Preparation of a National Single Window

A Blueprint for Implementation

Report No. 7853-LA

Lao PDR

The World Bank

Public Disclosure Authorized
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The findings and interpretations expressed here are those of the authors and do not necessarily reflect the views of the World Bank, its Executive Directors, or the countries they represent.
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<td>ACDD</td>
<td>ASEAN Customs Declaration Document</td>
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<td>ASEAN</td>
<td>Association of Southeast Asian Nations</td>
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<td>ASW</td>
<td>ASEAN Single Window</td>
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<tr>
<td>ASYCUDA</td>
<td>Automated System for Customs Data</td>
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<td>BOT</td>
<td>Build-Operate-Transfer</td>
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<td>TDF</td>
<td>Trade Development Facility</td>
</tr>
<tr>
<td>TDF</td>
<td>Trade Data Folder</td>
</tr>
<tr>
<td>TFS</td>
<td>Trade Facilitation Secretariat</td>
</tr>
<tr>
<td>TH</td>
<td>Thanaleng</td>
</tr>
<tr>
<td>TNA</td>
<td>Training Needs Analysis</td>
</tr>
<tr>
<td>TOR</td>
<td>Terms of Reference</td>
</tr>
<tr>
<td>UN/CEFACT</td>
<td>United Nations Centre for Trade Facilitation and Electronic Business</td>
</tr>
<tr>
<td>UN/LOCODE</td>
<td>United Nations Code for Trade and Transport Locations</td>
</tr>
<tr>
<td>UN/TDED</td>
<td>United Nations Trade Data Element Directory</td>
</tr>
<tr>
<td>USD</td>
<td>United States Dollar</td>
</tr>
<tr>
<td>VLAN</td>
<td>Virtual Local Area Network</td>
</tr>
<tr>
<td>VPN</td>
<td>Virtual Private Network</td>
</tr>
<tr>
<td>WAN</td>
<td>Wide Area Network</td>
</tr>
<tr>
<td>WB</td>
<td>World Bank</td>
</tr>
<tr>
<td>WCO</td>
<td>World Customs Organization</td>
</tr>
<tr>
<td>WTO</td>
<td>World Trade Organization</td>
</tr>
<tr>
<td>XML</td>
<td>Extensible Markup Language</td>
</tr>
</tbody>
</table>
1 Executive Summary

The principle long term development objective of implementing an effective, sustainable and cost effective National Single Window system and supporting environment is to make trade faster, simpler and lower cost for traders. The successful implementation of a National Single Window should simplify import and export requirements for traders, reduce transaction costs and improve data integrity. It should also reduce the opportunities for rent seeking, increase transparency and predictability and facilitate the adoption of modern risk based approaches across government agencies that have border management responsibilities.

Once implemented, it is envisaged that the Lao PDR National Single Window (LNSW) would establish a single point for electronic submission in order to facilitate the lodging of standardized information to fulfil all the regulatory requirements for imports, exports and transits. This would allow traders to submit all import, export and transit information required by regulatory agencies via a single electronic gateway instead of submitting essentially the same information numerous times to different government entities, some that are automated and others that still rely heavily on paper.

This ‘Blueprint for Implementation’ is the result of a World Bank-funded assignment to provide technical assistance for the preparation of a Lao PDR National Single Window and it has been assembled to offer support and direction to the Government of Lao PDR (GOL) as it proceeds towards implementation of its National Single Window. The material in this summary report should be read in combination with the individual and comprehensive technical and advisory chapters contained in the Appendices to the LNSW Blueprint for Implementation.

To foster a sense of purpose for implementation of the LNSW it is essential to build a vision that is both aspirational and equally, has a discernible timeframe, for example:

“By 2017 we will have electronic and streamlined Business to Government (B2G) and Government to Government (G2G) transactions for all Lao international trade”.

The vision should be agreed between GOL and the key government agencies and will become the hub around which implementation of LNSW takes place. There are presently a few key messages and important factors still to be considered as the GOL moves towards instituting and launching a LNSW.
The above diagram highlights the range and diversity of the tasks ahead and the importance of relationship and communication between tasks and a need for decisions, direction and multi-agency involvement in the LNSW. The choice of GOL to enter into a contract and concession agreement with a private sector company to operate the LNSW brings with it both challenges and opportunities. It is important that GOL makes maximum and effective use of the significant quantity of technical detail and information covered in the LNSW Blueprint for Implementation during both planning and throughout the implementation and long-term operational phases.

Adherence to the many frameworks and recommendations contained in the LNSW Blueprint for Implementation should enable the GOL to guarantee that the LNSW will deliver the eagerly anticipated trade and regulatory simplifications, harmonization and business process improvements.
2 LNSW Blueprint for Implementation

2.1 Introduction

Once implemented, it is envisaged that the Lao PDR National Single Window (LNSW) would establish a single point for electronic submission in order to facilitate the lodging of standardized information to fulfil all the regulatory requirements for imports, exports and transits. This would allow traders to submit all import, export and transit information required by regulatory agencies via a single electronic gateway instead of submitting essentially the same information numerous times to different government entities, some that are automated and others that still rely heavily on paper. Traders would anticipate this leading to reduced cost and time of compliance and predictable, more transparent procedures. For the Government of Lao (GOL) the anticipation would be for new and improved facilities, more reliable services, information sharing and coordinated action, better levels of compliance and increased efficiency of operations.

In order to foster a sense of purpose for introduction of the LNSW, it is essential to build a vision that is both aspirational and has a discernible timeframe. The vision should be agreed between government and the key agencies and it will become the hub around which implementation, communications and change planning takes place. An example of two possible (or complementary) vision statements for the LNSW could be:

- “By 2017 we will have electronic and streamlined Business to Government (B2G) and Government to Government (G2G) transactions for all Lao international trade”;
- or alternatively
- “By 2017 Lao PDR will be seen as a leader within ASEAN for streamlined electronic trade transactions”.

This LNSW Blueprint for Implementation is the result of a World Bank-funded assignment to provide technical assistance for the preparation of a Lao PDR National Single Window and it has been assembled to offer support and direction to the Government of Lao PDR (GOL) as it proceeds towards implementation of its National Single Window. The material in this summary report should be read in combination with the individual and comprehensive technical and advisory chapters contained in the Appendices to the LNSW Blueprint for Implementation.

From the outset of this technical assistance assignment it became evident that the GOL was already actively considering establishing a joint venture enterprise with a private sector company to build and operate a NSW. In the course of the assignment the GOL announced the signing of a concession agreement with Bureau Veritas, a worldwide testing, inspection and certification organization, to operate a NSW in Lao PDR. Discussions between the GOL and the World Bank led to agreement on the need for an interim ‘blueprint’ for the LNSW to support the government’s decision making process as it goes forward.
The interim 'blueprint' for the LNSW was to consist of the following:

- Legal Impediments, Gaps and Recommendations for Action;
- Proposed Governance and Operational models (including a statement of direction regarding the framework for Service Level Agreements (for LNSW Operator) and Service Level Objectives (for Government Agencies (GAs)) and similarly a statement of direction regarding a framework for fee models and revenue sharing);
- Proposed Functional and Technical Architecture (FandTA);
- Business Processing Re-engineering findings (building upon the Roadmap for Process Simplification and Harmonization now accepted by the Ministry of Industry and Commerce and other trade related GAs);
- Overall and General Risk Management model for the LNSW.

The contents of the interim ‘blueprint’ for the LNSW were presented to the NSW Steering Committee during a workshop/meeting hosted in Vientiane in March 2013. The workshop also featured a visual-display simulation (mock-up) of possible user-level interfaces and business processes under the LNSW (as depicted from the Functional and Technical Architecture).

This final LNSW Blueprint for Implementation has been constructed to incorporate all of the contents of the interim ‘blueprint’ plus further details of the Functional and Technical Specifications for the LNSW, a [draft] Government Decree for the LNSW, Service Level Frameworks and Models, a Capacity Building and Human Resource Development Planning Report and an Implementation Framework.

The LNSW Blueprint for Implementation consists of an Executive Summary, a general narrative providing an introduction, summarized details of the technical team’s findings and final conclusions for the different task clusters undertaken under the technical assistance assignment. Details are also provided of key questions that the GOL may still need to address in order to help focus strategic direction for implementation of a National Single Window in Lao PDR. More detailed technical chapters across each of the various clusters of work follow, each included in the LNSW Blueprint for Implementation as appendices.

### 2.2 Functional and Technical Architecture

The Functional and Technical Architecture (FandTA) document (see Annex A) describes in detail the proposed functions and architecture for a Regulatory National Single Window for Lao PDR. The FandTA is an essential prerequisite for the development of Functional and Technical Specifications.

A functional and technical architecture is a framework for the deployment and use of information and communication technologies across an organization in support of its strategic objectives. The architecture provides ‘plans’ for ICT that (over time) align business goals and strategies enabling the organization to make effective use of ICT to support and build the business.
For the LNSW the key purpose of the functional and technical architecture was to establish an agreed basis upon which specifications for application software, technical infrastructure and attendant services would be elaborated for the operation and management of LNSW. The architecture would also guide the specification of the protocols and technologies for interoperation between LNSW and the intended community of users within Government Agencies and the private sector, in particular international traders.

The Functional and Technical Architecture for LNSW was prepared and synthesized from several influences, including:

a. Government strategic choices for LNSW operation, and for its ICT, including:
   i. a desire for ICT enabled business processes within the GAs to leverage strategic opportunities for government and private sector stakeholders;
   ii. current and projected status of requirements agreed for National Single Windows within the political and technical protocols for an ASEAN Single Window (ASW); and
   iii. ambitions for interoperation or interconnectivity with an ASW, taking into account current and realistically scheduled capacities within ASW.

b. Views of traders seeking modern, efficient and transparent administration;

c. International guidance for ICT for National Single Window implementation (esp. UN/CEFACT recommendations and ASEAN models);

d. Industry trends in technology and infrastructure platforms, i.e. current good practice for ICT suitable for reliable, high-availability, enterprise-strength, transaction-orientated business systems;

e. Minimum necessary capacities for modern ICT enabled LNSW operation and technology and infrastructure environments: within participating Government Agencies, and within Lao PDR in general with regard to supply of goods and services needed for modern ICT, legal bases and national ICT policies;

f. The business models, especially as agreed for operations of LNSW Operator and including the outcomes of the BPR recommendations, risk-based processing, fee and revenue model, and Service Level Agreements (SLAs) and/or Service Level Objectives (SLOs);

g. Raw sizing expressed in terms of business transaction volumes and consequential influences for ‘right-sizing’ a solution and quantification of components; and

h. Operationalization imperatives, including, Help Desk requirements.

The architecture is elaborated in four dimensions, namely:

i. Applications: as in terms of processes/functions and application architecture;

ii. Data and Messages;

iii. End-user; and

iv. Technical Infrastructure: as in terms of Server(s) and Network(s).

The LNSW is envisaged to be a facility for electronic transactions between traders (and their agents) and Government Agencies and for facilitating interoperation among Government Agencies.
The following Government Agencies (GAs) were identified and listed as being the key agencies to be involved in the preparatory phase for the LNSW:

<table>
<thead>
<tr>
<th></th>
<th>Government Agency</th>
<th>Ministry</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Customs Department</td>
<td>Ministry of Finance</td>
</tr>
<tr>
<td>2</td>
<td>Department of Agriculture</td>
<td>Ministry of Agriculture and Forestry</td>
</tr>
<tr>
<td>3</td>
<td>Department of Livestock and Fisheries</td>
<td>Ministry of Agriculture and Forestry</td>
</tr>
<tr>
<td>4</td>
<td>Food and Drug Department</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>5</td>
<td>Import-Export Department</td>
<td>Ministry of Industry and Commerce</td>
</tr>
<tr>
<td>6</td>
<td>Department of Standards and Metrology</td>
<td>Ministry of Science and Technology</td>
</tr>
</tbody>
</table>

The work of the Lao Trade Portal (LTP), developed by the Ministry of Industry and Commerce, has also identified other agencies related to trade regulation: Department of Defense Industry of the Ministry of National Defense, Ministry of Post and Telecommunications, Ministry of Energy and Mines, the Department of Monetary Policy of Bank of Lao PDR, and the Ministry of Information, Culture and Tourism. The government agencies included within the scope of LNSW have offices in Vientiane and may have offices in provinces and at border locations.

In overview, the LNSW could be represented diagrammatically as follows:
Reference is made in the FandTA document (see Annex A) to the twenty-eight candidate regulatory-documentation processes and eighty-seven candidate GA implementation locations potentially to be covered for by the LNSW. From the trader’s perspective, the LNSW should be able to be used anywhere. Apart from using kiosks in GA offices, the FandTA relies on traders accessing the LNSW using their own ICT facilities for Internet connection and interoperation either in web-page mode or messaging mode.

The motivation for the LNSW, as a business proposition, is bi-lateral. It is intended to be used by traders and government agencies. Traders would anticipate benefiting from reduced costs and time for compliance along with increased trading velocity, and predictable, more transparent processes. These should have less and shorter steps and less face-to-face interaction. For Government Agencies the anticipation would be for new and improved facilities, more reliable, more closely and speedily integrated services to and between GAs, improved facilities for information sharing and coordination of action, better compliance and greater efficiency of operations.

Regardless of the organisational models eventually adopted for LNSW, there will need to be some kind of oversight role (a governance role or regulator) and some type of operator role. Other key actors or stakeholders are the user stakeholders including traders, government agencies, international actors, and perhaps other information consumers.

Figure 23 in the FandTA document (see Annex A) provides some data regarding the transaction rates while section 3.2.6 of the FandTA provides a summary analysis of these statistics including

a. Details of the 28 types of Certificates, Licences and Permits (CLPs) that are expected to reach a volume of approximately 44,000 per annum by 2018;

b. Descriptions of the candidate sites for exploiting LNSW including the 10 Government Ministries and departments located in Vientiane, the 42 provincial or regional offices in 7 provinces throughout Lao and the 33 border/government offices situated within 11 border posts; and

c. Data on customs declarations processed and that are anticipated to reach approximately 300,000 per annum by 2018 and of which about 24% will require a Certificate, Licence or Permit.
High-level functional sets to be provided by the operating entity for the LNSW are deduced from the influences described in section 3 of the FandTA and are illustrated below.

The LNSW would provide a registration function to cover all requirements for all participating GA’s (please see section 4.2.4 of the FandTA for further details).

Using the Trader’s Workbench facility in LNSW, a trader could undertake the following tasks:

- access the Lao Trade Portal to assist with the identification of permits, licences etc. needed;
- update its user/registration details;
- inspect its history of trade related transactions lodged with LNSW;
- record trade related data elements by data entry and attach uploaded scanned images of documents etc. into a Trade Data Folder (TDF);
- electronically submit/send the CLP applications to a GA;
- compile and complete customs declarations and send to LCD;
- track the progress of the application or declaration through the Workbench;
- respond to enquiries made by the GA through the LNSW;
i. receive the result of applications or declarations by message from LNSW (LNSW having been so advised by message from the GA). The trader would then finalise the process by a method specific to the GA according to its business rules; and
j. facilitate payment of associated fees and charges (according to the eventual model selected specifically for the GA).

In addition to the web-based method, the functional architecture also provides for message based operation for a sophisticated trader using an ERP (Enterprise Resource Planning) system.

The Government Agency Workbench of LNSW provides three functional sets for CLPIAs (Certificate, Licence and Permit Issuing Agencies), LCD officers and for other border agencies. For CLPIAs, the ‘level 1’ functional architecture is a GA-specific, model-based implementation of a workflow-management or business-process-management system that is available in three variations:

i. a standard model;
ii. a reduced step model should a GA choose not to have all steps in the standard model; and
iii. an expanded model for a GA that seeks to support its operations more deeply or broadly.

The standard model is illustrated as follows.
As previously mentioned, the FandTA lists the 28 candidate certificates, licenses, and permits that could be handled by the LNSW. For each CLP there would be a specific configuration of the standard model in one of the three variations described above. In practical terms, operations at a GA would allow officers, according to their specific authorities, to:

i. exploit risk-based processing route selection (if enabled for, and as specified by, each GA);
ii. inspect their role-based online ‘in-tray’ for work to be done, select an item and work on it;
iii. actioning the work-item by sending it on to the next step; and
iv. perform their role in a manner specific to each GA utilising the LNSW in a manner specific to the GA.

For LCD officers and the GAs located at border posts (i.e. MAF and MOH), the FandTA also provides for a comparable agency-specific workbench and workflow. Subject to necessary access control privileges, CLP enquiry and verification services would be provided by LNSW.

LNSW declaration lodgement and integration with ASYCUDAWorld is outlined at section 4.2.7 of the FandTA. The model entails message-based interfaces between the LNSW and ASYCUDA software systems. Customs would process import, export and transit declarations according to their specific, evolving business processes.

The FandTA also contains descriptions of the following:

a. Integration with the LCD ‘master List’ systems for administering duty and tax exemptions or concessions;
b. Possible interface or interaction with the ASEAN Single Window Integration Module;
c. Features of a LNSW Help desk;
d. Aspects of the LNSW Fee / Revenue Model (in broad terms only as full details contained in the Fee Structure and Revenue Sharing Model report); and
e. Considerations for a Risk Management function within the LNSW.

Functional sets described in overview include:

a. LNSW Performance Monitoring including business and activity dashboards;
b. LNSW Management Information Systems (MIS);
c. LNSW Information Services;
d. Additional administrative functions required by the LNSW governance entity and LNSW Operator;
e. LNSW Infrastructure functions; and

---

1 Use of XML EDIFACT (or WCO Data Model version 3 equivalent) messages are described in this document.
When looking at the description at (b) above it should be remembered that Lao PDR is party to ASEAN agreements for a Single Window. This encompasses the establishment of a National Single Window and participation in the eventual ASEAN SW. The LNSW Blueprint for Implementation prepares for the implementation of a LNSW and is clearly part of the process whereby Lao PDR satisfies its ASEAN commitments and agreement.

The ASEAN Secretariat has formulated its model for integration of the various National Single Windows through an ASEAN Singe Window and initiated feasibility studies and pilot projects such as the exchange of electronic copies of ATIGA Form D to substantiate Rules of Origin within ASEAN in support of the scheme for preferential tariffs. The feasibility studies explore technological aspects as well as aspects pertaining to political environment, national legislation and international trade law. As of the time of writing the specific details of the implementation model for ASW have not been finalised.

For the FandTA and specifications, the ASEAN SW project provides the ASW Technical Guide (Version 3/2006, March 2006) identifying key elements of particular pertinence such as:

1. the need for standardised documentation, notably the ASEAN Customs Declaration Document (ACDD) and ATIGA Form D (a Certificate of Origin or COO);
2. the requirement for standardised data and message standards, notably the WCO Data Model and UNeDocs\(^2\) packaged as XML/EDIFACT and XML trader-related messages;
3. a demand for the NSW to have the ability to store and forward (by push or pull) ACDD and COO between the countries involved in a particular trade from LNSW through ASW to another NSW and vice versa.

The FandTA for the LNSW includes elements that should realise a technical solution necessary to meet the ASEAN SW requirements.

The functional sets described in the FandTA include the following features

a. LNSW Performance Monitoring including business and activity dashboards;
b. LNSW Management Information Systems (MIS);
c. LNSW Information Services;
d. Additional administrative functions required by the LNSW governance entity and LNSW Operator;
e. LNSW Infrastructure functions; and
f. LNSW non-functional characteristics.

The functional model described in the overview above is driven by operational requirements within the scope of the TA assignment objectives. The application architecture needed to facilitate these functions is described in a manner consistent with both operational requirements and the various influences and preferences for a modern ‘good practice’ solution and is cognisant of (a) ‘right-sizing’, (b) affordability; (c) availability of supply, (d) availability of services for sustainability, and (e) market ingenuity that may introduce new and perhaps ‘better on balance’ products.

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\(^2\) UNeDocs has been redefined as Buy-Ship-Pay UN/CEFACT Business Subset for International Trade. Throughout this document for simplicity, the term UNeDocs will be used.
It may be that the eventual LNSW solution will have a different application architecture, however, the architecture presented here should nevertheless be viewed as ‘recommended’.

The application architecture depicted in the FandTA for LNSW utilises the following:

a. service orientated architecture (SOA);

b. web services;

c. workflow management/business process management architecture;

d. n-tier component-based architecture;

e. browser/thin client for the presentation layer; and

f. single centralised model (that may be distributed and replicated physically).

The application architecture, as described in the FandTA, is:

a. scalable with both horizontal and vertical functionality to provide growth and durability;

b. loosely coupled between the application modules, and between the application modules and the technical infrastructure, so as to provide functional enlargement and replacement, to allow transactional scalability with reduced system engineering, and to facilitate business process redesign; and

c. compatible with a technical infrastructure (outlined at sections 8 and 9 of the FandTA) that is also characterised by a component based architecture and also scalable vertically (within a component: e.g. processors, RAM, HDD) and horizontally: (e.g. clustered/fail-over units, replicated channels, etc.).
The application architecture is illustrated below. The purpose of each of the layers is described in more detail at section 5.2 of the FandTA.

<table>
<thead>
<tr>
<th>LNSW Application Architecture</th>
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</thead>
<tbody>
<tr>
<td><strong>CLIENT / PRESENTATION</strong></td>
</tr>
<tr>
<td>Web-forms</td>
</tr>
<tr>
<td>Government Agency user</td>
</tr>
<tr>
<td>Web-forms</td>
</tr>
<tr>
<td>Trader</td>
</tr>
<tr>
<td>Web-forms</td>
</tr>
<tr>
<td>Information Consumer</td>
</tr>
<tr>
<td>Browser (IE / Firefox, etc)</td>
</tr>
<tr>
<td>Secure HTML – GUI</td>
</tr>
<tr>
<td><strong>MESSAGING GATEWAY</strong></td>
</tr>
<tr>
<td>G2G messaging</td>
</tr>
<tr>
<td>Gov’t Agency</td>
</tr>
<tr>
<td>(XML / Edifact, LNSW Protocol)</td>
</tr>
<tr>
<td>B2G messaging</td>
</tr>
<tr>
<td>Trader</td>
</tr>
<tr>
<td>(XML / Edifact)</td>
</tr>
</tbody>
</table>

**Message Transformation**

**APPLICATION INTEGRATION LAYER**

- Workflow execution manager (e.g., BPEL)
- LNSW WF Definitions (e.g., GA and Trader workbenches)
- Web services orchestration manager (e.g., WebSphere, WebLogic)
- Services Directory (LNSW)
- Services Directory (external)

**PERSISTENCE LAYER**

(Commercially available and supported standard toolset, e.g., EJB)

**APPLICATION SERVER LAYER**

(Commercially available and supported multithreading tool, e.g., a J2EE application server)

**DATABASE SYSTEM LAYER**

(Commercially available and supported, ANSI SQL Compliant, e.g., Oracle 11 EE, Microsoft SQL)

**OPERATING SYSTEM LAYER**

(Commercially available and supported portable product: Windows Server, Unix)

Key technical aspects of the Data and Message model can be described as follows.

a. The Data Model relies upon applicable segments of WCO Data Model v3 definitions for data structures and attributes (and by extension UN/TDED and UN/LOCODE definitions), including naming conventions. Implementation within the eventual LNSW solution would necessarily entail a subset of relevant segments of the WCO Data Model with many extensions specifically related to CLPIAs, and for LNSW functions and the LNSW implementation model.

The LTP project has done extensive work defining entities and attributes for the data model.
b. The message model (for interoperating software systems and subsystems, and for web services) relies upon:
   i. XML translations of EDIFACT (or WCO Data Model version 3 equivalent) messages, in particular:
      CUSDEC: Customs Declaration Message (as applied for ASEAN Customs Declaration Document (ACDD)
      CUSRES: Customs Response Message
      APERAK: Application Error and Acknowledgement Message
      DIRDEB: Direct Debit Message;
   ii. potentially WCO SW message GOVCB;
   iii. a to-be-defined XML Protocol for interoperation with technologically sophisticated LNSW Traders and CLPIA’s and as the basis of LNSW’s own web services;
   iv. SMS and Email (specific protocol/content to-be-defined); and
   v. ASEAN SW Message Protocol (when defined).

The End-User model is defined at section 7 of the FandTA for the following user classes, including:

a. traders – via LNSW kiosks, their own Internet connected devices, SMS devices, potentially via system-to-system messaging using dedicated circuits in place of internet connections;

b. government agencies – in the same manner as above, it is anticipated that LNSW would entail the provision of technical infrastructure at all LNSW connected GAs – some 87 such sites and including approximately 1,585 network and end-user devices (PCs, PDAs, mobile devices, printers and scanners) over the LNSW Virtual Private Network (VPN)/Virtual Local Area Network (VLAN);

c. LNSW Operator, LNSW Governance Entity and LNSW Help Desk – using standard end-user devices over the LNSW VPN/VLAN;

d. information consumers – using their own Internet connected devices; and

e. ‘need-to-know’ users - i.e. users that have been accepted commercially/legally as broadcast recipients (police, immigration, etc.).

The technical architecture is defined in some detail at sections 8 and 9 of the FandTA.

The characteristics for the server architecture comprise of the following requirements, namely:

a. adequate (‘near high’) reliability and performance;

b. near 24x7 operational hours;

c. dual central computer sites, in active/passive mode, with replicated technical infrastructure for LNSW production;

d. n-tier server architecture for production services with separation of server by role, esp. for infrastructure servers, database servers, application servers, and web-servers;

e. production data held on SAN device at each central site with multiple channel access to database servers;

f. production servers: multiple-redundant component-based architectures in clustered configurations;
g. infrastructure (n-tier servers and SAN) for business intelligence / information services;

h. separate infrastructure for non-production services: transition-to-live (quality control and/or testing),
   training and development; and

i. infrastructure servers for overall ICT management, administration and security.

The key characteristics of the network infrastructure include the following recommendations:

a. centralised management;

b. ‘good practice’ LAN/VLAN design;

c. data-centre grade LAN in the two data centres;

d. a WAN implemented as LNSW VLAN and LNSW VPN;

e. wireless LAN at each participating GA office; and

f. mobile device telecommunications gateways.

Sections 8 and 9 of the FandTA contain detailed descriptions and illustrations for the above.

Section 10 of the FandTA goes on to describe certain other aspects implied by or necessary for the functional
and technical architecture, including:

a. the physical infrastructure for the data centres and GA offices;

b. a possible Management Model encompassing:
   i. administration and organization;
   ii. services to operate, support and maintain the new ICT including consideration of Service Levels and
      Agreements and Objectives;
   iii. security:
      - physical (safe physical environments);
      - data (transaction logging, restart journals, backup sets, restart methods, recovery methods); and
      - logical for access – usage (for identification, authorization, encryption, non-repudiation, audit trails).

c. proposed business continuity arrangements (described very briefly).

An overview of estimates of cost for LNSW is provided below. It is worth noting that these are very preliminary
estimates at the level of detail available from architecture descriptions.
### Cost element - capital

<table>
<thead>
<tr>
<th>Data centres</th>
<th>Cost est. USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Infrastructure – 2 data centres (main and business continuity / backup)</td>
<td>480,000</td>
</tr>
<tr>
<td>Technical Infrastructure – main data centre – based on technical architecture with multiple Services, each with multiple servers, and system software and infrastructure</td>
<td>1,151,000</td>
</tr>
<tr>
<td>Technical Infrastructure – business continuity / backup data centre</td>
<td>869,000</td>
</tr>
<tr>
<td>Subtotal – data centres</td>
<td>2,020,000</td>
</tr>
<tr>
<td>End-user equipment costs – 87 sites, each with allowances for end-user equipment plus infrastructure equipment and fit-out</td>
<td>2,934,000</td>
</tr>
<tr>
<td>Implementation – project management, LNSW software licence, CLP workflows (26 permits, border agencies) [Note: this is difficult to estimate accurately.]</td>
<td>3,100,000</td>
</tr>
<tr>
<td>Year 1 (implementation year) support and maintenance</td>
<td>619,000</td>
</tr>
<tr>
<td>Total supply and build estimate</td>
<td>8,673,000</td>
</tr>
</tbody>
</table>

### Cost Element – recurrent

<table>
<thead>
<tr>
<th>Cost Element – recurrent</th>
<th>Cost est. USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management, technical support, operations, help desk (5 years)</td>
<td>5,200,000</td>
</tr>
<tr>
<td>Telecommunications (4 years)</td>
<td>1,200,000</td>
</tr>
<tr>
<td>Power supply</td>
<td>105,000</td>
</tr>
<tr>
<td>Support and maintenance (5 years)</td>
<td>2,546,000</td>
</tr>
<tr>
<td>Total recurrent costs</td>
<td>9,051,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>year</th>
<th>Cost est. USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>year 1</td>
<td>619,000</td>
</tr>
<tr>
<td>year 2-5 p.a.</td>
<td>2,108,000</td>
</tr>
</tbody>
</table>

In overview: year 1 is an implementation year. Years 2 to 5 (and beyond) are operational years.

Additional and more detailed information is included in the FandTA (see Annex A). It should also be noted that the cost estimates would reduce if the GOL were to (1) restrict the CLP to be included in the project scope as might occur following any rationalization or discontinuation of CLP especially of those currently only used for statistical purposes; and (2) restrict the number of implementation sites in recognition of some very low transaction sites at some places and hence reduce the number of locations needing FandTA facilities.
2.3 Governance and Operations

The role of the LNSW Operator will be to build, implement and establish the LNSW facilities and services and operate and maintain the LNSW facilities to agreed standards. The LNSW Operator should also deliver supplementary services such as provision of information, data and statistics while reporting to the LNSW Governance entity, body or role and remitting net finances/monies.

The expected role of the LNSW Governance entity will be to oversee the LNSW Operator and operations, protect the GOL's policy interests in LNSW and to oversee the success of the LNSW in meeting GOL policy and trade facilitation objectives.

The Governance Model / Operational Model Report (see Annex B) is seen as building upon pre-existing work (especially the work to establish a Lao Trade Portal and the Roadmap for Process Simplification and Harmonization carried out for non-customs agencies by the Ministry of Industry and Commerce) and the preliminary descriptions and concept for the LNSW presented at the 'visioning' workshop.

The Governance Model / Operational Model Report also provides a summary of the experiences in other countries when implementing a National Single Window and represents a useful guide for comparison purposes.

The expected role of the LNSW Operator will be to undertake tasks or responsibilities such as:

i. Build, implement and establish the LNSW facilities and services;

ii. Operate and maintain the LNSW facilities and provide services in accordance with;
   • any formal, commercial or ‘quasi’ Contract; and
   • Service Level Agreements (SLAs) or Service Level Objectives (SLOs) with:
     - the LNSW Governance entity, body or role;
     - Government Agencies (such as Customs, Border Agencies and Permit or Licence Issuing Agencies); and
     - private sector operators (traders, brokers / agents, and perhaps logistics operators);

iii. Provide supplementary services such as provision of information, data and statistics; and

iv. Report to the LNSW Governance entity and remit net finance (if applicable and as per any formal, commercial or ‘quasi’ Contract).

The following is a Roster of Options for establishment or creation of the LNSW Operator, namely:

1. Part of an existing Government Agency (GA);
2. A new specialised Government Agency or part thereof;
3. A ‘state-owned’ enterprise or ‘corporatized’ Government Agency; or
4. A private sector company or enterprise.
In addition to a Roster of Options for the LNSW Operator we have considered how the LNSW could be built, implemented and operated.

The options for these tasks include the following:

I. A self-build plus implemented and operated by the GA;
II. An outsourced build and implementation under commercial contract with an ICT provider(s) and self-operated by the GA;
III. A to ‘build, operate and transfer’ (BOT) arrangement under a period or multi-year commercial contract with an ICT provider(s) and eventual transfer to the GA after an appropriate period of knowledge and technology transfer and change management; or
IV. To outsource the build, implementation and operation under a period or multi-year renewable or re-tendered commercial contract with a private sector operator/provider.

The current decision of GOL to establish a joint venture enterprise with a private sector company in order to build and operate a NSW under a concessionaire arrangement represents a variation of option IV.

The choice for the Governance entity may be simpler than that for the LNSW Operator. The LNSW Operator needs to be monitored and managed so as to ensure that agreed services are provided and that the policies of the GOL are adhered to. The options for the Governance entity for the LNSW could be one of the following:

1. Part of existing Government Agency;
2. New Specialised Government Agency or part thereof; or

Whichever of these is selected, the role of the LNSW Governance entity or body will be to carry out the following:

i. Oversee the LNSW Operator and operations;
ii. Protect the GOL’s policy interests in LNSW; and
iii. Oversee the success of the LNSW in meeting GOL policy and trade facilitation objectives.

The specific functions for the role of the LNSW Governance entity include being:

- the Steering Committee facilitator: i.e. facilitate a regularly convened stakeholder forum for LNSW monitoring, forward planning, and conflict and problem resolution;
- establishing a Liaison office: stakeholder relationship management, coordinate stakeholder commitments, facilities and forums for stakeholder discussions / policy formulation, implementation plans, legal drafting;
- providing the role of an Internal and External Communications manager: i.e. LNSW Public Portal Pages, newsletters etc. to traders and GA’s;
- ensuring data ownership, especially for the Trade Data Folders in LNSW [within the concept that the LNSW Operator is an Application Service Provider and a facility operator and as the LNSW Operator is regulated by the LNSW Governance entity];
• taking ownership of definition of standards, message protocol definitions, reference table data, maintaining / updating these [under its own skills sets and resources or by setting policy and directing the LNSW Operator];
• acting as auditor of LNSW financial accounts;
• acting as auditor of the LNSW application utilizing LNSW audit trails, message logs and metering facilities as part of internal-audit including service level monitoring and analyses, and providing continual business process improvement;
• making use of MIS (Management Information Systems) including ‘governance-dashboards’ for monitoring and responding, planning performance of the system and statistics about the operation of LNSW;
• offering internal administration functions e.g. HR [personnel, payroll, internal accounting, asset and inventory administration];
• undertaking the role of Service Level evolution manager [Service Level Agreements (SLAs) and Service Level Objectives (SLOs) can be expected to be progressively improved under steerage of the LNSW Governance entity infusing the views of all stakeholders];
• forming a planning office thereby using statistical information about the throughputs and usage of LNSW in order to inform policy decisions about financing or potential expansion in terms of capacity or scope; and
• becoming the recognized approving body for topics or tasks to be proposed by the LNSW Operator including,
  o operational plans,
  o physical siting or location of LNSW,
  o service hours,
  o minimum skill sets / labour capacity for LNSW Operator and users,
  o SLAs or SLOs,
  o backup security, RPO (Recovery Point Objective) and RTO (Recovery Time Objective),
  o functional specification,
  o acceptance of technical build including minimum component: quantities & sizes,
  o acceptance of functional delivery,
  o acceptance of physical and technical infrastructure,
  o acceptance of service delivery,
  o acceptance of changed and updated plans, operation, facilities.

It may be that the existing LNSW Steering Committee and secretariat team evolves into a permanent structure in one of the above three forms, e.g. the Steering Committee as a Management Board and the secretariat team expanded to provide the necessary skills and capacity to be able to manage and oversee the Operator and facilitate policy analyses and implementation.

Section 4 of the Governance Model / Operational Model Report (see Annex B) provides detailed descriptions and explanations of all the options for the Operator and Governance models as well as a decision-making framework to assist with selection of the preferred option.
2.4 Service Specifications for the operator of LNSW

The Statement of Direction: Service Specifications for LNSW document (see Annex C) specifies the variety of services that would be needed to implement and operate the Lao National Single Window (LNSW), as corresponding to the functional and technical architecture.

These specifications are documented in anticipation of the following:

a. a single private sector supplier (LNSW Implementer) contracted under commercial terms for implementation of technical infrastructure, application solutions, implementation services and post-implementation services including support and maintenance; and

b. a single private sector supplier (LNSW Operator) that is connected under commercial terms providing management and operations services for LNSW.

There would be advantages should the Implementer and Operator be the same organization but for flexibility, the specifications are written as if there could be two separate suppliers with overlap where necessary.

The services sought from the LNSW Implementer are described in section 3 of the Statement of Direction: Service Specifications and entail:

a. Comprehensive project management services;
b. System integration;
c. Management of the team of experts for implementation tasks and services;
d. Maintaining the escrow holding of the LNSW application software (or equivalent facility);
e. Configuration, data conversion and data take-on;
f. Training;
g. Acceptance assistance;
h. On-site technical and operational assistance for an initial period;
i. On-call support for an extended period of perhaps five or more years;
j. Support and maintenance of the physical and technical infrastructure and the application solutions; and
k. Ongoing cost-plus services available for additional system design, development and implementation.

The services sought from the LNSW Operator are described in section 4 of the Statement of Direction: Service Specifications and these complement the management model described in the FandTA.

The services would entail operations management and include:

a. Long, short and medium term business planning;
b. Contract management;
c. Quality planning, control and assurance;
d. Overall service administration;
e. Security services;
f. System and network administration;
g. Configuration management;
h. Business continuity;
i. Operation of physical sites and facilities, technical infrastructure and application services;
j. Help desk services;
k. Support and maintenance;
l. Service enhancement;
m. Liaison with third party suppliers including: LNSW Implementer, data communications carriers, suppliers of support and maintenance services;
n. Capacity planning and response (typically modifying or enhancing facilities or resources, or equipment quantities or capacities);
o. Liaison with LNSW Governance Entity concerning billings, revenue sharing, SLA setting, SLA monitoring, SLA consequences (for meeting, exceeding or failing), and LNSW service modification and enhancement; and
p. Liaison with stakeholders to discuss experiences regarding service usage and to solicit opportunities for enhancements.

2.5 Service Level Agreements

The Service Level Frameworks and Models for LNSW Report (see Annex D) describe the following:
   a. A General Framework for Service Level Agreements (SLA/GF) in the context of LNSW;
   b. Various Model Agreements based on the SLA/GF; and
   c. A possible Framework for Monitoring of SLAs based on the SLA/GF.

The following definitions as related to Service Levels should be noted, namely:
   a. Service Level Agreement (SLA): is an agreement between the provider of a service and its users which quantifies the minimum quality of service which meets business needs; and
   b. Service Level Objective (SLO): is a ‘charter’ derived from Government initiatives, legal requirements or good professional practice to specify the standards that service providers commit to meet and provide service users with an indication of the level of service they are entitled to expect.

The advantages of having or using a SLA/SLO include:
   a. clarification of the services offered by the service provider and defining expectations for service users;
   b. availability of performance and monitoring benchmarks and measurement methods;
   c. an opportunity for service providers (for LNSW: LNSW Operator and Government Agencies) to improve performance;
   d. an opportunity for service users (traders and Government Agencies) to review priorities; and
   e. a better understanding between the parties.
Guidelines for setting service levels, including the format of SLA and SLO and ongoing administration of these and citing international good practice, encompass the following key messages:

a. keep the definitions as simple as the circumstances allow and endeavour to have statements that are readily understood;

b. avoid unnecessary bureaucracy and unwanted behaviours such as ‘chasing the numbers’ rather than providing the service;

c. to the extent practical, the elements (including quantities, qualities, timeliness and costs) should be measurable by objective methods;

d. a rule of thumb is to under-promise and over-deliver; and

e. expect the evolution of the service level definitions while striving always for improved targeted services and lower costs.

A summary of international guidance for SLA, citing sources, is provided in general and for ASEAN. The use of SLA’s are strongly recommended for several reasons as summarised above.

The specific context for SLAs and the LNSW is summarised in the Service Level Frameworks and Models for LNSW Report with the main elements being:

a. Concessionaire agreement offered by Ministry of Finance of the Government of the Lao PDR and accepted for a joint venture with Bureau Veritas; and

b. Outcomes of the technical assistance provided by World Bank and PM Group, esp. for operational and governance models, functional and technical architecture and service specifications, summarising the services and functions recommended to be provided and candidate Government Agencies, candidate regulatory documents and candidate offices for inclusion within LNSW.

In summary, the recommendations as listed in the Service Level Frameworks and Models for LNSW Report are that there needs to be the following:

a. a Service Level Agreement between LNSW Operator and LNSW Governance Entity with the latter representing the government, government agencies participating in LNSW, traders and general public. This would be part of the concessionaire agreement. A detailed Model Agreement specifically for LNSW is included as an appendix to the Service Level Frameworks and Models for LNSW Report (Annex D);

b. a Service Level Agreement between the LNSW Operator and Traders that would be in a standard form and a part of each Trader’s registration process. A detailed Model Agreement specifically for LNSW is included as an appendix to the Service Level Frameworks and Models for LNSW Report; and

c. various Statements of Service Level Objectives by each LNSW-Government Agency. A short Model Statement of Service Level Objectives suitable for government agencies participating in LNSW is included as an appendix to the Service Level Frameworks and Models for LNSW Report.
The need for several additional support and maintenance and service agreements between the LNSW Operator and various technology and other suppliers (ICT hardware and software, power supply etc.) is noted.

2.5.1 Monitoring Framework

SLAs and SLOs have little purpose without the measurement and analyses of the service levels. The Service Level Frameworks and Models for LNSW Report set out a framework that could be used to establish monitoring procedures for SLA / SLO for LNSW.

The model agreements included in the appendices of the report give a context for the monitoring framework. The framework provided is therefore a worked example that encompasses the underlying general principles.

The monitoring framework is defined for each of the three recommended forms of SLA / SLO in terms of the following:
- responsible party;
- timing; and
- method for data collection and methods for analysis and reporting.

2.6 Fee Structure and Revenue sharing

The Report and Recommendations on Fee Structure and Revenue Sharing (see Annex E) takes into account the international experience with single window fee structures and places the proposed fee structure into the context of WTO rules and disciplines. The purpose was to design a Revenue Model and Fee Structure for the LNSW. It also addresses the current Lao PDR legal framework as it pertains to the levying of fees for government services.

The Technical Assistance assignment for preparation of a LNSW was initiated with the possibility of World Bank finance for all or part of the implementation costs with operating costs notionally to be supported by fee-recovery. Circumstances have changed in light of the proposed concessionaire and joint venture agreement between GOL and a private provider.

Nevertheless, in developing this Fee Structure and Revenue Model, a number of assumptions had to be made. The first is that GOL may prefer to finance some or all of the costs of LNSW through user fees. The second is that the build, installation and implementation costs could be financed through a donor agency, such as the World Bank.

In dollar terms, this would mean that the donor agency could finance approximately $8.4 million USD with user fees financing recurrent costs of approximately $2.1 million USD per annum. Should full costs be financed
through user fees, an alternate scenario is included in the report in which full LNSW costs are supported by user fees at a higher rate than the core proposal.

The fee structure is transaction based and the report addresses the various options in defining a transaction. In doing so, a third assumption regarding LCD volumes had to be made. Volume statistics on Customs declarations as generated by the LCD proved to be difficult to obtain and when obtained was of suspect validity. As a result, other more credible volume statistics arising from the FandTA were used as a planning assumption and form the basis for the fee structure proposal. The estimates in the FandTA are more conservative than those obtained from LCD and as such provide a safer basis for planning and design.

The fourth and final assumption relates to the number of traders actively involved with import, export or transit movements and registered in the ASYCUDA system. The Revenue Sharing model proposed in this document is dependent on LNSW registration and annual fees. As a result, it was necessary to assume that the ASYCUDA derived number for traders was, in order of magnitude, accurate and correct.

The primary challenge in defining a fee structure that is transactional is agreeing upon the definition of a transaction. In the context of this proposal, it is recognized that there are two possible definitions of a transaction when dealing with customs declarations and their use in developing transactional fees.

It will be critical in the development of a fee structure for LNSW to agree on two basic definitions of a customs transaction as follows:

I. A Customs Declaration is a document presented electronically or in writing by an importer, exporter or agent declaring goods to customs which he/she is importing or exporting.

II. A Declaration Line Item refers to items being declared on a Customs declaration which may individually attract different tariff treatment or customs/border controls but which on their own could be a Customs declaration (ACDD).

Lao PDR is a member of ASEAN and uses the ASEAN Customs Declaration Document (ACDD) as its Customs declaration. The ACDD, in and of itself, can be deemed to be a transaction. The Declaration Line Items within an ACDD can also be determined to be transactions.

It is recommended that the ACDD not be used in the transactional model for LNSW fees since ACDD volumes may not remain stable. Declaration Line Items, on the other hand, are much more stable and not necessarily subject to change as an effect of reform or modernization. Change in volume of Declaration Line items is, however, subject to change through the normal expansion in the growth of trade volume.

The report also makes a number of observations and recommendations on the current Certificate, Licensing and Permit regime in GAs. It will be important to ensure that along with simplification and harmonization, the CLP regime is further modernized and streamlined along with LCD processes in order that traders and other stakeholders receive measurably improved service as a result of LNSW implementation.
Naturally the charging or application of any fee will not be welcomed by all parties. It is inevitable that the trade community may view this as prohibitive and merely another ‘revenue or income generation’ measure. It is therefore essential to identify the benefits and gains to be made by introduction of the LNSW and the corresponding fee to be applied. The LNSW will act as a catalyst for simplification and harmonization or Customs and CLPIA procedures. This in turn will assist importers and exporters providing them with a more reliable, uniform and consistent service. The LNSW will enable the single submission of import or export data to be used by various government agencies and will provide a gateway or portal for traders to interact electronically with government. This in turn should save time and even although a fee may be payable for the services received, the LNSW should contribute to reducing overall costs and expenses associated with transactions.

Electronic banking or e-payments and paperless processing of CLPs and Customs declarations could be features of the LNSW and these would significantly facilitate international trade while reducing the need for personal interaction between parties. This in turn could assist in the reduction of collusion and/or corruption.

Even taking into account the range of assumptions that had to be made in the design of the Fee Structure and Revenue Model, it must be stated that the mechanisms for fees described and the methodology of revenue sharing would stand on their own should these assumptions change. The variable in this case is that the amounts charged for transaction fees and registration/annual fees would have to be adjusted. Lastly, the report also raises the option of charging no fees for LNSW and the rationale therefor.

In summary, based on the model described in the Report and Recommendations on Fee Structure and Revenue Sharing (see Annex E), the following recommendations can be made:

1. It is recommended that the LCD portion of LNSW costs to be recovered, be derived from a charge per declaration line item in the range of $3.00 USD. This charge should be adjusted in accordance with actual LNSW costs and should not be kept artificially high in order to raise non cost recovery revenue to avoid a violation of Article VIII of the General Agreement on Tariffs and Trade (GATT) and WTO user fee requirements.

2. It is recommended that the cost for recovery for non-customs GAs involved in border clearance be based on 20% of volume of transaction and that this revenue be apportioned amongst the relevant agencies on the basis of their respective percentage of permit volume. It is further recommended that Registration and Annual Fees be utilized to recover costs for non-customs GAs involved in border clearance.

3. It is recommended that fees for trade certificates, licenses and permits not be used as a mechanism for LNSW cost recovery. It is further recommended that no fees be charged for certificates, licenses and permits given the fee structure proposed in this document.

4. It is recommended that a detailed implementation plan be developed for LNSW. With regard to the Fee and Revenue Sharing structure, the implementation plan should include a clear definition of terms, a realistic plan for phasing in the fee structure and GA’s agreement on apportioning revenue sharing features.
2.7 Legal Impediments, Gaps and Recommendations

The Legal Impediments, Gaps and Recommendations (LIG&R) Report (see Annex G) examines in detail the legal impediments and gaps for the purpose of establishing a National Single Window in Lao PDR and provides, in section 3, recommendations on what action should be taken in the future. These recommendations are presented in the form of a Table containing a Checklist of what is required for the establishment of the Lao National Single Window, the extent to which these requirements are affected by existing laws in Laos, and recommendations on what provisions should be considered in drafting an initial decree on the establishment of the LNSW.

Before examining the extent of impediments and gaps in the current legislation, the LIG&R Report explains the concept of a NSW and the generally accepted criteria for the establishment of a NSW, in particular UN/CEFACT Recommendation No.35 on 'Establishing a legal framework for international trade Single Window' (ECE/TRADE/C//CEFACT/2010/23/Rev.2).

In the sub-section of the report on legal impediments, the consultant concludes that there are no legal impediments – in either the political regime of Lao PDR, in the Lao Constitution or in any other law – to the establishment of a NSW.

A key Decision (No.2114/MOF) was, however, taken by the Minister of Finance on 10 August 2012 to set up a Steering Committee and Secretariat for the NSW, chaired by the Deputy Minister of Finance and comprising senior members of the ministries most closely involved with LNSW issues – among others, the Ministry of Finance, the Ministry of Industry and Commerce, the Ministry of Agriculture and Forestry. Under Art.2 of the Decision, the Steering Committee is required “to lead, and follow up with the establishment of the Secretariat, in studying and preparing the setting up of the NSW”. The language of the Decision suggests that what is contemplated is the design and establishment of a NSW in Laos that is flexible and in line with the requirements of the nation.

While there are no legal impediments in Laos to the establishment and implementation of a LNSW, there are however many gaps in existing laws. The principal gap, of course, is that there is as yet no law/decree or other legal rules in Lao PDR establishing a NSW. A Law on Electronic Transactions that deals at length with important aspects of electronic commerce was adopted by the National Assembly in December 2012 (and was being ‘edited’, at the time of writing), but that law does not in itself create the legal framework for a LNSW. The main purpose of that law is to establish the rules for the formation, use, recognition, management and inspection of electronic transactions. It does not, however, provide the detailed rules for the establishment of the LNSW (by identifying or establishing, for example, an administrative body responsible for its day-to-day operation), and provide detailed rules regarding access to the LNSW, data quality assurance etc.
For the purpose of the LIG&R Report, an assessment of the gaps in the legal system for the operation of a LNSW was made by examining 122 “laws”, “decrees”, “regulations”, “decisions”, “notifications”, “instructions” etc. that are currently listed in the Lao Trade Portal. Since regulations, decisions and notifications are of an inferior legal status to laws and decrees, the main focus of the research has been towards laws and decrees. Of the 15 laws and 12 decrees that are listed on the Lao Trade Portal, only two laws, and six decrees, were directly relevant to the import, export and transit of goods. These laws and decrees all have ‘gaps’ in them in so far as they do not refer to electronic communications - which are a central feature for the operation of a LNSW – and recognize only written documentation, signatures, original documents and records etc.

It could be argued that Art.13 (2) of the recently adopted Law on Electronic Transactions fills these gaps by providing that an electronic document is to be treated on the same basis as a written document and that this law prevails over any inconsistent law (Art.58). However, since Ministries tend to focus, on a day-to-day basis, on the laws/decrees that they are required to administer (with sometimes little regard to other laws) it may be prudent to amend these laws and decrees to establish the equivalence of electronic documents with paper documents rather than leave all this to be governed by the Electronic Transactions Act only.

In adopting the Law on Electronic Transactions in December 2012, the Lao authorities have taken an important step in developing and implementing a LNSW. While the Lao law deals with a central feature of electronic commerce – namely, that electronic documents are to be treated on the same basis as written documents – it does not establish the legal structure for the establishment and operation of a LNSW. The decision taken by the Minister of Finance on 10 August 2012 (Decision No 2114/MOF) to set up a Steering Committee to study and set up a NSW in Laos suggests that what is being contemplated, is the establishment of a legal framework for a NSW and not merely the adoption of administrative arrangements to operate such a system.

The final part of the Legal and Regulatory Framework for the LNSW in the technical assistance assignment was, where necessary, the preparation of outline laws and drafting of new legislation as relevant. Following discussion with the NSW Secretariat team after the submission and presentation of the LNSW Interim ‘Blueprint’ Report, it was agreed that the PM Group specialists would focus attention on the preparation of a [draft] Government Decree for the LNSW.

The [draft] Decree (see Annex H) should be viewed by the reader as being more indicative than definitive as it aims to not be ‘overly prescriptive’. The Decree should provide sufficient powers for the necessary bodies to enable them to implement and operate LNSW but should not unnecessarily constrain the organizational structures and constituents, or the notices and procedures by which implementation and operation takes place. In particular, the Operator will likely be an organization or entity independent of government and will determine its own arrangements and practices in accordance with a contract to be formed with the GOL. The

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3 The Law on Electronic Transactions was promulgated by the GOL in March 2013
The structure and contents of any final Government Decree for LNSW will be very much dependent on the situation at that time and subject to the decision of GOL.

The [draft] Decree sets out to be an illustration of the issues and subjects that could be covered by a Government Decree for the LNSW while trying not to be too prescriptive and thereby restrict the flexibility and elasticity of the overall implementation and operations process. It has been developed to address the requisites as set out in the LNSW Final 'Blueprint' Report. It is not intended to be definitive and the Government may adopt or reject all or part, as suits the prevailing situation.

2.8 Business Process Re-engineering

2.8.1 ‘As-Is’ Status

A critical step in the development and implementation of the LNSW is modernizing and streamlining the business processes involved in trade transactions. This includes processes that must be undertaken by traders in advance of the arrival of goods (primarily registration and license, permit and certificate issuance by Government License and Permit Issuing Agencies - CLPIAs); and those procedures involved in the actual clearance of the goods upon arrival at the border.

In late 2012 a two part report “Roadmap for Process Simplification and Harmonization” was prepared under the Lao PDR Trade Development Facility Project. These reports provide detailed analyses of existing (As Is) procedures for the issuance of permits and licenses and propose streamlined (To Be) procedures under the LNSW.

The Import / Export “As-Is” Process report (see Annex I) provides details of a similar analysis for the clearance of goods at border checkpoints. The analysis carried out was restricted to the Friendship Bridge/Thanaleng Border crossing in large part as they were the only locations where the ASYCUDAWorld (AW) system was in operation at the time.

In 2007 the Government of Lao made a significant step to streamline the clearance processes with the issuance of Prime’s Minister Office Notice No. 405 (Notice on the Elimination of Authorities at the Border Check Points) that reduced to three the number of agencies authorized to have a permanent presence at the border for the clearance of goods (Quarantine, Immigration and Customs – QIC). Currently, in addition to the LCD, there are four government agencies involved in the clearance of goods at the border – Plant Quarantine Inspection Office and Animal Quarantine Inspection Office of the Ministry of Agriculture and Forestry, Food and Drug Inspection Unit of the Ministry of Health, and the Treasury office of the Ministry of Finance (in addition to Immigration).

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With the exception of the LCD and Treasury, all processes for the clearance of goods are manual. None of the CLPIAs present at the border have any form of automated systems and all documentation and processing is manual. Traders are required to hand carry documents between offices and in all cases approval for release is based on signatures and stamps, including LCD.

While inter-agency relations appear solid, the degree of coordination of processes is limited with the CLPIAs often carrying out their inspection and authorization processes quite separate from the LCD. While joint cargo inspections are carried out in many cases, it is the trader who generally initiates and coordinates them. In the case of an ACDD submitted by a customs agent, once the ACDD has been printed at Thanaleng the agent must obtain the signature of the consignee/importer often requiring travel to the importer’s offices. They also travel back and forth between the Friendship Bridge and Thanaleng offices during the clearance process. The split operation creates additional complications and delays in clearing goods and the report recommends that these should be rationalized.

Major findings and conclusions include:

- The LNSW offers potential to facilitate strengthening of interagency coordination and cooperation at border crossings;
- The limited availability of automation and limited use of existing systems inhibits efficient border clearance procedures and trade facilitation;
- Implementation of the ASYCUDAWorld system has not been a stimulus to streamlining and simplification of procedures. ACDD processing has changed little from manual procedures, and limited use is made of the selectivity module;
- The split operation at Friendship Bridge/Thanaleng is inefficient;
- Operation of the Thanaleng State Warehouse needs to be rationalized;
- Cooperation and coordination between LCD and GAs needs strengthening;
- Limited application of risk management by LCD and lack of an inter-agency approach to risk management impedes efficiency and results;
- Volumes of imports/exports requiring Other Government Agency (OGA) authorizations are relatively low.

The report also provides some preliminary suggestions for the way forward to begin preparations for the LNSW as follows:

- Develop a clear policy and strategy to reduce (over time) the number of border inspections carried out by the LCD and GAs through an interagency approach to risk management;
- Co-location of inspection agencies in the LCD office at Thanaleng;
- Implement changes to customs declaration processing system requirement.
  - eliminate requirement to purchase pre-printed ACDDs
  - increase limit of items per ACDD (to at least 100)
  - permit multiple vehicles and motorcycles to be declared on one ACDD (develop separate receipt document for individual vehicles)
develop with GAs selectivity criteria for permit, license and certificate requirements for products using customs tariff codes

- reach agreement with Treasury to accept ASYCUDA generated official receipt;

• In the medium term, provide GAs direct access to ASYCUDA;

• Reconfigure operations between Friendship Bridge and Thanaleng Offices to a more integrated operation to facilitate LNSW implementation;

• Rationalize use of ASYCUDA manifest system with procedures at TH/FB;

• Examine feasibility of integrating the management of exemptions (Master Lists) into the LNSW or ASYCUDA.

The second deliverable under this task cluster is the Import/Export ‘To-Be’ Process Report. This report is based on the findings and further discussions and consultations with the LCD and CLPIAs. This report details proposals for the streamlining and simplification of procedures for the clearance of goods in preparation for LNSW development and implementation, and outlines potential scenarios for border clearance operations under the LNSW.

2.8.2 ‘To-Be’ Model

The Import/Export ‘To-Be’ Process Report (see Annex J) concluded that; a) the LNSW offers potential to facilitate strengthening of interagency coordination and cooperation at border crossings; b) the lack of automation and limited use of existing systems inhibits efficient border clearance procedures and trade facilitation; c) implementation of the ASYCUDAWorld system has not been a stimulus to modernization in the LCD; d) the LCD makes limited use of risk management and inter-agency risk management processes is not well developed; e) cooperation and coordination between LCD and GAs needs strengthening; and f) the split operation at Thanaleng/Friendship Bridge is inefficient. The private sector has expressed concerns about the lack of consistency and transparency in the processes, and about inefficiencies in clearance procedures that result in delays and additional costs.

The proposed LNSW is expected to encompass the electronic registration of traders with the CLPIAs, application for and issuance of licenses certificates and permits required for import/export/transit operations, the electronic declaration of goods to the LCD and other Government Agencies at the border and electronic clearance/release of goods. The following operating principles are proposed for the goods clearance processes under the LNSW:

1. A trader (directly or through a broker or agent) would interact with government on-line in real-time through the single window for all stages in the import/export process (registration, license/permit issuance, goods declaration and release, and payment);

2. The trader uses the Single Window to monitor the progress of transactions and to monitor the performance of the services;
3. Physical visits to government agencies at all stages in the processes will be reduced to a minimum, and data required by any government agency for a transaction would be submitted only once using standardized and harmonized data formats;

4. Once submitted, data would be available to authorized government officials involved in the transaction;

5. Requirements for paper documents will be eliminated or reduced to the minimum required by law and to the degree needed to ensure effective controls are maintained;

6. Within the provisions of relevant legislation (Law on Electronic Transactions, Customs Law), electronic authorizations (signatures) and “stamping” of documents will be employed;

7. Border agencies will co-locate officials, and coordinate, and where feasible, integrate their processing and inspection processes;

8. Risk management techniques will be applied at all stages in the registration, permit and license approvals and border clearance operations by all agencies in a coordinated transparent manner, making maximum use of ICT;

9. An inter-agency approach to risk management will be in operation (including an automated risk management system in the LNSW);

10. Inter-agency Memoranda of Understanding (MOUs) and related Service Level Agreements (SLAs) among LNSW Operator, the LCD and GAs will be in place;

11. An integrated enforcement data base incorporating information on all enforcement actions and results from LCD and GA verification activities will be in operation;

12. Authorized Traders will be able to submit customs declarations (ACDDs) in advance of goods’ arrival (pre-arrival processing);

13. Electronic payment of duty taxes and fees and charges processed by banks/treasury will be linked directly to the LNSW. Payment options will be offered to traders;

14. Increased reliance by LCD (and GAs) on post clearance controls; and

15. Timely, accurate and comprehensive trade related statistics will be readily available.

The proposed border clearance processes that will be in effect with full implementation of the LNSW are based on the assumptions that; a) the Permit and License issuance processes in the CLPIAs have been fully automated and integrated with the LNSW; b) the Law on Electronic Transactions has been implemented and its provisions (along with those of individual legislation such as the Customs Law) are applied to the procedures for import/export; c) an inter-agency/integrated approach to Risk Management has been put in place; and d) the recommended Functional and Technical Architecture of the LNSW has been adopted.

The current paper-based approach to control will be replaced by risk-based controls developed through a coordinated, inter-agency approach to risk management based on analysis of electronic data (both historical and transactional) rather than on the review of documents on a transaction by transaction basis. Inspections will continue to be used as a significant control mechanism for government, but the rate of interventions will be reduced and will be driven by the risk management process.
Under the LNSW trade transactions will, to the greatest extent feasible, be electronic. This will mean fundamental changes to the border clearance operations - for both traders, LCD and other GAs. Enhancements to existing systems and development of new systems, policies and procedures by the LCD and GAs will be needed to prepare for implementation of the LNSW. A phased approach to implementation of these changes is proposed as follows.

**Phase 1: Streamlining/improvements to existing processes including:**
- Increasing the number of items that can be declared on an ACDD (from 10 to 100);
- Allowing multiple vehicles to be declared on a single ACDD (with individual receipts issued for purposes of vehicle registration and control);
- Allowing traders to print ACDDs directly from ASYCUDAWorld without use of the pre-printed form;
- Eliminating the requirement for importer/consignee signature on ACDDs submitted by agents;
- Co-location of GAs with LCD at border checkpoints to facilitate closed coordination and cooperation – joint inspections – one stop service; and
- Increasing use of other GA risk profiles and selectivity indicators in AW.

**Phase 2:** Building on the initiatives taken in Phase 1, this phase entails steps to further enhance the operations of ASYCUDAWorld, additional streamlining and simplification of business processes and procedures, and strengthening inter-agency co-operation, co-ordination and risk management, including:
- Expanding remote access to ASYCUDAWorld to select traders (leased line or web-based);
- Increasing the number of GOL kiosks for input of ACDDs;
- Closer integration of the Treasury system and ASYCUDAWorld allowing the generation of an ASYCUDAWorld receipt for duty and tax payments;
- Implementing a GOL policy with respect to levels of physical inspection of goods;
- Introducing trader self-assessment;
- Further strengthening inter-agency risk management coordination and cooperation;
- Providing limited access to ASYCUDAWorld by GAs; and
- Pilot testing acceptance of scanned licenses and permits with ACDD submission.

### 2.9 Risk Management

#### 2.9.1 Overall Risk Management Model

As part of the assignment to prepare the LNSW Blueprint for Implementation, work was undertaken to develop a Risk Management strategy and model for agencies participating in the LNSW.

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5 Note some changes, e.g. as relate to use of ASYCUDAWorld, would be interim measures to be phased-out when LNSW is operational.
Research was carried out including meetings with the Lao Customs Department (LCD) and several of the other Government Agencies responsible for issuing import and export licenses and permits.

Information provided at those meetings was supplemented by a site visit to the Friendship Bridge border post and Customs office at Thanaleng and a review/analysis of available reports, documents and other material. This enabled the consultants to obtain a good understanding of the procedures relating to cargo import, export and transit procedures, the issuing of import and export licences and permits, the control exercised over the products covered by those licenses and permits and the extent to which risk management is currently used by those agencies.

This research found that the Lao Customs Department had established a Risk Management Unit and was using risk management methodologies within ASYCUDAWorld to process international cargo. The use of risk management by the Lao Customs Department is a fairly recent innovation, in part made possible through the selectivity functionality available with the introduction of ASYCUDAWorld software for processing cargo.

The Lao Customs Department does not have a formal or documented risk management model and there is ample scope for further enhancement of risk management to improve the levels of trade facilitation and to use resources more effectively. This can be achieved by focusing Customs resources on those consignments which genuinely present a high risk and expediting the release of cargo which is of lower risk.

It was reported that currently as much as 90% of import declarations are identified for the ‘Red’ channel, signifying that they are high risk and requiring further intervention esp. inspection by Customs. This is considerably higher than most countries and suggests that the selectivity criteria being used to categorise cargo as high risk is too broad and needs refinement.

The Government Agencies which issue import and export licenses or permits do not currently use risk management in a structured manner as part of their license or permit issuing or import/export control procedures. There is an opportunity for these agencies to apply risk management at three specific stages:

- at the time at which an application is received for a license or permit;
- when the Customs declaration is processed; and
- when consignments arrive or are about to leave the country.

The use of risk management by these agencies would help improve trade facilitation by focusing the agency’s intervention on high risk items and allowing for more streamlined procedures for those which present a lower risk.

A risk management model based on ISO 31000:2009 is suggested as being suitable for use by all agencies (including LCD) associated with the Lao National Single Window. Details of the proposed model are provided in the Overall and General Risk Management Model Report (see Annex K). The model should be applied at the agency level as, in the main, particular risks may be specific to individual Government Agencies.
However, for risk management to work effectively in these agencies a number of other actions are recommended, these include the following:

- Management and staff in each agency should be provided with an understanding of risk management techniques and those in key roles associated with risk management should be given comprehensive risk management training;
- Permit and license issuing agencies should explore with LCD the extent to which each agency can, as a temporary measure, utilise the selectivity functionality of ASYCUDAWorld to help identify high risk consignments;
- Permit and license issuing agencies should explore with LCD the extent to which each agency can have access to and utilise data input to ASYCUDAWorld for risk analysis purposes;
- Each license or permit issuing agency should be provided with the capability required to apply risk management to the licence or permit issuing process;
- Data input to the LNSW should be stored and made accessible to each of the agencies connected to the LNSW for risk analysis and monitoring purposes. All agencies involved in the LNSW should hold regular inter-agency meetings and to the extent allowed by law, share information and intelligence; and
- The governance and administrative arrangements outlined in Annex C of the Overall and General Risk Management Model Report should be implemented in each of the agencies associated with the LNSW.

### 2.9.2 Guidelines for Risk Profiling

The Risk Management model proposed for the use of GAs participating in the LNSW includes several steps, one of which involves deciding on what treatments to use to counter particular risks. These treatments are subsequently applied when that risk arises. However, in order to apply these treatments effectively, it is necessary to identify any instances of the risk occurring. Good risk profiling can help do this and as such, is an enabler for Risk Management.

A structured approach is required in order to develop effective profiles. In the LNSW, to be effective a profile must be current and identify only the license or permit applications and/or import/export consignments that it is intended to identify. Because risks change (over time) there is an on-going need to review risk profiles. Accordingly, the steps in this structured approach could also be seen as phases within a continuing cycle.

These steps or phases are:

- Gather information
- Collate information
- Analyse information
- Profile creation
- Record results
- Review results.
Guidelines explaining what should occur in each of these steps are provided in Appendix B of the Guidance and Proposals for the Use of Profiles by Agencies in the LNSW (see Annex L). However it should be apparent from just looking at the list of steps above that information plays a vital role in risk profiling.

While the information required by each agency may vary slightly depending on the responsibilities of the agency, generally requirements will be similar. In addition to import and export data, all agencies will require details of any instances of non-compliance, including full details of data relating to each incident, e.g. origin, HS code, value weight, exporter, importer, broker, place of entry or exit etc. Where available, information on detections in other countries is also important as it can provide an important insight into emerging risks or trends.

Analysis of the data should allow the agencies to identify characteristics which are commonly associated with licence or permit applications or consignments presenting particular levels of risk, whether high, medium or low. These characteristics can then be used to construct profiles which can be used in the LNSW to identify applications or consignments of similar risk levels. Once identified these applications or consignments can be dealt with using procedures which are appropriate to the level of risk they present.

Currently none of the agencies that will be associated with the LNSW have access to all the data that they will need to undertake the type and level of analysis which is necessary to create good quality, effective profiles. What data they have is sometimes incomplete, inaccurate and in a format which makes analysis for profiling purposes very difficult. In addition, they do not have access to analytical tools or software which allows them to undertake the type of analysis that is required. The introduction of the LNSW will provide solutions to both these issues. Initially, because quality and complete historical data won’t be available, the data available through the LNSW will limit what analysis can be undertaken. As more and more data becomes available (over time) the quality of the analysis should improve leading to the development of more effective profiles.

Before profiling can begin in the agencies it will be necessary to conduct information campaigns to raise the general of knowledge about risk management and profiling within each agency. Currently, apart from the Lao Customs Department (LCD), the level of knowledge about these matters in agencies is low. Ideally the development of profiles for an agency should be undertaken by a small group of trained officers within that agency. These officers will need detailed training on risk management and profile development.

### 2.10 Change Management

Complementary to the other task clusters within the LNSW Blueprint for Implementation, the assignment also includes the development of a change management and communications strategy for agencies participating in the LNSW. This is in recognition of the fact that successful introduction of any single window will require more than equipment and technology, and will rely heavily on the readiness, energy, capability and commitment of the people who will implement and use it on a day to day basis – both in the trade community and in government departments.
The Change Management and Communications Situational Awareness and Strategic Directions Report (see Annex M) provides detail of a situational awareness of the change management and communications elements necessary to support the successful implementation of the LNSW. It also outlines key change management and communications strategic directions which should be incorporated within a final LNSW implementation plan. The management of change is fundamental to a successful implementation of LNSW.

Although no final decisions have yet been taken on the precise scope and coverage of the LNSW, it is clear that the introduction of the LNSW, as envisaged, will involve inter alia the introduction of new technology and tools for use by a number of the key participants in the trade process, automation of and changes to a number of current business processes, the introduction of some new business methodologies (e.g. risk management) and the streamlining of current processes in the trade context. These will require the agencies, traders and staff involved to acquire new skills and adapt to new technologies, new service expectations, new business processes, new mechanisms for communicating and working together and new and rigorous oversight and monitoring processes to govern the changed environment.

The current level of preparedness (or readiness) and capacity to embrace the likely changes ahead varies between the key agencies and traders at the current time. More detail is provided in body of this report, but for example, in some agencies and trade related companies computer literacy and competence is already relatively high, but in others it is presently either non-existent or very low. In one agency (Lao Customs Department) there is at least one core system introduced for automating trade transactions (ASYCUDAWorld) and some plans for other systems to be introduced, but none of the agencies involved have widespread application of automated workflow management systems or embedded enterprise electronic data systems.

All agencies currently rely heavily on paper based processes for trade transactions and even a gradual move away from this reliance will likely be a challenge for many involved. No agency has experience of managing high-availability, high-reliability, and enterprise-strength ICT systems that are essential to and embedded into its business processes.

One of the very significant benefits of the LNSW, as currently proposed by the project, is that it will support agencies in their streamlining and automation efforts, through the rollout of automated workflow management tools and the introduction of risk management into permit issuing and regulatory processes. While this will be highly beneficial to the trade and participating departments, as well as significantly contribute towards the Lao PDR government objective of modernisation and trade facilitation, it is likely that some staff in both headquarters and provinces will initially find the changes daunting and challenging and will require careful preparation, training and support throughout the LNSW introduction and transition process.

Significant benefits will come from major change, and significant change always brings uncertainty and potential for resistance. Effective change management will, therefore, need to be integral to any implementation strategy – to balance a focus on support and engagement for the individuals and stakeholders involved as a priority, alongside plans for the technical and physical rollout of any new equipment or systems.
There will be many hundreds of individuals directly affected by the introduction of the LNSW, and many hundreds more that will have some indirect interest in it. For this reason communications and change support (including capacity building and training) will need to be segmented and tailored to meet the needs of classes of stakeholders as well as the needs of the individuals involved. Some recommendations on how this can be approached are included in the body of the attached report.

Because of the diverse nature of LNSW impacts, the change and communications program elements of implementation will need to be delivered centrally as well as at an individual department level. Each agency will need to identify senior implementation change sponsors as well as some dedicated change management resources as part of the overall LNSW implementation plan.

Agency based change coordinators will need to be appointed as part of agency implementation teams and should be enabled and expected to work together across departments and ministries, as well as with the single window operator and lead department on a coordinated change process. A proposed framework for this is included in the report.

In summary, based on the technical and functional architecture proposed for the LNSW and the recommended work and workflow changes that accompany them, the successful introduction of a National Single Window for Lao PDR border agencies and traders will require timely and effective communications, engagement, marketing, training, facilitation, monitoring and staff and technical support strategies. It will also require a mechanism for central and regular monitoring of the progress of change initiatives (and of implementation more generally) to ensure coordinated and effective use of available resources and to embed a “review and improve” approach to the changes. These will need to commence immediately – with engagement and communications to inform any final decisions about the functional and technical specifications and will need to continue for at least the first year of implementation.

### 2.11 Capacity Building and Training Needs

Developing a National Single Window is a challenging and taxing process for government and traders in any environment. Thus, the process of preparing the LNSW Blueprint for Implementation included the delivery of a Capacity Building and Development Plan for implementation of the LNSW. This is in recognition of the fact that successful introduction of any single window will require more than equipment and technology, and will rely substantially on the readiness, skills and capability of the people who will implement and use it on a day to day basis – both in the trade community and in government departments.

The report at Annex N outlines a general conceptual framework for Capacity Building and Human Resource Development which contextualises the training and development support needed for the successful implementation of the LNSW. It also details areas of human resource development which should be addressed.
within a final LNSW implementation plan. It offers a suggested framework for the preparation of a training and development program for the LNSW. Lastly, it suggests a range of possible training courses aimed at building the main competencies for key users of the LNSW and the possible attendant new workflow management or business processes and provides some estimates of the number of people who will require that training.

Although no final decisions have yet been taken on the precise scope and coverage of the LNSW, it is clear that the introduction of the LNSW, as envisaged, will involve inter alia the introduction of new technology and tools for use by a number of the key participants in the trade process, automation of and changes to a number of current business processes, the introduction of some new business methodologies (e.g. risk management) and the streamlining of current processes in the trade context. The agencies, traders and staff involved will need to acquire new skills and competencies to enable them to use the new technologies, new business processes and new oversight and monitoring mechanisms to best effect.

For the purposes of preparing the LNSW Blueprint for Implementation, ‘Capacity Building’ is understood to refer to a process which increases the skills, infrastructure, and resource of individuals, organisations and communities. Capacity building is directed at establishing real and sustainable improvements to performance and outcomes. Capacity building is more than just training, and can include organisational development, institutional strengthening and business process enhancements.

In the LNSW context, the new technology being proposed represents a substantial contribution of new capacity. Likewise, the proposed new business processes and operating methodologies (e.g. Risk Management) represent potential significant enhancements to performance outcomes for both the agencies involved and the trade. That noted, all of these changes will clearly need to be complemented by enhancements to the skills and competencies of the people who use them.

The simplicity or complexity of the preparation and support given to individuals and groups, and the amount of time and effort required to prepare them, will vary greatly depending on the changes being made, the role each individual has in the business process and on the pre-existing skills and capacity of those being trained. Whilst a core component of training and development will likely be common to all, there will also be some different needs for different groups.

For example, to train an experienced technical officer who already assesses permit applications to use the proposed workflow management tools will be relatively straightforward - if they have pre-existing comfort in using computers. On the other hand, preparing a suitable cadre of staff to be effective at designing and implementing risk profiles, based on rigorous data analysis and applying best practice risk management principles, may take considerably longer and require greater in depth effort – involving training, coaching and mentoring over time.
It is clear that the LNSW human capacity building program will need to be adequately resourced, centrally coordinated and integrated with the technology and business change implementation phases that are determined. Based on the full list of candidate locations and licences (etc.) listed in the Functional and Technical Architecture Report we estimate that there could be in excess of 2300 people who will need a level of preparation or training for the LNSW. However we also suggest that a much wider group of people (government agency staff, traders and information users) should be given introductory information on the LNSW, its broad functionality and some background on why it is being introduced. This may not require training or development activity per se, but will require effective communications mechanisms – general staff briefings, newsletters etc.

Whilst the number of people who will require training, information and support to prepare them for the introduction and operation of the LNSW is substantial, we note that the system as proposed will be rolled out to specific agencies and will encompass specific permits or licenses over time.

Likewise, it may roll-out to specific locations in a managed process over time. This would allow for some staging of the training delivery – both by location and/or by agency. That noted, the bulk of traders and freight forwarders would appear to operate in Vientiane, and as such there will be a large number of this group at least who will require training early in the implementation process.

The key to successful implementation of the human capacity building program for the LNSW will, therefore, be planning:

- based on a sound understanding of the functionality and methodologies that are to be adopted;
- that clearly identifies the people to be trained and the new skills and knowledge that will be required by them;
- that is coordinated to coincide with whatever phased implementation is determined;
- which is designed to cater for pre-existing skill and competency levels of the affected staff; and
- tailored to some extent to each of the key target groups that are identified.

This will then need to be followed by training delivery approaches that meet these identified needs and that are coordinated with the affected agencies and with the trade. In summary, it is clear that whilst there are many Lao PDR government staff and traders who are already comfortable using computers, there are likely to be some variations between the capital and the provinces, and between different government departments and different traders.

It is suggested that a competency based approach is utilised to plan, prepare and deliver training and development for the LNSW. Competencies to undertake a specific task are the accumulation of the skills, knowledge, behaviours and understandings required to not only do the job – but to add value to it. A competency based approach starts from an understanding of what those skills, knowledge and behaviour requirements are for the task at hand. An example of a basic competence for many government officials is...
literacy – the ability to read and to write effectively. In other roles interpersonal skill may be paramount and in others negotiation or analysis capability might be crucial. These are not just knowledge-based; they also have to be able to be applied.

A competency based approach recognises that individuals will come to the training or development process with pre-existing skills, knowledge and abilities – which may simplify or complicate the training task. The example of attempting to train a staff member in a new computer system if they have no pre-existing computer skill or experience is an obvious one.

In the Capacity Building & Human Resource Development Planning Report 8 proposed core training courses are outlined that should be offered in the context of the LNSW implementation and we provide an overview of who the audience should be and what those courses of training should cover. These have been developed on the basis of some simple but effective Training Needs Analysis (TNA) methodologies (including an analysis of the skills likely to be required to use the LNSW when implemented) and inputs from agency representatives who participated in a 2 day Service Level and Human Capacity Development Workshop in Vientiane in April 2013.

The bulk of the proposed training will need to be delivered by the LNSW operator for the system users, but much of it will also require input, coordination and in some cases delivery by the agencies themselves. It is important to note that we do not specify training that will be required for the LNSW operating entity and its own staff, although we are conscious that such training will be required. Clearly the operator may need to train its own people in system and infrastructure development, maintenance and support, and also to train its own help desk staff to support the various users of the LNSW.

Finally, it is noted that the numbers of people who will require LNSW training in Vientiane will likely necessitate the establishment of a temporary LNSW Training Centre in the Capital (possibly in the LCD or at a new venue) and the development and availability of a training instance or version of the LNSW. A mobile training capacity will also be required for training in the Provinces. The Functional and Technical Architecture Report incorporates a provision for the training instance of the LNSW and for training PCs, but the operator will also need to establish the temporary/interim training centre, which could be required for at least the first 12-18 months of system roll-out.

2.12 Implementation

The Implementation Framework for LNSW report at Annex O offers general guidance as to the implementation of ICT-based projects, specific guidance related to implementation of single window projects and a framework for the LNSW in particular in correlation to the various task clusters of this LNSW Blueprint for Implementation.
‘Implementation’ can be interpreted in several ways in the context of ICT-based projects but for the purposes of this framework; LNSW implementation shall be interpreted as the time or period following the preparation work by the GOL and the World Bank-commissioned Technical Assistance team, i.e., starting from now.

The ‘key phases’ identified that constitute implementation for the LNSW includes: 1) Decisions; 2) Design and Build; 3) Implement, deploy and roll-out; and 4) Post-implementation, review and monitoring. The phases are not entirely consecutive and could be expected to overlap in time:

- Decisions
- Design and build
- Implement / deploy / roll-out
- Post-implementation review and monitoring

General guidance for implementation of new business processes and new ICT should be heeded. There are several well-regarded vendor-neutral approaches backed-up by extensive literature and educational services. Additional guidance concerning implementation of ICT projects in general and specifically for single window projects, plus also experience from national single window projects in ASEAN, based on international experience is provided in the Implementation Framework for LNSW at Annex O.

Some decisions have already been taken for LNSW and formalised through a Minister’s Decision and a Concession Agreement (in principle or understanding) including that there shall be an ‘LNSW Governance Entity’, there shall be an LNSW Operator to be engaged as private sector entity formed as a Joint Venture (JV) between GOL and a private provider, and it shall be engaged on a concessionaire basis.

The significant next steps for GOL include using the information in this LNSW Blueprint for Implementation in negotiations with the JV Operator to determine and agree upon the final scope and details of:

i. the Functional and Technical Architecture and Specifications for LNSW;
ii. the Service Specifications for implementation and operation of LNSW; and
iii. the Service Level Agreement(s).

GOL needs to build upon the present Concession Agreement (in principle or understanding) with Bureau Veritas to agree a commercial Contract between GOL and the Joint Venture (JV) company to be formed to develop and operate the LNSW. This will entail consideration of the parties to the Contract especially on behalf of the GOL. This might be the Lao Customs Department or another party, e.g. a new ‘Office of the LNSW’ to be as a type of Regulator or Governance Entity, possibly formed out of the NSW Secretariat.

At implementation, the majority of the tasks and activities for LNSW would be planned and executed by the JV nevertheless the GOL needs to be sufficiently informed and involved for acceptance. The planning products
to be provided by the JV should also include clearly defined expectations that are to be placed upon the JV, the GOL, each affected government agency, the Traders and any other affected parties. The implementation of LNSW concerns the introduction of new business processes with new ICT in a ‘low-awareness’ and ‘low to medium-skill’ environment. Implementation will take affected parties from the ‘as-is’ situation through transition phases to a ‘to-be’ situation.

Implementation for LNSW will inevitably include the build phase and the final process of moving the solution from development status to production status in a series of pre-determined steps. This process is often called deployment, go-live, rollout or installation. The key phases and constituent topics for implementation of LNSW are outlined in section 3.1 of the Implementation Framework for LNSW report at Annex O.

For the LNSW and for roll-out in particular, detailed planning, effective and frequent communication and disciplined follow-through on planning will be necessary for successful operation of LNSW with few or no false-starts. During the roll-out, many of the assumptions and simplifications and decision-deferments that might happen during preparation and build phases, can come under stress.

It is sometimes appealing to contemplate an all-at-once type implementation referred to as a big bang. However, in the majority of circumstances it is impractical to implement projects for comprehensive ICT-based modernisation of business processes in a big bang. The reasons are essentially due to practical limitations on the internal and external capacity to effectively manage a broad sweep of changes. The alternative to big bang is phased implementation which means the segmentation of the overall new ‘system’ into sets and subsets with each subset being a usable, sensible combination of several components of the overall ‘system’. Together the phases lead to a full implementation of the new ‘system’.

In determining the subsets for LNSW there are several considerations, including categories of the new ‘system’, practical considerations and political imperatives. Broadly speaking there are four common categories:
1. User groups;
2. Function groups;
3. Geographic groups; and for long-term implementations
4. Technological groups.

There are two obvious implementation categories for LNSW namely, the User groups and Functions groups and as such, these are described in the Implementation Framework for LNSW report against the backdrop of the FandTA.

The Statement of Direction for Service Specifications (see Annex C) outlines the services required to implement and operate the LNSW. The LNSW FandTA specifies functional and non-functional requirements and technical architectures and describes the ‘end-game’ when a fully functional, end-to-end, complete system would be established and operational.
It is likely and recommended that the LNSW would be introduced in stages. During the stages the fully functional, end-to-end complete system would not be available but rather just subsets of the complete solution. There would need to be transitional arrangements and architectures which entail parts of existing processes and system and parts of new processes and system with temporary ‘glue’ to provide the affected parties with a sensible, usable and manageable set of business processes. Each implementation stage needs to be described and planned. The Implementation Framework for LNSW describes and outlines release architectures in terms of the classifications needed. These are instructive, providing an overview of the intricacies that need to be thought through and put in place.

2.13 Conclusions

The intent of this LNSW Blueprint for Implementation is to further aid and assist the GOL in the decision making processes as it moves forward with implementation and operation of a NSW for Lao PDR. It is suggested that whilst there is inevitably a myriad of decisions that will have to be taken with regard to establishing a LNSW; before proceeding further with preparatory activities there are still a few key questions that call for thoughtful deliberation by GOL.

The FandTA and Specifications for the LNSW have been developed based upon the established circumstances for issuing of Certificates, Licences and Permits for Imports, Exports and Transit trade transactions. The Roadmap for Process Simplification and Harmonization of Import and export Standard Operating Procedures prepared and promoted by the Lao Trade Facilitation Secretariat (TFS) and recently endorsed by member GAs will surely influence the scope of automation of CLPIAs under the LNSW. Therefore the GOL should decide upon which, if any, of the licences and permits issued by the CLPIAs could be withdrawn as being representative of non-tariff measures and having worth only as redundant statistical purpose.

If the LNSW is to provide maximum benefit and input to the trade facilitation and the simplification and streamlining of trade-related processes in Lao PDR; the GOL should decide if the LNSW is to deliver automation of the process workflows in non-Customs Government Agencies.

The LNSW as defined in the FandTA and Specifications lists eighty-seven candidate implementation sites based on identification of affected GAs, and assumptions regarding affected provinces and border locations. Many sites have very low transaction rates. As such, the GOL needs to consider the list of candidate implementation sites and modify, expand or decrease the list of sites.

The LNSW Blueprint for Implementation again underlines the benefits that might be achieved through widespread introduction or enhancement of Risk Management practices. As such, the GOL needs to consider if the LNSW is going to provide an analytical and comprehensive electronic Risk Management tool or functionality to assist all the CLPIAs along with LCD.
Numerous opportunities for the re-engineering of current business processes have been identified, including possibilities for further delegation within the trade related processes, elimination of non-Tariff Barriers (NTBs) and/or non-Tariff Measures (NTMs), reduced need for personal interaction between Government and Business, increased collaboration amongst CLPIAs, harmonization of data elements, a shifting towards a paperless environment, etc. Many are clearly associated to the establishment of a LNSW however some are not contingent and as such, the GOL should directly adopt and implement those it considers to be beneficial and productive.

It is clear that the successful introduction of a LNSW for Lao PDR border and licensing agencies and traders will require the active engagement and support of a number of important stakeholders for whom the change will represent both opportunities and challenges. Timely and effective communications, engagement, marketing, training, facilitation, monitoring and staff and technical support strategies will need to be in place to achieve that.

Therefore if the GOL is to actively support the successful introduction of a LNSW, it is recommended that the GOL should without delay:

- Establish a clear Vision and Vision Statement for the LNSW;
- Identify a Senior LNSW Sponsor in each of the key agencies;
- Establish a multi-agency Implementation Team.

Successful introduction will also require a mechanism for central and regular monitoring of the progress of change initiatives to ensure coordinated and effective use of available resources. This will need to commence immediately through engagement and communications and so it is recommended that the GOL take steps to advise, inform and publicise any final decisions covering the FandTA, the Governance arrangements to be adopted and in particular, the proposed LNSW Fee Structure and Revenue Sharing provisions.

The questions and issues facing GOL as it proceeds towards development and implementation of a LNSW are numerous and complex. Nonetheless there are however presently a few key messages and important factors to be considered as the GOL moves towards instituting and launching a LNSW.

These highlight the wide range and diversity of the tasks ahead, the importance of relationships and communications between tasks and the Government Agencies involved and the need for decisions, direction and multi-agency involvement in the LNSW.
Key decisions and activities have been summarised in the following diagram:

The decision of GOL to enter into a contract with a private sector entity to be the LNSW operator brings with it both challenges and opportunities. It is therefore thought to be important and it is recommended that GOL makes effective use of the vast amount of technical detail and information contained in this LNSW Blueprint for Implementation during the planning and preparation phases in addition to throughout the implementation and long-term operations.

An appreciation of and adherence to the many frameworks and recommendations contained in the LNSW Blueprint for Implementation should facilitate and enable the GOL to guarantee that the LNSW will deliver the eagerly anticipated trade and regulatory simplifications, harmonization, automation and business process improvements.
Annex A:

Functional and Technical Architecture & Specifications
1 Management Summary

1. This document has been prepared by the team commissioned by World Bank for technical assistance to prepare a blueprint for the definition and establishment for the Lao National Single Window (LNSW). This document describes the Functional and Technical Architecture (FandTA) for LNSW. FandTA is an essential prerequisite for the Functional and Technical Specifications which is one of the two key expected results of the technical assistance. The FandTA is a major component of the Interim Blueprint for the LNSW. Following presentation and review a final version would be issued as soon as practical. A Product Flow Diagram is provided at §2 to place the document in the context of the technical assistance. A description of the content can also be found at §2.

2. A functional and technical architecture is an overall framework for the use of information and communication technologies over time across an organization in support of its strategic objectives. The architecture provides ‘plans’ for ICT that align business goals and ICT strategy enabling the organization to make effective use of ICT to support and build the business.

3. For LNSW the key purpose of the functional and technical architecture is to establish an agreed basis upon which specifications for application software, technical infrastructure and attendant services would be elaborated for the operation and management of LNSW.

4. The architecture would also guide the specification of the protocols and technologies for interoperation between LNSW and the intended community of users within Government Agencies and the private sector, in particular international traders.

5. The Functional and Technical Architecture for LNSW is synthesized from several influences, including:

   a. Government strategic choices for single window operation, and for its ICT, including
      i. a desire for ICT enabled business processes within the government agencies to leverage strategic opportunities for government and private sector stakeholders;
      ii. the current and projected status of requirements agreed for National Single Windows within the political and technical protocols for ASEAN SW (ASW);
      iii. ambitions for interoperation or interconnectivity with ASW, taking into account current and realistically scheduled capacities within ASW.
   b. Views of traders seeking modern, efficient and transparent administration;
   c. International guidance for ICT for National Single Window implementation (esp. UN/CEFACT recommendations and ASEAN models);
   d. Industry trends in technology and infrastructure platforms, i.e. Current good practice for ICT suitable for reliable, high-availability, enterprise-strength, transaction-orientated business systems;
   e. Minimum necessary capacities for modern ICT enabled Single Window operation and technology and infrastructure environments:
i. within participating Government Agencies, taking into account existing technical infrastructure base including skill sets;
ii. within Lao PDR in general with regard to supply (goods and services), support and maintenance of ICT, electrical power and data telecommunications, and national standards for ICT, legal bases (esp. for e-commerce and e-government) and national government ICT policies;
iii. taking into account geographic and other practical realities.

f. The business models esp. as agreed for the operation of LNSW Operator and including the outcomes of the BPR recommendations, risk-based processing, fee and revenue model, and Service Level Agreements and / or objectives;
g. Raw sizing expressed in terms of business transaction volumes and consequential influences for ‘right-sizing’ a solution and quantification of components in terms of sizes and numbers;
h. Operationalization imperatives, including, Help Desk requirements. Each influence is elaborated in some detail at §3.2.

6. The architecture is elaborated in four dimensions:
   a. Applications: in terms of processes / functions and application architecture;
   b. Data and Messages;
   c. End-user; and
   d. Technical Infrastructure: in terms of Server and Network.

There are also descriptions of related issues at §10.

7. In overview, the Lao National Single Window as scoped by the terms of reference could be represented diagrammatically as follows:

- ~ 10,000 traders [Allowing for growth].
- Candidates: 11 borders, 3 agencies at each (LCD, MAF, MOH) (see Appendix A)
- Candidates: CLPIA offices: 10 in Vientiane, 7 provinces, (6 CLPIA in each) 26 CLP’s plus exemption/concession certificates (see Appendix A)
8. LNSW is a facility for electronic transactions between traders (and their agents) and Government Agencies and facilitating interoperation among Government Agencies.

1) Customs Department  Ministry of Finance
2) Department of Agriculture  Ministry of Agriculture and Forestry
3) Department of Livestock and Fisheries  Ministry of Agriculture and Forestry
4) Food and Drug Department  Ministry of Health
5) Import-Export Department  Ministry of Industry and Commerce
6) Standardization, Quality Assurance and Metrology Department  Ministry of Science and Technology

The following Government Agencies were selected as primary participants in the LNSW:

The work of LTP project has also identified other agencies related to trade regulation: Department of Defense Industry of the Ministry of National Defense, Ministry of Post and Telecommunications, Ministry of Energy and Mines the Department of Monetary Policy of Bank of Lao PDR, and the Ministry of Information, Culture and Tourism.

9. The government agencies included within the scope of LNSW have offices in Vientiane and may have offices in provinces and at border locations. Refer to Appendix A where twenty-eight candidate regulatory-documentation processes and eighty-seven candidate GA implementation locations are listed. [From the trader’s perspective: LNSW can be used anywhere. Apart from using kiosks in GA offices, the FandTA would rely upon the trader having its own ICT facilities for internet connection and interoperation either in web-page mode or messaging mode.] The motivation for the National Single Window, as a business proposition, is bi-lateral: for traders and government agencies.

10. Traders would anticipate:
   a. reduced cost and time of compliance;
   b. increased trading velocity; and
   c. predictable, more transparent processes, with less and shorter steps and less face to face interaction.

11. For government agencies the anticipation would be:
   a. new and improved facilities;
   b. more reliable, more closely and speedily integrated services to and between government agencies;
   c. facilities for information sharing and coordination of action;
   d. better compliance; and
   e. better efficiency of operation.
12. A key outcome of a successful LNSW implementation and operation would be facilitation of international trade while maintaining and enhancing national safeguards at the borders, leveraging technology for reliable, repeatable business processes using reliable information that is readily and rapidly available.

13. Regardless of the organisational models eventually adopted for LNSW, there would be some form of oversight role (a governance role or regulator) and some form of operator role. Other key roles or stakeholders are the user stakeholders: traders, government agencies, international actors, and perhaps information consumers. Refer to §3.2.5.4 for a summary of the roles of each of these actors.

14. Figure 23 in Appendix A provides some data regarding the transaction rates and §3.2.6 provides a summary analysis of these statistics. Highlight statistics (under the assumptions that need to be reviewed and tested) include:
   a. CLP: 26 types and approximately 44000 p.a. by 2018;
   b. the candidate locations for exploiting LNSW comprise: 10 Ministries and departments in Vientiane, 42 provincial / regional offices in seven provinces and 33 border sites at 11 border posts;
   c. customs declarations: approximately 300000 p.a. by 2018 of which approximately 24% have line items requiring CLP.

15. High-level functional sets to be provided by the operating entity are deduced from the influences described in section 3 and are illustrated below. The main elements are described in some detail at §4.2 in terms of functional scope: concept of operation and functional content and ‘mock-ups’ to illustrate content and usage.

16. LNSW would provide a registration function to cover all requirements for all participating GA’s – refer to §4.2.4.

17. Using the Trader’s Workbench, a trader could:
   a. use LNSW-trade-expert assistance to guide the identification of permits etc;
   b. update its registration details;
   c. inspect its history of trade related transactions lodged with LNSW;
   d. record trade related data elements (TRDE) by data entry and attach uploaded scanned images into a trade folder;
   e. submit / send the CLP applications to a GA;
   f. compile and complete customs declarations and send to LCD;
   g. track the progress of the application or declaration through the Workbench;
h. would respond to enquiries made by the GA through the LNSW;

i. eventually receive the result of the permit application / declaration by message from LNSW (LNSW having been so advised by message from the GA). The trader would then finalise the process by a method specific to the GA according to its business rules (possible procedures outlined at §4.2.2.1). This could include an electronic version of permit / clearance document / gate pass (when the GA is ready to upgrade to e-permits);

j. facilitate payment of associated fees and charges (according to the eventual model selected specifically for the GA).

In addition to the web-based method, the functional architecture also provides for message based operation for a sophisticated trader using an ERP system.

The LNSW functional architecture for traders is described in some detail at §4.2.2.
18. The Government Agency Workbench of LNSW provides three functional sets for CLPIA administration, for LCD officers and for border agencies:
   a. For CLPIA the ‘level 1’ functional architecture is an agency-specific, model-based implementation of a workflow-management / business-process-management system available in three variations:
      i. a standard model;
      ii. a reduce step model should an agency choose not to have all steps in the standard model;
      iii. an expanded model for a GA that seeks to support its operations more deeply or broadly.

The standard model (taken from LTP project with minor modifications for LNSW) is illustrated below.

Appendix A lists 26 candidate certificate, license, permit, and so on. For each there would be a specific configuration of standard model.

b. in practical terms the operation at a GA would allow officers according to their specific authorities to:
   i. exploit risk-based processing route selection (if enabled for the GA);
   ii. inspect their role-based online ‘in-tray’ for work to be done, select an item and work on it;
   iii. actioning the work-item by sending it on to the next step;
   iv. perform their role in a manner specific to each GA utilising the LNSW workbench in a manner specific to the GA.

In addition to the web-based method, the functional architecture also provides for message based operation for a sophisticated trader using an ERP system.
The LNSW functional architecture for CLPIA officers is described in some detail at §4.2.5

c. For officers at LCD and at a border agency, the functional architecture includes a corresponding specific workbench and workflow. Refer to §4.2.5.6 (for LCD) and §4.2.5.5 (for OGA). Subject to access control privileges, permit enquiry and verification services would be provided by LNSW as described at §4.2.6.

19. LNSW declaration lodgement and ASYCUDA World integration is outlined at §4.2.7. The model entails message-based interfaces between the LNSW software system and ASYCUDAWorld software system. [Use of XML EDIFACT messages are described in this document.] LCD would otherwise process declarations according to their specific, evolving business processes.

20. The functional architecture also contains descriptions of:
   a. Integration with LCD ‘master List’ systems for administering exemptions / concessions – refer 4.2.8;
   b. ASEAN SW Integration Module – refer §4.2.9;
   c. LNSW Help desk – refer §4.2.10;
   d. LNSW Fee / Revenue Model (in broad terms only pending further work on this topic) – refer §4.2.11;
   e. LNSW Risk Management – refer §4.2.12.

21. Functional sets described in overview include:
   a. LNSW Performance Monitoring – refer §4.2.13;
   b. LNSW MIS – refer §4.2.14;
   c. LNSW Information Services – refer §4.2.15;
   d. Additional administrative functions required by the LNSW governance entity and LNSW Operator – refer §4.2.16;
   e. LNSW Infrastructure functions – refer §4.2.17;
   f. LNSW non-functional characteristics – refer §4.3.

22. The functional model described at (16) to (21) in terms of functions and process is driven from operational requirements within the scope of project objectives. The application architecture to facilitate these functions is described in a manner consistent with both operational requirements and the various influences and preferences for a modern ‘good practice’ solution and is cognisant of (a) ‘right-sizing’, (b) affordability; (c) availability of supply, (d) availability of services for sustainability, and (e) market ingenuity that may introduce new and perhaps ‘better on balance’ products.

It may be that the eventual LNSW solution has different application architecture, however the architecture presented here should be viewed as ‘recommended’.

23. The application architecture depicted here for Lao National Single Window includes:
   a. service orientated architecture (SOA);
   b. web services;
c. workflow management / business process management architecture;
d. n-tier component based architecture;
e. browser / thin client for the presentation layer;
f. single centralised model (that may be distributed and replicated physically).

24. The application architecture, as described, is:
   a. scalable functionally: both horizontally and vertically to provide growth and durability;
   b. loosely coupled: between the application modules, and between the application modules and the technical infrastructure, to provide functional enlargement and replacement transactional scalability with reduced system engineering and to facilitate business process redesign;
   c. compatible with a technical infrastructure (outlined at §8 and §9) that is also characterised by a component based architecture and also scalable vertically (within a component: e.g. processors, RAM, HDD) and horizontally: (e.g. clustered / fail-over units; replicated channels…).

25. The application architecture is illustrated below. The purpose of each of the layers is described at §5.2.
26. Data and Message model is described at §6:
   a. The Data model relies upon applicable segments of WCO Data Model v3 definitions for data structures and attributes (and by extension UN/TDED and UN/LOCODE definitions), including naming conventions. Implementation within the eventual LNSW solution would necessarily entail on the one hand, a subset of relevant segments of the WCO data model and many extensions specifically related to CLPIAs, and on the other, LNSW functions and the LNSW implementation model.

   LTP project has done extensive work defining entities and attributes for the data model. Refer to Roadmap for Process Simplification and Harmonization Final Report, in particular §5.4 and Appendices B and E for details. The data model in that report is a substantial body of work that fundamentally underpins the functional architecture for LNSW;

   b. The message model (for interoperating software systems and subsystems, and for web services) relies upon:
      i. XML translations of the following EDIFACT messages:
         CUSDEC: Customs Declaration Message (as applied for ASEAN Customs Declaration Document (ACDD).
         CUSRES: Customs Response Message
         APERAK: Application Error and Acknowledgement Message
         DIRDEB: Direct Debit Message
      ii. potentially WCO SW message GOVCBR;
      iii. a to-be defined LNSW XML Protocol for interoperation with technologically sophisticated LNSW Traders and CLPIA’s and as the basis of LNSW’s own web services;
      iv. SMS and Email (specific protocol / content to be defined);
      v. ASEAN SW Message Protocol (when defined).

27. The End-User model is defined at §7 for the following user classes:
   a. traders – via LNSW kiosks, their own internet connected devices, SMS device, potentially via system-system messaging, potentially using dedicated circuits in place of internet connections;
   b. government agencies – in the same manner as above It is anticipated that LNSW would entail the provision of technical infrastructure at all LNSW connected GA’s – some 87 such sites and including approx. 1585 network and end-user devices (PC’s, PDA’s, mobile devices printers and scanners);
   c. LNSW Operator, LNSW Governance Entity, LNSW Help Desk – using standard end-user devices over the LNSW VPN / VLAN;
   d. information consumers – using their own internet connected devices;
   e. ‘need-to-know’ users - i.e. users that have been accepted commercially / legally as broadcast recipients (police, immigration, etc.).
28. The technical architecture is defined in some detail at §8 and §9:

The technical architecture is described in a manner consistent with operational requirements and the various influences and preferences for a modern ‘good practice’ solution and is cognisant of (a) ‘right-sizing’, (b) affordability; (c) availability of supply, and (d) availability of services for sustainability. It may be that the eventual LNSW solution has different application architecture, however the architecture presented here should be viewed as ‘recommended’.

Characteristics for the server architecture include:
- adequate (‘near high’) reliability and performance;
- near 24x7 operational hours;
- dual central computer sites, in active / passive mode, with replicated technical infrastructure for LNSW production;
- n-tier server architecture for production services with separation of server by role, esp. for infrastructure servers, database servers, application servers, and web-servers;
- production data held on SAN device at each central site with multiple channel access to database servers;
- production servers: multiple-redundant component-based architectures in clustered;
- infrastructure (servers and SAN) for business intelligence / information services;
- separate infrastructure for non-production services: transition-to-live (quality control / testing), training and development;
- infrastructure servers for management, administration, and security.

Key characteristics of the network infrastructure include:
- centralised management;
- ‘good practice’ LAN / VLAN design;
- data-centre grade LAN in data centres;
- a WAN implemented as LNSW VLAN and LNSW VPN;
- LAN, wireless LAN at each participating GA office;
- mobile device telecommunications gateways. Refer to §8 and §9 for detailed descriptions and illustrations.

29. Section 10 describes certain other aspects implied by or necessary for the functional and technical architecture:
- physical infrastructure for the data centres and GA offices;
- Management Model:
  - administration and organization;
  - services to operate, support and maintain the new ICT including consideration of Service Levels and Agreements and Objectives;
  - security:
    - physical (safe physical environments),
    - data (transaction logging, restart journals, backup sets, restart methods, recovery methods), and
    - logical for access – usage (for identification, authorization, encryption, non-repudiation, audit trails).
c. (very briefly) Business continuity.

30. As a final item for this management summary, an overview of estimates of cost is provided below. These are very preliminary estimates at the level of detail available from architecture descriptions.

<table>
<thead>
<tr>
<th>Cost Element - capital</th>
<th>Cost est. USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data centres</td>
<td></td>
</tr>
<tr>
<td>• Physical Infrastructure – 2 data centres (main and business continuity / backup)</td>
<td>480,000</td>
</tr>
<tr>
<td>• Technical Infrastructure – main data centre – based on technical architecture with multiple Services, each with multiple servers, and system software and infrastructure</td>
<td>1,151,000</td>
</tr>
<tr>
<td>• Technical Infrastructure – business continuity / backup data centre</td>
<td>869,000</td>
</tr>
<tr>
<td>• Subtotal – data centres</td>
<td>2,020,000</td>
</tr>
<tr>
<td>End-user equipment costs – 87 sites, each with allowances for end-user equipment plus infrastructure equipment and fit-out</td>
<td>2,934,000</td>
</tr>
<tr>
<td>Implementation – project management, LNSW software licence, CLP workflows (26 permits, border agencies) (Note: this is difficult to estimate accurately.)</td>
<td>3,100,000</td>
</tr>
<tr>
<td>Year 1 (implementation year) support and maintenance</td>
<td>619,000</td>
</tr>
<tr>
<td>Total Supply and Build Estimate</td>
<td>8,673,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cost Element – recurrent</th>
<th>Cost est. USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management, technical support, operations, help desk (5 years)</td>
<td>5,200,000</td>
</tr>
<tr>
<td>Telecommunications (4 years)</td>
<td>1,200,000</td>
</tr>
<tr>
<td>Power supply</td>
<td>105,000</td>
</tr>
<tr>
<td>Support and maintenance (5 years)</td>
<td>2,546,000</td>
</tr>
<tr>
<td>Total recurrent costs</td>
<td>9,051,000</td>
</tr>
<tr>
<td>year 1 (incl. above as capital cost)</td>
<td>619,000</td>
</tr>
<tr>
<td>year 2-5 p.a.</td>
<td>2,108,000</td>
</tr>
</tbody>
</table>

Note also that the cost estimates would reduce if the GoL (1) restricts the CLP to be included in the project scope as may occur with a rationalization of CLP and discontinuation esp. of those for statistical purposes and (2) in recognition of some very low transaction sites at some places, may restrict the number of implementation sites and hence the places needing FandTA facilities.
2 Introduction

2.1 Context

This document has been prepared by the team commissioned by World Bank to prepare a blueprint for the definition and establishment for the Lao National Single Window.

The “Expected results” of the Technical Assistance (as defined in the Terms of Reference and in the Technical Proposal) are:

1. A national ‘blue-print’ for the establishment and implementation of the Lao National Single Window (LNSW) constructed from the delivered and agreed to outputs; and

2. Functional and Technical Specifications suitable for the preparation of bid documents for the LNSW environment and system.

This document contains the Functional and Technical Architecture (FandTA) for the Lao National Single Window and fulfils the first of two major deliverables of Task Cluster 4 within the technical assistance.

The FandTA is an essential prerequisite for the Functional and Technical Specifications which will be developed from this FandTA after its review.

The FandTA is a major component of the Interim Blueprint for the LNSW

In the preparation for the FandTA, the team prepared a diagnostic instrument to obtain an understanding of the purpose and procedural overview of the business processes, the volume of relevant business transactions and an overview of organizational characteristics of relevant Government Agencies. In this research, the work already completed by Lao Trade Portal project was valuable. As was anticipated, in the absence of existing ICT systems, some volumetric data was not easily obtained. In such cases, ‘best guesses’ have been used. Other sources were also used for research. A bibliography is included as Appendix C.

The team has also summarised practices elsewhere for ICT implementation for Single Window. The results are included as part of the Operational and Governance Model report/The FandTA builds upon the work of other members of the consultant’s team; esp. concerning the governance/operational model, and BPR\(^1\) and risk management findings and recommendations (Task Clusters 2, 6 and 7, respectively). For revenue and fee model and service level agreements, ‘statements of direction’ were not yet articulated, and assumptions were drawn from first principles, terms of reference and the proposal.

\(^1\) BPR – business process reengineering
Product Flow Diagram
The product flow diagram for the products of the LNSW FandTA and LNSW FandTS is illustrated in Figure 1.

The functional and technical architecture are developed conjointly and prepared as a single product.

Following review of the architecture, specifications would be developed as an elaboration of detail of the architectural elements in terms of quantities, sizes and technical characteristics.

Both the Architecture and Specifications would not be solution specific but only elaborated in terms of necessary and desirable requirements. The intention is that bidding documents would be developed to include these specifications and other requirements. It is intended that the Lao NSW Team would utilise the bidding documents to solicit and leverage market knowledge for the best available solution.


ICT Architecture products

The key ICT Architecture products are:

1. Draft ICT Functional and Technical Architecture for LNSW:
   a. To be issued to the World Bank for review and comment and then to stakeholders during February 2013;
   b. The architecture is issued as a Microsoft Word document.

2. Presentation of Draft ICT Architecture for LNSW:
   a. Now to be part of the Interim Blueprint event scheduled for February 2013;
   b. It is planned to be accompanied by an architecturally-consistent look and feel mock-up or simulation of the LNSW representing selected elements of the architecture;
   c. The presentation will use Microsoft PowerPoint;
   d. The presentation will be prepared in English and summaries and key parts of the presentation will be translated to Laotian for review purposes. It will be presented in English and Lao.

3. Final ICT Architecture for LNSW:
   a. The final issue will be a Microsoft Word document of the same general layout and content based on feedback received;
   b. The Final version would be issued to the World Bank as soon as practical.

2.2 Content

The Draft ICT Architecture for LNSW is a Microsoft Word document with embedded figures and tables. It is prepared in English with summaries and key parts of the document translated to Laotian for review purposes. The content is defined in Figure 2.

Figure 2 Layout and methods for Draft ICT Architecture for LNSW

<table>
<thead>
<tr>
<th>Attribute / Section</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management Summary</td>
<td>Summary of document</td>
</tr>
<tr>
<td>Introduction</td>
<td>Narrative description of the document layout and purpose</td>
</tr>
<tr>
<td>Architectural influences</td>
<td>Summaries of key influences and consequences for the architecture</td>
</tr>
<tr>
<td>Application: Process list</td>
<td>1. A function catalogue (specific functions and general functions) derived from available information and a high-level functional decomposition; 2. Suggested lists of MIS and operational reports and performance dashboards in addition to performance monitoring/metering aspects; 3. Non-functional characteristics, including, e.g. internationalization and presentation language, to be supported by the eventual solution.</td>
</tr>
</tbody>
</table>
| **Application: Architecture** | 1. Drawn from process list and functional decomposition, illustration and short narrative showing architecture stack, components, and locations conceptualized in parallel with data, server, and end-user and network models.  
2. Interoperation between applications and with other organizations. |
| **Data and Message Model** | Illustration and short narrative listing or referring to data and message references, esp. WCO DM v3, UN/EDIFACT, drawn from reference sources and showing data stores and locations conceptualized in parallel with application architecture, server, end-user and network models. |
| **End-user model** | Illustration and short narrative showing user types and usage, conceptualized in parallel with application architecture, data, server and network models. |
| **Technical Infrastructure Model: Server and system software** | 1. Illustration and short narrative showing implementation locations and broad server characteristics and architectural limitations to the extent possible, conceptualized in parallel with application architecture, data, end-user and network models.  
2. Server model includes consideration of computer hardware, LAN equipment, and system software (operating system, database, application integration, business process management / message handling, session / transaction management) |
| **Technical Infrastructure Model: Data Communications** | Illustration and short narrative showing network topology (sites and interconnections and interconnection methods) after consideration of existing network topology, conceptualized in parallel with application architecture, data, server and end-user models. |
| **Other considerations** | Short narratives, illustrated where appropriate, noting pertinent aspects of various topics including the following:  
1. physical infrastructure,  
2. administration and organization,  
3. security – physical (safe physical environments), data (transaction logging, restart journals, backup sets, restart methods, recovery methods) and logical for access – usage (for identification, authorization, encryption, non-repudiation, audit trails)  
4. services to operate, support and maintain the new ICT including consideration of Service Levels and Agreements and Objectives,  
5. Business continuity. |
| **Performance parameters** | Nomination of desirable minimum performance specifications. |
| **Acronyms and Abbreviations** | List and short description |
| **Supplementary Annexes** | Including Business Statistics - derived relevant business transactional statistics made available through survey data from the Government Agencies, World Bank data and other sources. The statistics are one of the architectural influences. |
3 Architectural influences

3.1 Definition

A functional and technical architecture is an overall framework for the use of information and communication technologies over time across an organization in support of its strategic objectives. The architecture provides ‘plans’ for ICT that align business goals and ICT strategy, to enable the organization to make the effective use of ICT to support and build the business.

For LNSW the key purpose of the functional and technical architecture is to establish an agreed basis upon which specifications for application software, technical infrastructure and attendant services would be elaborated for the operation and management of LNSW. Those specifications would, in turn, feed to procurement specifications and / or terms of reference for the operating entity for LNSW. The procurement specifications would probably also cater for ICT requirements for the LNSW governance entity (or regulator) and at least minimum aspects within the participating Government Agencies. The architecture would also set guidance for the specification of the interoperating interfaces between LNSW and the intended community of users within Government Agencies and also the private sector, in particular international traders.

3.2 Influences

The Functional and Technical Architecture for LNSW is synthesized from several influences, including:

1. Government strategic choices for single window operation, and for its ICT, including:
   a. a desire for ICT enabled business processes within the government agencies to leverage strategic opportunities for government and private sector stakeholders (e.g. refer to Lao Trade Portal Road map document (ROADMAP FOR PROCESS SIMPLIFICATION AND HARMONIZATION FINAL REPORT);
   b. the current and projected status of requirements agreed for National Single Windows within the political and technical protocols for ASEAN SW (ASW);
   c. ambitions for interoperation or interconnectivity with ASW, taking into account current and realistically scheduled capacities within ASW;
   d. international good practice for administration that includes longer term ambitions for ‘paperless’ operation.2

2. ‘Views of the Trade’ e.g. as documented following input by LIFFA, LNCCI and other traders a (cross-section of the trade, representative of the majority of enterprises that account for 80/90% of all the imports into Laos) as part of Lao Trade Portal project in its Final Report:
   a. Permit processing times are detrimental to business;
   b. paper applications for licenses and submitting them by hand was time consuming and costly to their business, repetitious (same data sent repeatedly) and unnecessary given their existing enterprise computer systems;

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2 Note: in ‘paperless’ operation, international norms are that:
1. Responsibility for the safety and security of documents (physical or electronic records) transfers to the trader.
2. Documents must be fully, readily, and reliably accessible to LCD / OGA under enforceable legal obligations.
3. The penalties for inadequate / fraudulent record management need to be a severe deterrent to mal practice, at least as severe as fraudulent or criminal behaviour concerning the transaction to which the documents relate.
c. chasing applications was necessary, required unwanted face-to-face time, and often required “incentives”;

d. entering ACDD at checkpoints was undesirable when it would be better done on-line from the trader’s premise;

e. processing of declarations always required at least documentary checks by several officers and depends on ‘who you know’ and ‘what you do’;

f. those with advanced computer facilities and use enterprise systems for their business would all welcome the opportunity to submit applications electronically, generated automatically from their system, saving the need to send people to the various departments and ministries.

3. International guidance for ICT for National Single Window implementation (esp. UN/CEFACT recommendations and ASEAN models);

4. Industry trends in technology and infrastructure platforms, i.e. Current good practice for ICT suitable for reliable, high-availability, enterprise-strength, transaction-orientated business systems;

5. Minimum necessary capacities for modern ICT enabled Single Window operation and technology and infrastructure environments;

a. within participating Government Agencies, taking into account existing technical infrastructure base including skill sets;

b. within Lao PDR in general with regard to supply (goods and services), support and maintenance of ICT, electrical power and data telecommunications, and national standards for ICT, legal bases (esp. for e-commerce and e-government) and national government ICT policies;

c. taking into account geographic and other practical realities.

6. The business models esp. as agreed for the operation of LNSW Operator and including the outcomes of the BPR recommendations, risk-based processing, fee and revenue model, and Service Level Agreements and / or objectives;

7. Raw sizing expressed in terms of business transaction volumes and consequential influences for ‘right-sizing’ a solution and quantification of components in terms of sizes and numbers;

8. Operationalization imperatives, including, Help Desk requirements.

The synthesis is based on the experience, intuition, and knowledge of the consultants aided by research available to the consultants.

The architecture is elaborated in four dimensions:

(1) Applications: in terms of processes / functions and application architecture;

(2) Data and Messages;

(3) End-user; and

(4) Technical Infrastructure: in terms of Server and Network.

There will also be consideration of related issues as indicated at §2.2.

The FandTA also sets-out minimum internal administrative features for an operating entity.
3.2.1 International practices in other NSW implementations

UN/CEFACT’s Recommendation No. 33 and ASEAN’s definition³ for National Single Windows are used to guide ‘good practice’ for countries aspiring to implement systems approaching the definition of “Single Window”. The definition can be summarised as:

- a single submission of data and information;
- a single and synchronous processing of data and information; and
- a single decision-making for customs release and clearance of cargo.

The UN/CEFACT Recommendation lays out a very broad implementation model for Single Window operation from, notionally, an administrative model without ICT to a system that anticipates closely integrated regulatory agencies facilitated by modern technologies, esp. ICT.

Ambitious projects seek to integrate trade regulatory agencies, border management and transport / logistics agencies (government regulators and operators and private operators). Beyond this, futuristic models could aspire to participate in or be the focal point for a leading-edge e-commerce supply-chain system, encompassing a virtual market place with warehouse-to-warehouse e-trading in which, source and destination traders, related financial and logistics providers and certification and regulatory agencies all exchange business and regulatory messages. A basic premise underpinning the integration through these models is the opportunity presented by the data describing a trade: a relatively constrained set of data of relevance to many of these participants in the regulation and demand-and-supply-chain of the trade transaction.

Refer to the LNSW Report: Operational Model / Governance Model for a summary of international experience with trade Single Windows.

For the LNSW, it may not always be helpful to reflect too closely on the specific details of the implementation models in advanced economies where single window type operations build layers of interoperation upon legacy systems each with functional depth, breadth and maturity and massive investment. Furthermore, the political or economic imperatives in the advanced economies reflect (a) their specific priorities and initiatives from time to time, and (b) trading volumes and the business needs within those places, where, for example, multi-million dollar investment to shave fifteen seconds off an electronic transaction dwell time might be considered justifiable. Singapore’s TradeNet, New Zealand’s Trade Single Window/Joint Border Management Project, the United Kingdom’s International Trade Single Window, Australia’s TradeGate, and the US International Trade Data Systems are all examples.

³ UN/CEFACT Recommendation No. 33, Geneva, July 2005
Protocol to Establish and Implement the ASEAN Single Window, 21-22 March 2006
Nevertheless, the basic premise holds throughout these examples and is pertinent in the context of the technological solution for the LNSW: a Single Window to provide a simplified relationship with each trader through a unified interface to the regulatory agencies as a key development for trade facilitation. Laos aims, through this project to prepare to implement business procedures and systems whereby a trader (directly or through a broker or agent) would interact on-line in real-time through a single entity (a single window), use that window as the conduit for subsequent intermediate transactions, when necessary, and for the final transaction that obtains the release of goods.

Most frequently, and increasingly so, the ideal would be for a standard turn-around time for the release instruction back to the trader without further human intervention within seconds. Such procedures and systems could be held up to be consistent with international best practice and set a scene for longer-term aspirational targets for LNSW.

3.2.2 Government strategic choices for single window operations

3.2.2.1 ICT enabled reengineered business processes for LNSW GA’s

The business process reengineering recommendations by this technical assistance team and others, especially under the Lao Trade Portal project, have identified the following opportunities:

1. for traders:
   a. a secure and private electronic workbench to assist the trader comply with the regulatory requirements for international trading and for collating, storing, processing permit requests and declarations, with data entered only once, handling communication with CLPIA, LCD and other border agencies.
   b. improved experience when dealing with the regulatory agencies: improved process certainty and transparency with quicker turnaround times and lower compliance cost.
   c. possibility of coordinated inspections by border agencies, when inspections are deemed necessary.
   d. possibility of ‘fast track’ processing in CLPIA and at borders depending upon the nature of the trader and the trade transaction under risk-assessed procedures implemented by GA’s.
   e. track and trace ability, that is, a secure and private online facility to track the progress of a CLP application / request or a declaration.
   f. e-government services, especially for larger traders with sophisticated ICT ERP systems.
   g. service level agreements and agreement monitoring.

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4 E.g. when subject to risk based processing, for corrections and clarifications and so on. Another aspect of trade facilitation would usually be ‘standard’ operation implemented as simplified, shortened and streamlined regulatory processes. Stricter regulatory procedures would only be invoked based on risk based selection.

5 ERP – enterprise resource planning
2. for Certificate / Licence / Permit issuing agencies (CLPIA):
   a. a common model, in the form of a dynamic CLPIA electronic ‘workbench’ for ICT-enhanced business processes leveraging BPM / WFM technologies and what might be described as a ‘level-1’ capability for LNSW interoperation
   b. ICT facilities to enable practical use of that common model, probably as 3G capable and / or cabled WAN, and wireless local area networks implementing a VLAN connecting nominated GA offices each with desktop computers, notebook computers and /or tablet devices plus printers and scanners
   c. removal of the necessity to repeatedly capture and sight trader identification / authentication documentation (company registration, tax registration and trading licences)
   d. capability for gradual evolution towards risk-based selection of process method for each specific transaction
      (1) at the transactional level through risk-filters for process-path selection and
      (2) at the management level for support for: (i) transaction analyses of risk-filter performance, trader, product, and country of origin and perhaps other data, and (ii) storing and exploiting intelligence data. Both management-level capabilities provide feedback for refining and updating risk-filters.
   e. necessity of future-proofing in terms of functional scalability, vertically and horizontally, including potential growth into a ‘level 3’ capability for LNSW interoperation
      [This would entail interoperation between LNSW and a well-resourced, enterprise-strength ICT-enabled business system within a CLPIA. The interoperation would be based on a published messaging protocol between LNSW and the CLPIA system. Lao Customs Department, with its ASYCUDA World capabilities, might be considered a ‘level 3’ participant in LNSW. It would be expected by all that the CLPIA involved in LNSW would, in the medium to longer term, all grow into their own advanced ICT-enabled business systems. Those new systems should be compatible with ongoing interoperation with LNSW.]
   f. depending upon the fee and revenue model: a self-funding service that guarantees support and maintenance and long, reliable system life for a well-performing system

   [For a list of permits etc. that are candidates for inclusion within LNSW refer to Figure 23 at Annex A. For a list of candidate implementation sites refer also to Annex A.]

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6 It is axiomatic for this technical assistance that the Lao NSW will rely upon on ICT. A ‘level 0’ capacity is not elaborated in this document, but in summary it could comprise a minimal cost, functionally and operationally simple, ‘secure-delivery’ electronic mail service between LNSW and GAs for permit requests and permits. It would provide negligible ‘track and trace’ for traders and no form of managed service for CLPIA’s. The work of LTP project has indicated aspirations in the CLPIA’s beyond this capacity.

7 WAN – Wide Area Network for data telecommunications

8 VLAN – Virtual LAN
3. for Lao Customs Department:
   a. a secure and private electronic submission of declarations by traders at their own premises, built upon
data already available from LNSW registration and permit processing, thereby facilitating traders and
providing process integrity
   b. linkage between LNSW and ASYCUDAWorld through a messaging protocol
   c. sophisticated benefits (e.g. for workload and resource planning) that could be leveraged, subject to
authorization to read, from early knowledge of impending declarations – made possible by the data
stored upon lodgement of permit requests
   d. online verification, automatically and by officer-enquiry, of permits attendant to a trade
   e. online access, subject to data privacy limitations, to a database of trade data folders for analyses for
management purposes
   f. coordination with other border agencies for physical inspections when deemed necessary under
risk-profiling
   g. an enhanced capability for risk management: (1) transaction analyses of risk-filter performance, trader,
product, and country of origin and perhaps other data, and (2) storing and exploiting intelligence data. These
analyses provide bases for adjusting risk-filters in ASYCUDAWorld, reactively and proactively
   h. depending upon the implementation model selected: the LNSW central ICT facility elaborated later in
this document

4. for other border agencies (MAF, MOH):
   a. a common model for an electronic ‘workbench’ for use by border agency personnel
   b. ICT facilities compatible with the electronic ‘workbench’ to enable practical use of that common
model, probably in the form of office equipment and mobile devices (tablets or smart phones) with
internet connectivity
   c. benefits that accrue from early knowledge of impending declarations that are enabled, subject to
authorisation to read, by the lodgement of permit requests, e.g. for workload and resource scheduling
   d. capability for experimentation with risk-based processing
      (1) at the transactional level through risk-filters for process-path selection and
      (2) at the management level for support for (i) transaction analyses of risk-filter performance, trader,
product, and country of origin and perhaps other data, and (ii) storing and exploiting intelligence
data. Both usages provide feedback for evolving coordination with other border agencies for physical
inspections when deemed necessary under risk-profiling

5. for information consumers: a database of trade related data than would be screened to redact
   confidential, private and identification data concerning trader and government agency

3.2.2.2 ASEAN requirements

Laos is party to ASEAN agreements for the Single Window. This encompasses the establishment of a National
Single Window (NSW) and participation in the eventual ASEAN SW. This Technical Assistance prepares for the
implementation of a LNSW and is clearly part of the process whereby Laos satisfies its agreements.
The ASEAN Secretariat has formulated its model for integration of the various National Single Windows through an ASEAN Single Window and initiated feasibility studies and pilot projects such as the exchange of electronic copies of ATIGA Form D to substantiate Rules of Origin within ASEAN in support of the scheme for preferential tariffs. The feasibility studies explore technological aspects as well as aspects pertaining to political environment, national legislation and international trade law. As of the time of writing the specific details of the implementation model for ASW have not been finalised.

For the LNSW functional and technical architecture and specifications, ASEAN SW project provides the ASW Technical Guide (Version 3/2006, March 2006). Key elements of particular pertinence to this Technical Assistance include:

1. Standardised documentation, notably the ASEAN Customs Declaration Document (ACDD) and ATIGA Form D (a Certificate of Origin or COO);
2. Standardised data and message standards, notably the WCO Data Model and UNeDocs\(^9\) packaged as XML/EDIFACT and XML trader-related messages;
3. Ability to store and forward (by push or pull) ACDD and COO between the countries involved in a particular trade from LNSW through ASW to another NSW and vice versa.

The FandTA includes elements to realise a solution to meet the ASEAN SW requirements.

### 3.2.3 Industry trends in technology and infrastructure platforms

Ease of use, high availability and better-than-good performance are keys to successful operation and up-take of the LNSW. It is vital that traders and government agency users of any LNSW are not deterred from its use by arduous procedures (or additional procedures for extra steps added to a continued manual operation), poor performance, poor system maintenance or (especially for the private sector users) costs that outweigh benefits. Users of the LNSW, in particular traders who may be relying on guaranteed through-put times and may be paying fees, expect certainty of service and acceptable performance of the technology and the business processes.

Durability and scalability are keys to long system life and the ongoing usefulness and relevance in an evolving technological and business environment. The eventual solution must incorporate technical and financial sustainability which is more important than the more ‘exciting’ initial establishment of any service for LNSW.

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\(^9\) UNeDocs has been redefined as Buy-Ship-Pay UN/CEFACT Business Subset for International Trade. Throughout this document for simplicity, the term UNeDocs will be used.
To protect investment, improve system durability and reduce risk, the LNSW architecture and specifications require that technical infrastructure is based on modern and proven open systems architectures\textsuperscript{10} and specifically for open system interconnection\textsuperscript{11}.

The technical infrastructure needs scalable, resilient, high-availability devices with multiple-redundant component based architectures. For servers, clustering capability would improve scalability and reliability of service. For resilience, response-time performance and through-put, the data communication architecture would be ideally served by multi-channel, multi-site structures.

For the application software for LNSW, benefits would accrue from an architecture based on non-proprietary, Business Process Modelling (BPM\textsuperscript{12}), work-flow-orientated standards and products operating in a Service Orientated Architecture (SOA\textsuperscript{13}) to provide for functional renewal and expansion\textsuperscript{14}, technological renewal and to accommodate interconnectivity with external systems. Data and message would require international standards and specifically those recommended by ASEAN Single Window project.

The architecture for LNSW, however, needs to be ‘fit-for-purpose” and “right-sized”, especially when volumetric realities are considered. The transaction volumes within Laos are relatively low especially when spread over many government agencies, provinces, and borders. Consideration of cost and benefit, imply that the implementation needs to be amendable to products available in the market (Commercial-Off-The Shelf) rather than rigidly determined by detailed, design-prescriptive requirements. In other words, it may beneficial to acquire and implement a customizable product / product set that may not perfectly match the architectural blueprint.

\textsuperscript{10} Non-proprietary definitions based on publicly known, widely accepted standard set of interfaces that allow anyone (any vendor) to build, use, interoperate with and communicate with any system that adheres to the same standards.

\textsuperscript{11} Open systems interconnection: a standard, well defined, well-proven, ubiquitous architecture (ISO/IEC 7498-1) for connection of services and devices for data networking.

\textsuperscript{12} BPM: a system engineering method using notations such as BPMN and xBML, that is supported by execution time interpreters such as BPMN, Business Process Execution Language (BPEL), Web Services Choreography Description Language (WS-CDL), XML Process Definition Language (XPDL).

\textsuperscript{13} SOA: Software engineering in the form of interoperable services, implemented using service brokers and service objects, each being a well-defined, reusable business function. An application, in particular a web-based application, can request a ‘service’. A Service Broker identifies a service request with a service object to satisfy the service request. This loosely-coupled architecture facilitates functional scalability, replacement and renewal. Disparate organizations can independently build architecturally compliant, protocol compliant services that can then interoperate. Messaging using XML is the common medium for interfacing with SOA services.

\textsuperscript{14} I.e. vertical and horizontal functional scalability that would also reduce the costs of take-up of innovative future interoperation.

Vertical functional scalability: implementing a particular business process with more detailed business process definition with ICT architectural support

Horizontal functional scalability: implementing additional business processes.

Innovative future inter-operation: a type of horizontal functional scalability well beyond current scope but which may still be exploited provided that LNSW and the ‘big new idea’ have architectures that are amenable to easy interoperation.
3.2.4 Minimum necessary capacities and technology and infrastructure environments

For a modern ICT enabled Single Window operation, it is necessary to consider both the technology and infrastructure environments in the Government Agencies participating in the LNSW along with the minimum necessary capacities within the participating Agencies, the trading community and in Lao PDR in general.

These considerations are to be taken together. For a sensible Single Window Operation, to meet the ambitions of the Government for the LNSW, there needs to be a minimum necessary level of automation within participating Government Agencies. At the same time the LNSW should not introduce a threshold of business process modernization that would be an insurmountable burden for these Agencies, in terms of necessary investment or change management issues. Furthermore, a one-size-fits-all solution would be unrealistic given heterogeneous absorptive capacities of, and diverse business modernization and investment priorities within, the participating Government Agencies. The architecture for LNSW also must be cognisant of the private sector’s capacity to participate, national capacities for supply of goods and services for ICT and national capacities for supply of data communications.

A technical architecture for the application software component (esp. based on BPM and SOA) plus a flexible, GA-specific, implementation approach provide a state-of-the-art answer to meet these needs. A minimum low-cost work-flow managed portal into LNSW would be very manageable for those participating Agencies that do not have existing ICT-based information systems. This would have a low investment burden and a change management / business process engineering imperative that remains largely at the discretion of the participating Agency. Each Agency could determine its own phasing and timing for modernisation, within the guidelines of the architecture that permit interoperation with LNSW. Therefore the initial business process and attendant HR changes for an Agency would range from minimal impact up to significant modernisation using LNSW as catalyst. The groundwork in this regard has been laid out by Lao Trade Portal project through its Roadmap for Simplification and Harmonization and has been extended through this architecture.

Simultaneously, for any participating Agency that is better-resourced and more familiar with ICT-enabled business procedures, the architecture needs to provide interoperability / interconnection possibilities. For LNSW, only Lao Customs Department fits this category. LCD has selected ASYCUDA World (Asycuda) for its strategic platform for the time frame for the implementation of LNSW. This product has been implemented in Vientiane at LCD and has been piloted for imports and exports through Thanaleng / Friendship bridge (with Nong Khai, Thailand) and is being rolled out to support the administration of customs documentation for transit at ten other border crossings in Laos during December 2012 – refer to Appendix A. It is assumed that Asycuda would be enabled for non-transit operations as well, specifically domestic import and export.
The architecture of Asycuda is not SOA-ready. Therefore, at least two capabilities could be envisaged for LNSW – Asycuda interoperation: (1) using proprietary middle ware to emulate a SOA-capability for Asycuda implementation, or (2) at least a message-orientated architecture for LNSW compatible with Asycuda capabilities, especially to send a receive EDIFACT messages, preferably implemented through an agreed XML-based protocol. At a minimum CUSDEC, CUSRES, APERAK messages would be required. EDIFACT DIRDEB and CREADV may also be exploited for e-payment capabilities.

Equally germane to this topic is the market place of traders, brokers, and transport companies. In our experience this does not usually present a technical problem. The larger participants in the trading community are already poised, ready and eager to participate. Solutions such as relying upon ubiquitous internet capability, self-help kiosks and an expanded customs broker community are available for smaller participants.

There can be impediments in the political domain, indirectly for small or infrequent international traders and directly for the agents who ply their business (esp. for these small or infrequent international traders) navigating in the obscurity of a myriad of paper-based manual transactions. There can be casualties in the community of these agents who would need to modernise to survive.

However, the trading community – large and sophisticated and small traders both - would in every case benefit through of faster service, lower costs and high transparency, directly or through use of modernised brokers.

3.2.5 Business model for the LNSW

The business model for LNSW is outlined in terms of a functional context, organisational-environmental model and commercial and financial considerations.

3.2.5.1 Broad functional vision

The three recognized models for a trade Single Window\(^ {15} \) are as follows:

1. A single Authority that receives data and information, disseminates this to all participating Government Agencies and is responsible for co-ordination and control so as to prevent undue hindrance in the logistical supply chain;

2. A single Automated System for the collection and dissemination of information that integrates the collection, use, and dissemination (including storage) of all data related to trade crossing borders. The single system may be (1) fully integrated whereby data is processed through the system, (2) interfaced whereupon data is transmitted to the participating Agency for processing, or (3) a combination of both; or

3. An automated Information Transaction System through which a trader can submit electronic trade declarations to participating Agencies for processing and approval in a single application.

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\(^ {15} \) Drawn from UN/CEFACT Recommendation no. 33.
The Strategic Options report drafted as part of the Lao PDR Trade Portal project describes, at a high level, a conceptual model of an ideal NSW based on some key assumptions. The key assumptions referred to in the conceptual model include;

1. Single submission of data from the trade to Government Agencies (GA's) through a single channel: this could encompass any of the three basic models outlined above but most likely, lends itself to model 2;
2. A shared SW workflow facility independent of existing Government legacy systems: again this leans towards model 2 as being the most appropriate;
3. A minimum workflow front-end for GA's that do not have automation: any of the three models mentioned would suffice;
4. Ability to accommodate different data standards: model 3 might not have the flexibility needed to cater for this assumption;
5. Synchronous processing of data elements and single decision point of clearance: models 2 and 3 would accommodate; and
6. Paperless environment: all three models would suit this but to move to such a type of operations will be a key consideration in the longer term for the LNSW.

3.2.5.2 Specific Context of Functional Vision for LNSW

Drawing together other influences, the functional objectives for LNSW include:

1. To implement re-engineered business procedures and systems that enable (but not necessarily dictate) trade-related regulatory processes, whereby a trader (directly or through a broker or agent)
   a. would interact on-line in real-time through a single entity (Window),
   b. uses that Window (only when necessary) as the conduit for subsequent intermediate transactions e.g. when subject to risk based processing, for corrections and clarifications and so on, and
   c. uses the Window to track and trace the progress of submissions and declarations and the performance of the services through the Window,
   d. obtains permits through the Window,
   e. for the final regulatory transaction of a trade, obtain the release of goods.
2. whereby government agencies
   a. would administer the processing of permits,
   b. coordinate joint agency activities, esp. concerning releases of goods,
   c. monitor the performance of their agency in the processing of their responsibilities.
3. To facilitate growth towards a future where the ideal would be for a turn-around time for the release instruction back to the trader without further human intervention within seconds.\(^{16}\)

\(^{16}\) That could then be said to be procedures and systems of international good practice.
3.2.5.3 Broad Functional Scope for the Lao National Single Window

In overview, the Lao National Single Window as scoped by the terms of reference could be represented diagrammatically at Figure 3.

Figure 3 LNSW broad functional scope

LNSW is a facility for electronic transactions between traders (and their agents) and Government Agencies and facilitating interoperation among Government Agencies.

In the TOR for this TA assignment the following Government Agencies are listed:

<table>
<thead>
<tr>
<th>Number</th>
<th>Agency</th>
<th>Ministry</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.</td>
<td>Customs Department</td>
<td>Ministry of Finance</td>
</tr>
<tr>
<td>8.</td>
<td>Department of Agriculture</td>
<td>Ministry of Agriculture and Forestry</td>
</tr>
<tr>
<td>9.</td>
<td>Department of Livestock and Fisheries</td>
<td>Ministry of Agriculture and Forestry</td>
</tr>
<tr>
<td>10.</td>
<td>Food and Drug Department</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>11.</td>
<td>Import-Export Department</td>
<td>Ministry of Industry and Commerce</td>
</tr>
<tr>
<td>12.</td>
<td>Standardization, Quality Assurance and Metrology Department</td>
<td>Ministry of Science and Technology</td>
</tr>
</tbody>
</table>
The work of LTP project has also identified other agencies related to trade regulation: Department of Defense Industry of the Ministry of National Defense, Ministry of Post and Telecommunications, Ministry of Energy and Mines the Department of Monetary Policy of Bank of Lao PDR, and the Ministry of Information, Culture and Tourism.

The government agencies included within the scope of LNSW have offices in Vientiane and may have offices in provinces and at border locations.

Refer to Appendix A where twenty-eight candidate regulatory-documentation processes and eighty-seven candidate GA implementation locations are listed.

[From the trader’s perspective: LNSW can be used anywhere. Apart from using kiosks in GA offices, the FandTA would rely upon the trader having its own ICT facilities for internet connection and interoperation either in web-page mode or messaging mode.]

The motivation for the National Single Window, as a business proposition, is bi-lateral: for traders and government agencies.

Traders would anticipate:
1. reduced cost and time of compliance;
2. increased trading velocity; and
3. predictable, more transparent processes, with less and shorter steps and less face to face interaction.

For government agencies the anticipation would be:
1. new and improved facilities;
2. more reliable, more closely and speedily integrated services to and between government agencies;
3. facilities for information sharing and coordination of action;
4. better compliance; and
5. better efficiency of operation.

A key outcome of a successful LNSW implementation and operation would be facilitation of international trade while maintaining and enhancing national safeguards at the borders, leveraging technology for reliable, repeatable business processes using reliable information that is readily and rapidly available.

3.2.5.4 Organisational Model

The organisational model is the subject of another task cluster within the TA for this assignment. The information included there will not be repeated here except to the extent that it provides an anchor for some of the descriptions for the FandTA.
Regardless of the organisational models eventually adopted for LNSW, there would be some form of oversight role (a governance role or regulator) and some form of operator role and of course the user stakeholders: traders, government agencies, international actors, and perhaps information consumers.

The key responsibilities of the Governance role would be:
1. Overseeing the performance of the LNSW Operating role in meeting its service commitments
2. Policy oversight for the LNSW Operating role, that is, ensuring the Operator’s actions are sympathetic to the government’s policy
3. Protect government’s policy interests in LNSW, that is ensuring the LNSW plans continue to be aligned with government plans and policies
4. Measure the success of the LNSW in meeting government policy objectives
5. Party to the formal / quasi commercial relationship with LNSW Operating role In one form or another, there needs to be clarity of services and expectations concerning, inter alia, the services provided, performance delivered, maintenance and renewal of services and facilities, monitoring and reporting. If the Operator is a private sector contractor or subcontractor a formal contract would be necessary. If not, a terms of reference and memorandum of understandings would be recommended

The key responsibilities of the Operating role would be:
1. Establish LNSW Facilities (including physical data centre, main and infrastructure servers, network services: WAN, VLAN / VPN, LAN and end-user equipment in nominated GA’s, LNSW application software) and Services (operating services, call centre, support, maintenance and renewal services)
2. Operate and maintain NSW Facilities and provide Services in accordance with its formal / quasi Contract
3. Meet Service Level commitments agreed with
   a. Governance role
   b. Government Agencies (Customs, Border Agencies, Permit / Licence Issuing Agencies)
   c. Private sector operators (Traders, brokers / agents, and perhaps logistics operators)
4. Provide supplementary services such as information services
5. Report to Governance role concerning performance of the LNSW
6. Remit net finance (if applicable under the selected fee and revenue model)

As noted in other products of the TA, the governance may be fulfilled by units within an existing GA or a new unit or even new GA. Inevitably it must be a GA. For LNSW, the Steering Committee + Secretariat may take on the responsibilities in one of these forms. In practical terms, a permanently staffed team would be necessary for the administrative functions and performance monitoring.

In a similar vein, there are options for an Operator role. For reasons of management agility for Human Resource, financing and procurement, for infusion of business and ICT capacities and to deliver reliable services to the LNSW users, especially traders who might be paying fees, the engagement at some level of
private sector is anticipated. This most likely would involve an international partner for technological infusion and perhaps financial strength for the business solution and must inevitably include international suppliers for the technical infrastructure.

The Government has indicated that Lao Customs Department would take the lead role for the implementation of LNSW. In order to operate a reliable and responsive quasi commercial operation for LNSW and for reasons of financial, HR and procurement flexibility, the FandTA assumes, if and where necessary, that a private operator under some commercial arrangement with LCD, will be engaged for the LNSW build and operation.

The organizational model also entails the involvement and responsibilities of stake-holder users:
1. for Traders / brokers
   a. Register to become authorised users
   b. Use services and exchange messages with Government Agencies through the NSW
   c. Pay Fees (depending upon the fee model selected)
2. Government Agencies who
   a. Agree and seek to meet Service Level Objectives
   b. Provide services and exchange messages with traders and other Government Agencies
   c. International actors (e.g. ASEAN SW) who
   d. Use and provide services and exchange messages per agreed multi-lateral and / or bi-lateral protocols
3. Information consumers (such as Statistical offices, academia, private sector) who
   a. Use information services
   b. May pay Fees (depending upon the fee model selected)

These organizational aspects are illustrated at Figure 4.

3.2.5.5 Commercial and financial considerations

At the time of writing, the fee and revenue model has not been defined in detail. Considerations and options for the fee and revenue model include:
1. the eventual operational model, business process reengineering, service level parameters,
2. the expected costs build and implementation for the LNSW and WTO expectations regarding charges for services such as LNSW,
3. whether use of LNSW would be mandatory for commercial cross-border trade\(^\text{17}\),

\(^\text{17}\) Non-commercial trade would not usually be part of national single window and fees, charges, taxes and duties would usually be recovered through a physical payment by the traveler etc.
4. government policy regarding costs and revenue (e.g. a cost-recovery approach or an LNSW funded ex budget),
5. a continuation of the physical payments of fees at CLPIA’s,
6. a continuation of physical payment of LCD processing fee,
7. a continuation of physical payments (for commercial transactions) of duties and taxes at Customs or via commercial banks (and witnessed by official receipts),
8. e-payments for any or all of these through LNSW on a step-wise intermediate transactional basis,
9. a single e-payment at the conclusion of a trade or on account basis,
10. whether there should be a LNSW fee and if there is, the fee quantum and charge point(s),
11. fees and charges redistribution arrangements.
E-payments through LNSW on a step-by-step intermediate transactional basis would not seem sustainable: the current service fees are small, there is no obvious basis or justification for an increase, and the transactional costs (e-banking costs) would be relatively high.

In the absence of definitions of the fee and revenue model, this version of the FandTA will, if and where necessary, assume a minimal process modernization and that a trader would continue to physically pay at step-wise intermediate transaction (for each permit etc.).

### 3.2.6 Sizing – business transaction volumes

Figure 23 in Appendix A provides some data regarding the transaction rates.

At the time of writing, most information concerning business transaction rates is unavailable. In a way this is not surprising: without good information systems, statistics of any type usually require painstaking effort and reliable statistics are very unlikely to be obtained.

The table provides data collected by interview with the representatives of the GA’s or derived from data provided by LCD from its C2000 system for all national imports for 2010 using stated but untested assumptions. [No data source is available for transit, Customs warehouse or export declarations.]

Highlight statistics (under the assumptions that need to be reviewed and tested) from Appendix A:

1. The order of magnitude across all agencies and all offices might be of the order of 26 types of documentary requires comprising a total of approximately 32000 per annum licences and permits and certificates and letters of all types. [Excluding Certificate of Origin procedures for which no data is available and no assumptions have been made.]
2. This might grow to approximately 44000 p.a. in 2018 assuming a growth rate of 7% p.a.
3. The quantities by document type are summarised in the table at Figure 5.\(^{18}\)

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\(^{18}\) Stated without basis: for CLP that may be issued in provinces: assume 25% of total shown in Appendix A Figure 23) are in largest province and 75% spread evenly over 10 provinces.
**Figure 5 Summary of assumed / derived business transaction rates for CLP’s**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>DIMEX</td>
<td>Import Plan</td>
<td>Vientiane</td>
<td>1000</td>
<td>1500</td>
</tr>
<tr>
<td>2</td>
<td>DIMEX</td>
<td>Import/Export License (motor vehicles etc)</td>
<td>Vientiane</td>
<td>12,000</td>
<td>16,000</td>
</tr>
<tr>
<td>3</td>
<td>DIMEX</td>
<td>Import for re-export Transit Permit</td>
<td>Vientiane</td>
<td>70</td>
<td>100</td>
</tr>
<tr>
<td>4</td>
<td>DIMEX</td>
<td>Vietnam Transit Certificate – dangerous goods</td>
<td>Vientiane</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>DIMEX</td>
<td>Vietnam Transit Certificate – dangerous goods</td>
<td>Vientiane</td>
<td>75</td>
<td>110</td>
</tr>
<tr>
<td>6</td>
<td>DIMEX / MOIC</td>
<td>Certificate of Product Eligibility (for COO)</td>
<td>Vientiane</td>
<td>3300</td>
<td>600</td>
</tr>
<tr>
<td>7</td>
<td>DIMEX / MOIC</td>
<td>Certificate of Origin</td>
<td>Vientiane</td>
<td>3300</td>
<td>600</td>
</tr>
<tr>
<td>8</td>
<td>MOIC</td>
<td>Import/Export License (rice etc, steel bars etc, cement etc)</td>
<td>Vientiane</td>
<td>600</td>
<td>80</td>
</tr>
<tr>
<td>9</td>
<td>F&amp;D, Drug Div.</td>
<td>Form 1 (for Registration Certificate)</td>
<td>Vientiane</td>
<td>360</td>
<td>510</td>
</tr>
<tr>
<td>10</td>
<td>F&amp;D, Drug Div.</td>
<td>Form 2 (for Registration Certificate)</td>
<td>Vientiane</td>
<td>360</td>
<td>510</td>
</tr>
<tr>
<td>11</td>
<td>F&amp;D, Drug Div.</td>
<td>Re- Registration Certificate</td>
<td>Vientiane</td>
<td>360</td>
<td>510</td>
</tr>
<tr>
<td>12</td>
<td>F&amp;D, Drug Div.</td>
<td>Letter of Approval (import of drugs)</td>
<td>Vientiane</td>
<td>1000</td>
<td>1400</td>
</tr>
<tr>
<td>13</td>
<td>F&amp;D, Food Div.</td>
<td>Import Permit (Food)</td>
<td>Vientiane</td>
<td>1500</td>
<td>2000</td>
</tr>
<tr>
<td>14</td>
<td>F&amp;D, Food Div.</td>
<td>Registration Certificate for food supplements</td>
<td>Vientiane</td>
<td>1000</td>
<td>1400</td>
</tr>
<tr>
<td>15</td>
<td>MAF, Forestry Div</td>
<td>Import / Export License for Timber, Wood and Forest Products</td>
<td>10 Provincial divs. each</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>16</td>
<td>MAF, Dep of Agriculture</td>
<td>Import Certificate for Plants (Agricultural Products)</td>
<td>10 Provincial divs. each</td>
<td>20</td>
<td>26</td>
</tr>
<tr>
<td>17</td>
<td>MAF, Dep of Agriculture</td>
<td>Registration Certificate (Agricultural Products)</td>
<td>Vientiane</td>
<td>100</td>
<td>150</td>
</tr>
<tr>
<td>18</td>
<td>MAF, Dep of Agriculture</td>
<td>Permit for Import of Pesticides and Fertilizers</td>
<td>10 Provincial divs. each</td>
<td>150</td>
<td>200</td>
</tr>
<tr>
<td>19</td>
<td>MAF, Dep of Agriculture</td>
<td>Registration Certificate (Fertilizers and Pesticides)</td>
<td>Vientiane</td>
<td>100</td>
<td>150</td>
</tr>
</tbody>
</table>
4. As indicated in Appendix A, the candidate locations for exploiting LNSW comprise: 10 Ministries and departments in Vientiane, 42 provincial / regional offices in seven provinces and 33 border sites at 11 border posts.

5. In addition to the above and a potential candidate for inclusion within LNSW is the Permit for exemptions and concessions administered by LCD. This may be (1) as part of the general model for CLP facilities, (2) a particular LNSW module or (3) as a message-integrated service. At the time of writing it is understood that LCD has plans to implement software to support the administration of these permits. Therefore FandTA anticipates a message-integrated service that can exchange messages with LNSW under a protocol to be published by LNSW.

6. The other main documents involved with LNSW are the Customs Declaration. Refer to Figure 23 in Appendix A for assumed and derived data. These assumptions / derivations indicate: approximately 200,000 declarations 2012, split approximately evenly as import, transit, and export declarations. This could be projected to rise to around 300,000 in 2018 at 7% p.a.

7. For the FandTA, for the purposes of sizing, it will be assumed as and when necessary (in the absence of better information and without basis) that 15% of these transactions occur at each of the busiest four border crossings: Thanaleng / Friendship Bridge, Savannakhet, Dansavanh, and Boten (to be confirmed) and 4% at each of the other 7 nominated border crossings (refer to Annex A). [The net effect should be to exaggerate the transaction rates. Additional factors would also further exaggerate transaction rates with the intention to be to provide a margin of over-capacity.]

<table>
<thead>
<tr>
<th>#</th>
<th>GA</th>
<th>Candidate Document</th>
<th>Place</th>
<th>estimates</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>MAF, Dep of Livestock / Fish.</td>
<td>Technical Certificate for Import of Livestock and Fish</td>
<td>10 Provincial divs. each</td>
<td>250</td>
<td>350</td>
</tr>
<tr>
<td>21</td>
<td>MOST</td>
<td>Certificate of Quality for Imported Goods</td>
<td>10 Provincial divs. each</td>
<td>15</td>
<td>20</td>
</tr>
<tr>
<td>22</td>
<td>MND, Dept Defense Industry</td>
<td>Import License for Explosive Substances</td>
<td>Vientiane</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>23</td>
<td>M of Post / Telecomm</td>
<td>Import License for Telecommunications Equipment</td>
<td>Vientiane</td>
<td>240</td>
<td>340</td>
</tr>
<tr>
<td>24</td>
<td>M of Mines / Energy</td>
<td>Mine Products Import/ Export License</td>
<td>Vientiane</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>25</td>
<td>Dept of Monetary Policy</td>
<td>Import/Export License for Gold Bars</td>
<td>Vientiane</td>
<td>10</td>
<td>15</td>
</tr>
<tr>
<td>26</td>
<td>M of Information, Culture, Tourism</td>
<td>Import / export Permit for Publications</td>
<td>Vientiane</td>
<td>100</td>
<td>150</td>
</tr>
</tbody>
</table>
8. Approximately 24% of line items require a permit and 76% do not (pending still: information concerning exemptions and concessions) (assuming without basis that a declaration would have only line items requiring a permit of one type or another, or no line items requiring any permit that would mean in 2012: approximately 17,000 declarations needing permits and 53,000 not needing any permit and in 2018 approximately 29,000 and 86,000 declarations respectively)

9. Appendix B also contains some rough configuration quantities, sizes and costs derived from the transaction statistics.

3.2.7 Operationalization imperatives

In general, the architecture should be agnostic of implementation product, approach and time-line, and should define a solution-space in terms of requirements. The architecture presents implementation and operational imperatives that would evolve into the specifications and the TOR for LNSW.

One example of this is highlighted in the TOR for this Technical Assistance: a Help Desk for users of the LNSW such as traders and brokers, transport operators, officers in the LCD or participating Government Agencies, the Operating Entity, and Governance Entity and perhaps other authorised external parties that may have a legitimate interest in LNSW, e.g. researchers with interest in trade data statistics.

International experience suggests that the success or otherwise of any major IT system implementation is heavily dependent on user acceptance of system functionality. In order to support effective implementation it will be necessary to establish practical help desk facilities to support users particularly during the early stages of system implementation. While this issue will be partly addressed under Task Cluster 2 and in the Change Management Cluster, the requirements for robust help desk facilities will be part of the overall LNSW functional and technical architecture and specifications. Recommendations for service operation will also take into account the likely infusion of managerial, commercial and technical skills necessary for reliable and robust operation.
4 Applications: Processes and functions

4.1 Functional overview

High-level functional sets to be provided by the operating entity are deduced from the influences described in section 3 and are illustrated at Figure 6. The main elements are then outlined in terms of broad functional scope.

4.2 Business functions

4.2.1 LNSW Web-site

4.2.1.1 Concept of operation

The main messaging interface for LNSW would be websites: a public website (www.lnsw.com if available or similar) and a government agency website (www.lnsw.gov.la if available or similar). The public web sites would provide basic information and provide the portal for three closed-user-groups (identified / authorised users each with a private and confidential access profile) for (a) LNSW-registered traders, (b) government agency officers and (c) LNSW-registered information services. The 'open' websites would be available to any internet connected user.

[Note: a message based service for sophisticated traders would also be offered. The corresponding functional set is outlined separately at §4.2.3. ]
4.2.1.2 Web-site functions

The public web site would offer:

1. language selection (initially at least: Lao and English pages);
2. a login application to access a software workbench for registered traders;
3. a trader registration web application:
   a. providing a common registration service for all participating GA’s for LNSW facilities for traders, including the common requirements for lodgement of e-copies of:
i. company registration certificate (Ministry of Industry and Commerce);
ii. trading licences (pertinent to the business of the trader) (relevant department / ministry);
iii. tax registration certificate (Tax Department of MOF).

b. permitting the trader to setup its unique access control profile (including username and password);
c. permitting the trader to nominate its employees to act on its behalf to transact with LNSW – each such employee to have his/her own access control profile (specific username and password, with username subordinated to the specific trader);
d. permitting the trader to nominate brokers or agents that may act on its behalf – such brokers or agents must have already registered with LNSW as brokers or agents The concept of operation proposed for LNSW is that there would be an LNSW registration unit, overseen by the Governance Entity and acceptable to participating GA’s. The LNSW registration Unit would perform the tasks of:
   o vetting registration applications,
   o making enquiries with issuing agencies of the lodged registration documents when necessary,
   o (When the issuing agencies (MOIC, Tax department, etc) have on-line verification services, the checks may be automated.),
   o seeking additional information from the trader when necessary, and
   o eventually acknowledging the completion of the registration process to the trader by the trader’s preferred communications channel (email, SMS or both),
   o data recording.

4. access to Lao Trade Portal and GA information services web-sites and ASEAN Trade Repository and associated ASEAN information services, such as for ATIGA, when available, LNSW news bulletins and other such information;

5. a login application to access LNSW information services\(^{19}\);

6. an information services user registration application (with similar operation to that for trader registration, business rules to be defined);

7. other common functions such as ‘forgotten username / password’;

8. contacts and enquiries;

9. access to support for site usage: how to register as a trader, how to register as LNSW information services user, how to use, FAQ, contacting help desk.

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\(^{19}\) The FandTA has assumed that LNSW information services would be made available only to registered LNSW information services users in order to exercise a measure of management over system resources.
An illustrative but not definitive ‘mock-up’\textsuperscript{20} of a LNSW public landing page is shown at Figure 7. The government agency website would offer:

1. a GA officer login application to access either a software workbench for a CLPIA or for LCD or a border agency depending upon the identity and credentials of the user name provided;
2. Lao Trade Portal and GA information services web-sites and ASEAN Trade Repository and associated ASEAN information services, such as for ATIGA, when available, LNSW news bulletins and other such information;
3. contacts and enquiries;
4. access to support for site usage: how to register, how to use, FAQ, contacting help desk.

An illustrative but not definitive ‘mock-up’ of a LNSW GA landing page is shown at Figure 8.

\textbf{Figure 7 Illustrative ‘mock-up’ of LNSW public website}

\textsuperscript{20}NB. The ‘mock-up’ screen / window / web-page layouts included in this document are illustrative only and are not meant to dictate or limit the actual layouts that would come with or be designed for the eventual solution for LNSW.
4.2.2 Trader’s LNSW Workbench

The Trader’s LNSW Workbench would provide a set of tools for traders to conduct trade related regulatory obligations.

4.2.2.1 Concept of operation:

1. A trader must be registered with LNSW prior to accessing and using the Trader’s LNSW Workbench.

Notes
a. A trader may be represented by designated employees or agents in general or for specific transactions.
b. All participating GA’s would accept the registration data held at LNSW to be sufficient. LNSW would ensure, automatically, that registration details remain current, e.g. that the tax certificate remains current and that the appropriate trade licence for a particular type of business corresponding to a tradable commodity is retained by LNSW.

Figure 8 Illustrative ‘mock-up’ of LNSW GA website.
c. It may be that that registration for LNSW also constitutes registration / authorisation for LCD and for DTI of ACDD’s.

d. In this case the Trader Identifier would be supplied with ACDD through LNSW to ASYCUDA World automatically.

e. It is recommended that the LTP registration process be subsumed into LNSW with new user names made available in LTP.

2. A trader, registered with LNSW, would compile data elements (data fields and / or attached files and / or image objects) associated with a trade, starting with data needed for permits, certificates, licences, or letters of approval and so on. LNSW would support the following methods for the data to be obtained

a. entered directly by citing a permit etc. that the trader seeks to obtain with the Trader’s Workbench providing a comprehensive data entry / attachment interface,

b. determined by enquiry: trader enters a commodity code or a commodity description and LNSW assists the trader to find the necessary permit(s) and so on,

c. copying from a previous trading folder or from a previous permit etc. application that the trader has compiled with LNSW offering the facility to amend the details,

   [This recognises that a commercial trader often repeats a similar transaction.]

3. Likewise, a trader could compile data elements necessary for a customs declaration. For those declarations that require a permit, many data elements would already be in the trade data folder. Otherwise, the data elements would need to be entered, or copied from a previous trade data folder and amended suitably.

4. When the necessary data elements are compiled, the trader would submit the application or declaration for processing by the relevant GA via the Workbench. The Workbench would select the appropriate GA service (that is, send LNSW messages for the GA corresponding to the permit application).

5. For flexibility, for a customs declaration, a trader may be able to reallocate an un-acquitted permit already in hand from another trade data folder.

6. A trader may submit an ACDD ‘pre-arrival’ ACDD through Trader’s Workbench

   a. for pre-arrival processing and assessment by LCD and border agencies,

   b. for routing to LCD for its processing of Master Lists for imports of exempt / concessional goods (with eventual notice of approval also recorded in LNSW).
7. Following from (6) b.: Refer also to §4.2.8.

There is a system under development at LCD to support its administration of these Master Lists. (Refer to BPR ‘To Be’ report.) LNSW would accept a pre-arrival declaration, with indicators set that a ‘permission letter’ for exemption / concession is being sought. LNSW would route this to the LCD Master List system. For specified commodities (e.g. fuel), LCD Import/Export Division in Vientiane would process the request. For other commodities, the particular checkpoint of import would process the request. The administering officer would receive the request through LNSW messaging and eventually notify the Trader through LNSW. Subsequently the Trader would cite a particular regime or procedure code for concessions in the ACDD and thereafter the procedure is in the normal manner from an LNSW perspective. LCD procedures for handling the type of declaration would apply.

Note: the software engineering for the Master List administration is not yet defined. The architecture in this document is correspondingly left undefined. It may be a simple message in a mail box or officer in-tray. It may be some form of automated exchange between LNSW and the other system.

8. Corresponding to (6) above, the trader would also notify LCD and OGA at borders of goods arrival through the Workbench, linking this advice to the pre-arrival declaration.

9. In the case of a declaration that also implies processing and perhaps inspections by a border agency (or agencies) other than Customs, LNSW would alert the other agency (agencies) based on the declaration, its constituent commodities and the need for permits, from the associated trade data folder.

10. A trader
   a. could track the progress of the application or declaration through the Workbench
   b. would respond to enquiries made by the GA through the LNSW
   c. would eventually receive the result of the permit application / declaration by message from LNSW (LNSW having been so advised by message from the GA)

   The trader would then finalise the process by one of the following methods that would be determined by each agency according to its business rules:
   i. an advice that the permit is ready and available for collection after paying relevant fees at the GA
   ii. an advice that the permit is ready and available for collection after paying relevant fees through LNSW
   iii. an advice that the e-permit is ready and can be downloaded after paying relevant fees
   iv. an advice that the e-permit is ready and can be downloaded with any relevant fees recorded in the traders account
   v. for a customs declaration, a notice concerning the next action required according to the customs procedure:

   1. a physical document lodgement / fee payment is required
   2. a physical inspection is required (joint inspection of other border agencies are involved)
   3. other procedure as determined by LCD

   Note: Final release of goods and exit note would be determined by LCD and included within the procedures using ASYCUDA World. Messages would be sent through LNSW to the Trader by the
preferred communications channel(s) such as SMS and Email and LNSW mail box and TDF status. Refer to §4.2.7.

11. Furthermore, the Trader’s Workbench could provide functions to
   a. Record pertinent details and seek an Advance Ruling from LCD and obtain a response from LCD through LNSW
   b. Record pertinent details and seek an opinion from a Government Agency and obtain a response from the GA through LNSW
   [LTP may already have plans to implement this function, in which case, under a Single Sign On concept for LNSW/LTP (refer to §4.2.17), the Trader could link to LTP through LNSW.]

An illustrative but not definitive ‘mock-up’ of a LNSW Trader’s Workbench web page is shown at Figure 9.

### 4.2.2.2 The tools in the Trader’s Workbench

The Trader would have the ability to

1. maintain its registration details including:
   a. changing basic details
   b. authorising and de-authorising employees and agents
   c. new or replacement registration certificates for company registration, trading licenses and tax registration (for which a new registration is required annually – to be confirmed)

2. inspect its history of trade related transactions lodged with LNSW

3. record trade related data elements (TRDE) by data entry and attach uploaded scanned images into a trade folder (suitable to single-case or multi-case transactions)

4. assemble TRDE into permit applications in the trade folder using the recorded TRDE

5. use (copy and paste) previous permit applications as a basis of a new application

6. submit / send the CLP applications to a GA
Figure 9 Illustrative ‘mock-up’ of LNSW Trader’s Workbench webpage
7. compile and complete customs declarations and send to LCD and border agencies where applicable
   [Ideally Participating systems would be SOA based (or at least responsive to remote procedure calls)
   and be able to respond to LNSW service requests e.g. to ‘parse’ a customs declaration. However, in the
   absence of that, as the case for ASYCUDA World which cannot participate in this arrangement, instead
   LNSW, as a matter of convenience for traders, would duplicate some parsing capability that is also in
   ASYCUDA World, with ASYCUDA WORLD reference tables exposed and accessed by read-only ODBC
   subroutines from within LNSW.]
8. send ACDD pre-arrival to LCD and border agencies where applicable and to the LCD for its processing
   of Master Lists for exemptions / concessions
9. obtain status updates on-line or by enquiry message providing a track and trace capability for the trader
10. use LNSW-trade-expert assistance to guide the identification of permits etc required
11. receive and respond to requests for clarification / additional information, with prompts by SMS / email
    and perhaps additional channels
12. facilitate payment of associated fees and charges (according to the eventual model selected in this
    regard which may be particular to each GA)
13. receive electronic version of permit / clearance document / gate pass (when the GA is ready to upgrade
    to e-permits)
14. inspect a mail box of LNSW messages

The workbench would be implemented to provide the user-level functions described above
1. through a message (XML, EDIFACT, or UNeDocs) based channel using LNSW protocols that would also
   be identical to that for more sophisticated message based traders
2. over Virtual Private Network or Dedicated Private Network providing closed user groups
3. utilising a to-be-published message architecture
4. securely and privately recording, retaining and providing access to the data

4.2.3 Trader’s message-based interface

Based on current information and assessments, this facility may not be practical for LNSW traders. The
facility implies a level of investment in sophisticated in-house ERP\textsuperscript{21} systems and a volume of trade to warrant
its implementation. Nevertheless a brief outline is provided here for completeness.

4.2.3.1 Concept of operation

A trader would compile purchase orders / delivery orders by or through its ERP. The ERP would be
configured (by the trader) to construct messages in accordance with LNSW published protocols for permit
applications and / or customs declarations. GA’s would respond either through LNSW messages (again
according to a published protocol) or through other communications, eventually leading to a recognition in
the trader’s ERP that a permit is available or a customs process can proceed.

A trader could also track and trace progress of its applications and lodgements through LNSW Website or,
potentially, through messages.

\textsuperscript{21} ERP = Enterprise Resource Planning, a tools covering broad and deep operational end-to-end processes, such as for supply chain to
automate and support administrative and operational business processes (from a definition on a Gartner Group website)
4.2.3.2 LNSW tools and functions

The LNSW tools and functions for message based interface would have commonality with underlying functionality for the trader’s workbench. LNSW would use a message-orientated architecture using a private, possibly unpublished SOAP\(^{22}\). For Trader’s Workbench the messages are presented in a human readable form as web pages and documents. In message-based interface, the XML message would sent within a secure protocol, typically FTPS or WS-Security.

[More generally, and for a more ‘open’ system, a range of message protocols might be offered to be acceptable with LNSW including message translation services to accept a variety of message protocols (e.g. UneDocs, EDIFACT, XML/EDIFACT and ebXML) interpret them to the internal LNSW SOAP and likewise send its replies interpreted into the originator’s protocol. However, in the circumstances of LNSW, this is an emerging technology, not widely used and would seem unnecessary and unnecessarily risky for the foreseeable future.]

4.2.4 LNSW Registration functions

These functions would reside with an LNSW registration unit, within the LNSW governance entity, operator or a designated GA.

4.2.4.1 Concept of operation

The function of the registration unit would be

1. to process trader registration applications received from the public website
2. inspect the application data including attached images
3. assess the application data and determine whether to cross check with other agencies
   (at this point in time that would require physical checks, however, in future, company registration, trading licences and tax certificates may become accessible on-line)
4. seek additional information from a trader
5. advise the applicant (by SMS or email or other nominated channel) that their registration is ready and collect a registration fee (if such a fee is included for LNSW)
6. advise the applicant by SMS or email or other nominated channel that their registration process is completed and that they may now transact with LNSW as a registered trader
7. advise the applicant that the registration is denied (pending the development of business rules to define these circumstances)
8. provide advice and guidance to new registrants
9. to process information-user registration requests (with similar sub-steps) Refer also to §4.2.2.1 item (1)
   c. regarding the opportunity to harmonise LCD registration for ASYCUDA World and LNSW registration.

\(^{22}\) ERP = Enterprise Resource Planning, a tools covering broad and deep operational end-to-end processes, such as for supply chain to automate and support administrative and operational business processes (from a definition on a Gartner Group website)
4.2.4.2 LNSW Software functions

The LNSW registration unit would
1. use a LNSW workflow-managed process based on the general model (defined later)
2. securely and privately, record, retain and guard access to the data
3. have access to registration data base for enquiry and simple reports including applicants that registered but never used LNSW, and Traders registered and inactive > n months

4.2.5 Government Agency Workbench

The Government Agency Workbench of LNSW provides three functional sets for CLPIA23 administration, for LCD, and for other border agencies: Ministry of Health (Food and Drug Department, Food Division and Drug Division) and Ministry of Agriculture and Forestry (Department of Agriculture and Department of Livestock and Fisheries).

4.2.5.1 Concept of operation – LNSW for CLPIA

LNSW would preferably use a service orientated architecture implemented through web services orchestrated through messaging. The participating CLPIA would receive CLP applications from LNSW-registered traders via LNSW using a ‘level-1’ LNSW GA messaging interface (LNSW Workflow) or a ‘level-2’ GA messaging interface (GA’s own messaging-capable ICT). The CLPIA would process the applications according to its business procedures and respond to the trader via LNSW.

1. ‘level-1’
   a. would be used by participating GA’s that do not presently have modern ICT-enabled business systems – currently in Laos this would entail all participating agencies other than LCD for the delivery of customs declarations from traders
   b. would entail use of LNSW GA Workbench for CLPIA that is an agency-specific, model-based implementation of a workflow-management / business-process-management system available in three variations
      i. a standard model
      ii. a reduce step model should an agency choose not to have all steps in the standard model
      iii. an expanded model for a GA that seeks to support its operations more deeply or broadly

In anticipation of LNSW implementation, it is proposed that the implementing organization would be required to offer to implement any of the three variants to build a GA-specific model-based administration system.

Under each of the three variants, an implementation specific to the GA would be built and made operational. The specifics would encompass: the specific applications / letters / requests, CLP(s) and organizational users of the GA, fee structure, CLP-delivery method, including availability for e-permit.

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23 CLPIA – Certificate, License, Permit (and Letters of Approval and so on) Issuing Agency. Note also that in this document that where the context allows, ‘permit’ might be used and this should be interpreted to mean applicable permits, licenses, certificates etc.
For a GA with more than one CLP, there would be an implementation for each CLP, to address variations in each of the specific applications / letters / requests, CLP(s) and organizational users of the GA, fee structure, CLP-delivery method.

For variant i: the standard model would be implemented with the aforementioned specific details configured. The standard model is based on the model proposed in the LTP project, illustrated at Figure 10.

Appendix A lists 26 candidate certificate, license, permit, and so on. For each there would be a specific configuration of standard model.

For variant ii: a processing path simplification would be available – combining any of the following: receiving officer / technical officer / first approver / second approver.

For variant iii: broader (more functional areas) and / or deeper (more detailed procedural assistance) would be offered. A more progressive GA could seek to acquire more ICT support for its processes. The LNSW provider would be required to offer a capped amount (nominally 100 days per GA) of system engineering days to analyze and implement more workflow steps.

A GA seeking still more ICT penetration, with the resources to do so could also elect to use those resources to expand upon the workflow, provided this was done in a manner that did not comprise LNSW interoperability. This could be done at some stage subsequent to the operationalization of LNSW.

Variant iii provides one of two options for functional scalability for the GA (the other being ‘level 2’ outlined below). [Note that likewise variants i and ii could be scaled up also.]

c. in practical terms would entail GA officers
   i. accessing the LNSW government website and logging onto LNSW – LNSW would know by user name the specific GA workflow to initiate
   ii. using the workbench to inspect the online ‘in-tray’ for work to be done, select an item and work on it
   iii. 4.2.5 which would include: contacting a trader for clarifications or other messages, or sending it on to the next officer
   iv. only having access to in-tray and actions that are pertinent to them under the control of the LNSW access control tables and workflow management configuration
   v. would mean that at each business process step, in particular for the technical officers and approving officers, is a ‘black-box; whereat the GA performs its detailed specific technical and administrative process and only the arrival and the step and result of the step are related to the CLPIA Workbench
   vi. would mean that the GA business processes are reengineered and revised to the extent to utilise the workflow management tools

An illustrative but not definitive ‘mock-up’ of a LNSW CLPIA Workbench web page is shown at Figure 11.
2. ‘level 2’
   a. would be used by participating with their own LNSW capable (SOA / message-oriented) modern ICT-enabled business systems either now or sometime in future
   b. would entail LNSW sending messages to the GA-system and receiving status / progress-tracking responses from the GA-system
   c. would mean that the GA-system manages the detailed operations of the GA in a manner specific to the GA
   d. requires that the GA-system is configured to accept messages or service requests from LNSW as triggering events and send messages or service completion notifications to LNSW using LNSW protocols
   [Note that the service / message protocols for ‘level-1’ and ‘level 2’ would be identical, that is, ‘level 1’ would also be engineered using a SOA/MOM]

Figure 10 Standard CLPIA Workflow model
3. risk filtering
   a. LNSW would offer risk profiles that would provide a risk-ratings report per CLPIA application and provide the GA with a basis to select an appropriate process path
   b. the GA could select its processing steps (automatically – i.e. according to predefined workflow logic-or at the discretion of an officer as part of the workflow), esp. at the detailed technical level and approval levels and perhaps whether two-step approval is necessary based on the risk level
   c. the filters would generally be set specifically for a CLP by a senior officer within each GA based on its own risk analyses (LNSW risk management functions described later)
   d. the filters could be based on any logical expression using data associated with a CLP request-typical data used would be trader, commodity, origin, value, quantity

Figure 11 Illustrative ‘mock-up’ of LNSW CLPIA Workbench webpage
4.2.5.2 CLPIA LNSW Workbench functions

The functional set implemented would provide trade related agencies permit\textsuperscript{24} administration service entailing an LNSW-level 1 business process flow assistant with mail box and positively-asserted processing closure step(s).

For the implementation there would a specific configuration for each certificate, licence and permit. [Appendix A lists 26 such documents.] Each specific configuration would entail specific variables such as the data being assembled in the trade data folder relevant to the permit, the layout of the eventual permit, organization and roles and workflow association with organization and roles and variants in the workflow as previously described.

LNSW provides event triggers when a trader submits a CLP request in the form of a message in a workflow ‘In-tray’ of an officer (or group of officers having the same role)

Government Agency responds through its ‘back-office’ procedures (not in LNSW), suitably reengineered at least to the extent for LNSW operation.

The officer to first receive the message and the workflow managed procedure would be deduced by LNSW on the basis of risk-ratings performed by LNSW (using the parameters set by the GA).

An officer would obtain access to the workbench functions and messages configured for the officer having logged-onto to LNSW using the LNSW government website.

The workbench functions:

1. access to information services
2. a mail service in which LNSW messages may be administered – sent to traders or other officers (roles) and received from them
3. LNSW in-tray in which are presented all new and pending CLP requests pertinent to the logged-in officer
4. selection of an in-tray item for action including a display of details of the CLP request including attached files and images
5. inspection of the history of previous CLP requests by the trader or otherwise (according to permissions set for the logged-in officer)
6. an ‘action’ command allowing the user to select a predefined set of actions for the CLP request configured according to the officer’s role together with accompanying remarks

\textsuperscript{24} For ‘permit’ read permit, license, certificate, approval etc. …
According to the role of the logged-in user, the officer would be able to suspend the CLP request pending further information from the trader or indicate the conclusion of the officer’s processing of the in-tray item, moving it on to the next step, typically placing in the in-tray of the next officer in the workflow.

Any messages to the trader would be sent back to the trader’s LNSW mailbox as well as via an SMS and/or email or other channel (or more than one of these) according to the trader’s preference.

7. according to the workflow configuration of the GA, at the final approval step, the ‘next action’ would be sending:
   a. an advice that the permit is ready and available for collection after paying relevant fees at the GA [In which case, the LNSW workflow instances remains pending the pickup and payment step.]
   b. an advice that the permit is ready and available for collection after paying relevant fees through LNSW
   c. an advice that the e-permit is ready and can be downloaded after paying relevant fees through LNSW
   d. an advice that the e-permit is ready and can be downloaded with any relevant fees recorded in the traders account
   e. securely and privately recording, retaining and providing access to the data

4.2.5.3 CLPIA LNSW GA Level 2 functions

This entails a ‘level 2’ message-exchanging (XML, EDIFACT, or UNeDocs) ICT system in a peer-to-peer architecture

1. where the GA has the technical capability and assets
2. using a Dedicated Private Network (preferred if transaction volume warrants) or Virtual Private Network
3. utilising a to-be-published message architecture receiving messages from traders via LNSW and responding with messages to traders via LNSW

The functions would be utilising a to-be-published message architecture to exchange messages with Government Agencies via LNSW

Functions include:
1. message creation and sending / message reception and storage
2. Functions for risk-orientated data collation and analysis and profile / filter setting leading to a risk ratings report
3. Functions for MIS and ad hoc research, Infrastructure functions such as for configuration / reference table management, presentation-layer services, secure messaging services, e-message interpreters, data security, network security (access controls with / without PKI, digital certificates, encryption services, non-repudiation), service and database high-availability, e-payments gateway, workflow / business process manager (modeller and run-time services), services / web-services manager, etc.
4.2.5.4 Concept of operation –LNSW for border agencies

The concept of operation is similar to that described for CPLIA. The border agency (DD, FD, MAF) would receive notifications of import/export/transit declarations by LNSW-registered traders through LNSW using a ‘level-1’ LNSW GA messaging interface (LNSW Workflow) or a ‘level-2’ GA messaging interface (GA’s own messaging-capable ICT – currently LCD only). The border GA would process the declarations according to its business procedures and respond to the trader via LNSW.

1. ‘level-1’
   a. would be used by border agencies GA’s that do not presently have modern ICT-enabled business systems (FDD and MAF) and could also be used by LCD.
   b. would entail use of LNSW GA Workbench for border agencies that is an agency-specific implementation of a simple message-handling, workflow-management / business-process-management system Further analysis may indicate more workflow steps, e.g. recommender / approver per transaction. The workflow could be adjusted accordingly.
       An expanded model could also be implemented for a GA with the interest and resources but this would not be anticipated within the scope of LNSW.
   c. in practical terms would entail GA officers at border officers:
      i. accessing the LNSW government website and logging onto LNSW – LNSW would know by user name the specific GA for the officer;
      ii. using the workbench to inspect the online ‘in-tray’ for work to be done, select an item and work on it, recording results through LNSW;
      iii. using the workbench, receive advance information such as might be obtained from the granting of a permit of an imminent trade transaction: Potentially, the licence data, containing some shipping data, could be available to border agencies – this may be of benefit for resource (human or otherwise) scheduling;
      iv. actioning the work-item by sending it on to the next step which would include: contacting a trader for clarifications or other messages, or actioning the trade transaction – e.g. for inspection and eventually for ‘clearance’ from the perspective of the particular GA;
      v. enquiry facilities concerning declarations;
      vi. enquiry / verification facilities concerning permits (refer to §4.2.6);
      vii. acquitting a permit at the conclusion of the corresponding processing steps;
      viii. the clearance may nevertheless be a removal to traders premises to await inspection (by LCD, quarantine etc) which would mean that LNSW would provide a WFM solution for that two step clearance process;
      ix. only having access to in-tray and actions that are pertinent to them under the control of the LNSW access control tables and workflow management configuration;
      x. the actual work of the officer would be a ‘black box’ to LNSW, with the officer utilising LNSW only for intermediate messages and conclusive actions;
      xi. the border agency business processes would be reengineered and revised to the extent to utilise the LNSW tools.
An illustrative but not definitive ‘mock-up’ of a LNSW Border Agency Workbench web page is shown at Figure 12.

2. ‘level-2’ – not described at this time. If and when border agencies become equipped to this level, processing akin to that described for Asycuda Integration later in this document would be required.

3. risk-based processing: according to the GA’s specification of risk filters, an LNSW risk assessment report may be used to recommend a processing path.

4. depending upon the eventual fee and revenue model for LNSW, the border agency officer could use LNSW to record fees and charges related to inspections and processing and also could rely upon accounting and payment procedures within LNSW.

### 4.2.5.5 Border Agency LNSW Workbench functions

The functional set would be somewhat similar to that described already for CLPIA Workbench. The border agencies may elect to utilise LNSW risk profiling of the trade declaration to select processing path. Refer also to the functions indicated by the concept of operation.

The border agencies may elect to utilise the shared information of the trade declaration (elements of which may be segmented according to the access control and permissions specified for users) to schedule joint physical inspections, should risk profiling or officer recommendation indicate this processing path.

LCD officers could also have access to the LNSW Border Agency Workbench. The action step to conclude a trade transaction from the perspective of the Border Agency would acquit the specific transaction permit and mark it as such in the LNSW database. That is, the trader could not reuse that permit for another declaration.
4.2.5.6 Concept of operation – LNSW for LCD

The concept of operation would have similarities to that described for OGA’s at borders, with an additional functional set for border gate officers.

LCD officers would receive notifications of (1) pre-arrivals declarations, (2) goods arrival notifications for pre-arrival declarations, (3) requests for ‘permission letters’ regarding exemptions / concessions, (4) import / export / transit declarations by LNSW-registered traders through LNSW. Messages would be exchanged with the ASYCUDAWorld as described at §4.2.7. For pre-arrival declarations, messages would be exchanged with the LCD information system for managing Master Lists for LOIP exemptions and concessions. [That system is under development.] Refer to §4.2.8.
In addition, for all declarations, data would be available to authorised officers via the LNSW LCD Workbench in-trays of officers according to role-based configuration. While processing of the declarations would be managed using ASYCUDA World, LCD officers would have the following facilities:

1. accessing the LNSW government website and logging onto LNSW – LNSW would know by user name that the user is for LCD and at which site
2. only having access to data that are pertinent to them under the control of the LNSW access control tables and workflow management configuration
3. using the workbench to inspect the online ‘in-tray’ to peruse the declarations that in process (pre-arrival declaration, arrival notifications for pre-arrival declarations, and ‘normal’ declarations)
4. enquiry facilities concerning declarations and access attached documentation (attached by the Trader) associated with each ACDD and stored in the LNSW database
5. record annotations concerning the processing of the ACDD, including potentially attachment of image files such as may be available from container scanning, inspection analyses and so on
6. communicating queries to Traders and receiving responses from Traders Messages would be deposited in the Trader’s LNSW Mailbox with an alert of the message sent via the Trader’s preferred communication channel. The Trader could respond through the LNSW with an alert likewise sent to the LCD officer
7. receive advance information such as might be obtained from the granting of a permit of an imminent trade transaction: Potentially, the licence data, containing some shipping data, could be available to border agencies – this may be of benefit for resource (human or otherwise) scheduling
8. enquiry facilities regarding permits, e.g. to verify authenticity (refer to §4.2.6)
9. utilise a simple workflow for border gate goods arrival transaction / workflow for LCD with risk assessment for disposition of goods (e.g. wait at gate for LCD / multiple agency inspection, proceed to scanner, proceed to warehouse, proceed to trader premises under seal, etc.)

This simple function set for LCD in LNSW

a. would allow an authorised officer to record vehicle movement control data (e.g. vehicle licence number, date, importer TIN, general description of vehicle, general description of goods) and
b. would include automated functions to suggest and record decision of next movement, agent’s request for warehousing, or trans-loading or release from customs control [In this sense, the functional set would add facility to the current spreadsheet and red / green tag system currently used at Friendship Bridge]
c. update the LNSW records concerning the location of goods and vehicles and have this available for enquiry and reporting.

4.2.5.7 LNSW LCD Workbench functions

The functional set would correspond to the functions implied by the concept of operations and have a style similar to that described already for Border Agency Workbench.

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25 Alternatively: attached documents may be sent to and duplicated in the ASYCUDA World dataset. However, this alternative would provide unnecessary data communications overhead and require significant additional data storage capacity with the ASYCUDA World database.
4.2.6 Permit verification and enquiry online service

4.2.6.1 Concept of operation

Building upon the Trade related agencies permit issuing service this functional group would entail:

1. Portal-based look-up for authorised GA users to confirm validity and content of permits, licences, certificates, approvals etc.
2. For GA’s with sophisticated architecturally-compliant information technology: message-exchanging (XML, EDIFACT, or UNEDocs) ICT system in a peer-to-peer architecture utilising a to-be-published message architecture
3. Infrastructure functions such as for the services, features and capabilities previously described
4. Messaging exchanges with border agencies to integrate with ‘back-office’ procedures
5. For GA’s with sophisticated architecturally-compliant information technology: message-exchanging (XML, EDIFACT, or UNEDocs) ICT system in a peer-to-peer architecture utilising a to-be-published message architecture
6. For GA’s, in particular for those that also have border regulation responsibilities, functions in support of (a) the pre-arrival procedures (as described for the trade related agencies permit issuing service), (b) alerts, messages and workflow during entry processing and clearance and (c) where applicable, acquittal processes for associated permits, licences etc.
7. Feedback loops from the outcomes of the declaration process to strengthen the risk-orientated data collation and analysis functions previously mentioned within LNSW for the GA’s

4.2.6.2 Functional content

The LNSW functional content would be secure enquiry facilities available to authorised officers at LCD and OGA’s at borders.

4.2.7 LNSW Declaration Lodgement / ASYCUDA World Integration

4.2.7.1 Concept of operation

1. The Trader’s Workbench (and LNSW messaging) would provide the facility to construct and submit declarations. LNSW would route the declaration to the officers configured for the pertinent border agencies: mostly to LCD at the designated point of entry or exit, and, it is estimated currently, in approximately 25% of circumstances, to one other border agency, MAF or FDD.

Refer also to 4.2.2.2 item (7): The declaration, prior to submission to LCD (ASYCUDAWorld) would be ‘parsed’ by LNSW to mitigate data entry errors.
2. For MAF or FDD, the border agency workbench has been described previously. For LCD, LNSW would construct a message in a protocol that can be accepted by ASYCUDAWorld, nominally XML/EDIFACT CUSDEC message (or WCO DM v3 equivalent message). ASYCUDAWorld would respond accordingly with XML/EDIFACT APERAK message (or WCO DM v3 equivalent message, if any) to acknowledge receipt of the customs declaration.

3. Thereafter, treatment and processing within LCD would be according to the standard operating procedures of LCD. [The procedures for MAF and FDD are as described under the Border Agency Workbench.]

4. It is anticipated that for LCD, ASYCUDAWorld risk profiles would be utilised in addition to or in place of LNSW risk assessment reports which could sent according to an agreed extension to CUSDEC in supplementary data fields according to an LNSW defined protocol. LCD would have access to and utilise LNSW Risk Management functions for the purposes of analysing risks and deriving risk profiles.

5. As the processing proceeds LNSW would accept XML/EDIFACT CUSRES messages sent from LCD/ASYCUDAWorld and make these available to the trader through LNSW Trader Workbench with alerts by SMS/Email according to the trader’s configuration. Depending upon agreements reached between LCD and other border agencies, LCD CUSRES content may be made available to the other border agencies.

6. Depending upon the eventual fee and revenue model for LNSW, the possibility exists for LCD to advise the trader of fees and charges for a declaration via XML EDIFACT CUSRES message. The payment could be facilitated through XML/EDIFACT messages DIRDEB sent by a LNSW at the initiation by a trader to a bank and CREADV from the bank acknowledging successful debiting of the trader account / crediting of the fee / revenue accounts. [Alternative methods of e-banking might also be negotiated with the banks.] LNSW would acknowledge, store and forward the CREADV message to LCD/ASYCUDAWorld to facilitate clearance.

7. At the conclusion of the LCD processing, usually a release notice, LNSW would accept a corresponding XML/EDIFACT CUSRES.

Final release of goods and exit note would be performed by LCD using procedures including ASYCUDAWorld. The final decisions by LCD concerning a declaration and recorded in ASYCUDAWorld would be forwarded to LNSW. [Given the architecture of ASYCUDAWorld a possible implementation method could be a database polling daemon monitoring declaration processing, looking for status changes and constructing messages as noted above] LNSW would advise the Trader by messages according to the Trader’s preferred communication channel (e.g. SMS and / or Email) and to the LNSW mail box with the status of the corresponding TDF updated accordingly.

### 4.2.7.2 Functional content

1. LNSW would construct messages from the trader’s trade data folder at the initiation by the trader and in response to messages received and send messages as described above.

2. LNSW would receive LCD messages, interpret messages, store as appropriate in LNSW database (corresponding trade data folder and or elsewhere as necessary) and respond accordingly, typically as alerts to the associated trader.
4.2.8  LNSW Pre-arrival declaration / LCD Exemptions-Concession System Integration

4.2.8.1 Concept of Operation

1. A Trader may lodge a declaration through the LNSW Trader Workbench well in advance of the arrival of goods for the purposes of obtaining the ‘permission letter’ for an importation that benefits from exemptions and concessions related to duties and taxes. The LNSW would route the message from the Trader to the LCD system for administering Master Lists of approved projects that may take advantage of concessions for import duties and taxes. [Note the FandTA for LNSW, has not included the procedures and processes by which the Trader works with various government agencies under the Law on Investment Promotion to obtain concessions and agree a Master Plan of importations for a project. Likewise the procedures by which the Trader and LCD Import-Export Division (IED) agrees and administers annual or periodic Master Lists has been left wholly external to FandTA. (Refer to the BPR AS-IS report §7.)]

2. At the time of writing functional and technical design and implementation of the LCD IED Master List system is not finalised. LNSW would nevertheless route a message to the LCD IED Master List system – as a ‘message’ in an officer’s in-tray on the LCD LNSW Workbench or, preferably, in a more automated system-to-system manner. The LNSW officer to handle the message and administer the “permission letter” can be
   • in Vientiane: for imports of vehicles and fuel products and for other exemptions (diplomatic, development projects, international organizations etc. (approved by Minister of Foreign Affairs)
   • Regional Customs Office / Customs checkpoint for import of items on a Master List (except vehicles and fuel)

3. At the conclusion of the process either a “permission letter” for the importation instance would be issued or the request would be denied. The outcome would be advised to the Trader directly by the LCD officer and also through LNSW. The identification data related to the “permission letter” and, preferably also the scanned image, would be notified to LNSW and associated with the pre-arrival declaration.

4. A subsequent ‘goods arrival’ notification by the Trader through the LNSW Trader’s Workbench associated with the pre-arrival declaration and the now associated “permission letter” (plus any other associated permits) would then be the import declaration sent by the Trader through LNSW to ASYCUDA World in the normal manner previously described at §4.2.7.

5. Note regarding urgent imports. Importations that would qualify for concessions may arise suddenly e.g. for medical equipment or for essential spare parts for expensive mining machinery, and may need to be expedited ahead of the “permission letter”. LCD has procedures to allow such imports to enjoy the concessions with the “permission letter” lagging in time. From an LNSW perspective, these procedures are considered to be LCD procedures. The Trader would submit an import declaration through LNSW. The declaration would be routed to ASYCUDA World in the normal manner previously described at §4.2.7. LCD would use its procedures to handle expedited processing and separately associate the “permission letter” separately.
4.2.8.2 Functional content

Corresponding to the ‘concept of operation’ the functional content necessary would comprise:

1. Trader’s Workbench to have indicators for a declaration that it is a pre-arrival declaration and that a “permission letter” is sought. A further indicator that the “urgent import” procedure was used would be needed to reconcile the procedures with the actual timing of events.

2. LNSW routing mechanisms would send a message to the configured LCD IED Master List user / system.

3. LNSW would accept messages from the configured LCD IED Master List user / system to signify the issuing of the “permission letter” or denial of the request. The messages could include an image of the “permission letter”. [The means by which the LCD IED Master List system message arises is left undefined. Preferably this interoperation would be integral to the design of that system. Alternatively, in a manner akin to that described for ASYCUDAWorld and alternative supplementary subsystem might inspect the LCD IED Master List system, detect the status of a request / availability of a “permission letter” and communicate this to LNSW accordingly.]

4. LNSW would notify the Trader accordingly by the Trader’s preferred communication channel(s) and place an item in the Trader’s LNSW mail box, updating the associated TDF accordingly.

4.2.9 ASEAN SW Integration Module

4.2.9.1 Concept of Operation

At the time of writing the specific modes of operation, technical architecture and legal bases for ASW integration are not yet settled. In principle, for intra-ASEAN trade, a trader in the exporter country could send or make available export documents, in particular the ACDD and any COO, to the importer. The importer could refer to the documents received in support of its import declaration.

4.2.9.2 Functional content

This functional group would entail

1. Functions for a trader to send declarations (ACDD, COO) created through LNSW to its trade partner via ASEAN Single Window (ASW) per ratified protocols that yet to be established [or through ASW to another NSW of an ASEAN country depending upon the eventual model for ASW]

2. Functions for a trader to receive and download declarations (ACDD, COO) from ASW per ratified protocols

3. Enquiry functions for GA officers subject to authorities / access controls
4.2.10 LNSW Help Desk

4.2.10.1 Concept of operation

LNSW would be available 24 * 7 excluding scheduled or emergency down time. It would be used to permit traders to conduct transactions at any time. Officers at CLPIA and border agencies would utilise LNSW functions according to their service hours. As such LNSW becomes a pivotal service requiring concomitant reliability and performance and a support services that would be accessible through a LNSW Help Desk by on-line and telephone facilities. The Help Desk functions should be available 24 * 7 at least for lodging service requests and enquiries with technical support to be available over extended time periods that would be defined (e.g. from 6am to 24:00 daily or from 6am to 22:00 on days when any LNSW-connected GA is in operation and so on).

Access online would be through the LNSW web-site (public and government) which would provide contact details (LNSW telephone operators), FAQ, and a service call or enquiry lodgement capability. Consideration for on-line LNSW support personnel could also be facilitated.

Call centre functionality would be offered for the public and for LNSW users:

1. prospective traders
2. registered traders
3. government agency users
4. information consumers

The request for assistance could be for any legitimate topic: including assistance concerning sources of information, registration enquiries, assistance concerning LNSW functions, suspected faults, defects and grievances, feedback and suggestions.

4.2.10.2 Functional content

The functions would be typical of a help desk / customer service operation, including:

1. For public / recognised LNSW users
   a. lodge a help request (on-line or by telephone) and receive an acknowledgement including an expected first-response time and a reference identifier
   b. follow-up a help request by reference identifier
   c. receive response
2. For LNSW help desk operators
   a. lodge a request made by telephone
   b. be alerted to a request made on-line
   c. review a list of help requests
   d. categorise a help request and allocate a respondent
e. annotate (by help desk operator or other authorised responder) responses and resolutions in a log per help request and send these on to originators
f. close a help request
g. log a help request for themselves
3. For LNSW help desk managers
   a. be alerted to near over-due and overdue responses to help requests
   b. follow-up an over-due response
   c. performance statistics – per type or request, type of resolution, trader, date and time and other attributes
4. For LNSW governance entity
   a. performance statistics – per type or request, type of resolution, trader, date and time and other attributes

### 4.2.11 LNSW Fee / Revenue Module

At the time of writing, the LNSW proposals for fees, revenue collection, fee distributions and related topics remain unsettled. The Technical Assistance has proposed methods that may be used to assist GoL to determine fee and revenue approach, charge points, fee levels and billing methods. Considerations include

1. LNSW being exclusive of any such processes and functions
2. LNSW having functions for accounts receivable, billing, statements and payment for some or all of the following
   a. registration fee
      Note: The Fee and Revenue Model report recommends a one-time fee payable by traders upon registration in order to make use of the LNSW. The registration fee, as recommended, includes one year annual membership.
   b. annual membership fee
      Note: The Fee and Revenue Model report recommends an annual fee payable by LNSW-registered Traders in order to make continued use of the LNSW.
   c. business transaction by a CLPIA (e.g. permit request),
      Note: The Fee and Revenue Model report recommends that the permit process does not contribute as a specific charge point.
   d. LNSW transaction fee (according to a definition to be devised for an ‘LNSW transaction’)
      Notes:
      i. The Fee and Revenue Model report recommends a line-item fee, i.e. the transaction fee for LNSW is reduced to fixed amount per line item on an ACDD whether for import, export or transit.
      ii. The report also suggests a capped amount or a reduced fee per line item for ACDD with line items in excessive of a set number.
      iii. Any TDF that did not include a declaration being submitted (e.g. for certain certificates or for permits that were not actually acted upon) there would be no LNSW fee.
3. Revenue and fees: Fees and charges module needs to be configurable to accommodate changes in the methods employed over time. Types of fees and revenues that could be included within LNSW:
   a. LNSW one-time registration fee,
   b. LNSW annual user fee,
   c. LNSW line item fee,
   d. LCD processing fee,
   e. border agency fees and charges for inspection / analysis / cleansing / destruction / …
   f. LCD fees and charges for inspection / analysis / cleansing / seizure / destruction / …
   g. expedited processing fees
   h. duties and taxes

4. Accounts module functional scope could entail
   a. lodgement, billing, debtor analyses, statements, income and disbursement reports,
   b. Configuration of charge points, fee schedules and calculations, and billing points, such as per transaction, periodic billing
   c. Recording in detail and accounting for all fees, charges, duties and taxes,
   d. Recognizing, accounting for and off-sets payments against accounts receivable line items either on a transactional basis or on a statement basis
   e. Recognizing and process electronic payments, i.e. on-line payments through LNSW transaction which may be
      i. Trader authorized direct debits as a transaction or
      ii. use by a Trader using a credit card account or debit card account
   f. Recognizing and processing bank statements for payments made by Traders at commercial banks and Treasury credited to LNSW recognized accounts which sufficient information (such as Trader LNSW identifier, account, transaction identifier, payable item identifier, statement reference number or details and so on)
   g. Periodic payment capabilities: sending periodic invoices or statements to registered LNSW users,
   h. Capabilities for periodic payments schemes under a guarantee, bonding or deposit scheme
   i. Functions to assist debt recovery
   j. Functions for direct debit disbursement or remittance into nominated accounts for Treasury, government agencies
   k. Integration with the LNSW Operator’s general ledger and accounts payable for payments made to suppliers engaged in the sustainability, support, maintenance, and operation of LNSW (i.e. in support of a cost-recovery approach for LNSW operation)
   l. Accounts receivable reporting functions
   m. Revenue accounting reporting functions
   n. Account reconciliation functions
5. Phasing: The implementation of the fee and revenue functions and methods may be expanded in phases, for example:
   a. Phase 1 could be no fee / revenue module. All agencies would process financial transactions as they are currently do.
   b. Phase 2:
      i. wrap up LNSW fees including registration, membership, transaction fee, LCD processing fee all recorded in LNSW for revenue distribution
      ii. Treasury handling cashiering
      iii. LNSW having a Treasury Receipt data entry function to recognise payment before goods can be released
   c. Phase 3:
      i. As above plus
      ii. LNSW LCD workbench and LNSW Border agency workbench to provide for reporting fees for inspections / analyses / cleansing / destruction and have these wrapped into the Trader’s account
      iii. Integration between the Treasury cashiering system and LNSW accounting module
   d. Phase final: wrap-up fees, duties, taxes, e-banking (credit card, direct debit instruction), periodic billing and transactional account traders

4.2.12 LNSW Risk Management Module

The risk management module for LNSW would have six functional set as described below.
LCD and all OGA would have a risk management group authorised and responsible for collating and recording analyses in an LNSW database private to each GA.

The risk management group would utilise analyses and reporting of its risk management database to define transactional risk selectivity filters used for each permit request and declaration submitted.

The risk management group would utilise the analyses and reporting to set audit selection filters used to recommend Trades and transactions to be audited.

The functional sets are:
1. Intelligence recording and analyses
   a. the sources of data would include intelligence sources of any type (e.g. inter-agency information, international agency information, intelligence gathering by the GA by surveillance by the risk management group and from its own operations and investigations)
2. processing feedback recording and analysis (an ‘enforcement’ database)
   a. another key source of information would be feedback from risk profiles and audit selections set within LNSW and the results of processing according to the transactional risk assessment reports
i. positives: when LNSW risk assessment leads to a detected defect, 
ii. false positives: when a risk assessment leads to no defect, 
iii. false negatives: when a risk assessment clears a transaction but a defect is detected by officer vigilance and 
iv. random positive: when a random selection for scrutiny leads to a detected defect 

b. each report of findings would include information on results, details of findings, selectivity indicators or profiles that generated inspection, further action and so on If inspection identifies irregularity the findings would be communicated. Final actions would also be recorded

3. risk profile setting
   a. based on its analyses, the risk management group of each GA would set risk profiles – that is, logical (AND / OR) combinations of terms comparing values in fields (e.g. =, ≠, >, <, ‘Contains’, ‘Starts with’) pertinent to permit requests / declarations. The declaration would be evaluated against the extant profiles when the trader submits the permit request / declaration for processing 
   b. typical fields would be trader, commodity, country of origin, quantities, values, point of entry / exit 
   c. the risk profiles would be set in LNSW by the risk management group of each GA 
   d. a risk profile may be constructed by modification of another profile 
   e. the overall selectivity procedure have a randomising factor to select transactions independently of designed filters to provide feedback concerning effectiveness of the selection criteria (with percentage of transactions to be checked randomly also set by each GA) 
   f. typically risk filters would be operational according to time and date validity periods 
   g. LCD would receive at the time that the declaration is submitted to it, and additional dataset being the LNSW selectivity recommendation that would be loaded into the ASYCUDAWorld database for the pertinent ACDD 
   h. LNSW risk analysis result would be sent to LCD Inspection Unit and if appropriate (depending on nature of goods) to the corresponding border OGA. [LCD / OGA officer would coordinate inspections (where applicable) and trader would be advised of physical inspection time (if applicable). This would be outside LNSW, however, massages could also be sent among LCD, OGA and Traders using the LNSW mailboxes. Inspectors (LCD/OGA) could use mobile data telecommunications devices (e.g. tablets) to update LNSW records (and perhaps ASYCUDAWorld records) with a report of the results of inspections. Each GA would report separately. The goods release procedures for LCD would include, where applicable, advice from authorised OGA officers through LNSW that from the OGA’s perspective, goods are approved for release.]

4. risk assessment reporting by LNSW
   a. each request for permit etc and each declaration would be analysed according to the risk filters in force for the time of the request / declaration 
   b. LNSW would report a risk assessment report that would permit the GA to select a processing path – usually a stream-lined path (perhaps (a) automatically issuing a permit, or (b) ‘green channelling’ a declaration without officer involvement or inspection) or a more investigative processing path (such as yellow, red and blue channelling at LCD)
c. the GA may use this risk assessment report integrated with its workflow management automatically (i.e. LNSW selects the processing path) or manually (i.e. a receiving officer uses the report to guide the processing steps through the GA’s LNSW workflow)
Note: the risk assessment report would also be available for GA’s with more sophisticated ICT capacity as part of the LNSW message that triggers the GA processing system.

5. transactional feedback reporting into the risk management database of the GA: as part of the LNSW GA workbench, an officer would report a result of the processing, in particular reporting whether any defects are detected in processing a request for a permit / or processing a declaration and the severity of any defect

6. audit selection:
   a. similar to risk filters, the risk management group would determine analysis criteria for determining traders or transactions to be audited post-processing
   b. audit selection differs from risk profiling by more complex analyses of trends and cross-trader comparisons in the registration database and the history of transactions in the LNSW with an aim to select audit cases matching the GA’s officer resources available for audit Audit selection can be more ICT-processing intensive, involving lengthy and complex database analyses and is usually not suitable for transactional risk analyses
   c. again a randomising factor would be used for selection to provide feedback concerning effectiveness of the selection criteria
   d. audit result reporting: this is similar to transactional feedback reporting

4.2.13 LNSW performance monitoring

An advantage of well-engineered, modern ICT systems is the ability to collect performance data seamlessly and without additional data entry by system users. For example, using workflow management architectures, all LNSW actions by GA officers in LNSW would be metered (time and date stamped).

SLA / SLO reporting would be available for any meters and at any level within the workflow, with selection by data and time range, workflow subset or element ranges, trader, system user and other ranges to be defined. Such reports would be available to authorized users at the LNSW operator and governance entity and at GA’s, and traders (restricted to workflows initiated by them).

Performance reporting would be available to the LNSW operator and the governance entity to show real time performance (e.g. through Business Intelligence tools and ‘Dashboards’) in terms of transactions for each processing step, dwell times per GA, transaction type, trader and transaction, highlighting transactions outside service level objectives. An example is shown in the mock-up at Figure 13.

LNSW technical infrastructure would be monitored using off-the-shelf performance monitoring tools providing reports such as communications network statistics (such as messages number, sizes and rates, effective bandwidths, network response times) and server statistics (such as transaction queue lengths, transaction response times, and resource utilisation).
Analyses of the performance of the system would be made available according to service level agreements and obligations in and comparison to those service levels.

Figure 13 ‘Mock-up’ of a manager’s dashboard

4.2.14 LNSW MIS

In addition to risk and audit analyses, each GA would find analyses of LNSW information pertinent to it advantageous for management. Subject to access security and privacy provisions, each GA would have access to data extracts and a level of ‘business intelligence’ tools for analysis and reporting.

GA executives and selected ‘site’ managers could utilise ‘Dashboards’ that portray significant real-time and near-real-time performance indicators and MIS. With appropriate training, these tools could be dynamic to provide information of interest that naturally changes over time, especially at the executive levels.

A GA might also use extracted data to which it has access as input to tools external to LNSW. Ad hoc enquiry: In addition to defined enquiries and reports, LNSW should support and facilitate other ad hoc enquiries by authorized, trained users from the client terminal. There shall be a tool for the generation of such reports without the need for programming.
4.2.15 Information Services

LNSW data could be made available to information consumers such as government planning agencies, central bank, statistics office, universities, international organisations, and other such subscribers with a legitimate interest in trade data statistics. Privacy of trader would be protected.

LNSW could provide data extract facilities using available keyed / coded attributes of LNSW trade data. LNSW could provide additional tools for analyses and reporting. The services would have implications for technical infrastructure sizing and may be subject to fees for service.

4.2.16 Additional administrative functions – LNSW Governance / LNSW Operator

The architectures nominated in the main body of this document pertain to the operation of the LNSW service. ICT will also be required for the LNSW Governance Entity and for the internal administration of the LNSW Operator. A brief outline of the functional requirements in this regard is included below. For the purposes of FandTA, it is assumed that the LNSW Governance Entity will be a specific government unit and that the LNSW Operator will require its own administrative capabilities including an accounts payable and treasury function.

4.2.16.1 LNSW Governance Entity

A modern government entity capable of setting policy and monitoring the sophisticated LNSW Operator, would require the following functional components
1. Accounting processes in accordance with government regulations
2. Human resource management processes in accordance with government regulations
3. Office automation
4. One-per-desk networked devices for all officers according to role
5. Office facilities for word processing, spreadsheet, etc.
6. Email
7. Web-access facilities
8. Audit administration

4.2.16.2 LNSW Operator Administration

The functional architecture for the LNSW service has been described. In order to operate as a modern commercial entity, the LNSW Operator will also require at least the following functional components:
1. MIS and EIS processes
2. CRM – for its clients: traders and GA’s
3. Accounting processes
4. Accounts payable
5. Accounts receivable
6. General ledger
7. Fixed asset administration
8. Other processes appropriate to the eventual commercial model for LNSW Operator
9. Human resource management processes
10. Personnel database
11. Payroll, entitlement and expenses administration
12. Leave administration
13. Skills inventory, training administration, career administration and succession planning
14. Office automation
15. Office facilities for word processing, spreadsheet, etc.
16. Email
18. Internal audit processes
19. Financial audit
20. System audit
21. ICT management systems
22. ITIL library
23. Configuration management systems
24. Network and system management systems
25. Full life-cycle software system development policies, procedures and tools
26. Project management policies, procedures and tools
27. Any value added services conceived by the operator in accordance with its mandate

At a minimum, the technical architecture for the administration of LNSW Operator would require:
1. One-per-desk networked devices for all employees according to role
2. Networked devices necessary in a modern organization for normal business processes e.g. printers, scanners
3. LAN connecting the network devices of sufficient capacity to meet the operational demands
4. Network server architecture: domain administration, internet server, web server, value added services
5. Business process servers, software and services for its functional components

4.2.17 LNSW infrastructure functions

Miscellaneous non-business functions would be necessary for LNSW to be reliable, responsive, secure, robust, access-controlled, and auditable. Administrative tools would also be required.

The infrastructure functions required for LNSW include:
1. administration of reference tables / configuration tables
2. administration of access security:
3. Identification / authentication / authorization / non-repudiation: user-name, password, other credentials (security device or digital certificates) LNSW requires the normal user-name, password provisions common for on-line services. The user-name needs to be unique and the password needs to be ‘strong’. For Traders, as part of the registration service, it is preferred that the Trader nominates his own user name and password and that the system confirm uniqueness and sufficient strength. GoL might also consider preferences for other credentials to verify that the authenticity of the user in the model of ‘how you are’ (user name), ‘what you know’ (password) and ‘what you have’ (security device – such as a user-specific RSA token-generating device such as increasingly common for on-line banking). Taken together these three credentials are regarded as sufficient in most jurisdiction to confirm identity and intent and obviate repudiation.

An alternative approach that might be considered, at the cost of additional administrative overhead for users and LNSW, is the use of digital certificates administered through a accredited or approved certificate authority to confirm the authenticity of the sender, ensure the integrity of the document received (i.e. that it has the same content as when sent) and timestamp the delivery.

4. Delegation In addition to the normally available functions, access control functions need to address requirements for an authorised ‘user’ list per trader, e.g. for employees and brokers, each with a password, e.g. login could be: trader/user + password. Similarly, the access control functions must be able to allow a trader to assign a broker on a general basis or on a case by case basis and authorise the broker to conduct related business for them.

A role-based architecture is required. (See below.) Users may apply to have a delegator’s function set. The Trader would have such access to enable them to nominate and delegate to employees and identify and delegate to brokers and to terminate such delegations.

5. Role-based functional access – that is the association of user-names to roles (esp. for GA users) and roles to functions Several implementation schemes are possible. For example: LNSW could have an access control coordination team that each GA would contact to arrange changes. This would remove the need for skills transfer and an administrative load from the GA but may be too slow to be practical. An alternative would be to have each GA or perhaps each site to link user names to roles as and when required (e.g. during periods of absence for holiday, illness etc). The role-based access administration is essential for audit of access and usage of the system but adds a senior administrative function and needs to be treated seriously by the organization.

6. Preferably with role-based data access (value-based access control) In addition to role-based functional access, certain functions would have

7. Single Sign On (SSO)
   a. Lao Trade Portal project recommends SSO for LTP and LNSW (in document Future of the LTP). It would be preferable to revise the light weight LTP registration procedures for Traders and government agencies and integrate the registration for LNSW and LTP.
   b. SSO for LNSW and ASYCUDAWorld (AW) AW has architectural limitations that may impede a perfect solution, however, SSO for LNSW and AW would be advantageous. Nevertheless it would be preferred to have a solution, e.g. leveraging Microsoft Active Directory or similar architectures.
8. context sensitive on-line help
9. function usage audit trails, preferably with before and after looks and audit reports with selection including at least: date and time, function, and LNSW-user
10. workflow / business process management tools for defining workflows and managing workflow instances at run time
11. database integrity functions and tools for backup and recovery
12. database referential integrity checks
13. operating procedures (e.g. for service start-up / close down, web, database and transactional services activation / suspension / …)
14. data archiving
   Desirable functions include:
15. real-time / automated SLA/SLO monitoring tools
   Help Desk functions are described at §4.2.10. The functions include miscellaneous queries, including status queries, by Traders and others that could lead to investigation and follow-up by Help Desk officers.
   The SLA / SLO monitoring could be extended to include real-time tools. Transactions that are awaiting a response from a GA beyond an SLO target nominated by the GA for a particular monitored process could trigger a message to a designated senior officer within the GA to initiate a query and remedial action. Escalation steps could also be considered.
   To facilitate real-time / automated monitoring the functions such as the following would be required:
   a. SLA / SLO target setting:
      Defining process steps, target response times, supervisor to be contacted, escalation steps
   b. Real-time SLA / SLO monitoring and escalation
      Monitoring of each workflow instance, comparing dwell time to SLA / SLO target and issuing messages to the designated supervisor.
16. on-line training tools
17. content management functions – for storing and accessing document content, esp. for imaged documents
18. customer relationship management tools

4.2.18 Value-added functions

In addition to the functions described in this document, it may be that LNSW Operator finds opportunity for Value Added Services leveraging the position of the Operator in the international supply chain. The resource allocations for, and implementation, support and maintenance of, such functions should be a distinctly secondary priority to the Operator. The limitations, rights and privileges and sharing of benefits arising would be a matter of agreement between the GoL and the Operator.
4.3 Non-functional characteristics

LNSW functions would be operated within the setting of the following non-functional characteristics. That is, the following non-functional characteristics apply broadly to the LNSW functions. These may relate to architectural requirements that relate broadly throughout the solution or to other requirements.

1. **Client interface:** For direct entry type interfaces (i.e. not B2G, G2G interfaces), LNSW should be based on thin client architecture, whereby user access to the system will be through a standard web browser.

2. **Presentation style:** It is preferable that the user (for a Trader, e.g. when completing a permit application request or ACDD, or a GA officer entering several fields for a particular form) has an option to use one of two forms of Human-Machine Interface (HMI):
   a. a direct data entry layout that simply presents the data fields to be entered or edited
   b. a form based data entry (e.g. using an interactive form tool) that seeks to replicate the real world layout of the form

3. **Presentation Language:** At least Lao and English (US variant). LNSW must support Lao for documentation, training, web pages, data entry, and reports. Trader should be able to nominate the language for presentation of web pages and for documents (to the extent permissible at law).

4. **Message languages:** XML/EDIFACT plus XML/LNSW protocol (to be defined). Underlying data elements would use WCO Data Model version 3 or latest, extended to encompass new data types for the CLPIA.

5. **Fuzzy matching:** Where appropriate in terms of common business usage for search fields, there should be support for fuzzy matching

6. **Field validation:** For all defined messages whether originating from a terminal operator as data input or another system, LNSW shall perform field type validation consistent with the field and, where appropriate, referential checks to LNSW database. Cross-field checks would also be made where possible, e.g. on the CLPIA Workbench (refer 4.2.5.1), if the user selects ‘Action = Send message to Trader’ then the Message box should be non-blank.

7. **Currency support:** The software shall support amounts in all trading currencies. The length of fields for accounts must support decimal numbers at least with integer part of 12 digits and decimal part of 2 digits.

8. **De minimis conditions:** where applicable, LNSW should have the capability of recording and handling de minimis amounts for specific functions – e.g. for accounting actions.

9. **Metering:** The business processes of LNSW would be implemented through a runtime workflow based architecture. Each workflow would be triggered by business level event, the arrival of which will be date and time stamped with the date and time stamp also recorded in a metering database. Each subsequent process step through the various workflows would likewise be date and time stamped. For real-world processes date and time stamps would also be kept for (1) the arrival of the workflow item at the step, (2) commencement of real world actions (i.e. observation of the arrival of a workflow item) and (3) final response to the workflow item. The meters would be used in the SLA / SLO reporting and the dashboard.
10. Transactional integrity: Message-based integrity such that the designed effects of a single message are either entirely retained or entirely discarded with status clearly identifiable by the message originator. Recovery from service failure should be an automatic feature of the technical infrastructure software for the database manager, multithreading application server and workflow manager.

11. Operational simplicity: LNSW needs to be simple to use, operate and maintain with minimal resources and skills needed.

12. Ease of use: Use of web forms should entail:
   a. navigation by simple minimal clicks
   b. for applicable fields there should be drop-down lists with auto-completion facility
   c. for classes of users, across the system, there should be a common look and feel. Some toolsets may have specialised functions that may include niche products with necessarily different look and feel
   d. an ability for the user to have multiple concurrent windows
   e. single-sign-on to LNSW functions
   f. where applicable, extraction of data by query filters and conversion of extracted data to commonly used formats (such as MS Office documents, MS Excel spreadsheets, CSV files)
   g. where applicable, reports may be generated in summary format only if requested and also with sub-totals and totals

13. COTS-based: It could be advantageous for LNSW to be based on a Commercial-Off-The-Shelf product specifically designed for Single Window operation.

14. Standard industry software available on commercial terms for supply and support: LNSW should be implemented in an n-tier, clustered / multi-redundant component based architecture for flexibility, scalability, durability and cost effectiveness. LNSW should be implemented with and operate with standard industry software (e.g. for software development suites, middleware, operating systems, and database system). The architecture would entail workflow execution / web services / persistence to decouple the layers of the architecture including external interfaces, end-user interfaces, functional modules, business flow, database, operating system and computer hardware.

15. Open systems: LNSW should facilitate future ICT and interoperability developments.

16. Modular design: LNSW should be based on an architecture divided into different modules which can be customized to adapt to business changes and supporting work flow management via graphic interface.

17. SOA toolset: Recognized (widely installed customer base) product with commercial warranty and which supports scalability, transactional integrity and resilience requirements, including replication.

18. Workflow toolset: Commercially available workflow management toolset with commercial warranty and widely installed user base, and providing WF / Business Process definition and execution management facilities.

19. System engineering: LNSW must be underpinned by a published architecture encompassing full-SDLC specifications preferably in a widely used, commercially available and supported system engineering tool as the repository for the published architecture. The software would be administered through a widely used, commercially available and supported system management toolset. The system
management approach and toolsets will support at least environments for live service at dual redundant sites, a transition-to-live environment for pre-live acceptance testing, system test environment, development environment and training environment.

20. The service would be underpinned by on-site operational personnel with expertise and experience using the LNSW application software basis and the technical infrastructure of LNSW and able to provide help-desk personnel.

21. Reliability of operation: LNSW must be reliably available during service operational hours. Being externally projected to traders, the service hours should be close to 24*7.

22. Performance: the system design and implementation on reasonably specified technical infrastructure should provide agreed response time exclusive of indeterminate internet latency.

23. Concurrent operation: The design should provide a solution for concurrent MIS, enquiry and information services without impacting transactional throughput.

24. Intrusion prevention / anti-hacking: the solution to LNSW must encompass facilities internet security, anti-virus, anti-spam, etc.

25. The solution for LNSW must be capable of redundant two-site operation – main site and back-up site.

26. The LNSW solution would require thorough usage documentation and training materials, available online for all classes of users and usages, including self-help training materials for GA officers, traders and information services consumers.
5 Application: Architecture

5.1 Synthesis of the application architecture

The functional model described in the previous section in terms of functions and process is driven from operational requirements within the scope of project objectives. ‘Look and feel’ may not be similar to the sample layouts in the previous section; however, the functions and processes would need to be present in the eventual solution if the project objectives are to be met.

The application architecture and, in subsequent sections, the technical architecture are described in this section in a manner consistent with both operational requirements and the various influences and preferences for a modern ‘good practice’ solution and is cognisant of (a) ‘right-sizing’, (b) affordability; (c) availability of supply, (d) availability of services for sustainability, and (e) market ingenuity that may introduce new and perhaps ‘better on balance’ products. [Refer to § 3 for discussion of the architectural influences.] These factors may not all coincide and compromises may be need for the actual solution, in particular if a COTS or reusable product is the substantive basis for LNSW.

The application architecture drawn here for Lao National Single Window is a synthesis of the factors to provide a reasonable, good practice model likely to be supplied and sustained within Lao, right-sized for the volumes of traffic and affordable on a balance of implementation and operational costs and benefits.

5.2 Description of recommended application architecture

The application architecture depicted here for Lao National Single Window includes:
1. service orientated architecture (SOA)
2. web services
3. workflow management / business process management architecture
4. n-tier component based architecture
5. browser / thin client for the presentation layer
6. single centralised model (that may be distributed and replicated physically)

The application architecture as described is
1. scalable functionally: both horizontally and vertically to provide growth and durability
2. loosely coupled between the application modules and between the application modules and the technical infrastructure to provide functional enlargement and replacement transactional scalability with reduced system engineering and to facilitate business process redesign
3. compatible with a technical infrastructure (outlined in subsequent sections) that is also characterised by a component based architecture and also scalable vertically (within a component: e.g. processors, RAM, HDD) and horizontally: (e.g. clustered / fail-over units; replicated channels…)
The application architecture is described in terms of the architecture stack and its components, and locations. It is conceptualized in parallel with the other FandTA dimensions: end-user, data and message, server and system software, network models and a management model. The application architecture is comprised of layers as illustrated in Figure 14.

**Figure 14 LNSW Application Architecture Model**

1. **Client / Presentation layer – user – device interaction**
   a. on conventional personal computers, notebook computers, PDA, and mobile devices, with any common standards based thin-client browse
   b. alternate channels via email alerts, SMS alerts
   c. interoperating with the application layer (i.e. binding user – device interaction with business logic defined by workflow definitions and web service requests)
2. Messaging Gateway— receiving and sending messages between LNSW and participating services (systems of Traders, Government Agencies) under published messaging protocols, viz. XML/EDIFACT and a private LNSW Message Interchange Protocol
3. Messaging Transformation – performing any necessary translations, e.g. between XML/EDIFACT and the LNSW XML schema,
4. Application Integration layer
   – implemented as orchestrated web services organized through a business process execution manager in a workflow execution management environment
   – providing modifiable workflow paths, associated business rules and procedures linked to web services
   [These capabilities are essential for cost-effective durability of LNSW.]
5. Persistence layer – decouples database and application functions through the administration of transaction units (i.e. across exchanges between users and the system)
6. Application service layer – managing multithreaded application units (transactional strings for a particular session or message exchange), and supporting transactional scalability
7. Database layer – providing transactional integrity, database integrity, optimised storage and retrieval, data storage security, replication services and database access scalability for databases that might be physically distributed over multiple physical servers, storage devices and database schema
8. Operating system layer – providing low level machine control over and between the various computer servers, switches, network servers and devices, and storage devices

5.3 Residency of the software infrastructure

LNSW functions and architecture would be preferably implemented as a single centralised service, also preferably at two physical central sites. The parallel operation would provide load balancing on the server clusters for network management, service management, application and database. At each of the two physical central sites there would be clustered multiprocessor configurations for resilient operation and scalability.
6 Data and Message Model

6.1 Overview

The data and message model for LNSW is conceptualized from

1. the application models in particular the concept of operation and functional and process outlines,
2. the World Customs Organization (WCO) Data Model (currently at version 3),
3. LTP project data analysis and CLP-to-ASYCUDAWorld data mappings\(^ {26} \)
4. XML/EDIFACT ‘standards’ i.e. specific EDIFACT messages translated to XML format
   a to-be-defined LNSW XML (ebXML\(^ {27} \)) message schema, esp. (A) for extensions to (2) and (3) above necessary for data flows between LNSW and Government Agencies not catered explicitly under those standards and (B) its internal operation as web services
5. strategies for the technical infrastructure, in particular, for centralized facilities The model is described in terms of a data model, a databases implementation model, and a message model.
6. strategies for the technical infrastructure, in particular, for centralized facilities The model is described in terms of a data model, a databases implementation model, and a message model.

6.2 LNSW Data Sets

The data model is shown as a high-level data set in Figure 15. At this high level, this diagram indicates the data subsets that should be included in LNSW database. Note that entities may participate in more than one dataset.

The entity-relationship model (or object model or data structure) may be elaborated as part of the Functional and Technical Specifications and would be part of the design of the eventual LNSW solution. Under a COTS or reusable system approach for implementation, there can be several levels of abstraction separating the implementation model and the logical model.

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\(^ {26} \) Additional analysis could be applied to the existing set of trade documents in use and determine whether these need to be aligned, harmonized and/or simplified according to the UN Layout Key: UNNExT Data Harmonization and Modelling Guide for Single Window Environment at [http://www.unescap.org/unnex/](http://www.unescap.org/unnex/). A minimum data set needs to be defined and published for all parties, including the format, data fields and data elements. These should be in conformity with international standards (e.g. UNECE/ISO UNTDED and the World Customs Organization data model) Refer: UNNExT Guide for the Design of Aligned Trade Forms for Paperless Trade, UNNExT Publication, December 2011. And UNNExT Data Harmonization and Data Modeling Guide, UNNExT Publication, 2012

\(^ {27} \) Refer: UN/CEFACT Core Component Technical Specification (CCTS: ISO 15000- 5/ebXML)
At an attribute level, it is required that regardless of the technical approach adopted by the eventual solution provider, compatibility with the corresponding segments of the WCO DM v3 data structures and attributes (and by extension UN/TDED and UN/LOCODE definitions), including naming conventions, should be evident and provably so. This conformance is intended to simplify additional yet-to-identified opportunities for interoperability. The data structures are listed and described in WCO DM v3 and not repeated here. In general terms the data attributes specifically associated with the fields of a Trader's Declaration would be compatible with the corresponding attributes in the WCO data model. Implementation within the eventual LNSW solution would necessarily entail on the one hand, a subset of relevant segments of the WCO data model and many extensions specifically related to CLPIAs, other LNSW functions and the LNSW implementation model.

LTP project has done extensive work defining entities and attributes for the data model. Refer to Roadmap for Process Simplification and Harmonization Final Report, in particular §5.4 and Appendices B and E for details which need not be repeated here. The data model in that report is a substantial body of work that fundamentally underpins the functional architecture for LNSW.

### 6.3 Data ownership

LNSW Operator has stewardship and safe keeping of all data but has no ownership of the LNSW data and may only access the data or allow access to the data as agreed between the GoL and the LNSW Operator. [The internal administration systems of the LNSW Operator remain the property of the LNSW Operator.]

Ownership of data in TDF (and the registration records created or supplied by the Trader) resides with the Trader. The Trader grants access to the data in a specific TDF for express purposes to a Government Agency by ‘submitting’ CLP applications and ACDD’s. The officers in GA’s may inspect TDF submitted as described for the express purpose but shall not alter the data and shall not have access to functions that allow alteration of the data in a TDF. For each TDF, the ‘status’ attribute would be shared use updatable programmatically by LNSW functions.

Each Permit Database and the database ASYCUDAWorld are owned by the relevant Government Agency. Authorised officers with each GA grant right of use concerning a CLP or release note to the relevant Trader by approving the document and informing the Trader. Cross-agency access to read CLP’s may be granted by the owner of the particular class of CLP.
All system data, registration data (other than that owned by the Trader as described above), accounting data, access control data, configuration data, reference tables, system administration data sets, workflow datasets for operational simplicity shall nominally be owned by the LNSW Governance Entity. The Governance Entity may for practical administration purposes authorise various user groups such as Traders, officers in GA’s, employees and agents of the LNSW Operator to access and amend the data. Likewise, performance monitoring data, MIS data, and extracted business intelligence data shall be owned by the Governance Entity who may grant access to other stakeholders including registered information consumers. In the case of information consumers, data marts shall be constructed so as to remove the specific identity of Traders and officers.
6.4 Implementation model for the databases

LNSW will be operated at central sites preferably replicated for LNSW transactional services providing a single logical central site. That is, there would be physical database storage at each site and database server clusters at each site. Database replication would be used to maintain equivalence of stored data, provide a level of business continuity in the event of scheduled maintenance or failures at either physical site, and potentially provide performance enhancing load balancing.

Replication is costly to implement and operate. Not all datasets may require replication. The key requirement is for business continuity for essential services as defined under Service Level Agreements. The data sets marked “****” in Figure 15 might be considered to be available under a less strenuous SLA and might be excluded from replication.

The architecture requires proven, commercially available and supported database management software that must be ANSI SQL compliant and have a large28 established user base. Likely solutions include MS SQL Server and Oracle.

Physical storage would be at each site: SAN clusters with RAID 1 disk of sufficient capacity with dual channel and dual disk controllers connecting the SAN cluster and DB server cluster.

In addition to the live or production service described, there should be secondary environments closely matching the primary environments technologically (but not in quantity and size) for: (1) testing / transition-to-live (TTL), (2) training and (3) development.

Separately, also at the production site only, there would be a separate disk storage (a separate SAN) holding a data warehouse and associated data marts being accessed by a data analysis server.

6.5 Message model for LNSW

6.5.1 General model

Message models illustrate message type and standards used in transmission between LNSW services and between services of LNSW and those offered by other systems interoperating with LNSW.

Information exchange is defined between services and applications of LNSW, also between LNSW and Traders, Government Agencies, and ASEAN. Data communications between these objects is illustrated in Figure 16.

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28 The definition of ‘large’ user base would be included in subsequent procurement specifications.
6.5.2 Message Protocols

Web-services using message-orientated architecture and standard protocols are preferred for LNSW to facilitate planned and unplanned interoperation between LNSW and other services.

1. LNSW internal services
   A single message standard is preferred for messages exchanged by LNSW internal services: a to-be-defined LNSW XML Protocol.
   The LNSW XML Protocol will be determined by the eventual solution.

Figure 16 Illustration: LNSW messaging
2. **LNSW external services**

Five protocols are required:

a. for interoperation in the international customs domain, and in particular with LCD's Asycuda:

XML UN/EDIFACT messages, in particular:

- **CUSDEC**: Customs Declaration Message\(^{29}\) (as applied for ASEAN Customs Declaration Document (ACDD)).
- **CUSRES**: Customs Response Message
- **APERAK**: Application Error and Acknowledgement Message
- **DIRDEB**: Direct Debit Message
- **CREADV**: Credit Advice Message

b. for interoperation with LNSW Traders and CLPIA's with appropriate in-house systems:

LNSW XML Protocol (external subset) – preferably this would be a subset of the full LNSW XML Protocol for messages with Traders and qualified CLPIAs (i.e. participating CLPIAs when not using LNSW GA Workbench) The Protocol would be WCM Data Model v3 compliant but would necessarily extend the data model for the needs of LNSW and CLPIAs in LNSW transactions

c. supplementary message to LNSW users: SMS

Alerts and advices may be sent as SMS (according to the user’s channel preferences) by LNSW (or through LNSW when originating in a Government Agency) to LNSW users. The message layout would be defined as part of the eventual solution.

d. supplementary message to LNSW users: Email

Alerts and advices may be sent as Email (according to the user’s channel preferences) by LNSW (or through LNSW when originating in a Government Agency) to LNSW users. The message layout would be defined as part of the eventual solution.

e. **ASEAN SW Message Protocol**

For exchanges between LNSW and ASW (and beyond ASW) would be implemented in the yet-to-be-defined ASW message protocols.

\(^{29}\) [http://www.unece.org/trade/undtid/d09b/trmd/cusdec_c.htm, cuscar_c.htm etc]
7  End-user model

LNSW would support the following end-user configurations:

1. Trader
   a. An LNSW kiosk device: participating agencies in Vientiane, provincial centres and potentially border offices may elect to provide kiosk facilities (personal computers) for walk-in traders in order that they can transact through LNSW. It could be advantageous for each agency, e.g. to transfer data capture workload and to mitigate lodgement errors, to insist that traders transact through LNSW.

   [Note an alternative model for kiosks could entail: a single work station at GA offices for convenience but a single multi-station kiosk at each main geographic centre at an ‘LNSW’ office’ in each provincial ‘capital and at LNSW border towns/locations. For the purposes of the cost estimates in Appendix B, the alternative model is not used.]

   b. any device (personal computer, notebook computer, tablet or other mobile device) with any standard / common web browser optionally with an email facility
   c. optionally: a device-connected scanner in order that applicable documentation can be attached to Trade Data Folder
   d. optionally: any SMS-capable device
   e. (potentially: its own ERP or other trading administration software capable of participating in LNSW messaging protocols – none are thought to want or need this capability in Laos)
   f. connected via internet in any manner
   g. (potentially: a dedicated data communications channel for high volume traders – none are thought to want or need this capability in Laos30)

Note: It is not anticipated that LNSW would provide any facilities for traders other than as kiosks located in participating government agencies.

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30 A note concerning cost of service / fees: a dedicated channel (e.g. a leased line) implies technical infrastructure at the LNSW data centre as well as at the trader’s facility. The fee structure might need to differentiate between internet connected Traders and Traders with a dedicated channel. It is foreseeable that a Trader with a dedicated channel might also use an internet connection to transact business with LNSW.
2. Government Agency
   b. to f. as above

   Notes:
   i. It is anticipated that certain registered users at Government Agencies would benefit from use of
      mobile devices (e.g. 3G-capable tablets) to perform transactions away from offices such as when
      undertaking inspections.
   ii. It is anticipated that LNSW implementation will entail the acquisition and implementation (data
       communication services, training, etc) for a large number of officers in LNSW-participating
       Government Agencies in Vientiane, in provincial centres and at border locations.
   iii. For Risk Management officers:
        It is anticipated that LNSW would provide end-user devices (desktop and notebook computers,
        scanners, and printers) and communication equipment and services suitable for the LNSW VPN\(^{31}\) for
        users at these places in order that they can utilise the Risk Management functions within LNSW.
   iv. For and senior GA managers:
        As above, it is anticipated that LNSW would provide end-user devices and communication
        equipment and services suitable for the LNSW VPN for users at these places in order that they can
        monitor the performance of their Agency and its officers concerning the transactions through
        LNSW.

3. Other users
   a. LNSW Operator, LNSW Governance Entity, LNSW Help Desk
      As above, it is anticipated that LNSW would provide end-user devices and communication equipment
      and services suitable for the LNSW VPN for users at these places in order that they can operate services
      and monitor the performance.
   b. Information Consumers
      It is not anticipated that LNSW would offer any end-user devices or special connectivity for this class
      of users (such as any person or organisation with a legitimate interest in trade data statistics). It may
      provide information services on a subscription basis, for which there may be a fee.
      The end-user interface for these users would be any standard / common device (personal
      computer, notebook computer, tablet or other mobile device) with any standard / common web browser
      optionally with an email facility.
   c. ‘Need to know’ users: i.e. users that have been accepted commercially / legally as broadcast recipients
      on a case by case, topic by topic basis, e.g. police, immigration, etc…
      The functional model needs to accommodate these broadcast messages, perhaps as part of risk
      profiling or as a configurable feature.

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\(^{31}\) Virtual Private Network – refer to the data communications model later in this document.
8 Technical Infrastructure Model: Server and system software

8.1 Synthesis of the technical infrastructure model

The technical architecture is described in this section in a manner consistent with operational requirements and the various influences and preferences for a modern ‘good practice’ solution and is cognisant of (a) ‘right-sizing’, (b) affordability; (c) availability of supply, and (d) availability of services for sustainability. [Refer to § 3 for discussion of the architectural influences.] The technical infrastructure for servers and system software must be compatible with the application architecture of the eventual LNSW solution and the descriptions here are accordingly non-prescriptive wherever possible. Quantification of elements (beyond some minima defined here) in terms of sizes and numbers of components and cluster numbers etc, will depend on the eventual solution for LNSW.

However, there are essential characteristics.
The infrastructure is enterprise-strength for a necessary level of resilience and reliability of availability and performance. LNSW functional model implies that the national trade would be possible (in ‘business as usual’ mode at least) only when LNSW service is operational. Resilience, reliability and rapid recovery are therefore essential and demand enterprise strength configurations.

Essential characteristics include:

1. dual central computer sites, in active / passive mode, with replicated technical infrastructure for LNSW production services Recovery time objectives and recovery point objectives will be described later in this document in §12.
The main data centre is likely to reside on premises of LCD. The premises of Ministry of Industry and Commerce are a candidate for the backup site, due to the relatively higher transaction rates for permits under its supervision.

2. n-tier server architecture for production services with separation of server by role, esp. for infrastructure servers, database servers, application servers, and web-servers

3. production data held on SAN device at each central site with multiple channel access to database servers

4. for production servers: multiple-redundant component-based architectures in clustered operation

5. separated infrastructure (servers and SAN) for business intelligence / information services

6. separate infrastructure for non-production services: transition-to-live (quality control / testing), training and development

The model drawn here for Lao National Single Window is a synthesis of the factors to provide a practical, good practice model likely to be supplied and sustained within Lao, right-sized for the volumes of traffic and affordable on a balance of implementation and operational costs and benefits.
8.2 Data centre server architecture principles:

1. LNSW network will use current network infrastructure servers where available.

2. All servers and appliances would necessarily be able to participate in a network management scheme (e.g. SNMP, RMON) using a server / service operated from a central site.

3. There will be a network management service (e.g. Tivoli Netview, HP Openview etc) with graphical depiction of network elements (including connected computing devices and preferably also environmental monitoring devices and UPS) with active monitoring, configuration and control of depicted elements, software / firm distribution.

4. System shall provide deep levels of resilience against levels of failure in the services at the central sites. Site resilience is provided by dual site (active / passive) operation, with production services at each site capable of processing the LNSW business transaction load. Servers at each site will be clustered configurations of multi-processor, multi-core devices with fail-over protection in terms of power supplies and fans. Power supply security shall be provided by in-line, line conditioning UPS with sufficient capacity to maintain server room operation until backup generator power is available.

5. The data centre at each site will be in an environment secure from environmental threats from heat, rising and falling water, particulate matter. There shall be physical access control in terms of secure building structures, lock-protected access with access to machine rooms rarely required. There should by camera surveillance of the machine room.

6. Security: The architecture shall provide for the protection of data, including at the application level. Security methods to be established include: Protection from Denial of service (DoS), Firewall, Virtual Private Network, IPS (Intrusion prevention system).

7. Policy and procedure: LNSW should be operated under good practice policy and procedures for the management of facilities, services, users and access levels (e.g. as prescribed by ITIL).

8. QoS: The architecture must be consistent with Quality of Service objectives defined in terms of availability and performance (see §12) usability, configurability, security, recoverability, scalability (functional and transactional) manageability, problem resolution, and support and maintenance. LNSW is a real time, mission critical service of national significance.

9. High performance: The architecture must protect the performance requirements by providing adequacy in network design and capacity, application services, infrastructure services, web-based application services, and database access.
8.3 Server configuration

There should be two data centres for LNSW: Main Data Centre (most likely located in Vientiane LCD offices) and Business Continuity Data Centre (possibly located at Ministry of Industry of Commerce in Vientiane). The servers at these data centres will process all LNSW transactions and provide the national data repository, user accounts and authentication, applications operating and management and all other related information and services. This is illustrated in Figure 17 and Figure 18 and elaborated in the table at Figure 19. The LNSW Production Services would be supported at both data centres. Non-production services would be located only at the main data centre.

In this document sizes and quantities of each sub-system in the configuration are not specified.
Figure 18 Business continuity data center configuration

Figure 19 Table of LNSW servers including infrastructure servers

<table>
<thead>
<tr>
<th>Server name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LNSW Production Server Configuration</strong></td>
<td></td>
</tr>
<tr>
<td>LNSW Database server clusters</td>
<td>Services and manages access to LNSW database</td>
</tr>
<tr>
<td>LNSW Storage Area Network</td>
<td>SAN with multiple disk providing RAID 1 of capacity dependent upon business transaction volumes and characteristics of the eventual solution Connected by dual channel to two file controllers with disk access also dual channelled.</td>
</tr>
<tr>
<td>LNSW Application server cluster</td>
<td>LNSW application services</td>
</tr>
<tr>
<td>SOA server + fail-over</td>
<td>Workflow manager, web services orchestration / directory management</td>
</tr>
<tr>
<td>LNSW Portal Server Cluster</td>
<td>Message management and Presentation management for LNSW web services</td>
</tr>
<tr>
<td><strong>LNSW Non-Production Server Configuration</strong></td>
<td></td>
</tr>
<tr>
<td>LNSW BI Data warehouse and analytical applications server cluster + SAN</td>
<td>Data warehouse management and application servers for analytical processing, clustered for CPU scalability with attached SAN also scalable for data warehouse, data marts … For information consumers, delayed-time management reporting</td>
</tr>
<tr>
<td>Server name</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>TTL / QC-testing server cluster</td>
<td>A representative cluster of the LNSW solution (including the data warehouse / analytics component) for the purposes of performing quality control testing and transition-to-live tasks when new or changed software configurations for LNSW are to be introduced. Safely segmented by switches from the production services.</td>
</tr>
<tr>
<td>SDLC / development cluster</td>
<td>A representative cluster of the LNSW solution (including the data warehouse / analytics component) for the purposes of analysing, designing, developing and unit-testing new or changed requirements and solutions for those requirements. Plus: configuration management / version control database and management services. Safely segmented by switches from the production services.</td>
</tr>
<tr>
<td>LNSW Operator ERP Server Cluster</td>
<td>Database and application servers as necessary for LNSW Operator as a business entity (HRM, payroll, accounting, etc)</td>
</tr>
</tbody>
</table>

**System and Network Infrastructure Services (S&NIS)**

<table>
<thead>
<tr>
<th>S&amp;NIS - exposed</th>
<th>Connection devices / appliances /services</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) HTTP Proxy service (and Backup DNS) – for LNSW user web access</td>
<td></td>
</tr>
<tr>
<td>(2) HTTP Reverse Proxy – for user proxy services</td>
<td></td>
</tr>
<tr>
<td>(3) DNS – for Domain Name Service</td>
<td></td>
</tr>
<tr>
<td>(4) Core switches</td>
<td></td>
</tr>
<tr>
<td>(5) LAN switches (distribution and access),</td>
<td></td>
</tr>
<tr>
<td>(6) VLAN switches</td>
<td></td>
</tr>
<tr>
<td>(7) WAN router</td>
<td></td>
</tr>
<tr>
<td>Protection devices / appliances /services</td>
<td></td>
</tr>
<tr>
<td>(1) Internal and external firewall</td>
<td></td>
</tr>
<tr>
<td>(2) IDS / IPS – intrusion detection prevention services</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>S&amp;NIS - protected</th>
<th>(1) Portal Services - for LNSW portals, in combination with HTTP Proxy Server and HTTP Reverse Proxy Server</th>
</tr>
</thead>
<tbody>
<tr>
<td>(2) Primary LDAP Server and Secondary LDAP Server – for user authorization and authentication servers</td>
<td></td>
</tr>
<tr>
<td>(3) Application Access Control Services – for access control of authenticated users</td>
<td></td>
</tr>
<tr>
<td>(4) HTTP Content Server – for accessed website content processing and storage</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>File Server</th>
<th>File services processor</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>System and Network Management server</th>
<th>Real-time facility performance monitoring:</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Network and attached LNSW device monitoring and administration,</td>
<td></td>
</tr>
<tr>
<td>(2) LNSW Server monitoring and administration</td>
<td></td>
</tr>
<tr>
<td>(3) LNSW application monitoring and administration level and infrastructure level.</td>
<td></td>
</tr>
<tr>
<td>(4) LNSW Helpdesk services</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Tape Management Server + virtual and real tape library</th>
<th>Control activities of storing and access backup data for all LNSW data (production and non-production)</th>
</tr>
</thead>
</table>

**LNSW Systems Software**

<table>
<thead>
<tr>
<th>Server Operating System Software</th>
<th>Current release of Windows Server or commercially support Unix variant with widely installed customer base Offering proven clustering support Proven compatibility with DBMS, Application Server, SOA Server and LNSW solution.</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Database management system software</th>
<th>Commercially supported ANSI SQL complaint with capabilities for enterprise strength DB management functions esp. database-transactional integrity management through transactional journals for quick recovery, real-time replication, real-time backup Offering proven clustering support Proven compatibility with OS, Application Server, SOA Server and LNSW solution.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Server name</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Application Server software</td>
<td>Commercially supported application server software with capabilities for enterprise strength multi-threading transactional management with transactional-database integrity over service disruption. Offering proven clustering support. Proven compatibility with OS, DBMS, SOA Server and LNSW solution.</td>
</tr>
<tr>
<td>SOA Server Software</td>
<td>Commercially supported software capabilities for web service administration and orchestration with workflow management. Offering proven clustering support. Proven compatibility with OS, DBMS, Application Server and LNSW solution.</td>
</tr>
<tr>
<td>Other software</td>
<td>SDLC toolsets for analysis, design, build and unit-testing for LNSW including the data warehouse / analytics component QC-testing support tools. Configuration management tools. Version control tools.</td>
</tr>
</tbody>
</table>
9 Technical Infrastructure Model: Data Communications

9.1 Considerations

This section describes the technical architecture for the data communications network for LNSW. The architecture is formulated following consideration of:

1. centralized operation and management of LNSW;
2. a logical central site for LNSW implemented at two physical, geographically-separate, replicating sites each with high availability configurations;
3. diverse user populations.
   a. traders using LNSW web-pages over secure and private protocols and ISP connections (and potentially dedicated circuits, and potentially: using messaging over secure and private protocols for LNSW interoperation and ISP connections or dedicated circuits),
   b. users in Government Agencies (CLPIA’s at issuing offices and border locations) using LNSW web-pages over secure and private protocols and ISP connections as part of LNSW VPN,
   c. Government Agencies (initially only LCD) using messaging over secure and private protocols for LNSW interoperation and dedicated circuits as part of LNSW VPN,
   d. traders and government users receiving SMS alerts sent from LNSW,
   e. information consumers using LNSW web-pages and potentially file transfer services over a mix of protocols and ISP connections,
   f. LNSW operation and administration users using LAN / VLAN / VPN connections,
   g. LNSW governance entity users using LAN / VLAN connections.
4. designed for variety of communication types (data, files, images) and protocols (messaging, web pages, SMS, and email);
5. serviceability, reliability and performance requirements LNSW transactions are part of the international and national trading process. Traders would demand that LNSW is able to meet its service level requirements and provide reliable measurements and records of its performance. It may also attract a usage fee, emphasising the need for adequate, agreed performance;
6. high availability Internet connectivity implies that traders may conduct business 24x7 or at least well beyond standard government trading hours. Border operations likewise imply that LNSW is available at least during the official hours at border posts;

32 In addition to the above user connections, there is planned to be interconnection between LNSW and ASEAN Single Window. The protocol is not yet finalized. It is likely to be use secure and private file or message protocols through an ASEAN VPN over the internet, or through point-to-point dedicated circuits. The architecture and specifications would need to be revised when the ASW protocols for NSW interconnection is finalized.
7. ‘right-sized’ and sustainable implementation and operational cost and in consideration of transaction volumes;
8. potential connection sites based on the data at Appendix A Selection decisions will be required concerning the network-span, i.e. the CLPIA offices and border locations to be connected and supported by LNSW project, / border location. These decisions would entail considerations based on costs, connection / operation practicalities, and development goals including perhaps a desire for providing common nation-wide service. These selection decisions are deferred as topics for specification and implementation steps;
9. Network scalability (connectivity, services and bandwidth) for LAN and WAN LNSW requires functional scalability and, consequently, may require expanded service types and reach and transactional capacity. New service types may imply new data communications service types. LNSW is to be implemented in stages, implying functional and transactional expansion over time;
10. Secure data communications – authentication, non-repudiation, encryption;
11. Open standards interconnection model-based requirements;
12. Implementation approach:
   The eventual implementation would rely upon technical expertise from the LNSW solution provider. The network would be sized (in terms of connections, bandwidths and data termination equipment) according to LNSW solution characteristics, to performance and reliability minima, and minimum design requirements such as dual channel interconnectivity between LNSW data centres and dual ISP’s.

The result is a technical architecture comprising:
1. high-speed, resilient data centre interconnection;
2. a virtual private network (LNSW VPN) for interconnected government agencies;
3. Internet gateway for trader interoperation;
4. up to 85 points of connection to Government Agencies (10 GA’s in Vientiane, 42 GA’s in provincial centres – 6 GA’s in each of 7 provinces, 33 border locations – 3 GA’s at each of 11 border points) spread across the geographical area of Laos, connected as a virtual LAN – refer to Appendix A for the list of potential sites;
5. interconnection to specified other parties in particular Ministry of Finance; and
6. ASEAN Single Window;
7. internet connection for mobile and travelling officers;
8. two connections to Internet Service Providers for connection for traders, information consumers, etc
9. additional VLAN points of connection for users of the LNSW operator and for users of the governance entity.
9.2 Network architecture for LNSW

The LNSW data communications network is illustrated at Figure 20.

The network design is outlined in terms of:

1. Wide Area Network (WAN) design;
2. Local Area Network (LAN) in terms of scalable layout for CLPIA, LNSW Operator and Governance entity.

The network and system design intends to provide high availability through elimination of single points of failure, dual channel network connections depending on business transaction load, multiple component features in server equipment and dual physical central site.

Nevertheless there may be periods of service loss either for traders who may be unable to file / follow-up permit requests and declarations or for government agency officers unable to process these documents.
It is anticipated that in the circumstance that LNSW is off-line, in general, the office should wait for the re-establishment of the communications link. If the link is down for beyond a threshold period (to be defined), the office might perform a reduced, minimum-necessary set of alternative procedures until the service is re-established, e.g. (a) using mobile devices, (b) using fax to have documents processed by an alternative (recovery or back-up) office or prescribed manual procedures. This might pertain, for example, for customs declarations relating to perishable goods. Long term outages would be the subject of the disaster recovery approach which is not addressed in this document.

### 9.3 Wide Area Network (WAN)

The main purposes of the LNSW WAN are (a) the interconnection of the LAN at each location to the data centres to form a virtual LAN connecting participating government agencies and (b) internet connectivity and the implementation of LNSW VPN. The topology of physical connections may include wireless and wired common carrier services and correspondingly wireless and wired data terminating equipment at each connected office.

All WAN equipment operated by LNSW needs to be capable of remote management, e.g. capable of participating in an SNMP-scheme for the entire network and connected devices, with monitoring by network management systems to be installed centrally.33

**LNSW WAN shall comprise the links listed at**

Figure 21. The table lists LNSW operated links. Separately, LNSW would be accessible by other parties who would provide their own internet services, connections and equipment operated (a) by one or more authorised e-security Certificate Authorities (for digital certificates), (b) Traders, (c) information consumers, and (d) ASEAN SW34.

The minimum capacity (bandwidth) requirement per link would be determined by (a) the volume of traffic as indicated by the volumes of business transactions plus calculations for enquiry and reporting, (b) the specific characteristics of the eventual LNSW solution for database replication, (c) and performance requirements. Refer to Appendix A for data concerning business transaction volumes.

In general there would be no specific requirement for technology or protocols. The links would need to be supplied by common carriers, preferably engaged under commercial terms for service level agreements.

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33 The operation and management of the underlying network of the carrier is a separate issue not part of the LNSW technical architecture.

34 In the absence of architectural decisions for ASW – NSW connections, an internet connection is assumed.
**Figure 21 Table of WAN links**

<table>
<thead>
<tr>
<th></th>
<th>Links between data centre sites</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>This shall be a dual redundant circuit connecting the two core switch-pairs at each data centre site. It is likely that the bandwidth requirement would imply fibre channels within the Vientiane city area, preferably through a common carrier. This requirement may have implications for the location and the maximum geographic separation between sites. It is preferred that at each site the dual connections are physically serviced by connections to distinct local exchanges to remove another single point of failure.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Between each data centre and two Internet Service Providers</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Each data centre should be linked to two independent ISP’s with the intention being that at least one of the links should be in operation at all times. In normal operation, there should be load-balanced use of both links.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Between each data centre and LCD Asycuda site</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>The requirement for a specific architecture for this link is based on an assessment of transaction volumes. LCD Asycuda would be part of the complete trade transaction in 100% of cases, whereas the CLPIA have generally low volumes, especially on a per office basis, and are involved in around 25% of actual trade transactions. Each data centre should be linked to the LCD Asycuda data centre. [It may be that the main or back-up LNSW data centre and Asycuda are co-located. In that case, a secure LAN connection would be required instead.] For a WAN connection there should be a back-up connection through the LNSW Virtual Private Network.</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Between each data centre and MOIC Vientiane office</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>The requirement for a specific architecture for this link is based on an assessment of transaction volumes. Of the CLPIA offices, MOIC account for approximately 60% of trade transactions that require permits (not taking into account exemptions / concessions administered by LCD). [That is, 60% of the 25% of imports and exports that require a permit.] Each data centre should be linked to the MOIC Vientiane LNSW LAN. [It may be that the main or back-up LNSW data centre and MOIC Vientiane LNSW LAN are co-located. In that case, a secure LAN connection would be required instead.] For a WAN connection there should be a back-up connection through the LNSW Virtual Private Network.</td>
<td></td>
</tr>
</tbody>
</table>
5. **Between each CLPIA Vientiane and provincial office selected for LNSW interconnection and an ISP**

A dedicated link, which may be DSL, cable, or wireless (3G), would be required between each selected office and at least one ISP. For each there would be an internet service plan preferably under enforceable commercial terms. Two links and 2 ISP agreements would add a layer of resilience. Refer to Appendix A for the candidate CLPIA offices. There are 10 Vientiane offices and 42 provincial offices listed (6 government agencies in 7 provinces). Each office would have a LAN that is implemented as part of the LNSW VLAN.

6. **Between each border office selected for LNSW interconnection and an ISP**

A dedicated link, which may be DSL, cable, or wireless (3G), would be required between each selected office and at least one ISP. For each there would be an internet service plan preferably under enforceable commercial terms. Two links and 2 ISP agreements would add a layer of resilience. Refer to Appendix A for the candidate border offices. There are 33 border offices (3 offices at each of 11 selected borders). Each office would have an LAN that is implemented as part of the LNSW VLAN.

7. **Between mobile officers at borders and a wireless (3G) provider offering internet services**

Officers at borders sites may need mobile services in order to effectively investigate trade permits and declarations and file reports of findings. Each such mobile device would require connectivity through a wireless provider to participate in the LNSW VPN.

An option that may eventually be appropriate and attractive to LNSW and LNSW stakeholders is additional dedicated circuits (leased lines) or perhaps, though less likely, switched circuits (dial-up lines). Traders, esp. brokers, with high volume of transactions may seek guaranteed response times. Likewise, an office of a government agency may find that its volume of LNSW transactions would be better served by point-to-point connections. Potentially also a government agency may build its own national network infrastructure and reorganise its connection to LNSW through a point-to-point gateway. All such point-to-point connections would require additional data terminating equipment (DTE) and a corresponding data communications service to be implemented by LNSW and DTE a corresponding data communications service to be implemented by the other organization. There are cost and fee implications for such implementations. At this stage, there does not appear to be a case for any such connections other than as identified above.
9.4 Local Area Network (LAN)

There would be a LAN at each office of a government agency participating in LNSW to enable users at those locations to access LNSW Workbench\textsuperscript{35}. The locations are selected CLPIA offices in Vientiane and selected provinces and selected border locations. Refer to Appendix A.

These agencies currently do not have any reusable technical infrastructure apart from, perhaps, personal computers, and other items of end-user equipment. A case by case analysis would be needed to determine the capabilities of such equipment to be connected to the LNSW LAN.

Each LAN segment in each of participating office would in fact be a segment of the LNSW VLAN.

All network components for every LAN and all devices connected to the LAN for LNSW need to be capable of remote management, e.g. capable of participating in an SNMP-scheme for the entire network and connected devices, with monitoring by network management systems installed for LNSW centrally.

The LAN functions are:
1. Connecting users at a local place into the LNSW VLAN over the WAN;
2. Sending and receiving data for LNSW to/ from the data centre;
3. Other local processing that may be performed separately to LNSW and agreed to be acceptable to the LNSW operator\textsuperscript{36};
4. Layered services:
   a. Local layer: This layer is used to connect and segment end-user equipment and file / office automation (word processing, etc) server for both wired and wireless LAN devices\textsuperscript{37},
   b. Access layer: this layer connect local LAN layer to network,
   c. Distribution layer: implementation for policies, contains switches and routers,
   d. Core layer: route traffics with routers and switches that are optimized for availability and performance.

\textsuperscript{35} For a ‘level 2’ agency (as described in § 4), eventually the LNSW LAN would be superseded by that agency’s technical infrastructure

\textsuperscript{36} Non-LNSW use on LNSW facilities should not be such that it impedes LNSW operation. So for example, LNSW Operator could engage bandwidth management equipment, web-filtering software and appliances and so on.

\textsuperscript{37} Mobile devices may connect both to the wireless LAN and mobile telecommunications network
Figure 22 LAN configuration

LNSW LAN facilities at each participating office

Devices

Local LAN

Access Layer

Distribution Layer

Core Layer

LNSW Central Facilities

WLAN Switch
LAN Switch
Access Switch
Access Switch
Distribution Router
Distribution Router
Core Switch
Core Switch

Annex A: Functional and Technical Architecture & Specifications
Chapter 10 Other architecture aspects

This section briefly outlines two other aspects for the technical architecture:
1. Physical infrastructure,

### 10.1 Physical infrastructure

1. **Physical locations:**
   The FandTA describe two centralised data centres: one for the main service and one as a warm backup service for business continuity in the case of non-short term unavailability at the main site. The business continuity backup site would be tested for operational readiness from time to time as a quality control exercise.

   The FandTA also specifies installations at a large number of CLPIA offices in Vientiane and in the provinces and at border locations. These are listed as candidate locations. Government of Laos would define the actual locations and any scheduling of roll-out. Therefore, for physical infrastructure locations, LNSW would require:
   a. an adequate structure of adequate dimensions for the main LNSW data centre, including facility personnel and their office requirements. Nominally this would be office space at LCD headquarters Vientiane,
   b. an adequate structure of adequate dimensions for the backup business continuity LNSW data centre, including facility personnel and their office requirements. Nominally, for reasons indicated elsewhere in this document, concerning business transaction volumes, this would be office space at MOIC headquarters in Vientiane,
   c. adequate physical structures at each CLPIA office and border office at which LNSW technical infrastructure would be implemented.

2. **Physical fit-out:**
   i.e. the dismantling of existing structures and construction (civil, mechanical and electrical works) of new structures (partitions, doors, false ceilings, raised floors, electrical cabling, data cabling, lighting and other fixtures and furniture) at each place where new physical infrastructure is required;

3. **Physical equipment:**
   Equipment such as the following would need to be installed, maintained and operated at the data centres. It is likely that office-grade physical locations the CLPIA offices and border offices would be sufficient without additional physical equipment, with the exception of physical security devices.
   a. climate control,
   b. power regulating equipment and in-line, line-conditioning, un-interruptible power supply,
   c. mains power supply, preferably 3-phase for reduced voltage and frequency variability,
   d. standby generator and supplies of fuel with necessary power-supply switchover circuits and equipment,
e. automatic fire-suppression system suitable for a data centre,
f. environment monitoring unit for temperature, humidity and particulates,
g. security devices: smart-key doors, CCTV,
h. telephone and fax equipment.

10.2 Management model

10.2.1 Administration and organization

Administration and organization considerations will be described on a role-type basis: operations, system and network administration, support and maintenance, management and planning, development, testing, configuration management and quality assurance.

1. Operations

LNSW and its central technical infrastructure down to the remotely managed LAN security and management services shall be operated as a centralized service – logically one service but physically at two replicated sites.

Operation at CLPIA offices and border offices would be limited to the use of end-user devices for business purposes, monitoring physical conditions, local LAN equipment power-up and start-up according to prescribed procedures, and providing on-site assistance under direction from the central site required at times for service recovery and diagnostics. There should be a small number of designated officers at each site responsible for these delegated operations;

2. System and Network Administration

LNSW and its central technical infrastructure down to the remotely manage LAN security and management services and local end-user devices shall be administered from systems and network management facilities located at a central site. Software updates for remote components of the system and network will be normally administered from a central site. System and network management tools would be included in the technical infrastructure at the central site. There may need to be local on-site intervention from time to time. The designated officers for delegated operations would be required to perform procedures under the direction of the system and network administrator;

3. Support and maintenance

LNSW would operate a Help Desk at a central site for recording, tracking and monitoring the performance of, and assessing the impacts of, various notifications of real or perceived faults and calls for assistance. The Help Desk would receive notification and calls by email or telephone and would respond by emails where possible or by telephone and provide call tracking, follow-up, escalation and progress and resolution information to the originator. Callers could be anyone, internal or external with a legitimate topic pertaining to LNSW or its usage. The Help Desk would be manned for extended hours (perhaps 24x7) at least for traders using the LNSW web services;
LNSW Help Desk would seek to resolve the issue using its own capacities or by seeking expertise and or services available to the LNSW Operator. These may be suppliers to be engaged under support and maintenance contracts (outlined below);
For the life of LNSW and the technical infrastructure, contracts with the suppliers will be required to provide support and maintenance services with service level agreements under commercial terms. In the support and maintenance contracts there should provisions for on-site spares and replacement units and components down to the local office level (or at a supplier facility near the local office) to facilitate quick repair.

10.2.2 Management and Planning
Management and Planning personnel for LNSW and its technical infrastructure would be responsible for assessing performance reports, capacity monitoring and planning, quality planning, planning new business modules and functions, architectural redesign when required, client (service user) monitoring and liaison, supplier monitoring and liaison, and procurement liaison.
The personnel would normally be located at a central site.
The LNSW Governance Entity would be engaged in the oversight of the LNSW Operator.

10.2.3 Development and enhancement
Development personnel for LNSW would normally be located at a central site. They would for the most part be involved in requirement definition and design for new or modified requirements. There would be tools for the system development life cycle complementary to the eventual LNSW solution. The tools would typically include graphic definition and design aids, workflow definition and design aids, and version control and configuration management.

It is expected that there would be skilled resources for support of LNSW and for configurable aspects of LNSW, and in particular in workflow design. In general configuration changes, new workflow definitions, new standard reports, complex ad hoc reports and enquiries would be developed in environments quarantined from testing and live services.

Any and all development work would only arise after authorisation starting usually from a help desk issue report that is determined to be an LNSW application software / configuration issue. The development work would first need authorisation from configuration management personnel who would also release relevant configuration items to development.

10.2.4 Testing
The LNSW Operator would be responsible for the quality of the LNSW service. Testing would normally be located at a central site. The primary role of the testing group would be to test LNSW, including any
workflow or other definition and configuration changes for new and modified functions and facilities prior to deployment in the live services. The changes may have developed internally or originate due to changes introduced by suppliers of infrastructure products. The changes may include new versions of application and technical infrastructure software products or new models of technical infrastructure hardware.

Configuration items to be tested would be released to testing by the authorisation of the configuration management personnel.

10.2.5 Configuration Management

LNSW Operator would be responsible for configuration management. The primary role of the CM group would be the transition of new products and product versions (software, reference tables, on-line training and reference materials) from development (whether in-house or from the supplier) through testing / transition-to-live to the live service. This could be on a site-by-site basis or for the whole service.

This group would have a gate keeper quality assurance role to protect the live service from untested modifications.

The group would be the custodian of the configuration definition of the live, testing / transition-to-live environments. The configuration management group would chair the change request / system update committee to review maintenance requests / authorise implementation. Development work or testing work should only proceed after release of the affected configuration items to development or testing. Configuration management group would be responsible for monitoring configuration items in all environments: development, testing / transition-to-live and live. There would be a configuration management database that provides a controlled, auditable record of changes in the implementation of LNSW.

10.2.6 Quality Assurance

LNSW Operator would be responsible for Quality Assurance (QA). The role of the group is distinguished from Quality Control for which each of the aforementioned areas would be responsible for their respective aspects. The Quality Assurance role would be an independent observer that seeks to ensure that agreed quality control mechanisms are in place and being followed as intended as described within a quality plan that would be jointly developed by the QA group and the Management and Planning group.

10.2.7 Security

Security considerations will be described on a site-type basis in three dimensions:

1. physical security: the protection of personnel, hardware, programs, networks, and data from physical circumstances and events that could cause serious losses or damage to the facilities, including protection from fire, natural disasters, burglary, theft, vandalism, and terrorism;

2. data security: the protection of the content of data storage devices from incidents that could lead to loss of content through disruption to updating services, and media failure, including use of disk redundancy, transaction logging, before- and after-look journals, backup sets, restart methods, and recovery methods;
3. **logical access – usage security**: the protection of the confidentiality, integrity and availability authenticity, accountability, non-repudiation, and reliability of information, including use of techniques for identification, authentication access control, authorization, encryption, non-repudiation, and audit trails.

Security measures will be tested periodically in response to simulated events to confirm that the security measures are in place, operable, properly understood and operated.

Network intrusion detection and prevention would be managed centrally.

10.2.7.1 **Central sites**

1. **Physical security**
   a. There shall be a safe physical environment. That is there shall be a machine room where all servers will be rack mounted in climate controlled and monitored environments with structured under floor cabling. The monitors would continuously match readings (temperature, humidity, particulate matter) and thresholds to emit alarms audibly, by email and SMS and initiate service shutdown procedures by procedure call to the servers,
   b. The machine room would be located and built to provide reasonable protection against environmental factors, in particular rising and falling water, storm, dust and other particulate and vandalism. That is, the room would be environmentally sealed, separated from external walls and windows, above ground level and with at least one storey above it, preferably with wet wall floor to ceiling on all sides, with public and unauthorized access denied by at least one perimeter fence, gate and guard before access to the floor on which the machine room is located,
   c. Access to the machine room would be rare and would require locks opened biometrically or using smart card tokens in the custody of authorized personnel. Security cameras would record movements into the machine room.

2. **Data security**
   a. Aspects are covered under the heading of non-functional requirements in §(18),
   b. The central sites house the data stores for LNSW. The technical infrastructure at each site for LNSW would provide data security facilities for a RAID level appropriate for disk recovery and access performance, database mirroring, transaction logging, restart / quick recovery journals, and backup sets. A combination of facilities and procedures would provide restart methods and recovery methods,
   c. The sites are replication sites to improve availability in event of connectivity disruption, maintenance and short term service disruption.

3. **Logical access – usage security**

Users of the central services, regardless of location would participate under the following conditions:
   a. Logical access to the data centres and the information assets will be protected by physical and logical means,

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38 For data security and access security – the LNSW Operator shall research, document, publish and promulgate policies and procedures that also set standards for all LNSW users regarding the use of LNSW and technical infrastructure facilities and use and disclosure of data.
b. There shall be user name and password functions and audit trails – refer to §(18) – to limit access to services to known, authorized persons,
c. Declarations and applications for permits and other designated transactions may be accompanied by digital signatures implemented through certificates of third-party Certificate Authorities to confirm the source of the message and also provide non-repudiation protection,
d. Access shall be filtered by firewall and other intrusion detection and prevention appliances,
e. Messages may be encrypted when appropriate,
f. There shall be audit trails – refer to section §(18) – to record all access to services and all changes to data stores.

10.2.8 CLPIA offices, border offices

1. Physical security
   a. There shall be lockable rooms at these places to house and keep safe LNSW end-user equipment. There shall be lockable cabinets for LAN and WAN equipment;
   b. Each officer trusted with mobile equipment shall be subject to government policy in regard to safe custodianship of such equipment;
   c. In all respects, the corresponding Government Agency is responsible for the physical security of the equipment, facilities, structures ate each place;

2. Data security
   No LNSW data is located at the provincial offices.
   End-user data recovery may be required for documents on the local equipment. This would not be part of the LNSW service.

3. Logical access – usage security
   No LNSW applications or database services installed at these offices.
   Access to the network infrastructure services would usually by via the Network and System Management Service at the central site. Local access may occur from time to time and that would be protected by username and password and under direction of the central site administrators.
   LNSW user access would be managed by the logical access-usage security scheme described for the central site services.

10.2.9 External users

External users include brokers, traders, and other parties. They will have certain legal obligations, e.g. concerning adequate, auditable, secure record keeping, and data privacy and confidentiality obligations. There are no additional requirements placed on the physical security of the offices of external users specifically for LNSW.

Data security is provided as described for information held by LNSW as described for the central site services. Again, traders would need to provide data security for their electronic records.
Users at external client offices, whether connecting by business-to-government messaging or web-clients, would participate in the logical access-usage security scheme described for the central site services for LNSW.

10.3 Business continuity

The architecture of the technical infrastructure described in this document provides a high degree of resilience. Nevertheless, beyond-short-term service disruption may occur causing widespread or long term disturbance of operation of LNSW and therefore for trade transactions. Declaration processing is the most sensitive to service disruption.

The architecture as presented in this document provides for resilient technical infrastructure through recommendations for multiple redundant component based devices, multiple and clustered devices, multiple channel communications and a platform for a warm start recovery site.

A comprehensive plan for business continuity is not properly part of an architecture document. It is recommended that a separate study be commissioned. Following that study appropriate measures may be implemented. Importantly, too often business continuity planning is considered in terms of ICT alone, when in fact, it would need to consider the true disruption and effects (1) on physical infrastructure, (2) on human resources throughout affected government agencies at the management and operational levels, (3) on traders and perhaps (4) society more broadly.
11 Business Statistics

Refer to Appendix A for data related to business statistics:
1. candidate certificates, licenses and permits for LNSW;
2. candidate CLPIA’s;
3. candidate border locations;
4. business transaction rates;
12 Performance parameters

LNSW Operator would negotiate service level agreements (SLA) and commit to operate its services accordingly. The SLA should evolve over time for continuously improving service by LNSW to all its clients to LNSW traders. The SLA would be met by the LNSW Operator using its own capabilities directly or through third party service providers contracted to it, but with commercial responsibility residing with the Operator. Each third-party would be engaged under a specific SLA with the LNSW Operator set on commercial terms.

Under the coordination of the governance entity, participating Government Agencies that accept and respond to LNSW messages and events would set service level objectives (SLO). The SLO should evolve over time for continuously improving service by the government agencies to traders.

The SLO/SLA levels would be set initially to be easily achievable. Progressively the SLO/SLA would be modified to increase the performance of the services towards international good practice standards.

The LNSW Operator would operate its services to meet its service level agreements and objectives in accordance with the framework to be supplied by the PMG team (work in progress) and at levels that would be set by the LNSW Governance Entity and included in procurement specifications. These would evolve over time through agreements made between the governance entity and the Operator.

LNSW would include SLA/SLO metering as outlined in §4. LNSW would provide comprehensive on-line, near-real-time reporting for its own management purposes and on-line near-real-time entity-specific performance reporting to traders, government agencies and the LNSW governance entity.

The facility service level required of the LNSW Operator would entail a service that provides its required business level functions on the basis of: 39

1. Near 24x7 operation of the LNSW servers and network as observed by trade community and government agencies participating in the Customs clearance process, with service unavailable only at agreed down-time – see below;
2. 24x7 help desk and customer service facilities (i.e. as a minimum telephone link to be available 24x7);
3. ICT support and management service for facilities provided by LNSW Operator for service hours to be agreed;
4. Near 24x7 operation of its web-available public information services;
5. Dual redundant site and network channel operation for at least 90% of agreed service hours;
6. Agreed overall service down time (say maximum of 2 hours each Sunday from 12:30 a.m);
7. Agreed single site / single channel down-time (say maximum 8 hours each Sunday from 12:30 a.m;
8. Guaranteed service levels for users of LNSW, e.g;

39 In the list of outlined SLO/SLA, the practical means of measuring and reporting the service level achievements are not identified. These would be specified as part of the formulation of each SLO and SLA.
a. availability set initially at 90% of standard business hours for each of those places and increasing upward over time to 99%,

b. responsiveness to be set according to functional category.

9. Recovery point objective: zero minutes – i.e. the backup data centre would have replicated database and be ready to process all but uncompleted transactions;

10. Recovery time objective: nominally two hours – i.e. two hours provided to activate services from the warm-start backup site;

11. Response time objectives for LNSW users <to be defined>.
13 Appendix A: FandTA DATA, SCOPE, PARAMETERS, & ASSUMPTIONS

13.1 Overall assumptions regarding scope

The scope of LNSW is defined below in terms of candidate CLP, candidate offices of government agencies and candidate border offices. The candidate lists may be increased as more data becomes available. However, the selection of CLP to be implemented and sites for implementation requires:

- decisions about the minimal level of transaction to warrant a CLPIA WF implementation for the permit type or specific location,
- decisions regarding recommendations for certain unnecessary permits to be discontinued – these are indicated as ‘candidate for discontinuation per LTP Roadmap’,
- decisions about the minimal level of transaction to warrant an LNSW facility at a CLPIA office or a border location.

1. LNSW would be available to GA’s in the nominated departments for Vientiane national government ministries;
   a. viz: from the TOR:

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<tbody>
<tr>
<td>1.</td>
<td>Customs Department</td>
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<tr>
<td>2.</td>
<td>Department of Agriculture</td>
</tr>
<tr>
<td>3.</td>
<td>Department of Livestock and Fisheries</td>
</tr>
<tr>
<td>4.</td>
<td>Food and Drug Department</td>
</tr>
<tr>
<td>5.</td>
<td>Import-Export Department</td>
</tr>
<tr>
<td>6.</td>
<td>Standardization, Quality Assurance and Metrology Department</td>
</tr>
</tbody>
</table>

b. Plus others potentially as candidates from LTP data – refer to §0.

2. LNSW would be available to GA’s in the nominated departments for provincial offices at the provinces which also have a border gate selected for Asycuda roll-out – refer to data and assumptions at §13.3;

3. LNSW would be available to border agencies at the same borders selected for Asycuda roll-out – refer to data and assumptions at §13.3;

4. Taken together this would mean (subject to the aforementioned potential for de-scoping in terms of “permits” and implementation sites):
   a. E-documentation:
      for 26 “permits” listed at
i. Figure 23,
ii. COO documentation administered,
iii. exemption/concession documentation administered by LCD,
iv. ACDD.

b. Vientiane offices (drawn from Figure 23)
   Higher transaction rate sites:
i. LCD,
ii. Department of Import and Export,
iii. Department of Food and Drugs, Drugs Division,
iv. Department of Food and Drugs, Food Division,
v. Department of Agriculture, Ministry of Agriculture and Forestry.

That is five sites in total, with each site nominally having:

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Description</th>
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<tbody>
<tr>
<td>8</td>
<td>end-user devices (desktop PC, notebook PC) for GA use of the CLPIA Workbench (two officers per workflow step in the general model at §4.2.5)</td>
</tr>
<tr>
<td>2</td>
<td>spare end-user device (notebook)</td>
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<tr>
<td>2</td>
<td>kiosk devices (desktop PC) each with low-through-put flatbed scanner with auto document feed (ADF) and low volume printer</td>
</tr>
<tr>
<td>2</td>
<td>medium-through-put office printers</td>
</tr>
<tr>
<td>2</td>
<td>low-through-put flatbed scanners with ADF</td>
</tr>
<tr>
<td>1</td>
<td>wireless LAN switch</td>
</tr>
<tr>
<td>1</td>
<td>VLAN switch + router</td>
</tr>
</tbody>
</table>

Lower transaction rate sites:
vi. Department of Defense Industry of the Ministry of National Defense,
vii. Ministry of Post and Telecommunications,
viii. Ministry of Energy and Mines,
ix. Department for Monetary Policy, Bank of Lao PDR,
x. Ministry for Information, Culture and Tourism.

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>end-user devices (desktop PC, notebook PC) for GA use of the CLPIA Workbench (two officers per workflow step in the general model at §4.2.5)</td>
</tr>
<tr>
<td>2</td>
<td>spare end-user device (notebook)</td>
</tr>
<tr>
<td>2</td>
<td>kiosk devices (desktop PC) each with low-through-put flatbed scanner with auto document feed (ADF) and low volume printer</td>
</tr>
</tbody>
</table>
That is forty-two (seven times six) such sites with each site nominally having:

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Equipment Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>medium-through-put office printers</td>
</tr>
<tr>
<td>2</td>
<td>low-through-put flatbed scanners with ADF</td>
</tr>
<tr>
<td>1</td>
<td>wireless LAN switch</td>
</tr>
<tr>
<td>1</td>
<td>VLAN switch + router</td>
</tr>
</tbody>
</table>

Provincial offices (7) in Ban Houayxay, Muang Pakxan, Pakxé, Sam Neua, Louang Namtha, Savannakhét (Muang Khanthabouly), Muang Phôn-Hồng (drawn from

c.Figure 23 and Figure 24
i. regional LCD office,
   ii. Provincial division of MoIC,
   iii. Forestry Division of Provincial Office of the Ministry of Agriculture and Forestry (MAF),
   iv. Department of Agriculture of the Provincial Division of the Ministry of Agriculture and Forestry,
   v. Provincial Division of Livestock and Fisheries of the Department of Agriculture of the Ministry of Agriculture and Forestry,
   vi. Provincial Division of the Department of Standards.

That is forty-two (seven times six) such sites with each site nominally having:

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Equipment Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>end-user devices (desktop PC, notebook PC) for GA use of the CLPIA Workbench (one officers per workflow step in the general model at §4.2.5)</td>
</tr>
<tr>
<td>1</td>
<td>spare end-user device (notebook)</td>
</tr>
<tr>
<td>2</td>
<td>kiosk devices (desktop PC) each with low-through-put flatbed scanner with auto document feed (ADF) and low-volume printer</td>
</tr>
<tr>
<td>2</td>
<td>medium-through-put office printers</td>
</tr>
<tr>
<td>2</td>
<td>low-through-put flatbed scanners with ADF</td>
</tr>
<tr>
<td>1</td>
<td>wireless LAN switch</td>
</tr>
<tr>
<td>1</td>
<td>VLAN switch + router</td>
</tr>
</tbody>
</table>

d. Border gates (11) with officers from:
   i. LCD,
   ii. Department of Food and Drugs, Drugs Division,
   iii. MAF.
That is thirty-three (eleven times three) such sites with each site nominally having

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>end-user devices (desktop PC, notebook PC) for GA use of the CLPIA Workbench (four offices per office)</td>
</tr>
<tr>
<td>1</td>
<td>spare end-user device (notebook)</td>
</tr>
<tr>
<td>2</td>
<td>medium-through-put office printers</td>
</tr>
<tr>
<td>2</td>
<td>low-through-put flatbed scanners with ADF</td>
</tr>
<tr>
<td>1</td>
<td>wireless LAN switch</td>
</tr>
<tr>
<td>1</td>
<td>VLAN switch + router</td>
</tr>
</tbody>
</table>

e. Access by Customs in Vientiane, provinces and border sites using facilities already available through Asycuda roll-out – that is without further need of supplementary technical infrastructure.

5. Taken together that would mean eighty-five access locations for government agencies each with multiple officer-users.

A preliminary estimate of costs is included at Appendix B

**13.2 Assumptions regarding scope - CLP**

The list of CLP is obtained from the Lao Trade Portal Interim Report on Roadmap for Process Simplification and Harmonization (v2)

Figure 23 lists the CLP to be included within the scope of LNSW and for each CLP, indicates:

1. products associated, including AHTN
   These are either provided by the corresponding GA in the LTP Interim Report or deduced from a description of the commodities,
   The deduction is not perfect. The deduction is more likely to lead to over-estimates of transaction volumes. For the purposes of the architecture, over-estimates are preferred – modest over-sizing of the architecture is preferable to under-sizing,
   Some research is required still to finalise the mapping to AHTN;
2. the agency involved in receiving, administering and issuing the CLP – these are all at the national level in Vientiane or at the provincial level;
3. the agency involved at borders for the witnessing / confirmation that a regulatory CLP is required and that the goods match the CLP;
4. the annual quantities of the licenses
The data has been collected by interview with the representatives of the GA's or derived from data provided by LCD from its C2000 system for all national imports for 2010 using stated but untested assumptions. [No data source is available for transit, Customs warehouse or export declarations.] Until such time that data is available, the derived approximations, with gross rounding-up, will be used to quantify components quantities and sizes. This is more likely to lead to over-sizing than under-sizing;

5. other short notes and observations;

6. reference to the LTP Roadmap process definition From;

7. Figure 23, and under the assumptions that need to be reviewed and tested, the order of magnitude across all agencies and all offices might be of the order of 32000 licences and permits and certificates and letters of all types.
This might grow to approximately 44000 in 2018 assuming a growth rate of 7% p.a.
[Excluded from this calculation are the procedures for certificates for exemptions and concessions administered by LCD. No transaction rate data is available and no assumptions have been made.];

8. Scope does not include permits etc. used by the LNSW GA's that also have licensing etc. responsibilities for domestic matters (e.g. company registration in DIMEX, or Registration Certificate for domestic food producers). Only relates to cross-border shipments.

Figure 23 Table of candidate CLP

<table>
<thead>
<tr>
<th>#</th>
<th>CLP</th>
<th>Government agencies</th>
<th>Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Lodgement of Import Plan</td>
<td><strong>CLP agency:</strong> DIMEX</td>
<td>Vientiane</td>
</tr>
<tr>
<td></td>
<td>Acknowledgment receipt</td>
<td>Quantity unspecified</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Road Vehicles</td>
<td>Assume without basis: small number of traders and plans p.a – 1000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Spare parts for road vehicles</td>
<td>Cost: &lt;unspecified&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Temporary Car Imports</td>
<td><strong>Border Agency:</strong> Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td></td>
<td>Above: AHTN: 8701.20, 8701.30.20, 8701.90, 8702, 8703, 8704 (Except 8704.31 (motor vehicles with 3 wheels)), 8705, 8711</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Petroleum and Gas</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Above: AHTN: 27.10 (petroleum oil), 27.11 (petroleum gas)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Logs barks, transformed timbers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Above: AHTN: 4403.20.10, 4407.29, 0601.20.90</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LTP process: &lt;mentioned in DX-01&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#</td>
<td>CLP</td>
<td>Government agencies</td>
<td>Locations</td>
</tr>
<tr>
<td>----</td>
<td>------------------------------------------</td>
<td>------------------------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>2.</td>
<td>Application for Import/Export License</td>
<td></td>
<td>Vientiane</td>
</tr>
<tr>
<td></td>
<td>➢ Import /Export License</td>
<td>CLP agency: DIMEX</td>
<td></td>
</tr>
<tr>
<td></td>
<td>➢ Road Vehicles</td>
<td>Quantity  $^{40}$</td>
<td></td>
</tr>
<tr>
<td></td>
<td>➢ Petroleum and Gas</td>
<td>Guestimate: From 2010 Customs data:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>➢ Spare parts for road vehicles</td>
<td>45000 applicable line items declared.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>➢ Temporary Car Imports</td>
<td>Assume without basis 5 line items per</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AHTN: as for Import Plan</td>
<td>permit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LTP process: DX-01</td>
<td>➢ 9000 permits p.a.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>➢ 12000 p.a. in 2013 (@7% p.a.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>➢ 16000 p.a. in 2018 (@7% p.a.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cost: 10,000 LAK / licence form</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Border Agency: Customs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Application for Import for re-export</td>
<td></td>
<td>Vientiane</td>
</tr>
<tr>
<td></td>
<td>Transit Permit</td>
<td>CLP agency: DIMEX</td>
<td></td>
</tr>
<tr>
<td></td>
<td>➢ Import for re-export Transit Permit</td>
<td>Quantity: 60/70 p.a (2012)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(type 1: main borders, type 2: involving</td>
<td>➢ 100 p.a. in 2018 (@7% p.a.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>controlled border)</td>
<td>Cost: nil</td>
<td></td>
</tr>
<tr>
<td></td>
<td>➢ Commodities in the list of controlled</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>goods listed in Notification No. 0076/MoIC</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DIMEX (e.g. gas, oil, motor vehicles,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>weapons, etc.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>AHTN: as for DX-01 – t.b.c.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LTP process: DX-02</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>➢ Vietnam Transit Certificate for</td>
<td>Quantity: 3 or 4 p.a – 1 trader</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dangerous Goods</td>
<td>(transport company)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>➢ Commodities controlled dangerous</td>
<td>Cost: nil</td>
<td></td>
</tr>
<tr>
<td></td>
<td>commodities such as explosives or</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>explosive materials.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Border Agency: Customs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$^{40}$ Additional data subsequently provided from DIMEX:
During the year of 2012.
1. Number of license issued for car is about 298/month
2. For fuel, 12/week
3. For diamond, 90/year
4. For COO, approx. 360 / month
5. Transit, 5/month

These statistics indicate that the estimate provided in the table might be an over-estimate. This would not greatly disturb the overall estimations / sizing calculations in this document. Note also that trade facilitation modernization proposals recommends that these permits are candidates for discontinuation when better statistical sources are available e.g. through LNSW.
<table>
<thead>
<tr>
<th>#</th>
<th>CLP</th>
<th>Government agencies</th>
<th>Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AHTN: 3602 – Prepared explosive other than propellant powders;</td>
<td>CLP agency: DIMEX</td>
<td>Vientiane</td>
</tr>
<tr>
<td></td>
<td>3603 – Safety fuses; detonating fuses;</td>
<td>Quantity: 70 – 75 p.a. (2012)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>percussion or detonating caps; igniters; electric detonators;</td>
<td>110 p.a. in 2018 (@7% p.a.)</td>
<td>Border locations</td>
</tr>
<tr>
<td></td>
<td>LTP process: DX-03</td>
<td>Cost: nil</td>
<td>specified for LNSW</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Border Agency: Customs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Border Agency: Customs</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Application for Vietnam Transit Certificate for Non-Dangerous</td>
<td>CLP agency: DIMEX</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vietnam Transit Certificate for Non-Dangerous Goods</td>
<td>110 p.a. in 2018 (@7% p.a.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Commodities other than those for dangerous goods</td>
<td>Cost: nil</td>
<td>Border locations</td>
</tr>
<tr>
<td></td>
<td>AHTN: all except 3602 and 3603;</td>
<td>Border Agency: Customs</td>
<td>specified for LNSW</td>
</tr>
<tr>
<td></td>
<td>LTP process: DX-04</td>
<td>Border Agency: Customs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Border Agency: Customs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Border Agency: Customs</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Application for Certificate of Product Eligibility (for COO)</td>
<td>CLP agency: DIMEX</td>
<td>Vientiane or Provincial</td>
</tr>
<tr>
<td></td>
<td>Certificate of Product Eligibility (for trader)</td>
<td>Quantity: Approximately 4400 p.a. 2012</td>
<td>division of MoIC</td>
</tr>
<tr>
<td></td>
<td>AHTN: any</td>
<td>(assume ~8000 2018)</td>
<td>(see list of provinces</td>
</tr>
<tr>
<td></td>
<td>LTP process: CO-01 (mentioned)</td>
<td>Cost: &lt;unspecified&gt;</td>
<td>included for LNSW)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Border Agency: Customs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Border Agency: Customs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Border Agency: Customs</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Application for Certificate of Origin (for requesting trader in</td>
<td>CLP agency: DIMEX</td>
<td>Vientiane or Provincial</td>
</tr>
<tr>
<td></td>
<td>the import country)</td>
<td>Quantity: as above</td>
<td>division of MoIC</td>
</tr>
<tr>
<td></td>
<td>COO for DFTP Scheme for LDC for trade with India</td>
<td>Cost: Fees for COO are based on value</td>
<td>(see list of provinces</td>
</tr>
<tr>
<td></td>
<td>Form A for trade with country belonging to the Generalized System</td>
<td>of goods as follows:</td>
<td>included for LNSW)</td>
</tr>
<tr>
<td></td>
<td>of Preferences</td>
<td>Less than $10,000: KIP 40,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Form AI for trade under the ASEAN-India FTA</td>
<td>$10,001 to $30,000: KIP 60,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Form D for trade under the ATIGA</td>
<td>$31,000 to $60,000: KIP 80,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>$61,000 or more: KIP 100,000</td>
<td></td>
</tr>
</tbody>
</table>
### Annex A: Functional and Technical Architecture & Specifications

<table>
<thead>
<tr>
<th></th>
<th>CLP</th>
<th>Government agencies</th>
<th>Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.</td>
<td>Application for Import/Export License</td>
<td><strong>Border Agency:</strong> Customs</td>
<td>Not applicable</td>
</tr>
<tr>
<td></td>
<td>- Import / Export License</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Un-milled rice, low-standard rice, premium rice, semi-milled or fully milled rice whether filtering or not (AHTN: 1006) (import and export)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Steel bars and transformed steel (AHTN: 72.13, .14, .15, .16) (import only)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Cement, mortar, concrete (AHTN: 25.23, 38.16) (import only)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LTP process: MI01</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>CLP agency:</strong> Provincial division of MoIC</td>
<td></td>
<td>Vientiane or Provincial division of MoIC (see list of provinces included for LNSW)</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Quantity unspecified – Guestimate:</strong> From 2010 Customs data: 6300 applicable line items declared – all provinces. Assume without basis 1 line items per permit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- 6300 permits p.a.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- 8000 p.a. in 2013 (@7% p.a.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- 11000 p.a. in 2018 (@7% p.a.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LTP process: DR-01</td>
<td><strong>Cost:</strong> 10,000 LAK / licence form</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Border Agency:</strong> Customs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Quantity:</strong> 20-30/month = 360 p.a. (2012)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- 510 p.a. in 2018 (@7% p.a.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- [@100 traders]</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Cost:</strong> &lt;see below – Form 2&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Border Agency:</strong> Not applicable</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>[Drugs] Form 1 (generic details)</td>
<td><strong>CLP agency:</strong> Department of Food and Drugs, Drugs Division</td>
<td>Vientiane</td>
</tr>
<tr>
<td></td>
<td>- request for Form 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Drugs</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Food supplements</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Traditional medicines used for medicinal purposes</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- AHTN: incl. 0510, 1211, 1212, 30</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LTP process: DR-01</td>
<td></td>
<td>Not applicable</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Quantity:</strong> 20-30/month = 360 p.a. (2012)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- 510 p.a. in 2018 (@7% p.a.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- [@100 traders]</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>Cost:</strong> &lt;see below – Form 2&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>[Drugs] Form 2 (detailed chemical details) &amp; Registration certificate (3 year validity)</td>
<td><strong>CLP agency:</strong> Department of Food and Drugs, Drugs Division</td>
<td>Vientiane</td>
</tr>
<tr>
<td></td>
<td>- AHTN: as above</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- LTP process: DR-01</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Quantity:</strong> 20-30/month = 360 p.a. (2012)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- 510 p.a. in 2018 (@7% p.a.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- [@100 traders]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#</td>
<td>CLP</td>
<td>Government agencies</td>
<td>Locations</td>
</tr>
<tr>
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<td>----------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
<td>--------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Cost</strong>: 2,000 LAK / product listed</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Border Agency</strong>:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Not applicable</strong></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>[Drugs] Request for Re-registration Certificate</td>
<td><strong>CLP agency</strong>: Department of Food and Drugs, Drugs Division</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>➢ 510 p.a. in 2018 (@7% p.a.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>➢ 100 traders</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Cost</strong>: unspecified</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Border Agency</strong>:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Not applicable</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>[Drugs] Request for Re-registration Certificate</td>
<td><strong>CLP agency</strong>: Department of Food and Drugs, Drugs Division</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>➢ 510 p.a. in 2018 (@7% p.a.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>➢ 100 traders</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Cost</strong>: unspecified</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Border Agency</strong>:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Not applicable</strong></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Request for Letter of Approval</td>
<td><strong>CLP agency</strong>: Department of Food and Drugs, Drugs Division</td>
<td></td>
</tr>
<tr>
<td></td>
<td>➢ Letter of Approval for import of drugs (per importation for which</td>
<td>**Quantity unspecified – Guestimate: From 2010 Customs data:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>valid Registration Certificate / Re-registration Certificate must</td>
<td>800 applicable line items declared – all provinces.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>be in hand)</td>
<td>Assume without basis 1 line items per permit</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>➢ 800 LoA p.a.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>➢ 1000 p.a. in 2013 (@7% p.a.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>➢ 1400 p.a. in 2018 (@7% p.a.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>➢ 100 traders</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Cost</strong>: 20,000 LAK / LoA</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Border Agency</strong>:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Customs</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Department of Food and Drugs, Drugs Division</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Quantity</strong>: 120/month = 1440 p.a. (2012)</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Request for Import Permit (Food)</td>
<td><strong>CLP agency</strong>: Department of Food and Drugs, Food Division</td>
<td></td>
</tr>
<tr>
<td></td>
<td>➢ Import Permit (Food)</td>
<td><strong>Quantity</strong>: 120/month = 1440 p.a. (2012)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AHTN: incl. 02, 04, 07 to 22</td>
<td><strong>Locations</strong>: Vientiane</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LTP process: FD-01</td>
<td><strong>Border locations specified for LNSW</strong></td>
<td></td>
</tr>
<tr>
<td>#</td>
<td>CLP</td>
<td>Government agencies</td>
<td>Locations</td>
</tr>
<tr>
<td>----</td>
<td>--------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>14</td>
<td>Application for Registration Certificate for Food Supplements&lt;br&gt; ‣ Registration Certificate for Food Supplements&lt;br&gt; AHTN: t.b.d.&lt;br&gt; LTP process: FD-02</td>
<td>‣ 2000 p.a. in 2018 (@7% p.a.)&lt;br&gt; Cost: 1,000 LAK / permit form + 50,000 LAK / invoice attached&lt;br&gt; <strong>Border Agency:</strong>&lt;br&gt; Customs&lt;br&gt; Department of Food and Drugs, Food Division</td>
<td>Border locations specified for LNSW</td>
</tr>
<tr>
<td>15</td>
<td>Application for Import / Export License for Timber, Wooden Products and Forest Products&lt;br&gt; ‣ Export License for Timber, Wooden Products and Forest Products&lt;br&gt; AHTN: 4403.2010 (Logs, trunk, bark, transformed timber and semi-finished timber from plantations)&lt;br&gt; 4407.29 (Logs, trunk, bark, transformed timber and semi-finished timber from plantations)&lt;br&gt; 4409.29.00 (Logs, trunk, bark, transformed timber and semi-finished timber from plantations)&lt;br&gt; LTP process: FR-01</td>
<td><strong>CLP agency:</strong>&lt;br&gt; Forestry Division of Provincial Office of the Ministry of Agriculture and Forestry (MAF)&lt;br&gt; [Note: also involves authorization by the regional Department of MAF&lt;br&gt; Permit also serves as a domestic transport approval.]&lt;br&gt; Quantity: 10 / year (exports – imports are negligible)&lt;br&gt; ‣ for 2018 –20 p.a.&lt;br&gt; Cost: 30,000 LAK / license&lt;br&gt; <strong>Border Agency:</strong>&lt;br&gt; Customs&lt;br&gt; MAF</td>
<td>Provincial division of MAF&lt;br&gt; (see list of provinces included for LNSW)</td>
</tr>
<tr>
<td>16</td>
<td>Application for Import Certificate for Government agencies</td>
<td>Provincial division of</td>
<td></td>
</tr>
<tr>
<td>#</td>
<td>CLP</td>
<td>Government agencies</td>
<td>Locations</td>
</tr>
<tr>
<td>----</td>
<td>-----</td>
<td>---------------------</td>
<td>-----------</td>
</tr>
<tr>
<td></td>
<td>Plants (Agricultural Products)</td>
<td>Department of Agriculture of the Provincial Division of the Ministry of Agriculture and Forestry</td>
<td>MAF (see list of provinces included for LNSW)</td>
</tr>
<tr>
<td>17.</td>
<td>Import Certificate for Plants (Agricultural Products)</td>
<td>Quantity unspecified</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AHTN: 6, 12, 20, 97019010</td>
<td>Guestimate: From 2010 Customs data: 1500 applicable line items declared – all provinces. Assume without basis 1 line items per permit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LTP process: AP-01</td>
<td>1500 applications p.a.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1900 p.a. in 2013 (@7% p.a.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2600 p.a. in 2018 (@7% p.a.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cost: unspecified</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Border Agency: Customs</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MAF</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>Application for Registration Certificate for Plants (Agricultural Products)</td>
<td>CLP agency: Department of Agriculture, Ministry of Agriculture and Forestry</td>
<td>Vientiane</td>
</tr>
<tr>
<td></td>
<td>Registration Certificate for Plants (Agricultural Products)</td>
<td>Quantity unspecified</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AHTN: as above</td>
<td>Assume without basis – very few ~100 p.a. 2012 (≥ 150 in 2018)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LTP process: (implied from AP-01)</td>
<td>Cost: unspecified</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Border Agency: Not applicable</td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>Application for Permit for Import of Pesticides and Fertilizers</td>
<td>CLP agency: Department of Agriculture of the Provincial Division of the Ministry of Agriculture and Forestry</td>
<td>Provincial division of MAF (see list of provinces included for LNSW)</td>
</tr>
<tr>
<td></td>
<td>Permit for Import of Pesticides and Fertilizers</td>
<td>Quantity unspecified</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AHTN: 3808 - pesticides, 31 - fertilizer</td>
<td>Guestimate: From 2010 Customs data: 1000 applicable line items declared – all provinces. Assume without basis 1 line items per permit</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LTP process: AP-02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#</td>
<td>CLP</td>
<td>Government agencies</td>
<td>Locations</td>
</tr>
<tr>
<td>----</td>
<td>----------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| 19.| Application for Registration Certificate for Plants (Agricultural Products)  
   ▶ Registration Certificate for Pesticides and Fertilizers (Agricultural Products)  
   AHTN: 6, 12, 20, 97019010  
   LTP process: (implied from AP-02)  | ▶ 1000 applications p.a.  
   ▶ 1400 p.a. in 2013 (@7% p.a.)  
   ▶ 1900 p.a. in 2018 (@7% p.a.)  
   Cost: unspecified  
   **Border Agency:**  
   Customs  
   MAF  | Border locations specified for LNSW  |
| 20.| Request for Technical Certificate for Import of Livestock and Fish  
   ▶ Technical Certificate for Import of Livestock and Fish  
   • Livestock  
   • Fish  
   AHTN: 01 – livestock, 03 – fish  
   ▶ 2500 p.a. in 2013 (@7% p.a.)  
   ▶ 3500 p.a. in 2018 (@7% p.a.)Cost: unspecified  
   **Border Agency:**  
   Customs  
   MAF  | Provincial division of MAF  
   (see list of provinces included for LNSW)  |
| 21.| Application for Certificate of Quality for  | **CLP agency:**  
   Provincial Division of Livestock and Fisheries of the Department of Agriculture of the Ministry of Agriculture and Forestry  
   Quantity unspecified  
   Guestimate: From 2010 Customs data: 2000 applicable line items declared – all provinces.  
   Assume without basis 1 line items per permit  
   ▶ 2000 requests p.a.  
   ▶ 2500 p.a. in 2013 (@7% p.a.)  
   ▶ 3500 p.a. in 2018 (@7% p.a.)Cost: unspecified  
   **Border Agency:**  
   Customs  
   MAF  | Provincial division of  |
<table>
<thead>
<tr>
<th>#</th>
<th>CLP</th>
<th>Government agencies</th>
<th>Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Construction materials, electronic equipment and others listed in a list of controlled products AHTN: t.b.d. LTP process: SM01</td>
<td>Quantity: 3-4/year (2012) ➤ 10 in 2018 (@7% p.a.) Cost: unspecified Border Agency: Customs</td>
<td>Border locations specified for LNSW</td>
</tr>
<tr>
<td></td>
<td>Imported Goods</td>
<td>Government agencies: Provincial Division of the Department of Standards and Metrology, of the Ministry of Science and Technology (MOST) Quantity: 10 per month ➤ 120 p.a. 2012 ➤ 170 in 2018 Cost: unspecified Border Agency: Customs In principle (per regulations), MOST but MOST do not place officers at the borders.</td>
<td>MOST (see list of provinces included for LNSW)</td>
</tr>
<tr>
<td></td>
<td>• Explosive substances</td>
<td>Quantity: 3-4/year (2012) ➤ 10 in 2018 (@7% p.a.) Cost: unspecified Border Agency: Customs</td>
<td>Border locations specified for LNSW</td>
</tr>
<tr>
<td></td>
<td>AHTN: 3601 – Propellant powders; 3602 – Prepared explosive other than propellant powders; 3603 – Safety fuses; detonating fuses; percussion or detonating caps; igniters; electric detonators; 3604 – Fireworks, signalling flares, rain rockets, fog signals and other pyrotechnic articles; LTP process: ND01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Application for Import License for Explosive Substances ➤ Import License for Explosive Substances • Explosive substances AHTN: 3601 – Propellant powders; 3602 – Prepared explosive other than propellant powders; 3603 – Safety fuses; detonating fuses; percussion or detonating caps; igniters; electric detonators; 3604 – Fireworks, signalling flares, rain rockets, fog signals and other pyrotechnic articles; LTP process: ND01</td>
<td>CLP agency: Department of Defense Industry of the Ministry of National Defense Quantity: 3-4/year (2012) ➤ 10 in 2018 (@7% p.a.) Cost: unspecified Border Agency: Customs</td>
<td>Vientiane</td>
</tr>
<tr>
<td></td>
<td>• Construction materials, electronic equipment and others listed in a list of controlled products AHTN: t.b.d. LTP process: SM01</td>
<td>Quantity: 3-4/year (2012) ➤ 10 in 2018 (@7% p.a.) Cost: unspecified Border Agency: Customs</td>
<td>Border locations specified for LNSW</td>
</tr>
</tbody>
</table>
### Annex A: Functional and Technical Architecture & Specifications

#### CLP

<table>
<thead>
<tr>
<th>#</th>
<th>CLP</th>
<th>Government agencies</th>
<th>Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>Application for Mine Products Import/Export License</td>
<td><strong>CLP agency:</strong> Ministry of Energy and Mines</td>
<td>Border locations specified for LNSW</td>
</tr>
<tr>
<td></td>
<td>• Mine Products Import/Export License</td>
<td>Quantity: 4-5 / year (2012) ➤ 10 in 2018 (@7% p.a.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Minerals</td>
<td>Cost: unspecified</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Mineral products</td>
<td><strong>Border Agency:</strong> Customs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AHTN: incl. 26, 28</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LTP process: EM01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Application for Import/Export License for Gold Bars</td>
<td><strong>CLP agency:</strong> Department of Monetary Policy, Bank of Lao PDR</td>
<td>Vientiane</td>
</tr>
<tr>
<td></td>
<td>➤ Import Permit for Gold Bars</td>
<td>Quantity: “low” (both import and export) Assume without basis: 10 2012, 15 2018</td>
<td>Border locations specified for LNSW</td>
</tr>
<tr>
<td></td>
<td>➤ Export Permit for Gold Bars</td>
<td>Cost: unspecified</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Gold Bars used as a means of international payment</td>
<td><strong>Border Agency:</strong> Customs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AHTN: 718.1210 – Gold bars (only for gold bars as internationally recognized as medium of payment)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LTP process: BL01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26</td>
<td>Application for Import/Export License for Publications</td>
<td><strong>CLP agency:</strong> Ministry of Information, Culture and Tourism</td>
<td>Vientiane</td>
</tr>
<tr>
<td></td>
<td>➤ Import / export Permit for Publications</td>
<td>Quantity: 100 p.a. (2012) ➤ 150 in 2018 (@7% p.a.)</td>
<td>Border locations specified for LNSW</td>
</tr>
<tr>
<td></td>
<td>• All printed publications</td>
<td>Cost: 5000 LAK / Application form and 100000 LAK/license</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Encoded CD’s / DVD’s</td>
<td><strong>Border Agency:</strong> Customs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AHTN: t.b.d.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LTP process: MI01</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Notes:

For the CLP indicated above (rows 1 to 26), subject to any de-scoping as indicated elsewhere, the LNSW / CLPIA Workbench – workflow management system is anticipated.

For the Exemption / concession certificate, item 27, it is expected that this would be outside LNSW except to the extent that the system to be implemented by LCD (work in progress) would confirm the licence to the Trader data in LNSW as a message under an agreed protocol.

For item 28, ACDD the architecture anticipates that the Trader would submit the ACDD to LNSW which would then route to Asycuda (as well as providing notification to border agencies, esp. MAF and MOH for officers to use the LNSW Border Agency Workbench).

Eventually after the customs process is completed, Asycuda would then confirm the Customs outcomes to LNSW by a message under an agreed protocol.
<table>
<thead>
<tr>
<th>#</th>
<th>Request for Exemption / concession</th>
<th>Government agencies</th>
<th>Locations</th>
</tr>
</thead>
</table>
| 27. | Request for Exemption / concession certificate  
   ➢ Exemption / concession certificate  
   AHTN: any  
   LTP process: N/a | Receiving agency:  
   Customs – Customs system for exemptions / concessions  
   Quantity: <t.b.d.>  
   Cost: <not known>  
   Border Agency:  
   Customs | Vientiane and Provincial offices of LCD  
   (see list of provinces included for LNSW)  
   Border locations specified for LNSW |
| 28. | ACDD  
   ➢ Clearance Note  
   AHTN: any  
   LTP process: N/a | Receiving agency:  
   Customs - Asycuda  
   Quantity: unspecified  
   ex 2010 national import data from WB:  
   187000 tariff lines declared  
   Assume lines per declaration = 3.  
   This gives 63000 import declarations p.a. in 2010  
   (and 78000 import decs in 2013 @ p.a. 7% and 109000 import decs in 2018 @ p.a.7%)  
   There is no available data re transit and export declarations.  
   Based on hearsay: there were ~200000 total declarations p.a. in 2012.  
   Following from the above there might be ~120000 export and transit decs in 2012.  
   Also following: an estimated number of declarations in 2018 would be 344000 in total at 7% p.a.  
   Cost: 100,000 LAK / ACDD  
   Border Agency:  
   Customs | Vientiane and Provincial offices of LCD  
   (see list of provinces included for LNSW)  
   Border locations specified for LNSW |
13.3 Assumptions regarding scope - offices

1. Laos is divided into 16 provinces and 1 prefecture plus capital city municipality as listed at Figure 24. The rows on dark print are indicated to be LNSW installation sites for the nominated GA’s in the provincial capital and border locations.

Figure 24 Laos - provinces, capitals, borders

<table>
<thead>
<tr>
<th>Province / prefecture</th>
<th>Capital</th>
<th>Borders</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Attapu</td>
<td>Attapu (Muang Samakhisai)</td>
<td>Houei Xay</td>
</tr>
<tr>
<td>2. Bokeo</td>
<td>Ban Houayxay</td>
<td>Lak Sao / Nam Phao and Paksan</td>
</tr>
<tr>
<td>3. Bolikhamxai</td>
<td>Muang Pakxan</td>
<td>Vang Tao</td>
</tr>
<tr>
<td>4. Champasak</td>
<td>Pakxé</td>
<td>Namsoy [Nam Xoi]</td>
</tr>
<tr>
<td>5. Houaphan</td>
<td>Sam Neua</td>
<td></td>
</tr>
<tr>
<td>6. Khammouan</td>
<td>Thakhek (Muang Khammouan)</td>
<td></td>
</tr>
<tr>
<td>7. Louang Namtha</td>
<td>Louang Namtha</td>
<td>Boten</td>
</tr>
<tr>
<td>8. Louangphrabang</td>
<td>Louangphrabang</td>
<td></td>
</tr>
<tr>
<td>9. Oudômxaï</td>
<td>Muang Xay</td>
<td></td>
</tr>
<tr>
<td>10. Phôngsali</td>
<td>Phôngsali</td>
<td></td>
</tr>
<tr>
<td>11. Saravan</td>
<td>Saravan</td>
<td></td>
</tr>
<tr>
<td>12. Savannakhét</td>
<td>Savannakhét (Muang Khanthabouly)</td>
<td>Dansavanh and Savannakhét</td>
</tr>
<tr>
<td>13. Vientiane</td>
<td>Muang Phôn-Hông</td>
<td>Thanaleng, and Wattay</td>
</tr>
<tr>
<td>15. Xaignabouri</td>
<td>Muang Xayabury</td>
<td>Xayaboury / Kenethao</td>
</tr>
<tr>
<td>16. Xékong</td>
<td>Ban Phone (Muang Laman)</td>
<td></td>
</tr>
<tr>
<td>17. Xiangkhoang</td>
<td>Phônsavan</td>
<td></td>
</tr>
</tbody>
</table>

2. The main border checkpoints, i.e. Asycuda roll-out\(^\text{41}\) (and perhaps other facilities such as container scanners) geographically listed from north-east of Laos, clockwise, are listed below.

\(^{41}\) These 11 locations are said to cover over 90% of ACDD volumes.
<table>
<thead>
<tr>
<th>Border</th>
<th>Province</th>
<th>Connecting to</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Namsoy [Nam Xo]</td>
<td>Houaphan</td>
<td>to Nam Eo, Vietnam</td>
</tr>
<tr>
<td>(2) Lak Sao / Nam Phao</td>
<td>Bolikhamxai</td>
<td>to Cau Treo, Vietnam</td>
</tr>
<tr>
<td>(3) Dansavanh</td>
<td>Savannakhet</td>
<td>to Lao Bao, Vietnam</td>
</tr>
<tr>
<td>(4) Vang Tao</td>
<td>Champasak</td>
<td>to Cong Mek, Thailand</td>
</tr>
<tr>
<td>(5) Savannakhet</td>
<td>Savannakhet</td>
<td>to Mukdahan, Thailand</td>
</tr>
<tr>
<td>(6) Paksan [Pakxan]</td>
<td>Bolikhamxai</td>
<td>to Bung Kan, Thailand</td>
</tr>
<tr>
<td>(7) Thanaleng</td>
<td>Vientiane</td>
<td>to Nong Khai, Thailand</td>
</tr>
<tr>
<td>(8) Wattay International Airport</td>
<td>Vientiane</td>
<td>to international destinations</td>
</tr>
<tr>
<td>(9) Xayaboury / Kenethao</td>
<td>Xaignabouri</td>
<td>to Nakaxeng, Thailand</td>
</tr>
<tr>
<td>(10) Houei Xay</td>
<td>Bokeo</td>
<td>to Chiang Khong, Thailand</td>
</tr>
<tr>
<td>(11) Boten</td>
<td>Louang Namtha</td>
<td>to Mohan, China</td>
</tr>
</tbody>
</table>

3. It is assumed that the selection of Asycuda roll-out sites has been strongly influenced by the ASEAN Highway (AH) Routes for regional integration and cooperation.

There are 8 routes that Lao PDR has selected as ASEAN Highway (AH) Routes for regional integration and cooperation, as follows:

- Route AH-3 (NR3): Houeixay (Lao-Thai border) to Boten (Lao-Chinese border),
- Route AH-12 (NR13North): Natrey (J.R. AH-3-Oudomxay-Luang Prabang-Vientiane-Thanaleng (Lao-Thai border),
- Route AH-13 (NR2): Muang Ngeun-Oudomxay-Taichang (Lao-Vietnamese border),
- Route AH-11(NR13South): Vientiane (J.R. AH-4)-Ban Lao-Thakhek-Savannakhet-Pakse-Veunkham (Lao-Cambodian border),
- Route AH-15(NR8): Ban Lao to Nam Phao (Lao-Vietnam border),
- Route AH-131(NR12): Thakhek (Lao-Thailand border) to Mugia (Lao-Vietnamese border),
- Route AH-132(NR18B): Vang Tao(Lao-Thailand border) to Ban Het (Lao-Vietnamese border),
- Route AH-120(NR9): Savannakhet (Lao-Thailand border) to Densavanh (Lao-Vietnamese border).
## 14. Appendix B: Preliminary Cost Estimate

The following is a very preliminary estimate of costs for the goods and services for installation and implementation of the FandTA for LNSW and the services for ongoing operation, support and maintenance of LNSW.

### Summary of assumptions:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The configurations are drawn from the architecture specified in the main body of the document.</td>
</tr>
<tr>
<td>2</td>
<td>The configuration estimate will be sized for 2018 assuming growth rates of 7% per annum.</td>
</tr>
<tr>
<td>3</td>
<td>There are said to be around 200K customs declarations for 2012. This would imply ≈ 300K per annum for 2018. Assume that there would be 2 lodgement transactions per custom declaration and an average 5 LNSW processing steps per declaration (\rightarrow) = 2.1 million corresponding LNSW business transactions p.a. [Processing steps includes for LNSW: trader queries and responses, and clearance message.]</td>
</tr>
<tr>
<td>4</td>
<td>Assume 5 user transactions / business transaction ≈ 10.5 million corresponding user transactions p.a. [User transaction include menu navigation, searching, enquiries, updates.] Based on actual trade transactions for 2010, there are estimated to be around 18K permits issued in Vientiane and 14.5K permits issued provincially for 2010. This would imply ≈ 24.5K and 20Kp.a correspondingly for 2018 and a total = 44.5K p.a.). Assume that there would be 2 lodgement transactions per permit and 20 LNSW processing steps per declaration (\rightarrow) = 1 million corresponding LNSW business transactions per annum and (at 5 user transactions / business transaction) ≈ 5 million user transactions p.a.</td>
</tr>
<tr>
<td>5</td>
<td>From 3 and 4: ≈ 16 million user transactions per annum (\rightarrow) 64000 transactions / messages per day or ≈ 2 per second on average and perhaps 10 per second peak. This is a modest rate of transactions - server specifications can be modest.</td>
</tr>
<tr>
<td>6</td>
<td>Raw data requirement: Assume 10,000 traders – registration data: say 1000 bytes each plus certificate images: say 3 MB each: 30 GB 45,000 CLP p.a. – assume 1000 bytes each plus supporting image documents say 2 MB (~10 scanned pages) each for five years 900 GB. 300,000 customs declarations – assume 1000 bytes each plus supporting image documents say 2 MB (~10 scanned pages) each for five years 6,000 GB. This would imply a physical data requirement of approximately 8.0 TB at each of two sites. The 'live' storage at each place might only need to be around 2 TB. Allowing for system engineering (fudge factor 3): total 'live' storage per site: 6.0 TB plus server-storage corresponding to the technology engaged and 30TB total storage. Nevertheless the cost of storage for these modest volumes should not be challenging.</td>
</tr>
<tr>
<td>7</td>
<td>Unit prices taken from actual costs in representative projects.</td>
</tr>
<tr>
<td>8</td>
<td>For project management a two amount inclusive of all fees and costs for all project management personnel.</td>
</tr>
<tr>
<td>9</td>
<td>LNSW Application Base Licence - is entirely speculative. A one-time perpetual licence is assumed.</td>
</tr>
<tr>
<td>10</td>
<td>CLP build etc. costs is based on $500 per day for 100 days per CLP for 26 CLP's.</td>
</tr>
</tbody>
</table>
Recurrent costs:
Manager - 1 person plus assistant for four years
Technical Support - LNSW solution support, maintenance and enhancement- small team for five years (incl. fist implementation year)
Operations and Help Desk - small team of shift basis - 2 persons per shift
For support and maintenance of end-user equipment, renewal (i.e. repurchase after wear and tear) is recommended rather than annual support and maintenance.

Electrical fit-out: service and equipment for connection to mains, cabling to data centre, $50K
Generators: Internet search suggests price for mid-range 60 KVA Genset: $US7 to 10K.
Switchover equipment: $US 10K
UPS (60 KVA, 1 hour): $US 40K
Assume annual fuel: 1 hour per day, 15 litres/hr., $2/litre = $11K p.a.
Assume mains power annual cost: 10K p.a.

The cost estimates for implementation and operation take into account the service specifications outlined in the FandTA and further elaborated in the ‘Service Specifications’ document.

Rental for accommodation for data centres / LNSW operator not included – assumed government accommodation / budget.

Costs for establishing / operating LNSW governance entity not included except to the extent of LNSW end-user equipment, LAN, WAN connections, implementation of these and S&M) – assumed government budget.

Costs may be defrayed in several ways: government budget, donor grants, credits or loans for whole or part of supply and implementation and / or operation, fees for access and usage, entrepreneurial value added services provided by the LNSW Operator or other entity subject to authorisation or approval by GoL.

The configuration, component, and cost estimates are shown in the following figures.
Minimum component sizing and functional characteristics would be documented as part of the specification document

**Figure 25 Data Centre estimates.**

<table>
<thead>
<tr>
<th>DATA CENTRE COSTS</th>
<th>Main Data Centre</th>
<th>BC Data Centre</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Component</strong></td>
<td>Unit cost</td>
<td>Qty</td>
<td>Cost</td>
</tr>
<tr>
<td>Physical Infrastructure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data centre build (lot)</td>
<td>50000</td>
<td>1</td>
<td>50000</td>
</tr>
<tr>
<td>Physical infrastructure (lot)</td>
<td>80000</td>
<td>1</td>
<td>80000</td>
</tr>
<tr>
<td>Electrical fit-out (lot)</td>
<td>110000</td>
<td>1</td>
<td>110000</td>
</tr>
<tr>
<td>subtotal - physical infrastructure</td>
<td>240000</td>
<td>240000</td>
<td>480000</td>
</tr>
<tr>
<td>Technical infrastructure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Racks / blade chassis (42U equiv)</td>
<td>50000</td>
<td>2</td>
<td>100000</td>
</tr>
<tr>
<td>Operating system s/w (per server)</td>
<td>40000</td>
<td>19</td>
<td>76000</td>
</tr>
<tr>
<td>DBMS s/w (per server core)</td>
<td>40000</td>
<td>12</td>
<td>480000</td>
</tr>
<tr>
<td>App servers s/w - assume open source</td>
<td>0</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>Enterprise-wide security s/w</td>
<td>20000</td>
<td>1</td>
<td>20000</td>
</tr>
<tr>
<td>LNSW App Maintenance s/w</td>
<td>20000</td>
<td>1</td>
<td>20000</td>
</tr>
<tr>
<td>Help Desk s/w</td>
<td>50000</td>
<td>1</td>
<td>50000</td>
</tr>
<tr>
<td>LNSW Database server</td>
<td>100000</td>
<td>2</td>
<td>200000</td>
</tr>
</tbody>
</table>

Annex A: Functional and Technical Architecture & Specifications
### Annex A: Functional and Technical Architecture & Specifications

#### Figure 26 End-user equipment estimates

<table>
<thead>
<tr>
<th>Component</th>
<th>Border site</th>
<th>LNSW Operator</th>
<th>SW Governance Ent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. 33</td>
<td>No. 1</td>
<td>No. 1</td>
</tr>
<tr>
<td>Unit cost</td>
<td>Qty</td>
<td>Cost</td>
<td>Qty</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>-------------</td>
<td>---------------</td>
<td>--------</td>
</tr>
<tr>
<td>WAN Router</td>
<td>2500</td>
<td>1</td>
<td>2500</td>
</tr>
<tr>
<td>LAN Switch</td>
<td>2500</td>
<td>1</td>
<td>2500</td>
</tr>
<tr>
<td>WLAN Switch</td>
<td>2500</td>
<td>1</td>
<td>2500</td>
</tr>
<tr>
<td>WLAN Access points</td>
<td>1000</td>
<td>3</td>
<td>1000</td>
</tr>
<tr>
<td>Personal computers</td>
<td>1500</td>
<td>0</td>
<td>1000</td>
</tr>
<tr>
<td>Notebooks</td>
<td>2000</td>
<td>3</td>
<td>6000</td>
</tr>
<tr>
<td>Mobile devices</td>
<td>1000</td>
<td>2</td>
<td>2000</td>
</tr>
<tr>
<td>Scanners</td>
<td>1000</td>
<td>2</td>
<td>2000</td>
</tr>
<tr>
<td>Printers</td>
<td>500</td>
<td>2</td>
<td>1000</td>
</tr>
<tr>
<td>LNSW Kiosks</td>
<td>3000</td>
<td>1</td>
<td>3000</td>
</tr>
<tr>
<td>cabinets, cabling, ftout</td>
<td>5000</td>
<td>1</td>
<td>5000</td>
</tr>
</tbody>
</table>

**per site sub-total** 29500 35000 34500

**subtotal for site category** 973500 35000 34500

---

**END-USER EQUIPMENT COSTS**

<table>
<thead>
<tr>
<th>Component</th>
<th>Unit cost</th>
<th>Qty</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>LNSW Storage Area Network</td>
<td>20000</td>
<td>1</td>
<td>20000</td>
</tr>
<tr>
<td>LNSW SAN Switch</td>
<td>5000</td>
<td>2</td>
<td>10000</td>
</tr>
<tr>
<td>LNSW Application server</td>
<td>5000</td>
<td>4</td>
<td>20000</td>
</tr>
<tr>
<td>SOA server + fail-over</td>
<td>5000</td>
<td>2</td>
<td>10000</td>
</tr>
<tr>
<td>LNSW Portal Server Cluster</td>
<td>5000</td>
<td>2</td>
<td>10000</td>
</tr>
<tr>
<td>LNSW BI Database server</td>
<td>5000</td>
<td>1</td>
<td>5000</td>
</tr>
<tr>
<td>LNSW BI applications server</td>
<td>5000</td>
<td>2</td>
<td>10000</td>
</tr>
<tr>
<td>LNSW BI SAN</td>
<td>20000</td>
<td>1</td>
<td>20000</td>
</tr>
<tr>
<td>LNSW BI SAN Switch</td>
<td>5000</td>
<td>1</td>
<td>5000</td>
</tr>
<tr>
<td>Fast Printer</td>
<td>5000</td>
<td>1</td>
<td>5000</td>
</tr>
<tr>
<td>TIL / QC-testing server</td>
<td>5000</td>
<td>2</td>
<td>10000</td>
</tr>
<tr>
<td>SDL/development server</td>
<td>5000</td>
<td>1</td>
<td>5000</td>
</tr>
<tr>
<td>LNSW Operator ERP Server</td>
<td>5000</td>
<td>2</td>
<td>10000</td>
</tr>
<tr>
<td>System/Network Mgmt Server</td>
<td>5000</td>
<td>1</td>
<td>5000</td>
</tr>
<tr>
<td>HTTP Proxy / reverse proxy servers</td>
<td>5000</td>
<td>2</td>
<td>10000</td>
</tr>
<tr>
<td>DNS server</td>
<td>5000</td>
<td>1</td>
<td>5000</td>
</tr>
<tr>
<td>Core switches</td>
<td>5000</td>
<td>2</td>
<td>10000</td>
</tr>
<tr>
<td>Distribution switch</td>
<td>2500</td>
<td>2</td>
<td>5000</td>
</tr>
<tr>
<td>Access switch</td>
<td>2500</td>
<td>2</td>
<td>5000</td>
</tr>
<tr>
<td>VLAN switches</td>
<td>2500</td>
<td>2</td>
<td>5000</td>
</tr>
<tr>
<td>WAN router</td>
<td>2500</td>
<td>2</td>
<td>5000</td>
</tr>
<tr>
<td>Internal and external firewall</td>
<td>5000</td>
<td>4</td>
<td>20000</td>
</tr>
<tr>
<td>IPS - appliances</td>
<td>5000</td>
<td>2</td>
<td>10000</td>
</tr>
<tr>
<td>Portal Server</td>
<td>5000</td>
<td>2</td>
<td>10000</td>
</tr>
<tr>
<td>LDAP Server</td>
<td>5000</td>
<td>2</td>
<td>10000</td>
</tr>
<tr>
<td>Access Control Server</td>
<td>5000</td>
<td>2</td>
<td>10000</td>
</tr>
<tr>
<td>HTTP Content server</td>
<td>5000</td>
<td>1</td>
<td>5000</td>
</tr>
<tr>
<td>Backup Server</td>
<td>5000</td>
<td>1</td>
<td>5000</td>
</tr>
<tr>
<td>Virtual tape device</td>
<td>10000</td>
<td>1</td>
<td>10000</td>
</tr>
<tr>
<td>Backup tape device</td>
<td>10000</td>
<td>1</td>
<td>10000</td>
</tr>
</tbody>
</table>

**subtotal technical infrastructure** 911,000 629,000 1,540,000

**total data center costs** 1,151,000 869,000 2,020,000

---
### Annex A: Functional and Technical Architecture & Specifications

#### Figure 27 LNSW Implementation summary

<table>
<thead>
<tr>
<th>END-USER EQUIPMENT COSTS</th>
<th>Vientiane large site</th>
<th>Vientiane small site</th>
<th>Provincial site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Component</td>
<td>No.</td>
<td>5</td>
<td>No.</td>
</tr>
<tr>
<td>WAN Router</td>
<td>2500</td>
<td>1</td>
<td>2500</td>
</tr>
<tr>
<td>LAN Switch</td>
<td>2500</td>
<td>1</td>
<td>2500</td>
</tr>
<tr>
<td>WLAN Switch</td>
<td>2500</td>
<td>1</td>
<td>2500</td>
</tr>
<tr>
<td>WLAN Access points</td>
<td>1000</td>
<td>5</td>
<td>5000</td>
</tr>
<tr>
<td>Personal computers</td>
<td>1500</td>
<td>4</td>
<td>6000</td>
</tr>
<tr>
<td>Notebooks</td>
<td>2000</td>
<td>6</td>
<td>12000</td>
</tr>
<tr>
<td>Mobile devices</td>
<td>1000</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Scanners</td>
<td>1000</td>
<td>2</td>
<td>2000</td>
</tr>
<tr>
<td>Printers</td>
<td>500</td>
<td>2</td>
<td>1000</td>
</tr>
<tr>
<td>LNSW Kiosks</td>
<td>3000</td>
<td>2</td>
<td>6000</td>
</tr>
<tr>
<td>cabinets, cabling, fHout</td>
<td>5000</td>
<td>1</td>
<td>5000</td>
</tr>
</tbody>
</table>

**Per site sub-total**

<table>
<thead>
<tr>
<th>Component</th>
<th>Vientiane large site</th>
<th>Vientiane small site</th>
<th>Provincial site</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>5</td>
<td>No.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>44500</td>
<td>35500</td>
<td>35500</td>
</tr>
</tbody>
</table>

**Subtotal for site category**

<table>
<thead>
<tr>
<th>Component</th>
<th>Vientiane large site</th>
<th>Vientiane small site</th>
<th>Provincial site</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>5</td>
<td>No.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>222500</td>
<td>177500</td>
<td>1491000</td>
</tr>
</tbody>
</table>

**Total for end-user equipment**

| End-User Equipment Costs | 2,934,000 |

---

### LNSW IMPLEMENTATION COSTS

<table>
<thead>
<tr>
<th>Component</th>
<th>No.</th>
<th>5</th>
<th>No.</th>
<th>5</th>
<th>No.</th>
<th>42</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project management office (per year)</td>
<td>400000</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LNSW Base Licence (1-time)</td>
<td>1000000</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LNSW CLP workflow build / implementation (per day)</td>
<td>500</td>
<td>100</td>
<td>26</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

**Subtotal**

<table>
<thead>
<tr>
<th>Component</th>
<th>No.</th>
<th>5</th>
<th>No.</th>
<th>5</th>
<th>No.</th>
<th>42</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3,100,000</td>
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</tbody>
</table>

---

### TOTAL BUILD / INSTALLATION IMPLEMENTATION ESTIMATE

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<tr>
<th>Component</th>
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<th>No.</th>
<th>5</th>
<th>No.</th>
<th>42</th>
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</thead>
<tbody>
<tr>
<td>Data Centre Costs</td>
<td>2,020,000</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>End-User Equipment Costs</td>
<td>2,934,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LNSW Implementation Costs</td>
<td>3,100,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Year 1 (implementation year) operating cost</td>
<td>619,000</td>
<td></td>
<td></td>
<td></td>
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</table>

**Total**

<table>
<thead>
<tr>
<th>Component</th>
<th>No.</th>
<th>5</th>
<th>No.</th>
<th>5</th>
<th>No.</th>
<th>42</th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8,673,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure 28 LNSW Recurrent cost estimates

<table>
<thead>
<tr>
<th>RECURRENT COSTS</th>
<th>Management office (per year)</th>
<th>200000</th>
<th>4 years</th>
<th>800000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical Support office (per year)</td>
<td></td>
<td>400000</td>
<td>5 years</td>
<td>200000</td>
</tr>
<tr>
<td>LNSW Operations (per person per year)</td>
<td></td>
<td>50000</td>
<td>4 years</td>
<td>6 persons</td>
</tr>
<tr>
<td>Help Desk</td>
<td></td>
<td>50000</td>
<td>4 years</td>
<td>6 persons</td>
</tr>
<tr>
<td><strong>Telecommunications</strong></td>
<td></td>
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<tr>
<td>- CLP/1ISP / network per site p.a.</td>
<td></td>
<td>2000</td>
<td>4 years</td>
<td>88 sites</td>
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<tr>
<td>- mobile device per device p.a.</td>
<td></td>
<td>1200</td>
<td>4 years</td>
<td>70 devices</td>
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<tr>
<td>- between data centres (high speed connection) p.a.</td>
<td></td>
<td>5000</td>
<td>4 years</td>
<td>2 links</td>
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<tr>
<td>- data centre to ISP (high bandwidth) p.a.</td>
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<td>5000</td>
<td>4 years</td>
<td>4 links</td>
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<tr>
<td>- data centre and LCD /MOIC/Vientiane</td>
<td></td>
<td>5000</td>
<td>4 years</td>
<td>2 links</td>
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<tr>
<td><strong>Power Supply</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>- mains power</td>
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<td>100000</td>
<td>5 years</td>
<td>50000</td>
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<td>- generator fuel</td>
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<td>110000</td>
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<td><strong>Support and Maintenance</strong></td>
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<td></td>
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<tr>
<td>- data centre - physical infrastructure @% of costs (p.a.)</td>
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<td>5%</td>
<td>4 years</td>
<td></td>
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<tr>
<td>- data centre - hardware @% of costs (p.a.)</td>
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<td>10%</td>
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<tr>
<td>- end-user equipment @% of costs (p.a.)</td>
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<td>10%</td>
<td>4 years</td>
<td></td>
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<td>- data centre - system software @% of costs (p.a.)</td>
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<td>20%</td>
<td>5 years</td>
<td></td>
</tr>
<tr>
<td><strong>Total 5 year recurrent cost</strong></td>
<td></td>
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<td></td>
<td>9,051,000</td>
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<tr>
<td><strong>Year 1 (implementation)</strong></td>
<td></td>
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<td>619,000</td>
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<tr>
<td><strong>Year 2-5 p.a.</strong></td>
<td></td>
<td></td>
<td></td>
<td>2,108,000</td>
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**Note:** The year 1 recurrent cost is show to be an implementation cost since it concerns technical support and software support and maintenance during the first year during which time, for the purposes of these estimates, the services would be built. This simplification might be revised when the implementation plans are formulated.

**Note:**
The cost estimates would reduce if the GoL restricts the CLP to be included in the project scope as may occur with a rationalization of CLP and discontinuation esp. of those for statistical purposes.

Each CLP implies a USD50K workflow implementation cost and for any GA's that would thereby be de-scoped, a technical infrastructure reduction of the order of USD30K per site implementation cost and ~USD10K p.a. recurrent cost for telecoms charges.

Also GoL, in recognition of some very low transaction sites at some places, may restrict the number of implementation sites and hence the places needing FandTA facilities. This would mean, per site de-scoped: a technical infrastructure reduction of the order of USD30K per site implementation cost and ~USD10K p.a. recurrent cost for telecoms charges.
## 15. Appendix C: BIBLIOGRAPHY OF REFERENCE MATERIALS

<table>
<thead>
<tr>
<th>#</th>
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<tr>
<td>1</td>
<td>LTP Roadmap For Process Simplification And Harmonization Interim Report + Appendices v1.</td>
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<td>2</td>
<td>LTP Roadmap For Process Simplification And Harmonization Interim Report + Appendices v2.</td>
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<td>3</td>
<td>LTP Roadmap For Process Simplification And Harmonization Final Report</td>
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<tr>
<td>4</td>
<td>LTP: The Future of the Lao Trade Portal</td>
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<td>5</td>
<td>Case Studies on Implementing a Single Window, UNECE 2005</td>
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<td>6</td>
<td>First Regional Meeting on Trade &amp; Transport Facilitation in the Landlocked &amp; Transit Countries, Lattanamany KHONEYVONG, Director General, Department of Transport, MCTPC, Laos. 2005</td>
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<td>7</td>
<td>Diagnostic Trade Integration Study 2012, MOIC, Laos</td>
</tr>
<tr>
<td>8</td>
<td>Sector Assistance Program Evaluation, For The Transport Sector In The Lao People's Democratic Republic, ADB 2012</td>
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<tr>
<td>9</td>
<td>Lao PDR Economic Monitor May 2011 – UPDATE, WB Vientiane</td>
</tr>
<tr>
<td>10</td>
<td>Asycuda Modernisation Project Inception Report</td>
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<td>11</td>
<td>Instructions for Detailed Customs Declaration by the ASYCUDA system dated 5th July 2012</td>
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<td>12</td>
<td>LNSW TA Report And Recommendations On Fee Structure And Revenue Sharing</td>
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<td>13</td>
<td>LNSW TA Risk Management Report</td>
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<td>14</td>
<td>LNSW TA Import-Export ASIS Process Report</td>
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<td>15</td>
<td>LNSW TA Import-Export TOBE Process Report</td>
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<td>16</td>
<td>LNSW TA Draft Decree To Establish A National Single Window: Detailed Comments</td>
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<td>17</td>
<td>(Draft) LAW ON ELECTRONIC TRANSACTIONS</td>
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<td>18</td>
<td>LNSW Legal Opinion On The (Draft) Law On Electronic Transactions: Final</td>
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<td>19</td>
<td>UNESCAP: Electronic Single Window Legal Issues</td>
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<td>20</td>
<td>UNESCAP: Single Window Implementation Guide</td>
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<td>21</td>
<td>BTOR: NSW Development in the Philippines, WB Vientiane, 2012</td>
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<td>22</td>
<td>BTOR: NSW Development in the Singapore / Jakarta, WB Vientiane, 2012</td>
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<td>23</td>
<td>LNSW TA Project TOR</td>
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<td>24</td>
<td>LNSW TA Project Proposal</td>
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Annex B:

Governance and Operational Models Report
1 Management Summary

The role of the LNSW Operator will be to build, implement and establish the LNSW facilities and services and operate and maintain the LNSW facilities providing agreed services. The LNSW Operator should also deliver supplementary services such as provision of information, data and statistics while reporting to the LNSW Governance entity, body or role and remitting net finances/monies.

The expected role of the LNSW Governance entity or body will be to oversee the LNSW Operator and operations, protect the GOL’s policy interests in LNSW and to oversee the success of the LNSW in meeting GOL policy and trade facilitation objectives.

This document can be considered as a step along the road towards the final ‘blueprint’ for the LNSW and is seen as building upon the terms of reference, pre-existing work (especially the Lao Trade Portal project) and the preliminary descriptions and concept for the LNSW included in the Inception Report and presented at the ‘visioning’ Workshop.

The high-level functions to be provided by the LNSW are as follows:
1. Trade related Government Agency permit ¹ issuing function;
2. Online permit verification and enquiry function;
3. Trade declaration lodgement function;
4. ASEAN Single Window integration function.

Annex A offers a summary of the experiences in other countries when implementing a National Single Window and provides a useful guide for comparison purposes.

The following is a Roster of Options to describe the LNSW Operator, namely:
1. Part of an existing Government Agency (GA);
2. A new specialised Government Agency or part thereof;
3. A ‘state-owned’ enterprise or ‘corporatized’ Government Agency; or
4. A private sector company or enterprise.

¹ For ‘permit’ read permit, license, certificate, approval etc. …
In addition to a Roster of Options for the LNSW Operator we need to consider how will the LNSW be built, implemented and operated? The options include:

I. Self-build plus implemented and operated by the GA;
II. Outsourced build and implementation under commercial contract with an ICT provider(s) and self-operated by the GA;
III. To ‘build, operate and transfer’ (BOT) under a period or multi-year commercial contract with an ICT provider(s) and eventual transfer to the GA after an appropriate period of knowledge and technology transfer and change management;
IV. Outsource the build, implementation and operation under a period or multi-year renewable or re-tendered commercial contract with a private sector operator/provider.

The choice for the Governance entity may be simpler than that for the LNSW Operator. The LNSW Operator needs to be monitored and managed so as to ensure that agreed services are provided and that the policies of the GOL are adhered to. The options for Lao NSW Governance entity include:

1. Part of existing Government Agency;
2. New Specialised Government Agency or part thereof; or

One possible scenario would be for the existing LNSW Steering Committee and Secretariat to evolve into a permanent structure in one of the above three forms, e.g. the Steering Committee as a Management Board and the Secretariat expanded to provide the necessary skills and manpower to be able to manage and oversee the Operator and facilitate policy analyses and implementation.

Section 4 provides detailed descriptions and explanations of all the options for the Operator and Governance models as well as a decision-making framework to assist with selection of the preferred option. Although without commitment or definitive decision, it will be beneficial if consideration can be given without delay as to the preferred option for the Operator and Governance model to be adopted for the LNSW. This will significantly facilitate the other planned activities for the technical assistance and support assignment while also enabling the further development of the Functional and Technical Architecture for the LNSW.

This document is submitted to the World Bank for consideration. It is anticipated that it would be reviewed and discussed with the Ministry of Finance, the NSW Steering Committee, the Lao Customs Department and the other nominated key Government Agencies.
2 Introduction

This document has been prepared by the PM Group team of specialists commissioned by the World Bank to provide support and technical assistance with preparation of a ‘blueprint’ for the definition and establishment of a National Single Window for Lao PDR (LNSW). The products to be delivered and work program of technical assistance is defined in some detail in the team’s Inception Report.

The results and findings from our preliminary research and activities into the concept of Operational and Governance models were included in the aforementioned Inception Report and details were presented to participants at the LNSW ‘visioning’ workshop in Vientiane on 23rd November 2012.

The expected role of the LNSW Operator will be to:

I. Build, implement and establish the LNSW facilities and services;
II. Operate and maintain the LNSW facilities and provide services in accordance with;
   - any formal, commercial or ‘quasi’ Contract; and
   - Service Level Agreements (SLAs) or Service Level Objectives (SLOs) with:
     - The LNSW Governance entity, body or role;
     - Government Agencies (such as Customs, Border Agencies and Permit or Licence Issuing Agencies); and
     - Private sector operators (Traders, brokers / agents, and perhaps logistics operators).
III. Provide supplementary services such as provision of information, data and statistics; and
IV. Report to the LNSW Governance entity, body or role and remit net finance (if applicable and as per any formal, commercial or ‘quasi’ Contract).

The expected role of the LNSW Governance entity or body will be to:

i. Oversee the LNSW Operator and operations,
ii. Ensure policy oversight for the LNSW Operator,
iii. Protect the GOL’s policy interests in LNSW,
iv. Oversee the success of the LNSW in meeting GOL policy and trade facilitation objectives.

In attempting to provide a detailed roster of options for the Operational and Governance models this document also contains ‘statements of direction’ as part of the overall business model for the LNSW.

It is intended that the ‘statements of direction’ conceptualise the context for the various products to be developed by the PM Group team of specialists as part of the individual Task Clusters (as per the original TOR and Technical Proposal).

This business model for the LNSW is documented in terms of organization including:

a. models for the operation of LNSW;
b. models for the governance of LNSW; and
c. a decision making framework.
This business model for the LNSW is also documented in terms of ‘statements of direction’ for:

- Broad functional and technical framework;
- Reengineered business processes including risk management;
- Service Specifications for the LNSW Operator;
- Frameworks for Service Level Agreements (SLAs) and Service Level Objectives (SLOs); and
- Framework for Revenue model and Fee structure.

This document can be considered as a step along the road towards the final ‘blueprint’ for the LNSW and is seen as building upon the terms of reference, pre-existing work (especially the Lao Trade Portal project) and the preliminary descriptions and concept for the LNSW included in the Inception Report and presented at the ‘visioning’ Workshop.

The work within each Task Cluster continues to realign the product definitions in the light of findings and decisions and adds to increasing the levels of detail. The PM Group team has been requested to present an interim ‘blueprint’ for the LNSW to GOL in February 2013 with the final ‘blueprint’ to be published in June 2013.

This document is submitted to the World Bank for consideration. It is anticipated that this document would be reviewed and discussed with the Ministry of Finance, the NSW Steering Committee, the Lao Customs Department and the other nominated key Government Agencies.
3 Broad Functional and Technical Architecture

3.1 Context

Before giving consideration to the preferred options for the governance and operation of the LNSW it is prudent to have a sense of the broad functional vision envisaged.

The following descriptions are sourced from the Inception Report and updated with our revised understanding. The vision and descriptions will be further elaborated in the Functional and Technical Architecture.

3.2 Broad Functional Vision

The Strategic Options Report drafted in 2011 as part of the Lao Trade Portal project describes, at a high level, a conceptual model of a NSW for Lao PDR based on some key assumptions. The key assumptions referred to include:

- Single submission of data from the trade to Government Agencies (GA's) through a single channel;
- A shared SW workflow facility independent of existing Government legacy systems;
- A minimum workflow front-end for GA's that do not have automation;
- Ability to accommodate different data standards;
- Synchronous processing of data elements and single decision point of clearance; and
- Paperless environment.

The LTP Strategic Options Report included the statement shown at (d) above about the "ability to accommodate different data standards". The preparatory work for LNSW tends to indicate that this may not be an immediate concern but different data standards can arise in electronic exchanges where users may employ standards germane to their environment, e.g. IMO messaging standards, IATA messaging standards, EDIFACT, and de facto standards (over XML, CSV files, structured coded files and so on) adopted for supply-chain participants.

In the content of LNSW, there does not appear to be any gravitation towards particular standards by the commercial operators. The regulatory agencies are not automated. LCD has C2000 and ASYCUDA but these systems are not implemented as 'message based architectures', even partially. Therefore, the LNSW will not include message interpreter/translator requirements at this time. In the first instance, the LNSW would publish a messaging standard for participants, possibly EDIFACT or XML for EDIFACT, and use this standard for LNSW-ASYCUDA interoperation and any recommendations needed for any eventual B2G traders.
3.2.1 Objectives for LNSW

In general terms the objectives include:

a. To implement business procedures and systems that enable (but not necessarily dictate) trade-related regulatory processes whereby a trader (directly or through a broker or agent) would:
   i. interact on-line in real-time through a single entity (window),
   ii. use that window (only when necessary) as the conduit for subsequent intermediate transactions e.g. when subject to risk based processing, for corrections and clarifications and so on, and
   iii. utilize the window for the final transaction that obtains the release of goods.

b. To facilitate growth towards a future where the ideal would be for a turn-around time for the release instruction back to the trader without further human intervention and within minimal but agreed time periods².

3.2.2 Broad Functional Scope for the Lao National Single Window

High-level functional sets to be provided by the operating entity are:

1. **Trade related Government Agency permit³ issuing function**;
2. **Online permit verification and enquiry function**;
3. **Trade declaration lodgement function**;
4. **ASEAN Single Window integration function**.

The four main elements are outlined here in terms of broad functional scope.

1. **Trade related Government Agency permit issuing function**

   This is likely to be the functional set implemented in the first phase, entailing a trader gateway for:
   - linkage to the Lao Trade Portal and other GA information services web-sites and the ASEAN Trade Repository and associated ASEAN information services, such as for ATIGA and CEPT, when available;
   - registration as a LNSW trader providing a common-GA registration service or facilitating a specific agency registration service;
   - recording trade related data elements (TRDE) by electronic and remote data entry and attaching files and uploading scanned images into a trade folder (suitable to single-case or multi-case transactions);
   - assembling TRDE into permit applications in the trade folder using the recorded TRDE;
   - submitting / sending the application for a permit to a GA;
   - obtaining status updates on-line or by enquiry message providing a ‘track and trace’ capability;
   - receiving and responding to requests for clarification / additional information, with prompts by SMS / email and perhaps additional channels;

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² That could then be said to be procedures and systems of international best practice.
³ For ‘permit’ read permit, license, certificate, approval etc. …
facilitating payment of associated fees and charges (according to the eventual model selected in this regard which may be particular to each GA); and

- receiving electronic version of permit;

On the Trader side the LNSW should also provide:

- a message based channel (XML, EDIFACT, or UNeDocs),
  - through a Virtual Private Network (VPN) or Dedicated Private Network,
  - utilising a to-be-published message architecture, and
  - providing the user-level functions as described.

On the Government Agency side the LNSW should provide:

- A ‘level 2’ Work Flow Management (WFM) application with mail box and the following positively-asserted processing closure step(s):
  - LNSW provides event triggers to the GA via a workflow ‘in-tray’;
  - GA responds through its ‘back-office’ procedures (not in LNSW), suitably updated where desirable for LNSW operation,
  - GA provides ‘status’ updates per permit application facilitating a track and trace capability for the trader,
  - GA provides positive feedback asserting conclusion of process with an electronic version of the permit,
  - optionally sending / receiving additional correspondence between trader and GA can be facilitated through LNSW,
  - SMS / email channels as well as ‘mail box’ channel,
  - e-statements and accounting payment of associated fees and charges (according to the eventual model selected in this regard which may be particular to each GA),
  - optionally (preferably) holding e-certificate into the trader’s trade folder,
  - process-assistant for the business procedures at the GA closely related to LNSW but also with the flexibility for progressive expansion vertically and horizontally into the ‘back office’,
  - risk filtering for, and selection of risk-based process selection within, each GA.
- A ‘level 3’ message-exchanging ICT system (XML, EDIFACT, or UNeDocs) in a peer-to-peer architecture:
  - where the GA has the technical capability and assets,
  - using a Dedicated Private Network (preferred if transaction volume warrants) or Virtual Private Network,
  - utilising a to-be-published message architecture receiving messages from traders via LNSW and responding with messages to traders via LNSW,
  - utilising a to-be-published message architecture to exchange messages with other Government Agencies via LNSW.
- Functions for MIS and ad hoc research, Infrastructure functions such as for configuration / reference table management, presentation-layer services, secure messaging services, e-message interpreters, data security, network security (access controls with / without PKI, digital certificates, encryption services, non-repudiation), service and database high-availability, e-payments gateway, workflow / business process manager (modeller and run-time services), services / web-services manager, etc.
• Appendix B contains details of the “permits” that are candidates for processing via the LNSW. These candidates are drawn for the work of the LTP Project Roadmap Interim Report (pre-final). From this list of candidates the GoL may elect to deselect certain “permits” based on very low transaction volumes. The LTP Project Roadmap Final report (draft) also introduces strategic options for the elimination of permits.

Furthermore, the implementation sites need to be considered. At present, one rationale, as presented, is that the services could be made available in provinces where ASYCUDAWorld would also be activated. Once again, transaction volumes could well justify deselecting to counterbalance consideration of ‘universal service obligation’.

2. **Online permit verification and enquiry function**
   Building upon the Trade related agencies permit issuing service, entailing:
   - Internet portal-based look-up for authorised GA users to confirm validity and content of permits, licences, certificates, approvals etc.
   - For GA’s with sophisticated architecturally-compliant information technology: message-exchanging (XML, EDIFACT, or UNeDocs) ICT system in a peer-to-peer architecture utilising a to-be-published message architecture.

3. **Trade declaration lodgement function**
   Extending the message set comprising the Trade related agencies permit issuing service:
   - DTI for traders utilising trade related data elements (TRDE) built up in the trade-related folder, supplemented by data entry where necessary [Key factor … data elements need only be entered or submitted once].
   - Messaging exchanges with border agencies to integrate with ‘back-office’ procedures.
   - For GA’s with sophisticated architecturally-compliant information technology: message-exchanging (XML, EDIFACT, or UNeDocs) ICT system in a peer-to-peer architecture utilising a to-be-published message architecture.
   - For GA’s, in particular for those that also have border regulation responsibilities, functions in support of (a) the pre-arrival procedures (as described for the trade related agencies permit issuing service), (b) alerts, messages and workflow during entry processing and clearance and (c) where applicable, acquittal processes for associated permits, licences etc.
   - Feedback loops from the outcomes of the declaration process to strengthen the risk-orientated data collation and analysis functions previously mentioned within LNSW for the GAs.

4. **ASEAN Single Window integration function**
   The LNSW should provide:
   - Functions to send declarations (ACDD, COO) to ASW per ratified protocols,
   - Functions to receive and store declarations (ACDD, COO) from ASW per ratified protocols,
   - Enquiry functions per stringent authorities / access controls,
Additional functional sets likely to be provided by the operating entity are illustrated below:

1. LNSW Help Desk function (maybe with call centre for prospective and registered traders, Government Agency users and information consumers e.g. LICC or ASEAN SW);
2. LNSW Governance support functions (e.g. performance monitoring, dashboards etc.);
3. LNSW Infrastructure functions to ensure security, robustness and access-controlled;
4. A risk management module in support of the intelligence gathering and organization and analysis and integration with risk-profiling capabilities within GAs.

### 3.2.3 Illustration of Functional and Technical Architecture

Appendix C provides two illustrations of the directions anticipated for the business level functional and technical architecture.
4 Organization

4.1 Context

In considering the organization element for a National Single Window there is a need to gravitate towards the preferred models for the Operation and Governance of the system. The roles of the Operator and Governance entities or bodies have been briefly explained previously and so the aim of this section of the document is to expand on definitions of roles and to set out the various options available.

It may also be advantageous for the reader to refer to Appendix A for a summary of the international experience for trade single windows.

4.2 Models for Operation of the LNSW

The following is a Roster of Options to describe the entity or body that could operate the LNSW. The operating entity should be:

1. Part of an existing Government Agency (GA);
2. A new specialised Government Agency or part thereof;
3. A ‘state-owned’ enterprise or ‘corporatized’ Government Agency; or
4. A private sector company or enterprise.

It is envisaged that the entity or body that will operate the LNSW should also build and implement the LNSW meeting the required Functional and Technical Specifications defined as part of an open and transparent tender and procurement process. This in turn leads to further choices for the GOL in addition to the Roster of Options for the operating entity, namely; how will the LNSW be built, implemented and operated? The options for how this will come about include:

I. Self-build plus implemented and operated by the GA;
II. Outsourced build and implementation under commercial contract with an ICT provider(s) and self-operated by the GA;
III. To ‘build, operate and transfer’ (BOT) under a period or multi-year commercial contract with an ICT provider(s) and eventual transfer to the GA after an appropriate period of knowledge and technology transfer and change management;
IV. Outsource the build, implementation and operation under a period or multi-year renewable or re-tendered commercial contract with a private sector operator/provider.

The favoured option for the method of build, implementation and operation will inevitably influence the preferred operating entity. A further factor that needs to be considered is the proposed revenue and fee model for the LNSW however the fee structure will equally be contingent on the operational model preferred.
4.2.1 Existing Government Agency

This is self-explanatory and needs little description. Of the countries listed in Appendix A highlighting the experience of national single window implementations more than half of them preferred to use an existing Government Agency as the Operator (USA, Finland, Sweden, Senegal, Philippines and Indonesia). In many cases this was in fact the relevant Customs administration or department.

Although it is eminently feasible for the LNSW operator to be an existing Government Agency (GA) or part thereof, such as the Lao PDR Customs Department (LCD) as part of the Ministry of Finance; consideration does need to be given to the existing capacity and technical know-how within the preferred Government Agency to build and implement the LNSW.

It is anticipated that even if an existing Government Agency is the preferred option for the Operator, there remains a need for involvement, participation or partnership with an international and private sector ICT provider for infusion of technology, skills and commercial capacity. As such, the existing Government Agency will still need to consider their options for system build etc. as detailed at (i) to (iv) in 4.2 above.

4.2.2 New Specialised Government Agency

Naturally this is very similar to having an existing Government Agency as the LNSW Operator. If this was to be the preferred option, the GOL would create and establish a new Government Agency specifically to be responsible for LNSW operations. Although unlikely, it is feasible that a new Government Agency may grow out of the role and activities of the Lao PDR Trade Facilitation Secretariat or the LNSW Secretariat and this new agency could in turn become responsible for the LNSW. Analysis of the experience of the countries listed in Appendix A indicates that the option of establishing a new specialised Government Agency is not widely favoured. None of the countries summarised adopted this approach.

A new Specialised Government Agency would most likely also need the involvement, participation or partnership with an international and private sector ICT provider for infusion of technology, skills and commercial capacity. This being the case, any new Government Agency would also have to opt for one of the system build options as detailed at (i) to (iv) in 4.2 above.

4.2.3 State-owned enterprise or ‘corporatized’ Government Agency

This may be viewed as similar to the option of the LNSW Operator being a private sector company or enterprise however there are differences. The inference here is that a State Owned Enterprise or ‘corporatized’ GA would be an entity that has necessary flexibilities in human resource management, finance and procurement procedures to be able to respond rapidly to exigencies. In some countries this could be an over-arching autonomous or semi-autonomous Revenue Authority but equally a state-owned enterprise could be a wholly state owned ICT provider.
A noteworthy difference between this option and the operator being an existing or new specialised Government Agency is that a state-owned enterprise is likely to be in the area of ICT and technology and so there could be a reduced need for the involvement, participation or partnership with an international ICT provider. Irrespective, if this was to be the preferred option; consideration would again have to be given to the system build options as detailed at (i) to (iv) in 4.2 above.

### 4.2.4 Private Sector Company or enterprise

The final option is for a company from the Private Sector to be the LNSW Operator. This company may be wholly privately owned or could in fact be a joint venture or Public, Private Partnership with the GOL. This option is often viewed as usually embodying as its key elements:

- risk distribution; and  
- revenue sharing between the Government and the private sector company.

Inevitably as with the other options above there will be a cost factor to be considered and the involvement of a profit sharing association leads to the charging of a fee under a defined commercial arrangement such as:

- Transaction fee / document fee based commercial; or  
- Fixed service cost based; or  
- Some combination or other arrangements.

In many instances government will enter into an agreement or align itself with an internationally recognized provider (ICT and associated services) who will bring the required infusion of technology, skills and financial and commercial capacity. The factors surrounding the build options as detailed at (i) to (iv) in 4.2.1 above remain relevant but will inevitably be viewed as of less importance as the private sector company or enterprise may well bring with it a configurable base IT system, process and procedures.

### 4.2.5 Decision-making framework for Operating Model

The GOL faces a complex decision-making process where it may be required to weigh and assess multiple criteria and non-quantifiable criteria. A structured decision making framework would facilitate and assist the GOL in reaching a final decision. The weights and values applied may well aid the final decision but these are likely to be subjective and may in turn present a risk to the success of the process.

A decision-making framework will help the GOL to consider the pros and cons, strengths and weaknesses and risks associated with any of the options. Nonetheless even without the framework it is apparent that build option (i) is essentially not viable as it is unlikely that any of the Government Agencies involved with the LNSW currently have sufficient IT technical capacity, experience or infrastructure to successfully carry out this task. Build options (ii) and (iii) may be feasible while option (iv) may also be a possibility.
The following is a list of some considerations for GOL when selecting the preferred option of the Operating model though it would be beneficial if GOL was to elaborate on this and determine their own considerations or criteria.

1. How effective will the operator model be in support of government policy and strategy;
2. How credible will the operator model be to the traders;
3. Will the chosen operator model assist to promote international competitiveness;
4. What will be impact on the likely performance and reliability of services of the operator model;
5. To what degree does the operator model guarantee the capacity to operate;
6. To what degree does the operator model facilitate access / ability to skills and technologies, ability to hire and fire, buy, acquire, retire technology;
7. How agile would the operator be under the model (i.e. ability to respond to internal or external shocks and opportunities);
8. To what degree does the operator model support access to finance required for establishing / operating / maintaining the LNSW;
9. Will the operator model chosen have the capacity to innovate;
10. What level of protection of GOL investment / asset will the operator model offer;
11. What will be the cost or ease of establishing this operator model;
12. Will the operator model strengthen border protection safeguards; or
13. To what degree is service continuity supported under the operator model?

A decision-making framework could be used to compare the differing models. Each model should be scored against a series of considerations. The example framework shown overleaf lists some of the factors to be considered in Column A and each option should be evaluated and scored on each row in Columns C to F (say between 0 and 10). Additional factors to be considered may be added. A weighting or value such as High (10), Medium (5) or Low (1) could be applied in Column B to any of the specific considerations listed in Column A as each consideration may not have equal importance, relevance or appropriateness. Example …

<table>
<thead>
<tr>
<th>Column A</th>
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<tbody>
<tr>
<td>Considerations?</td>
<td>Weighting H, M or L</td>
<td>Existing GOL Agency</td>
<td>New GOL Agency</td>
<td>State-owned enterprise or ‘corporatized’ GOL Agency</td>
<td>Private Sector Company or enterprise</td>
</tr>
<tr>
<td>1</td>
<td>How effective in supporting GOL policy and strategy?</td>
<td>H (x10)</td>
<td>10</td>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>Is it credible to the trading community?</td>
<td>H (x10)</td>
<td>8</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>Will it promote international competitiveness?</td>
<td>M (x5)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Column A</td>
<td>Column B</td>
<td>Column C</td>
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<tr>
<td>4 What will be its performance and effectiveness and reliability?</td>
<td>H (x10)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Will it have the capacity to operate?</td>
<td>M (x5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 What access and ease of access to skills and technology?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Ability to respond?</td>
<td>H (x10)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 What capacity will it have to innovate?</td>
<td>M (x5)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Cost and ease of establishing and implementation?</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 Protection of GOL investment?</td>
<td>L (x1)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>180</td>
<td>160</td>
<td>130</td>
<td>110</td>
<td></td>
</tr>
</tbody>
</table>

It was originally anticipated that the PM Group team of specialists would work closely with GOL counterparts (essentially the LNSW Secretariat team) in order to further develop, elaborate and amplify the considerations but this has not always proved to be possible. While the above table includes generic considerations made elsewhere as good practice in other countries; it is essential that these be channelled or fleshed out to meet the requirements of Lao PDR. The PM Group team of specialists remain ready as necessary to cooperate and collaborate should it be decided to further develop the above framework.

### 4.3 Models for Governance of the LNSW

In many ways the choice for the Governance entity may be considered to be simpler than that for the Operator. It is imperative that the LNSW Operator is monitored and managed so as to ensure that certain agreed standards and services are realized and that the priorities and policies of the GOL are being met and adhered to. As stated earlier, the role of the Governance entity (otherwise called the LNSW Regulator or LNSW Manager or similar) is:

- to oversee the LNSW Operator and operations;
- protect the GOL’s policy interests in LNSW; and
- to oversee the success of the LNSW in meeting GOL policy and trade facilitation objectives.

Specific functions that might be included within the role of the LNSW Regulator are:
- Board / Steering committee facilitator: i.e. facilitate regularly convened stakeholder forum for LNSW monitoring, forward planning, and conflict and problem resolution;
• Liaison office: stakeholder relationship management, coordinate stakeholder commitments, facilities and forums for stakeholder discussions / policy formulation, implementation plans, legal drafting;
• Internal and External Communications manager: i.e. LNSW Public Portal Pages, newsletters etc. to traders and GA's;
• Data ownership, especially for Trade Data Folders in LNSW [within the concept that the LNSW Operator is an Application Service Provider, a facility operator and is regulated by the LNSW Regulator];
• Ownership of definition of standards, message protocol definitions, reference table data, maintaining/updating these under its own skills sets and resources or by setting policy and directing LNSW Operator;
• Auditor: LNSW financial accounts;
• Auditor: LNSW application utilizing LNSW audit trails and message logs and metering facilities as part of internal-audit including service level monitoring and analyses and provide continual business process improvement;
• User of MIS (Management Information Systems) including Regulator-dashboards for monitoring and responding, planning performance of the system and statistics about the operation of LNSW;
• Internal administration functions: HR [personnel, payroll, internal accounting, asset administration];
• Service Level evolution manager [Service Level Agreements (SLAs) and Service Level Objectives (SLOs) can be expected to be progressively improved under steerage of the LNSW Regulator infusing the views of all stakeholders;
• Planning office: using statistical information about the throughputs and usage of LNSW in order to inform policy decisions about financing or potential expansion in terms of capacity or scope; and
• Approving body for aspects to be proposed by LNSW Operator including:
  o operational plans,
  o physical siting or location of LNSW,
  o service hours,
  o minimum skill sets / labour capacity for LNSW Operator and users,
  o SLAs or SLOs,
  o backup security, RPO (Recovery Point Objective) and RTO (Recovery Time Objective),
  o functional specification,
  o acceptance of technical build including minimum, component: quantities & sizes,
  o acceptance of functional delivery,
  o acceptance of physical and technical infrastructure,
  o acceptance of service delivery,
  o acceptance of changed and updated plans, operation, facilities.

The options for Lao NSW Governance entity include:
1. **Part of existing Government Agency**;
2. **New Specialised Government Agency** or part thereof; or
3. **State Owned Enterprise**.
The Decision no. 2114/MOF issued in Vientiane Capital on 10 August 2012 by the Minister of Finance on the appointment of the Steering Committee and Secretariat for the National Single Window has essentially made the choice on the governance model for the LNSW.

The Steering Committee is made up of officials and representatives from various Government Agencies and private sector participants and is “tasked to lead … the setting up of the NSW; ensuring that the design of the system is in line with the policy of the party and governmental regulations”. Though not exhaustive this does lead to a presumption that the governance model to be adopted is one of ‘part of existing Government Agency’. An alternative approach could be that the Steering Committee and Secretariat are enhanced and formalised into a permanent government unit, perhaps within the Ministry of Finance.

4.3.1 Existing Government Agency

As stated above, one option open would be for the NSW Steering Committee to be identified as the body responsible for governance of the LNSW as part of an existing Government Agency however, equally; the NSW Steering Committee along with the appointed Secretariat could be the governance model chosen should the Secretariat not be selected as the NSW operator. It could make eminent sense for the pre-existing NSW Steering Committee to be responsible for governance of the LNSW if the governance model of an existing Government Agency is preferred. Although not clearly defined in the summaries of other countries’ experiences listed in Appendix A, it is assumed that in the majority of cases the governance entity for a NSW is often a part of an existing Government Agency.
4.3.2 New specialised Government Agency

As was the case with the preferred LNSW Operator model, if this was to be the favoured option; the GOL would create a new Government Agency specifically responsible for the governance of LNSW.

As stated earlier, it is feasible that a new Government Agency may grow out of the role and activities of the Lao PDR Trade Facilitation Secretariat and this new agency could in turn become responsible for the LNSW.

4.3.3 State owned enterprise

Once again, the inference is that a State Owned Enterprise or ‘corporatized’ GA would be an entity that has necessary flexibilities in human resource management, finance and procurement to be able to respond rapidly to exigencies. However, this factor is less critical for the governance model than it was for the operating model.
It is possible to envisage a scenario where responsibility for governance of a NSW and the resulting monitoring and oversight of the NSW operating entity could be given to an autonomous or semi-autonomous Revenue Authority (with or without private sector representatives on the Board) where the operating entity could be one of or part of a department or agency operating as part of the Revenue Authority. However such a scenario is not pictured for Lao PDR.

4.3.4 Decision-making framework for Governance model

The favoured governance model is in many ways co-dependent on the operational model preferred. Again a structured decision making framework could facilitate and assist the GOL in reaching a final decision. The following is a list of some considerations for GOL when selecting the preferred option of the Governance model though it would be beneficial if GOL was to elaborate on this and determine their own considerations or criteria.

1. How effective will the governance model be in support of government policy and strategy;
2. How credible will the governance model be to the traders;
3. Will the governance model have the required capacity to be effective;
4. How agile (flexible) will the governance model be (i.e. ability to respond to internal or external shocks and opportunities);
5. Will the governance model chosen have the capacity to innovate;
6. What are the strengths of the model regarding the cost or ease of establishing this governance model; or
7. Will the governance model strengthen border protection safeguards?
A decision-making framework could be used to compare the differing models. Each model should be scored (say between 0 and 10) against a series of considerations. Additional factors to be considered may be added. A value of High (10), Medium (5) or Low (1) could be applied in Column B to any of the considerations listed in Column A as each consideration may not have equal importance, relevance or appropriateness. Example …

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<td>5</td>
</tr>
<tr>
<td>3 Will it have the capacity to be effective?</td>
<td>H (x10)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Ability (flexibility) to respond?</td>
<td>M (x5)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 What capacity will it have to innovate?</td>
<td>H (x10)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Cost and ease of establishing?</td>
<td>M (x5)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td></td>
<td>80</td>
<td>60</td>
<td>50</td>
</tr>
</tbody>
</table>

While the above table includes generic considerations made elsewhere as good practice in other countries; it is essential that these be channelled or fleshed out to meet the requirements of Lao PDR. The PM Group team of specialists remain ready as necessary to cooperate and collaborate should it be decided to further develop the above framework.
5 Statements of Direction

5.1 Reengineered business processes including risk management

5.1.1 Context

As stated in our Technical Proposal, one of the biggest challenges facing the development of the LNSW is the need to strengthen the level of coordination and harmonization of the various processes, documents, permissions and approvals involved in the international trade process. Importers and exporters must deal with a number of Government Ministries and Agencies generally requiring their physical presence at the various offices in sequential manner in order to obtain the required approvals and documents to clear their goods.

With the exception of the Laos Customs Department, currently almost all Lao PDR Government Ministries’ trade related permit, license and authorization processes are completely manual. Before progress can be made on implementation of the LNSW the processes and procedures applied by these agencies’ must be reengineered and modernized to support their shift to an automated Work Flow Management (WFM) environment. If implementation of the LNSW is to succeed and provide the anticipated benefits to trade facilitation; the manual issuance of licenses, permits and related authorizations cannot continue.

5.1.2 Statement of Direction

Leveraging from the activities and progress achieved by the Lao Trade Portal project, the PM Group team of specialists are preparing an ‘as-is’ statement and analysis of the processes of lodgement of the ACDD to LCD using ASYCUDAWorld and the inter-agency cooperation and interaction at the borders and point of clearance. Utilising the findings and proposals from the Roadmap for Process Simplification and Harmonization prepared by the LTP project and the initial proposals for the reengineering of LCD and border agency’ processes, the consultants will develop the Functional and Technical Architecture for the LNSW.

5.2 Frameworks for SLA and SLO

5.2.1 Context

A Service-Level Agreement (SLA) is seen as a contract between a service provider and a customer that sets out, usually in measurable terms, what services and levels the service provider will furnish. Many Internet Service Providers (ISPs) for example now provide their customers with a SLA. More recently, ICT departments in major enterprises have adopted the idea of writing a Service Level Agreements (SLA) so that the services for their
customers (users in other departments within the enterprise) can be measured, justified, and perhaps compared with those of outsourcing network providers.

The requirement in Lao PDR for Service Level Agreements (SLAs) will in this case be expected to apply to both the LNSW Operator and the participating Government Agencies and traders. Examples are that a SLA for the LNSW Operator may stipulate agreed and acceptable response times should any technical problems occur or agreed times for system operations and availability.

While SLAs for the participating Government Agencies may include commitments to respond to electronic submissions within agreed time limits, to notify the LNSW Operator of any changes or amendments to laws or internal procedures in a timely manner or to inform the Operator when a risk profile needs to be modified or enhanced if Risk Management is included as a component or function of the LNSW.

If the service to be provided is between government agencies it is unlikely that formal or contractual Agreements are applicable and in those situations it is normal for a Service Level Objective to be drawn up. This may be seen as similar in concept to a SLA but without the penalty clauses etc. for non-compliance. Agreed service levels will be critical to the efficient functioning of the LNSW and to meeting the ‘timeliness and predictability’ objective of the LNSW.

Therefore the format and content of the SLAs or SLOs will inevitably depend upon the Governance and Operational models preferred.

5.2.2 Statement of Direction

It is not yet appropriate to begin the work of developing or drafting the various SLAs and SLOs that will be required for the LNSW. Nevertheless the interim ‘blueprint’ for the LNSW to be delivered in February 2013 is to contain a more detailed statement of direction or framework for the possible SLAs. This will build upon the preferred Governance and Operational models if decided upon and the LNSW Functional and Technical Architecture.

5.3 Framework for fee and revenue model

5.3.1 Context

The PM Group team of specialists have not as yet embarked on the activities in Task Cluster 3 to define the Revenue Model and Fee Structure for the LNSW. Technical Assistance activities will commence in January next year however even during early research, analysis and preliminary development of the Functional & Technical Architecture of the LNSW the specialists have considered and reflected on the fee and revenue model.
The LNSW will undoubtedly have design, development and implementation costs along with longer-term maintenance and running expenses and so, unless the GOL is to finance and provide the LNSW as part of its overall service towards trade facilitation and so free of charge; it is likely that a fee will be charged for using the LNSW service.

The preferred options for the Governance and Operational models for the LNSW is inevitably tied into the possibilities for a Revenue Model and Fee structure.

5.3.2 Statement of Direction

Without prejudging or prejudicing the work to be carried out in early January the consultants believe that in order to determine the revenue model and fee structure it will be necessary to take account of the following:

- Volume of transactions to be processed through the LNSW (e.g. number of trade certificates, permits or licences applied for and to be issued electronically, number of import, export and transit ACDDs submitted to ASYCUDAWorld via the LNSW, number of clearances affected etc.);
- Fees and costs currently applied for purchase licences and permits;
- Processing fees currently applied for ASYCUDAWorld;
- Design, development and set up costs of LNSW (incl. software licences etc.);
- Support costs e.g. help-desk as per the Service Level Agreements defined;
- Maintenance and replacement costs; or
- Expected lifespan of LNSW system (hardware etc.).

The Revenue and Fee Structure model will take into consideration the need to share and distribute a proportion of any fee collected to all Government Agencies involved. The Functional & Technical Architecture and Specifications for the LNSW may well include an automated function or feature for this sharing process.
6  Next Steps

6.1  Preferred models

The consultants continue with work on the design and development of the proposed Functional and Technical Architecture for the LNSW based upon the Roadmap for Process Simplification and Harmonization and the findings emanating from our work primarily in Task Cluster 6 (BPR) and Task Cluster 7 (Risk Management).

The preferred options for the Governance and Operational models will also inevitably feed into the Functional and Technical Architecture and so it is critical that the GOL is proactive in reaching an early decision as to which option to adopt.

The purpose of this document was to give background, concept and details to set out the various options available for the Governance and Operational models for the LNSW and to provide the GOL with a framework to assist and facilitate the decision making process.
Appendix A: SUMMARY OF INTERNATIONAL EXPERIENCE

International Experience
This summarises the experience of national single window implementations in 10 countries.
1. United States of America
2. Malaysia
3. Finland
4. Sweden
5. Hong Kong SAR (China)
6. Singapore
7. Senegal
8. Rwanda
9. Philippines
10. Indonesia

The summary has relied upon information from miscellaneous sources, in particular UNECE documents (1) “Case Studies on Implementing a Single Window” 2005 and (2) “Single Window Implementation Framework”, 2011 and (3) reports by World Bank from the study tours by LNSW delegation during 2012. Source materials are listed at the end of this appendix.

The case studies provide an insight into what is happening with regard to a NSW in various countries.

1. United States of America

**Success stories:**
The benefits of Single Window are evident. Some examples of achievements are:

- **Hong Kong:** The electronic platform called DTTN that facilitates information flow and services integration launched in Hong Kong leads to an operational efficiency improvement in trade and transport procedures. It is estimated that the improvement brings to the industry about HK$ 1.3 billion (~US$ 167.5 million) per annum.

- **Republic of Korea:** The total savings for the business community from the use of the TradeHub in the Republic of Korea are estimated to be US$ 1.819 billion. These savings are a result of cheaper e-documents transmission cost, improved productivity from the automation of administrative work, and improved management of trade information and documents.

- **Singapore:** After introducing Single Window in Singapore, the time to process trade documents was reduced from 4 days to 15 minutes.
Germany: It is estimated that users of Dakosy, an electronic document exchange system for sea-port operations in Hamburg, may save approximately €22.5 million per annum simply by reducing labor costs associated with correcting errors during the preparation and submission of trade and transport documents.

Sweden: After the Swedish Customs Information System was launched, traders have enjoyed a benefit of a 20-50% decrease in compliance costs, especially for exports. Swedish Customs has also decreased its time spent on certain documentary controls by 50%; the Swedish Board of Agriculture has in certain cases cut its processing time by 40%; and the customers receive the subsidies in half the time it took before the system went operational.

Thailand: Partial implementation of Single Window in Thailand has eliminated redundant processes in the export of ordinary goods and reduced the number of days for export from 24 days in 2006 to 14 days in 2009 (Keretho, 2009).

Sources:
- UN/CEFACT Single Window Repository http://www.unece.org/cefact/single_window/welcome.htm

a. Background
The US has an International Trade Data System (ITDS) which was established in 1996 and reinforced legislatively in 2006 through the SAFE Port Act. ITDS is used for import and export and integrated government oversight of international trade. ITDS is owned and operated by the US Government with Customs as the lead agency. Customs and Border Protection (CBP) is redesigning its current system and developing the new Automated Commercial Environment (ACE).

Currently, 48 agencies, including CBP, are implementing ITDS. The interagency ITDS Board of Directors, chaired by the Treasury Department, coordinates interagency participation in ITDS. CBP is responsible for building and operating ITDS.

The main clients are the international trade agencies, or government agencies involved in imports and exports. In addition to the federal trade agencies, participants include the trade community consisting of exporters, carriers, importers, Customs brokers, freight forwarders, etc.
CBP has built the capability to collect data elements required by other agencies by:

- “PGA (Participating Government Agency) Message Set” to the information that can be transmitted through the Automated Broker Interface (ABI).
- “Document Image System” to accept electronic transmission of “imaged” documents, documents that currently must be submitted on paper.
- Capability to transfer data it collects to other ITDS agencies’ electronic systems using “Interoperable Web Services” based on standard protocols.

b. Operational objective

ITDS’ overarching goal is to provide a facility for integrated government oversight of overseas trade through utilization of the Single Window will provide the trade with the ACE functionality through which they can electronically submit all information to comply with CBP and other government regulations. The information would then be assessed electronically by the relevant government departments and agencies, resulting in border-related decisions which would be transmitted electronically back to the trade.

The ITDS strategy includes: enabling the development of competence in the Participating GAS (PGA); assisting the PGAs with trade outreach so that the Trade understands its Single Window obligations to the PGAs; and representing PGA interests and requirements in future ACE developments for cargo release and exports.

To achieve these goals, ITDS fosters the utilization of the PGA message set for imports through interactions with the PGAs and the trade; facilitating the inclusion of PGAs in the development of Cargo Release requirements; facilitating the PGAs in the harmonization of export data elements and documentation of export business process requirements; and managing the alignment of import and export data sets with the WCO data model and NIEM standards.
c. Funding
The ITDS is funded through appropriations as part of the development of ACE, and the new CBP system. In the period 2008 to 2012, USD64M was allocated for ITDS development. No user fees are collected. The US Government is not profit motivated. Cost benefit analysis reveals that there will be savings, not profits, through implementing ACE.

d. User Fees
No user fees are collected to finance ITDS/ACE. It is financed through appropriations.

e. Critical success factors:
  - Leadership – commitment at the highest level possible.
  - Budget – commitment to provide long-term funding for the single window.
  - Technical – must respond to the needs of the participating agencies and trade community.
  - Operational – buy-in to the process, cooperation and operational vision.

f. Greatest hurdles:
  - The factors shown above are also the greatest obstacles to overcome.
  - Continued full cooperation and support of CBP, PGAs, and the trade community.
  - Sufficient dedicated financial resources
  - Legislative and regulatory changes to transition from paper documents to electronic submissions [refer: http://www.itds.gov/xp/itds/home.xml].

2. Malaysia

a. Background
The single window in Malaysia started in 2002. The myTradeLink service was officially opened September 2012. Electronic logistics and electronic permits are running and a cross-border exchange service is in the pilot stage. Seventeen permit issuing agencies are integrated.
myTRADELINK is Malaysia’s trade facilitation portal that connects trading communities with the relevant government agencies and also other businesses involved in global trade and logistics. An initiative of the Malaysian Government led by the Ministry of Finance of Malaysia and operated by Dagang Net Technologies Sdn Bhd, it is a single platform where the trade community can exchange documents required to fulfill regulatory trade processes for import, export or transit - anytime, anywhere via the Internet.

myTRADELINK Services:

- Electronic Customs Declaration (eDeclare) online.
- Electronic Customs Duty Payment (ePayment).
- Electronic Manifest (eManifest).
- Electronic Permit (ePermit) – from PIA’s and obtain approval online.
- Electronic Preferential Certificate of Origin (ePCO) - Apply for Preferential Certificate of Origin from Ministry of International Trade and Industry (MITI) and obtain approval online.
- Electronic Permit Strategic Trade Act (ePermitSTA) – registration and permits online.

b. Operational objective

Under the current model, the single window allows the user to file an application and re-use the information for submission to other authorities.

c. Funding

The cost to Dagang Net when it revamped its operation in 2004 was $US 3.5 million.

d. User Fees

The cost of operating the electronic logistics service is borne by the government, there is a fixed price per permit for electronic permits and in relation to the cross-border exchange service there will be a fixed price per message received.
Schedule of fees includes: for EDI ~ $0.25/kilobyte; or $1.25 per document; registration (one time) ~ $125 or $65 for SME’s and monthly mailbox charges of ~$40 or $20 for SME.

e. **Critical success factors:**
   - Support from the government and policy makers - The success of Malaysia's NSW has been significantly influenced by the support of the Malaysian Government who had championed this move since the late 1990s when electronic trade/infrastructure was identified as one of the nation's top priorities.
   - Government Agencies’ involvement is critical – There has been active involvement and continuous interagency collaboration demonstrated by the 30 participating permit-issuing agencies for the implementation of ePermit.
   - Demonstrated benefits to the users.
   - Standardisation and harmonisation of information parameters among the Government Agencies, including Customs.
   - Private – Public Partnership - While the Government took a leading role in developing and implementing forward-looking and sustainable e-initiatives, the private sector was given the important role to devise and implement the paperless move to achieve a more transparent and efficient public delivery system for enhancing productivity and reducing the cost of doing business.

f. **Greatest hurdles:**
   - User's willingness to change.
   - Harmonisation of information.
   - Sighting of paper document.
   - Change in procedures/processes to cater for implementation.

3. **Finland**

a. **Background**
The first electronic system was set up in 1993-94. The new PortNet system replaced the old mainframe database in the year 2000 and this was subsequently replaced by PortNet 2 in 2007.

PortNet is operated by the Finnish Maritime Administration (FMA) and encompasses all maritime requirements, Customs processes and terminal notifications regarding containers. The user interface for the PortNet system is Internet-based. PortNet is a telematic system, where telecommunications and an information system are combined together. XML file transfer is now it is the prevalent mode of data transfer.

b. **Operational objective**
PortNet is a national maritime traffic database and accessed by a user name and password. User access is restricted to their own information however Government agencies have access to all information. Use is “mandatory” by Custom decree. The system:
▶ Creates a single window application for all maritime authority notices from ships/ship agents supporting one stop shop applications: information in IMO FAL 16 forms, custom cargo manifest, ISPS notification –pre-arrival/pre-departure, ETA/ATA, ETD/ATD, DG, nr of passengers, dangerous waste.
▶ Creates supporting services to traffic and logistic customers - Customs, Port Authorities, Ship Agents, Stevedoring Companies, Maritime Administration, Vessel traffic operators, and the Frontier guard.
▶ Support maritime safety, security, efficiency and environmental protection simultaneously – sharing data with SafeSeaNet.

c. **Funding**
The system is financed by the Maritime Administration, the Customs Office and the 21 largest ports some of which are privately owned, thus it could be said that this is a Public Private Partnership. However, with the advent of the added emphasis on security, it is thought that the system should be state-owned.

d. **User Fees**
No user charges are currently levied as it was considered inappropriate to charge for the supply of mandatory information. There have been considerations however to levy a charge on those who still provide information on paper – a paper handling charge.

e. **Critical success factors:**
   • The key factor is the cooperation between the authorities: regarding operational aims as well as financing.
   • The system that works well and reliably to so without interruption since 2000 → high customer satisfaction level.
   • Supporting legislation.
   • No user charges applied.

f. **Greatest hurdles:**
   • Oversubscription: previous version planned for 200 users but quickly reached 1000.
   • Establishing the cooperation between authorities.
   • Reluctance to share information.
   • Authority – who will take the lead?
Authorities coming under different ministries and uncertainty as to responsibility for an application covering a large area of jurisdiction.

Success breeding demand for new challenges.

4. **Sweden**

**a. Background**
Swedish Customs is the only public service at Swedish borders, performing several tasks for other public services such as the National Board of Trade and the Swedish Board of Agriculture. The use of information technology was thus a natural process to involve all such partner agencies in the design and development of IT systems supporting the overall process of foreign trade.

The first true single window was established in 1989 and was solely focussed on the export system. It was later enhanced to cover transit and later still imports. The Swedish single window now includes electronic funds transfer and functions for a number of non-import/export related agencies (in 2005, eight agencies, for example, trade registration, agricultural permits, and hunters and gun registration). In 2005 the system was handling seven million declarations, 98% electronically and 82% with automatic clearance – moving from one-stop-shop to no-stop-shop with a free flow AEO lane for the eight agencies participating. Trade statistics al now provided by Swedish Customs to Statistics Bureau.

**b. Operational objective**
The customer submits information to Swedish Customs. Dependent on whether the information is a requirement in order to perform a specific procedure, for instance a license, the information is forwarded to the relevant public service. If that is not the case, a Customs declaration is submitted electronically and selected information is extracted and forwarded to the responsible public service, for instance trade statistics to Statistics Sweden.

**c. Funding**
The single window was initially financed using dedicated funds from the Swedish Government. When new services are designed and implemented today, financing is done under existing budgets allocated to each government agency respectively. Some initiatives are on-going and consideration is being given to using PPP’s for developing new systems of greater complexity.

**d. User Fees**
The services under the Swedish Customs single window are free of charge. Some investments may be necessary for customers to be able to use the services, e.g. submitting electronic Customs declarations using EDIFACT.

With no revenue the costs are not covered per se, however, automated processes allow Swedish Customs to allocate resources differently, for instance more emphasis on enforcement or more complex matters.
e. **Critical success factors:**
   - Leadership Identification and offering efficient solutions for processes and procedures used by several customers creating the critical mass.
   - Listening to the requirements and demands from the end-users vision.

f. **Greatest hurdles:**
   - To provide a technical framework suitable for small to medium enterprises to participate in the electronic submission of information to public services.

For this purpose web technology was chosen. Major companies who submit numerous Customs declarations were offered solutions enabling them to utilise existing business systems.

## 5. Hong Kong SAR - (China)

### a. Background
A single window for the Hong Kong Special Administrative Region (HKSAR) began operations in 1997. It was operated by Tradelink Electronic Commerce Limited appointed by the HKSAR Government. This system processes Government trade documents including trade declarations, dutiable commodities permits, certificates of origin, production notifications, restrained textile export licenses and electronic manifests.

In 2004, an expanded single window initiative was introduced. This is called the Digital Trade and Transportation Network (DTTN). Tradelink were again the successful bidder to develop and operate the DTTN. The DTTN is seen to be the vehicle by which Hong Kong can become the preferred international and regional transportation and logistics hub.

### b. Operational objective
DTTN is a platform that provides interconnection among the trade, logistics and finance industries to facilitate information flow and enhance efficiency.

It is a 3-layer module: Value-Added Services, Core Messaging Infrastructure, Standards and Protocols DTTN aims to provide a low cost, single connection between its clients and with all the client’s trading partners worldwide with concomitant value add e.g. message translation, organization and storage, reduced costs, and
secure and efficient payments. It facilitates the Business Process Interconnect (BPI) requirements of industry and provides a platform to promote development of new business opportunities. The existence of a common and shared user platform with defined standards and protocols is intended to attract existing suppliers and spawn the development of new businesses such as logistics software development and value added services, which will contribute to economic development.

The DTTN provides electronic document exchange functions for reliable, secure transformation and delivery of electronic documents.

- Reliable delivery locally, in the Mainland and worldwide.
- Secure delivery with encryption & digital signatures, and non-repudiation of origin.
- Immediate alerts and notifications on any exceptions/errors.
- Any-to-any protocol, character set & document transformation. For example, a message submitted using FTP to the DTTN as an EDIFACT formatted document is translated to the DTTN XML structure and then delivered as an e-mail in the recipient’s required format such as Excel.
- Data inheritance services - participants can choose to reuse relevant business data from different business documents to generate another document to save time and minimize data re-entry error.

DTTN’s published service level:

- The DTTN is designed to operate 24 hours a day, seven days a week and the whole year round, with a maintenance window of six hours every three months, and a targeted availability in excess of 99%. In the event of a major disaster to the primary data centre, DTTN services are targeted to resume on the secondary data centre within two hours with no loss of data.
- On average, each document sent through the DTTN is targeted to be processed, validated, transformed and delivered within 10 minutes - that is, some documents will be processed in less than 10 minutes, and some will be processed in more than 10 minutes, while almost all (95%) of the documents are targeted to be processed within 30 minutes.

c. Funding

DTTN Ltd is a private entity jointly owned by Tradelink, Government of the HKSAR and industry associations.

d. User Fees

DTTN pricing can be grouped into three categories. These are (as of January 2012):

- Registration (SHK5000) and Annual Fee (SHK1000)
- Document Conversion and Exchange Service Fee (or DTTN Document Fee) chargeable to document recipient SHK5.00 (standard document) and SHK2.20 (confirmation and amendment)
- Solution Development Fee for Trade Document Service available as a standard module, buyer module, trader/shipper module, forwarder module, customised modules and document conversion module all subject to quotation.

If value added services from the application service providers are utilized, they may levy charges for such services may be levied, separate or additional to the DTTN charges.
e. **Critical success factors:**

- Neutrality - DTTN provides a level playing field for all stakeholders without undue bias towards particular players or industry sectors;
- Non-exclusivity - fair access to all industry stakeholders;
- Transparent, accountable and responsible operations - DTTN is subject to strict scrutiny. Transactions involving confidential and mission critical information will not be misused in any way;
- Minimum intervention to internal business processes - companies do business in various ways hence DTTN will only provide data interchange facilities and not require organisations to change their own business processes;
- Facilitate and respect market force - DTTN is designed to facilitate and complement businesses and will not compete with other existing private sector initiatives unless there is a need for value added services and these are not being met; and
- Easy to access and use - the design of DTTN is user-friendly, intuitive and participant centric.

g. **Greatest hurdles:**

None identified.

6. **Singapore**

a. **Background**

The first electronic processing system was introduced in Singapore in 1989 involving a few government agencies. Today the Singapore TradeNet system provides the trading community with an electronic means of submitting trade documentation to all relevant government authorities for processing through a single electronic window (SEW).

TradeNet was established with the key objectives to:

- Reduce the cost of trade documentation
- Reduce delays in turnaround time for trade documentation
- Increase authorities’ processing efficiencies with streamlined process flow
- Attract foreign direct investment as a result of operational efficiency and transparency

The world’s first nationwide electronic trade documentation system TradeNet has been recognized as a great contributor to Singapore’s pro-business environment, bringing about increases in efficiency and lowering business costs for the Singapore trading community with the innovative use of IT.

The Singapore single window, TradeNet, tries to integrate other government agencies (OGAs), including the front end business to business data exchange for permit clearance before connecting with e-customs, a backend customs declaration and clearance system.
Key features: it integrates currently all 35 government authorities involved in border clearance and provides facilities for data harmonization, sharing, clearance process and interlink with the e-Customs system. Each government authority still maintains separate systems. TradeNet allows traders or agents to submit their import and export documentation for cargo clearance permit at a single point once. Once the clearance permit is approved by controlling agencies and/or customs, the cargo can be released by border control and checkpoint authority to the importer’s warehouse. In addition, Tradenet has been extended (TradeXchange) to allow reuses of existing key common data generated by private firms from their in-house resource planning system such as electronic data interchange (EDI), Oracle, SAP and etc., extends its flexibility beyond and link to the private sector players. Refer to presentation delivered by CIO of Singapore Customs, Ms Yeo Beng Huay to the WCO Tallinn Conference June 2012. http://www.eiseverywhere.com/file_uploads/55ef1b439c232865b12f6cf00b41988_session_2_Yeo_Beng_Huay.pdf

TradeNet Version 4.1 (latest version) was just successfully implemented on January 1st, 2012 to align format and data fields with the World Customs Organization (WCO) and to incorporate revised ASEAN Harmonized Tariff Nomenclature 2012 (AHTN 2012).

Notably: Some clearance permits or licenses are still issued in form of physical hard copies. Some controlling agencies still want to see copies of hardcopy licenses or permits.


b. Operational objective

The operational model involves the shipping and trade community sending in the trade declaration via any TradeNet Front-End software. This is software provided by any approved service providers. The front-end software offers the users a variety of data submission methods, i.e. via internet / web application, client based input or host-to-host connection. Having submitted the data, the front-end system sends trade declarations via the TradeNet SEW for automated processing by the various authorities. The permit processing sub-module of the TradeNet system provides an intelligent routing agent that automatically determines the workflow required for that particular permit application and routes it to the relevant authorities for their processing. A set of rules embedded in the rules engine will then execute the processing requirements for each of the controlling agencies involved in the processing.
With the in-built intelligence that enables automated processing, 90% of the declarations do not require manual intervention and users are able to receive and print their approved cargo clearance permit within 10 minutes. There are also options for a declarant to transmit data directly via their host systems in any structure data format. Web portal services are provided for traders to process their permits, check on the transaction status and make billing enquiries. It also allows download of code tables (e.g. country, port, harmonized system codes etc). The portal also enables the authorities to process the declarations and to make enquiry.

c. **Funding**
The initial shareholder capital invested in CrimsonLogic (formerly known as Singapore Network Services) was S$24M (approx. US$14.3 million). By creating CrimsonLogic, a private company and thus an independent profit centre, the government no longer has to bear the cost of running and operating a nationwide network infrastructure and services. The beneficiaries, namely, trading companies, pay for use of the services without incurring developmental or maintenance costs.

With increasing high transactions (now: 35,000 declarations per day, and 95 percent of these were approved within 3 minutes), a flat fee of S$1.98 is currently imposed on each transaction by which 90 cent is retained in Customs for maintenance cost of the system. This flat fee was higher, approximately S$10-S$13 when transactions were lower in the past (10,000/day).

d. **User Fees**
Crimson Logic charges the declarants fees based on a pay per use model. Users pay a one-time registration / subscription fee with a monthly fee to maintain an account with the system. A usage fee is also imposed for every permit processed.

e. **Critical success factors:**
- The main success of TradeNet lies in the Government’s foresight in identifying the problems, finding a solution and championing the implementation. The cohesiveness of all the stakeholders, the systematic planning with phased implementation strategy as well as the adoption and use of appropriate technology were also pivotal to the success.
- Strong commitment of the highest level of government, dedicated committee, and working group (multi-stakeholders committees and subcommittees), participation of the private sector, multiphase implementation, education and change management, and a proper legal framework.
- The costs of building and running TradeNet are quite high (ninety-five percent of resources for investing in people with only only five percent in IT system).
The Singaporean government injected significant resources to build TradeNet and implemented an operational model that requires more resources to run it but it is justifiable because of high trade transaction.

f. Greatest hurdles:
   - The greatest obstacle during the initial phases of implementation was the need to change.
   - Managing changes in business operation for both private and public sectors is challenged especially for the transition period toward operating a new system. Educating users (government officers, traders, agents, and related parties) is quite challenging and time consuming but necessary to ensure that common inputs responded the system requirement. Coordination and cooperation across agencies is not simple and needed to be reinforced with assign specific tasks and responsibilities to deliver at each phases.

7. Senegal

a. Background
The Senegalese single window, called Orbus, operated by Gainde 2000, is a successful second generation implementation by the Ministry of Commerce that went into operation in March 2005 under the Ministry of Finance. The system is now managed by the Customs Department.

[The earlier generation, Gainde, suffered and collapsed under the weight of physical document transactions that were still required until Gainde 2000, with the support of implementing agencies and legal basis, facilitated paperless trading.]

Some stakeholders were already equipped with their own system (e.g.: Banks, insurance companies, inspection, Customs) others were not. For those who were not equipped, they were provided with ORBUS interface as their new system (hardware and software were offered to public stakeholders. For private stakeholders, only software was offered).

Those who were properly equipped were provided with an open interface that they could use by creating an electronic link for their system to proceed 100% electronically. It was also possible for them to use the interface as a stand-alone application and to manually feed data into their system. The two situations currently exist.
Senegal’s single window is interconnected to the following agencies:

- Banks
- Currency and Credit Department (DMC): in charge of controlling exchange permits
- Insurance Companies
- Plant Protection Office (DPV)
- Livestock Department (DIREL)

b. Operational objective
The ORBUS 2000 System is designed to facilitate foreign trade procedures through electronic exchanges among the different stakeholders. The system is built on a technological infrastructure and provides a set of services. The Facilitation Centre (the key point of the ORBUS System) is in charge of coordinating the ORBUS operations and the monitoring of the system’s performances.

c. Funding
During the pilot phase, the government mainly financed the project. After transferring the project to

Lessons learnt over the long implementation period, beginning with customs automation and the first generation of Orbus, including:

1. focus more on the common benefits that the new system will bring to stakeholders and traders rather than focusing on the legal implications and the business process reengineering
2. involve all stakeholders, including customs, at the initial stage and make sure that it’s a strong involvement and not just a formal presence of customs during meetings
3. link the main stakeholder gradually to mitigate implementation difficulties
4. The SW project must integrate the equipment, the interfaces and the training of all public agencies to avoid potential problem of budget that will delay their participation
5. SW project requires Vision (high level government) + Leadership (on champion Ministry or Administration such as customs) + Change Management abilities (Consultants needed but local motivated project team is critical).

Customs, the project was financed by a committee including both the private sector and government. That committee collects $US 10 per Customs declaration to maintain and improve the system.

d. User Fees
- Subscription fees (once off): $US 200
- Fixed price per transaction: $US 10
- Additional price per document: $US 2

For those who are not connected, subscription fees are not required but they have to pay additional service charges of $US 10 for each transaction.

The single window in Senegal was self-sustainable after one year of operation. The fees charged have been determined to cover all the operational cost and the research and development activities.
The central servers of ORBUS are hosted by Customs. So ORBUS and the Customs system (Trade X) share the same central infrastructure and maintenance costs are supported by the Customs administration.

e. Critical success factors
   • Strong involvement of Government.
   • Customs leadership.
   • Public and Private Partnership.
   • Creation of an autonomous entity to develop and operate the Single Window.
   • Regular information meetings with stakeholders.

f. Greatest hurdles
   • Resistance to change.
   • Power migration or reduction with IT introduction.

8. Rwanda

a. Background
Rwanda is rising from history of civil strife and genocide halving GDP in 1994 to about $1bn and per capita income of $120. It has low per capita income estimated at $320, with an agriculture based economy with low levels of manufacturing and services. Rwanda wants a high growth economy (>7% p.a. and must diversify). Its challenges include: land locked status and distance from the sea, translating into high transportation costs for the only available option (road), logistical trade barriers mainly at the regional level and inadequate human and institutional capacity.

Current Situation:
• Total number of registered users: 1,400 (including Customs employees and all other broker/importers.)
• Average monthly transactions: 11,000 (includes all declarations at all ports)
• 6 kinds of documents are required to be attached with declaration.
• 16 government agencies are likely to use SW (excluding Customs and Rwanda Revenue Authority who are owners of the system).
• Main information processing facilities to be implemented through the Electronic Single Window are the following:
  1) Electronic Receipt of Air Manifest.
  2) Automated Processing of Customs declarations and Risk Management
  3) Electronic Payment
  4) Access to declarations online and integrated release from all government agencies
  5) Electronic Notification of Release status to Warehouse Operator
  6) Online Permit Processing
  7) Integration of RADEX data and Cargo Tracking

(Source: Reforming for Global Trade: The experience of Rwanda, Presentation by Vincent Karega)
Rwanda intends to become a redistribution and ICT hub to maximize their competitiveness by

- Electronic single window which would serve as an information platform for stakeholders in cross border trade. This would entail simplified documents consistent with international best practice, integrated border procedures and computerization
- In hand with above, introduce electronic payment system
- One-stop border post and joint customs inspection within EAC and regional integration

b. Operational objective
The Single Window project will strengthen trade facilitation reforms.
A trade logistics working group in place co-chaired by Rwanda Revenue Authority (Customs) and private sector federation, overseen by Ministry of Trade and Industry (MINICOM). The working group aims to simplify and harmonize documents for international trade and align them to international best practice, within EAC and COMESA framework.

Rwanda will streamline and integrate border management with Customs taking coordinating lead over other agencies (RBS, MINAGRI – Ministry of Agriculture and Animal Resources, Public Safety). The target in a difficult environment is to reduce number of days to export to 30 and 50 for imports by end 2012. Risk management is being implemented to further streamline border procedures.
Self assessment is being introduced in addition to implementing pre-clearance and prepayment of taxes and duties.
The conceptual design is illustrated below:

At present funding and user fees are not yet defined.
9. Philippines

a. Background
The Philippine government NSW development agenda has been on the table of the government since 2005 with an Executive Order to form a National Single Window Task Force for Cargo Clearance. Under the Executive Order, a Steering Committee was created at the inter-ministerial level are members by all ministers and chaired by the President.

The resulting system provides levels of online support for the application for / and issuing of permits. The level of process support varies across agency from a low-key, lodgement service to a fuller e-government service including e-lodgement, e-payment and e-permit. In general, the Philippines did not choose to rationalize existing procedures and regulations governing import and export permit, licensing and clearances. Complexity is in no small part due to the more than 40 agencies concerned in NSW development, with 30 agencies processing applications for import and export permit, license and clearances. Phase 1 comprised connecting ten agencies involved in most trade flows under the auspices of a Technical Working Group.

There is a centralized permit facility hosted by the Bureau of Customs (BOC). Each agency has their own ICT (end-user devices, network equipment and back-up server) to link to the centralized facility. The centralized permit system does not connect to the E2M, a customs declaration and clearance system that is also operated by BOC as a front end to its Asycuda system. The E2M facility is accessed online by traders through regulated Valued Added Service Providers (VASP).

There is not sharing between agencies at this time. Subsequent phases of the implementation intend to build upon the existing facilities for information integration and also to re-engineer business processes within participating agencies.

b. Operational objective
Philippines National Single Window is intended to meet the objectives and commitments set out under ASEAN. At this stage, the implementation could be said to be a phase along the path towards a national single window, but has not yet achieved its objectives.

c. Funding
The permit facility is financed by the Government. The implementation was outsourced to a private supplier. The operation resides with Customs using contracted support of the private sector implementer.

d. User Fees
There is no fee for the use of the permit facility. [This is a similar model for the Customs E2M facility, except to the extent that the VASP’s charge traders for the access for declaration lodgement.].
e. Critical success factors:
   • Transition from the old system to the automated system in the context of the Philippines has taken a lengthy process. Coordination across agencies needs handholding and patience and requires strong political will
   • Philippines has political will to commit to the NSW as a national priority—a pilot case for ASEAN; balancing between NSW equipment and automation is a realistic motivation strategy for agency involvement
   • Phasing to move along a Roadmap for rationalization from current procedures to modernized and automated procedures

f. Greatest hurdles:
   • The involved agencies accepted well the new system of automation but are doubtful the next phase of rationalization of procedures and process;
   • Different levels of minimum IT competency among agencies cause delays in NSW implementation;
   • Training and outreach to traders in transition to accept and use the new system is time consuming and repetitive;
   • Upstream/downstream processes are only partially addressed in the Philippines NSW, with the link between these to the Customs System is critical.

10. Indonesia

a. Background
The Indonesian National Single Window (INSW) integrates government agencies (OGAs) with the e-customs system at the back-end although it is still at the early stage of development.

Key features and characteristics of the INSW may be more integrated than the TradeNet of the Singapore and the National Single Window of the Philippines. Currently, customs and four other GAs⁴ are live integrated in INSW. ISNW provides dynamic facilities covering from data exchange mediator, translator of message and data standard across GAs, workflow manager to automate clearance service system, expediting decision making process and clearance of documents, automation of data validation in line with international standard and data model; data reconciliation between INSW and all permits issued by GAs, feeding back information from various reports in the INSW to other GAs for uses, real time track and trace of customs clearance transaction, data integrity and security and final statistics report.

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⁴ Customs and Exercise Department, Trade Ministry, Food and Drug Control Agency under Health Ministry, Agricultural Quarantine Authority under Ministry of Agriculture, and Post & Telecommunication Department under the Ministry of ICT. In addition, there are fourteen other GAs are also integrated but to a lesser degree
By process, INSW links the transaction process of GAs’ clearance and e-customs system at back-end and it is electronically managed. Specifically, a trader can check commodities from tariff databases by harmonized system code (HS Code) to determine regulations and procedures governing such commodities, applying for required licenses from GAs’ systems. Traders can then prepare their customs declaration including all information from the GA’s approved licenses and submit into the INSW. INSW is then automatically checking and validating the declared licenses and reconcile the data with GA’s data. The matched and reconciled data will subsequently forward to the customs back-end system for clearance process and once customs clears it. After completing all clearance processes, customs back-end system will release Customs Clearance Notification and forward it to the trader through INSW, and by then INSW pass back the information to traders and related GAs. Cargo will then be released to traders' warehouse.

Some GAs still keep their existing automated system into a transactional system and adapt it to link and communicate with the INSW, instead of adopting a new system.

Experimental usage of the system tends to suggest that the availability of service facilities is not as complete as might be suggested.

b. Operational objective
Indonesia National Single Window is intended to meet the objectives and commitments set out under ASEAN. At this stage, INSW operation is said to be well advanced to meet its objective.

c. Funding
The system build and operation is financed by the government. The implementation was outsourced to a private supplier. The operation resides with Customs using contracted support of the private sector implementer.

d. User Fees
User charges <not known at this time>.

e. Critical success factors:
- The Indonesian team developed their system to integrate multiple agencies involving on import and export control by looking existing experiences, provisions, and practices from the international community and also mapping out the existing procedures and processes that should be streamlined and standardized.
- The project team developed a blue print of the INSW system, put in place a roadmap and implementing strategy as a guidance document before taking stocks of all business requirements, system design, system development and implementation and an overarching committee to oversee the project development. The approach facilitated the engagement of multiple stakeholders.

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5 INATRADE (Ministry of Trade), e-BPOM (FDA) e-POSTEL (DG Post & Teleco, Ministry of ICT), e-Pharm (Ministry of Health), e-Quarantine (Ministry of Agriculture), and etc.
• Need handholding and collaboration at all levels: overall project level, in each GA, technical working group and committee level for the common understanding and driving for changes.
• Identifying champion or resource persons in the OGAs who know the system well and understand how to make the changes right in response to requirement of the INSW is seen as a success story of Indonesia.
• Leadership and commitments of the committee members and working groups are critical for dealing with managing changes and challenges.

f. Greatest hurdles:
• Most OGAs appear to have very slow changes in simplifying and streamlining procedures, streamlining processes and standardization of data elements and format before integrating into INSW.
• Dealing with change of people’s mindsets both in the government sector and in the private sector who involve in the system change and development. [The information technology part of the NSW development does not matter much.]
• INSW is a government-run model; however, there are capacity and procedural constraints in the government machinery. It is a challenge to maintain this and keep good people to run the system
• Some OGAs seem to understand risk management differently but this is quite critical for not just work flows but also facilitating the authorization process of import or export permits.

Summary of International Experience
International experience shows there are a variety of approaches to the introduction of a NSW.

Each country settled upon its preferred model based on extant national parameters and priorities. No country has developed a generic system that would meet the individual needs of each country.

Case studies strongly suggests that the interpretation of “single window” – what it is and what it does – is influenced by the environment in which it operates and the needs and desires of the stakeholders. It is not clear that any particular implementation has clearly achieved the ambitions of its stakeholders. While Singapore Tradenet is quite well regarded, the idiosyncrasies of trade liberalism of Singapore need to be taken into account.

In relation to the NSW Operator, there is a mixture of government ownership, private ownership and public, private partnerships (PPP). Each country has tailored their model to their particular needs.

Lessons learnt
➤ A “single window” of any type will not happen overnight - note the Hong Kong SAR case;
➤ Implementation will require a determined effort and strong leadership - note the common theme of government leadership and commitment from all stakeholders;
➤ Hong Kong SAR lists as its first Critical Success Factor “Neutrality” that is provision of “a level playing field for all stakeholders without undue bias towards particular players or industry sectors”;
➤ In relation to funding, both Hong Kong SAR and Singapore accessed private funding to establish and run the service providing bodies.
➤ In Malaysia, one of their greatest obstacles was “a change in procedures/processes to cater for implementation”.
➤ The Critical Success Factors in Singapore are recorded as “The main success of TradeNet lies in the Government’s foresight in identifying the problems, finding a solution and championing the implementation. The cohesiveness of all the stakeholders, the systematic planning with phased implementation strategy as well as the adoption and use of appropriate technology were also pivotal to the success.”
The “Critical Success Factors” and “Greatest Obstacles” tend to illustrate the need to gain a commitment from all stakeholders, co-operation between agencies, government support and sharing of information. A change in procedures and processes is also critical.

Sources:
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### Appendix B: CANDIDATE “PERMITS” FOR LNSW

<table>
<thead>
<tr>
<th>CLP</th>
<th>Government agencies</th>
<th>Locations</th>
</tr>
</thead>
</table>
| Lodgement of Import Plan  
→ Acknowledgment receipt  
  • Road Vehicles  
  • Spare parts for road vehicles  
  • Temporary Car Imports  
Above: AHTN: 8701.20, 8701.30.20 8701.90, 8702, 8703, 8704 (Except 8704.31 (motor vehicles with 3 wheels), 8705, 8711  
• Petroleum and Gas  
Above: AHTN: 27.10 (petroleum oil), 27.11 (petroleum gas)  
LTP process:<mentioned in DX-01> | CLP agency:  
DIMEX  
Quantity unspecified – guestimate: xxx  
Cost: <unspecified>  
Border Agency: Not applicable | Vientiane  
Not applicable |
| Application for Import/Export License  
→ Import /Export License  
  • Road Vehicles  
  • Petroleum and Gas  
  • Spare parts for road vehicles  
  • Temporary Car Imports  
AHTN: as for Import Plan  
LTP process: DX-01 | CLP agency:  
DIMEX  
Quantity unspecified – guestimate: xxx  
Cost: 10,000 LAK / licence form  
Border Agency: Customs | Vientiane  
Border locations specified for LNSW |
| Application for Certificate of Origin (Form D) → COO (Form D)  
AHTN: any  
LTP process: para 6.1.2  
Note: for LNSW other COO (e.g. Form A GSP, Form S for bilateral arrangement with Vietnam) are not included within LNSW scope | CLP agency:  
DIMEX  
Quantity unspecified – guestimate: xxx  
Cost: <unspecified>  
Border Agency: Customs | Vientiane or Provincial division of MoIC  
(see list of provinces included for LNSW)  
Not applicable |
| Application for Import/Export License  
→ Import / Export License  
  • Un-milled rice, low-standard rice, premium rice, semi-milled or fully milled rice whether filtering or not (AHTN: 006) (import and export)  
  • Steel bars and transformed steel (AHTN: 72.13, .14, .15, .16) (import only)  
  • Cement, mortar, concrete (AHTN: 25.23, 38.16 ) (import only)  
LTP process: MI01 | CLP agency:  
Provincial division of MoIC  
Quantity unspecified – guestimate: xxx  
Cost: 10,000 LAK / licence form  
Border Agency: Customs | Vientiane or Provincial division of MoIC  
(see list of provinces included for LNSW)  
Border locations specified for LNSW |
<table>
<thead>
<tr>
<th>CLP</th>
<th>Government agencies</th>
<th>Locations</th>
</tr>
</thead>
</table>
| [Drugs] Form 1 (generic details) → request for Form 2  
- Drugs  
- Food supplements  
- Traditional medicines used for medicinal purposes  
AHTN: incl. 0510, 1211, 1212, 30  
LTP process: DR-01 | CLP agency: Department of Food and Drugs, Drugs Division  
Quantity: 20-30/month  
[~100 traders]  
Cost: <see below – Form 2>  
Border Agency: Not applicable | Vientiane or Provincial division of MoIC  
(see list of provinces included for LNSW)  
Not applicable |
| [Drugs] Form 2 (detailed chemical details) → Registration certificate (3 year validity)  
AHTN: as above  
LTP process: DR-01 | CLP agency: Department of Food and Drugs, Drugs Division  
Quantity: 20-30/month  
[~100 traders]  
Cost: 2,000 LAK / product listed  
Border Agency: Not applicable | Vientiane  
Not applicable |
| [Drugs] Request for Re-registration Certificate → Re-registration Certificate  
AHTN: as above  
LTP process: DR-01 | CLP agency: Department of Food and Drugs, Drugs Division  
Quantity: unspecified - assume 20-30/month  
[~100 traders]  
Cost: unspecified  
Border Agency: Not applicable | Vientiane  
Not applicable |
| Request for Letter of Approval → Letter of Approval for import of drugs (per importation for which valid Registration Certificate / Re-registration Certificate must be in hand)  
AHTN: as above  
LTP process: DR-02 | CLP agency: Department of Food and Drugs, Drugs Division  
Quantity unspecified – guestimate: xxx  
[~100 traders]  
Cost: 20,000 LAK / LoA  
Border Agency: Customs  
Department of Food and Drugs, Drugs Division | Vientiane  
Border locations specified for LNSW |
| Request for Import Permit (Food) → Import Permit (Food)  
AHTN: incl. 02, 04, 07 to 22  
(for food excluding food supplements that are controlled by Drug Division)  
LTP process: FD-01 | CLP agency: Department of Food and Drugs, Food Division  
Quantity: 120/month  
Cost: 1,000 LAK / permit form + 50,000 LAK / invoice attached  
Border Agency: Customs  
Department of Food and Drugs, Food Division | Vientiane  
Border locations specified for LNSW |
<table>
<thead>
<tr>
<th>CLP</th>
<th>Government agencies</th>
<th>Locations</th>
</tr>
</thead>
</table>
| [Food] Form 1 (generic details)  
 → request for Form 2  
 AHTN: as above  
 LTP process: DR-01 | CLP agency:  
 Department of Food and Drugs, Food Division  
 Quantity: unspecified - guestimate: xxx  
 Cost: <see below – Form 2>  
 Border Agency:  
 Not applicable | Vientiane or  
 Provincial division of  
 MoC (see list of provinces included for LNSW)  
 Not applicable |
| [Food] Form 2 (specific details)  
 → Registration certificate (3 year validity)  
 AHTN: as above  
 LTP process: DR-01 | CLP agency:  
 Department of Food and Drugs, Food Division  
 Quantity: unspecified - guestimate: xxx  
 Cost: 2,000 LAK / product listed  
 Border Agency:  
 Not applicable | Vientiane  
 Not applicable |
| [Food] Request for Re-registration Certificate  
 → Re-registration Certificate  
 AHTN: as above  
 LTP process: DR-01 | CLP agency:  
 Department of Food and Drugs, Food Division  
 Quantity: unspecified - guestimate: xxx  
 Cost: unspecified  
 Border Agency:  
 Not applicable | Vientiane  
 Not applicable |
| Application for Import / Export License for Timber, Wooden Products and Forest Products  
 → Export License for Timber, Wooden Products and Forest Products  
 AHTN: 4403.2010 (Logs, trunk, bark, transformed timber and semi-finished timber from plantations)  
 4407.29 (Logs, trunk, bark, transformed timber and semi-finished timber from plantations)  
 4409.29.00 (Logs, trunk, bark, transformed timber and semi-finished timber from plantations)  
 LTP process: FR-01 | CLP agency:  
 Forestry Division of Provincial Office of the Ministry of Agriculture and Forestry (MAF)  
 [Note: also involves authorization by the regional Department of MAF  
 Permit also serves as a domestic transport approval.]  
 Quantity: 10 / year (exports – imports are negligible)  
 Cost: 30,000 LAK / license  
 Border Agency:  
 Customs  
 MAF | Provincial division of  
 MAF (see list of provinces included for LNSW)  
 Border locations specified for LNSW |
| Application for Import Certificate for Plants (Agricultural Products)  
 → Import Certificate for Plants (Agricultural Products)  
 AHTN: 6, 12, 20, 97019010  
 LTP process: AP-01 | CLP agency:  
 Department of Agriculture of the Provincial Division of the Ministry of Agriculture and Forestry  
 Quantity unspecified – guestimate: xxx  
 Cost: unspecified  
 Border Agency:  
 Customs  
 MAF | Provincial division of  
 MAF (see list of provinces included for LNSW)  
 Border locations specified for LNSW |
<table>
<thead>
<tr>
<th><strong>CLP</strong></th>
<th><strong>Government agencies</strong></th>
<th><strong>Locations</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Application for Registration Certificate for Plants (Agricultural Products) → Registration Certificate for Plants (Agricultural Products) AHTN: as above LTP process: (implied from AP-01)</td>
<td><strong>CLP agency:</strong> Department of Agriculture, Ministry of Agriculture and Forestry Quantity unspecified – guestimate: xxx Cost: unspecified <strong>Border Agency:</strong> Not applicable</td>
<td>Vientiane Not applicable</td>
</tr>
<tr>
<td>Application for Permit for Import of Pesticides and Fertilizers → Permit for Import of Pesticides and Fertilizers AHTN: 3808 - pesticides, 31 - fertilizer LTP process: AP-02</td>
<td><strong>CLP agency:</strong> Department of Agriculture of the Provincial Division of the Ministry of Agriculture and Forestry Quantity unspecified – guestimate: xxx Cost: unspecified <strong>Border Agency:</strong> Customs MAF</td>
<td>Provincial division of MAF (see list of provinces included for LNSW) Border locations specified for LNSW</td>
</tr>
<tr>
<td>Application for Registration Certificate for Plants (Agricultural Products) → Registration Certificate for Plants (Agricultural Products) AHTN: 6, 12, 20, 97019010 LTP process: (implied from AP-02)</td>
<td><strong>CLP agency:</strong> Department of Agriculture, Ministry of Agriculture and Forestry Quantity unspecified – guestimate: xxx Cost: unspecified <strong>Border Agency:</strong> Not applicable</td>
<td>Vientiane Not applicable</td>
</tr>
<tr>
<td>Request for Technical Certificate for Import of Livestock and Fish → Technical Certificate for Import of Livestock and Fish • Livestock • Fish AHTN: 01 – livestock, 03 – fish LTP process: LF01</td>
<td><strong>CLP agency:</strong> Provincial Division of Livestock and Fisheries of the Department of Agriculture of the Ministry of Agriculture and Forestry Quantity unspecified – guestimate: xxx Cost: unspecified <strong>Border Agency:</strong> Customs MAF</td>
<td>Provincial division of MAF (see list of provinces included for LNSW) Border locations specified for LNSW</td>
</tr>
<tr>
<td>Application for Certificate of Quality for Imported Goods → Certificate of Quality for Imported Goods • Construction materials, electronic equipment and others listed in a list of controlled products AHTN: t.b.d. LTP process: SM01</td>
<td><strong>CLP agency:</strong> Provincial Division of the Department of Standards and Metrology, of the Ministry of Science and Technology (MOST) Quantity: 10 per month [Cost: unspecified <strong>Border Agency:</strong> Customs In principle (per regulations), MOST but MOST do not place officers at the borders.</td>
<td>Provincial division of MOST (see list of provinces included for LNSW) Border locations specified for LNSW</td>
</tr>
<tr>
<td>CLP</td>
<td>Government agencies</td>
<td>Locations</td>
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</tbody>
</table>
| Application for Import License for Explosive Substances  → Import License for Explosive Substances  • Explosive substances  • Hunting shotguns  
AHTN: 3601 – Propellant powders; 3602 – Prepared explosive other than propellant powders; 3603 – Safety fuses; detonating fuses; percussion or detonating caps; igniters; electric detonators; 3604 – Fireworks, signalling flares, rain rockets, fog signals and other pyrotechnic articles; 9303.20 – Other sporting, hunting or target-shooting shotguns, including combination shotgun-rifles; 9303.30 – Other sporting, hunting or target-shooting rifles  
LTP process: ND01 | CLP agency: Department of Defense Industry of the Ministry of National Defense  
Quantity: 3-4/year  
Cost: unspecified  
Border Agency: Customs | Vientiane  
Border locations specified for LNSW |
| Application for Import License for Telecommunications Equipment  → Import License for Telecommunications Equipment  • Telecommunications Equipment  
AHTN: incl. 8504, 8518, 8544, 88039010, 90011010, 903040  
LTP process: PT01 | CLP agency: Ministry of Post and Telecommunications  
Quantity: 20/month  
Cost: 100,000 LAK / license  
Border Agency: Customs | Vientiane  
Border locations specified for LNSW |
| Application for Mine Products Import/Export License  → Mine Products Import/Export License  • Minerals  • Mineral products  
AHTN: incl. 26, 28  
LTP process: EM01 | CLP agency: Ministry of Energy and Mines  
Quantity: 4-5 / year  
Cost: unspecified  
Border Agency: Customs | Vientiane  
Border locations specified for LNSW |
| Application for Import/Export License for Gold Bars  → Import Permit for Gold Bars  → Export Permit for Gold Bars  • Gold Bars used as a means of international payment  
AHTN: 718.1210 – Gold bars (only for gold bars as internationally recognized as medium of payment)  
LTP process: BL01 | CLP agency: Bank of Lao PDR  
Quantity: “low” (both import and export)  
Cost: unspecified  
Border Agency: Customs | Vientiane  
Border locations specified for LNSW |
Appendix C: COMPONENTS OF THE LNSW ARCHITECTURE

The two diagrams that follow illustrate business functional components and a high level schematic of the technical architecture that might be anticipated for LNSW.

Elaboration of the rationale, influences, definitions and details are not included here but will be elaborated in the Functional and Technical Architecture documentation.

Figure C-1:
Figure C-2: Schematic of the Technical Architecture
Appendix D: PROS AND CONS OF GOVERNANCE MODELS

LNSW Governance Model

Pros / Strengths
- Effective support of GOL policy and strategies
- Reasonably credible to private sector/traders
- Low cost and fairly easy to establish
- Is more likely to be effective
- Pre-existing legal basis

Cons / Weaknesses
- Government inflexibility: HR, finance, procurement
- Less ability to innovate

Existing Government Agency
Possible loss of resources by Government Agencies
Government inflexibility: HR, finance, procurement
Less ability to innovate
Greater costs to establish
Unknown entity so less or lack of credibility

New Specialised Government Agency

Effective support of GOL policy and strategies
Is likely to be effective

LNSW Governance Model
Annex B: Governance and Operational Models Report

LNSW Governance Model

Cons / Weaknesses
- Possible loss of resources by Government Agencies
- Greater costs to establish and start-up finance req’d
- More time needed to establish, recruit, set-up
- Unknown entity so less or lack of credibility

State Owned Enterprise

Pros / Strengths
- Improved flexibility: HR, finance, procurement
- Greater ability to innovate
- Could be effective
Annex C:
Service Specifications for LNSW
1 Management Summary

1. This document outlines the specifications of services that would be needed to implement and operate the Lao National Single Window (LNSW) corresponding to the functional and technical architecture.

2. These specifications are documented in anticipation of:
   a. a single private sector Supplier (LNSW Implementer) contracted under commercial terms for implementation of technical infrastructure, application solutions, implementation services and post-implementation services including support and maintenance;
   b. a single private sector Supplier (LNSW Operator) connected under commercial terms providing management and operations services for LNSW.

There would be advantages should the Implementer and Operator be the same organization but for flexibility the specifications are written as two separate suppliers with overlap where necessary.

3. The services sought from the LNSW Implementer are described in §3 of this document and would entail:
   a. Comprehensive project management services;
   b. System integration;
   c. Management of the team of experts for implementation tasks and services;
   d. Escrow;
   e. Configuration, data conversion and data take-on;
   f. Training;
   g. Acceptance assistance;
   h. On-site technical and operational assistance for an initial period;
   i. On-call support for an extended period of perhaps five or more years;
   j. Support and maintenance of the physical and technical infrastructure and the application solutions;
   k. Ongoing cost-plus services available for additional system design, development and implementation.

4. The services sought from the LNSW Operator are described in §4 of this document, complementing the management model described in the Functional and Technical Architecture and would entail operations management including:
   a. Long, short and medium term business planning;
   b. Contract management;
   c. Quality planning, control and assurance;
   d. Overall service administration;
   e. Security services;
   f. System and network administration;
   g. Configuration management;
   h. Business continuity;
i. Operation of physical sites and facilities, technical infrastructure and application services;
j. Help desk services;
k. Support and maintenance;
l. Service enhancement;
m. Liaison with third party suppliers including: LNSW Implementer, data communications carriers, suppliers of support and maintenance services;
n. Capacity planning and response (typically modifying or enhancing facilities or resources, or equipment quantities or capacities);
o. Liaison with LNSW Governance Entity concerning billings, revenue sharing, SLA setting, SLA monitoring, SLA consequences (for meeting, exceeding or failing), and LNSW service modification and enhancement;
p. Liaison with stakeholders to discuss experiences regarding service usage and to solicit opportunities for enhancements.
2 Introduction

This document outlines the specifications of services that would be needed to implement and operate the Lao National Single Window (LNSW) corresponding to the functional and technical architecture.

For the purposes of this specification it is assumed that:
1. LNSW would be implemented by a single private sector Supplier (LNSW Implementer) contracted under commercial terms that would be normally expected. It is inevitable that the supply will involve the private sector due to the nature of the requirements.

The Supplier may be a consortium and may engage specialist sub-contractors but would be the prime contractor responsible for a comprehensive set of implementation services.

Variations of the implementation approach, such as multiple suppliers for specific elements may be possible or preferred by the Government of Laos, with corresponding advantages and disadvantages not outlined in this document. Nevertheless, the services described in this document would need to be provided.

2. In a similar vein, support and maintenance of any equipment, ICT hardware and software would be necessary. For convenience, this documented is framed assuming that the implementation supplier also stands behind its implementation through support and maintenance services.

3. LNSW would be operated by a single private sector Supplier (LNSW Operator) connected under commercial terms. The commercial terms could be one of several one forms not described in this document (e.g. as a contractor to government for specific services, as a contractor fully responsible for service delivery, as a concessionaire, etc.).

It is recommended that the technology of LNSW and the essential need for reliable services will mean that a private sector operator in one form or another would be necessary.

There would be advantages if the LNSW Operator and LNSW Implementer were to be the same Supplier, in which case, the specifications would need some revision for language but not overall content.

This document does not describe at length the commercial terms under which the implementer or operator would be engaged.

Correspondingly the services needed are described in two sections: for implementation and for operation.
3 Implementation Services

3.1 Project Management

3.1.1 System Integration

1. The LNSW Implementer would be required to take responsibility for total and overall systems integration of the application software, technical infrastructure, physical infrastructure and services to ensure the successful implementation of the LNSW.

2. Specifically, this includes, but is not necessarily limited to, the following responsibilities:
   a. Overall project management;
   b. Coordination of activities and schedules of the project elements;
   c. Provision of all labour, facilities, equipment, tools and resources needed to meet the requirements;
   d. Ensuring proper and efficient installation, deployment and interoperation of all Supplier facilities, equipment and software offered to meet the requirements of the LNSW;
   e. Ensuring connectivity and inter-operability to Supplier facilities, equipment and system software, software tools and application software;
   f. Detailed design, specification and customization of the software package offered;
   g. Performing pre-commissioning tests to verify proper operation prior to Operational Acceptance;
   h. In collaboration with the GOL, plan, design and specify Operational Acceptance Tests;
   i. Assistance to the Purchaser in the conduct of Operational Acceptance tests;
   j. Provision of on-site experts in operational and support roles;
   k. Implementation services encompassing training of GOL personnel and stakeholders in particular those in the trading community;
   l. Provision of post-installation technical support and warranty services.

3.1.2 Project Management

1. Project Management Method:
   The LNSW Implementer shall follow a well-defined, recognised, project management method that is documented and familiar to the Implementer’s management team.

   The project management method shall cover at least:
   a. Project scoping / project charter;
   b. Project planning;
   c. Project monitoring, control and reporting within the Implementer’s project team;
   d. Project monitoring, control and reporting and meetings between the Implementer’s project team and the GOL. Minimum progress reporting requirements will be described in the Documentation requirements of the Functional and Technical Specifications;
e. The interface between project methods and system engineering methods (see below);
f. Documentation and productivity toolsets.

2. Software Engineering Method:
The Implementer shall follow a well-defined, recognised software engineering for the application software for LNSW. The method shall be familiar to the Implementer’s team and compatible with, and complementary to, the toolsets and products upon which the software is built, configured and installed. In particular, the method shall include tools and techniques complementing the configuration and customisation of workflow for the Government Agencies, preferably using graphical tools directly defining runtime execution of the workflow management engine.

The Implementer will provide training to the GOL’s personnel.
The system engineering method shall cover at least:
a. Methods applicable to the key stages:
   i. requirements analysis and specification,
   ii. design specification,
   iii. product build by customization by tables, by workflow, by software programming, etc.,
   iv. unit testing and system testing,
   v. acceptance testing.
b. Tools and techniques for each method stage;
c. Methods and tools for version control and configuration control;
d. Comprehensive documentation concerning the system engineering method;
e. Comprehensive training concerning the system engineering method.

3. Periodic Progress Meetings:
Periodic progress meetings are required to ensure mutual project goals are being achieved and to directly raise issues regarding risks and performance. At a minimum:
a. The Implementer’s project manager and the GOL’s project manager shall meet on no less than a weekly basis;
b. The Implementer’s account executive and the LNSW Steering Committee shall meet on a quarterly basis.

4. Stakeholder Communications:
The Implementer shall travel periodically, not less than monthly during the implementation stages, to provincial offices and border offices to meet on-site with GOL users and with Traders. More frequent meetings may be needed to attend to issues and crisis that might arise.

The Implementer shall lead the meetings, prepare briefing materials, prepare minutes, and record and track action items.
5. Project Orientation Events:
The Implementer shall prepare for and host project orientation events. The purpose of the events shall be to facilitate smooth collaboration between the Implementer’s team and affected stakeholder personnel, clarify expectations of those personnel sought by the Implementer, and provide an overview of the Implementer’s tools sets and nomenclature.

At the start of the project the Implementer shall provide a project orientation and project management methods orientation seminar to up for forty (40) selected members of the GOL’s project team and stakeholder representatives.

At the start of the project, the Implementer shall provide a system engineering methods orientation seminar for up to twenty (20) selected members of the GOL’s project team.

At the start of each major project phase, e.g. for physical site preparation at the data centres, technical infrastructure installation and commissioning, for each implementation of specific GA workflows and for roll-out to GA’s offices, the Implementer shall provide a methods orientation seminar for selected stakeholder personnel.

The events would be held at premises to be agreed with GOL. Any and all equipment and materials including comprehensive seminar notes (in Lao and English) would be prepared and provided by the LNSW Implementer. The events may be delivered bilingually (Lao and English) or in Lao only.

6. Detailed Project Plan:
The Implementer shall investigate specific circumstances extant at the time of project commencement and defined and agree a Detailed Project Plan.

The Detailed Project Plan would cover the entire project building upon the preliminary project plan agreed prior to the formation of the contract for the implementation project and covering at least the topics specified in accordance with the Implementer’s project management method.

The minimum content of the project plan is:
   a. Project Organization and Management Plan;
   b. Project Methods:
      i. project management / stage management,
      ii. system engineering,
      iii. configuration management and version control,
      iv. release management,
      v. product issue reporting and management,
      vi. quality management (planning, control, assurance).
   c. Quality Plan;
d. Product Descriptions – for all project products / product types – showing for each: client, attributes and review/acceptance technique;
e. Product Flow;
f. Work breakdown structures;
g. Milestones;
h. Delivery and Installation Plan;
i. Training Plan;
j. Pre-commissioning and Operational Acceptance Testing Plan;
k. Warranty Service Plan;
l. Task, Time, and Resource Schedules for each pilot –site stage;
m. Post-Warranty Service Plan;
n. Technical Support Plan;
o. Commitments register (i.e. commitments sought from the GOL and other parties);
p. Project risk assessment and mitigation approaches.

7. Detailed Stage Plans:
The Implementer shall define detailed stage plans for significant project elements such as: physical infrastructure installation, technical infrastructure installation and commissioning, and pilot stage implementations.

The detailed Stage Plans would build upon the Detailed Project Plan, and prepared immediately prior to the commencement of the Stage when planning data is more apparent and provides greater focus.

Stage Plans content would be consistent with that of the Detailed Project Plan, but provide activity definitions and schedules in greater detail and specify general methods more specifically such as for testing methods. The Stage Plans would be consistent with the Implementer’s project management methods.

For roll-out of business functions and facilities, the stage plans shall be in sufficient detail to cover the activities for training and conditioning and general preparedness of stakeholders for the particular objectives of the roll-out, in addition to the physical and technical environment for implementation.

8. Project team – Structure and Responsibilities:
The Implementer’s Team (or teams) shall comprise of experts to provide technical capabilities for the build, installation, deployment, operationalization and support of the project.

The experts would include:
a. Project manager (and others for the project management office, including adequate interpreters and translators);
b. Chief ICT Technical Engineer (and technical experts per technology sets such as server hardware and system software, infrastructure ICT, network ICT);
c. Chief Solution Architect (and solution experts for database system, workflow systems, application server, business intelligence, business analysts, including proficient bilingual business analysts, programmers, and technical authors (bilingual));
The Implementer’s Team(s) shall be responsible for delivering the fully functional application systems and physical and ICT facilities to the GOL on a turnkey basis. They shall perform tasks, including the following:

a. Collaborate with the GOL, its project team and its agents;
b. Collaborate with GOL for selection of locations for data centres and office space for LNSW;
c. Perform site preparations and works for the Central Sites – data centres and office space;
d. Install, deploy and integrate all the technical infrastructure, including data communications network carrier services and infrastructure;
e. Conduct and document pre-commissioning tests;
f. Design the software solution (main solution including the risk management solution) in detail, customize and test the solution, and implement the solution in stages;
g. Provide an initial acceptance test plan (main solution) for review of the GOL, and assist the GOL to finalise the acceptance test, build acceptance test environments and scenarios and conduct the acceptance tests and obtain acceptance;
h. Investigate and customise workflow for each CLP and declaration including interoperation for border agencies and any and all other software modules to be implemented;
i. Correspondingly investigate and document the reengineered business procedure for each affected CLP. The reengineered business processes would be based on the output of the LNSW Technical Assistance, modified as necessary for the specific steps for the Implementer’s solution;
j. Assist each government agency to plan, build and conduct acceptance testing and obtain acceptance for the workflows for each CLP;
k. Design, develop and prepare various documentation;
l. Roll-out of the main solution and specific solution to each site for each CLP, ACDD and any other LNSW process;
m. Provide implementation services:
   i. project management,
   ii. training and seminars for GOL government agencies and external stakeholders in the trade community,
   iii. on-site expertise in operational and support roles,
   iv. handover to the LNSW Operator.

n. Provide ongoing support and maintenance.

9. Escrow

LNSW software and software engineering artefacts, whether standard software or custom software, shall be held by GOL or held in escrow and kept up to date. The software and artefacts shall be accessible by the Purchaser. There shall be adequate to enable the GOL to take over maintenance of the system if and when the need arises.
3.2 Configuration, data conversion and data take-on

1. The configuration, data conversion and take-on 'duties' that would be needed to make the LNSW operational encompass the core service and each roll-out site, affected government agency, and certificate, licence and permit to be implemented.

2. The specific tasks in this regard would be the responsibility of the LNSW Implementer and are determined by its software solution. It is inevitable that the tasks shall entail:
   a. Data input for configuration tables / reference tables specific to the software solution;
   b. Data conversion / take-on for reference data such as tariffs, country codes, etc., specific definition of data tables (workflow steps, corresponding reference data, lookup fields etc.) for each certificate, licence and permit (CLP), initial access control tables for each government agency, site and CLP, and so on;
   c. Data input for the initial risk profiles for each CLP;
   d. Configuration of the initial web site information pages and panes;
   e. Configuration of an initial set of dashboards, business performance reports, activity reports, data warehouse definitions, data marts and so on;

3. There would not be a take-on or conversion of historic data.

3.3 Training

1. Each Government Agency requires training on the customized application software solutions – the main solution and each individual workflow-based solution – to enable it to effectively operate, administer, support and maintain the solution.

2. For operation of the solutions, the training should be role-based and encompass the reengineered business procedures complementary to the software functions. Each and every function and sub-function and common variations in expected usage should be addressed.

3. The personnel at government agencies to be trained encompass approximately 87 sites for the CLP / border agencies workflow solution and management personnel centrally for each government agency and for LNSW Operator and a governance entity for performance monitoring and business intelligence. There would be expected to be ten persons per site / implemented functional set.

4. Seminars would be required for traders in the LNSW registration process, use of trader workbench and in the international trading procedures under LNSW. The first of these events (two events for up to 50 participants) would be built and conducted by the Implementer in Vientiane. Thereafter the seminars would become the duty of the LNSW Operator using the facilities and materials provided by the Implementer.

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1 Conversion shall mean a computerized process for extracting records from an electronic database, manipulating that data as required and loading it the LNSW data structures.
Take-on shall mean a computerized process for capturing records from various sources, manipulating that data as required and loading it the LNSW data structures.
5. LNSW Operator personnel require training on all ICT facilities (including server equipment, infrastructure equipment, data communications equipment, system software, application service software and all other ICT facilities implemented) to enable it to effectively operate and administer the ICT facilities. Training leading to applicable certification should be provided wherever possible.

6. Highly specialized training courses for technical infrastructure products may be a venue at the supplier’s discretion within Laos or externally and to be agreed by both parties, but again should include all the necessary items including travel, accommodation and subsistence (if necessary), equipment, training materials, venue, and meals.

7. The aim of the training should be that the LNSW Operator could reasonably expect to be fully self-sufficient in the administration of the applications and facilities, initially with the support of the on-site expertise.

8. The venues for the training events would be provided by GOL. All the necessary items including travel, accommodation and subsistence (if necessary), ICT equipment and facilities, training equipment and facilities, training materials, venue, and meals would be provided by the Implementer for training conducted by the Implementer.

9. The minimum course coverage required is listed in the table that follows. Numbers of trainees, number of events, locations and so on would be defined in due course.

   a. Project Orientation:
      i. At project start-up: LNSW solution overview, LNSW project plan, Implementer’s project management method, Implementer’s system engineering method;
      ii. At each major stage: Stage plans;

   b. LNSW GA User:
      i. Access control: LNSW administration officers in each GA, LNSW Operator;
      ii. Management and Decision Support: Executives in GA, LNSW Operator, LNSW governance entity;
      iii. Risk Management: Risk management officers in each GA;
      iv. LNSW central site application tools: LNSW Operator;
      v. Each specific functional set and workflow (CLPIA Workbench, border agency workbench etc.): each GA implementation site, LNSW governance entity according to the target users for the functional sets / workflows.

   c. LNSW Trader:
      i. Trader’s Workbench: first two seminars in Vientiane for traders and LNSW Operator trainers (for subsequent seminars).

   d. LNSW Operator:
      i. LNSW Application Solution: LNSW management, support, operation, configuration management, workflow customization techniques, testing techniques;
      ii. LNSW technical infrastructure: full competency training for: Server and operating system, RDBMS, other application infrastructure software (esp. SOA and Application Server tools), Data Warehouse/ Business Intelligence tools, datacentre infrastructure appliances and software, communications equipment and software, network and system management devices and software.
10. Each course shall include, as may be appropriate: written content testing, student survey forms confirming the curriculum was satisfactorily delivered, trainer report concerning description, attendance and effectiveness of the training event.

11. Training should be scheduled in accordance with the proposed project implementation period to be provided as near as practical to the time when the students would engage their new capabilities in the use of the functions, facilities, tools, equipment etc.

12. In particular, for acceptance testing, training of the acceptance test users should be scheduled for acceptance testing immediately prior to the commencement of the corresponding acceptance test scenario preparation.

### 3.4 Acceptance Assistance

Specific planning, design, set-up, operation and interpretation of tests require both the GOL specification of requirements and the Implementer's specific knowledge of its products. Accordingly, the Implementer shall provide Acceptance Assistance services. The experts provided by the Implementer shall work with persons (from its own establishment or otherwise) appointed by the GOL (1) to define acceptance scenarios, specific tests, expected test results, and test plans, (2) to build test environments, (3) to conduct tests and compare expected results to actual results, and (4) rerun tests as necessary to, eventually, obtain acceptance.

The acceptance testings assistance services shall include:

1. Physical infrastructure at the main and back data centres;
2. Fit out of the main and backup data centres;
3. Technical infrastructure implementation at the main and backup data centres;
4. Fail-over operations from main to backup and restoration of normal services;
5. Implementation of LNSW public and government websites;
6. Customised and configured application software solution for all LNSW business function sets (and any associated non-functional requirements) including:
   a. Core solution,
   b. Risk management functional set,
   c. Trader's workbench,
   d. CLP workbench,
   e. Each CLP workflow solution,
   f. Border agency workbench,
   g. Any other functional set.
7. Infrastructure functions (and any associated non-functional requirements);
8. Documentation;
9. Training materials;
10. Implementation services.
3.5 On-site Technical and Operational Assistance

The LNSW Implementer shall assist the LNSW Operator for a specified period until the Operator is capable of operating and maintaining the services and able to call upon second line support and maintenance services that would continue to be provided by the Implementer. The on-site technical and operational assistance team shall be in place for the first six (6) months of operation. The team shall include Lao language capability either directly or through interpreters and translators.

The team shall include:

1. **Senior ICT operators on one shift with second and third shift standby.** The Senior ICT Operators shall be proficient in the operation of the specific equipment, tools, software and applications services implemented for LNSW and shall be responsible for:
   a. Advising LNSW Operator personnel regarding proper operation of the services for the customized solutions and technical infrastructure in every environment: production, acceptance testing / transition to live, and development, including:
      i. start and close of jobs and services according to operational schedules,
      ii. tidy restart of services when required,
      iii. data backup tasks according to operational schedules,
      iv. other data backup and recovery tasks in accordance with instructions by authorized support personnel,
      v. recording and reporting operational service levels.
   b. Monitoring and suggesting revisions to the Policies and Procedures for Operations
      [Policies and Procedures guidelines would be prepared as part of the Implementer’s duties.]
   c. Skills transfer to the LNSW Operator’s personnel assigned to operate the such that the LNSW Operator can be self-standing by the end of the assignment.

2. **Senior System and Network Administrator on one shift with second and third shift standby.** The Senior System and Network Administrators shall be proficient in the administration of the specific equipment, tools, software and applications services implemented for LNSW and problem diagnosis and resolution and shall be responsible for:
   a. Advising LNSW Operator personnel regarding proper administration of the technical infrastructure in every environment: production, acceptance testing / transition to live, and development, including:
      i. Monitoring services using the system and network management tool and responding to unit and component faults and warnings to replace or recover units and components to ensure SLA are met,
      ii. Liaising with operations personnel concerning operation modalities,
      iii. Installing configuration changes and software patches that may be required in a controlled manner at all times to ensure that service levels are not threatened.
   b. Monitoring and suggesting revisions to the Policies and Procedures for System and Network Administration
Annex C: Service Specifications for LNSW

[ Policies and Procedures guidelines would be prepared as part of the Implementer’s duties. ];

c. Skills transfer to the LNSW Operator’s personnel assigned to perform system and network administration with the aim of handing over responsibilities fully to the Operator personnel by the end of the assignment.

3. Senior Help Desk Specialists for three shifts. The Senior Help Desk Specialist shall be proficient in the provision of LNSW Help Desk services for the technical infrastructure and LNSW solutions specifically implemented for LNSW and first-level problem diagnosis and resolution and shall be responsible for:

a. Advising LNSW Help Desk personnel regarding proper operation of the Help Desk for end-user production services and incident recording for the environments for acceptance testing / transition to live, and development, including:
   i. Monitoring the performance of the help desk personnel and reporting help desk performance,
   ii. Assisting 2nd-level support personnel at the Help Desk and with liaison to 3rd-level support (Supplier support services),
   iii. Responding to ‘help’ calls that have not been addressed and resolved according to service level guidelines and commencing escalation procedures,
   iv. Provide skills transfer with the aim of handing over responsibilities fully to the Operator personnel by the end of the assignment,
   v. Other duties to be specified in Policies and Procedures for the Help Desk.

b. Monitoring and suggesting revisions to the Policies and Procedures for Help Desk operation;

c. Skills transfer to the LNSW Operator’s Help Desk personnel with the aim of handing over responsibilities fully to the Operator personnel by the end of the assignment.

3.6 On-call Support

On-call support with scheduled on-site visits shall be provided by the following experts:

- LNSW ICT Technical Infrastructure Architect
- LNSW Application Solution Architect
- LNSW Workflow Software Solution Expert
- LNSW Data warehouse / business intelligence Expert

It would be desirable for the experts to also have been responsible for the drafting of the guidelines for comprehensive Policies and Procedures documentation and the detailed technical infrastructure specification as part of the LNSW Implementer’s duties. Each shall be engaged for four (4) continuous weeks after six months operation and at the anniversary of operation for four years.

The experts shall

a. assist the Operator with an analysis of performance data for:
   i. technical infrastructure facilities,
   ii. LNSW software,
   iii. services provided under the LNSW Operator’s contract,
   iv. support and maintenance services provided by the LNSW Implementer,
v. other related services (if any),
vi. Service Level Agreements,


b. prepare a report for the LNSW Operator and the LNSW governance entity of recommendations and suggestions regarding improvements in each of the topics above;
c. assist the LNSW Operator and governance entity with the formulation of revised:
   i. strategic ICT plan,
   ii. capacity plans,
   iii. operational plans,
   iv. SLA,
   i. Quality plans.

3.7 Support and Maintenance

1. LNSW Customised Solutions
   a. The Implementer shall provide for the entire set of deliverables for the standard and customized software full on-site warranty from any defects and faulty workmanship for at least one year from date of operationalization.
   b. Support and maintenance, including defect correction, for all standard and customised application software, including any open source software that is offered as part of the solution, shall be provided for at least five (5) years from the date of operationalization.
   c. The Implementer would access records of the configurations specifically installed and operated for LNSW in all configurations. It shall use the configuration management tool that it shall install for LNSW.
   d. The Implementer shall advise the GOL and the LNSW Operator concerning the proper procedures for quality control and transition-to-live for any corrections, enhancements, new product stages (in pilot stages) and releases, for all standard and customized software.
   e. The LNSW Operator shall have access to on call expertise as backup to the operational and technical assistance for advice and trouble shooting for the operation and administration of the LNSW software. This would include expertise available by telephone and email as well as an ability to obtain on-site support from time to time.

2. Technical Infrastructure Support and Maintenance
   a. The Implementer shall provide for the entire set of deliverables for the technical infrastructure (including all equipment for the data centres, all server and network hardware, system software, network hardware and software, all off-the-shelf software, and software development tools) a one year full on-site warranty from any defects and faulty workmanship for at least one year from date of operationalization.
   b. Warranty for technical infrastructure will commence when all equipment has been installed, configured and deployed and an Acceptance Certificate is issued by the GOL.
   c. All System Software and Network Software must be covered by a manufacturer’s Support and Maintenance agreement that shall include: defect repair or resolution, patches and upgrades, access by internet to a knowledge base for known errors and usage advice, on-line and telephone contact with expert support personnel for advice and guidance concerning product usage.
d. All ICT hardware shall have five (5) years extended manufacturer’s on-site warranty and maintenance.

e. The warranty must include the supply of temporary or replacement ICT equipment for repairs that cannot be made on-site within the required service time (to be defined per equipment category).

f. The Implementer shall guarantee supply spare parts and consumable materials for all items purchased for a period of not less than five years.

g. The LNSW Operator shall have access to on call expertise as backup to the operational and technical assistance for advice and trouble shooting for the use and administration of the technical infrastructure. This would include expertise available by telephone and email as well as an ability to obtain on-site support from time to time.

3. Implementer Call Centre

a. The Implementer shall establish an Implementer Call Centre as a single point of contact for the LNSW Operator (usually from the Operator’s LNSW Help Desk) for any matter relating to support and maintenance of LNSW application software and technical infrastructure supplied under the Contract.

b. The Implementer Call Centre shall be contactable by the LNSW Operator’s personnel by telephone and email.

c. The Implementer Call Centre shall liaise with the LNSW Operator’s Help Desk to resolve any and all matters raised for support and maintenance following procedures to be agreed between the LNSW Implementer and the LNSW Operator.

d. The Implementer call Centre must procedures must include:
   i. recording all contacts for Support and Maintenance,
   ii. assigning the contact to a resolution resource,
   iii. liaising with the LNSW Operator for diagnoses,
   iv. tracking the resolution of the calls, time-stamping key events during the resolution,
   v. escalation procedures for contacts that are not resolved to the LNSW Operator’s satisfaction within time frames to be agreed per severity of issue,
   vi. reporting procedures to compare actual performance to required performance targets for responses and resolutions, with the reports provided quarterly to the LNSW Operator.

4. Option for additional system design, development and implementation

a. During the operation of the Warranty and the Support and Maintenance, new and changed requirements for the application software may arise.

b. The Implementer shall commit to negotiate the incorporation of new and changed requirements in good faith with the LNSW Operator should the need arise.

c. In order to facilitate negotiation, the charge rates shall be quoted for various skills sets, e.g.:
   i. Project manager,
   ii. Analyst / designer,
   iii. Product consultant,
   iv. Workflow engineer,
   v. Software engineer,
   vi. Trainer.
4 Operation Services

4.1 Management

Refer to the LNSW Functional and Technical Architecture §10.2 for the management model for LNSW and §12 for performance parameters that shall frame the service level agreements that set the minimum expectations of service delivery by the LNSW Operator.

The roles and scope of management functions include:
1. Long, short and medium term business planning;
2. Contract management;
3. Quality planning, control and assurance;
4. Overall service administration;
5. Security services;
6. System and network administration;
7. Configuration management;
8. Business continuity;
9. Operation of physical sites and facilities, technical infrastructure and application services;
10. Help desk services;
11. Support and maintenance;
12. Service enhancement;
13. Liaison with third party suppliers including: LNSW Implementer, data communications carriers, suppliers of support and maintenance services;
14. Capacity planning and response (typically modifying or enhancing facilities or resources, or equipment quantities or capacities);
15. Liaison with LNSW Governance Entity concerning billings, revenue sharing, SLA setting, SLA monitoring, SLA consequences (for meeting, exceeding or failing), and LNSW service modification and enhancement;
16. Liaison with stakeholders to discuss experiences regarding service usage and to solicit opportunities for enhancements.

4.2 Operations

The LNSW Operator shall manage staff and operate the technical infrastructure and application software for LNSW. The application software for the core solution and for each GA solution shall be resident on the LNSW data centre services.
[Note: each Government Agency would operate the end-user and data terminating equipment installed through LNSW project.]

1. The LNSW Operator shall be responsible for proper operation of the services for the customized solutions and technical infrastructure in every environment: production, acceptance testing / transition to live, and development, including:
   a. Start and close of jobs and services according to operational schedules;
   b. Tidy restart of services when required;
   c. Data backup tasks according to operational schedules;
   d. Other data backup and recovery tasks in accordance with instructions by authorized support personnel;
   e. Recording and reporting operational service levels;
   f. Documenting, monitoring and suggesting revisions to the Policies and Procedures for Operations
      [Policies and Procedures guidelines would be prepared as part of the Implementer’s duties.]

2. The LNSW Operator shall be responsible for proper administration of the technical infrastructure in every environment: production, acceptance testing / transition to live, and development, including:
   a. Monitoring services using the system and network management tool and responding to unit and component faults and warnings to replace or recover units and components to ensure SLA are met;
   b. Liaising with operations personnel concerning operation modalities;
   c. Installing configuration changes and software patches that may be required in a controlled manner at all times to ensure that service levels are not threatened;
   d. Documenting, monitoring and suggesting revisions to the Policies and Procedures for System and Network Administration
      [Policies and Procedures guidelines would be prepared as part of the Implementer’s duties.]

### 4.3 LNSW Support and Enhancement

The LNSW Operator shall offer Support and Enhancement services to LNSW stakeholders for the implementation of new or modified functions and facilities. The LNSW Operator and LNSW Governance Entity would negotiate in good faith the costs and charges and implementation approach for any such new and modified functions and facilities.

### 4.4 Help Desk

The LNSW Operator shall manage staff and operate the LNSW Help Desk. The Operator shall ensure proper operation of the Help Desk for end-user production services and incident recording for the environments for acceptance testing / transition to live, and development, including:

1. Monitoring Help Desk contact requests and issue reports made via the LNSW public and government agency web sites, responding with an initial response within agreed response times, recording and tracking the contact / issue reports;
2. Providing call centre responsibilities for telephone, SMS, etc. contact requests and issue reports, responding with an initial response, recording and tracking the contact / issue reports;
3. Monitoring the performance of the help desk personnel and reporting help desk performance;
4. Providing 2nd-level support personnel to seek to respond to contacts and resolve issues;
5. Liaising with Supplier support services;
6. Tracking and responding to ‘help’ calls that have not been addressed and resolved according to service level guidelines and commencing escalation procedures;
7. Other duties to be specified in Policies and Procedures for the Help Desk;
8. Monitoring and revising the Policies and Procedures for Help Desk operation.

4.5 Stakeholder Assistance

The LNSW Operator shall provide stakeholder assistance services:
1. monthly news bulletins in national public press and in key trade associations bulletins (including brokers, freight forwarders, particular industry groups, chambers of commerce, other to be notified by LNSW Governance Entity) regarding new procedures, progress towards them, schedule, project approach and especially: client interface, and a notices concerning LNSW Help Desk;
2. seminars for traders: 3 months prior to operationalization regarding revised LNSW procedures, progress towards them, schedule, project approach and LNSW Help Desk;
3. seminars for government agencies: 3 months prior to operationalization regarding revised LNSW procedures, progress towards them, schedule, project approach and LNSW Help Desk;
4. prepare and publish discussion papers concerning e-business for traders and brokers: summary, introduction, services that could be provided business model, high level architecture, pros and cons, next steps.
Annex D:

Service Level Frameworks and Models for LNSW
1 Management Summary

1. This document has been prepared by the team commissioned by World Bank for technical assistance (TA) to prepare a blueprint for the definition and establishment for the Lao National Single Window (LNSW).

2. This document describes:
   a. a General Framework for Service Level Agreements (SLA/GF) in the context of LNSW;
   b. Model Agreements based on the SLA/GF;
   c. a Framework for Monitoring SLAs based on the SLA/GF.

3. Some definitions:
   a. Service Level Agreement (SLA): An agreement between the provider of a service and its users which quantifies the minimum quality of service which meets business needs;
   b. Service Level Objective (SLO): a ‘charter’ derived from Government initiatives, legal requirements or good professional practice to specify the standards that service providers commit to meet and provide service users with an indication of the level of service they are entitled to expect.

Further details are provided at §3.1.1

4. Advantages of SLA/SLO are described at §3.1.2 and include:
   a. clarifying services offered by the service provider and defining expectations for service users;
   b. performance and monitoring benchmarks and measurement methods;
   c. an opportunity for service providers (for LNSW: LNSW Operator and Government Agencies) to improve performance;
   d. an opportunity for service users (traders and Government Agencies) to review priorities;
   e. better understanding between the parties.

Refer to §3.1.2 for further discussion of advantages.

5. Guidelines for setting service levels, the format of SLA and SLO and ongoing administration of these, citing international good practice, are described in §3.1.3 to §3.1.6. Some key messages:
   a. keeping the definitions as simple as the circumstances allow and endeavouring to have statements that are readily understood;
   b. avoiding unnecessary bureaucracy and unwanted behaviours such as ‘chasing the numbers’ rather than providing the service;
   c. to the extent practical, the elements (including quantities, qualities, timeliness and costs) should be measurable by objective methods;
   d. a rule of thumb is to under-promise and over-deliver;
   e. expect evolution of the service level definitions striving always for improved targeted services and lower cost.

6. A summary of international guidance for SLA, citing sources, is provided at §3.2 in general and for ASEAN. SLA’s are strongly recommended for several reasons as summarised above and in the main body.
7. Specific context for LNSW is summarised at §4 with the main elements being:
   a. Concessionaire agreement offered by Ministry of Finance of the Government of the Lao PDR and accepted by a joint venture with a Bureau Veritas;
   b. Outcomes of the technical assistance provided by World Bank and PM Group, esp. for operational and governance models, functional and technical architecture and service specifications, summarising the services and functions recommended to be provided and candidate Government Agencies, candidate regulatory documents and candidate offices for inclusion within LNSW.

8. Recommendations are listed at §5. In summary these are that there be:
   a. A Service Level Agreement between LNSW Operator and LNSW Governance Entity with the latter representing the government, government agencies participating in LNSW, traders and general public. This would be part of the concessionaire agreement.
      A detailed Model Agreement specifically for LNSW is included at Appendix A.
   b. Service Level Agreement between LNSW Operator and Trader that would be in a standard form and part of each Trader’s registration process.
      A detailed Model Agreement specifically for LNSW is included at Appendix B.
   c. Statements of Service Level Objective by each LNSW-Government Agency.
      A short Model Statement of Service Level Objectives suitable for government agencies participating in LNSW is included at Appendix C.

Several additional support and maintenance and service agreements between the LNSW Operator and various technology and other suppliers (ICT hardware and software, power supply etc.) are noted at §0. Such services not within the scope of this report, however, are within the oversight of the GOL so that acceptable LNSW services can be ensured.

9. Monitoring framework SLA and SLO have little purpose without measurement and analyses of the service levels. §6 sets out a framework that could be used to establish the monitoring procedures for SLA / SLO. The model agreements included in the appendices of this report give a context for the monitoring framework. The framework provided at §6 is therefore a worked example that encompasses the underlying general principles.

   The monitoring framework is defined for each of the three recommended forms of SLA / SLO in terms of (1) responsible party, (2) timing, and (3) method for data collection and methods for analysis and reporting.
2 Introduction

This document has been prepared by the team commissioned by World Bank to provide Technical Assistance (TA) and prepare a blueprint for the definition and establishment for the Lao National Single Window.

Service Level Agreements are only of true value when they can be measured and monitored … to ensure that service levels are kept and bottle necks identified.

This document describes
a. a General Framework for Service Level Agreements (SLA/GF) in the context of LNSW;
b. Model Agreements;
c. a Framework for Monitoring SLAs.
3 Guidance

3.1 Service Level Agreements and Service Level Objectives

3.1.1 Some definitions

<table>
<thead>
<tr>
<th>Service Level Agreement:</th>
<th>An agreement between the provider of a service and its users which quantifies the minimum quality of service which meets business needs. [7] A service level agreement is both a process and a document. The service level agreement process involves the customer and service provider agreeing on suitable targets for particular services. This process is also treated as a commercial transaction, and the services are paid for by the customer. The achievement of these targets is measured and any discrepancies are discussed and resolved openly.[8]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Guarantee:</td>
<td>A service guarantee promises the customer a certain service quality and backs up this promise with a payout. [7] Service Guarantees are a common private sector marketing tool, e.g. ‘we stand behind the product we sell.’</td>
</tr>
<tr>
<td>Service Charter / Service Level Objective ¹:</td>
<td>Charters are often derived from Government initiatives, legal requirements or good professional practice, but, unlike service guarantees, they do not promise a payout if the promised level of service is not achieved. Charters do, however, specify the standards that service providers are expected to meet and provide customers with an indication of the level of service they are entitled to expect. [7]</td>
</tr>
</tbody>
</table>

For LNSW, as described in §5, SLA has purpose regarding, (1) the relationship between the LNSW Operator and the GOL and (2) between the trader and either the LNSW Operator or the LNSW Governance Entity, depending upon the commercial arrangement eventually selected by GOL.

SLAs for LNSW are appropriate in both cases as an instrument of clarity and because there are commercial implications: profits for operation in the first instance and fee for service in the second.

For LNSW, SLO has purpose, quite closely matching the description above, as a declaration by the LNSW Government Agencies (those providing services through LNSW) to the public.

¹ In some literature the term ‘service level objective’ is used in a different sense: to mean aspirational targets as part of the process of negotiating an SLA. For this document, SLO shall have the meaning resembling service charter.
The definition of ‘service guarantee’ is included in the definitions for completeness, and because such instruments are common in private sector marketing. However, it is ‘jingoistic’ and inappropriate for LNSW. Formalisation of the relationships is required and hence SLA and SLO would be the appropriate instruments. For Government Agencies, an SLO would provide a positive statement, enhance transparency, and provide a start-point for a service-orientated organisational development within the GA and a platform and focus for modernisation and service evolution.

3.1.2 Advantages of SLA/SLO

As cited above, SLA / SLO can be viewed as a process and a document. The advantages of the process are that:

1. It gives the service provider (e.g. LNSW Operator and LNSW-GA’s) an opportunity to improve performance;
2. It gives the service users (e.g. Traders and LNSW-GA’s) an opportunity to review priorities.

An SLA document is like a contract. It formalises an agreement between the parties by setting out a minimum level of service. [8]

An SLO on the other hand provides value to both users (in this case: Traders) through clarity and transparency and to the service provider (each LNSW-GA) by focussing endeavours to provide and improve public service. The recommendations documented in §5 anticipate: SLA between LNSW Operator and Trader (incorporating an End-User Usage Agreement), SLA between LNSW Operator and LNSW Governance Entity (also incorporating an End-User Usage Agreement) representing the government, government agencies participating in LNSW, traders and general public, and SLO by each LNSW-GA.

Other advantages in the context of LNSW include:

1. Traders, LNSW Operator, and each LNSW GA are clearly identified;
2. Attention is focused on the actual and specific services of LNSW, as distinct from what it is believed they do;
3. Traders are more aware of the services they receive through LNSW and what additional services and levels of service a provider can offer;
4. The real needs and levels of service required by the Traders can be clarified;
5. Stakeholder engagement can frame modification and evolution of needs and service levels, possibly at reduced cost;
6. Services and service levels that add value can be distinguished from those that do not;
7. Monitoring of services and service levels is facilitated;
8. Automated monitoring and Trader reporting of failure to meet service levels enables LNSW Operator and each LNSW GA to eliminate the causes and effect improvements;
9. Understanding and trust can be fostered amongst Traders, LNSW Operator and LNSW GA’s.

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2 The list is an interpretation from [7] in the context of LNSW.
3.1.3 Some cautions

By recognising potential pitfalls, the advantages of the SLA process formulation and execution can be realised without undue disadvantage. Some pitfalls include:

1. The drafting of SLAs, installation of measurement procedures and negotiation of SLAs can be costly. Therefore an SLA is better if simple to understand and easy to measure;
2. There is a potential increase in bureaucracy and paperwork;
3. There is potential for ‘chasing the numbers’, rather than providing services to traders. This is true of any key performance indicators (KPIs). It is therefore important to monitor indicators and measures within SLAs, and adjust those that lead to aberrant effect.

3.1.4 Setting service levels

A service level is an agreed measure which might include the following elements to describe the performance of a service delivery [8]:

1. Quantity
2. Quality
3. timeliness
4. cost

Principles to be observed when agreeing SLA’s include that service levels should be:

1. Reasonable
   Unnecessarily high service levels usually entail higher charges
2. Pertinent
   Focus the attention of the service provider (e.g. the LNSW Operator) on those aspects of service that are of value to service user (e.g. Traders) and not merely those being monitored
3. Prioritised by the users (Traders and LNSW-GA users) e.g. a three-point scale might include criteria that are:
   (1) ‘most important’; (2) ‘important’; (3) ‘less important’
4. Easily monitored
   Avoiding specifications that are subjective, intangible or incapable of quantification; e.g., statements such as ‘the provider will furnish a high level of service’ are meaningless.
5. Readily understood
   By all parties (e.g. LNSW Operator, LNSW-GA officers, and Traders)

Before prescribing service levels, the services to be provided need to be defined and current performance assessed and ‘baselined’. In the case of the services related to the issuing of certificates, licence and permits (CLP), current performance (e.g. as measured by responsiveness and turn-around-time) can be estimated by the respective GA. In the case of the LNSW operation, general good practice for a comparable on-line service could be used as the basis. Improvements in service delivery can be measured against this baseline. [8]

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3 Accordingly, the FandTA [6] provides for automated metering and reporting.
4 ‘timeliness’ could be implemented in terms of availability, responsiveness, and turn-around time
5 In theory: (a) by the authorised representatives of LNSW-GA users and of the Traders for the operational services of the LNSW, and (b) by the Traders concerning the services related to permit-issuing performed by each LNSW-GA.
In practice this is more likely to be: for (a), by the LNSW Governance entity representing the interests of the LNSW clients, in consultation with the client community; and for (b), proposed by each LNSW-GA, preferably also in consultation with a broad range of the Traders that interact with them.
For the LNSW Operator, and in particular for each LNSW-GA, the rule of thumb is to under-promise and over-deliver [8]. This is in the context of evolving service levels and does not mean that inferior service should be acceptable but rather that in the first instance, while this formalised service orientated culture is being introduced, the service levels should be achievable without undue duress for the service provider. As the service level culture and procedures become settled and the parties become familiar the services being provided, the service levels should evolve towards better levels and recognised ‘good practice’.

3.1.5 Format of SLA and SLO

The most useful advice relating to the format of SLAs and SLOs is summarised by the acronym KISS (Keep It Short and Simple) [7].

This is particularly true for each LNSW-GA which is actually making a unilateral declaration as an integral part of its desire for modernization, improved public service, internal efficiency and macro-economic efficiency. In the case of the LNSW Operator, on the other hand, the services are offered under commercial arrangements and formality is appropriate.

3.1.5.1 Format of SLA

Extending the foregoing definitions, a Service Level Agreement quantifies minimum levels and quality of service to meet users’ business needs within acceptable costs and which usually entail commercial terms. An SLA is agreed between a provider of a service and its users, and may be specific to a particular user or subset of users. It is a formalised document held jointly by the service provider and the service user.

The SLA should be as concise and plain speaking as the circumstances allow and would be expected to consist of the following\(^6\):

1. Identification of parties: service level provider and service level user;
2. Designated representatives and communication between the parties;
3. Commencement date of SLA;
4. Context and purpose of the SLA;
5. Roles and Responsibilities including services, functions and features offered by the service provider and also terms under which they are available to a service user (e.g. through a usage agreement);
6. Service level specifications;
7. Fees and Credits;
8. Monitoring and reporting – requirements and rights and responsibilities for monitoring the SLA;
9. Modification of the SLA – the procedures under which the agreement may be amended;
10. Termination conditions and methods;
11. General provisions – boilerplate clauses;

\(^6\) The format examples provided here reflect a framework for the SLA between LNSW OPERATOR and GoL. It is anticipated under the circumstances that the essence of the SLA described here would be merged with the contract being prepared for the design, build, supply, installation, support, maintenance and operation of LNSW in a concessionaire agreement. As described later in this document, a second form of SLA is recommended, between LNSW OPERATOR and each registered, fee-paying TRADER. Each registered, fee-paying TRADER would enter agreement with LNSW OPERATOR as part of the registration process.
A Model framework for SLA’s in the context of LNSW is included at Appendix A and Appendix B with language suggested for each clause.

### 3.1.5.2 Format of SLO

A Statement of Service Level Objectives (or a Service Charter) is an organization's guarantee of good customer service. It is usually captured in a leaflet or booklet but may also be communicated in different ways, on the internet, on panels in a reception area and so on.

A SLO would usually be concise and consist of:

1. identification of the SLO and the service provider (in this case an LNSW-GA) and a high level statement of intent concerning the SLO;
2. a guide to services offered;
   This would include a list of services covered by the SLO. For LNSW, the list should be constructed from the Trader’s perspective and address priority areas.
3. a statement of the rights and responsibilities of Traders and the public;
4. the standards of service you aim to achieve in terms of:
   a. Quality Standards of quality vary according to your circumstances. For LNSW GA, the quality of service might relate to the accuracy of the information provided.
   b. Timeliness This would be broken down according to the broad categories of services offered. For example, target for maximum wait for a response to a Trader’s request, or to receive a certificate, licence or permit.
   c. Reliability Timelines should always be calculated from the point of view of the Trader – e.g. from the time a CLP request has been submitted by the Trader up to the time that the response is available to the Trader.
   d. Accessibility Where timeliness relates to target maxima, reliability relates to the majority of service requests, e.g. ‘In 80% of cases, xyz-service will be finalised within the target service window’.
   e. Measurement and reporting Hours of operation; the number and spread of service points. The means by which the SLO is monitored.

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7 With acknowledgment to [12].

8 It is anticipated that the LNSW public web-site would have links to a web-page per LNSW-GA, with the LNSW-GA responsible for content management, on which the Statement of Service Level Objectives would be published.
5. Additional common themes in SLO include:
   a. Commitment to courtesy,
   b. a formal complaints procedure,
   c. Administration procedures.

A Model framework and language for each clause of a Statement of Service Level Objectives for each government agency participating in LNSW is included at Appendix C.

3.1.6 Administering SLA and SLO

SLA and SLO are not intended as one-time interventions to set and forget. They are management instruments for continuous improvement in service delivery.

Administrators of SLA and SLO require at least the following aspects:
1. senior executive involvement with a serious intent for improving service delivery to the organization's clients;
2. stakeholder engagement to align service level parameters to clients' priorities and business needs;
3. frequent performance monitoring, preferably without superfluity to the standard operation of the agency;
4. periodic (monthly) comparison of performance to service level targets – the SLA and SLO only make sense if it is monitored and used as a management tool to recognize adjustments needed in procedures or resource disposition so that the organization responds to divergence from its SLA/SLO targets;
5. suggestion, feedback and complaints handling;
6. periodic (annual) adjustment of service level targets, incremental adjustment towards improved service levels;
7. an SLA / SLO administration unit to assist the senior executive with administration and which may be full time or convened from time-to-time such as on exception, monthly and annually. In the case of LNSW, this would entail.
   a. an SLO administration unit within each GA participating in LNSW;
   b. an SLA administration unit in the LNSW Regulator (or Governance Entity).

3.2 Guidance: SLA for National Single Windows

3.2.1 Broad international guidance

Support and recommendations for SLA for Single Window are documented in many publications by reputable international organizations, e.g. UN/ESCAP [1], APEC and WCO [2]. In Border Management Modernization [3] publication, the World Bank authors make key recommendations concerning service level agreements:
Annex D: Service Level Frameworks and Models for LNSW

1. **Clarity about business outcomes (p118)**
   
   Business outcomes are not always well described before or during ICT program design, which can result in poor service delivery. Service level agreements with key dependent partners and stakeholders should be defined and agreed on as early as possible in ICT program planning. It is important to align the envisioned business outcomes with overall outcomes in the agency’s vision and strategy.

2. **Service level agreements for the national single window (p131)**

   Critical to efficient functioning are agreed service levels. To meet the timeliness and predictability objective, a generalized framework of service levels and overall service level for the national single window need to be prepared in consultation with the window operator, participating government agencies, and other stakeholders (including in the private sector). The service level agreements developed should take into account international practices in other national single windows as well as any other interagency service level agreements for similar activities.

   Service level agreements have most value when they can be monitored. A monitoring framework and methodology, to ensure that service levels are kept and bottlenecks identified, should be simultaneously developed and implemented. Monitoring and enforcement of service level agreements are critical to national single window governance.

3. **Service level agreement reporting (p139)**

   Reports may be prepared for any meters and at any level within the workflow, with selection by data and time range, workflow subset or element ranges, trader, government agency, government agency role, government agency user, and other ranges to be defined.

   Such reports are to be available to authorized users at the national single window operator, national single window oversight body, government agencies (restricted to meters pertinent to them), and traders (restricted to workflows initiated by them).

4. **Interagency arrangements (p212)**

   A government’s reasons for assigning these tasks to customs may include resource constraints and a desire to further national interests (for example, by promoting tourism). Underpinning the arrangements may be extensive service level agreements linked to agreements between ministers and departmental chief executives—the departments agree to reach certain service levels, and government in turn agrees to provide extra resources. This approach offers a best practice model for interagency arrangements.

### 3.2.2 SLA for National Single Windows – within ASEAN

At the time of writing no published Service Level Agreements, publically available, for National Single Windows was found. However, through the direct experience of the Consultants two examples are briefly described.

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9 Recommendations (1) and (2) essentially reinforce the terms of reference for the Consultants’ technical assistance for preparation of LNSW.

10 Refer also to the Functional and Technical Architecture (FandTA) for the Technical Assistance prepared by the Consultants. The FandTA very directly and purposely addresses these requirements as architectural imperatives.

11 Also known as ‘Agency services’ offered or used - e.g. some customs agencies already have a longstanding responsibility to conduct primary health and immigration checks on persons entering the country, with support from secondary referral desks staffed by the agencies mainly responsible for those areas.

12 While the Consultants indicated opportunities to be studied for ‘agency services’ and would recommend formalisation of any such arrangement, there are none yet being pursued by GOL in the context of LNSW.
1. A draft of an inter-governmental agreement prepared in 2010 during the first phase of the implementation of the Philippines National Single Window which was limited to a narrow range of on-line facilities for specified permit issuing agencies, described below as the PIA Service. [The Government of the Republic of the Philippines has awarded very recently the second phase of its NSW implementation that may expand the functions and services beyond stand-alone PIA interfaces towards a true National Single Window.]

The draft agreement between the Food & Drug Administration of the Philippines (FDA-PH) and the National Implementing Task Force (otherwise in the context of LNSW, the Operating Entity), sets out the following:

a. Objectives – describes the main aims of the agreement: to facilitate the implementation of the PIA Service within FDA-PH; to provide detailed instructions to importers and concerned personnel of FDA-PH; to effect implementation of electronic filing through the PIA Service as the sole method of application; and, to affect the coexistence of FDA's current application process with the PIA Service's status tracking.

b. Scope – sets out general details about availability and location: the PIA Service will be available at FDA-PH National Office only; the components for importer registration, electronic lodgement, receipt and process tracking of application in PIA Service, and, parallel authorization tracking of the application.

c. General Provisions – gives information about background to the Philippine NSW and the PIA Service, the requirement and how to register with PIA Service and a glossary of terms to assist the applicants using PIA Service.

d. Operational Provisions – describes the registration, lodgement, receipt and processing, payment and authorization services of the PIA Service in a step-by-step way for all users.

Administrative Provision – provides specific details of the responsibilities of the Operating Entity such as: day to day technical, administrative and logistical support services, process for adjustments and changes to PIA Service, communication methods, and central operations.

e. Repealing Clause – requirement to modify or repeal previous legal instruments in this matter.

f. Duration – states that the service agreement comes into effect when PIA Service is launched. [Absent is an end date for the service. It may be the implementer considers the service to have been in perpetuity, however, it would have been more appropriate to indicate 'until the end of phase 1'.]

Comments:
The content above indicate that this is not an SLA (or an SLO) in the context interpreted in this document. It provides a definition of services and a usage guide. This is valuable for clarity. To further elaborate the description above and become a Service Level Agreement would require additional information such as commitments (to traders and to the government agency) regarding availability, reliability, response time targets, and if appropriate rewards, incentives and penalties for the operator to meet those targets.

At a second level, and as indicated later in this document, the underlying service offered by (in fact, required by) a government department, requires a second instrument (a Service Charter or a Statement
of Service Level Objectives) for the benefit of the traders that would also list out the agency’s services and commitments (to objectives), such as turn-around times at various steps of the permit issuing process.

2. Frameworks and scene-setting documentation for Indonesia National Single Window.
As part of the preparation phase for Indonesia National Single Window (INSW), a blueprint document was prepared and with technical assistance, reviewed, modernised and expanded. The updated work included scene-setting and instructive material concerning service level agreements for the INSW operator and, in particular, service level objectives for GA’s participating in the INSW in the meaning of those terms also used in this document. The framework SLO materials included: measurement modalities, measurement points, exclusions and exceptions, and the concept of step-wise turn-around targets for government agencies. The SLA for the Operator was proposed as part of a commercial contract.

The Government of the Republic of Indonesia continues to implement its NSW. The Indonesia NSW comprises linkages between systems such as, private sector direct trader input software (as authorised commercial products and as private capability), on-line declaration submission, the INaTrade system for trading permits, InaPort for port-community integration, and systems in the food and drug administration, plant quarantine, animal quarantine, and fisheries quarantine. At the time of writing, the INSW remains with the Indonesia Customs service. At the time of writing, formalised SLA and SLO have not been publicised. Informal statements of services offered are advertised. Status tracking is not implemented (in the sense described for LNSW). The short-coming is an absence of procedural transparency and a formalised commitment to modernisation.

3. Singapore Customs Service Charter
Refer to http://www.customs.gov.sg/NR/rdonlyres/B47E83A3-4EE4-4972-B227-376241A134A1/0/ServiceCharterMay2012_pamphlet.pdf for a well-defined service charter that sets out contact details, commitments to quality, key service standards, and rights and responsibilities.

4. Singapore TradeNet service levels
Electronic documentation services are provided through TradeNet. TradeNet is accessed through Value Added Service Providers who may issue service level agreements with traders, for example: Tradenet Services Pte Ltd offers Key Performance Indicator terms with each trader backed up with audit checks to confirm service level standards.

5. Malaysia Customs Client Charter

6. Malaysia Dagangnet service level agreement
The registration of a trader for use of Dagangnet for e-declaration and e-permit services and other services (refer to http://reg.dagangnet.com/) includes terms and conditions of use. This lays out common terms for a service level agreement. The terms and conditions are strongly ‘provider orientated’ with only a weak commitment to 24 x 7 availability of services and not explicit remedy for underperformance.
3.2.3 SLA for ASEAN Single Window

At the time of writing no specification of the implementation of ASEAN Single Window (ASW) was found. The scope of ASW remains at high level descriptions. The functions and services offered and expected are not defined in any usable manner.

It is anticipated that ASW will offer (or require under multi-lateral agreements) the exchange or sharing of at least two document types for intra-ASEAN trade: ASEAN Customs Declaration Document (ACDD), and ATIGA Form D (Certificate of Origin). Potentially other trade related documents might be exchanged or shared through ASW: (1) Customs Declarations and Certificates of Origin for trade beyond ASEAN members and (2) other forms of documents such as might relate to health and quality certifications.

For LNSW, and for the Consultants’ work regarding SLA in particular, no specific recommendations can be made.

As a general provision, the GOL, LNSW Operator, LNSW Governance Entity, LCD and DIMEX (and eventually other affected Lao Government Agencies) need to (1) monitor progress towards the functions and services implemented under ASW and the interconnection requirements and the service levels offered or required by ASW (2) plan and implement the functions and facilities that these stakeholders would need as a consequence and (3) upgrade service level objectives and agreements accordingly, and (4) plan and implement organisational changes to service and utilise the new functions and services to meet the service level objectives and agreements.
4 Specific context for LNSW

The SLA’s and SLO’s for LNSW would be set in the specific context for LNSW, with the main elements being:

1. LNSW will be implemented and operated under a concessionaire agreement offered by Ministry of Finance of the Government of the Lao PDR and accepted by a joint venture with Bureau Veritas as the main international partner for the infusion of capital and technology.

2. LNSW would be regulated in a manner somewhat consistent with the recommendations set out in the Operational Model and Governance Model report prepared by the Technical Assistance team. It seems likely that the governance or regulator role would reside with Lao Customs Department.

3. LNSW would offer the functions more or less as specified in the Functional and Technical Architecture (FandTA) documented by the Technical Assistance team. In a short summary, LNSW would provide:
   a. A ‘help desk’ or call centre, on-line and accessible by telephone, for LNSW-registered users and for general enquiries manned 24x7 or near 24x7;
   b. On-line web-based access available at least near 24x7 to anyone, anywhere with internet connection for the purposes of information and inquiries relating to trade with or by traders in Lao PDR and including link to the Lao Trade Portal;
   c. A registration service for traders;
   d. Access control services to provide secure access only to officers authorised to use LNSW and for those officers only to functions that they are authorised to use;
   e. On-line web-based services (the LNSW Trader’s Workbench) and LNSW-XML message based services for LNSW-registered Traders available at least near 24x7 for the conduct of their regulatory requirements with specified government agencies of Lao PDR;
   f. On-line web-based services Government Agency Workbench (LCD Workbench, CLPIA Workbench and Border Agency Workbench) for authorised officers at specified government agencies of Lao PDR available at least for extended business hours according to the hours offered by the government agencies for the purpose of assisting those agencies to administer requests for permits and to conducting cross-border trade transactions;
   g. LNSW-XML message based services for sending ACDD and associated documentation to LCD’s ASYCUDA World service available at least near 24x7;
   h. XML message based exchanges (using to-be-published ASW protocols) between LNSW and ASEAN Single Window;
   i. Risk management ICT services to allow participating agencies to use risk-based processing and intelligence;
   j. Fee and revenue management services;
   k. Information services for GOL and information consumers;
   l. Performance recording, monitoring, analysis and reporting for the Operator, Governance Entity, participating government agencies, and perhaps traders;
m. Physical and technical infrastructure assets (data centres, computer systems, LAN and WAN) and infrastructure functions and functional characteristics.

4. GOL and the concessionaire Joint Venture would negotiate the exact locations of the agencies, regulatory documents and office locations to be included within LNSW, based on (a) trade facilitation initiatives which may eliminate the need for certain documents, in part because of LNSW, (b) volume of activity, (c) political imperatives that may mean that low volume sites or documents are required by GOL to be covered within LNSW.

Of the agencies listed below, 1 to 6 are likely to be included at both national and provincial levels and in the case of 1 to 4 at border sites.

a. The specified government agencies will consist of some subset of the national and provincial and border offices of some subset of the following agencies:

1. Lao Customs Department, Ministry of Finance;
2. Department of Agriculture, Ministry of Agriculture and Forestry;
3. Department of Livestock and Fisheries, Ministry of Agriculture and Forestry;
4. Drugs Division, Food and Drug Department, Ministry of Health;
5. Foods Division, Food and Drug Department, Ministry of Health;
6. Import-Export Department, Ministry of Industry and Commerce;
7. Department of Standards and Metrology, Ministry of Science and Technology;
9. Ministry of Post and Telecommunications;
10. Ministry of Energy and Mines;
11. Department of Monetary Policy, Bank of Lao PDR;

b. The Functional and Technical Architecture, in Appendix A, lists:

1. 28 candidate regulatory documents for LNSW;
2. 87 candidate national and provincial and border offices at seven provinces and eleven borders [plus a location each for the LNSW Operator and the Governance Entity].

5. The LNSW Operator would also be responsible for the following services:

a. Short, medium and long-term management of the functional and technical assets including capacity planning;

b. Quality Planning, control and assurance for the LNSW services;

c. Commercial management of the Concessionaire Agreement;

d. Operate the functional and technical assets of LNSW including logical and physical security of, and access to, all assets including data assets and values held on LNSW databases;

e. Provide for and operate business continuity (e.g. backup data centre);

f. Operate the help desk;

g. Provide support and maintenance for LNSW functional and technical assets (directly and through agreements with third party technology providers);
h. Provide expert advice to participating government agencies;
i. Offer Service Enhancement services;
j. Reporting and liaison services:
   1. With participating government agencies billings, revenue sharing, SLA setting, SLA monitoring, SLA
      consequences (for meeting, exceeding or failing), and LNSW service modification and enhancement,
   2. with third party suppliers including: LNSW Implementer, data communications carriers, suppliers of
      support and maintenance services,
   3. with stakeholders to discuss experiences regarding service usage and to solicit opportunities for
      enhancements.

Refer to the Service Specification document prepared by the Technical Assistance team for descriptions of the
services required of the LNSW Operator.
5 Recommendations

5.1 Summary

It is recommended that there be:

1. Service Level Agreement between LNSW Operator and LNSW Regulator or Governance Entity with the latter representing the government, government agencies participating in LNSW, traders and general public. This would take form within, and integral to, the contract between the LNSW Operator and the LNSW Governance Entity. It would incorporate an End-User Usage Agreement that clarifies the enforceable rights and obligations of government officers authorised to use specified functions of LNSW.

2. Service Level Agreement between LNSW Operator and Trader. This would be a published agreement as part of the Trader’s registration process that binds the LNSW Operator to a minimum service level that it offers to registered, fee-paying traders. It would incorporate an End-User Usage Agreement that clarifies the enforceable rights and obligations of the registered traders.

3. Statements of Service Level Objective. Each government agency participating in LNSW would unilaterally publish a Statement of Service Level Objectives to make its commitments known to the trading public that the agency serves and for the benefit of the agency in its management of its service delivery. This recommendation is illustrated at Figure 1.

Figure 1 SLA/SLO recommended for LNSW
5.2 SLA: LNSW Operational Services

A separate report (Service Specifications for LNSW – Statement of Direction) was prepared separately during the Technical Assistance and included within the Interim Blueprint. The Service Specifications for the LNSW Operator are categorised as implementation services and operating services. Implementation Services are essentially a one-time service to establish the LNSW (although this may be spread over some time). The Operating Services are those that would be the standard business of the LNSW for many years.

It has been decided that both the implementation services and operating services would be agreed under a concessionaire agreement offered by Ministry of Finance of the Government of the Lao PDR and accepted by a joint venture with Bureau Veritas as described at §4.

It is recommended that the concessionaire agreement includes a Service Level Agreement between LNSW Operator and LNSW Governance Entity with the latter representing the government, government agencies participating in LNSW, traders and general public.

A framework and model agreement is provided at Appendix A.

[Note: The LNSW Joint Venture would need to enter into several additional support and maintenance and service agreements with several other parties in order for it to fulfil its obligations. These include support and maintenance agreements for

1. the physical infrastructure for the data centres and any LNSW kiosks or other such locations,
2. the technical infrastructure including: servers, other data centre infrastructure hardware, data communications hardware, end-user devices, system software, infrastructure software, network software, system and network management hardware and software, LNSW application software, and so on,
3. raw internet link services with two or more internet service providers for connections to the LNSW data centres, other LNSW Operator places of business, any participating government offices through Laos,
4. data communication services with two or more telecommunications providers for connections to the LNSW data centres, other LNSW Operator places of business, any participating government offices through Laos,
5. electricity supply for connections to the LNSW data centres and any other LNSW Operator places of business,
6. miscellaneous other providers.

These are all a matter between the LNSW Operator and the various suppliers of such services and not within the scope of this report. The GOL should nevertheless seek assurances that acceptable levels of such services are contracted by the LNSW Operator to ensure acceptable availability, performance and continuity of LNSW.]
5.3 SLA between LNSW Operator and Traders

Traders would be required to register with LNSW before using the LNSW Trader Workbench facilities. It has been recommended that Traders would be required to pay membership fees and transactional fees for use of LNSW Trader Workbench. They would be entitled therefore to expect at least a minimum level of service from LNSW and would also need to abide by a usage agreement. A form of fee remission would be reasonable should a Trader experience levels of service that do not meet at least the minimum levels in this SLA.

The LNSW Regulator / Governance Entity, representing the interests of Traders in general, would negotiate with the LNSW Operator minimum levels of service that the LNSW Operator would be required to meet.

A Service Level Agreement would be agreed between LNSW and each Trader as part of the registration / annual renewal procedure. This could be the standard agreement or, for example, for a high volume Trader or a Trader with special needs might be an extension of the standard agreement (e.g. for a dedicated point-to-point data communications link in place of internet connections) with additional or revised provisions and other terms and conditions.

This SLA might be likened to the service contracts in the telecommunications industry where:

1. A telecommunication service provider (e.g. Lao Telecom) is licenced by a regulator (e.g. Ministry of Post and Telecommunications) and is required to offer services to private and business consumers to at least some minimum terms set by the regulator.

2. A private and business consumer might require additional or revised services under revised terms and conditions and negotiates with the service provider accordingly.

There is a strong comparison with the telecommunications industry: for the most part, LNSW is no more than a message handling instrument.

A framework and model agreement is provided at Appendix B.
5.4 SLO between GA’s and Traders

It is recommended that each Government Agency participating in LNSW documents, publicises and maintains a Statement of Service Level Objectives.

Appendix C provides a framework with sample terms that could be used.

Recommendations concerning the SLO are:
1. The initial SLO targets in the first instance should be modest and achievable.
2. The SLO only makes sense if it is monitored and used as a management tool. The FandTA for LNSW defines measurement and reporting subsystems and functions for the purpose of monitoring performance. If and when a GA fails to meet its SLO, there should be executive and managerial action to modify procedures and the deployment of resources to improve performance. In rare occasions it may be that the SLO is unreasonable, in which case it may be modified to temporarily decrease the service levels offered by the agency.
3. It is strongly recommended that the Director General (or equivalent) of each agency assumes control of
   a. setting the SLO for the agency,
   b. establishing procedures for monitoring and analysing performance in comparison to the SLO,
   c. reviewing performance reports on at least a monthly basis and where necessary: instituting procedural change and adjusting resource deployment to meet the SLO,
   d. on at least an annual basis, reviewing the Statement of SLO to aspire towards improved service levels.
4. The Director General should be supported by his management team.
5. The objective of each Government Agency would be continuous quality improvement and from time to time the SLO should be revised to specify improved service levels to the public that the agency aspires to serve.
# Monitoring framework

SLA and SLO have little purpose without measurement and analyses of the service levels. This section sets out a framework that could be used to establish the monitoring procedures for SLA / SLO. The model agreements included in the appendices of this report give a context for the monitoring framework. The framework here is therefore a worked example that encompasses the underlying general principles.

The framework is defined for each of the three recommended forms of SLA / SLO in terms of (1) responsible party, (2) timing, and (3) method for data collection and for analysis and reporting.

## 6.1 SLA for LNSW Operational Services

| Responsible Parties | 1. LNSW Operator – SLA ‘manager’  
No prescription is placed upon the organizational arrangement for the LNSW Operator except to the extent that a person of acceptable skill and authority within the LNSW Operator’s team must be responsible for negotiating the SLA, implement the monitoring framework within the scope of the Operator’s responsibilities, monitoring the SLA, participating in SLA meetings and reviews and correcting any and all underperformance issues that may arise.  
2. LNSW Regulator – SLA / Contract management team  
The LNSW Regulator / Governance Entity represents the interests of the user communities including the LNSW Regulator officers, public in Lao and internationally, registered Traders, and registered information consumers.  
It is recommended that the LNSW Regulator has a contract management team (SLA/CT) to negotiate with and monitor the performance of the LNSW Operator. The chief officer of the LNSW Regulator should be the responsible party for the government and should be supported by the SLA/CT. |
|---|---|
| Timing | 1. Annual review: Convened by LNSW Regulator SLA/CT to review performance and adjust the SLA towards higher service levels.  
2. Periodic monitoring: Monthly meeting between LNSW Operator and LNSW Regulator SLA/CT to review performance, negotiate fees and penalties in accordance with the SLA, devise and seek to implement methods for addressing any divergence from the SLA targets, review stakeholder issues concerning the LNSW Operator, LNSW Regulator and participating LNSW GA’s.  
3. Continual monitoring:  
a. Continuous automated monitors (through system and network management monitors and alarms) and non-automated intra-day checks using system and network management tools and LNSW Operator dashboards by designated operations staff within the LNSW Operator team;  
b. Frequent intra-day checks using system and network management tools and dashboards by designated LNSW Regulator monitoring personnel;  
c. LNSW Helpdesk personnel receiving, logging and resolving issues;  
d. LNSW Regulator stakeholder liaison team members receiving and responding to suggestions, complaints and other feedback. |
<table>
<thead>
<tr>
<th>Monitoring Method</th>
<th>1. Data collection:</th>
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<tr>
<td></td>
<td>a. Continuous monitoring infrastructure with (and / or for) all data centre environmental control equipment to record and report incidents concerning the environment of the data centre;</td>
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<td></td>
<td>b. Continuous monitoring infrastructure (such as SNMP-capability as standard) for all servers, network devices and system software reporting to polling from corresponding, appropriate, full-functioned, system and network management tools that record the ‘vital signs’ of technical infrastructure and application software;</td>
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<td></td>
<td>c. Continuous metering by ICT architectural software (runtime capability in business process management / workflow management tools) of LNSW transactions;</td>
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<td></td>
<td>d. LNSW Help Desk recording of incidents as they are reported and tracking the status update of incidents towards resolution seamlessly through use the help desk software functions;</td>
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<td></td>
<td>e. LNSW Regulator stakeholder liaison team: Record keeping regarding suggestions and complaints and other feedback from stakeholders.</td>
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<tr>
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<th>2. Analysis and reporting:</th>
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<tbody>
<tr>
<td></td>
<td>a. As part of LNSW implementation, the Operator’s implementation team would:</td>
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<tr>
<td></td>
<td>i. Implement monitoring infrastructure for all data centre environmental control equipment, technical infrastructure and application software as described above,</td>
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<td></td>
<td>ii. Put in place and perform good practice operating practices such as defined by ITIL,</td>
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<td>iii. Study the Service Levels set out in the SLA and define and implement dashboard and analysis and reporting tools and make these available to authorised personnel of the LNSW Operator and LNSW Regulator. Include in LNSW SLA monitoring dashboard layout, Service Levels data such as:</td>
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<td>- actual availability data for each type of service for which availability service levels are defined</td>
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<td>- actual performance data for each performance measure defined in the SLA</td>
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<td>- SLA targets</td>
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<td>- comparison of actual performance to SLA targets, highlighting warning conditions if breach levels are approached and alarm conditions when breach conditions are exceeded</td>
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<td>- other actual performance data, e.g.</td>
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<td>o per assigned LCD office, for the past hour, day, month with historical comparison</td>
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<td></td>
<td>† number of declarations received</td>
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<td>† number of declarations awaiting clearance per lane (‘green’, ‘yellow’, ‘red’, ‘blue’)</td>
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<td>† number of declarations awaiting clearance by OGA</td>
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<td>† average processing time in each colour coded lane</td>
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<td>† average processing time when OGA clearance required</td>
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<td>o per OGA @ border office (FDD, PQ, AQ) for the past hour, day, month with historical comparison</td>
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<td>† number of declarations requiring OGA clearance</td>
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<td>† average processing time for OGA clearance</td>
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<td>o per PIA office, or the past hour, day, month with historical comparison</td>
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<td>† number of permit requests by type of permit</td>
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<td>† average processing time for issuing a permit</td>
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<td>iv. provide some capability for an authorised user to drill down to inspect the underlying data: permit applications, permits, customs declarations, clearance notes, and the stages of transactions</td>
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<td>v. provide monthly performance reports containing</td>
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<td>† data similar to that on the dashboard but over a longer time interval with statistical analyses</td>
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<td>† provide monthly LNSW help desk activity summaries concerning help desk issues raised and cleared, categorised by type, with average clearance time</td>
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<td>† ‘Service Level Rating’ report as defined within the SLA from which the LNSW Operator fees and penalties would be calculated</td>
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<td>vi. train designated officers concerning use of the analysis and reporting tools</td>
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Monitoring Method

b. LNSW Operating Monitors
   The LNSW Operator personnel would maintain a constant surveillance of the running systems and services using the data centre environment monitoring facilities, systems and network management tools, and LNSW SLA Dashboard.
   The operating personnel would seek to identify opportunities for impending service underperformance, avert any such events, and/or respond to incidents of underperformance, directly by their own actions or through assistance sought from technicians of the Operator or of sub-contracted suppliers with support and maintenance obligations.

c. LNSW Dashboard by Regulator personnel
   Designated team members within the Regulator’s team would inspect the dashboard from time to time to identify anomalies, alert the LNSW Operator via the LNSW Help Desk and seek confirmation of satisfactory resolution.

d. LNSW Help Desk officers
   The LNSW Help Desk would perform triage for any issues reported to it and resolve issues where this possible or refer the issue to LNSW Operator operational or technical support personnel or GA’s as appropriate.
   For service availability and/or performance issues, the Help Desk provides a monitor of feedback of ‘system health’ beyond the automated monitors built-in to the technical infrastructure and system software.

e. LNSW Help Desk Manager
   The LNSW Help Desk would follow-up on such referrals for resolution and may seek to escalate and expedite such issues that are overdue for resolution. This escalation action is part of the monitoring framework for LNSW SLA.

   On a monthly basis the LNSW Help Desk would prepare a report of issues reported, by categorisation, and with clearance times and issues requiring escalation. This report would feed the ‘Service Level Rating’ report from which the LNSW Operator fees and penalties would be calculated as noted at item a. v. above.

g. Monthly Regulator Summary report of stakeholder suggestions and complaints and other feedback.
   On a monthly basis, the Regulator’s stakeholder liaison team should prepare a short report of the number and type of suggestions, complaints and feedback and a short trend analysis. The report may also take into account referrals by registered Traders for arbitration of disputes raised by those Traders in the context of the SLA between Trader and LNSW Operator.

h. Monthly LNSW SLA Service Rating meeting between Operator and Regulator’s contract team
   On a monthly basis according to a strict schedule, the meeting shall:
   i. Review (1) LNSW Service Rating Report for the immediate past month, and (2) Monthly Regulator Summary report of stakeholder suggestions etc.
   ii. Calculate fees and penalties according to the Service Level Rating report and the SLA whereby this calculation informs the fee and revenue management procedures within the Contract between the LNSW Operator and GOL.
     Any dispute would be handled under the arbitration procedures within the Contract between the LNSW Operator and GOL.
   iii. Devise and outline methods and plan implementation actions to correct any divergence from the SLA and bring important concerns to the chief officer of both the Operator and Regulator.
   i. System audit
     Annually, and at other times at the option of the Regulator, a system audit shall be commissioned by the Regulator to determine whether reporting by LNSW is safe and that all necessary good practice system management and operations are in place to ensure the reliability of data produced by the LNSW system, Help Desk system and other aspects of the SLA monitoring framework.
### Monitoring Method

j. **Annual SLA review**
   The review will be between the LNSW Operator and the LNSW Regulator. The LNSW Regulator may invite stakeholder representatives.
   The SLA, esp. in the initial years of operation, is recommended to be framed with service levels that represent minimum tolerable service levels that can be relatively comfortably met by the Operator at a price acceptable to the GOL. This would assist implementation, familiarisation and operation. Within 3 to 4 years, both parties would be in more informed positions regarding reasonable service levels that can be expected to be higher than initial levels without increase in cost.
   The Operator and Regulator SLA/CT should collate and summarise monthly findings and suggest opportunities for reviewing the SLA, generally towards improved levels of service.
   This review will take into account the general form of SLA required to be offered by the LNSW Operator to LNSW-registered Traders. That form of SLA should likewise be reviewed in the context of seeking improved service levels.
   The revised service levels should then be formally agreed by the parties.
   LNSW Operator would then promulgate the revised SLA:
   a. an update of brochures, web-site and other places where the SLA is published, and
   b. revision of targets in the LNSW data tables for use in dashboards and reports.

---

### 6.2 SLA between LNSW Operator and Trader

#### Responsible Parties

1. **LNSW Operator – SLA ‘manager’**
   No prescription is placed upon the organizational arrangement for the LNSW Operator except to the extent that a person of acceptable skill and authority within the LNSW Operator’s team must be responsible for negotiating the SLA, implement the monitoring framework within the scope of the Operator’s responsibilities, monitoring the SLA, participating in SLA meetings and reviews and correcting any and all underperformance issues that may arise, including the posting of credits to the Trader’s account.

2. **LNSW Registered Trader**
   No prescription is set for the organizational arrangement for the LNSW-registered Trader. Rights and obligations of the Trader are defined in the SLA.

3. **LNSW Regulator – Stakeholder liaison team**
   The LNSW-registered Trader may seek the assistance of the LNSW Regulator stakeholder liaison team in disputes between the Trader and LNSW-Operator under the SLA.

#### Timing

1. **Annual review**
   The general form of the SLA is determined between the LNSW Regulator and LNSW operator and is reviewed in the context of an annual review between the LNSW Regulator and LNSW Operator. Refer to the annual review method in §6.1.
   For special SLA negotiated between the LNSW-registered Trader and LNSW Operator, it would be expected that the parties would formally commit to a process of periodic review.

2. **Periodic monitoring**
   There are no specific routine events for the monitoring of this SLA.
   Monitoring is at the discretion of a Trader who assess that underperformance events have occurred. The service levels defined in the SLA in Appendix B require conditions to be measured and assessed on a monthly basis. In that sense, there would be a monthly periodicity to the optional monitoring and reporting by a Trader.
### Annex D: Service Level Frameworks and Models for LNSW

#### Monitoring Method

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| 3. | Continuous monitoring  
   |   a. Continuous automated monitors (through system and network management monitors and alarms) and non-automated intra-day checks using system and network management tools and LNSW Operator dashboards by designated operations staff within the LNSW Operator team.  
   |   b. Incident recording and reporting by the Trader according to the Trader’s priorities and interests.  
   |   c. LNSW Helpdesk personnel receiving, logging and resolving issues.  
   |   d. LNSW Regulator stakeholder liaison team members receiving and responding to suggestions, complaints and other feedback  

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| 1. | Data collection:  
   |   a. Continuous monitoring infrastructure with (and / or for) all data centre environmental control equipment to record and report incidents concerning the environment of the data centre.  
   |   b. Continuous monitoring infrastructure (such as SNMP-capability as standard) for all servers, network devices and system software reporting to polling from corresponding, appropriate, full-functioned, system and network management tools that record the ‘vital signs’ of technical infrastructure and application software.  
   |   c. Continuous metering by ICT architectural software (runtime capability in business process management / workflow management tools) of LNSW transactions.  
   |   d. LNSW Help Desk recording of incidents as they are reported and tracking the status update of incidents towards resolution seamlessly through use the help desk software functions.  
   |   e. LNSW-registered Traders recording evidence in support of claims as defined within the SLA (refer to Appendix B).  
   |   f. LNSW Regulator stakeholder liaison team: Record keeping regarding referrals for dispute resolution brought by LNSW-registered Traders.  

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| 2. | Analysis and reporting:  
   |   a. As part of LNSW implementation, the Operator’s implementation team would  
   |   ii. Implement monitoring infrastructure for all data centre environmental control equipment, technical infrastructure and application software as described above.  
   |   iii. Study the Service Levels set out in the SLA and define and implement analysis reports concerning the availability and performance of the LNSW Trader’s Workbench and LNSW Help Desk as they relate to a particular Trader for a calendar month. Such reports need only be prepared in response to a claim of under-performance by an LNSW-registered Trader.  
   | b. LNSW Operating Monitors  
   |   The LNSW Operator personnel would maintain a constant surveillance of the running systems and services using the data centre environment monitoring facilities, systems and network management tools, and LNSW SLA Dashboard.  
   |   The operating personnel would seek to identify opportunities for impending service underperformance, avert any such events, and / or respond to incidents of underperformance, directly by their own actions or through assistance sought from technicians of the Operator or of sub-contracted suppliers with support and maintenance obligations.  
   | c. LNSW-registered Trader  
   |   Only as may be required from time to time:  
   |   i. Compiling evidence concerning SLA underperformance and reporting this to the LNSW Operator with a claim for credit as defined within the SLA (refer Appendix B).  
   |   ii. In the event of dissatisfaction with the response of the LNSW Operator to any such report and claim, referring the matter with all evidence previously collated and supplemented by a record of interactions with the LNSW Operator concerning the claim.  

**Note:** *In the event of a well-known and widespread service failure, it could be in the Operator’s interest to make a universal declaration of service credits to all active LNSW-registered Traders in order to mitigate the administration of claims. This course of action may be advised by the LNSW Regulator.*
### 6.3 Statement of Service Level Objective by each GA

| Responsible Parties | 1. | The senior officer of each Government Agency in Vientiane (e.g. Director General) would need at least to sponsor the SLO initiatives and it is recommended that officer should actively lead the implementation and operation of the tasks. |
| | 2. | Each Government Agency would have an SLO Monitoring Unit (SLO/MU) that would assist the senior officer with handling suggestions and comments, data capture, monitoring and analysis. The SLO/MU could be structured as a permanent separate unit however the volume of work may not warrant this approach. Alternative strategies could include: (a) convening a group on a regular basis, and / or (b) assigning additional capabilities and responsibilities to select senior officers (and their assistants) for ongoing operational monitoring and other activities. |

| Timing | 1. | Annual review: Convened by senior officer (e.g. Director General) to review performance and adjust the statement of service level objectives. |
| | 2. | Periodic monitoring: Monthly meeting of SLO/MU to review performance, review suggestions, complaints and other feedback for trends, devise and seek to implement methods for addressing any divergence from the statement of service level objectives and bring important concerns to the attention to the senior officer. |
| | 3. | Continual monitoring: Frequent intra-day checks by designated SLO/MU team members to respond to suggestions, complaints and other feedback and check dashboards etc. for any short term operational fixes that may be necessary. |

| Monitoring Method | 1. | Annual review: Convened by senior officer (e.g. Director General) to review performance and adjust the statement of service level objectives. |
| | 2. | Periodic monitoring: Monthly meeting of SLO/MU to review performance, review suggestions, complaints and other feedback for trends, devise and seek to implement methods for addressing any divergence from the statement of service level objectives and bring important concerns to the attention to the senior officer. |
| | 3. | Continual monitoring: Frequent intra-day checks by designated SLO/MU team members to respond to suggestions, complaints and other feedback and check dashboards etc. for any short term operational fixes that may be necessary. |
| | 1. | Data collection: |
| | a. | Continuous metering by ICT architectural software of LNSW transactions |
| | b. | LNSW Help Desk recording |
| | c. | GA SLO/MU Record keeping regarding suggestions and complaints and other feedback |
| | 2. | Analysis and reporting: |
| | a. | As part of LNSW implementation, the Operator’s implementation team would |
| | i. | Perform an agreed level of business process analysis for the specific LNSW GA Workbench configuration for each GA |
| | ii. | Include identification of LNSW monitoring dashboard layout for each GA, such as: |
| | • | actual performance for each the workflow steps, e.g. in terms of turnaround times, dwell times, queue lengths, responsible office, responsible officer for permits, declarations and other border procedures |
| | • | other actual performance data, e.g. number of permits processed per unit time for the past hour, day, month with historical comparison |
| | • | SLO targets |
| | • | comparison of actual performance to SLO targets |
| Monitoring Method | iii. provide some capability for an authorised officer to drill down to inspect the underlying data: permit applications, permits, customs declarations, clearance notes, and the stages of transactions |
|                   | iv. provide monthly performance reports containing |
|                   | • data similar to that on the dashboard but over a longer time interval with statistical analyses |
|                   | • provide monthly LNSW help desk activity summaries concerning help desk issues pertinent to each GA in a separate report per GA |
|                   | v. train designated officers concerning use of the analysis and reporting tools |
|                   | b. LNSW Dashboard for each GA |
|                   | As part of the SLO/MU role, designated team members would inspect the dashboard for the corresponding GA to identify anomalies, investigate the circumstances, take short-term corrective actions if warranted and make notes for discussion at monthly meetings. |
|                   | c. LNSW Help Desk escalation referrals |
|                   | The LNSW Help Desk would perform triage for any issues reported to it and, where applicable, refer these on to the GA concerned for resolution. [Note the point of resolution within a GA would generally not be the SLO/MU team but rather designated technical assistance contact persons within the GA.] |
|                   | The LNSW Help Desk would follow-up on such referrals for resolution and may seek to escalate and expedite such issues that are overdue for resolution. This escalation action is part of the monitoring framework for LNSW SLA. |
|                   | d. Monthly LNSW help desk activity summary report |
|                   | On a monthly basis the LNSW Help Desk would prepare a report, specific to each GA of issues reported, clearance times and issues requiring escalation. |
|                   | e. Monthly SLO/MU summary report of suggestions and complaints and other feedback |
|                   | On a monthly basis, the SLO/MU should prepare a short report of the number and type of suggestions, complaints and feedback and a short trend analysis. |
|                   | f. Monthly LNSW SLO performance meeting for each GA |
|                   | On a monthly basis, the SLO/MU should: |
|                   | i. review (1) LNSW monthly performance report for the GA, (2) monthly LNSW help desk activity report for the GA, (3) SLO/MU summary report of suggestions, complaints and feedback, (4) other notes that may have been collated as part of SLO monitoring |
|                   | ii. devise and seek to implement methods for addressing any divergence from the statement of service level objectives and bring important concerns to the attention to the senior officer |
|                   | g. Annual SLO review |
|                   | The SLO/MU should collate and summarise monthly findings and suggest opportunities for reviewing the Statement of SLO, generally towards improved levels of service. The SLO/MU should report this to a meeting convened by the senior officer and provide additional information on request. The senior officer and management team would then seek to promulgate a revised Statement of SLO, leading to |
|                   | a. an update of brochures, web-site and other places where the SLO is published, and |
|                   | b. revision of targets in the LNSW data tables for use in dashboards and reports. |
7 Appendix A: Framework / Model Terms: SLA for LNSW Operational Services

The following framework could be used as the basis for a service level agreement between the LNSW Operator and the Government of Lao PDR as representative of the intended user community. It should an official presentation in Lao, in English and perhaps in other languages. For LNSW, a concessionaire agreement is anticipated for the implementation and the operation of LNSW under a single contract. The essence of this SLA should be incorporated as part of the concessionaire agreement.

Note: The words here are used to indicate contents but should be settled in consultation between LCD and LNSW Operator.

**Service Level Agreement (SLA) between**

**LNSW Operator PTY LTD (hereafter LNSW OPERATOR) and**

**Government of Lao People’s Democratic Republic (hereafter GOL),**

**represented by Lao Customs Department (hereafter LCD)**

1. Designated representatives and communication between the parties
   The designated representatives of the parties shall be the only recognised and formal channel of communication between the parties. Communication must be as documented notices and can be delivered in person, by email, by fax, or by courier. Communication received from a designated representative is binding upon the corresponding party.
   Each designated representatives may delegate by documented notice another recipient for a limited period.

   The designated representatives are:

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2. **Commencement date of SLA**
   This SLA comes into effect on midnight <insert the date of commencement date of the single SLA between LNSW Operator and GOL>.

3. **Context and Purpose**
   Lao National Single Window (LNSW) is an on-line service to facilitate international trade between traders of Laos and the international community by streamlining regulatory procedures legislated by GOL for cross-border trade. GOL has entered a CONCESSIONAIRE AGREEMENT with LNSW OPERATOR to implement and operate LNSW for a defined period.
   As part of the CONCESSIONAIRE AGREEMENT concerning the operation of LNSW, the purposes of this SLA are:
   a. To define the services provided for the operation of the LNSW by LNSW OPERATOR to persons represented by the GOL including (1) LCD being the Governance Entity regulating the operation of LNSW, (2) users in participating government agencies registered with LNSW, (3) traders registered with LNSW, (4) registered information consumers, and (5) unregistered persons nationally and internationally who may use publically available LNSW services.
   b. To define the commercial arrangements under which LNSW OPERATOR has the CONCESSIONAIRE AGREEMENT to operate LNSW.

4. **Roles and Responsibilities**
   a. LNSW OPERATOR shall:
      i. provide the services, functions and features of LNSW outlined in Annex A and defined more fully in the Detailed LNSW Specifications agreed between GOL and LNSW OPERATOR,
      ii. meet the service level specifications set-out in Annex B,
      iii. honour the Service Level Agreement to be entered with Traders registered for use of LNSW,
      iv. provide performance analysis and reporting,
      v. account for service level performance based on performance analysis and reporting and pay penalties if any as set-out in Annex C,
      vi. convene annual SLA reviews with stakeholders to improve the definition of the SLA with the general aim of gradually improving service levels for the LNSW user community,
      vii. prominently publish and keep up-to-date a comprehensive summary of services, functions and features of LNSW and current service level specifications,
      viii. accept, record, respond in good time to, help desk calls made by any person concerning LNSW and / or this SLA.

   For the avoidance of doubt: LNSW OPERATOR is not an administrator of any regulatory process. In this regard, it remains only a facilitator of message handling between Traders and participating Government Agencies.

   b. The GOL shall:
      i. represent the general interests of the government, government agencies participating in LNSW, traders, registered information consumers and general public,
ii. assist Traders registered with LNSW and paying LNSW fees to obtain fair and proper treatment under the Service Level Agreement between the Trader and LNSW operator,

iii. endeavour to ensure that usage of LNSW by the community of registered users that it represents is for the purposes and in the spirit intended and according to the agreements set-out in this SLA,

iv. for government agency users, instruct the affected agencies to require that officers registered to use the LNSW shall receive instructions regarding their rights and obligations as users of LNSW and sign (physically or electronically) or acknowledge electronically an End-LNSW GA User Agreement prior to use of the service (see Annex D),

v. analyse the performance reports and conduct its own analyses from time to time,

vi. agree service level performance between the parties according to the specifications as set-out in Annex B,

vii. participate in annual review of the SLA and resetting of service levels and encourage stakeholders to also participate in the reviews.

5. Service level specifications

The services required are set out in outline in Annex A.

The service level specifications are set out in Annex B.

6. Payments and penalties

LNSW Operator is well compensated for the provision of operational services for LNSW as agreed in the CONCESSIONAIRE AGREEMENT. Failure to meet service levels set out in this SLA shall lead to penalties for the LNSW Operator to be paid to GOL as set-out in Annex C. For the avoidance of doubt, the penalties are not formulated as liquidated damages. They are set as a deterrent to under performance.

7. Monitoring and reporting

Monitoring involves the collation of statistics and preparation of service reports by the LNSW OPERATOR, verification by the GOL and joint review meetings.

LNSW registered users authorised by GOL and who might be officers in LCD in its role as Governance Entity, officers in LNSW GA and traders shall have access to performance reports including (a) real-time / near-real-time LNSW electronic dashboards, and (b) formalised monthly performance reports (Monthly SLA Performance Report) in format agreed between LNSW OPERATOR and GOL that compares monthly performance to the service levels defined in this SLA and provides monthly trend analysis over the preceding twelve months or during the first twelve months of operation from the commencement of LNSW operational services. Performance not meeting service levels agreed in this SLA shall be highlighted. LNSW OPERATOR shall ensure that the dashboard services are available to authorised users and that the monthly performance reports for each month just past are prepared and available on-line to authorised users no later than the third day of each calendar month.

Any person may contact LNSW OPERATOR via the contact pages on the LNSW website, by fax or by help desk phone number (all such contact points being advertised prominently on the LNSW web pages) to advise LNSW OPERATOR of perceived failures to meet published serviced levels. Authorised GOL
representative have the right to rely upon electronic LNSW dashboard information to advise LNSW OPERATOR of perceived failures to meet published serviced levels.

All advice of perceived failures to meet published serviced levels shall be recorded by LNSW OPERATOR and a summary and detail report shall be incorporated as part of its monthly SLA Performance Report. GOL shall nominate a representative to study and assess each Monthly SLA Performance Report and recommend notice concerning payments and disbursements due to the LNSW OPERATOR.

8. Modification of the SLA
Modification of this SLA can only be made following an exchange of notices between delegated representatives proposing a change and accepting or rejecting the change or counter-proposing a change.
It is anticipated that there would be a revision of the SLA following an annual review of the SLA general aim of gradually improving service level users for the LNSW user community.

9. Termination
This SLA, modified as is expected annually following review and otherwise from time to time according to clause 6), shall terminate on the conclusion of the CONCESSIONAIRE AGREEMENT for LNSW. All conditions relating to the rights and obligations of the parties upon termination are defined in the CONCESSIONAIRE AGREEMENT.

a. Severability. If any provision of this SLA is declared by a court of competent jurisdiction to be invalid or unenforceable, such determination shall not affect the validity or enforceability of any other provision hereof.
b. Entire Agreement. This SLA which shall be read together with the LNSW CONCESSIONAIRE AGREEMENT, represents the entire agreement of the parties with respect to the subject matter hereof and any other previous understanding, commitments, or agreement, oral or written, between the parties with respect to the subject matter hereof.
c. Waiver. No failure by either party to insist upon the strict performance of any term or condition of this Agreement, or to exercise any right or remedy, shall constitute a waiver of such right or remedy on any subsequent occasion.
d. Governing Law. The validity, construction, scope and performance of this Agreement shall be governed by the laws of the Lao People’s Democratic Republic.
e. Assignment. This Agreement may not be assigned by either party except in connection with and under the circumstances permitted under the LNSW CONCESSIONAIRE AGREEMENT. Subject to the foregoing, this Agreement will be binding on the parties and their respective successors and permitted assigns.

11. Authorised signatures
THE AGREEMENT
We hereby signify agreement with the terms of this Service Level Agreement.
ANNEX A: Outline of LNSW Services provided by LNSW OPERATOR under this SLA

This Annex A provides an outline of the services, functions and features of LNSW. The services, functions and features are defined more fully in the Detailed LNSW Specifications agreed between GOL and LNSW OPERATOR.

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| 1.   | Help Desk                        | For handling all inbound calls from LNSW-registered users who may be Traders or officers of government agencies and other agents and representatives of Traders and the government agencies the general public regarding the services | - on-line web-pages shall be available to receive help desk submissions near 24x7  
- telephone calls shall be accepted and recorded near 24x7  
- shall support at least two languages: Lao and English  
- shall record, acknowledge by email or telephone, track, resolve calls and report resolution by email or telephone using help desk resources and other support resources  
- shall escalate calls to LNSW Operator Chief Executive Officer for calls not resolved from the submitter’s perspective within 24 hours  
- shall escalate calls to the LNSW Regulator for calls not resolved within 48 hours |
| 2.   | LNSW Information Pages           | On-line web-based access for the purposes of information and inquiries relating to trade with or by traders in Lao PDR and including link to the Lao Trade Portal | Available at least near 24x7 to anyone, anywhere with internet connection |
| 3.   | LNSW registration service        | - Web-based service to accept Trader requests to register with LNSW and for information consumers to register with LNSW | - Available to Traders near 24x7 |

13 Consideration might also be given to provision of a ‘walk-in’ help desk service.
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| 4.   | LNSW Trader’s Workbench           | Registered Traders conduct trade regulatory transactions with Lao PDR government agencies using  
  ➢ Web-based service; or  
  ➢ LNSW XML message service                                                                                                                                                                                                                                                        | Available to Traders near 24x7                                                                                   |
| 5.   | LNSW GA Workbenches               | On-line web-based Government Agency Workbench (LCD Workbench, CLPIA Workbench and Border Agency Workbench) for authorised officers at specified government agencies of Lao PDR for the purpose of assisting those agencies to administer requests submitted through LNSW Trader’s Workbench for permits and to conduct cross-border trade | Available at least for extended business hours according to the hours offered by the government agencies, nominally:  
  ➢ M-F, 07:00 – 18:00 for CLPIA  
  ➢ 24x7 for Thanaleng  
  ➢ Etc. for other border gates per hours of operation                                                                                                                  |
| 6.   | LNSW ACDD LNSW XML message service | LNSW XML message based services for sending ACDD and associated documentation to LCD’s ASYCUDAWorld service                                                                                                                                                                                                                                    | Available at least near 24x7                                                                                     |
| 7.   | Risk management services          |  
  ➢ Risk based processing of submissions through the LNSW Trader’s Workbench                                                                                                           | Available and operational at least near 24x7                                                                     |
|      |                                    |  
  ➢ Risk management and intelligence service for authorised users at participating Government Agencies                                                                                                                                                                                 | M-F, 07:00 – 18:00                                                                                               |
| 8.   | Fee and revenue management service |  
  ➢ Billing of services used by Traders through registration and Trader’s Workbench                                                                                                                                                                                                             | Available at least near 24x7                                                                                     |
|      |                                    |  
  ➢ Acceptance of payments on-line                                                                                                                                                                                                                                                                | Available at least near 24x7                                                                                     |
|      |                                    |  
  ➢ Recording of payments made not on-line                                                                                                                                                                                                                                                        | M-F, 07:00 – 18:00                                                                                               |
|      |                                    |  
  ➢ Accounting and reporting services for the LNSW Account Keeping Unit                                                                                                                                                                                                                       | M-F, 07:00 – 18:00                                                                                               |
### Annex D: Service Level Frameworks and Models for LNSW

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Service Name</th>
<th>Short Description</th>
<th>Short Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>9.</td>
<td>Information services</td>
<td>† Data collection services as part of the functioning of LNSW</td>
<td>† Available at all times that LNSW is operational</td>
</tr>
<tr>
<td></td>
<td></td>
<td>† On-line, web-based analysis and reporting services for authorised and registered users</td>
<td>† Available at least near 24x7</td>
</tr>
</tbody>
</table>
| 10.  | Performance management services       | Extranet services for information and performance analysis and reporting for Government Agencies including operational and performance monitoring dashboards | Available at least for extended business hours according to the hours offered by the government agencies, nominally:  
      |                                       | † M-F, 07:00 – 18:00 for CLPIA                                                      |  
      |                                       | † 24x7 for Thanaleng                                                               |  
      |                                       | † Etc. for other border gates per hours of operation                               |                                        |
| 11.  | Physical, technical and functional infrastructure | Physical and technical infrastructure assets (data centres, computer systems, LAN and WAN) and infrastructure functions and functional characteristics taken together to provide LNSW | Available at least near 24x7         |

The list of participating Government Agencies is: <insert list>
The list of Government Agency sites for which LNSW supplies services is <insert list of locations, addresses, primary point of contact>  
The list of regulatory documents serviced through LNSW is: <insert list and administering agency, and locations>

**ANNEX B: Service Level Specifications**

The Service Level Specifications are defined in terms of availability and performance. Availability and performance will be measured by auditable LNSW meters and reports, help desk logs, feedback to the regulator (LNSW Governance Entity) and client surveys. The measurements will be used on a monthly basis to determine penalties (if any) to be paid to the GOL in lieu of failure to meet the service level specifications as defined in Annex C.
### Availability
Availability is a measure of the degree to which a particular service is accessible, usable and substantially offers the functions defined for the service.

<table>
<thead>
<tr>
<th>#</th>
<th>Service Name</th>
<th>Availability Period</th>
<th>Availability (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Help Desk – web pages</td>
<td>24x7</td>
<td>99%</td>
</tr>
<tr>
<td>1.2</td>
<td>Help Desk – telephone calls</td>
<td>24x7</td>
<td>99%</td>
</tr>
<tr>
<td>2</td>
<td>LNSW Information Pages</td>
<td>24x7</td>
<td>95%</td>
</tr>
<tr>
<td>3.1</td>
<td>LNSW registration service – web based</td>
<td>24x7</td>
<td>95%</td>
</tr>
<tr>
<td>3.2</td>
<td>LNSW registration service – extranet</td>
<td>M-F, 07:00 – 18:00</td>
<td>95%</td>
</tr>
<tr>
<td>4</td>
<td>LNSW Trader’s Workbench</td>
<td>24x7</td>
<td>95%</td>
</tr>
<tr>
<td>5</td>
<td>LNSW GA Workbenches</td>
<td>M-F, 07:00 – 18:00 for CLPIA</td>
<td>95%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>24x7 for Thanaleng</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Etc. for other border gates</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>LNSW ACDD XML message service</td>
<td>24x7</td>
<td>95%</td>
</tr>
<tr>
<td>7.1</td>
<td>Risk management services – profiling /selectivity / feedback</td>
<td>24x7</td>
<td>95%</td>
</tr>
<tr>
<td>7.2</td>
<td>Risk management services – management, intelligence etc.</td>
<td>M-F, 07:00 – 18:00</td>
<td>90%</td>
</tr>
<tr>
<td>8.1</td>
<td>Fee and revenue management service - billing</td>
<td>24x7</td>
<td>95%</td>
</tr>
<tr>
<td>8.2</td>
<td>Fee and rev. mgmt. service – online payments</td>
<td>24x7</td>
<td>95%</td>
</tr>
<tr>
<td>8.3</td>
<td>Fee and rev. mgmt. service – accounting</td>
<td>M-F, 07:00 – 18:00</td>
<td>90%</td>
</tr>
<tr>
<td>9</td>
<td>Information services – web-based analyses</td>
<td>24x7</td>
<td>80%</td>
</tr>
<tr>
<td>10</td>
<td>Performance management services</td>
<td>M-F, 07:00 – 18:00 for CLPIA</td>
<td>90%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>24x7 for Thanaleng</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Etc. for other border gates</td>
<td></td>
</tr>
</tbody>
</table>
### Availability Restrictions

Availability restrictions specific to the Services covered under this Agreement are as follows:

Scheduled Maintenance Window: 10pm Sunday to 6am Monday
Back up Window: 12:01am – 2am daily

### Performance

Performance is measured as response times reasonably within the control of the LNSW Operator. Traffic through the internet is excluded in all cases.

<table>
<thead>
<tr>
<th>#</th>
<th>Service Metric</th>
<th>Definition</th>
<th>Target</th>
<th>Breach</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Average time to resolve Help Desk service issue to the requestor’s satisfaction</td>
<td>This is the time period from a call logged online or by telephone up to the time that a credible resolution is communicated to the requestor. Measured over all calls per month.</td>
<td>&lt; 1 hour</td>
<td>&gt; 48 hours</td>
</tr>
<tr>
<td>2.</td>
<td>Average Workbench message dwell time in LNSW</td>
<td>This is the time between the arrival at the LNSW data centre of a message carrying a registered Trader’s submission and the time the submission is deposited in the in-tray of the defined recipient, and between a response by a GA officer using LNSW GA Workbench and that message being SMS’d and / or Email’d by LNSW to the Trader. Measured over all messages per hour.</td>
<td>&lt; 2 s</td>
<td>&gt; 1 min</td>
</tr>
<tr>
<td>3.</td>
<td>Average ACDD message dwell time in LNSW</td>
<td>This is the time between the arrival at the LNSW data centre of a message carrying a registered Trader’s submission of an ACDD and the time an acknowledgement response is received from ASYCUDA World by LNSW, measured and reported over all messages per hour.</td>
<td>&lt; 10 s</td>
<td>&gt; 5 min</td>
</tr>
<tr>
<td>4.</td>
<td>Infrastructure performance</td>
<td>This is a proxy measure of LNSW performance measured as average LNSW main service Application Servers utilization per hour.</td>
<td>&lt;80%</td>
<td>&gt;90%</td>
</tr>
</tbody>
</table>

---

14 This is set assuming that the ASYCUDA World service is available to receive messages in near 24x7.
ANNEX C: Service Level Rating

LNSW Operator shall

1. Continuously collect auditable operational and performance statistics in meters as specified in the functions and features of LNSW in the CONCESSIONAIRE AGREEMENT

2. On a monthly basis, no later than the third business day of the month, provide to the LNSW Governance Entity a Service Level Rating Report for the preceding month summarising the auditable operational and performance statistics and comparing these to the service level parameters set-out in the SLA, highlighting any under-performance events in the format specified in the functions and features of LNSW in the CONCESSIONAIRE AGREEMENT

3. provide Help Desk logs to the LNSW Governance Entity

LCD shall collect and analyse (a) Service Level Rating Report, (b) help desk logs, (c) feedback to the regulator (LNSW Governance Entity) if any were received, and (d) client surveys, if any were undertaken.

The LCD and LNSW Operator shall meet on the 5th business day of each month to conclude the number of service level failures in the previous month and calculate the service level penalties to be paid to the GOL as follows:

1. Availability - any day on which any availability target is not met shall result in a penalty of 3.34% of the LNSW Operator fee for operation of LNSW for the month.
   [The percentage amount is calculated such that if on every day of a month there is at least one availability target not met, the Operator fee for the month would be zero.]

2. Performance – for any underperformance event, as measured according to the time periods specified for performance measures as defined in Annex C, shall result in a penalty as follows:
   a. #1 Average time to resolve Help Desk service issue to the requestor’s satisfaction:
      a penalty of 10% of the LNSW Operator fee for operation of LNSW for the month if the breach condition is met
   b. #2 Average Workbench message dwell time in LNSW: a penalty of .14% of the LNSW Operator fee for operation of LNSW for the month in which the breach condition is met
   c. #3 Average ACDD message dwell time in LNSW: a penalty of .14% of the LNSW Operator fee for operation of LNSW for the month in which the breach condition is met
   d. #4 Infrastructure performance: a penalty of .14% of the LNSW Operator fee for operation of LNSW for the month in which the breach condition is met

Notwithstanding the penalties as calculated above concerning availability and performance, the maximum penalty per month is 100% of the Operator fee for the month.

Deliberate tampering with or falsification of the meters and performance reports shall be a serious breach of the CONCESSIONAIRE AGREEMENT for which the LNSW OPERATOR shall be liable to a penalty equalling the total gross value of the CONCESSIONAIRE AGREEMENT for the entire period of the AGREEMENT and termination of the AGREEMENT.
Annex D: End User Usage Agreement

GOL shall ensure that each officer and any other person in government agencies authorised to use LNSW shall commit to the LNSW GA End User Usage Agreement set out below before the authorisation becomes effective.

**LNSW GA End User Usage Agreement**

1. This LNSW End User Usage Agreement (AGREEMENT) is between <insert name of GA>, hereafter GA, and <insert name>, hereafter USER.

2. We hereby accept the terms of this AGREEMENT
   For GA   As LNSW GA Administrator
   Name: ...................................................................................
   Title ..................................................................................
   Signature ..........................................................................
   Date ..................................................................................
   For USER
   Name: ...................................................................................
   Title ..................................................................................
   Signature ..........................................................................
   Date ..................................................................................

3. Lao National Single Window (LNSW) is an on-line service to facilitate international trade between traders of Laos and the international community by streamlining regulatory procedures legislated in Laos for cross-border trade. GA is a participating agency in LNSW and makes use of LNSW in accordance with the LNSW User Manual for GA.

4. GA authorises USER to use LNSW and assign access to specific functions to USER and will seek to ensure that USER is informed of any such authorisation and assignment.
   GA may amend that authorisation and access to specific functions within LNSW from time to time and will seek to ensure that USER is informed of any such amendment.
   GA may rescind authorisation of USER at any time and will seek to ensure that USER is informed of any such rescission.

5. GA shall provide opportunity to USER to be trained in use of LNSW by formal training, on the job training and / or self-paced training using the LNSW User Manual for GA.
   USER agrees to only use LNSW in accordance with the LNSW User Manual for GA for the purposes intended for the regulatory procedures legislated in Laos for cross-border trade administered by GA according to the commission of the USER granted by GA.

6. USER agrees to only use LNSW in accordance with the LNSW User Manual for GA for the purposes intended for the regulatory procedures legislated in Laos for cross-border trade administered by GA according to the commission of the USER granted by GA.
   USER recognises that transactions through LNSW conducts the business of GA with the full force of the relevant powers of GA and shall use LNSW with due care. Misuse of LNSW shall carry the penalties for misconduct otherwise attributed to USER by the terms of their employment or contractual relationship with GA.
   USER shall have and keep a username and a password to login to LNSW and to access LNSW functions. USER may have or be given additional credentials to login and to access LNSW functions. USER shall take all reasonable precautions to keep safe and secret and not to disclose username, password or other credentials to any other person.

---

15 Every person granted user access to LNSW shall be required to confirm that they understand the rights and responsibilities that obtain prior to being granted access.

The Agreement in this Annex concerns GA officers requesting access to LNSW.

Likewise, the LNSW OPERATOR shall include an End User Usage Agreement with registered Traders as part of the registration and membership process for Traders.
Annex D: Service Level Frameworks and Models for LNSW

USER should ignore any emails that appear to come from LNSW that require you to input your username, password or credentials. These emails may come from third parties seeking to use the information to access to LNSW under your identity. Likewise, USER shall not login to LNSW other than through the portal described in the LNSW User Manual for GA.

USER recognises that all transactions conducted by USER through LNSW will be logged and that log is available to persons authorised by the Government of Lao PDR. The history of all such transactions may be used by such persons as may be necessary.

USER shall not attempt to modify any data held within LNSW by any means other than LNSW functions to which USER has been granted access by LNSW GA Administrator.

USER shall notify the designated LNSW GA Administrator to (a) access to functions that USER would not reasonably have, (b) any transactions accidentally or erroneously transacted by USER through LNSW, and (c) malpractice of any form that comes to USER's attention concerning use of LNSW by any person.

USER shall treat all data and information obtained from or through LNSW as strictly confidential to the parties concerned which are the GA and the specific LNSW-registered trader seeking to conduct its regulatory obligations with the GA. Under no circumstances shall USER disclose such data and information to any other party except as may be absolutely necessary under legal proceedings within a competent jurisdiction.

Annex E: Definitions

<to be inserted>

7.1 Addendum to Appendix A: Workshop feedback

A workshop was facilitated by PM Group for LCD and key government agencies participating in LNSW including: MOIC, DIMEX, MOH (Drug Division), MAF (Plant Division and Livestock Division). The SLA (above) was the subject of a mock 'negotiation' with the following points arising:

1. The service hours for the on-line customer service need not be 24 x 7. Hours of service could be more aligned with real expectations of the time period over which a trader might trade if this could lead to a significant reduction in the cost of providing the service.

2. Availability of Trader’s Workbench likewise need not be 24 x 7. Hours of service could be more aligned with real expectations of the time period over which a trader might trade if this could lead to a significant reduction in the cost of providing the service.

3. (3) The services hours for the help desk personnel is unlikely to require 24 x 7 operation in Laos. Hours might more closely match standard operational hours.

4. Service levels need further definition to protect against circumstances beyond the control of the Operator.

5. The services hours for LNSW Workbenches for government agencies should match the service hours at each place where officers would use LNSW. There are currently no 24 x 7 requirements. PIA generally operate only 08:00 to 16:00 Monday to Friday holidays excluded. Hours of service at border sites differ in terms of hours per day and days per week and holiday schedules.

6. There needs to be provision for procedures that allow government agencies to request and be provided with ‘extraordinary’ hours of LNSW operation at every place for every service to address unusual circumstances that arise from time to time and lead to additional hours of service.

7. Further definition and agreement on the service levels is required (a) in terms of ‘availability %’ etc. and (b) the means of measurement and calculation.
Appendix B: Framework / Model Terms: SLA between LNSW Operator and Traders

The following framework could be used as the basis for service level agreements between the LNSW Operator and each LNSW registered Trader. The Agreement should be part and parcel of the registration and membership for the Trader. It should be available in Lao, in English and perhaps in other languages.

The words here are used to indicate contents but should be settled in consultation between LCD, LNSW Operator and Trader representatives.

Service Level Agreement (SLA) between
LNSW Operator PTY LTD (hereafter LNSW OPERATOR) and
<insert the name of the registered trader> (hereafter TRADER)

1. Designated representatives and communication between the parties
   The designated representatives of the parties shall be the only recognised and formal channel of communication between the parties. Communication must be as documented notices and can be delivered in person, by email, by fax, or by courier. Communication received from a designated representative is binding upon the corresponding party.
   Each designated representatives may delegate by documented notice another recipient for a limited period.

   The designated representatives are:

   For LNSW OPERATOR
   Name: .................................................................
   Title .................................................................
   Contacts details
   Address: ............................................................
   Fax: .................................................................
   Email ...............................................................  

   For GOL
   Name: .................................................................
   Title .................................................................
   Contacts details
   Address: ............................................................
   Fax: .................................................................
   Email ...............................................................  

2. Commencement date of SLA
   This SLA comes into effect upon payment of registration fees by the TRADER and acceptance of the registration application for LNSW by the LNSW Operator. No LNSW transactional fees may be charged to the TRADER until the SLA has commenced.
3. **Context and Purpose**

Lao National Single Window (LNSW) is an on-line service to facilitate international trade between traders of Laos and the international community by streamlining regulatory procedures legislated by GOL for cross-border trade. GOL has entered a CONCESSIONAIRE AGREEMENT with LNSW OPERATOR to implement and operate LNSW for a defined period. Context and Purpose.

The purposes of this SLA are:

a. To define the services provided by LNSW OPERATOR to traders registered with LNSW.

b. To define the commitments to service levels that LNSW OPERATOR makes to TRADER.

4. **Roles and Responsibilities**

a. **LNSW OPERATOR shall**

i. provide the services, functions and features of LNSW outlined in Annex A and defined more fully in the LNSW Trader User Manual;

ii. meet the service level specifications set-out in Annex B;

iii. take all reasonable measures to record and keep safe data entered by TRADER and their employees and agents using LNSW Trader's Workbench;

iv. take all reasonable measures to safeguard the confidentiality of data recorded by TRADER, its employees and agents using LNSW Trader's Workbench;

v. NOT read or use TRADER records held within LNSW whether created by TRADER, its employees or agents or created by Government Agencies in response to submissions by TRADER its employees or agents for any other purpose other than of sending messages between TRADER and Government Agencies and for keeping safe such data;

vi. provide performance analysis and reporting;

vii. account TRADER's payments for service level performance based on performance analysis and reporting and record credits if any as set-out in Annex C;

viii. convene annual SLA reviews with traders to improve the definition of the SLA with the general aim of gradually improving service levels;

ix. prominently publish and keep up-to-date a comprehensive summary of services, functions and features of LNSW and current service level specifications;

x. accept, record, respond in good time, to calls made by TRADER

For the avoidance of doubt: LNSW OPERATOR is not an administrator of any regulatory process. In this regard, it remains only a facilitator of message handling between Traders and participating Government Agencies.

b. **TRADER shall**

i. use LNSW in accordance with the end-user agreement (Annex D) and shall take all reasonable measures to ensure its employees use LNSW accordingly and shall instruct any agent it appoints to use LNSW to do so accordingly;

ii. pay fees for registration, annual membership and transactions conducted through LNSW as set-out in Annex C;

iii. have the option to participate in annual review of the SLA and resetting of service levels.
5. Service level specifications
The services required are set out in outline in Annex A.
The service level specifications are set out in Annex B.

6. Payments and credits
TRADER pays registration, annual membership and transaction fees as set out in Annex C and expects services within the context of this SLA to at least match the levels set out in Annex B. Failure to meet service levels set out in this SLA shall lead to penalties for the LNSW Operator to be credited to TRADER as set-out in Annex C. For the avoidance of doubt, the penalties are not formulated as liquidated damages. They are set as a deterrent to under performance.

7. Monitoring and reporting
Monitoring involves the collection of performance data and preparation of service reports by the LNSW OPERATOR and negotiation with TRADER who may make claims for under-performance based on its own records.
All notices of perceived failures to meet published serviced levels shall be recorded by LNSW OPERATOR and a summary and detail report shall be incorporated as part of its monthly SLA Performance Report to Government of Lao PDR. Any such notice by the TRADER must be made not later than 30 days after the event is said to have occurred.

8. Modification of the SLA
Modification of this SLA can only be made following an exchange of notices between delegated representatives proposing a change and accepting or rejecting the change or counter-proposing a change.
It is anticipated that there would be a revision of the SLA following an annual review of the SLA general aim of gradually improving service level users for the LNSW user community.

9. Termination
This SLA, modified as is expected annually following review and otherwise from time to time according to clause 8), shall suspend if amounts owing are notified by LNSW OPERATOR to the TRADER and a period of 30 calendar days elapses before payment is settled. The SLA shall terminate after a further 30 calendar days elapses before payment is settled.

a. Severability. If any provision of this SLA is declared by a court of competent jurisdiction to be invalid or unenforceable, such determination shall not affect the validity or enforceability of any other provision hereof.
b. Entire Agreement. This SLA represents the entire agreement of the parties with respect to the subject matter hereof and any other previous understanding, commitments, or agreement, oral or written, between the parties with respect to the subject matter hereof.
c. Waiver. No failure by either party to insist upon the strict performance of any term or condition of this Agreement, or to exercise any right or remedy, shall constitute a waiver of such right or remedy on any subsequent occasion.
d. Governing Law. The validity, construction, scope and performance of this Agreement shall be governed by the laws of the Lao People’s Democratic Republic.
e. Assignment. This Agreement may not be assigned by the TRADER. This Agreement may only be assigned by LNSW OPERATOR with the consent of the Government of Lao PDR in the event of a change in supplier of LNSW operational services.

11. Authorised signatures

THE AGREEMENT

We hereby signify agreement with the terms of this Service Level Agreement.

<table>
<thead>
<tr>
<th>For LNSW OPERATOR</th>
<th>For GOL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>Name:</td>
</tr>
<tr>
<td>Title</td>
<td>Title</td>
</tr>
<tr>
<td>Signature</td>
<td>Signature</td>
</tr>
<tr>
<td>Date</td>
<td>Date</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WITNESSED BY</th>
<th>WITNESSED BY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name:</td>
<td>Name:</td>
</tr>
<tr>
<td>Title</td>
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<tr>
<td>Signature</td>
<td>Signature</td>
</tr>
<tr>
<td>Date</td>
<td>Date</td>
</tr>
</tbody>
</table>

ANNEX A: Outline of LNSW Services provided by LNSW OPERATOR under this SLA

This Annex A provides an outline the services, functions and features of LNSW. The services, functions and features are defined more fully in the Detailed LNSW Specifications agreed between GOL and LNSW OPERATOR.

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Service Name</th>
<th>Short Description</th>
<th>Short Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ref. 1.</td>
<td>Help Desk</td>
<td>For handling all inbound calls from Trader regarding the services</td>
<td>➤ on-line web-pages shall be available to receive help desk submissions near 24x7 ➤ telephone calls shall be accepted and recorded near 24x7 ➤ shall support at least two languages: Lao and English ➤ shall record, acknowledge by email or telephone, track, resolve calls and report resolution by email or telephone using help desk resources and other support resources ➤ shall escalate calls to LNSW CEO for calls not resolved from the submitter’s perspective within 24 hours</td>
</tr>
</tbody>
</table>
### Annex D: Service Level Frameworks and Models for LNSW

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Service Name</th>
<th>Short Description</th>
<th>Short Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>LNSW Trader’s Workbench</td>
<td>Registered Traders conduct trade regulatory transactions with Lao PDR government agencies using</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>‣ Web-based service; or</td>
<td>Available to Traders near 24x7;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>‣ LNSW XML message service</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Fee and revenue management service</td>
<td>› Acceptance of payments on-line</td>
<td>› Available at least near 24x7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>› Acceptance of payments made not on-line at LNSW office</td>
<td>› M-F, 07:00 – 18:00</td>
</tr>
</tbody>
</table>

The list of participating Government Agencies is: <insert list>

The list of Government Agency sites for which LNSW supplies services is <insert list of locations, addresses, primary point of contact>

The list of regulatory documents serviced through LNSW is: <insert list and administering agency, and locations>

### ANNEX B: Service Level Specifications

LNSW is an internet-based service and therefore there is opportunity for high variability in performance outside the LNSW OPERATOR control. LNSW Operator operates LNSW under agreement with Government of Lao PDR and its performance is a subject of a separate agreement that encourages LNSW to provide a reasonable level of performance with penalties provided for poor performance on behalf of all LNSW users.

Under this SLA, Service Level Specifications shall defined in terms of availability only for LNSW and performance only for responses to Help Desk calls for support.

Availability will be measured by LNSW meters and reports auditable by Government of Lao PDR, help desk logs, feedback to the regulator (LNSW Governance Entity) and client surveys.

TRADER shall make records of non-availability if it seeks credits as set-out in Annex C. For use of on-line facilities, the records of non-availability shall include screen snapshots that show date and time of the event which would be a ‘web page unavailable’ event. TRADER recognises that the unavailability of LNSW may be due to problems on the TRADER’s facility, or at the TRADER’s ISP or in the internet in general, none of which are for the account of LNSW OPERATOR.
### Availability

Availability is a measure of the degree to which a particular service is accessible, usable and substantially offers the functions defined for the service.

<table>
<thead>
<tr>
<th>#</th>
<th>Service Name</th>
<th>Availability Period</th>
<th>Availability (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Help Desk – web pages</td>
<td>24x7</td>
<td>99%</td>
</tr>
<tr>
<td>1.2</td>
<td>Help Desk – telephone calls</td>
<td>24x7</td>
<td>99%</td>
</tr>
<tr>
<td>2.</td>
<td>LNSW Trader’s Workbench</td>
<td>24x7</td>
<td>95%</td>
</tr>
<tr>
<td>3.1</td>
<td>Fee and rev. mgmt. service – online payments</td>
<td>24x7</td>
<td>95%</td>
</tr>
<tr>
<td>3.2</td>
<td>Fee and rev. mgmt. service – off-line payments</td>
<td>M-F, 09:00 – 16:00</td>
<td>90%</td>
</tr>
</tbody>
</table>

### Availability Restrictions

Availability restrictions specific to the Services covered under this Agreement are as follows:

- Scheduled Maintenance Window: 10pm Sunday to 6am Monday
- Back up Window: 12:01am – 2am daily

### Performance

Performance is measured as response times reasonably within the control of the LNSW Operator. Traffic through the internet is excluded in all cases.

TRADER shall make records of under-performance if it seeks credits as set-out in Annex C.

<table>
<thead>
<tr>
<th>#</th>
<th>Service Metric</th>
<th>Definition</th>
<th>Target</th>
<th>Breach</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Time to resolve Help Desk service issue to the TRADER's satisfaction.</td>
<td>This is the time period between a call logged online or by telephone related to a service failure and the time that a credible resolution is communicated to the requestor. Measured per call.</td>
<td>&lt; 1 hour</td>
<td>&gt; 48 hours</td>
</tr>
</tbody>
</table>
ANNEX C: Payments and Credits

Billing and payments
The fee rates shall be agreed between LNSW OPERATOR and Government of Lao PDR and may change from time to time with at least 60 days prior notice on the public web-site and by message to TRADER. The fee rates shall be published on the LNSW public web-site.

As a condition for use of LNSW, TRADER shall pay a one-time registration fee in force on the date of the registration application according to the fee agreed between LNSW OPERATOR and Government of Lao PDR. The registration fee includes the first year membership fee.

As a condition of continued use of LNSW, TRADER shall be due to pay the annual membership fee at the fee rate in force on each anniversary of the date of the registration application according to the fee agreed between LNSW OPERATOR and Government of Lao PDR. The fee may change from time to time. The fee shall be published on the LNSW public web-site. LNSW OPERATOR shall invoice TRADER for the membership fee each year at any time before the due date but not less than 14 days before the due date.

TRADER shall be due to pay transaction fees for use of LNSW according to the published fee and payment schedule.

LNSW OPERATOR shall record, keep safe and make available TRADER accounts and statements. TRADER may request a statement at any time and LNSW OPERATOR shall provide detailed statement within 14 days. Payments shall be made by TRADER to LNSW OPERATOR according to the methods described on the LNSW public website.

LNSW OPERATOR shall cooperate in good faith with TRADER and the Government of LAO PDR appointed regulator to resolve disputes concerning statements and payments.

Credits
LNSW Operator shall
1. collect operational and performance statistics auditable by Government of Lao PDR as specified in the functions and features of LNSW agreed between Government of Lao PDR and LNSW OPERATOR;
2. record and analyse statements and evidence by TRADER concerning failure to meet availability and performance commitments agreed in this SLA;
3. calculate Credits if any due to TRADER and account for these in the TRADER accounts;
4. cooperate in good faith with TRADER and with the Government of LAO PDR appointed regulator to resolve disputes concerning Credits.
TRADER shall be entitled to keep records and make claims for Credits when it assesses that LNSW OPERATOR fails to meet its service level commitments under the SLA.

Credits can only be used as deductions for payments due from TRADER to LNSW OPERATOR.

LNSW shall pay Credits according to the following schedule:

1. **Availability**
   a. for the second and each subsequent reported unavailability incident for each calendar month for which LNSW OPERATOR accepts responsibility the Credit shall be a 10% of the TRADER’s transaction fees for the month per incident.
   b. if LNSW OPERATOR disputes the claim, but this is later upheld by the LAO PDR appointed regulator, the Credit shall be 20% of the TRADER’s transaction fees for the month per incident.

2. **Performance**
   a. for the second and each subsequent reported performance failure for each calendar month for which LNSW OPERATOR accepts responsibility the Credit shall be a 10% of the TRADER’s transaction fees for the month per incident.
   b. if LNSW OPERATOR disputes the claim, but this is later upheld by the LAO PDR appointed regulator, the Credit shall be 20% of the TRADER’s transaction fees for the month per incident.

Notwithstanding the penalties as calculated above, the maximum penalty per month is 100% of the TRADER transaction fees for the month.

Deliberate tampering with the meters and performance reports shall be a serious breach for which there are provisions in the Agreement between LNSW OPERATOR and Government of Lao PDR including a penalty equalling the total gross value of the CONCESSIONAIRE AGREEMENT for the entire period of the AGREEMENT and termination of the AGREEMENT.
Annex D: TRADER Usage Agreement
TRADER agrees to only use LNSW in accordance with the LNSW TRADER Manual for the purposes intended for the regulatory procedures legislated in Laos for cross-border trade.

TRADER recognises that transactions submitted through LNSW to a Government Agency are equivalent to direct dealing with the Government Agency and shall use LNSW with due care. Misuse of LNSW shall carry the penalties for misconduct otherwise attributed to TRADER by the laws of the Lao PDR.

TRADER transactions conducted through LNSW, authorise LNSW to act on the instructions entered including submission of permit requests, ACDD and other such requests and declarations to designated Government Agencies.

TRADER shall have and keep a username and a password to login to LNSW and to access LNSW functions. TRADER may have or be given additional credentials to login and to access LNSW functions. TRADER shall take all reasonable precautions to keep safe and secret and not to disclose username, password or other credentials to any other person. Likewise, TRADER may create profiles for its employees and thereby authorise those employees to use LNSW Trader’s Workbench on their behalf.

TRADER and its authorised employees should ignore any emails even if they appear to come from LNSW that require you to input user, password or credentials. These emails may come from third parties seeking to use the information to access to LNSW under your identity. Likewise, TRADER and its authorised employees shall not login to LNSW other than through the portal described in the LNSW TRADER Manual for GA.

TRADER recognises that all transactions conducted by TRADER through LNSW will be logged and that log is available to persons authorised by the Government of Lao PDR. The history of all such transactions may be used by such persons as may be necessary.

TRADER shall not attempt to modify any data held within LNSW by any means other than LNSW functions to which TRADER has been granted access by LNSW GA Administrator.

TRADER shall notify LNSW OPERATOR of (a) access to functions that TRADER would not reasonably have, (b) any transactions accidentally or erroneously transacted by TRADER through LNSW, and (c) malpractice of any form that comes to TRADER’s attention concerning use of LNSW by any person.

Annex E: Definitions
<to be inserted>
9 Appendix C: Framework / Model Terms: Statement of SLO by each LNSW GA

The following framework could be used as the basis for a statement of service level objectives. Each government agency participating in LNSW should be document a specific version in an official presentation in Lao, in English and perhaps in other languages.

Note: The words here are used to indicate contents but should be settled in consultation within each GA and between each GA and its client community.

<insert GA letter head> <insert GA Name, etc>

Statement of Service Level Objectives

This Statement of Service Level Objectives

is published by LNSW-GA (authorized officer: ….) and is valid from mm dd, yyyy until mm dd, yyyy or until further notice

is addressed to Traders registered with Lao National Single Window (LNSW), prospective Traders in international goods and the general public with Lao PDR and abroad

sets out the Service Level Objectives of LNSW-GA concerning use of Lao National Single Window and the administration by LNSW-GA of xyz-permits

is intended by LNSW-GA to provide further transparency and clarity to Traders and the public concerning the administration and procedures of LNSW-GA for xyz-permits and as a platform for continuous quality and performance improvement within LNSW-GA

For information concerning LNSW refer to www.LNSW.com.

The services of LNSW-GA pertinent to use of Lao National Single Window and addressed by this Statement are as follows:

- responding to enquiries by registered Traders submitted through LNSW concerning xyz permit 1, xyz permit 2 ...
- responding to queries by unregistered persons submitted through LNSW
- processing permit requests by registered Traders submitted through LNSW concerning xyz permit 1, xyz permit 2 ...
- etc...

Further information concerning LNSW-GA services and procedures can be found at www.LNSW-GA.gov.la and www.LTP.gov.la

LNSW registered Traders and the public have the rights to expect honest, accurate, timely, responsive and courteous response by LNSW-GA to their requests for or concerning permit 1, xyz permit 2 ....
Traders and the public have the responsibility to use the services of LNSW-GA under this Statement of Service Level Objectives in good faith and without frivolous intent. Traders have the responsibility to provide correct and complete information concerning their requests and reply promptly to queries by LNSW-GA officers if the service level objectives are to be met.

We endeavour to provide the following the standards of service:

- **Courtesy**
  Staff will be courteous and helpful and will protect the privacy and confidentiality of information provided by the Trader

- **Quality**
  Standards of quality vary according to your circumstances. For LNSW GA, the quality of service might relate to the accuracy of the information provided, e.g.
  “LNSW-GA will at all times endeavour to respond to the users of its services with accuracy and necessary completeness.”

- **Timeliness**
  This would be broken down according to the broad categories of services offered. For example, target for maximum wait for a response to a Trader’s request, or to receive a certificate, licence or permit.
  Timelines should always be calculated from the point of view of the Trader – e.g. from the time a CLP request has been submitted by the Trader to the time that the response is available to the Trader, e.g.
  “Within LNSW-GA officer hours, 80% of requests for xyz-permits will be risk assessed for ‘straight-through’ processing with the xyz-permit issued to the Trader within one hour of submission.
  For submission not selected for ‘straight-through’ processing, within one hour of being presented in the officer’s in-tray, the Receiving Officer within the LNSW-GA will inspect the xyz-permit request and respond either by detailed, specific query to the Trader or by forwarding the request to the next step in the process, with the status indicated accordingly in the LNSW Trader’s Workbench.”

- **Reliability**
  Where timeliness relates to target maxima, reliability relates to the majority of service requests, e.g. for an initial reliability commitment
  “In 80% of cases not selected for straight-through processing, the Receiving Officer within the LNSW-GA will meet the Timeliness target for CLP requests.”
Accessibility

Hours of operation; the number and spread of service points.

Measurement and reporting

The means by which the SLO is monitored, e.g.
"LNSW provides automatic time-stamping of the submission of Traders and the public and of actions taken by LNSW-GA and its officers. The management of LNSW-GA has real-time dashboards for monitoring workflows and bottlenecks within LNSW-GA. On the first business day of each month, a report will be published on our web-site to show key statistics and performance against this Statement of Service Level Objectives for the previous month, the month before that and the same month in the previous year."

Suggestions and complaints

The Manager, LNSW-GA will take action to respond and resolve the complaints and suggestions of registered Traders and to take complaints and suggestions of the public into consideration.

The procedures are as follows:

i. For registering a complaint or suggestion: use the ‘service desk’ function on the LNSW Web Site (www.LNSW.com) to submit a summary of the issue and contact details for a reply.

   Issues pertinent to LNSW-GA and submitted in this manner will be resolved by the LNSW Help Desk personnel or will be forwarded to LNSW-GA for action.

ii. For follow-up: again use the LNSW Trade Portal or, for issues specific to this LNSW-GA contact The Manager by email: (LNSW-GA-manager@LNSW.gov.la) or telephone (9999 9999). All follow-up calls will be registered.

iii. For response: LNSW Help Desk will acknowledge receipt of the complaint or suggestion with an advice concerning its disposition. Either LNSW Help Desk personnel or, where relevant, an authorised LNSW-GA officer will provide a formal reply.

Administration of this statement

LNSW has established an SLO unit to monitor performance and feedback and recommend adjustments in procedures and resources when necessary to meet SLO targets.

LNSW-GA will maintain and keep up-to-date this Statement of Service Level Objectives. From time to time, LNSW-GA will seek to engage with registered Traders and / or the general public in order to improve this Statement and the operations of LNSW-GA.
10 Appendix D: Research Bibliography

7. The Chartered Institute of Purchasing and Supply, How to prepare Service Level Agreements, (www.cips.org), Apr 2009
Annex E:

Fee Structure and Revenue Sharing Model Report
1 Management Summary

1.1 Summary

The purpose of this deliverable is to design a Revenue Model and Fee Structure for Lao PDR National Single Window (LNSW). The document takes into account the international experience with single window fee structures and places the proposed fee structure into the context of WTO rules and disciplines. It also addresses the current Laos PDR legal framework as it pertains to the levying of fees for government services.

The Technical Assistance assignment for preparation of a LNSW was initiated with the possibility of World Bank finance for all or part of the implementation costs with operating costs notionally to be supported by fee-recovery. Circumstances have changed in light of the proposed concessionaire and joint venture agreement between GOL and BV.

Nevertheless, in developing this Fee Structure and Revenue Model, a number of assumptions had to be made. The first is that GOL may prefer to finance some or all of the costs of LNSW through user fees. The second is that the build, installation and implementation costs could be financed through a donor agency, such as the World Bank.

In dollar terms, this would mean that the donor agency could finance approximately $8.4 million USD with user fees financing recurrent costs of approximately $2.1 million USD per annum. Should full costs be financed through user fees, an alternate scenario is included in the report in which full LNSW costs are supported by user fees at a higher rate than the core proposal.

The fee structure is transaction based and the deliverable addresses the various options in defining a transaction. In doing so, a third assumption regarding LCD volumes had to be made. Volume statistics on Customs declarations as generated by the LCD proved to be difficult to obtain and when obtained of suspect validity. As a result, other more reliable volume statistics arising from this project’s Functional and Technical Architecture deliverable were used as a planning assumption and form the basis for the fee structure proposal. The F&T&A estimates are more conservative than those obtained from LCD and as such provide a much safer basis for planning and design.
The fourth and final assumption relates to the number of traders in the ASYCUDA system. The Revenue Sharing model proposed in this document is dependent on LNSW registration and annual fees. As a result, it was necessary to assume that the ASYCUDA derived number for traders was, in order of magnitude, accurate and correct. This document also makes a number of observations and recommendations on the current Certificate, Licensing and Permit regime. It will be important to ensure that this regime is modernized and streamlined in order that LCP clients and stakeholders receive measurably improved service as a result of LNSW implementation.

Even taking into account the range of assumptions that had to be made in the design of the Fee Structure and Revenue Model, it must be stated that the mechanisms for fees described and the methodology of revenue sharing would stand on their own should these assumptions change. The variable in this case is that the amounts charged for transaction fees and registration/annual fees would have to be adjusted. Lastly, this deliverable also raises the option of charging no fees for LNSW and the rationale therefor.
2 Introduction

2.1 Background

This report is one deliverable in the project “Technical Assistance for the Preparation of a Lao PDR Single Window”. Specifically, it is contained in Task Cluster 3 and provides a recommendation on the fee structure to be paid by clients of the Lao National Single Window (LNSW) and a recommendation on the disbursement of resultant revenue amongst government agencies as such revenue arises from the collection of LNSW fees. It provides an outline of the legal and international framework within which LNSW is being developed and sets out comparisons of fee structures in various countries which currently have functioning single window operations.

The report presents the estimation of transaction volumes that take place in the current non-Single Window environment, a description of those transactions along with any fees currently being charged. These volumes, set against the projected costs of the National Single Window for Lao PDR, form the basis for determining an appropriate fee and revenue sharing structure. Finally, the report provides a recommendation on a LNSW fee structure and revenue sharing from collected fees.

2.2 International Context

The United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) Recommendation no. 33 defines Single Window as;  

A facility that allows parties involved in trade and transport to lodge standardized information and documents with a single entry point to fulfil all import, export and transit-related regulation requirements. If information is electronic, then individual data elements should only be submitted once.

The objectives of a Single Window include:

a. To implement business procedures that enable (but not necessarily dictate) trade-related regulatory processes;
   I. Whereby a trader (directly or through a broker or agent) would interact on-line in real-time through a single entity (window),
   II. Use that window…as the conduit for subsequent intermediate transactions…,
   III. For the final transaction that obtains the release of goods.

b. To facilitate growth towards a future where the ideal would be for a turn-around time for the release instruction back to the trader without human intervention within seconds.

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Laos is undertaking the design and implementation of a National Single Window as part of its obligations to the Association of Southeast Asian Nations (ASEAN) which promotes single window portals amongst its member states. Currently, six government departments are involved in the customs clearance process including Customs which has primary responsibility for the release of goods and a range of sub-departmental agencies whose responsibilities include the issuance of permits or certificates and inspection of specified goods. These agencies are as follows:

<table>
<thead>
<tr>
<th></th>
<th>Agency Name</th>
<th>Ministry Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Customs Department</td>
<td>Ministry of Finance</td>
</tr>
<tr>
<td>2</td>
<td>Department of Agriculture</td>
<td>Ministry of Agriculture and Forestry</td>
</tr>
<tr>
<td>3</td>
<td>Department of Livestock and Fisheries</td>
<td>Ministry of Agriculture and Forestry</td>
</tr>
<tr>
<td>4</td>
<td>Food and Drug Department</td>
<td>Ministry of Health</td>
</tr>
<tr>
<td>5</td>
<td>Import-Export Department</td>
<td>Ministry of Industry and Commerce</td>
</tr>
<tr>
<td>6</td>
<td>Department of Standards and Metrology</td>
<td>Ministry of Science and Technology</td>
</tr>
</tbody>
</table>

Other agencies involved in trade clearance or regulation are the Department of Defence Industry of the Ministry of National Defence, Ministry of Post and Telecommunications, Ministry of Energy and Mines, the Department of Monetary Policy of the Bank of Lao PDR and the Ministry of Information, Culture and Tourism.

Of the departments and agencies involved in the Customs clearance process, only Customs has any significant level of automation through ASYCUDAWorld. In addition to the Laotian Customs Department (LCD), the Ministry of Agriculture (Plant Quarantine and Animal Quarantine) and the Food and Drug Inspection Unit of the Ministry of Health operate at the border. This project’s “Import/Export ‘As Is’ Process Report” indicated that there are,

“... numerous areas of where procedures can be streamlined and simplified, areas in which inter agency coordination of verification and inspection functions can be strengthened. The general lack of automation and underutilization of existing systems are major areas where improvements can be made. Operational processes are primarily paper based (only Customs and Treasury have operating automated processing systems).”

Further, other government agencies which issue licences, permits, certificates and letters of all types are not automated.

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This obviously poses significant challenges in the design and implementation of NSW and in the development of an appropriate fee structure and its operation. Lack of automation renders the process of levying and collecting fees more difficult and impedes the process of moving towards more modernized methodologies such as periodic payment (e.g. monthly) and automatic debit of fee invoices against client accounts.

However, fees can be levied and collected in a manual environment and the proceeds of that process can be used to improve the level of automation of all government players in the clearance process over the medium term.

### 2.3 International Constraints on the Levying of SW Fees

In terms of financing the LNSW, it is assumed that the Government of Laos PDR will not be able to finance the development, implementation, maintenance and expansion of the system. Financing of the LNSW will, therefore, be dependent in whole or in part on the proceeds of fees built into the SW system. However, there are specific international constraints on the levying of fees in this context to the effect that such fees cannot be imposed as a parallel form of tariff, cannot restrain trade and must not extend beyond recovery of SW costs of establishment, maintenance and expansion.

Specifically, the World Trade Organization’s (WTO) user fee requirement is stated in Article VIII of the General Agreement on Tariffs and Trade (GATT); 4

> All fees and charges of whatever character other than import and export duties and other than taxes… imposed by the contracting parties or in connection with importation or exportation shall be limited in amount to the approximate costs of the service rendered and shall not represent an indirect protection to domestic products or a taxation of imports or exports for fiscal purposes.

This provision is not inconsistent with the ASEAN position on National Single Window.

As a result, any fees charged for participation in National Single Window must be based solely on recovery of costs of the services rendered. On the other hand, the WTO and GATT do not preclude NSW fees being used for system expansion including expansion of automation. It will be necessary to determine the level of participation of donor agencies in the funding for LNSW, particularly with respect to front end design, software, hardware and other infrastructure costs.

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4. General Agreement on Tariffs and Trade (GATT), Article VIII “Fees and Formalities Connected with Importation and Exportation.”
2.4 International Comparison on Fees and Fee Structures

The international landscape with respect to paying fees for use of a single window type system is mixed. A number of countries such as the US, Finland and Canada charge no fees to the client community on the basis that establishment of a Single Window is an internal re-engineering initiative which will result in increased savings. Others charge a range of fees such as registration fees, annual fees, transaction fees and document fees.

Governance of these Single Window entities is also mixed. Some are managed by internal, interagency government committees, some by mixed public/private sector organizations and some by private sector companies.

The international comparisons contained in the following chart are derived from study tours which took place in 2012 and research data from subsequent analyses.

### International Comparisons on SW Fees and Fee Structures

<table>
<thead>
<tr>
<th>Country</th>
<th>System</th>
<th>Fee</th>
<th>Participation</th>
<th>Governance</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>International Trade Data System (ITDS)</td>
<td>None - estimates indicate savings to operational budgets</td>
<td>48 Agencies, trade and transportation community</td>
<td>Interagency Board Chaired by US Customs and Border Protection</td>
<td>Provides a facility for integrated government oversight of overseas trade through utilization of a single window. Provides a facility through which government agencies can electronically submit all information</td>
</tr>
<tr>
<td>Malaysia</td>
<td>MyTrade</td>
<td>Fixed price per permit for electronic permits -EDI--$.25 USD/kilobyte or -$1.25/doc. + One time registration @ $65-$125 + -Mailbox charges @ $20-$40</td>
<td>17 permit issuing agencies</td>
<td>Private sector-Dagang Net Technologies</td>
<td>Connects trading communities with relevant government agencies Single platform on which the trade community can exchange documents required for export, import and transit</td>
</tr>
<tr>
<td>Finland</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Sweden</td>
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<tr>
<td>Hong Kong</td>
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<tr>
<td>Singapore</td>
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<tr>
<td>Senegal</td>
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<td></td>
</tr>
</tbody>
</table>

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### Annex E: Fee Structure and Revenue Sharing Model Report

<table>
<thead>
<tr>
<th>Country</th>
<th>System</th>
<th>Fee</th>
<th>Participation</th>
<th>Governance</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finland</td>
<td>PortNet</td>
<td>None</td>
<td>-Customs&lt;br&gt;-Port Authorities&lt;br&gt;-Ships Agents&lt;br&gt;-Traffic &amp; logistics clients&lt;br&gt;-21 largest ports</td>
<td>Finnish Maritime Administration (FMA)</td>
<td>Includes all maritime requirements, Customs processes and terminal notifications regarding containers. Mandatory participation</td>
</tr>
<tr>
<td>Sweden</td>
<td>Sweden Single Window</td>
<td>None</td>
<td>Full range of relevant government agencies-traders, brokers and agents</td>
<td>Government</td>
<td>-Import, export and transit&lt;br&gt;-Electronic funds transfer&lt;br&gt;-Trade Registration&lt;br&gt;-Agricultural permits&lt;br&gt;-Hunting and gun registration</td>
</tr>
<tr>
<td>Singapore</td>
<td>TradeNet</td>
<td>One time registration fee Monthly fee to maintain account</td>
<td>35 government agencies involved in border clearance, trade and transportation community</td>
<td>Private Crimson Logic</td>
<td>Provides the trading community with an electronic means of submitting trade documentation to all relevant government authorities. -business data -customs clearance -export -transit -permits Import/export documents can be submitted at a single point</td>
</tr>
<tr>
<td>Senegal</td>
<td>Orbus</td>
<td>-One time $200 USD subscription fee&lt;br&gt;-$10 per transaction&lt;br&gt;-$2 additional document fee</td>
<td>-Customs&lt;br&gt;-Banks&lt;br&gt;-Insurance Companies&lt;br&gt;-Currency and Credit Department (exchange permits)&lt;br&gt;-Plant Protection&lt;br&gt;-Livestock</td>
<td>Ministry of Commerce chairs a public/private committee</td>
<td>Full optimization of the Senegal SW has been impeded by the slow pace of automation</td>
</tr>
</tbody>
</table>

In addition, Canada charges no fee for its single window type facility.
2.5 Legal Framework

From the standpoint of the international legal framework, as noted above in Section 2.3 above, the application of user fees must be on a cost recovery basis only and cannot be constructed as a trade protective measure or as a means to collect revenue beyond the system and maintenance costs for LNSW. Nationally, a “Decree on Fees and Service Charges” (amended version 2008) is in place. While this Decree does not mention or in any way provide a precise legal framework for LNSW fees, it does establish the foundation for the levying of fees for specified government services.

Article 2 of the Decree states;⁶

<table>
<thead>
<tr>
<th>Fees and Service Charges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charges are collected by the concerned State sector for issuing certificates and licenses under administration by the State from individuals and legal entities and organizations that carry out their rights to perform economic and social activities throughout the sector concerned in the Laos PDR.</td>
</tr>
</tbody>
</table>

As part of the establishment of the legal foundation for LNSW, a legal framework, initially in the form of a decree and ultimately through legislation, will have to be specifically developed for LNSW. This legal framework should make provision for the establishment of LNSW fees based on a cost recovery criterion and provide reference to a revenue sharing formula that can be administered and modified by the LNSW governance body subject to established criteria on costs, expansion, maintenance and development.

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⁶ Lao People's Democratic Republic, Decree of the President of the Lao People's Democratic Republic on Fees and Service Charges, Amended Version 2008.
3 Current Laos Customs Clearance Fee Regime

3.1 Customs Clearance System User Fee

LCD currently charges a user fee of 100,000 Kip or approximately $12.00 USD per declaration. This fee is applied to each customs declaration (ACDD) and is used to support the use, expansion and maintenance of ASYCUDA.

The user fee is collected on a transaction by transaction basis either in cash or through a bank transfer certificate which also must be presented in person by the importer or by his/her agent.

3.2 Trade Certificates, Licences and Permits

Currently, Lao PDR government agencies involved in the border clearance process issue permits and levy fees as follows;
Permits, certificates and licenses currently issued and their associated costs, where they are known or exist are contained in the following table: 7

<table>
<thead>
<tr>
<th>Document</th>
<th>Issuing Agency</th>
<th>Current Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Lodgement of Import Plan and receipt acknowledgement  • Road Vehicles  • Spare Parts  • Temporary Car Imports 1000-2012</td>
<td>DIMEX</td>
<td>Unspecified</td>
</tr>
<tr>
<td>2 Application for Import/Export License  • Road Vehicles  • Petroleum and Gas  • Spare parts-road vehicles  • Temporary Car Imports 12,000-2012 16000-2018</td>
<td>DIMEX</td>
<td>10,000 LAK</td>
</tr>
<tr>
<td>3 Application for Import for Re-export transit permit  • Commodities on the list of controlled goods 70-2012 100-2018</td>
<td>DIMEX</td>
<td>Nil</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Document</th>
<th>Issuing Agency</th>
<th>Current Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application for Vietnam Transit Certificate for dangerous goods</td>
<td>DIMEX</td>
<td>Nil</td>
</tr>
<tr>
<td>4-2012 (1 trader)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Application for Vietnam Transit Certificate for Non Dangerous Goods</td>
<td>DIMEX</td>
<td>Nil</td>
</tr>
<tr>
<td>75-2012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Application for Certificate of Product Eligibility for Certificate of</td>
<td>DIMEX</td>
<td>Unspecified</td>
</tr>
<tr>
<td>Origin Quantity unknown</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Application for Certificate of Origin for trader in the import country</td>
<td>DIMEX</td>
<td>Fees based on the value of the goods</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-Less than 10k-40k LAK</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-10,001-30,000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-60kLAK</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-61,000 or more-100k LAK</td>
</tr>
<tr>
<td>Application unknown</td>
<td>MOIC</td>
<td>10,000 LAK</td>
</tr>
<tr>
<td>Application for Import/Export License</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Unmilled rice, low standard rice, premium rice, semi milled or fully</td>
<td></td>
<td></td>
</tr>
<tr>
<td>milled rice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Steel bars and transformed steel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Cement, Mortar, Concrete</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8000-2012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11,000-2018</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drugs/Form 1 request for Form 2</td>
<td>Department of Food &amp; Drugs (Drugs Division)</td>
<td>See below Form 2</td>
</tr>
<tr>
<td>• Drugs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Food Supplements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Traditional medicines used for medicinal purposes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>360-2012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>510-2018</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drugs (Form 2)/Registration Certificate (detailed chemical information)</td>
<td>Department of Food and Drugs (Drugs Division)</td>
<td>2,000 LAK</td>
</tr>
<tr>
<td>360-2012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>510-2018</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Document</td>
<td>Issuing Agency</td>
<td>Current Fee</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>11 Drugs—Request for Re-registration certificate</td>
<td>Department of Food and Drugs (Drugs Division)</td>
<td>Unspecified</td>
</tr>
<tr>
<td>2012 510-2018</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 Request for Letter of Approval for import of drugs</td>
<td>Department of Food &amp; Drugs (Drugs Division)</td>
<td>20,000 LAK</td>
</tr>
<tr>
<td>(per importation for which a valid Registration Certificate has been</td>
<td></td>
<td></td>
</tr>
<tr>
<td>issued) 1000-2012 1400-2018</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13 Request for Import Permit (Food)</td>
<td>Department of Food and Drugs (Food Division)</td>
<td>1,000 LAK/ permit form 50,000 LAK</td>
</tr>
<tr>
<td>1400-2012 2000-2018</td>
<td></td>
<td>invoice</td>
</tr>
<tr>
<td>14 Application for Registration Certificate for food supplements</td>
<td>Department of Food and Drugs (Food Division)</td>
<td>Unspecified</td>
</tr>
<tr>
<td>1000-2012 1070-2018</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15 Application for Import/Export License for Timber, Wood</td>
<td>Forestry Division of Provincial Office of the Ministry of Agriculture and</td>
<td>30,000 LAK</td>
</tr>
<tr>
<td>Products, and Forest Products</td>
<td>Forestry and Forestry</td>
<td></td>
</tr>
<tr>
<td>10-2012 20-2018</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 Application for Import Permit for Plants (Agricultural Products)</td>
<td>Provincial Division of the Ministry of Agriculture and Forestry</td>
<td>Unspecified</td>
</tr>
<tr>
<td>(Import Certificate)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1900-2012 2600-2018</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17 Application for Registration Certificate for Plants (Agricultural</td>
<td>Department of Agriculture, Ministry of Agriculture and Forestry</td>
<td>Unspecified</td>
</tr>
<tr>
<td>Products</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1000-2012 1070-2018</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18 Application for Permit for the import of pesticides and fertilizers</td>
<td>Department of Agriculture of the Provincial Division of the Ministry of</td>
<td>Unspecified</td>
</tr>
<tr>
<td>1400-2013 1900-2018</td>
<td>Agriculture and Forestry</td>
<td></td>
</tr>
<tr>
<td>19 Application for Registration Certificate for Plants Pesticides and</td>
<td>Department of Agriculture, Ministry of Agriculture and Forestry</td>
<td>Unspecified</td>
</tr>
<tr>
<td>Fertilizers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100-2012 150-2018</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Document</td>
<td>Issuing Agency</td>
<td>Current Fee</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>------------------------</td>
</tr>
<tr>
<td>20 Request for Technical Certificate for import of livestock and fish</td>
<td>Provincial Division of Livestock and Fisheries of the Department of Agriculture of the Ministry of Agriculture and Forestry</td>
<td>Unspecified</td>
</tr>
<tr>
<td>2500-2013 3500-2018</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21 Application for Certification of Quality for Imported goods. (construction materials, electronic equipment and others listed in the list of controlled products 120-2012 170-2018</td>
<td>Provincial Division of the Department of Standards and Metrology of the Ministry of Science and Technology</td>
<td>Unspecified</td>
</tr>
<tr>
<td>120-2012 170-2018</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22 Application for Import License for explosive substances 7-2012 10-2018</td>
<td>Department of Defence Industry of the Ministry of National Defence</td>
<td>Unspecified</td>
</tr>
<tr>
<td>24 Application for Import License for Telecommunications equipment 240-2012 340-2018</td>
<td>Ministry of Post and Telecommunications</td>
<td>Unspecified</td>
</tr>
<tr>
<td>23 Application for Import License for Telecommunications equipment 240-2012 340-2018</td>
<td>Ministry of Post and Telecommunications</td>
<td>Unspecified</td>
</tr>
<tr>
<td>25 Application for Import/Export License for gold bars Import Permit for Gold Bars Export Permit for Gold Bars (Gold bars used as a means of international payment) 10-2012 15-2018</td>
<td>Ministry of Monetary Policy, Bank of Laos PDR</td>
<td>Unspecified</td>
</tr>
<tr>
<td>26 Application for Import/Export License for Publications Import/Export Permit for Publications 100-2012 150-2018</td>
<td>Ministry of Information, Culture and Tourism</td>
<td>5000 LAK for Application Form 100,000 LAK for License</td>
</tr>
<tr>
<td>27 Request for Exemption/Concession Certificate Volume-Unknown</td>
<td>Vientiane and Provincial offices of LCD</td>
<td>Unspecified</td>
</tr>
</tbody>
</table>
It should be noted that many of these permits either attract no fee or the fee amount is unknown or unspecified. In addition, there are numerous opportunities to streamline permits that cover different stages of import or export of a certain commodity.

In terms of proportional share of the total permits recorded, the following breakdown applies:

<table>
<thead>
<tr>
<th>Government Agency</th>
<th>% of all CLP issued</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOIC/DIMEX</td>
<td>64%</td>
</tr>
<tr>
<td>Ministry of Agriculture</td>
<td>21%</td>
</tr>
<tr>
<td>Ministry of Health (Food and Drug)</td>
<td>10%</td>
</tr>
<tr>
<td>• Ministry of Science and Technology</td>
<td></td>
</tr>
<tr>
<td>• Ministry of National Defence</td>
<td></td>
</tr>
<tr>
<td>• Ministry of Post and Telecommunications</td>
<td></td>
</tr>
<tr>
<td>• Ministry of Energy and Mines</td>
<td></td>
</tr>
<tr>
<td>• Bank of Laos</td>
<td></td>
</tr>
<tr>
<td>• Ministry of Information, Culture &amp; Tourism</td>
<td>5%</td>
</tr>
</tbody>
</table>

It should be noted that the MOIC share of the total would be closer to 75% when Certificates of Origin are taken into account. At the same time, a number of permits and certificates may be combined or discontinued in any re-engineering initiative leaving the relative volume share within the same order of magnitude. These proportional breakdowns are important to the issue of revenue sharing a cost recovery LNSW fee.

See Recommendation number 3 in Section 9, “Revenue Sharing” (below) with respect to the application of Certificates, Licenses and Permits to an LNSW Fee Structure.
4 Volumes and Population – the Foundation for LNSW Fee Structure

The three essential building blocks for a viable fee structure are: 1) volume of declarations (Import/Export/Transit); 2) Trade certificates, licenses and permits; and 3) population of the trade community (importers, exporters, brokers, agents, freight forwarders etc.) who will use LNSW.

4.1 Import/Export/Transit Declaration Volumes

In developing a fee structure model, it will be important to have available a base number of volumes of documents generated by the import/export/transit system in order to assess the effectiveness and applicability of any proposed fee structure. The following volumes were obtained from the LCD for the 2010-11 fiscal year. These have been extrapolated into calendar year format in order to provide conformity with other deliverables in this project and serve not as exact volume numbers but volumes in order of magnitude for assessing various fee structure options.

<table>
<thead>
<tr>
<th>Type</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Import ACDD</td>
<td>130,000</td>
<td>140,400</td>
<td>151,632</td>
<td>163,762</td>
<td>176,863</td>
<td>191,012</td>
<td>206,293</td>
<td>222,796</td>
</tr>
<tr>
<td>Export ACDD</td>
<td>230,000</td>
<td>248,400</td>
<td>268,272</td>
<td>289,733</td>
<td>312,912</td>
<td>337,944</td>
<td>364,979</td>
<td>394,177</td>
</tr>
<tr>
<td>Transit ACDD</td>
<td>45,000</td>
<td>48,600</td>
<td>52,488</td>
<td>56,687</td>
<td>61,222</td>
<td>66,120</td>
<td>71,410</td>
<td>77,123</td>
</tr>
<tr>
<td>Total</td>
<td>405,000</td>
<td>437,400</td>
<td>472,392</td>
<td>510,182</td>
<td>550,997</td>
<td>595,076</td>
<td>642,682</td>
<td>694,096</td>
</tr>
</tbody>
</table>

It should be noted that there appears to be a distortion relating to the number of import declarations versus export declarations. The high number of export declarations for 2011 (230,000) compared to import declarations (130,000) indicates that further research is required regarding LCD volumes.

As a result, for purposes of the development of fee structure proposals, the volume assumptions made in the Functional and Technical Architecture deliverable will be used. These are 200,000 declarations of all types (import, export and transit) for 2012 and 300,000 declarations of all types projected for 2018.\(^8\)

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\(^8\) Ibid. Appendix A
4.2 Trade Certificates, Licences and Permits

Analyses for the year 2010 indicate that approximately 32,500 trade certificates, licenses and permits were issued by government agencies referenced in Section 2.2 above. This is projected to increase at an annual rate of 7% per annum to a total of approximately 55,000 in 2018. Using this rate of increase from 2010, the following planning assumption can be made for purposes of determining a LNSW user fee option.

<table>
<thead>
<tr>
<th>Year</th>
<th>Volume</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>32,500</td>
</tr>
<tr>
<td>2011</td>
<td>34,775</td>
</tr>
<tr>
<td>2012</td>
<td>37,229</td>
</tr>
<tr>
<td>2013</td>
<td>39,835</td>
</tr>
<tr>
<td>2018</td>
<td>55,000</td>
</tr>
</tbody>
</table>

Trade certificates, licenses and permits will be processed through the single window environment. Issues with respect to the current CLP regime and fee structure should be addressed as early as possible during LNSW implementation.

4.3 Trader Population

ASYCUDA registrant data indicates that there are approximately 6,000 traders registered in the system including importers, exporters, brokers and freight forwarders. It is estimated that this number will increase to 10,000 by 2018.

Trader population is important in the context of LNSW user fees when considering the option of registration and annual fees to operate within LNSW.

Note: This trader population data requires further confirmation, particularly with respect to the number of active traders.

---

9 Ibid. Appendix B
10 Ibid. Appendix B
5 LNSW Projected Costs

The "Functional and Technical Architecture" document developed by this TA assignment outlines the following costs for LNSW. \textsuperscript{11}

<table>
<thead>
<tr>
<th>LNSW IMPLEMENTATION COSTS</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Project management office (per year)</td>
<td>400000</td>
<td>2</td>
<td>800000</td>
</tr>
<tr>
<td>LNSW Base Licence (1-time)</td>
<td>100000</td>
<td>1</td>
<td>100000</td>
</tr>
<tr>
<td>LNSW CLP workflow build / implementation (per day)</td>
<td>500</td>
<td>100</td>
<td>26</td>
</tr>
<tr>
<td><strong>subtotal</strong></td>
<td></td>
<td></td>
<td><strong>3,100,000</strong></td>
</tr>
</tbody>
</table>

**TOTAL BUILD / INSTALLATION IMPLEMENTATION ESTIMATE**

| DATA CENTRE COSTS                             | 1,880,000      |
| END-USER EQUIPMENT COSTS                     | 2,835,000      |
| LNSW IMPLEMENTATION COSTS                    | 3,100,000      |
| **7,815,000**                                 |                |

| RECURRENT COSTS                              |                |                |                |
| Management office (per year)                 | 200000         | 4 years        | 800000         |
| Technical Support office (per year)          | 400000         | 5 years        | 2000000        |
| LNSW Operations (per person per year)        | 50000          | 4 years        | 6 persons      | 1200000       |
| Help Desk                                    | 50000          | 4 years        | 6 persons      | 1200000       |
| Telecommunications                           |                |                |                |
| - CLPIA ISP / network per site p.a.          | 2000           | 4 years        | 88 sites       | 704000        |
| - mobile device per device p.a.              | 1200           | years          | 70 devices     | 336000        |
| - between data centres (high speed connection) p.a. | 10000         | 4 years        | 2 links        | 80000         |
| - data centre to ISP (high bandwidth) p.a.   | 10000          | 4 years        | 4 links        | 160000        |
| - data centre and LCD / MOIC Vientiane       | 2500           | 4 years        | 2 links        | 20000         |
| Support and Maintenance                      |                |                |                |
| - data centre - physical infrastructure @ % of costs (p.a.) | 5%              | 4 years        | 68000          |
| - data centre - hardware @ % of costs (p.a.) | 10%             | 4 years        | 220000         |
| - end-user equipment @ % of costs (p.a.)     | 10%             | 4 years        | 1240000        |
| - data centre - system software @ % of costs (p.a.) | 20%           | 5 years        | 990000         |
| **Total 5 year recurrent cost**             | **9,018,000**  |

In summary, the cost breakdowns are as follows;

<table>
<thead>
<tr>
<th>Total Build/Installation Implementation Estimate</th>
<th>$7,815,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recurrent Costs</td>
<td></td>
</tr>
<tr>
<td>Year 1</td>
<td>$598,000</td>
</tr>
<tr>
<td>Year 2-5 p/a</td>
<td>$2,105,000</td>
</tr>
</tbody>
</table>

\textsuperscript{11} Ibid.
There are a number of issues that arise from these cost estimates. In the design of the fee structure, what actual costs (central and/or within the participating agencies) will be covered by the LNSW user fee? Will the user fee be expected to cover the procurement and build costs or only recurrent costs including operating and maintenance costs?

In other words, in developing a LNSW Fee Structure based on cost recovery, it is somewhat important to know what the costs to be recovered are. For the purposes of this document, it is currently assumed that the Recurrent Costs of $2,105,000 are the costs for recovery although the design will afford sufficient flexibility to recover a larger amount should that be required. In addition, it is assumed that the $598k Year 1 costs are part of the “Build/Installation Implementation Estimate” to be covered by the World Bank. Should these assumptions be incorrect resulting in an expectation that the LNSW fee structure will be obligated to cover the full amount outlined above; an alternate fee proposal is outlined in Section 6.1.3.
6 Fee Structure – Operating Principles

The following operating principles should be applied to a Single Window environment.

i. The fee structure must be designed to recover costs only and cannot be formulated to provide revenue beyond the defined level of costs. However, cost recovery can include funding for system improvements, modernization and expansion.

ii. The fee structure should be fair and transparent and perceived as being fair and transparent by users and clients.

iii. Fairness and transparency are enhanced by simple, non-complex fee structures which are easily understandable and which foster an increased willingness to comply on the part of clients and users.

iv. In an environment in which expanded trade is to be fostered and encouraged, fee structures should not be constructed so as to impose higher costs on high volume users.

v. Payment of fees should be easy and efficient and the payment process should take full advantage of the system’s automated capacity.

6.1 Fee Structure – Revenue Drivers

There are three potential LNSW cost recovery revenue sources within the current system as follows:12

i. User population, based on the number of traders currently in ASYCUDA, as the source for registration and/or annual fees.

ii. Certificates, Licences and Permit fees.

iii. Clearance transaction fees (ACDD’s, line items or by threshold).

6.1.1 Registration and Annual Fees

Currently there are approximately 6,000 registrants in the ASYCUDA system comprised of brokers, importers, exporters, freight forwarders and other agents. A LNSW registration system should require all of these parties to be registered in order to support appropriate risk management profiles and that effective risk management is applied from application to transaction stages.

In addition, registrant information is essential to ensure the automated completion of clearance documents from information on file pertaining to the registrant subject to the provision of additional information specific to a clearance action. Assuming that all LNSW clients will be registered, a registration and/or an annual fee could be applied.

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12 It is important to note that the term “revenue” as used in this document refers to the revenue necessary to recover the specified costs of LNSW and is not revenue associated with the levying of duties and taxes.
A LSNW registration would result in $600k in first year revenue and second and subsequent annual revenue of approximately $400k (annual plus new registration fees).

Note: The fees used in this model are not meant to suggest a specific fee level. They are used only as an example of what revenue might be generated within the model. Decisions will be required as to whether or not to charge a registration and/or annual fee and if so, what those fee levels should be.

### 6.1.2 Trade Certificates, Licences and Permits

As noted in Section 3.2 (above) there are approximately 27 types of certificates, licenses and permits issued by various government agencies involved in the Customs process. Approximately 40,000 such documents will be issued in 2013 and volume is expected to increase at a rate of 7% per annum to a total of 55,000 in 2018.\(^{13}\) Current fees for these documents are often unknown or unspecified and where there is indication of fees, charges range from 1,000 LAK to 100,000 LAK.

\(^{13}\) See section 4.2 above.
It is clear from reviewing the current license, certificate and permit regime that there is ample room for reform and streamlining. It appears that a number of these documents could be combined and, if fees are to be charged, a more coherent and logical fee structure designed.

The Trade Facilitation Secretariat (TFS) has been working with the GOL and specifically DIMEX to streamline the CLP process and remove non-tariff barriers to the import/export process. The TFS provides some guidance in this area in its “Roadmap for Simplification”. Further work is required on the entire CLP regime both from the standpoint of streamlining and rationalizing the CLP structure and on the applicability of CLP fees in the context of LNSW and related fee and revenue sharing components.

A recommendation on the use of CLP fees for LNSW is contained in Section 9, “Recommendations” No. 3 (below). One possible approach to CLP revision and maintenance of fees is contained in Appendix A.

### 6.1.3 Customs Declarations (ACDDs) and Line Items

The primary challenge in defining a fee structure that is transactional is agreeing upon the definition of a transaction. In the context of this proposal, it is recognized that there are two possible definitions of a transaction when dealing with customs declarations and their use in developing transactional fees. It will be critical in the development of a fee structure for LNSW to agree on two basic definitions of a customs transaction as follows:

I. A Customs Declaration is a document presented electronically or in writing by an importer, exporter or agent declaring goods to customs which he/she is importing or exporting.

II. A Declaration Line Item refers to items being declared on a Customs declaration which may individually attract different tariff treatment or customs/border controls but which on their own could be a Customs declaration (ACDD).

Laos is a member of ASEAN and uses the ASEAN Customs Declaration Document (ACDD) as its Customs declaration. The ACDD in and of itself can be deemed to be a transaction. The Line Items within an ACDD can also be determined to be transactions.

It should be noted that in the current environment, LCD limits the number of Declaration Line Items on an individual ACDD to 10. In addition, they require a separate ACDD for each motorcycle or vehicle in a consignment. This artificially inflates the number of ACDD’s generated and increases costs to the trading community when the 100,000 LAK ($12.00 USD) fee per ACDD is taken into account. It has been recommended through this project that this restriction be removed with a view to streamlining the import/export process, using the functionality of ASYCUDA to maintain the collection of Customs transaction fees.\(^\text{14}\)

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Given that recommendation and the potential for further Customs reform and modernization in the medium to long term, it is recommended that the ACDD not be used in the transactional model for fees since ACDD volumes may not remain stable. Declaration Line Items, on the other hand, are much more stable and not necessarily subject to change as an effect of reform or modernization. Change in volume of Declaration Line items is, however, subject to change through the normal expansion in the growth of trade volume. As indicated in Section 4.1 above, assumptions for ACDD volumes are as follows:

2012—200,000
2018—300,000

Current restrictions regarding vehicles, motorcycles along with the ceiling of a maximum of 10 lines on a declaration serve to compress the average number of line items on an ACDD to approximately 3. Using that number as a planning assumption (i.e. 3 line items per declaration on average), the total number of line items in the two planning years would be as follows:

2012—600,000
2018—900,000

Therefore, a charge of $3.00 USD per declaration line item would result in the following revenue for the two planning years.

<table>
<thead>
<tr>
<th>Year</th>
<th>Line Items</th>
<th>Charge $/Line</th>
<th>Revenue $USD</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>600,000</td>
<td>$3.00</td>
<td>$1.8 million</td>
</tr>
<tr>
<td>2018</td>
<td>900,000</td>
<td>$3.00</td>
<td>$2.7 million</td>
</tr>
</tbody>
</table>

Using the assumption of 3 line items per ACDD, a $3.00/line charge on a declaration would amount to $9.00. Added to the current ASYCUDA transaction fee of approximately $12.00, the total ACDD cost for processing would be $21.00 USD.

The viability of using line items as the basis for a transaction based fee structure is dependent on having confirmable data made available by the LCD. ACDD volumes, line item averages per declaration and indication of reliable subsets of volumes such as transit and export would allow for less reliance on assumptions and a firmer base for cost recovery projections.

A variation of the simple charge per line item approach would consist of a two or three tiered charge per line item based on volume of declaration lines. One version of this approach would be to charge a lower amount for a specific number of line items up to a cut off after which a higher charge per line item would apply. This would be, in effect, a matter of charging more for higher usage. The second version of this approach would be the opposite, that is, a higher charge up to a volume cut off after which a lower charge would apply. This would be, in effect, a savings based on volume.
It is difficult to determine any particular advantage to either of these volume based approaches. A tiered approach is unnecessarily complex and complexity impairs fairness and transparency. Each would be subject to a degree of manipulation if one assumes, for example, monthly billing. In the case of a higher fee for higher volumes, an importer may choose to delay shipments into the next month to ensure the lower fee. Both approaches could distort trade patterns and create a level of uncertainty amongst importers and agents as to what level of charges they are liable for. As a result, a tiered approach is not recommended.

As outlined in Section 5 above, the estimated costs for LNSW are as follows:

<table>
<thead>
<tr>
<th>Total Build/Installation Implementation Estimate</th>
<th>$7,815,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recurrent Costs</td>
<td></td>
</tr>
<tr>
<td>Year 1</td>
<td>$ 598,000</td>
</tr>
<tr>
<td>Year 2-5 p/a</td>
<td>$2,105,000</td>
</tr>
</tbody>
</table>

Assuming that the total build, installation and implementation costs of $7.8 million (USD) plus the approximate $600k costs for Year 1 will be assumed by donor agencies, annual recurrent costs of $2.1 million will be recovered by LNSW.

Using the declaration line item approach outlined in Section 6.1.3 above, a $3.00 charge per line item would recover $1.8 million at 2012 volume levels.

Using the LCD growth estimate of 8%, revenue from this approach for 2013 would be as follows:

<table>
<thead>
<tr>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>600,000</td>
</tr>
<tr>
<td>Line Items</td>
</tr>
<tr>
<td>+8%</td>
</tr>
<tr>
<td>2013</td>
</tr>
<tr>
<td>640,000</td>
</tr>
<tr>
<td>Line Items</td>
</tr>
<tr>
<td>@ $3.00/Line Item</td>
</tr>
<tr>
<td>$1.9 million USD</td>
</tr>
</tbody>
</table>

This represents an overall $200K shortfall from the targeted $2.1 million. However, at the 8% level of growth, revenue begins to overtake costs by 2014.¹⁵

¹⁵ It should be noted that the phasing of implementation will have a direct impact on the funding model. Adjustments and recalculations will have to be made accordingly.
### Fee Structure and Revenue Sharing Model Report

#### Volume Growth

<table>
<thead>
<tr>
<th>Year</th>
<th>Line Items</th>
<th>Growth %</th>
<th>Line Items</th>
<th>Growth %</th>
<th>Revenue</th>
<th>Revenue Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>640,000</td>
<td>+8%</td>
<td>2014</td>
<td>691,000</td>
<td>@ $3.00/Line Item</td>
<td>$2.07 million USD</td>
</tr>
<tr>
<td>2014</td>
<td>691,000</td>
<td>+8%</td>
<td>2015</td>
<td>749,280</td>
<td>@ $3.00/Line Item</td>
<td>$2.2 million USD</td>
</tr>
<tr>
<td>2015</td>
<td>749,280</td>
<td>+8%</td>
<td>2016</td>
<td>809,222</td>
<td>@ $3.00/Line Item</td>
<td>$2.4 million USD</td>
</tr>
<tr>
<td>2016</td>
<td>809,222</td>
<td>+8%</td>
<td>2017</td>
<td>873,959</td>
<td>@ $3.00/Line Item</td>
<td>$2.6 million USD</td>
</tr>
<tr>
<td>2017</td>
<td>873,959</td>
<td>+8%</td>
<td>2018</td>
<td>943,875</td>
<td>@ $3.00/Line Item</td>
<td>$2.8 million USD</td>
</tr>
</tbody>
</table>

Funding deficits or surpluses over the period 2013-18 would be as follows:

<table>
<thead>
<tr>
<th>Year</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>Net Surplus</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>-200k</td>
<td>-37k</td>
<td>+100k</td>
<td>+300k</td>
<td>+500k</td>
<td>+700k</td>
<td>$1.3 million USD</td>
</tr>
</tbody>
</table>

Alternate assumption on cost for recovery

Should it develop that the assumption regarding World Bank funding for the “Build/Installation/Implementation” costs is invalid, an additional $8.4 million USD would have to be generated by LNSW fees. Amortized over the 4 year period ending in 2018, this would amount to a further $2.1 million per year. This would require an additional $2.00-$3.00 charge per line item resulting in a cost per line item of from $5.00-6.00 (final additional cost is dependent on the use and application of the above-noted net surplus). Under this scenario, the cost to the trader for a 3 line item declaration would be as follows:

3 line items @ $6.00/line item = $18.00 + $12.00 Customs processing fee = $30.00 USD
7 Revenue Sharing

An automated environment will offer a range of opportunities to apply a revenue sharing formula based on factors such as processing time utilized by permit issuing agencies, individual log-ins or other transaction based data that could be derived from a broad base of system derived trade data. However, it is recommended that consideration of more complex systems be deferred until LNSW has fully matured and all agencies involved in the border clearance process achieve a more complete level of automation.

Currently, approximately 44,000 of the approximately 200,000 customs declarations require a permit from an issuing agency. This represents 20% of the total. Of these 44,000, approximately 64% are issued by MOIC (DIMEX), 21% by the Ministry of Agriculture, 10% by the Ministry of Health (Food and Drug Department) with the balance of 5% issued by various other agencies.

For the short to medium term, these volume proportions present an acceptable guideline for revenue sharing the cost recovery of LNSW as outlined below;

<table>
<thead>
<tr>
<th>Total Cost for Recovery</th>
<th>$2,000,000 USD p.a.</th>
</tr>
</thead>
<tbody>
<tr>
<td>20% of Total of Cost for Recovery</td>
<td>$400,000 USD p.a.</td>
</tr>
</tbody>
</table>

Specifically, $400k of the $2 million cost for recovery should be assigned to government agencies other than LCD that are involved in the customs clearance process. That $400k should be sub-assigned to agencies based on the percentage of permits that they issue in any given year.

It is important to note that the revenue gained from Registration and Annual LNSW fees as outlined in Section 6.1.1 above, at the fee levels specified in the Section, is approximately $400,000 USD. This is equivalent to the 20% cost for recovery for non-customs agencies.

In the longer term, a more complex approach to cost recovery can be undertaken based on system usage, complexity of permits issued and volume thresholds. It is expected, however, that the proportion of cost recovery revenue assigned to agencies other than customs will be of a similar order of magnitude to that outlined above.

Summary of Cost Recovery / Revenue Sharing Methodology\textsuperscript{16}

<table>
<thead>
<tr>
<th>Laos Customs Department</th>
<th>Cost recovery through declaration line item charge</th>
</tr>
</thead>
<tbody>
<tr>
<td>License/Certificate/Permit Issuing Agencies</td>
<td>Cost recovery through registration/annual fees</td>
</tr>
</tbody>
</table>

\textsuperscript{16}It should be noted that any cost recovery fee may have to take into account the cost of the LNSW governance model chosen.
8 Payment of LNSW and Processing Fees

In the current environment traders make payments for transaction and other charges manually. This involves multiple stops to secure cash or bank drafts, visits to Government Agencies to apply for or receive permits often involving a number of visits and transactions. Payments are made on a transaction by transaction basis and the process is labour intensive and inefficient requiring a considerable amount of time from traders, their agents or their staff.

While it is expected that the introduction of an LNSW fee may rely on a manual system in the early implementation phase, it is critical that the payment process be automated and streamlined. At a minimum, the features of an automated payment system should include the following:

- Automated billing on a periodic basis (e.g. monthly) through which a trader receives an itemized statement listing his/her transactions for the period with a total for payment and a stated payment period (e.g. 10 days). Such a statement would include Registration or Annual fees when they are due for payment.
- Introduction of electronic payments via a debit system or corporate credit card.

It will be important for traders to see real and measureable improvements in service as a result of the introduction of LNSW and automated billing and payment would be a key feature of such improvements. These enhancements coupled with streamlining the CLP process and further customs modernization will support trade growth and the national economy.
9  Recommendations

Based on the above, the following recommendations can be made:

1. It is recommended that the LCD portion of LNSW costs to be recovered be derived from a charge per declaration line item in the range of $3.00 USD as outlined in Section 6.1.3 above. This charge should be adjusted in accordance with actual LNSW costs and should not be kept artificially high in order to raise non cost recovery revenue to avoid a violation of Article VIII of the General Agreement on Tariffs and Trade (GATT) and WTO user fee requirements.

2. It is recommended that the cost for recovery for non-customs agencies involved in border clearance be based on the 20% of volume outlined in Section 6.1 and that this revenue be apportioned amongst the relevant agencies on the basis of their respective percentage of permit volume. It is further recommended that Registration and Annual Fees be utilized to recover costs for non-customs agencies involved in border clearance.

3. It is recommended that fees for trade certificates, licenses and permits not be used as a mechanism for LNSW cost recovery. While not within the mandate of this project, there appears to be a significant amount of duplication in the licence and permit regime along with an absence of any coherent structure for the levying of applicable fees. It is further recommended that the entire certificate, license and permit regime be streamlined and re-engineered on an inter-agency basis to produce a more rational and efficient system. It is further recommended that no fees be charged for certificates, licenses and permits given the fee structure proposed in this document.

4. It is recommended that a detailed implementation plan be developed for LNSW. With regard to the Fee and Revenue Sharing structure, the implementation plan should include a clear definition of terms, a realistic plan for phasing in the fee structure and inter-agency agreement on apportioning revenue sharing features.

Additional observation:

5. In the course of completing the research for this deliverable, it became apparent through discussions with representatives of the trade community, that what has become known as “informal fees” are often charged by customs or other Government Agencies in return for some form of expedited service. The circumstances in which “informal fees” can be requested or inferred include payments to avoid a referral to the warehouse or examination, payments to ensure quicker processing and release of goods and payments to avoid enforcement actions.

While this information is largely anecdotal, it was repeated a sufficient number of times by various parties to be a cause for concern from a number of perspectives. First, while LNSW will provide a wide range of benefits to Laotian trade and the Laotian economy through streamlining and facilitation, cost recovery fees will, in most likelihood, be charged for resultant enhanced service. It is important that such fees not be in addition to the “informal fees” that members of the trade community often confront in the course of doing business. Otherwise, the credibility not just of LNSW but of the entire export/import system can be called into question.
Importers, exporters, customs brokers, freight forwarders and trade organizations will generally comply with a requirement if it is fair, transparent and honest. The existence of informal fees endangers this credibility and calls into question the integrity of the customs process.

Lastly, the demand for and collection of “informal fees” is generally considered to be a bribe and violates existing laws and regulations. The Organisation for Economic Co-operation and Development (OECD) defines corruption as “the abuse of public office for private gain.” The solicitation of bribes and payments for services by a public official and the condoning of such activities by government is a violation of international conventions designed to reduce corruption in public agencies.

All Government Agencies involved in the border clearance process should take all necessary steps to ensure that the practice of soliciting and accepting “informal fees” is eradicated.

9.1 No Fee for LNSW

While the direction of this deliverable has been focused on the composition of a Revenue and Fee Structure for LNSW, it has been noted that a number of countries do not charge fees for single window type systems. Such a case can be made for LNSW.

Laos has a rapidly strengthening economy and with an 8.3% GDP growth in 2012, was the fastest growing economy in Southeast Asia. The Wall Street Journal” reported that Laos has…”posted some of the world’s strongest economic growth over the past several years.” In 2011, Laos’ exports grew by 15% and its imports by 25% over the previous year. Laos joined the World Trade Organization (WTO) in 2013.

Given the general outlook for economic growth, specifically with respect to international trade, Laos is increasingly focused on modernizing and reforming its customs and border management processes. Laos National Single Window (LNSW) provides an opportunity to facilitate international trade and streamline the process of moving goods back and forth across the border. In that context, LNSW supports a growing Laotian economy and will enhance the economic growth that Laos has been experiencing.

These factors allow for a strong argument that LNSW, in and of itself, is an economic contributor and with its inherent prospect of facilitating Laos international trade, should not be implemented with a fee structure. Fee structures at time of import or export are often seen as non-tariff barriers to trade and the absence of a fee structure would ensure that such a barrier is not imposed.

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18 Wall Street Journal, October 25, 2012
19 World Trade Organization, Country Profile-Laos PDR, 2012
Finland, Sweden, Canada and the United States are amongst the developed countries that impose no fees for a single window type of trade services. One of the primary reasons indicated for the absence of such a fee are savings that result from increased operational efficiencies, avoidance of unnecessary trade barriers and improved facilitation of trade.

Given Laos’ recent economic growth and expanding trade profile, the option of imposing no fee for LNSW should be considered as an option.
Appendix A: Alternative for CLP Fee Structure

For the short to medium term, however, it is possible to define a two tier structure of certificates, licenses and permits. Tier one would consist of those documents that could be considered to be more complex with a greater consequence of error. These would include import/export licences, licenses to import motor vehicles and permits related to regulation of food and drugs. In addition, certificates of origin to either exporters or importers could be included in tier 1.

A general estimate of potential tier 1 documents would be in the range of 40% of the total issued. The balance of 60% tier 2 documents would represent those certificates, licenses and permits that are less complex with a decreased consequence of error.

It should be emphasized that this division into tier 1 and tier 2 documents is somewhat arbitrary and is specified only to demonstrate the application of a more coherent document fee structure. Further analysis by the responsible departments and agencies would be required to refine this categorization. In the longer term, it is recommended that the entire certificate, license and permit regime be examined with a view to streamlining through a Technical Assistance initiative.

Using the 40% tier 1/60% tier 2 division, it would be possible to assign a blended document charge to each. Complex document charges tend to range from 20k LAK to 100k LAK or $2.50 USD to $12.00 USD respectively. Given this, a blended rate of 60 LAK ($7.50 USD) for tier 1 documents and 40 LAK ($5.00 USD) for tier 2 documents could be applied. The cost recovery revenue for the year 2013 using this approach would be as follows:

<table>
<thead>
<tr>
<th>2013 40,000 Documents</th>
<th>$7.50</th>
<th>$120,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tier 1 @ 40% = 16,000 documents</td>
<td>$5.00</td>
<td>$120,000</td>
</tr>
<tr>
<td>Tier 2 @ 60% = 24,000 documents</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Total Revenue $240,000

Note: As in Section 6.1.1 above, the fee levels contained in this chart are shown only as a means to demonstrate the cost recovery potential for certificates, licences and permits and are not meant to suggest a specific fee amount.
Annex F:

Summary Abstract of the Fee Structure
REPORT AND RECOMMENDATIONS ON FEE STRUCTURE AND REVENUE SHARING

Subject: Summary Abstract of the Fee Structure and Revenue Sharing Model

Background:
The report and proposals take into account international experience with National Single Window fees and places the proposed fee structure into the context of WTO rules and disciplines.

A World Bank (WB) funded Technical Assistance assignment for the preparation of a National Single Window for Lao PDR (LNSW) was initiated with the possibility of donor funding or WB finance being available for all or part of the implementation costs with operating costs notionally to be supported by fee-recovery. Based on current estimates, this would have meant the donor agency potentially funding roughly $8.4 million USD for implementation costs and 'user fees' to finance the recurrent costs of approximately $2.1 million USD per annum.

Due to the proposed Joint-Venture concessionaire agreement between the Government of Lao PDR (GOL) and Bureau Veritas (an internationally based private sector company); donor funding may not be accessible and it is therefore more likely that the full cost or investment will have to be recovered by charging a fee for the service provided by LNSW.

Argument:
The following operating principles for fees should be applied to the LNSW environment:

i. The fee structure must be designed to recover costs only and cannot be formulated to provide revenue beyond the defined level of costs. However, cost recovery can include funding for system improvements, modernization and expansion;

ii. The fee structure should be fair and transparent and perceived as being fair and transparent by users and clients;

iii. Fairness and transparency are enhanced by simple, non-complex fee structures which are easily understandable and which foster an increased willingness to comply on the part of clients and users;

iv. In an environment in which expanded trade is to be fostered and encouraged, fee structures should not be constructed so as to impose higher costs on high volume users; and

v. Payment of fees should be easy and efficient and the payment process should take full advantage of the system's automated capacity.

There are three primary potential revenue sources for LNSW fees:

1. Certificates, Licenses and Permits (CLPs) issued by Government Agencies;

2. Trader Population potentially using the LNSW; and

3. Customs Declarations (ACDDs) and/or Declaration Line Items.
The report analyses the current state of volumes and population of these three revenue sources. It provides an assessment of CLPs as a potential revenue source for recovery of LNSW costs. However it recommends that they not be utilized as a revenue source based on the proposed and on-going trade facilitation related task of re-engineering the overall CLP regime in order to remove non-tariff measures and the current inconsistent application of CLP fees.

The model proposed recommends that the Fee Structure for the recovery of LNSW costs should be ‘transaction based’ however two options were considered for definition of a transaction:

I. A Customs Declaration is a document presented electronically or in writing by an importer, exporter or agent declaring goods to customs which he/she is importing or exporting; and

II. A Declaration Line Item refers to items being declared on a Customs declaration which may individually attract different tariff treatment or customs/border controls but which on their own could be a Customs declaration (ACDD).

The model proposed recommends that Declaration Line Items be used as the operative transaction. The volume of Customs declarations may not be sufficiently stable due to the modernization and simplification proposals to remove restrictions on the number of line items per ACDD.

The fee model proposes the charging of a Registration and Annual Fee based on trader population and a separate transaction fee based on Declaration Line Items for LNSW services.

It recommends that any revenue generated from the Registration and Annual User fees be used to recompense Government Agencies issuing CLPs for organizational cost of services to be provided by them through the LNSW and the revenue stream lost due to no longer selling forms or issuing paper licences. It further recommends that any sharing of revenue generated by the Registration and Annual fees be based on current or future workload distribution regarding CLP volumes and shared amongst the relevant Government Agencies accordingly.

The report also provides sample Registration, Annual and transaction based fees for recovery of estimated LNSW costs (i.e. total build/installation and implementation and the annual recurrent costs for a 5 year period).

The Presidential Decree on Fees and Service Charges No. 03\PO, November 2008 would have to be amended to cater for the removal of CLP fees and to give legal basis for the charging and collection of LNSW fees by the Joint-Venture concessionaire company and the subsequent sharing of portions of the revenue generated amongst Government Agencies involved with the LNSW.
Summary Recommendations:

1. Certificates, Licenses and Permits issued by Government Agencies should not be used as a revenue source for the LNSW. The current CLP regime should be automated, modernized and streamlined and in view of Recommendation 2 (below), fees for issuance of CLPs should be removed and no longer charged.

2. A Registration and Annual Fee for services provided by the LNSW, based on current and future trader population, should be implemented. The sharing of revenues generated from such fees should be done based on CLP workloads and may be automated within the functions of the LNSW. Final agreement on revenue distribution or sharing should be reached by all involved Government Agencies.

3. A separate transaction fee based on Declaration (ACDD) Line Items calculated on submission of each and every Customs declaration should be used to recover operational costs for LNSW.

4. In a phased approach, billing and payment of all fees should be automated within LNSW and a system of periodic or deferred payment (e.g. monthly) should be designed and implemented.
Annex G:

Legal Impediments, Gaps and Recommendations Report
1 Management Summary

This report examines in detail the legal impediments and gaps for the purpose of establishing a National Single Window in Laos and provides, in section 3, recommendations of what action should be taken in the future. These recommendations are presented in the form of a Table containing a Checklist of what is required for the establishment of the Lao National Single Window (Column 1, in the Table reproduced in section 3), the extent to which these requirements are affected by existing laws in Laos (Columns 2 and 3), and the recommendations on what provisions should be considered in drafting an initial decree on the establishment of a NSW (Column 4).

Before examining to what extent there are impediments and gaps in the current legislation, the report explains briefly the concept of a NSW and the generally accepted criteria for the establishment of a NSW, in particular the UN/CEFACT Recommendation No.35 on ‘Establishing a legal framework for international trade Single Window’ (ECE/TRADE/C//CEFACT/2010/23/Rev.2).

In the sub-section on legal impediments, the consultant concludes that there are no legal impediments – in the political regime of Lao PDR, in the Lao Constitution or in any other law – to the establishment of a NSW. All the evidence suggests that the Lao Government wishes to proceed with the establishment of a NSW but it is unclear, at the time of writing, what form the NSW is likely to take.

A key Decision (No.2114/MOF) was, however, taken by the Minister of Finance on 10 August 2012 to set up a Steering Committee and Secretariat for the NSW, chaired by the Deputy Minister of Finance and comprising senior members of the ministries most closely involved with NSW issues – among others, the Ministry of Finance, the Ministry of Industry and Commerce, the Ministry of Agriculture and Forestry. Under Art.2 of the Decision, the Steering Committee is required “to lead, and follow up with the establishment of the Secretariat, in studying and preparing the setting up of the NSW”. The language of Decision No.2114/MOF suggests that what is contemplated is the design and establishment of a NSW in Laos that is flexible and in line with the requirements of the nation, and not merely the adoption of some administrative arrangements to operate such a system.

While there are no legal impediments in Laos to the establishment and implementation of a NSW, there are many gaps in existing laws. The principal gap, of course, is that there are still no laws/decrees or other legal rules in this country establishing a NSW. A Law on Electronic Transactions that deals at length with important aspects of electronic commerce was adopted by the National Assembly in December 2012 (and is being ‘edited’, at the time of writing), but that law does not in itself create the legal framework for a NSW. The main purpose of that law is to establish the rules for the formation, use, recognition, management and inspection of electronic transactions. It does not, however, provide the detailed rules for the establishment of the NSW (by identifying or establishing, for example, an administrative body responsible for its day-to-day operation), and provide detailed rules regarding access to the NSW, data quality assurance etc.
For the purpose of this report an assessment of the gaps in the legal system for the operation of a NSW was made by examining 122 “laws”, “decrees”, “regulations”, “decisions”, “notifications”, “instructions” etc. that are listed in the Lao PDR Trade Portal. Since regulations, decisions and notifications are of an inferior legal status to laws and decrees the main focus of the research has been on laws and decrees. Of the 15 laws and 12 decrees that are listed on the Lao Trade Portal, only two laws, and six decrees, were directly relevant to the import, export and transit of goods. These laws and decrees all have ‘gaps’ in them in so far as they do not refer to electronic communications - which are a central feature for the operation of a NSW – and recognize only written documentation, signatures, original documents and records etc.

It could be argued that Art.13 (2) of the recently adopted Law on Electronic Transactions fills these gaps by providing that an electronic document is to be treated on the same basis as a written document and that this law prevails over any inconsistent law (Art.58). However, since ministries tend to focus, on a day-to-day basis, on laws/decrees they are required to administer (with sometimes little regard to other laws) it may, nonetheless, be prudent to amend these laws and decrees to ensure the equivalence of electronic documents with a paper documents rather than leave all this to be governed by the Electronic Transactions Act only.

By virtue of signing the 2005 ASEAN Agreement to Establish and Implement the ASEAN Single Window and the 2006 Protocol to Establish and Implement the ASEAN Single Window, Lao PDR – like all other ASEAN members – has undertaken legal obligations to develop and implement a NSW, based on international standards and best practices as established in international agreements concerning trade facilitation and modernization of customs techniques and practices. Since no ASEAN country has so far managed to establish a NSW that encompasses the legal structure and the requirements for the operation of a NSW (identified in international agreements and standards, and summarized in column 1 of section 3, below) it seems unlikely that the Lao authorities will press ahead to establish a fully-fledged NSW until more progress has been made in the region to establish NSWs. It is recommended, therefore, that the Lao authorities might concentrate, first, on establishing the basic legal structure for the establishment of a NSW (Column 1 of section 3) and refine the legal architecture and requirements further in the light of international developments generally, and in ASEAN countries in particular, in order to ensure greater uniformity in national approaches, conformity with international standards and the eventual establishment of an ASEAN Single Window.
2 Legal Impediments and Gaps

2.1 Introduction

This section is the final output/deliverable on the legal impediments and gaps in the Lao legal system that stand in the way of the creation and operation of a National Single Window (hereinafter referred to as “NSW”). To understand what legal impediments and gaps exist in regard to the establishment and operation of a NSW in Laos it is first necessary to explain what is meant by a “National Single Window” and what are its essential features.

2.2 Concept of a National Single Window

2.2.1 General

Creating a legally enabling framework for the establishment of a National Single Window (‘NSW’) is a complex operation requiring, among other measures, clarifications and changes to current practices on exchanging data and processes and, hence, to existing laws, regulations and practices. A widely-used definition of a Single Window is the one adopted, in 2004, by delegations at the UN Centre for Trade Facilitation and Electronic Business (UN/CEFACT Recommendation No.33 - ESTABLISHING A SINGLE WINDOW to enhance the efficient exchange of information between trade and government’).

It provides that:

“Within the context of this Recommendation, a Single Window is defined as a facility that allows parties involved in trade and transport to lodge standardized information and documents with a single entry point to fulfil all import, export, and transit-related regulatory requirements. If information is electronic, then individual data elements should only be submitted once.”

A NSW is generally managed centrally by a lead agency, such as Customs, enabling the appropriate governmental authorities and agencies to receive, and have access to, the information relevant to fulfil their respective regulatory requirements.

2.2.2 International criteria

By virtue of having signed the 2005 Agreement to Establish and Implement the ASEAN Single Window, Lao PDR and all other ASEAN Member States are legally required, inter alia, to “ensure that their line ministries and agencies co-operate with, and provide necessary information to their Lead agency in accordance with their
national laws in the development and implementation of their National Single Windows.” (Art.5 (2)). Art. 5 of the 2006 ASEAN Protocol to Establish and Implement the ASEAN Single Window requires member countries to “develop and implement their NSWs based on international standards and best practices as established in international agreements and conventions concerning trade facilitation and modernisation of customs techniques and practices.” Under Art.8 (3) of the Protocol they are also required to ensure that “secure infrastructure for the ASW and NSWs shall follow international standards and best practices with features such as confidentiality, data integrity, authenticity and non-repudiation.”

Lao PDR is taking steps to meet its international commitments. For example, on 10 August 2012, the Minister of Finance decided (pursuant to Prime Ministerial decree no.80/pm of 28/02/2007) to set up a Steering Committee for the NSW to prepare and set up the NSW for Laos. In December 2012, the National Assembly adopted the Electronic Transactions Act, which addresses essential elements for the effective operation of a NSW. The Lao authorities are also relying on technical assistance provided by donors and international financial institutions to ensure compliance with international criteria for the establishment of a NSW, including the World Bank’s Technical Assistance for the Preparation of a Lao National Single Window.

The United Nations Commission on International Trade Law (UNCITRAL) has developed a key international convention – the United Nations Convention on the Use of Electronic Communications in International Contracts (hereinafter referred to as the “2005 Electronic Communications Convention”), which was adopted by the UN General Assembly in 2005, and two Model laws, that provide important benchmarks in the field of electronic commerce law. As explained in the Final Report of the USAID’s Lao PDR Single Window Implementation: Legal Requirements, Analysis, and Recommendations, the ASEAN Single Window Legal Working Group has encouraged ASEAN Member States to consider ratifying the 2005 Electronic Communications Convention and to adopt aspects of the UNCITRAL Model Law in domestic law (para.28 of Final Report). As at 31 January 2013 only three states (including Singapore) had ratified or acceded to the 2005 Convention and 18 states had signed it, including two ASEAN countries (the Philippines and Singapore). The 2005 Convention applies to the use of electronic communications in connection with the formation and performance of a contract between parties whose places of business are in different states and is, therefore, of limited application to the establishment of a NSW in individual states.

UN/CEFACT Recommendation No.35 on ‘Establishing a legal framework for international trade Single Window’ (ECE/TRADE/C//CEFACT/2010/23/Rev.2), which has provided a basis for the work of the ASEAN Legal Working Group (“LWG”) over the past several years, provides a list of key legal issues in its Annex II - ‘Checklist Guidelines’ that need to be addressed by governments. They are:

- The need to have a legal basis for the establishment of a Single Window facility (a legislative framework is what is envisaged here), and for its operation in national law and regulations, as well as authorize cross-border transactions in such laws, regulations and/or decrees;
- SW facility structure and organization issues (e.g. is the SW facility to be established by a governmental organization, such as Customs, or by private businesses, or public-private partnerships?);
• Data protection issues – such as access to, and the integrity and accuracy of data;
• Authority to access and share data between government agencies;
• Need for proper mechanisms for the identification, authentication and authorization of users;
• Data quality issues – its accuracy and integrity within a SW environment;
• Liability issues – need to address liability issues, such as providing for national and international legal recourse and possible indemnities for damages suffered;
• Arbitration and dispute resolution;
• Governments to promote the functional equivalence of paper and electronic documents;
• In order to comply with national and international rules on the archiving of information (i.e. the keeping of records), proper procedures for electronic archiving must be established;
• Issues regarding intellectual property and database ownership; and
• Need to address possible problems regarding anti-trust and protectionism.

A number of the above-mentioned criteria are addressed not only in international and regional agreements for the establishment of NSW but also, to a greater or lesser extent, in the national legislation of a number of countries seeking to establish a NSW (e.g. Indonesia, Malaysia, Singapore, Vietnam). As a member of ASEAN with legal obligations in regard to the establishment of a NSW, and because of the importance of developing legislation that is consistent with emerging international standards on the subject, Lao PDR will need to address gaps and impediments in its own legal system by reference to the above criteria.

The following is an assessment of current impediments and gaps in Lao laws when measured against the above criteria.

### 2.3 Legal Impediments and Gaps in Lao PDR

#### 2.3.1 Impediments

Judging by the briefings provided to the consultant, and the material he has examined, there are no legal impediments\(^1\) in Lao PDR to the establishment and implementation of a NSW meeting the criteria of the UN/CEFACT Recommendation 35 Checklist Guidelines referred to above, and in existing international agreements on NSW.

There is, for example, nothing in the political regime of Lao PDR, or in the Lao Constitution or in any other law, that would prevent the establishment of a NSW, with various provisions addressing the issues in the UN/CEFACT Checklist Guidelines (above). Lack of political will on the part of the Lao Government would be another example of an impediment in establishing a SW in this country, but all the evidence suggests that the Government wishes to proceed with the establishment of the NSW even though the details of what it has in mind at this stage are not clear. The Trade Facilitation Strategic Plan for Lao PDR (2011-2015), however, states

\(^1\) The dictionary meaning of an ‘impediment’ is a ‘hindrance’ or ‘obstruction’.
that the Lao PDR is “continuously working on improving legislations” and is “investing in new infrastructure to facilitate trade and will gradually move towards a single windows service for cross-border trade and single window system management based on risk assessment as a tool for more effective management.” (p.6)

The main issues for Lao PDR appear to be:

- to what extent do the Lao authorities wish to implement, in the short to medium term, the international criteria mentioned above?
- how do they wish to do this – e.g. in a separate decree establishing the legal framework for a NSW and amending the decree as required to meet new exigencies? Or merely by making amendments to existing laws/decrees/regulations that stand in the way of the operation of a NSW and establish a NSW administratively rather than on the basis of an enabling law or decree?

The Law on Electronic Transactions which was adopted by the National Assembly in December 2012 (and is, at the time of writing, edited by the Law Committee of the National Assembly) and the Customs Law of 20 December 2011, go some way in dealing with essential elements for the operation of a NSW – namely providing equivalence between electronic and written documents. But they do not establish the legal framework for the establishment and operation of a NSW or address the various legal issues recommended in UN/CEFACT Recommendation 35 (above). Section 3 (Recommendations) of this report sets out a checklist of what is required to establish a basic NSW in Laos. It also examines whether there are already any laws applying to each item on the checklist, whether any such law is inconsistent with the provisions proposed for the establishment of a NSW, and what provisions should be considered for inclusion in an initial decree establishing a NSW. Although a “law” is superior to a “decree” under the Lao legal system, a decree is put forward as the preferred option because it can be prepared and adopted more quickly than a law and is easier to amend than a law. This is important because it is anticipated that the legal framework establishing a NSW will need to be updated from time to time to meet ASEAN and other international commitments. From discussions the consultant had with senior Lao officials, it appears that they also prefer a decree.

### 2.3.2 Gaps

While there are no legal impediments in Laos to the establishment and implementation of a NSW, there are many gaps in existing laws. The principal gap, of course, is that there are still no laws/decrees or other legal instruments in this country establishing a NSW. As mentioned before there is now a Law on Electronic Transactions which deals at length with important aspects of electronic commerce, but that law does not in itself create the legal framework for a NSW. The main purpose of that law is to establish the rules for the formation, use, recognition, management and inspection of electronic transactions. It does not, however, provide the detailed rules for the establishment of the NSW (by identifying or establishing an administrative body responsible for its day-to-day operation), and provide detailed rules regarding access to the NSW, data quality assurance etc.

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2 A “gap” is defined in dictionaries as “an interruption of continuity”.
Nor does the new Customs Law of 2011 provide the legal framework for the establishment of a NSW. The relevant provisions - which give equal value to detailed customs declaration and/or electronic detailed customs declaration - read as follows:

“Article 22. (Revised) Detailed Customs Declaration
The declarant shall submit a regular detailed customs declaration and/or an electronic detailed customs declaration with regard to imported-exported or transit goods, as follows:
1. Fill out the information required in the detailed customs declaration form and sign it;
2. The detailed customs declaration verified by the Customs Authorities shall be registered;
3. Signature in the detailed customs declaration and/or electronic detailed customs declaration has equal value;
4. The detailed customs declaration that has been approved and registered shall not be subject to change except [when] the declarant has the information and evidence to validate [the need] for the Customs Administration to consider and modify the information before actual goods inspection by Customs Authorities;
5. [If] The detailed customs declaration has been erased, struck out, or stained, it is considered invalid.”

An “electronic detailed customs declaration”, referred to in Art.22.3 above, is defined in Art.3.6 as “application of information, data and technology for declaring information on goods through the customs automated electronic system of the Customs Administration.” “Electronic signature” is defined in Art 3.7 as “a signature of the customs declarant to certify the accuracy of information declared by means of an electronic system and recognized by the Customs Administration.”

In March 2012, a draft decree was prepared entitled “The Government’s Decree to Establish and Operate a Lao National Single Window”. The text of that draft decree was handed over to the consultant during a meeting with the LUNA-Lao Project on 15 October 2012. Judging by the wording of the draft decree, it is clear that its main purpose is not so much to create a LNSW but, rather, to establish the Lao NSW Secretariat, list the various ministries and other entities that are to be represented on the Secretariat, spell out the responsibilities of the LNSWSec, and establish a Legal Working Group and a Technical Working Group. Under Art.8.1 (Chapter II) the Legal Working Group is to be “responsible for developing recommendations to the LNSWSec for any legal changes that may be needed to establish the necessary legal framework in which the LNSW will operate both nationally and across borders. One objective of the LWG, among others that may be assigned by the LNSWSec, will be to ensure that the LNSW legal framework is consistent with and interoperable with the ASEAN Single Window Legal Framework Agreement currently under development by ASEAN.” The draft decree does not in itself provide the principles and rules to establish a NSW but, rather, establishes a Legal Working Group to do this in the future. A legal opinion was prepared by the consultant on the draft decree in November 2012 and is reproduced in Appendix I.

The draft decree has now been overtaken by the Decision (No.2114/MOF) of the Minister of Finance, on 10 August 2012, to set up a Steering Committee and Secretariat for the NSW, chaired by the Deputy Minister of
Finance and comprising senior members of the ministries most closely involved with NSW issues – among others, the Ministry of Finance, the Ministry of Industry and Commerce, the Ministry of Agriculture and Forestry. Under Art.2 of the Decision the Steering Committee is required “to lead, and follow up with the establishment of the Secretariat, in studying and preparing the setting up of the NSW; ensuring that the design of the system is in line with the policy of the party and governmental regulations.”

The Decision has also established a Secretariat team for the NSW – consisting mainly of officials from the Ministry of Finance. Under Art.4 of that Decision, the Secretariat is required to:

- Research and present a working model of the NSW that is flexible in terms of working with other related agencies;
- Actively coordinate and consult with concerned organizations in studying and drafting the activities that will lead to the establishment of the NSW in line with regulations and the actually (sic) requirements of the nation;
- Implement and monitor the implementation of the tasks that have been approved by the Steering Committee;
- Report the progress of the implementation of the NSW to the Steering Committee periodically in order to receive directions required to address outstanding issues during the implementation period.”

It would seem clear from the above that what is contemplated is the design and establishment of a NSW in Laos that is flexible and in line with the requirements of the nation, and not merely to make some administrative arrangements to operate such a system. We understand that the Steering Committee has met infrequently. The issues which, in the consultant’s view, should be taken into account in drafting the legal framework for the establishment of the NSW are set out in section 3 (Recommendations) of this paper.

One could conclude, therefore, that the principal gap in the establishment of a NSW in Laos is the absence of any law or decree or other legal framework for the establishment and operation of the NSW. However, in addition to this there are a number of laws, decrees, regulations, decisions, instructions etc. that have gaps in them in so far as they do not refer to electronic communications - which are a central feature for the operation of a NSW – and recognize only written documentation, signatures etc. These laws are listed in the Lao Trade Portal and what follows is a brief examination of the gaps in those laws and decrees that, on the face of it, exclude electronic communications.

One could argue that Art.13 (2) of the recently adopted Law on Electronic Transactions fills these gaps by providing that:

‘2. Where a legal rule requires information to be in writing, or provides for certain consequences if it is not, an electronic document satisfies that legal rule if the information contained in the electronic document can be accessed for subsequent reference.’

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3 “Lao Trade Portal” is the focal point and where the trade information is maintained to simplify and disseminate to the public through the website www.laotradeportal.gov.la, www.laotradeportal.org, and www.laotradeportal.com, located at the Trade Facilitation Secretariat (TFS) office.
The above provision would presumably mean that an electronic document would be considered as satisfying the legal requirements in all existing Lao laws, decrees, regulations etc using notions of traditional paper-based systems – e.g. references to ‘writing’, ‘original’, ‘signed’ and ‘record’.

The last provision (Art.58) addresses issues of inconsistency between the Law on Electronic Transactions and other laws. It provides that:

“If a provision in any other laws conflicts with a provision of this Law, the provision in this Law shall govern.”

Art.58 would presumably have the effect of prevailing over any law – be it a law relating to trade or any other law – that accepts only written documentation. Since ministries tend to focus, on a day-to-day basis, on laws/decrees they are required to administer (with sometimes little regard to other laws) it may, nonetheless, be prudent to amend these laws and decrees to ensure the equivalence of electronic document with a paper document rather than just leave all this to be governed by the Electronic Transactions Act only. In many respects, what is proposed here would constitute an additional legal guarantee for the recognition of electronic transactions? But, in the consultant’s view, it would make matters clearer for officials administering legislation relating to the export, import and transit of goods – who may not be inclined to look at laws (such as the Electronics Transactions Act) and decrees etc. outside those administered in their ministries/department.

The recommendation that laws referring to written documentation only should be amended to provide equivalence of electronic documentation - notwithstanding what is already in the Customs Act and the Law on Electronic Transactions - is especially relevant in regard to the administration of justice by the courts. Could one be totally confident, for example, that a judge would not reject documentation submitted as evidence in electronic form to the court on the grounds that the 2004 Presidential Decrees on the promulgation of the amended laws on criminal and civil procedure refer only to ‘Physical evidence’; ‘Documentary evidence’; and ‘Evidence from persons/Witness evidence’? In applying the law in a dispute referred to the court a judge may look only at the decrees that relate to the admission of evidence without being aware of the existence of Art.14 (1) of the Electronic Transactions Act. The English translation of Art.14 (1) provides that in “any legal proceedings, electronic documents may be used as evidence the same as other [paper] documents [that are used as] evidence, except the laws defined otherwise”. Even if the judge were made aware of Art.14 (1), the reference to “except the laws defined otherwise” could mean that he or she might consider that the Decrees on criminal and civil procedure would prevail over the Electronic Transactions Act.

The following gaps in relevant laws and decrees have been identified for the purpose of determining whether they should each be amended to provide equivalence between electronic and paper documents in regard to the import, export and transit of goods. The many ‘Regulations’, ‘Decisions’ issued by ministers, ‘Instructions’ and ‘Notifications’ referred to in the Trade Portal also have gaps in them but will not be examined in any depth here because it is considered sufficient to amend laws and decrees only, rather than cover also subsidiary rules.
2.3.3 Gaps in Laws and decrees pertinent to Trade

At the time of writing, laws and decrees dealing with the export, import and transit of goods listed in the Lao Trade Portal have been examined for the purpose of identifying gaps in the existing NSW regime in Laos, in particular the absence of any reference to electronic transactions and its acceptance for export, import and transit of goods purposes. The following is the list of laws and decrees that fail to provide equivalence of electronic communications with written transactions in particular.

**Laws**

(1) **Plant Quarantine Law No.06/NA – 09-12-2008**
For the import of plants, plant products etc. “individuals, families and entrepreneurs” who import plant, plant products and regulated articles are required to present the “relevant document” to the plant protection border check point and another “relevant document” issued by the exporting country/country of origin. For the import and export of plants, plant products etc. reference is made (Sections 2 and 3 of the Law) to a “Phytosanitary certificate”, which is defined in Art.3 as “a document certifying that plants, plant products and other materials for export or import are free from regulated pest”.

**Gap:** This law makes no reference to electronic documentation. Arguably, the Electronic Transactions Act now ensures that electronic documentation has equal validity as a written Phytosanitary certificate but it would be preferable to make this clear in the Plant Quarantine Law No.06/NA as well. A new article, along the following lines, could be inserted in Chapter I of the Law:

“Art.8. The Law on Electronic Transactions, 2012 applies to any certificate or other written documentation referred to in this law.”

(2) **Wildlife and Aquatic Resources Law No.07/NA – 24-12-2008**
Article 42 – entitled “Import, Export, Re-export and Transhipment” – provides inter alia for the need to obtain “breeding certification”, “free of disease certification”, “contract between the importer and exporter”, “completed registration sheet”, “export document and import document”, “native place certification” etc.

**Gap:** This law refers to certification, contracts, documents, and registration sheets etc. which are all, presumably, written documents. As with other laws referring to documentation for export/import/transit purposes, it may be desirable to add in Section I (General Provisions) of this law an article along the following lines:

“Art.8. The Law on Electronic Transactions, 2012 applies to any certification or other written documentation referred to in this law.”
Decrees

(1) Decree on the Control of the Import, Export and Use of Ozone Depleting Substances, No.162/PM-13

October 2003

Art.7 provides that "juridical entities or organizations" wishing to import or export ODS or products, materials, appliances or vehicles which have been designed to use ODS must obtain an import-export license from the ‘Ministry of Trade or the provincial, city or special zone trade office.’ Art.9 provides that a license is to be issued in accordance with the Ministry of Commerce Regulation No.0160/MOC/FTD (dated 25/1/2002) on controlled goods import-export license. That regulation is not listed among the legal documents identified in the Lao PDR Trade Portal but it can be safely assumed that the import-export license referred to in Arts. 7 and 9 covers only paper documents, and not to electronic communications.

Gap: A reference to import-export licenses can only be to those that have been, and continue to be; in common usage and these are essentially paper – and not electronic - documents. While the Electronic Transactions Act may have changed this, and all other decrees, referring to (paper) documentation it may be desirable to amend this decree to provide equivalence between electronic and paper documents in order to ensure that officials, both centrally-located and in provincial areas, who administer this decree are under no misapprehension that they must treat electronic documentation in the same way as written documents.

This decree, as well as those listed below, could be amended by including a general provision referring to the application of the Electronic Transactions Act – see drafting suggestions provided above.

(2) Decree on Import Licensing Procedures No.180/PM (Issuing Agency: Prime Minister’s Office, 07/07/2009)

The objective of the decree is to set out principles, rules and procedures for import licensing, which is to be administered in a simple and transparent manner “in line with the international conventions of which Lao is a member” with a view to promoting the flow of international trade. Art.5.2 provides that applicants “shall have to approach only one Government authority in connection with an application for an import licence, but where it is strictly necessary to have more than one Government authority, there shall not be more than three”.

Gap: This decree simplifies import licensing procedures. However, it makes no reference to the legal validity of electronic transactions and its equivalence with written documents. The reference to the need to be in line with “international conventions of which Lao is a party” (Art.1) does not solve the problem here because Lao PDR is not a party to any convention (e.g., the 2005 Electronic Communications Convention) or other international treaty which specifically requires equivalence between electronic and written documents.

(3) Decree on the Origin of Import and Export Goods, No. 228/PM – 22 April 2010

Among other things, this decree requires an exporter wishing to obtain a “certificate of origin of export goods” to submit a valid application to the authority issuing such a certificate (Art.11) and the importer to present the certificate of origin of import goods to the Customs authority at the time of customs clearance in the cases set
out in Art.14. A Certificate of origin is defined, in Art.3.6 of the Decree, as “a written document specifying that the good is originated or undergone production process, which is issued by a competent authority of body of the exporting country.” Art.11.4 provides that the “certificate of origin issued by the issuing body shall be in a specified format.”

**Gap:** This decree clearly anticipates that the Certificate of origin will be in the form of a “written document” only. It could be argued that the combined effect of Arts.13 (2) and 58 (quoted above) of the Electronic Transactions Act is to ensure that Certificates of origin presented in electronic form will be treated in the same way as written documents. There is a possibility, however, that officials responsible for administering Decree No. 228/PM will continue to apply the original wording in that decree and insist on written documentation until the decree is amended. It is recommended, therefore, that this decree be amended to ensure that electronic documentation are treated equally with written documents.

This is the basic law that provides the principles regarding the obligation to obtain import and export licenses. Art.8 provides that “The import and Export Administration Authorities have the rights to require importer or exporter to obtain import or export license prior to import or export of goods.” It also states that the import licensing procedures are set out in a separate regulation and that the export licensing procedures are to be applied “the same as the import licensing procedures.” Sanitary and Phytosanitary measures (SPS), and technical standards (TBT) are also covered by this.

**Gap:** Art.13 requires importers or exporters of goods subject to licensing to obtain import or export licenses from the Import and Export Administration. Since these licenses are in written form it would be desirable to add a provision in the Decree to ensure equivalence of electronic licenses with written ones. In other respects, the gap is the same as that explained under (2), above.

This decree requires the importer of animals, animal products or animal related items to present “all relevant documents to the entry checkpoint veterinary officer when the animal, animal products or animal related items arrival.” (Art.24 (2)). Among other obligations, all natural or legal persons who intend to bring any animals, animal products and animal related items into Lao PDR are required to have an import permit and other relevant documentation including “an international veterinary certificate issued by the relevant government organizations or officer of the exporting country, in line with the requirements of Lao PDR”.

**Gap:** The reference to “import permit”, “other relevant documentation”, “certificate” etc. cover only written, but not electronic, documentation.

(6) Decree Implementing the Law on Plant Protection - 31 May 2012
Under this decree any person who intends to import a plant, plant product or regulated article is required
to obtain an import permit issued by the Plant Protection Authority (PPA). Under Art.21 the plant protection officer must “notify the importer the reasons of (sic) refusing the Phytosanitary certificate in writing, or where necessary, the plant protection officer shall ask for additional information in writing in accordance with import regulations.” Among the other relevant articles, Art.22 refers to warnings and a “written notice” by the plant protection officer; Art.24 requires that consignments in transit “shall require a written authorization” from the plant protection officer at the entry checkpoint, and Art. 26 stipulates that any person wishing to export a plant, plant product or regulated articles shall submit an application to the PPA “in the prescribed form and with the documents as set out in regulations…”

Gap: It is clear from the above that there is a requirement for written notices, authorizations and documents set out in regulations (which are normally in writing). No reference is made in the decree to equivalence of electronic notices, documents etc. with written documentation. While on one view the operation of the Electronic Transactions Act overcomes this problem, it would still be prudent to amend this decree, together with the other decrees and laws that have been mentioned, to ensure equivalence of electronic with written documentation.

(7) Decree on Fees and Service Charges No.03/PO – 19 November 2008
The purpose of this decree is to set out the fees and charges for a wide variety of government services, including the issuing of export-import licenses, fees for issuing a certificate of origin of goods, fees for land transportation etc.

Gap: There are no provisions in the decree to enable electronic payments to cover the cost of implementing, maintaining, developing, administering etc. the (future) LNSW. Lao authorities would be perfectly entitled to issue regulations imposing fees for such services. This was foreshadowed in Art.18 of the [draft] The Government’s Decree to Establish and Operate a Lao National Single Window (March 2012). Of course, this cannot be done until the NSW is established and it is recommended, therefore, that the Decree on Fees and Charges No.3/PO be amended at about the time, or just before, the LNSW becomes operational.

Regulations, Decisions, Instructions, Notifications
The great majority of legal rules mentioned in the Lao PDR Trade Portal are Regulations, Decisions, Notifications, Ministerial Orders and Instructions, Provisions etc. Since they are subsidiary legal instruments and instructions, it is not considered necessary to examine them here. The amendments of laws and decrees, mentioned above, should be sufficient to ensure that any subsidiary legal rule, instruction etc is automatically invalidated to the extent of its inconsistency with the law or decree to which it relates. The following is a sample of regulations, decisions and notifications that have identifiable gaps.

This Notification from the Prime Minister’s Office requires those involved in the business of ‘import-export goods or other products’ shall submit documents and proceed with the procedures’ set out in the Notification. For the exportation and importation of different categories of goods the exporter or importer, as the case may be, is required to submit “Request/letter of intention, Invoice and Packing list” to the relevant ministries for approval. After an export or import license has been issued by the relevant authority the exporter or importer is required to submit the license to a Single Window Unit.

Gap: Although this Notification refers to the submission of a license to a Single Window, there is no provision for the exporter/importer to lodge standardized information and documents with a single entry point to fulfil all import or export requirements. This problem would be overcome by a (future) decree establishing a NSW in Laos. The other gap is similar to those referred to above (ie, lack of functional equivalence to written documentation) but no action is recommended given that this is only “Notification”, and not a law or decree – which carries much greater legal weight.

(2) Regulation on the Control and Production, Export-Imported Safe Food 2006.

Any food business wishing to register a food product is required to provide all documents required by the Food and Drug department for food registration. Art.2 defines “food product registration” as “…the information of formula in writing form that demonstrated the list of ingredients used in food composition,..” Section 2 of this Regulation, entitled Import-Export and transit of Food, refers to the submission of the documents for food imports and exports to the Food and Drug Authority. It would appear that this documentation can only be made in paper form.

Gap: It appears that only written documents are acceptable for food product registration and for documentation of food imports and exports. No mention is made of electronic documentation.


This Decision refers (in Art.6) to a number of “required documents” to apply for export or import license for minerals and mineral products. They include application for export or import license and the submission of a “copy of documents” regarding enterprise registration certificates, approval for mining extraction etc.

Gap: The Decision does not provide a single entry point to fulfil all import and export requirements and makes no reference to electronic documentation.

Documents required for transportation of finished timber products to be exported are set out in Art.IV (Exportation). They are:

1. Copy of Enterprise Registration Certificate authorized to exercise timber business.
2. Export controlling license issued by Department of Industry and Commerce, attached with packing list.
3. Customs declaration forms (if different province shall comprise the document according to the discipline of finance sector).
5. Copy of Sale-Purchase contract with foreign buyer.
6. Copy of payment receipt through the bank."

Gap: It is clear that what is envisaged here is essentially paper documentation. There is no provision here for electronic transactions.

A number of other laws, regulations, decrees, decisions etc. listed in the Trade Portal have gaps when measured against the requirements for the establishment of a NSW and introduction of electronic transactions/e-commerce. They are similar to those mentioned in the examples (above) and it is not considered necessary to analyse the gaps in them for the reasons already mentioned.

The “Decisions” and “Notifications” that are relevant but likely to be automatically reviewed following amendments to the parent law and the application of the Electronic Transactions Act include:

- Decision on Procedures for Importation and Exportation of Gold Bars (26 June 2012);
- Decision on Procedures for Importation, Management and Utilization of Chainsaw(wood-cutting machine), No.0080/MAF(19 June 2012);
- Decision on the Quality Control of Cosmetic Products, 12 November 2003;
- Notification on the licensing procedure of the import and export of planted timbers No.1791/MOIC. DIMEX, 30/09/2011;
- Decision on Procedures for Importation and Distribution of Publications (Ministry of Information, Culture and Tourism), 19 June 2012;
- Decision of the Minister of National Defense on the Management of Industrial Explosive Materials No.2450/MND – Ministry of National Defence, 5 August 2010; and the

2.3.4 Gaps in admissibility of evidence in criminal and civil proceedings

In addition to gaps in laws etc. referred to in the Lao PDR Trade Portal, when measured against international standards, problems can also arise when a matter is brought before a criminal or civil court in Laos.
For example, the Decree of the President of Lao PDR on the Promulgation of the Amended Law on Criminal Procedure 2004 provides that evidence in criminal proceedings consists of: Physical evidence; Documentary evidence; and Evidence from persons. “Documentary evidence” is defined as “derived from letters, reports of the investigation, reports of the activities of the people’s courts, accounts, drawings, sketches, photographs, and other documents relating to the offence.” (Art.20)

**Gaps:** This decree is relevant if, for example, a person is prosecuted for fraud in the submission of documents for the export, import or transit of goods. The problem with the decree is that it does not refer to electronic documents and this would, therefore, make the admissibility of such documents in court, and the punishment of offenders, difficult and thus hamper criminal proceedings.

Similarly, the Decree of the President of Lao PDR on the Promulgation of the Amended Law on Civil Procedure 2004 sets out what evidence is admissible in a civil court. Reference is made in the Decree to “Physical evidence”, “Documentary evidence” and “Evidence from persons” – as is the case for criminal proceedings. The definition of documentary evidence refers here to “[documents of] title, contracts, photographs, financial statements, and other documents relating to the dispute.” Thus any electronic documents would, on the face of this law, be excluded from admission in proceedings involving a civil case – for example, a claim for compensation by an exporter for the mishandling of information by the NSW authority.

As already explained on p.8 of this report there could be problems here in applying the Electronic Transactions Act, 2012. While Art.14 (1) of that Act states that electronic documents may be used as evidence in the same way as paper documents, it also contains an important proviso – “except the laws defined otherwise”. Since both the Criminal and Civil Procedure Decrees provide for written documentation only it could be argued that Art. 14 (1) has the effect of giving priority to the existing requirements of these decrees. It is, therefore, recommended that they be amended to ensure that judges accept electronic documents as evidence on the same basis as written documentation.

Section 3 (below) of this paper sets out a Checklist of what is required for the establishment of a NSW in law, and what should be considered for inclusion in an initial Lao Decree.
3 Recommendations

3.1 Introduction

This section sets out the Checklist of what is required for the establishment of the Lao National Single Window (Column 1, below), the extent to which these requirements are affected by existing laws in Laos (Columns 2 and 3), and the recommendations on what provisions should be considered in drafting an initial decree on the establishment of a NSW.

Although a decree is inferior to a law in the Loa legal system, a Decree can be prepared, and amended, relatively quickly in the light of experience with its implementation. It is the consultant's view that a decree is the best option at this stage for establishing the legal framework for a NSW in Laos. At the same time, it should be borne in mind that any decree that is inconsistent with an existing law would be inoperative to the extent of its inconsistency. In the light of experience with the operation of a decree it may be necessary, therefore, to consider upgrading the decree into a law.

As far as ensuring the equivalence of electronic transactions with written documentation is concerned, it may be sufficient to make a cross-reference, in the proposed LNSW Decree, to the Law on Electronic Transactions (recently adopted by the National Assembly), and to also make reference to the Customs Act. However, for the purpose of ensuring greater clarity in the application of laws, and in keeping with the approach proposed in the previous section, the consultant proposes that the essential elements of electronic transactions should also be included in the Decree. As for the application of criminal offences (e.g. hacking of information), it would be appropriate for the proposed Decree to spell out prohibitions in the Decree but not penalties – which should be left to the criminal law. As for dispute settlement (e.g. conciliation procedures, arbitration) there are already general laws on dispute settlement but, for the sake of completion, it would be desirable to have some provisions on this in the Decree as well – provided they are consistent with existing law.

It appears that no ASEAN country has, at the time of writing, established a fully operational NSW incorporating all the international standards and best practices established in international agreements, as well as the UN/CEFACT Recommendation No.35 on ‘Establishing a legal framework for international trade Single Window’ (ECE/TRADE/C//CEFACT/2010/23/Rev.2), which has provided a basis for the work of the ASEAN Legal Working Group (“LWG”) over the past several years. ASEAN countries have introduced some elements - in particular laws on electronic transactions - that have been identified in the Checklist of legal issues in Recommendation No.35 but none of them has, so far, developed a law incorporating the bulk of the standards provided UN/CEFACT Recommendation No.35. Singapore comes the closest to achieving this.
Given the slow progress in the establishment of NSWs (in individual ASEAN countries) encompassing all the international standards in Recommendation 35 it is unlikely that Laos will move ahead of its ASEAN partners in developing a fully developed NSW. It may be necessary, therefore, to start with a legal framework that encompasses essential elements for the operation of a NSW – such as the establishment of an entity for the operation of a NSW, authority to access and share data between government agencies, data protection and data quality assurance – and adopt other requirements of the overall architecture (as measured by international standards) little by little - and in the light of Laos’ progress and any obstacles it encounters - in adopting the detailed and high standards set out in international agreements and model laws.

The Checklist in the following table contains all the international standards set out in UN/CEFACT Recommendation No.35 on ‘Establishing a legal framework for international trade Single Window’. The last column sets out the various steps that could be taken by the Lao authorities for the purpose of meeting those international standards.

### 3.2 Checklist of rules to be included in legal framework of a NSW

<table>
<thead>
<tr>
<th>Checklist of what is required</th>
<th>Presence / Absence of law on subject</th>
<th>Conflicting laws on subject</th>
<th>Initial Decree (Government Decree)</th>
</tr>
</thead>
</table>
| **1) Law/Decree to establish a NSW**  
* A Decree/Law establishing a NSW would allow all parties involved in international trade and transport to lodge standardized information and documents at a single entry point to fulfil all import, export and transit-related regulatory requirements.  
* As at 28 January 2013, there are no laws, decrees or any other legal rule in Lao PDR establishing a NSW.  
* There is nothing in the Constitution or existing laws that prevent the establishment, under a law or decree etc., of a National Single Window.  
* The first priority would be to identify an existing ministry/department, or create a new entity, for the operation of the NSW. The Decree would include some basic provisions for the operation of the NSW (see below) and make reference to existing laws relevant to the operation of NSWs – i.e. Law on Electronic Transactions, Customs Act, criminal laws (e.g. for falsifying documents), etc.  
* If various organizations (government or non-governmental) are involved in the creation and operation of the NSW it will be important to have a formal agreement between the parties involved that clearly defines the different roles, responsibilities and |
obligations of each participant. Such an agreement should be sufficiently flexible to include any other organization that is considered – in the light of experience - as essential for the operation of the NSW.

*It will also be important for the decree establishing the legal framework for the LNSW to foreshadow the development of ‘end-user agreements’ with the users of the SW facility (i.e., with traders, freight forwarders, agents, banks etc.). Such agreements could be mandated under separate regulations, or other legally binding rule that should include terms related to access and security controls and procedures, electronic signatures, liability issues etc.

*The Decree will need to eventually include the international standards set out in UN/CEFACT Recommendation No.35 (which are set out in the Checklist – see first column), and any international agreement to which Lao PDR becomes a party, to ensure consistency in approaches for the operation of NSWS, thus facilitating cross-border interoperability between the Lao NSW and other national NSWS - both in the ASEAN region, and also outside the region.

*In addition, the decree will need to authorize the sharing or exchange of data information with the customs administrations of other countries in order to ensure that such sharing of information have legal validity.

*There are no laws that prohibit access to, and sharing of data, between government agencies.

*There appears to be no laws or decrees in Lao PDR governing access and sharing of trade related information between government agencies.

*There are no laws that prohibit access to, and sharing of data, between government agencies.

*If this has not already been done, an examination will be required identifying all the government agencies that may require information from, and provide data to, the NSW. Private sector entities will also need to be authorized to access the NSW to enable them to submit electronic documents and arranging electronic payment for customs duties etc.

<table>
<thead>
<tr>
<th>3) Authority to access and share data between government agencies</th>
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<tbody>
<tr>
<td>*In establishing a NSW it will be important to identify which governmental agencies may require information from, and provide data to, the NSW. Private sector entities will also need to be authorized to access the NSW to enable them to submit electronic documents and arranging electronic payment for customs duties etc.</td>
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<tr>
<th>3) Authority to access and share data between government agencies</th>
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<tbody>
<tr>
<td>*If this has not already been done, an examination will be required identifying all the government agencies that may require information from, and provide data to, the NSW solely for the purposes of fulfilling their duties related to the import and export processes of Lao PDR.</td>
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<tr>
<th>3) Authority to access and share data between government agencies</th>
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<tr>
<td>*It will also be necessary for the LNSW/Steering Committee to consider whether an inter-agency agreement, or a separate decree, authorizing information exchanges between ministries and government agencies, as well as private sector entities, will be required.</td>
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<tr>
<th>3) Authority to access and share data between government agencies</th>
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<tr>
<td>*Private sector entities – including traders and customs brokers – will need to be authorized, under the Decree, to access the NSW to enable them to submit electronic documents for processing and arranging electronic payment for customs duties, taxes and fees.</td>
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</table>

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<tr>
<th>3) Authority to access and share data between government agencies</th>
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<tbody>
<tr>
<td>*Legal authority will also be required – to the extent that this is not already authorized under Lao law – for the exchange of electronic information in regard to the import, export and transit transactions between Lao PDR and other countries.</td>
</tr>
</tbody>
</table>
### 4) Electronic transactions

*The relevant provisions here would set out the specific requirements that electronic communications need to meet in order to fulfil the same purposes and functions that certain notions in the traditional paper-based system – for example, ‘writing’, ‘original’, ‘signed’ and ‘record’ – seek to achieve.

*Even though the equivalence of electronic documents and signature with traditional paper-based systems is already provided for in the Customs Act and Electronic Transactions Act it would be prudent to reinforce this in a Decree (and any subsequent Law) establishing a NSW, given the importance of full recognition of electronic transactions.

*There are various laws and Decrees in Lao PDR that refer to ‘documents’, ‘statements’ etc. (See Section 2 (above) on ‘Impediments and Gaps’). On the face of it, this would exclude electronic documents and signatures from the validation, admission in evidence in courts etc. of electronic documents.

* For example, the 2004 Decree on Criminal Procedure and the 2004 Decree on Civil Procedure refer to ‘physical evidence’, ‘documentary evidence’ and ‘evidence from persons’; but not to electronic documentation.

*A Decree establishing a LNSW will need to provide inter alia for the equivalence of electronic documents with written and other categories of documents.

*It will also need to make reference to the Law on Electronic Transactions, making it clear that this laws applies to all transactions under the NSW.

*In order to comply with national and international rules on the archiving of information (i.e., the keeping of records), proper procedures for electronic archiving must be established. This should also include measures to ensure that an ‘audit trial’ (to address liability and responsibility issues) is established once the NSW is in operation.

*Notwithstanding the operation of the Law on Electronic Transactions and the revised Customs Act, it would probably be desirable to amend other laws and decrees that envisage paper documents to ensure that they also cover electronic documents used in the context of trade facilitation. These laws are referred to in the “Gaps” analysis in the previous section. For example, existing laws on the admissibility of evidence in a Lao court or tribunal should be re-examined to ensure that they include electronic documents or messages, so that they can be used – on the same basis as written documents - in evidence in legal proceedings.

### 5) Submission of trade-related documentation, data protection within NSW facility and access through identification, authentication and authorization mechanisms

*This covers a number of processes from the initial submission of trade-related data, to the physical protection of different categories of information and access to it through pre-determined procedures.

*Since there is no NSW in existence there are no legal rules regarding the submission of trade related documentation and data protection in a NSW context.

*There are no conflicts with existing laws.

*It will be essential to develop data protection rules even in the most basic legal framework establishing the NSW. Where relevant, the NSW should adopt international legal standards and best practices so that it is eventually interoperable with NSW developments in ASEAN and also with countries outside the region. At the initial stage the rules should cover the following:

- Who can submit the trade-related documentation/data: Importers/Exporters; Customs Brokers; Agents;
- Since the data submitted to a NSW will typically contain personally-identifiable information, trade-sensitive data, confidential business and financial information and, possibly, information related to national security, there is the question of where these different categories of information should be stored and what measures should be taken to ensure that they are secure;
- How should the above-mentioned data be shared amongst participating government ministries/agencies, and the private sector;
- How should it be shared with administrations in other countries;
It will be necessary to establish under the Decree, or Regulations adopted under it, secure authentication protocols, and develop access control measures to restrict access to personal and confidential information to those who need such access to perform their duties in operating the LNSW; Proper mechanisms for the identification, authentication and authorization of users will be required; For documents that need to be signed and sealed it will be important to determine what kind of 'E-signature' will be required; Develop memoranda of understanding and information security agreements between the operator of the NSW in Lao PDR and government agencies in order to incorporate the above-mentioned requirements; Need to check whether the Decree on cyber security being prepared by the Ministry of Posts and Telecommunications is adequate and what additional legal reforms, if any, are required; and A list of criminal and civil offences should be referred to in the Decree but remedies and punishment should be dealt with under existing civil and criminal law.

| 6) Data quality assurance | *There are no laws protecting the accuracy and integrity of data processed in a NSW. | *There are no existing laws that would stand in the way of protecting the accuracy and integrity of data. | *It will be essential to ensure that the data processed within a SW environment is accurate (i.e. free from errors) and integral (i.e. complete). For example, if valuation information is incorrectly entered on an electronic declaration, this would almost certainly distort the assessment of duties or taxes that have to be paid. It is, therefore, necessary to provide controls over the data input process as well as establish responsibility for data entry and processing within the NSW. *The responsibility for entering data into the SW facility, and the subsequent processing of the data, will need to be established by the LNSWSec/Steering Committee after consultation with the governmental agencies involved in the operation of the LNSW and the private sector. *As for data processing within the Single Window facility, it will be necessary to determine for each step who is to be the data controller. *Regulations will need to be prepared to provide guidelines for the entry in the NSW of data and establishing responsibility for errors on electronic forms to the NSW, and to facilitate the correction of errors in the event that incorrect data is submitted, for example, by a trader or broker. *The UN/CEFACT Recommendation No. 35 has recommended that, for data processing, audit trials should be established by means of... |
identification, authentication and authorization as well as proper logging and recording mechanisms.

*If regulations are required to ensure the accuracy and integrity of data and information processed in the LNSW, it may be desirable for the Minister of Finance to promulgate the necessary regulations, ensuring at the same time that they are based on international standards.

*Administrative sanctions and civil liability (involving, for example, the payment of compensation to traders adversely affected) will need to be provided for damage or loss caused as a result of the failure of NSW operators to take reasonable measures to protect the accuracy and integrity of data.

### 7) Liability issues

*Civil and criminal liability to be provided for submission of incorrect information, illegal access and misuse of information.

*Under existing laws and administrative practices, traders or officials who provide inaccurate, incorrect or incomplete information can be made liable, and punished, for their action.

*It is unclear to what extent traders can under current laws sue, or obtain compensation from, a Ministry or the government for providing inaccurate, information which causes a commercial loss.

*There are no laws that would prevent the development of an effective liability regime for inaccurate, incorrect or incomplete information in a NSW context.

* Depending on the circumstances, liability could arise for the relevant ministry operating the NSW, an independent entity operating the NSW, traders and persons who submit incorrect information, or persons who criminally interfere with the operation of the NSW (e.g. hackers).

*In the first place, the Decree would need to set out the various situations where liability for the provision of inaccurate, incomplete or incorrect information can arise. This could include:

- errors arising from a dysfunction in the physical operation of the NSW, which could result in delays in the release of goods that are time-sensitive either under the contract between the private parties or as related to the goods themselves (e.g. perishable food shipments);

*Illegal access to the Lao PDR NSW should also be referred to in the enabling legislation but penalties for this should be dealt with under existing Lao criminal law (e.g. in relation to the stealing by outsiders of confidential information);

*It may be necessary to determine to what extent government liability for errors should be limited – given the limited scope for a person or trading company to take action against the government, under the Lao legal system, for acts of negligence.

### 8) Privacy issues

*Privacy issues relate to the need to ensure the confidentiality of personal information.

*There are no laws protecting privacy in any comprehensive manner in Lao PDR.

*The development of privacy rules, in a Decree or Law establishing the NSW, would not conflict with existing laws.

*The protection of privacy (i.e. personal information) overlaps with Data protection (dealt with above) but is not fully covered by it.

*An examination will be required of what data submitted by private traders will need to be protected over and above the data protection discussed above. Privacy violations may include, for example, release of information (e.g. by an official) of the trading
patterns of a user of the LNSW.
*There is also the question of how long data containing personal information may be retained before it is destroyed.
*It may be sufficient to have, in the initial Decree, a general prohibition against the unauthorized release of 'private information', provide administrative sanctions against such a release, and explore - with the Ministry of Justice – what specific laws are required to protect privacy (perhaps as a separate section in a law on data protection).
- In considering privacy protection it would be useful to take into account the OECD Guidelines on the Protection of Privacy and Trans-border Flows of Personal Data.

9) Intellectual Property Rights
*Two sets of issues would arise in regard to IPR in the LNSW context:
- the first relates to the IPR rights of, for example, a trader who submits information electronically to the (future) Lao NSW;
- and the second relates to the actual development of the Lao NSW, including all of the software development and hardware associated with the NSW.

*The review of the 2007 Intellectual Property Law to ensure Lao PDR's compliance with the WTO's Trade-Related Intellectual Property Rights Agreement is now complete.
*Art.32 (New Protection Measures) of the 2011 Customs Law provides that "[I]f the owner of intellectual property rights has reliable information that imported, exported or transited goods infringe his/her trademarks or copyrights, the owner of the intellectual property right is entitled to prepare a request and submit [it] to the Customs Administration to inspect and seize such goods temporarily".
*Art. 33 of the Customs Law provides that the

*There appear to be no laws in Laos that are in conflict with the application of intellectual property rights under a NSW.

* As has been pointed out in various studies, intellectual property rights issues may arise in the context of the LNSW in two types of situations:
- the first relates to the question of "ownership" of data that is stored in a future Lao NSW, and which parties may have intellectual property interests in it. As regards a trader's, and other interested parties' intellectual property rights over such data, it seems clear that both the Intellectual Property Law of 2007 – which is very comprehensive – and the 2011 Customs Law cover the field adequately. There is, therefore, no need to have additional provisions regarding IPRs in a NSW legal framework; and
- the second set of IPR issues relates to the actual development of the LNSW, including all of the computer hardware, software, firmware etc., associated with a NSW. Developers of software etc. would normally wish to retain ownership of the software and provide a license to the user. Because of its close relationship with the establishment and operation of the LNSW, one option would be to address this in the future decree/law itself rather than leave it to be dealt with under the Intellectual Property Law of 2007. This is essentially a policy choice to be resolved by the Lao authorities in the future.
10) Anti-competitive practices

*In the course of processing information under the NSW, evidence may emerge of violations of Lao’s Decree on Trade Competition.

*The Lao Decree 15/PMO on Trade Competition (2004) prohibits a number of anti-competitive practices – including mergers or acquisitions that destroy competitors or substantially reduces competition; dumping, price fixing, the establishment of cartels with foreign business entities.

*There are no laws that would prevent the application of Lao Decree No.15/PMO on Trade Competition (2004).

* Decree No 15/PMO appears to cover the field, and no additional provisions are recommended, for the time being, in the Decree establishing a NSW.

11) Dispute Resolution

*If there is a dispute between, for example, a trader and organization running the NSW, it will be important to resolve the dispute quickly through conciliation, mediation and arbitration, thus avoiding recourse to courts of law – which should only be resorted to for criminal offences, or in major civil cases.

*There are no specific laws in Lao PDR to settle the various disputes that could arise in the implementation of a NSW, other than the Law on Electronic Transactions which includes a section on Resolution of Disputes (Part VII of the Law). Among other things, Part VII enables a person or legal entity to appeal to the Minister of Science and Technology to reconsider a decision refusing to register a Secure Digital Signature Certificate Provider and, if dissatisfied with the outcome of the appeal, to submit the case to the courts for final resolution according to the laws and regulations (Art.42).

*There are no laws in Lao PDR preventing the resolution of disputes regarding the operation of the NSW by conciliation, mediation, arbitration etc. in addition to recourse to a court of law.

*An important initial task for the LNSWSec/Steering Committee will be to examine to what extent administrative and civil disputes between parties using NSW can be heard, and settled, by the Amended Law No.06/NA on Resolution of Economic Disputes, adopted by the National Assembly in December 2010.

*If the mechanisms available under the above-mentioned law are found not to be suitable for the settlement of disputes in transactions involving the LNSW, provisions for negotiation, mediation, conciliation and arbitration should be developed in the Decree, or in Regulations, following consultations with line Ministries.

*In developing mechanisms for dispute settlement, particular attention will also need to be given to what remedies are to be made available for traders against the organization responsible for the operation of the NSW in case of negligence etc., leading to commercial loss etc.

*For administrative errors causing loss (as opposed to criminal activities) it appears that alternative dispute resolution mechanisms (e.g. mediation or arbitration) are already available in Lao PDR under the Amended Law No.06/NA on Resolution of Economic Disputes, mentioned above. It is assumed that such a law would be applicable, for example, in regard to claims for financial loss resulting from the used of incorrect
| **12) Conformity with international commitments** | *Additional laws/Decrees may be required to fully meet Laos' obligations under the ASEAN Protocol, and its Annexes, and any multilateral, regional or bilateral treaty to which it becomes a party.* | *Decisions to become a party to legally binding international agreements are made by the government (on behalf of the State) and there are no laws that would prevent the Lao authorities from adopting whatever international commitments they wish to make on behalf of Lao PDR.* | *Early attention will need to be given as to whether the measures proposed for inclusion in the Initial Decree fully meet Lao PDR's obligations under the ASEAN Convention on the NSW and its Protocol as well as to any multilateral treaty (e.g. 2005 Electronic Communications Convention) or bilateral treaty to which Lao PDR becomes a party.*  
*It is recommended that Lao PDR not enter into international commitments on the operation of the NSW until it first satisfies itself that its laws and practices fully conform to the treaty/convention in question.* |
| **13) Amendment provisions of Decree/Law** | *Not applicable* | *Not applicable* | *The provisions of a Decree should be readily amendable to take into account developments, including ensuring consistency with existing and new international agreements.* |

Adopted by the National Assembly in December 2010, may also be available for the resolution of disputes in regard to the operation of the NSW.

Information.

Dispute Resolution mechanisms to be developed in the Decree and/or Regulations will need to take into account any ASEAN Single Window dispute resolution mechanism that may be established by the ASEAN Member States.
4 Conclusions

In adopting the Law on Electronic Transactions in December 2012, the Lao authorities have taken an important step in developing and implementing a NSW, which is mandated under the ASEAN 2005 Agreement to Establish and Implement the ASEAN Single Window and its 2006 Protocol. While the Lao law deals with a central feature of electronic commerce – namely, that electronic documents are to be treated on the same basis as written documents – it does not establish the legal structure for the establishment and operation of a NSW. The decision taken by the Minister of Finance on 10 August 2012 (Decision No 2114/MOF) to set up a Steering Committee to study and set up a NSW in Laos suggests that what is contemplated is the establishment of a legal framework for a NSW, and not merely the adoption of administrative arrangements to operate such a system.

Neither the ASEAN Agreement of 2005, nor the 2006 Protocol, set out what is to be covered in a NSW. UN/CEFACT Recommendation No.35 on ‘Establishing a legal framework for international trade Single Window’ (ECE/TRADE/C/CEFACT/2010/23/Rev.2), which has provided a basis for the work of the ASEAN Legal Working Group over the past several years, provides a list of key legal issues in its Annex II -‘Checklist Guidelines’ that need to be addressed by governments in establishing a NSW. These guidelines are widely supported internationally and form the basis of the Recommendations provided in section 3 (Recommendations) above.

There are no political, constitutional or legal impediments to the establishment of a NSW in Laos. The Lao government is free to develop a legal framework for the establishment of a NSW in whatever manner it considers will best serve Laos’ national interests. All the evidence suggests that the Lao Government wishes to proceed with the establishment of the NSW, even though the details of what is intended, are not clear at this stage. The main issues appear to be: (i) to what extent do the Lao authorities wish to implement, in the short to medium term, the international criteria set out in UN/CEFACT Recommendation No.35; and (ii) how do they wish to do this – e.g., in a separate decree establishing the legal framework for a NSW?

While there are no legal impediments in Laos to the establishment and implementation of a NSW, there are many gaps in existing law. The principal gap, of course, is that there is no law or decree in Laos providing for the establishment and operation of a NSW with detailed rules regarding access to the NSW, data protection and quality assurance etc. In addition to this there are a number of laws, decrees, regulations, decisions, instructions etc. that have gaps in them in so far as they do not refer to electronic communications - which are a central feature for the operation of a NSW. These laws and decrees etc. - which recognize only written documentation, signatures etc. - are listed in the Lao Trade Portal. The main gap in these legal rules is that they fail to provide equivalence of electronic communications with written documentation.
While it could be argued that Arts.13 (2) and 58 of the Law on Electronic Transactions fills these gaps by providing for the equivalence between electronic and domestic documents, and making it clear that the law prevails over any inconsistent law, this may not be sufficient from a legal and administrative point of view. Since ministries tend to focus, on a day-to-day basis, on laws/decrees they are required to administer (with sometimes little regard to other laws) it may be prudent to amend these laws and decrees to ensure the equivalence of electronic document with a paper document rather than just leave all this to be governed by the Electronic Transactions Act only. In many respects, what is proposed here would constitute an additional legal guarantee for the recognition of electronic transactions? But, in the consultant’s view, it would make matters clearer for officials administering legislation relating to the export, import and transit of goods – who otherwise may not be aware of laws (such as the Electronics Transactions Act) and decrees etc. outside those administered in their ministries/department.

To overcome this potential problem, it may be sufficient to provide in trade laws and decrees that have gaps in them (either in the introductory part of each law or decree dealing with the import/export/transit of goods, or in a final clause) a provision along the following lines.

“The Law on Electronic Transactions, 2012 applies to any certificate or other written documentation referred to in this law.”

The importance of amending individual laws and decrees that have gaps in them is more obvious in regard to both the Criminal and Civil Procedure decrees which provide for the admissibility in evidence of written documentation only. The fact that Art.14 (1) of the Electronic Transactions Act provides that electronic documents may be used as evidence in the same way as paper documents “except the laws defined otherwise”(sic) would suggest that these decrees, which recognize only written documentation, would prevail. It is, therefore, recommended that these decrees should be amended to ensure that judges accept electronic documents as evidence on the same basis as written documentation.

Given the slow progress in the establishment of NSWs in individual ASEAN countries encompassing all the international standards in UN/CEFACT Recommendation 35, it is unlikely that Laos will move ahead of its ASEAN partners in developing a fully developed NSW. It may be necessary, therefore, to start with a legal framework that encompasses essential elements for the operation of a NSW – such as the establishment of an entity for the operation of a NSW, authority to access and share data between government agencies, data protection and data quality assurance – and adopt other requirements of the overall architecture (as explained in the Checklist in UN/CEFACT Recommendation No.35) little by little, and in the light of Laos’ progress and any obstacles it encounters, in adopting the detailed and high standards set out in international agreements, the UN/CEFACT Recommendation No.35, and model laws. A phased approach to the development of a LNSW is recommended in view of the many steps that must be taken to have a fully-functioning NSW. This would be consistent with NSW best practices.
Appendix A: LEGAL OPINION ON DRAFT GOVERNMENT DECREE TO ESTABLISH AND OPERATE A LAO NATIONAL SINGLE WINDOW

1. Introduction
On 2 November 2012 I handed to the Team Leader a brief report (2 ½ pages) examining aspects of the (draft) The Government’s Decree to Establish and Operate a Lao National Single Window (hereinafter referred to as the ‘Draft Decree’) The text of the Draft Decree was provided to me by Mr Steve Parker, Director of the Luna-Lao Project, during a meeting I had with him on 15 October. I was informed by Mr Parker that the text was finalized in March 2012 and that it was the latest version available of the draft law.

I sent the English version of the Draft Decree to both Ms Anisara Sombounkhan, Head of the Bilateral Cooperation Unit, Customs Department, and Mr. Sanya Praseuth, Chief of Cabinet Office, Ministry of Science and Technology, asking them to confirm that that version was still the current one, and had not been amended. At the time of writing, no response has been received. What follows is based on the assumption that the text handed over to me on 15 October is the latest draft. However, even if is not, many of my comments on the text are likely to be still relevant in regard to a later text.

From comments made by officials it appears that the Lao Government plans to adopt the Decree by January 2013. Before examining the Draft Decree in some detail, it is important to explain what is meant by a ‘National Single Window’ and, in general terms, what legal framework is required to establish it.

2. Definition and legal framework of National Single Window
What is a ‘Single Window’? A widely used definition is the one provided in the 2005 UN/CEFACT Recommendation 33 – Guidelines on Establishing a Single Window, which states that it is:

’a facility that allows parties involved in trade and transport to lodge standardized information and documents with a single entry point to fulfil all import, export, and transit-related regulatory requirements. If information is electronic, then individual data elements should only be submitted once.’(Recommendation 33, p.7)

As explained in UN/CEFACT Recommendation 35 on Establishing a legal framework for international trade Single Window (8 October 2010), ‘Single Window facilities are increasingly used around the world as a tool to simplify and make more efficient and effective the data submission process for import and export operations.
In many countries and economies, the introduction of such a facility has brought substantial benefits both to the Government and the trading community…’(p.4) The Single Window is generally managed centrally by a lead agency, enabling the appropriate governmental authorities and agencies to receive or have access to the information relevant for their purpose.

The establishment of a National Single Window (‘NSW’) requires enabling legislation to address a range of legal issues. As pointed out in the USAID’s Final Report entitled Lao PDR Single Window Implementation: Legal Requirements, Analysis, and Recommendations (June 2011), many of the legal issues are generic to the legal infrastructure for both NSW (national) development and for cross-border (international) Single Window development since there can be substantial overlap between them. It will be important to develop a national legal framework in Laos that will enable the NSW to be interoperable with those of other countries, particularly ASEAN countries – which, together with Laos, have made international legal commitments to establish and implement the ASEAN Single Window (Agreement of 2005, Protocol of 2006). The Draft Decree seeks to develop ‘principles and procedures’ for the establishment of the Lao NSW. This paper will focus essentially on substantive and drafting issues in regard to the March 2012 text of the Draft Decree that was handed to me and then focus on the legal principles established in existing international agreements, model laws and best practices that will need to be taken into consideration in the further elaboration of the Draft Decree.

3. General comments on Draft Decree
The Draft Decree comprises five chapters:

- Chapter I: General Provisions;
- Chapter II: Lao National Single Window Secretariat;
- Chapter III: Regulatory Principles for the Operation of the Lao National Single Window;
- Chapter IV: Relationship to Other Lao PDR Law;
- Chapter V: Final Provisions.

It appears that the main function of the Draft Decree is to establish the Lao NSWSec, list the various ministries and other entities that are to be represented on the Secretariat, spell out the responsibilities of the LNSWSec, and establish a Legal Working Group and a Technical Working Group. Under Art. 8.1 (Chapter II) the Legal Working Group is to be ‘responsible for developing recommendations to the LNSWSec for any legal changes that may be needed to establish the necessary legal framework in which the LNSW will operate both nationally and across borders. One objective of the LWG, among others that may be assigned by the LNSWSec, will be to ensure that the LNSW legal framework is consistent with and interoperable with the ASEAN Single Window Legal Framework Agreement currently under development by ASEAN.’ Art.8.1 goes on to explain that ‘[in the next draft, these responsibilities will be further defined.]’

The Draft Decree does not in itself provide the principles and rules to establish a NSW but, rather, establishes a Legal Working Group to do this in the future. I understand that the Legal Working Group has already met but,
during my visit to Laos in October, it has not been possible to obtain any information on what it has done so far and how it plans to proceed, despite various attempts to obtain information from various sources. Under Art.8. 2 a Technical Working Group will be responsible for developing recommendations to the LNSWSec ‘for the development and implementation of the technical architecture and operations of the LNSW.’

Similarly, in regard to Chapt.III, it will be up to the LNSWSec to recommend regulations for the identification, authentication and authorizations of access to the LNSW, including government employees, traders, brokers, and other end-users of the LNSW (Art.13). In other words, the legal rules applicable to those essential functions are not set out in the Draft Decree but are to be proposed, at some future time, by the LNSWSec. The Draft Decree also envisages, among other matters, that the LNSWSec will ‘recommend policies, processes and standards’ to ensure ‘the accuracy and integrity of data and information that is processed in the LNSW (Art.14) and to recommend to the Ministry of Finance ‘to issue regulations, policies and procedures for information and data submitted to and processed by the LNSW to protect confidential and private data.’ (Art.16) and to ‘examine the legal issues of intellectual property rights that may be associated with the development and operation of the LNSW.’(Art.17). Under another provision of the Draft Decree (Art.21 in Chapter IV) the LNSWSec is required ‘to develop recommendations, in consultation with the Legal Working Group and the Technical Working Group, for ‘regulations including those aspects required to insures the legal validity and enforcement of domestic and cross-border transactions.’

It is clear therefore that the Draft Decree does not, in itself, create the legal framework and rules for the operation of the LNSW but envisages that the LNSWSec, with the assistance of the Legal and Technical Committees, will do this in the months/years ahead. It is, therefore, not correct to assert that ‘the draft Decree already contains many, if not most, of the needed electronic commerce legal framework for the Lao PDR NSW’ (para.144 of USAID’S Final Report on Lao PDR Single Window, June 2011). The Draft Decree is more of a roadmap for future action for developing the underlying principles for the operation of a Lao National Single Window than a law establishing the various elements of NSW and regulating its operation. It is, in that respect, quite different, and not as far advanced, as the laws of a number of other countries or, for that matter, Lao’s Draft Law on Electronic Transactions (which has been examined separately).

It is clear that a number of additional provisions will need to be included in the Draft Decree in order to establish a legal framework to ensure that the NSW can operate effectively both nationally and internationally, and they will be discussed in very general terms in section 5 (below). Before doing this, however, it is necessary to examine some of the shortcomings in the Draft Decree as it stood in March 2012.

4. Comments on the substantive provisions and drafting of the Draft Decree

Chapter I: General Provisions

Article 1: Objectives and Purposes.

This Article reads quite well and appears to be an accurate description of what the Draft Decree seeks to achieve.
Article 2: Lao National Single Window
This provision is also satisfactory.

Article 3: International and Regional Agreements
The drafters of the text have acknowledged that this text is incomplete – presumably because it does not refer to all the international agreements and model texts dealing with Single Window issues. In the writer’s view, however, there are dangers in seeking to identify the names of all the texts pertaining to Single Windows/Electronic Communications that have been adopted because new ones are likely to be negotiated and adopted in the future. Because they are not identified in the text of Art.3, they would not be used as a reference point for the purposes of this Decree, even if they are more important and command greater international support than any of the existing international legal texts.

The reference to ‘WTO Agreements related to the operation of the LNSW’ is also inappropriate and misconceived because there are no such Agreements focusing on National Single Windows. It is only in recent years that the WTO has begun to look at Single Windows issues as part of the Doha Round Negotiations and in the broader context of trying to devise new trade facilitation arrangements. The Doha Round, however, has stalled and there is little likelihood of finding a solution in the near term. It would be more realistic, therefore, to omit any reference to the WTO and to simply refer to international agreements in a generic way so as to take into account future agreements. A possible option would be to redraft the Article as follows:

"Article 3: International and Regional Agreements
This Decree and implementing regulations, policies and procedures will comply with international and regional agreements to which the Lao PDR is a party. In particular, the Lao PDR will comply with its commitments made under the ASEAN Single Window Agreement and Protocol, as well as with any other ASEAN or other legally binding agreement which it has accepted. This Decree acknowledges that the ASEAN Single Window Working Group on Legal and Regulatory Matters strongly recommends that Member-States’ legal frameworks related to a NSW should be based on UNCITRAL texts”.

Article 4: Definitions.
This Article provides that ‘Definitions are to be added when the text is complete.’

Article 5: Scope of Application
This Article appears to be satisfactory.

Chapter II: Lao National Window Secretariat
Article 6: Organization Structure for the Lao National Single Window Secretariat
This Article identifies the fifteen ministries that will need to be represented (at Director-General level) on the LNSWSec. It also mentions the ‘Bank of Lao PDR’, the ‘Lao National Chamber of Commerce and Industry’ and ‘[additional members for discussion]’. 
There is a reference, in the fourth para. of this Article, to the ‘NS-LNSW’ but this body is not defined in the Draft Decree. It presumably refers to the National Secretariat of the LNSW. A reference to an ‘NS-LNSW’ is also made in Arts. 9, 10 and 23.

The question of which ministries and other organizations/entities should be represented on the LNSWSec is clearly a matter for the Lao authorities to determine.

It appears that the LNSWSec has not met very often since its creation and some consideration could be given, therefore, on what are the minimum number of meetings it should hold over a certain period of time – e.g., a meeting every second month? Monthly meetings? Given the large number of issues that need to be discussed and settled over the next few months/years there are advantages in providing a legal requirement for the LNSWSec to meet on a regular basis.

**Article 7: Responsibilities for the LNSWSec**

This Article is, generally speaking, quite satisfactory. Perhaps the word ‘in a manner consistent with the parameters of this Decree’ (at the end of the first para.) could be replaced by ‘in a manner consistent with the objectives and provisions of this Decree’.

**Article 8: Legal Working Group and Technical Working Group**

The châpeau of this Article does not read well in the English version and should be replaced by:

‘Two Working Groups will operate under the supervision of the LNSWSec and report to it, with the following responsibilities:

1. A Legal Working Group (LWG)…’

**Article 9: Secretariat Office**

This Article is fine as far as it goes. The existing draft explains that the responsibilities of the Secretariat Office will be ‘further defined’ in the next draft.

**Article 10: Cooperation Among the Working Groups and Secretariat Office**

This Art. appears to be satisfactory.

**Chapter III: Regulatory Principles for the Operation of the Lao National Single Window**

**Article 11: Authorization**

Art.11 authorizes the ‘…development, implementation and full operation of the LNSW for the purpose of the electronic submission of all necessary electronic documents, forms, data and information of whatever type necessary for the Lao PDR Government Ministries and Agencies to process import, export and transit transactions that are now, or may be established, under the laws of Lao PDR.’ It also authorizes the cross-border exchange of information and data under requirements in other Articles of Chapter III and pursuant to the
implementation of the ASEAN Single Window Agreements. The issues that need to be kept under consideration for the development and implementation of this, and other provisions in Chapter III, will be examined in Part 5 (below).

**Article 12: Access to and Sharing of Information and Data in the LNSW**

Art. 12 of the draft Decree is of crucial importance because it foreshadows access to and sharing of information and data in the proposed LNSW. The reference to ‘collaboration’ in the first line of the second paragraph does not appear to be the correct terminology and should be replaced by ‘consultation’, so that the phrase would now read:

‘After consultation and coordination with relevant line Ministries and the private sector, the LNSWSec…’

**Article 13: Requirements for Identification, Authentication and Authorization**

This Art. requires that after ‘collaboration and coordination’ with relevant line Ministries and the private sector, regulations for the processes of identification, authentication, and authorization of all individuals or entities that may have access to the LNSW, shall be recommended by the LNSWSec. As is the case for Art.12 it would be desirable to replace (in the first sentence) the term ‘collaboration’ with ‘consultation’.

The second half of the Art. requires, inter alia, that the processes outlined in the Art. be based on ‘international standards for information security’ and that account be taken of the ‘objective of the LNSW being interoperable with the ASEAN Single Window to the extent necessary.’ While it makes good sense to single out the ASEAN Single Window it is important that the LNSW should eventually be ‘interoperable’ with Single Window facilities throughout the world as well as those in ASEAN. The second last sentence of Art.13 could, therefore, be reformulated as follows.

‘Such processes shall be based on international standards for information security, and will take into account the objective of the LNSW being interoperable with the ASEAN Single Window and Single Window facilities throughout the world.’

**Article 14-17:**

Art.14 is entitled ‘Data Quality Assurance’, Art.15 ‘Electronic Archiving and Data Retention’, Art.16 ‘Data Protection and Information Security’ and Art.17 ‘Intellectual Property Rights’. These provisions authorize: the development of policies, processes and standards to ensure the accuracy and integrity of data and information processed in the LNSW (Art.14); the electronic archiving and data retention in electronic form of all information and data that may be submitted to, processed by, and shared between Ministries and government agencies in the LNSW environment (Art.15); recommendations (by the LNSWSec) to the Ministry of Finance to issue regulations, policies and procedures for information and data submitted to and processed by the LNSW to protect confidential and private data (Art.16); and an examination (by the LNSWSec) of legal issues and recommendations related to intellectual property rights. (Art.17).
As is the case with most of the other provisions in the Draft Decree, the above-mentioned provisions merely authorize the future development of policies, regulations, procedures etc. in regard to the above matters rather than set them out as basic rules in the Draft Decree. In Part 5 of this paper, an overview will be provided of issues that will need to be considered for inclusion in a subsequent version of the Draft Decree in order to ensure conformity with international standards in regard to the issues mentioned in Arts.14 to 17.

**Article 18: Payment Regulations**
This provision authorizes the LNSWSec to recommend to the Ministry of Finance to issue regulations to enable electronic payments to support the LNSW. This provision does not give rise to any particular substantive or drafting issues.

**Article 19: Competitive Environment**
This provision requires that the ‘LNSWSec shall ensure open and fair access to the LNSW facility by all end-users’. It does not raise any particular substantive or drafting issues.

**Chapter IV: Relationship to other Lao PDR Law.**
Although this chapter, in common with the other chapters that have been examined, authorizes the development of recommendations, laws and regulations in the future, it makes reference to the Customs Law and a (future) Electronic Transactions Law, with the objective of achieving a harmonized approach. Art.21, however, must have been drafted before the [Draft] Law on Electronic Transactions was prepared because only passing reference is made to that law which (we are told) is about to be adopted by the National Assembly. Since a first version of the Draft Decree is likely to be adopted some time after the Draft Law, it will be important for the Decree to spell out the legal relationship between it and the Draft Law. This will probably require the redrafting Art.21 to authorize the LNSWSec to examine - in consultation with the LWG and the TWG - both the Draft Law and Decree to ensure that they complement each other and to clarify any issues regarding their inter-operability as well as recommend what additional steps (if any) are required to enable the LNSW to operate using electronic commerce technologies and ensure the legal validity and enforceability of domestic and cross-border transactions.

The last para. of Art.21 requires that when the [Draft] Law on Electronic Transactions comes into effect regulations for the LNSW must be brought into compliance with that Law, and that the Law should take into account the requirements for the LNSW and linkage to the Asian Single Window. In the writer’s view, the wording here is too open-ended. It is not sufficient for the [Draft] Law on Electronic Transactions to ‘take into account the requirements of the LNSW! Both the Law and Decree, as well as Regulations adopted under them, must be fully consistent with each other if the LNSW is to operate satisfactorily.

It is recommended that both the Draft Law and Draft Decree make reference to each other and make it clear that they complement each other – the one (Draft Law) dealing essentially with the legal recognition of electronic documents, signatures and transactions, and the other (Draft Decree) providing the legal framework for the establishment and operation of the NSW in Laos. A new draft Article is proposed below
(Part 5) for inclusion in the Draft Decree. It is recommended that the Draft Law on Electronic Transactions should also include a provision to make it clear that nothing in it should be interpreted or applied in a manner inconsistent with the Decree.

The second para. of Art. 21 refers to the international standards that the LNSWSec will need to apply. In order not to ignore emerging legal standards in the ASEAN region, the words ‘regional and’ should be inserted before ‘international legal standard’ so that the beginning of that second para. would now read:

‘The LNSW shall use regional and international legal standards such as …. ’

Chapter V: Final Provisions
This chapter is in fact Chapter V, and not Chapter IV (as mentioned in the text).

Article 22: Enforcement Provision
The main problem with this provision is similar to that in Art. 49 of the [Draft] Law on Electronic Transactions (which has been examined separately): it is too general and relies too much on other laws, which – as far as we can ascertain – do not provide effective remedies against violators of this Decree. Since this Decree deals with novel issues it needs to spell out the different acts or omissions that constitute civil and criminal offences under the law, and set out the sanctions (from warnings and disciplinary measures to fines and prosecutions) according to the gravity of the offence. It is most unlikely that existing civil and criminal laws in Lao PDR do this adequately and, therefore, new enforcement provisions/sanctions will need to be worked out by the LNSWSec in consultation with the LWG, and then approved by Ministers. This is not a priority issue since the main task of the LNSWSec, in the coming months, will be to concentrate on the various tasks that have been allocated to it under the Draft Decree.

Article 23: Dispute Resolution Mechanism
This Article, like most of the others, leaves it to the LNSWSec to develop dispute resolution processes. There is a reference, in the second para. to the ‘NS-LNSW’ which, as mentioned before, has not been defined in the Draft Decree.

Article 24: Implementation
Apart from pointing out that the Ministry of Finance has the main coordinating role for implementing the Decree, Art. 24 is vague and somewhat incoherent. What is meant by ‘ministerial equivalents’ and the ‘related sectors of the economy’. Also, there is no need to mention the requirement to ‘strictly implement this decree’ since this is implicit in the legal nature of the Decree (or any other law). Perhaps this Art. could be reformulated along the following lines:

‘The implementation of this Decree will be coordinated by the Ministry of Finance.’
Article 25: Effectiveness

The second sentence of this Art. is unclear. What is meant by the term ‘provisions’ (that conflict with this Decree)? Also, rather than require the repeal of any law that conflicts with the Decree (which may take time) it may be simpler to have wording in the Article to the effect that: ‘This Decree and any regulations promulgated under it shall prevail over any other regulation or legal provision that is inconsistent with the Decree or regulation promulgated under it.’

5. The Draft Decree, best practices and International Standards

The legal framework underlying the operation of the Lao NSW will be a combination of the Lao Law on Electronic Transactions (the Draft Law has been examined separately) and the enabling framework, which has been partly developed in the Draft Decree, which is the subject of this paper. In addition to the Law on Electronic Transactions, a legal framework is required to establish a national Single Window and to make sure it operates efficiently, especially if it deals with electronic transactions. This is especially important in cross-border transactions where a transaction initiated in one country’s Single Window, where the legal framework for a SW has not been enabled under a law, may not be legal in an importing country.

In their further elaboration of the Draft Decree, the LNSWSec and the Legal Working Group will need to ensure that both the Decree and LNSW are consistent with, and complement, each other so that the rules relating to electronic transactions in the Draft Law do not cut across the principles being developed in the Draft Decree and that the Draft Decree, for its part, does not have provisions which are inconsistent with the detailed rules in the Draft Law. It will be important to ensure, for example, that traders and other businesses in the private sector do not have inconsistent legal requirements for different parts of their business operations. The Draft Law and Decree, as they currently stand, each deal with different issues and there would appear to be no conflict between them. Nonetheless, it is recommended that an additional Article be included under Chapter I (General Provisions) of the Draft Decree to address the relationship between the Draft Decree and the Draft Law. It could read something along the following lines:

‘Article 6 Relationship with [Draft] Law on Electronic Transactions

Nothing in this Decree shall be interpreted or applied in a manner that is inconsistent with the wording or implementation of the Law on Electronic Transactions, which complements this Decree.’

Alternatively, it may be preferable, and more logical, to include this provision in Chapter IV – entitled ‘Relationship to other Lao PDR Laws’.

Articles 1 (objectives and Purposes), 3 (International and Regional Agreements), 8 (Legal Working Group and Technical Working Group), 11 (Authorization), 13 (Requirements for Identification, Authentication and Authorization), 14 (Data Quality Assurance), 16 (Data Protection and Information Security), 17 (Intellectual Property Rights), 18 (Payment Regulations), 20 (Customs Law and Regulations), 21 (Electronic Transaction Laws), and 23 (Dispute Resolution Mechanisms) all require that the standards to be developed are to be in line with
international standards and best practices or to be consistent with international agreements, including legal interoperability with the ASEAN Single Window. Art.5 of the ASEAN Protocol to Establish and Implement the ASEAN Single Window, which is a key regional agreement that is legally binding on Lao PDR, provides that:

‘Member Countries shall develop and implement their NSWs based on international standards and best practices as established in international agreements and conventions concerning trade facilitation and modernisation of customs techniques and practices.’

But it will be important for the NSW legal framework in Lao PDR to be based not only on international legal standards but also on the specific needs of Lao PDR’s Single Window policy perspectives and national laws. Moreover, as recommended in USAID’s Final Report (June 2011) on Lao PDR Single Window Implementation, the Draft Decree should provide the complete underlying legal basis in national law for not only the operation of the NSW but also for Lao PDR’s entire e-Commerce and ICT Legal Framework. As explained in that Report, this would provide a ‘robust legal infrastructure within which all ICT and e-Commerce functionalities can exist.’ In this section the focus will be on the international standards and best practices which the LNSWSec, and the Legal Working Group will have to take into account in further developing the Draft Decree, particularly in regard to Chapter III (‘Regulatory Principles for the Operation of the Lao National Single Window’). The relevant Articles in that Chapter are analysed (below), with commentary on how they might be further developed to meet best international practices and standards.

**Article 12: Access to and Sharing of Information and Data in the LNSW (Chapter III of Draft Decree).**

This Article authorizes ministries and government agencies that are involved in import, export and transit transactions in Lao PDR to receive and access information and data from the LNSW and to provide information and data to the LNSW. It is envisaged, under this Art., that the LNSWSec will make recommendations for regulations in this area. As pointed out in the June 2011 USAID Final Report, it will probably be necessary to have an inter-agency agreement, or a separate law or decree, authorizing information exchanges between ministries and government agencies, as well as private sector entities. Moreover, private sector entities – including traders and customs brokers – will need to be authorized, under new regulations, to access the Lao PDR NSW to enable them to submit electronic documents for processing and arranging electronic payment for customs duties, taxes and fees. Legal authority will also be required, to the extent that this is not already authorized under Lao laws, for the exchange of information in regard to import, export and transit transactions between Lao PDR and other countries.

The exchange of information and data between agencies, governments and with the private sector raise data protection and privacy issues. Lao PDR does not appear to have any laws protecting data and individual privacy and this will be required not only to ensure that information provided by local traders etc is kept secure and confidential but also to ensure that data submitted by foreign entities and individuals is also protected. Unless this is done, foreign entities may be unwilling to exchange sensitive information with Lao PDR. Such laws will also need to provide penalties for misuse of data and breaches of privacy (see below).
As pointed out in Part 2 of UNESCAP’s Essential Legal Elements for the Implementation of a National Single Window, many countries are developing general data privacy legal regimes. Such frameworks are already in place in Europe. Importantly for Lao PDR and the region, there is also an APEC Cross-border Privacy Enforcement Arrangement, which is generally based on the OECD’s Guidelines on Data Protection. Although Laos is not a Member of APEC these international standards will, nonetheless, need to be taken into account in future work on the Draft Decree given that many of Laos’ trading partners in the region are Members of APEC (eg. China, Vietnam, Thailand).

**Article 13: Requirements for Identification, Authentication and Authorization.**

As explained in Annex II of UN/CEFACT Recommendation 35 (Establishing a legal framework for international trade Single Window), proper mechanisms will be required for the identification, authentication and authorization of users (both operators and end-users) to ensure the protection, quality, accuracy, and integrity of data within the Single Window facility. ‘Users’ might include private sector traders/brokers, customs and other government employees, enforcement authorities etc.

‘Identification’ refers to the ability to reliably identify entities seeking access to the SW, including traders and personnel from government ministries and agencies, who may need information from, or provide information to, the SW. For example, a simple ‘User ID’ could be assigned to each individual who is permitted to access the LNSW.

‘Authentication’. Once a method for identifying a particular user has been established, a password (that is known only to the user) can be used to verify or authenticate the identity of the user attempting to log onto the SW. After using the correct User ID, the entry of the correct password will enable the user to log onto the LNSW.

‘Authorization’ is the act of granting permission to a person, or entity, to conduct an action in the SW environment once the identification and authorization processes have indicated who that person is. For example, an individual may be authorized to log in data into the SW but not to view or change other data that may be held in the SW.

It is recommended that once the LNSWSec has worked out with the relevant ministries and the private sector what regulations are required for access to the LNSW, the Lao authorities should begin a process of consultations with other ASEAN governments to ensure that the development of national systems for identification, authentication and authorization are interoperable with each other, taking into account also what other countries in the region, and beyond, have been doing in developing mechanisms for the identification, authentication and authorization of users.
**Article 14: Data Quality Assurances.**
Recommendation 35 points out that it will be essential to ensure the accuracy and integrity of data processed within the NSW. For example, if valuation information is incorrectly entered on an electronic declaration, this would almost certainly distort assessment of duties or taxes that have to be paid. The Draft Decree or Regulations will need to determine who is responsible for entering data into the Single Window facility, and the subsequent processing of this data. As explained in Recommendation 35, a data controller will need to be identified for each step that has to be taken, and audit trials need to be established by means of identification, authentication and authorization, and proper logging and recording mechanisms.

**Article 15: Electronic Archiving and Data Retention.**
In its current form, the Decree authorizes the electronic archiving (ie, the storage of electronic data and information) and data retention in electronic form of all information and data that may be submitted to, processed by, and shared between Ministries and government agencies in the LNSW environment. The development of regulations, policies and procedures is foreshadowed for the retention of LNSW data in electronic form (based on the analysis and recommendations of the Legal and Technical Working Groups). The Article further provides that:

> ‘Information and data that is retained by the LNSW and is electronically stored and archived shall be legally valid and binding in Lao PDR and will be treated in the same manner as any paper documents, information, and data to permit the effective utilization of electronically archived data in any administrative and/or judicial proceedings related to LNSW transactions whether such proceedings involve government actions or private sector matters.’

The Decree will need to ensure that archived data is secure and maintained in a form and format that will be legally enforceable. As explained in UNESCAP’s Essential Legal Elements for Implementation of a NSW (Part 2), establishing the necessary regulatory framework for data retention and electronic archiving implies making decisions on a number of legal issues. For example, it will be important to establish rules – as many countries have done - on how long different categories of data may be retained. This includes distinctions between data related to regulatory filings and data involving personally identifiable information. In the latter case, laws/regulations will sometimes regulate the maximum time for which particular data may be retained and then require that that data be destroyed.

Consideration will also need to be given to a number of other areas pertaining to electronic archiving. As pointed out in UNESCAP’s Essential Legal Elements, this includes definitions of the formats in which data will be stored, and the requirements of national law – such as ‘original documents’ that might be needed for subsequent use in an enforcement proceeding or in relation to possible civil disputes or, on a short timeframe, in customs post-clearance audit procedures.

As explained in UNESCAP’s Essential Legal Elements, it is also important that the Decree, and subsequent regulations, should require that information and data exchanged with other SWs, in the cross-border
environment, be retained and stored effectively in the event that there is a dispute regarding the underlying transactions processed by the SWs involved.

**Article 16: Data Protection and Information Security.**

Draft Art.16 requires that, after coordination with the relevant line ministries and the private sector, the LNSWSec will recommend to the Ministry of Finance to issue regulations, policies and procedures for information and data submitted to and processed by the LNSW to protect confidential and private data.

The issues of data protection and information security are closely related to those of privacy. Given that Laos does not have privacy laws it will be important for the LNSWSec and the Legal Working Group to distinguish between protection of personally identifiable information and ‘confidentiality’ issues related to both trade data and business information.

As pointed out in the Essential Legal Elements there are different aspects of data protection that should be considered. First is the question of what data and information should be protected and, second, is the issue of what types of information security measures could be implemented to protect that data and information.

A Single Window is likely to process sensitive information data and information. An electronic SW - which is what is envisaged here - may for example contain personally identifiable information, trade sensitive data, confidential business information, and possibly information related to criminal activities and national security. It may also have trade secret information in regard to traders and companies participating in the system, as well as private data relating to banks, insurers and other parties. As a SW develops, it may also include regulations dealing with the electronic payment of duties, fees and taxes associated with transactions processed through the SW, and sensitive law enforcement information used primarily by government officials to enforce a wide variety of civil and criminal laws relating to matters as varied as public health and food safety, terrorism, money-laundering and drug trafficking. It is clearly essential to protect these different categories of information, to ensure that appropriate security measures are in place to protect the SW facility, and broader national interests, and to ensure that there are laws that criminalize unauthorized access to, and misuse of, those categories of information.

**Article 17: Intellectual Property Rights.**

Draft Art. 17 requires the LNSWSec to examine legal issues of intellectual property rights that may be associated with the development and operation of the LNSW and provides that the LNSWSec may develop recommendations related to these and related intellectual property rights that are consistent with any international agreement to which Lao PDR is a Party.

Two sets of IPR issues will arise in setting up the LNSW. The first relates to the intellectual property rights of persons who submit information electronically to the NSW. For example, a trader who submits electronic information regarding the export of goods over which he owns a patent will need to have his rights over that patent protected. In order to comply with its obligations under the WTO the Lao Government has been
updating its IPR laws. It will need to ensure that any intellectual property rights of exporters or importers are fully protected, including of course information that is conveyed by the LNSW. It appears that existing laws in Laos do not cover this adequately. As pointed out in the USAID'S Final Report on the Lao PDR Single Window (June 2011), a second set of IPR issues relate to the actual development of the Laos’ NSW, ‘including all of the software development as well as any firmware, middleware, and hardware associated with the NSW.' Adequate legal protection will need to be provided here in regard to, for example, a third-party software developer, or a vendor providing systems hardware, products and/or services to the LNSW. Current laws in Lao PDR do not appear to do this adequately.

The Legal Working Group and LNSWSec will need to consider whether these matters should be dealt with in the Draft Decree or whether it should be dealt with in the current laws on IPR that are currently being developed. The latter seems to be the better approach to deal with these issues. It would help to ensure the integrity of IPR legislation in Lao PDR, rather than have the laws on the subject diffused in different legal documents.

Other legal issues to be considered.

(1) Competition issues
As noted in UN/CEFACT Recommendation 35:
‘Consideration should be given to the potential that Single Window operations may be structured so that concerns about antitrust and protectionism may result. These possibilities, though unlikely, can give rise to concerns by those who may utilize an international Single Window facility and be disabling to trade development and facilitation.’

An example of this might be any anti-competitive practices that create trade barriers that are inconsistent with Laos’ international obligations under bilateral, regional and multilateral agreements (such as the WTO, which Lao PDR is about to join). However, Laos already has a law on anti-competitive practices (Decree 15/PMO – 4/2/2004), which prohibits specific restrictive business practices leading to monopolies. That Decree does not distinguish between national and foreign business persons.

(2) Liability issues
Legal liability could arise in a number of ways under a future LNSW environment. It could arise as a result of errors in valuation, delays due to negligence in providing import or export licenses or permits or, more seriously, illegal access to information by hackers. The subsequent use of inaccurate, incomplete or incorrect data could lead to various situations where damages are incurred. It is assumed that a number of activities, such as the submission of incorrect information, is already dealt with under Lao criminal and civil laws but they may need to be adjusted to ensure that they cover also electronic records. It will, therefore, be necessary to examine Lao law to look for defects in the operation of the system, for negligence and criminal activities. New rules to deal with this will need to be addressed either in the Draft Decree or in amendments to existing
criminal and civil laws in Laos. In the writer’s view it would be preferable to address the issues in the Draft Decree, taking into account also what is provided in the [Draft] Law on Electronic Transactions and ensuring that both the Draft Law and Decree are consistent with, and complement, each other.

The types of problems mentioned above could also have international repercussions and create problems for other governments, or individuals/companies in other countries. These would normally be dealt with under customary international law rules relating to State responsibility and the obligation to make reparation for breaches of customary or treaty law. These issues would not normally be addressed in domestic legislation. Nor would it be necessary, at this stage, to draw up new international agreements to deal with international liability issues. The focus should be on domestic liability and remedies, but also with an eye on developments in the ASEAN region, China etc to ensure that the system of liability and civil/criminal sanctions developed in Laos can work effectively with the countries with which Laos has close trade relations and whose NSW systems are likely to become interoperable with that of Laos in the foreseeable future.

(3) Arbitration and Dispute Resolution

In view of the costs and protracted time required for litigation in many countries, the LNSWSec, and the Legal Working Group, should examine alternative dispute resolution mechanisms – such as conciliation or mediation procedures, and arbitration – rather than rely solely on court enforcement. Alternative dispute resolution mechanisms would also be useful in dealing with liability issues arising in one of Laos’ trading partners, and where jurisdiction over the dispute is in that country.

Art.17 of the Protocol to Establish and Implement the ASEAN Single Window is of special relevance here because it provides that

‘[T]he provisions of the ASEAN Protocol on Enhanced Dispute Settlement Mechanism, done at Vientiane, Lao PDR on the 29th day of November 2004, shall apply to disputes arising under this Protocol.’

Art.4 of that Protocol provides that Member-States which are parties to a dispute may at any time agree to good offices, conciliation or mediation, and it also provides for the establishment of a dispute panel. An Appellate Review is also envisaged under Art. 12 of the Protocol.
Appendix B: BIBLIOGRAPHY OF REFERENCE MATERIALS

International and regional agreements, Recommendations and Guidelines
2. Recommendation No.35. Establishing a legal framework for international trade Single Window – 8 October 2010;
7. 2005 Agreement to Establish and Implement the ASEAN Single Window;
8. 2006 Protocol to Establish and Implement the ASEAN Single Window; and

Laws, decrees, draft laws, strategic plans of Lao PDR and other countries
1. (Lao) Customs Law (Revised Version);
2. (Lao) Law on Electronic Transactions (Dec.2012, as edited in January 2013);
3. (Draft) The Government’s Decree to Establish and Operate a Lao National Single Window;
4. 2004 Decree on Criminal Procedure;
5. 2004 Decree on Civil Procedure;
6. 2004 Lao Decree No.15/PMO on Trade Competition;
7. 2007 Lao Intellectual Property Law;
8. 2010 Amended Law No.06/NA on Resolution of Economic Disputes;
9. Various other Lao laws, decrees, regulations, notifications, etc. identified in section 2, above;
10. Laws of Australia, Indonesia, Malaysia, New Zealand, Philippines, Qatar, Singapore, Thailand and Vietnam establishing electronic communications and related issues; and

Publications
- How to Build a Single Window Environment, (Chapt.7: Dealing with Legal Issues). World Customs Organization, 2011;
- International Single Window Development. Paper presented by William J. Luddy Jr.; and
- Articles and press releases on electronic commerce and national single windows published in newspapers and other publications.
Annex H:

[draft] Government Decree for LNSW
1 Summary

1.1 Background

The LNSW Legal Gaps, Impediments and Recommendations Report submitted in February 2013 highlighted the following: “While there are no legal impediments in Laos to the establishment and implementation of a NSW, there are many gaps in existing law. The principal gap, of course, is that there is no law or decree in Laos providing for the establishment and operation of a NSW … In addition to this there are a number of laws, decrees, regulations, decisions, instructions etc. that have gaps in them in so far as they do not refer to electronic communications … The main gap in these legal rules is that they fail to provide equivalence of electronic communications with written documentation.”

The report also concluded that: “While it could be argued that Arts.13 (2) and 58 of the Law on Electronic Transactions fills these gaps by providing for the equivalence between electronic and domestic documents, and making it clear that the law prevails over any inconsistent law, this may not be sufficient from a legal and administrative point of view. … it may be prudent to amend these laws and decrees to ensure the equivalence of electronic document with a paper document rather than just leave all this to be governed by the Electronic Transactions Act only.”

The LNSW Legal Gaps, Impediments and Recommendations Report also advocates that in order “to overcome this potential problem, it may be sufficient to provide in trade laws and decrees that have gaps in them … a provision along the following lines.”

“The Law on Electronic Transactions, 2012 applies to any certificate or other written documentation referred to in this law.”

Alternatively or even additionally, the relevant trade laws and decrees could be amended in a similar vein or fashion to the text of the Customs Law which now makes provision for equivalence in ‘Article 22. Detailed Customs Declaration’ as follows:

“The declarant shall submit a regular detailed customs declaration and/or an electronic detailed customs declaration with regard to imported-exported or transit goods, as follows:

3. Signature in the detailed customs declaration and/or electronic detailed customs declaration has equal value;”
The final part of Task Cluster 1: Legal and Regulatory Framework for the LNSW in the Technical Assistance assignment was, where necessary, the preparation of outline laws and drafting of new legislation as relevant. Following discussion with the NSW Secretariat team after the submission and presentation of the LNSW Interim ‘Blueprint’ Report, it was agreed that the PM Group specialists would focus attention on the preparation of a [draft] Government Decree for the LNSW.

1.2 Description and details

The [draft] Government Decree for the LNSW has been formulated fully utilising the latest work-in-progress draft Decree prepared by Dr Dominique De Stoop, the PM Group Legal specialist, but also incorporating the findings, views and experiences of other specialists in the team.

The [draft] Government Decree builds upon the discoveries and conclusions set out by Dr De Stoop in the Legal Gaps, Impediments and Recommendations Report submitted in February 2013. It should also be read in conjunction with, the varied technical reports included as Appendices to the LNSW Interim ‘Blueprint’ Report. Particular attention should be given to the Service Specifications for the LNSW, the Operational and Governance Models and the Change Management Situational Awareness and Strategic Direction Report. The Service Level Frameworks and Models for LNSW Report also provides complementary information.

The [draft] Government Decree takes account of an earlier draft Decree which was prepared in 2012 by the USAID funded US-Laos International and ASEAN Integration Project (LUNA-Lao). The latest [draft] Decree has been prepared after a period of research and consultation.

The [draft] Decree should be viewed by the reader as being more indicative than definitive as it aims to not be ‘overly prescriptive’. The Decree should provide sufficient powers for the necessary bodies to enable them to implement and operate LNSW but should not unnecessarily constrain the organizational structures and constituents, or the notices and procedures by which implementation and operation takes place. In particular, the Operator will be an organization or entity independent of government and will determine its own arrangements and practices in accordance with a contract to be formed with the GOL. The structure and contents of any final Government Decree for LNSW will be very much dependent on the situation at that time and subject to the decision of GOL.

That noted, the [draft] Decree provides for the creation of a Steering Committee and introduces the concept of and distinguishes the role of a LNSW Operator (likely to be substantiated through a commercial contract with a private sector entity formed as a government and private sector joint venture). Whilst a NSW Steering Committee has already been established (by the Decision of the Minister of Finance, No 2114/MOF, 10 August 2012), its role and responsibility is now defined more precisely and hence its mention and inclusion in the new [draft] Decree. It would be normal for the Government of Lao PDR to establish a Secretariat for the
Steering Committee but this has not been defined in the [draft] Decree as a NSW Secretariat team has already been established in LCD under the afore mentioned Decision of the Minister of Finance and it’s role is unchanged.

The Interim LNSW ‘blueprint’ proposes establishment of a Governance entity (LNSW Regulator or ‘Office for the LNSW’) that will ultimately be responsible for implementation of the LNSW (although the majority of work is to be carried out by the Operator but it would need to be overseen) and the longer-term supervision or oversight of the services provided by the LNSW Operator. Again this has not been defined in the [draft] Decree as this will be dependent on a government decision and in any case, it may not be legally necessary to identify or specify this entity within the Government Decree. This may equally be achieved by Ministerial Decision or some other government instrument.

1.3 Conclusion

The [draft] Decree sets out to be an illustration of the issues and subjects that could be covered by a Government Decree for the LNSW while trying not to be too prescriptive and thereby restrict the flexibility and elasticity of the overall implementation and operations processes. It has been developed to address the requisites as set out in the LNSW Final ‘Blueprint’ Report. It is not intended to be definitive and the Government may adopt or reject all or part, as suits the prevailing situation.
2  [Draft] Government Decree

The Government’s Decree to Establish and Operate a Lao National Single Window, 2013
The Prime Minister hereby issues the Decree:

Chapter I
General Provisions

Article 1  Objectives and Purposes
This Decree provides principles and procedures for the establishment and operation of the Lao National Single Window (LNSW), including the establishment of a Lao National Single Window Steering Committee with the responsibility to oversee initiating of the operation of the National Single Window and to enable the establishment of the LNSW Operator entity, with the responsibility and authority to provide and manage the day-to-day activities of the LNSW, and processes for effective interaction between government authorities and private sector participants. The LNSW will facilitate the processing of electronic government documents required for the import and export of goods with the aim of reducing the costs for trading goods and raising competitiveness of Lao producers and benefiting Lao consumers.

Article 2  Definitions
The terms used in this Decree shall have the following meanings:
‘Agreement’ refers to any treaty, protocol, convention or other written document that is intended to be legally binding under international law upon the States that have signed and ratified or have otherwise expressed their intention to be legally bound by the Agreement;

‘Electronic’ refers to electrical, digital, magnetic, wireless, optical, electromagnetic or similar capabilities of technology;

‘International agreement’ refers to any international agreement legally binding upon Lao PDR with any foreign State or States;

‘LNSW’ refers to the Lao National Single Window;

‘Minister’ refers to the Minister of Finance;

‘Operator’ refers to the Lao National Single Window Operator to be appointed by the Minister to carry out the functions set out in Art.6 and other Articles of this Decree;
Annex H: [draft] Government Decree for LNSW

Privacy refers to the protection of any information that identifies or could identify a trader and the nature of his transactions to any person who is not legally authorized to view the information;

Private sector participants includes traders, banks, customs brokers, warehouse operators, carriers, insurance companies and freight forwarders;

Regional agreement refers to any legally binding agreement between Member States of ASEAN to which Lao PDR is also a State Party;

Steering Committee refers to the Lao National Single Window Steering Committee;


Article 3 Operation of the Lao National Single Window
The LNSW will be developed, implemented and operated as an electronic National Single Window that allows parties involved in the import and export of goods to lodge electronic standardized information and data with an electronic single entry point and to process such submissions in order to fulfill all import, export and transit-related regulatory requirements.

The LNSW will be operative at the times and places to be determined as set out in the contractual agreement between the Lao Government and the Operator.

Article 4 International and Regional Agreements
This Decree and any implementing regulations and procedures will comply with international and regional agreements to which Lao PDR is a State Party. In particular, Lao PDR will comply with its commitments under the 2005 ASEAN Agreement to Establish and Implement the ASEAN Single Window, 2005, the Protocol to Establish and Implement the ASEAN Single Window, 2006, as well as any other legally binding agreement which it has accepted. This Decree acknowledges that the ASEAN Single Window Working Group on Legal and Regulatory Matters strongly recommends that Member-State legal frameworks related to a NSW should not be inconsistent with UNCITRAL texts.

Article 5 Scope of Application
This Decree and any implementing regulations apply to any individual or entity involved in any transaction that is submitted to and or processed by the LNSW as well as any Lao PDR government employee or officer, Ministry, and Ministry-equivalent government agencies including any public-private partnerships or private sector individuals or entities involved in the development, implementation, and/or operation of the LNSW.
Article 6 National Steering Committee

(1) Within 30 days of the entry into force of this Decree, the Lao National Single Window Steering Committee shall be appointed by the Government. The Steering Committee shall consist of a senior representative drawn from each of the major permit issuing and government border agencies, Lao National Chamber of Commerce and Industry, the Lao International Freight Forwarders Association, and any public or private organization which the Government considers has an important role in the implementation of the LNSW. The Committee shall be chaired by the Vice-Minister of Finance and shall meet every three months from the time of its formation, or as otherwise determined.

(2) All members of the Steering Committee are required to have extensive experience of trade and business processes for the export, import and transit of goods plus knowledge of ICT. The Steering Committee shall also include or be able to draw upon persons with ICT management experience and/or the technical capabilities to build and install the required technology, such as server hardware and system software, for the effective operation of the LNSW.

(3) The principal functions of the Steering Committee are to:
   a. consult among themselves and engage regularly with stakeholders in order to identify all the issues relevant to the establishment of the LNSW that need to be considered, and to address and maximize common objectives between all interested parties in the public and private sectors;
   b. make all the required administrative arrangements to establish a LNSW taking into account the views of all stakeholders, in both the public and private sectors, regarding the effective operation of the LNSW;
   c. make recommendations to the Minister concerning what regulations are required for the purpose of identification, authentication, and authorizations of all individuals or entities that may have access to the LNSW;
   d. examine what Service Level Agreements with traders, banks, customs brokers, warehouse operators, carriers, insurance companies, freight forwarders, and other stakeholders are required to facilitate the operation of the LNSW;
   e. advise the Minister what amendments, if any, to existing laws and decrees are required to ensure the smooth operation of the LNSW;
   f. report to the Minister, at the time-intervals specified by the Minister, what progress has been made in regard to the establishment of the LNSW and recommend what additional steps are required to ensure the effective operation of the LNSW; and
   g. maintain close consultation with the LNSW Operator.

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1 Guidance note: the Operator may be invited to attend parts of the Steering Committee meetings or deliberations as and when required by the Steering Committee but would not be a permanent member.

2 Guidance note: a possible alternative here would be to have a Director-General from the Ministry of Finance chairing the NSC meetings.
Article 7  Lao National Single Window Operator

The Minister shall appoint, within 90 days of the entry into force of this Decree, a full time Operator for the LNSW who has extensive experience in ICT and in the processes for export, import and transit of goods. The Operator shall be responsible for overall management and coordination of activities for the efficient operation of the LNSW, including:

a. ensuring that all facilities, equipment, tools, labour and other resources required for the effective operation of the LNSW are in place;
b. ensuring proper and efficient installation, deployment and interoperation of all supplier facilities, equipment and software provided to meet the requirements of the LNSW;
c. ensuring connectivity and inter-operability to supplier facilities, equipment and system software, software tools and application software;
d. in collaboration with the responsible government authorities plan, design and specify operational acceptance tests;
e. recruiting on-site experts in operational and support roles;
f. implementing services that include the training of GOL personnel and stakeholders, particularly those in the trading community;
g. monitoring the integrity of the data stored on the LNSW;
h. responding to inquiries;
i. conducting audit trials by means of identification, authentication and authorization and ensure that logging mechanisms work effectively;
j. investigating errors and ensure they are corrected;
k. investigating any irregularities in the operation of the LNSW and, if they involve breaches of the law, bring them to the attention of the appropriate authorities;
l. proposing what fees are to be charged for transactions under the LNSW;
m. taking any administrative measure required to ensure the efficient operation of the LNSW;
n. establishing a Help Desk, recruit staff to manage it and develop policies and procedures for its operation;
o. providing on the LNSW website monthly news bulletins, and organize seminars for traders and government agencies who make use of the LNSW;
p. ensuring that all the necessary steps are being taken to meet the requirements of this Decree;
q. providing an annual report to the Minister summarizing the operation of the LNSW in the preceding 12 months (or reports for any other period so requested by the GOL) and recommending any regulatory changes to ensure further improvements in the operation of the LNSW.

The Operator shall appoint staff to assist him to fulfill the above-mentioned duties. The Operator shall organize training for his staff to ensure they are fully able to assist him in the discharge of his responsibilities and to administer the ICT facilities.

To ensure the efficient operation of the LNSW across government agencies each agency shall designate a member of its staff to be available to [advise and] cooperate with the Operator in order to ensure the effective coordination between the agency concerned and the Operator in the administration of the LNSW.
Chapter II

Regulatory Principles for the Operation of the Lao National Single Window

Article 8  Authorization
This Decree authorizes the development, implementation and full operation of the LNSW for the purpose of the electronic submission of all necessary electronic documents, forms, data and information of whatever type necessary for the Lao PDR Government Ministries and Agencies to process import, export and transit transactions that are now, or may in the future be, established under the laws of Lao PDR. This Decree further authorizes the cross-border exchange of information and data under the requirements provided for in the following Articles of this Chapter and pursuant to the requirements of the ASEAN Single Window Agreement of 2005 and Protocol of 2006, referred to in Art.3.

Article 9  Access to and Sharing of Information and Data in the LNSW
All Ministries and Government Agencies that are involved in import, export and transit transactions in Lao PDR are authorized to receive and access information and data from the LNSW and to provide information and data to the LNSW solely for the purposes of fulfilling their duties related to the import and export processes of Lao PDR. Access to and sharing of this information may be done through electronic means as provided for in this Decree.

After collaboration and coordination with relevant line Ministries and the private sector, the Steering Committee shall make recommendations for regulations, as necessary, to be promulgated by the Minister of Finance as provided for above including the development of technical data standards for each Ministry’s participation in the LNSW.

Article 10  Requirements for Identification, Authentication and Authorization
After collaboration and coordination with relevant ministries and the private sector, regulations for the processes of identification, authentication and authorization of all individuals or entities that may have access to the LNSW, including government employees, traders, brokers, and other end-users of the LNSW, shall be recommended by the Steering Committee and will be issued by the Minister.

Such processes shall be based on international standards for information security and will take into account the objective of the LNSW being interoperable with the ASEAN Single Window.

Regulations developed pursuant to this Article shall authorize the use of electronic transaction [ICT] technologies.

Article 11  Data Quality Assurance
All end-users (including traders, customs brokers, shippers, freight forwarders etc.) who submit information and data to the LNSW shall be solely responsible for the accuracy and integrity of their submissions.
Any entity or person who submits information that is inaccurate or incomplete shall be liable to civil or criminal liability under the laws of Lao PDR.

The processes and standards that require to be observed to ensure the accuracy and integrity of information and data submitted to the LNSW will be set out in regulations, which will be based on international standards and include, among other things, mechanisms for logging and recording information and data.

**Article 12  Electronic Archiving and Data Retention**

This Decree authorizes the electronic archiving and data retention in electronic form of all information and data that may be submitted to, processed by, and shared between Ministries and government agencies in the LNSW environment.

Following close consultations among all stakeholders, the Steering Committee shall recommend policies, regulations and procedures for the electronic archiving and retention of different categories of data in electronic form. The Minister of Finance shall promulgate such regulations after collaboration and consultation with line Ministries.

Information and data that is retained by the LNSW and is electronically stored and archived shall be legally valid and binding in Lao PDR and will be treated in the same manner as any paper documents, information, and data to permit the effective utilization of electronically archived data in any administrative and/or judicial proceedings related to LNSW transactions whether such proceedings involve government actions or private sector matters.

**Article 13  Data Protection and Information Security**

After close consultation with relevant line Ministries and the private sector, the Steering Committee shall recommend to the Ministry of Finance to issue policies, regulations and procedures for information and data submitted to and processed by the LNSW to protect confidential and private data. These recommendations should be based on information security technologies and strategies that are adopted in international standards and best practices.

Such regulations shall be consistent with, and no less secure than, those adopted for use in the ASEAN Single Window so that the LNSW will be technically and legally interoperable with the ASEAN Single Window.

**Article 14  Protection of privacy**

In overseeing the management of the LNSW, the Steering Committee is required to ensure that the privacy of all users of the LNSW is protected at all times. Any commercial or personal information regarding users of the LNSW must not be shared with a third party unless strictly required for the day-to-day operation of the LNSW or in regard to any criminal or civil proceedings taken against users of the LNSW.
Article 15   Fees
A fee may be charged for any transaction under the LNSW. The amount of the fee and how it is to be calculated will be examined by the Steering Committee and laid down in Regulations following consideration by the Minister of the Steering Committee’s recommendations.

Chapter III

Relationship to other Lao PDR laws

Article 16   Criminal and civil law
The criminal and civil laws shall apply in regard to any misuse of the LNSW by any person who causes, or is likely to cause, harm or damage to another person.

Article 17   Customs Law and Regulations
The Customs Law and regulations, and any amendments thereto, shall apply to the extent that they are relevant to the operation of the LNSW.

The Operator shall collaborate with the Customs Department to ensure a harmonized approach to any regulation promulgated under this Decree and the Customs Law and regulations, as well as the requirements for technical and legal interoperability with the ASEAN Single Window.

Article 18   Law on Electronic Transactions Law
The Law on Electronic Transactions applies to all electronic transactions under the LNSW.

Chapter IV

Dispute Resolution

Article 19   Dispute Resolution
Any dispute between a person or organization using the LNSW and the Operator in regard to the implementation of the LNSW shall be settled amicably between the parties to the dispute, including by mediation or by arbitration in accordance with the Lao Law on Resolution of Economic Disputes of 2005.

The provisions of the ASEAN Protocol on Enhanced Dispute Settlement Mechanism, done at Vientiane, Lao PDR on the 29th day of November 2004, shall apply to disputes arising under the Agreement to Establish and Implement the ASEAN Single Window, 9 December 2005, and the Protocol to Establish and Implement the ASEAN Single Window, 2006.
Disputes between Lao PDR and any other State not a Party to the above-mentioned ASEAN Agreement and Protocol shall be settled amicably and in accordance with any Agreement on dispute settlement between Lao PDR and the foreign State concerned or, in the absence of such an Agreement, by negotiation, good offices, conciliation, mediation, or arbitration.

Chapter V

Final provisions

Article 20  Coordination and Implementation
The Ministry of Finance shall coordinate with relevant line Ministries to implement this Decree and Ministries, ministerial equivalents, and the related sectors of the economy shall disseminate and strictly implement this Decree.

Article 21  Enforcement
Any individual, entity or organization violating this Decree and any of the regulations promulgated pursuant to this Decree may be subjected to a warning, disciplinary measures, fines, or prosecution as set out in relevant laws and regulations.

Article 22  Entry into force
This Decree shall enter into force 30 days from the date of signature. Any regulation or provision that conflicts with this Decree or the regulations promulgated under this Decree shall be repealed.

FOR AND ON BEHALF OF THE GOVERNMENT
PRIME MINISTER

(Signature and Seal)
Annex I:

LNSW Business Process ‘As Is’ Report
1 MANAGEMENT SUMMARY

A critical step in the development and implementation of the LNSW is modernizing and streamlining the business processes involved in trade transactions. This includes processes that must be undertaken by traders in advance of the arrival of goods (primarily registration and license, permit and certificate issuance by Government License and Permit Issuing Agencies - LPIAs); and those procedures involved in the actual clearance of the goods upon arrival at the border. In late 2012 a two part report “Roadmap for Process Simplification and Harmonization” was prepared under the Lao PDR Trade Portal Project (Project ID P106165) which is part of the Lao Trade Development Facility (TDF). These reports provide detailed analyses of existing (As Is) procedures for the issuance of permits and licenses and propose streamlined (To Be) procedures under the LNSW.

This report carries out a similar analysis for the clearance of goods at border checkpoints. The analysis was restricted to the Friendship Bridge/Thanaleng Border crossing in large part as they were the only locations where the ASYCUDAWorld (AW) system was in operation and due to time constraints. Plans are to expand to an additional 11 sites in the coming months that will account for the vast majority of customs declarations (estimated by the Lao Customs Department (LCD) to be over 95%).

In 2007 the Government of Lao made a significant step to streamline the clearance processes with the issuance of Prime's Minister Office Notice No. 405 (Notice on the Elimination of Authorities at the Border Check Points) that reduced to three the number of agencies authorized to have a permanent presence at the border for the clearance of goods (Quarantine, Immigration and Customs – QIC). Currently, in addition to the LCD, there are four government agencies involved in the clearance of goods at the border – Plant Quarantine Inspection Office and Animal Quarantine Inspection Office of the Ministry of Agriculture and Forestry, Food and Drug Inspection Unit of the Ministry of Health, and the Treasury office of the Ministry of Finance (in addition to Immigration).

With the exception of the LCD and Treasury, all processes for the clearance of goods are manual. None of the LPIAs present at the border have any form of automated systems and all documentation and processing is manual. Traders are required to hand carry documents between offices and in all cases approval for release is based on signatures and stamps, including LCD. While inter agency relations appear solid, the degree of coordination of processes is limited with the LPIAs often carrying out their inspection and authorization processes quite separate from the LCD. While joint cargo inspections are carried out in many cases, it is the trader who generally initiates and coordinates them. Traders are required to travel back and forth between the LCD headquarters in Vientiane and the border crossing to purchase blank customs declarations (ACDDs) and once the ACDD is printed to obtain signatures of the consignee/importer. They also travel back and forth between the Friendship Bridge and Thanaeleng offices during the clearance process. The split operation creates

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1 Lao Trade Portal Sub Component, Roadmap for Process Simplification and Harmonization Interim Report, PM Group October 31, 2012
additional complications and delays in clearing goods and needs to be rationalized.  

Major findings and conclusions include:

- The LNSW offers potential to facilitate strengthening of interagency coordination and cooperation at border crossings;
- The limited availability of automation and limited use of existing systems inhibits efficient border clearance procedures and trade facilitation;
- Implementation of the ASYCUDAWorld system has not been a stimulus to streamlining and simplification of procedures. ACDD processing has changed little from manual procedures, and limited use is made of the selectivity module;
- The split operation at Friendship Bridge/Thanaleng is inefficient;
- Operation of the Thanaleng State Warehouse needs to be rationalized;
- Cooperation and coordination between LCD and OGAs needs strengthening;
- Limited application of risk management by LCD and lack of an inter-agency approach to risk management impedes efficiency and results;
- Volumes of imports/exports requiring Other Government Agency (OGA) authorizations are relatively low;
- The report also provides some preliminary suggestions for the way forward to begin preparations for the LNSW as follows;

Develop a clear policy and strategy to reduce over time the number of border inspections carried out by the LCD and OGAs through an interagency approach to risk management;
- Co-location of inspection agencies in the LCD office at Thanaleng;
- Implement changes to customs declaration processing system requirements:
  - eliminate requirement to purchase pre-printed ACDDs,
  - increase limit of items per ACDD (to at least 100),
  - permit multiple vehicles and motorcycles to be declared on one ACDD (develop separate receipt document for individual vehicles),
  - develop with OGAs selectivity criteria for permit, license and certificate requirements for products using customs tariff codes,
  - reach agreement with Treasury to accept ASYCUDA generated official receipt.  
- In the medium term, provide OGAs direct access to ASYCUDA;
- Reconfigure operations between Friendship Bridge and Thanaleng Offices to a more integrated operation to facilitate LNSW implementation;
- Rationalize use of ASYCUDA manifest system with procedures at TH/FB;
- Examine feasibility of integrating the management of exemptions (Master Lists) into the LNSW or ASYCUDA.

The second deliverable to be produced under Task Cluster 6 is the Import/Export “To Be” Process Report, which will be based on the findings of this report and further discussions and consultations with the LCD and License and Permit Issuing Agencies (LPIAs). This report will lay out detailed proposals for the streamlining and simplification of procedures for the clearance of goods in preparation for the LNSW development and implementation, and will outline potential scenarios for border clearance operations under the LNSW.
2 INTRODUCTION

This report provides an analysis of the business processes in the clearance and release (import and export, transit) of goods at the Friendship Bridge and Thanaleng border crossing station; the “AS-IS” process mapping. Information was gathered during two visits to the border crossing, interviews with Lao Customs Department Headquarters, LPIAs, and the private sector, and through a review of existing documentation, including the recently completed Lao PDR Trade Portal Sub-Component Roadmap for Process Simplification and Harmonization.

The report begins with the description of the overall procedures for the import, export and transit of cargo at the border crossing. A brief overview of the processes involved in the clearance of goods is followed by a listing of the actors involved in the process, including a brief description of their roles.

A step by step description of the procedures involved is then outlined followed by detailed process maps for the import export procedures at the border crossing. Similar descriptions are then presented for the main Government Agencies involved in the clearance process, i.e. Ministry of Agriculture and Forestry (Animal and Plant Quarantine) and the Ministry of Health (Food and Drug). The report concludes with some preliminary findings and conclusions and identifies potential areas of improvement/streamlining. These issues will be addressed in more detail in the second Report dealing with process re-design and simplification.
3 IMPORTATION AND EXPORTATION OF GOODS – OVERALL PROCESS

3.1 Overview

The Friendship Bridge/Thanaleng border crossing consists of two separate facilities. The Friendship Bridge office is located directly off the international bridge and is the first point of processing of all arriving vehicles (commercial and private) and travellers.

The Thanaleng Customs facility, located some three kilometres inland from the Friendship Bridge, processes all import and export customs declarations (ACDD), and the majority (approximately 90%) of trucks transporting imported goods proceed to Thanaleng under customs control for clearance.

A state owned Warehouse used for the temporary storage of goods awaiting clearance, for the inspection of cargo and for the trans-loading of cargo from foreign trucks to Lao trucks is also located at Thanaleng. ACDDs for cargo held for release at the Friendship Bridge\(^2\) are processed at the Thanaleng customs office.

For export goods, transport documents must be submitted to customs within 24 hours of arrival of goods at the border. At the time of export, the ACDD data is entered into the ASYCUDAWorld system by the trader. The truck carrying the goods for export reports to the Thanaleng customs office for inspection. Once inspected (or if no inspection is required) the truck proceeds to the Friendship Bridge where the truck and shipment are released, subject to other Government Agency requirements as outlined in the following sections.

This split operation somewhat complicates the import and export clearance processes, gives rise to additional administrative procedures and processes, and may increase risks of weakened control and non-compliance. The lack of refrigeration facilities limits the temporary storage of perishables pending clearance and most such shipments are transported to inland warehouses for inspection (particularly by Food and Drug and Agriculture inspectors) prior to final customs clearance.

In the past, numerous Government Agencies were represented at the border crossings and became involved in the clearance process, resulting in bureaucratic excesses, delays and additional costs and time to clear goods. On 14 March 2007 the Prime’s Minister Office issued Notice No. 405 (Notice on the Elimination of Authorities at the Border Check Points) that reduced to three the number of government agencies authorized to have a full time presence at the border (Customs, Immigration and Quarantine - CIQ). This decision has greatly reduced clearance procedures and clearance times and is considered a major step forward in process simplification and trade facilitation.

\(^2\) Including specific types of cargo that can be easily verified, imports by and for Government, imports for Government supported investment projects, and diplomatic and other exempt imports.
### 3.2 Actors

A number of private sector and government entities are involved in the clearance processes at the border. The following table identifies these actors and provides a brief description of their functions, including the four Government entities have staff located on a full time basis at the border crossing:

<table>
<thead>
<tr>
<th>Code</th>
<th>Actor</th>
<th>Function</th>
</tr>
</thead>
</table>
| DR   | Vehicle operator | - Initial report to Immigration  
- Initial cargo report to LCD  
- Receipt and presentation of “gate pass”  
- Report to Thanaleng State Warehouse  
- Presentation of release documents at exit gate |
| TR   | Trader (importer/exporter or clearing agent) | - Submit ACDD to LCD  
- Present required documents to LCD and OGAs  
- Ensure cargo available for inspection  
- Arrange inspection team  
- Pay duty and tax and fees and charges |
| LCD  | Lao Customs Department | - Receive cargo reports  
- Determine where vehicles/goods to be released (FB or Thanaleng)  
- Face vet and register ACDD (quality assurance)  
- Assess ACDD and attached documentation  
- Inspect cargo and vehicles  
- Take enforcement action in cases of non-compliance  
- Revenue accounting  
- Authorize release of cargo and vehicle |
| AIU  | Animal Inspection Unit, Department of Livestock and Fisheries, Ministry of Agriculture and Forestry | - Receive and verify licenses, certificates, permits etc. for live animals and fish, meat and meat products, animal feed and medicines (import and export, transit)  
- Inspect shipments (jointly with LCD)  
- Issue inspection certificates for animals and animal products (import, export and transit)  
- Authorize release  
- Recommend detention/seizure of infected animals/fish  
- Witness destruction of infected animals/fish etc. |
### 3.3 Cargo Clearance Process

All imported, exported and transit goods must be declared to the Lao Customs Department (LCD) which holds the final authority for the release of goods. Other Government Agencies are involved in the clearance of specified goods regulated by their individual legislation. At the border points they conduct documentary review and goods inspection and their authorization is required before shipments of products they regulate can be released. Customs and Treasury are the only agencies that utilize automated processing systems. All other agencies operate in a fully manual environment. The agencies are not co-located and each occupies its own separate office. Apart from Treasury, other Government agencies do not have access to the ASYCUDA system.

The clearance process for imports can be summarized as follows:
### 3.4 Detailed Procedures

#### 3.4.1 Import Procedures

<table>
<thead>
<tr>
<th>Step</th>
<th>Process Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Truck arrives at entry gate at Friendship Bridge (FB).</td>
</tr>
<tr>
<td>2.</td>
<td>DR reports to Immigration for passport processing (passport or border pass).</td>
</tr>
<tr>
<td>3.</td>
<td>DR (or TR) reports to LCD office at FB and submits the Thai Carrier Export Report for exported goods.</td>
</tr>
<tr>
<td>4.</td>
<td>If importing live animals, meat or meat products, or fish or fish products DR reports to Animal Inspection Station (AIS), Agriculture and Fisheries Department, Ministry of Agriculture and Forestry at the FB for inspection. Live animals/fish are not allowed to depart the Bridge until AIS authorizes movement (refer to Section 5, Animal Quarantine procedures).</td>
</tr>
<tr>
<td>5.</td>
<td>If importing plants, plant products, seeds, fertilizer or pesticides the DR reports to the Plant Inspection Unit (PIU) Agriculture and Fisheries Department, Ministry of Agriculture and Forestry at FB for verification of permits, certificates etc. and inspection. (Refer to section 4 – Plant Inspection Procedures).</td>
</tr>
<tr>
<td>6.</td>
<td>CO at FB records importer/exporter, vehicle, driver and cargo information (the Thai Carrier Export Report) on a standalone computer system and assigns a number to the transaction.</td>
</tr>
<tr>
<td>7.</td>
<td>CO stamps the Carrier Export Report and writes a registration number on the form.</td>
</tr>
<tr>
<td>8.</td>
<td>CO decides if truck to proceed to Thanaleng (TL) for customs and Other Government Agency (OGA) processing and clearance, or to remain at FB until clearance (including ACDD processing) at TL. (Note: All ACDDs are submitted at TL via ASYCUDA).</td>
</tr>
<tr>
<td>9.</td>
<td>CO issues Red-tag if truck to proceed to TL for inspection, and truck proceeds to TL.</td>
</tr>
</tbody>
</table>
| 10.  | CO assigns Green tag if truck to be inspected/cleared at FB. Note: 90% of trucks are sent to TL, and 10% are processed at FB. The decision is based on the importer, the customs regime or the commodity. Cargo cleared at the Friendship Bridge (Green-tag) includes:  
- Goods exempt from customs duty  
  - imports by Government (exempt)  
  - imports for Government approved investment projects,  
  - imports for diplomatic missions, international organizations  
  - imports by/for Government approved development projects  
- Bulk commodities (e.g. petroleum)  
- Live animals, plant products (AQ and PQ)  
- Goods that may be scanned due to their nature, type of transport etc. and that can be physically inspected at the FB |
<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.</td>
<td>CO at FB selects vehicles for scanner inspection (Goods that are practical to be scanned) Trucks are scanned upon departure from the Friendship Bridge facility (see step 41). (Note: Trucks sent to TL are generally not scanned as will be inspected at warehouse)</td>
</tr>
<tr>
<td>12.</td>
<td>TR collects documents from driver, including certificates required by PQ, or AQ, and assembles supporting documents (invoice, packing lists, Lao permits etc.).</td>
</tr>
<tr>
<td>13.</td>
<td>For food and drug products TR submits permits, licenses and certificates (as required) to the Food and Drug Unit, Ministry of Health (FDU) at Thanaleng (ACDD is not provided to FDU).</td>
</tr>
<tr>
<td>14.</td>
<td>TR pays 100,000LAK customs processing fee. (Note: TR is required to purchase 3 copies of the ACDD form from LCD for 5,000LAK for each declaration).</td>
</tr>
<tr>
<td>15.</td>
<td>TR inputs ACDD data into ASYCUDA at TL.</td>
</tr>
<tr>
<td>16.</td>
<td>ASYCUDA system validates the ACDD and if accepted registers the ACDD.</td>
</tr>
<tr>
<td>17.</td>
<td>Once validated and registered, TR prints three copies of the ACDD (two for customs, and one for the trader), signs as the declarant, and attaches supporting documents, including receipt for processing fee.</td>
</tr>
<tr>
<td>18.</td>
<td>TR (agent) obtains signature and stamp of the consignee (importer) on the ACDD (either the TR travels to the importer’s premises, or in some cases the TR has the blank ACDD pre-signed by the consignee).</td>
</tr>
<tr>
<td>19.</td>
<td>TR returns to TL with signed copies of ACDD (unless pre-signed by importer).</td>
</tr>
<tr>
<td>20.</td>
<td>TR presents two copies of the ACDD and attached documents to the LCD Declaration Reception Counter.</td>
</tr>
<tr>
<td>21.</td>
<td>CO face vets the ACDD (ensures fully completed, that all required documents are attached, proper signatures affixed etc.) (If all in order, proceed to Step 24).</td>
</tr>
<tr>
<td>22.</td>
<td>If documents are missing or submitted documents contain errors the CO rejects the declaration and returns the ACDD to the TR for correction.</td>
</tr>
<tr>
<td>23.</td>
<td>The TR reviews the rejected ACDD package, makes corrections, or obtains missing documents. If data re-entry required TR must purchase new ACDD forms and re-enter ACDD into ASYCUDA (Step 15). If only attached documents require adjustment TR resubmits ACDD package to LCD Declaration Reception Desk (Step 20).</td>
</tr>
<tr>
<td>24.</td>
<td>If face vetting OK, ASYCUDA assigns ACDD to a processing path (Green – release; Yellow- documentary review; Red – physical inspection; Blue – post clearance verification) through the selectivity module. Note: Approximately 60% are assigned to Red Channel by system.</td>
</tr>
<tr>
<td>25.</td>
<td>LCD Reception CO passes ACDD package to Documentation Verification CO for review.</td>
</tr>
<tr>
<td>26.</td>
<td>Document Verification CO reviews ACDD and attached documents. All ACDDs are checked irrespective of the channel assigned by the ASYCUDA system (i.e. treated as Yellow channel).</td>
</tr>
<tr>
<td>27.</td>
<td>If required, the Verification CO requests clarification or additional information from TR.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>28.</td>
<td>TR provides required clarification, additional information to Verification CO.</td>
</tr>
<tr>
<td>29.</td>
<td>Once document verification is completed the ACDD is passed to the Chief of the Document Verification Unit (Yellow channel). If no physical inspection required proceeds to Step 36.</td>
</tr>
<tr>
<td>30.</td>
<td>If inspection required, ACDD and attached documents are passed to customs inspection team (Red channel). (Proceed to Step 32).</td>
</tr>
<tr>
<td>31.</td>
<td>If goods require OGA examination, the TR contacts the OGA and coordinates joint examination. (Often OGA inspection is carried out in advance of ACDD processing. PIU and AIU may do joint inspections with LCD either at the FB or TL; FDU do independent inspection).</td>
</tr>
<tr>
<td>32.</td>
<td>Customs (or joint) inspection team examines goods at warehouse (if cargo offloaded) or on truck (if not off loaded). All shipments are examined. Intensity of examination depends on risk assessed by customs officers PIU officers and AIU officers. Risk profiling is not coordinated.</td>
</tr>
<tr>
<td>33.</td>
<td>When inspection completed, CO completes “inspection act” on ACDD document and signs ACDD. Submits to head of Inspection Unit for review. If all is in order proceed to Step 36.</td>
</tr>
<tr>
<td>34.</td>
<td>If the inspection detects irregularities CO notes the irregularities in the “inspection act” in ASYCUDA and the shipment is held pending resolution of the matter.</td>
</tr>
<tr>
<td>35.</td>
<td>Further action may be taken including seizure etc. in cases of serious discrepancies.</td>
</tr>
<tr>
<td>36.</td>
<td>If all is in order the head of customs Inspection Unit (red channel) or Document verification unit (yellow or green channel) signs/approves ACDD.</td>
</tr>
<tr>
<td>37.</td>
<td>ACDD status is redirected to Green by Unit head and the ACDD is assessed by ASYCUDA and the system issues and assessment notice.</td>
</tr>
<tr>
<td>38.</td>
<td>TR pays duty and taxes at Bank or Treasury depending on the amount. If paid at the Bank, Bank issues payment notice (receipt) to TR.</td>
</tr>
<tr>
<td>39.</td>
<td>TO processes payment, inputs payment information (including bank advice/receipt if paid at Bank) into ASYCUDA and issues 2 copies of receipt to TR. (ASYCUDA updates payment information).</td>
</tr>
<tr>
<td>40.</td>
<td>TR returns Treasury receipt to Customs.</td>
</tr>
<tr>
<td>41.</td>
<td>ACDD package, including exit note submitted to the Chief of Customs at Thanaleng for approval and signature. (Deputy Chief may sign in his absence).</td>
</tr>
<tr>
<td>42.</td>
<td>Trucks selected for scanning at FB proceed though scanner.</td>
</tr>
<tr>
<td>43.</td>
<td>TR collects approved exit note and provides to DR.</td>
</tr>
<tr>
<td>44.</td>
<td>DR proceeds to gate and provides exit note to the CO. Truck departs.</td>
</tr>
</tbody>
</table>
### 3.4.2 Export Procedures

Processing of export shipments is similar to import procedures, with the exception that in most instances there is no payment of customs duties and taxes. This section describes the general export processing procedures with a focus on the LCD. As with imports, a number of products require export licenses, permits or certificates issued by other government permit issuing agencies (LPIAs). More detailed descriptions of the export procedures for these goods are contained in the relevant sections of this document.

<table>
<thead>
<tr>
<th>Step</th>
<th>Process Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>TR submits transport documents (cargo manifest) to LCD at TL (within 24 hours of arrival of goods at border).</td>
</tr>
<tr>
<td>2.</td>
<td>TR pays 100,000LAK customs processing fee. (Note: TR also required to purchase 3 copies of the ACDD from LCD for 5,000LAK).</td>
</tr>
<tr>
<td>3.</td>
<td>TR inputs ACDD data into ASYCUDA at TL at time of or in advance of arrival of truck (within 15 days of submission of transport documents).</td>
</tr>
<tr>
<td>4.</td>
<td>ASYCUDA system validates the ACDD and if accepted registers the ACDD.</td>
</tr>
<tr>
<td>5.</td>
<td>Once validated, TR prints and signs three copies of the ACDD (two for customs, and one for the trader) and attaches supporting documents, including receipt for processing fee.</td>
</tr>
<tr>
<td>6.</td>
<td>TR (agent) obtains signature and stamp of the consignee (importer) on the ACDD (either the TR travels to the importer's premises, or in some cases the TR has the blank ACDD pre-signed by the consignee).</td>
</tr>
<tr>
<td>7.</td>
<td>TR presents two copies of the signed ACDD and attached documents to the LCD Declaration Reception Counter for face vetting and processing.</td>
</tr>
<tr>
<td>8.</td>
<td>If required TR submits ACDD and attached documents to OGA for processing/approval.</td>
</tr>
<tr>
<td>9.</td>
<td>If documents are missing or submitted documents contain errors the CO rejects the declaration and returns the ACDD to the TR for correction. (If all is OK proceed to Step 11).</td>
</tr>
<tr>
<td>10.</td>
<td>The TR reviews the rejected ACDD package, makes corrections, or obtains missing documents. If data re-entry required TR must purchase new ACDD forms and re-enter ACDD into ASYCUDA (Step 3). If only attached documents require adjustment TR resubmits ACDD package to LCD Declaration Reception Desk (Step 7).</td>
</tr>
<tr>
<td>11.</td>
<td>If face vetting OK, ASYCUDA assigns ACDD to a processing path (Green – release; Yellow- documentary review; Red – physical inspection; Blue – post clearance verification) selectivity module.</td>
</tr>
<tr>
<td>12.</td>
<td>In all cases (Green, yellow, red and blue) ACDD and attached documents are passed to the Document Review unit for verification of the information.</td>
</tr>
<tr>
<td>13.</td>
<td>All ACDDs and attached documents reviewed by Doc. Verification unit.</td>
</tr>
<tr>
<td>14.</td>
<td>CO requests clarification from TR if needed.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>15.</td>
<td>TR provides clarification to CO.</td>
</tr>
<tr>
<td>16.</td>
<td>If all is in order, the ACDD is submitted to the Head of the Unit who decides if ACDD to be redirected to Green channel for assessment by the system. (Proceed to Step 22 – if duty or tax payable or to Step 25 if none payable), or referred for physical inspection (Step 17).</td>
</tr>
<tr>
<td>17.</td>
<td>ACDDs assigned to the red channel are referred to the inspection unit.</td>
</tr>
<tr>
<td>18.</td>
<td>Goods are inspected, generally in conjunction with other agencies as required.</td>
</tr>
<tr>
<td>19.</td>
<td>If the inspection detects irregularities CO notes the irregularities in ASYCUDA and the shipment is held pending resolution of the matter.</td>
</tr>
<tr>
<td>20.</td>
<td>Further action may be taken including seizure etc. in cases of serious discrepancies.</td>
</tr>
<tr>
<td>21.</td>
<td>If all is in order, the custom officer completes the inspection act and signs back of ACDD. The other agency inspector indicates approval of release by signing and stamping the permit/license.</td>
</tr>
<tr>
<td>22.</td>
<td>The CO submits ACDD to Head of unit who reassigns ACDD to Green channel in ASYCUDA and the ACDD is assessed by the system.</td>
</tr>
<tr>
<td>23.</td>
<td>TR pays any duty and taxes payable at Bank or Treasury depending on the amount.</td>
</tr>
<tr>
<td>24.</td>
<td>TO processes payment, inputs payment information (including bank advice if paid at Bank) into ASYCUDA and issues 2 copies of receipt to TR.</td>
</tr>
<tr>
<td>25.</td>
<td>TR returns Treasury receipt to Customs.</td>
</tr>
<tr>
<td>26.</td>
<td>ACDD package, including exit note submitted to the Chief of Customs Office for approval and signature (Deputy Chief may sign in his absence).</td>
</tr>
<tr>
<td>27.</td>
<td>The Chief of the Customs Office signs the ACDD and the exit note authorizing the export of the goods.</td>
</tr>
</tbody>
</table>

### 3.4.3 Transit Procedures

The Lao Customs Department has in place procedures to control the in transit movement of goods and vehicles from one foreign country through Lao PDR to a third foreign country (international transit), and the movement of goods and vehicles from a Lao border crossing to a location within Lao for customs clearance (domestic transit). The Transit declaration is recorded under customs procedure code/regime IM-8 in the ASYCUDA system. In advance of a transit operation the Trader (transporter, owner or agent) must obtain a Transit Permit from the Ministry of Industry and Commerce, and is required to enter into a transit contract with the LCD including the provision of a guarantee or cheque (cash) to secure the duty and taxes on the goods being transported (125% of the duty and taxes amount).
Permits are also required from Plant and Animal Control and other LPIAs according to their requirements, including presentation of licenses, permits and certificates etc.

All transit movements are also subject to technical and licensing requirements for foreign vehicles imposed by the Ministry of Transport. The clearance procedures at the office of entry into the Lao PDR for transit cargo are similar to those for imports, although under the GMS Cross Border Transit Agreement (CBTA) transit cargo is to be exempt from routine customs physical inspections.

Permit and license requirements of other Government Agencies are applied to transit cargo in much the same way as to imported cargo.

Currently the vast majority of international transit cargo is processed in the Savhanakhet – Dansavahn route (the East West Corridor) under the general auspices of the CBTA. The LCD intends to use the ASYCUDAWorld system in the near future to process transit declarations, therefore the ASYCUDA procedures are described in this section.\(^3\)

<table>
<thead>
<tr>
<th>Step</th>
<th>Process Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry</td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>TR obtains a MOIC transit permit for the transit operation (at provincial office or in Vientiane).</td>
</tr>
<tr>
<td>2.</td>
<td>TR signs a contract with the LCD regarding the transit movement.</td>
</tr>
<tr>
<td>3.</td>
<td>The TR submits the transit permit and guarantee (which may be in the form of a bank guarantee, cheque or cash) and transit contract to LCD at the arrival checkpoint.</td>
</tr>
<tr>
<td>4.</td>
<td>LCD issues customs transit permit and accepts the security/deposit.</td>
</tr>
<tr>
<td>5.</td>
<td>Truck arrives at border post.</td>
</tr>
<tr>
<td>6.</td>
<td>DR reports to Immigration for passport processing (passport or border pass).</td>
</tr>
<tr>
<td>7.</td>
<td>TR collects documents from DR, and assembles supporting documents (invoice, packing lists, Lao permits etc.).</td>
</tr>
<tr>
<td>8.</td>
<td>If transporting animals, animal products, or animal related items TR submits a copy of the import permit from the destination country, a transit permit application accompanied by a veterinary certificate from the country of origin to the AIU.</td>
</tr>
<tr>
<td>9.</td>
<td>AIU reviews documentation and inspects animals, animal products or animal related items.</td>
</tr>
<tr>
<td>10.</td>
<td>If all requirements met and no risk identified the head of the AIU issues a transit permit.</td>
</tr>
</tbody>
</table>

\(^3\) The GOL signed the Greater Mekong Sub Region Cross Border Transport Facilitation Agreement (CBTA) in 1999 and signed all annexes in 2007, including Annex 6 (Transit and Inland Clearance Customs Regime, 8 – Temporary importation of vehicles, and 14 Container Customs Regime). Articles 7 (b), 18 and 34 (c) of the CBTA provide for the establishment of the Customs Transit System (CTS). In addition, Lao has signed bilateral transit agreements with Viet Nam and Thailand and a tri lateral MOU on transit arrangements. Lao is also a signatory to the ASEAN Framework Agreement of the Facilitation of Goods in Transit and related protocols.
<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.</td>
<td>If risk identified, permit may not be issued or conditions of permit revised.</td>
</tr>
<tr>
<td>12.</td>
<td>If transporting plants, plant products, seeds, fertilizer or pesticides the TR submits an application for authorization to the PQU for the transit movement of the goods.</td>
</tr>
<tr>
<td>13.</td>
<td>PIU reviews application and inspects the goods, and verifies the certificates from exporting country.</td>
</tr>
<tr>
<td>14.</td>
<td>If Phytosanitary risk identified, PIO may deny permission and either detain shipment of require re-exportation.</td>
</tr>
<tr>
<td>15.</td>
<td>PIU issues authorization (permit) for transit if all in order.</td>
</tr>
<tr>
<td>16.</td>
<td>For food and drug products TR submits permits, licenses and certificates (as required) to the Food and Drug Unit, Ministry of Health (FDU).</td>
</tr>
<tr>
<td>17.</td>
<td>FDU issues transit permit for food and drug products.</td>
</tr>
<tr>
<td>18.</td>
<td>TR pays 100,000LAK customs processing fee. (Note: TR also required to purchase 3 copies of the ACDD from LCD for 5,000LAK).</td>
</tr>
<tr>
<td>19.</td>
<td>TR inputs ACDD data for transit operation (Customs Regime IM8 into ASYCUDA).</td>
</tr>
<tr>
<td>20.</td>
<td>ASYCUDA system validates and registers the ACDD.</td>
</tr>
<tr>
<td>21.</td>
<td>Once validated and registered, TR prints three copies of the ACDD (two for customs, and one for the trader), signs as the declarant, and attaches supporting documents, including receipt for processing fee, and bank guarantee or other security.</td>
</tr>
<tr>
<td>22.</td>
<td>TR presents two copies of the ACDD and attached documents to the LCD Declaration Reception Counter.</td>
</tr>
<tr>
<td>23.</td>
<td>ACDD and attached documents face vetted and processed by LCD.</td>
</tr>
<tr>
<td>24.</td>
<td>CO inspection team inspects vehicle and affixes customs seal to container or truck trailer.</td>
</tr>
<tr>
<td>25.</td>
<td>CO completes and signs transit box of ACDD indicating conditions of transit (route, time allowed).</td>
</tr>
<tr>
<td>26.</td>
<td>If all is in order the head of customs inspection unit sign/approves ACDD.</td>
</tr>
<tr>
<td>27.</td>
<td>Head of Customs Unit redirects ACDD in ASYCUDA to green, and ACDD is assessed by system.</td>
</tr>
<tr>
<td>28.</td>
<td>ACDD signed and stamped by chief of office.</td>
</tr>
<tr>
<td>29.</td>
<td>DR departs entry border post and proceeds to exit border station in accordance with instructions issued by LCD (route, time allowed etc.).</td>
</tr>
</tbody>
</table>

Exit

<p>| 30. | Truck arrives at exit border post.                                                                  |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>31.</td>
<td>DR/TR submits transit ACDD and attached documents to LCD CO.</td>
</tr>
<tr>
<td>32.</td>
<td>CO inspects vehicle/container to ensure seal have not been tampered with and that goods have not been removed. (Generally no cargo inspection is carried out).</td>
</tr>
<tr>
<td>33.</td>
<td>Depending on the goods the AIU, FDU or PIU officers inspect shipment as required (jointly with LCD) to verify seals etc. (where present).</td>
</tr>
<tr>
<td>34.</td>
<td>PIU sends copy of transit document to PIU at entry checkpoint.</td>
</tr>
<tr>
<td>35.</td>
<td>AIU sends copy of transit documents to AIS at entry checkpoint.</td>
</tr>
<tr>
<td>36.</td>
<td>ACDD is updated in ASYCUDA to cancel the IM 08 Transit operation. (Note this is the procedure with ASYCUDA).</td>
</tr>
<tr>
<td>37.</td>
<td>If all is in order the truck is allowed to depart.</td>
</tr>
<tr>
<td>38.</td>
<td>The transit guarantee/deposit is cancelled or refunded by LCD.</td>
</tr>
</tbody>
</table>
3.5.1 LCD 01 - IM Import

Export and Transit Processes

3.5 Process Map LCD 01 Friendship Bridge/Thanaleng Import,
LCD 01 – IM Import (continued)

[Note: includes approved licenses, permits, certificates from OGAs as required]

From P 1

20. TR submits 2 copies of ACDD & attached documents to LCD Reception Counter

[If re-entry of ACDD required]

21. CO-face vets ACDD package

22. CO Returns ACDD package to TR

[If only attach document problem]

23. TR reviews ACDD package and provides correct/missing documents

24. ASYCUDA assigns ACDD to processing path

[Note: 60% of ACDDs referred by ASYCUDA to Red Channel. CO reassign additional 20% to Red]

Green Lane (goods released without inspection)

Yellow Lane (documentary review)

Red Lane (physical inspection of goods by customs and/or other agencies)

Blue Lane (goods released, subject to post clearance verification)

25. Reception CO passes ACDD package to
Document Verification Unit

26. All ACDD packages reviewed by document verification unit (Yellow)

29. CO passes ADCC to head of verification unit

Physical inspection required?

28. TR provides CO clarification missing documents as required

27. CO requests clarification from TR if required

30. To Step 37

36. To step 30

LCD 01 – IM Import (continued)

30. ACCD package passed to customs inspection team
31. TR contacts DGUs if required to schedule inspection
32. Cargo inspected by CD and OGA as required [post inspection]
33. Co completes inspection act and submits ACCD to Unit Head

Irregularities identified?

Yes

34. Irregularities noted, Co signs back of ACCD and submits to Head of Inspection Unit
35. Reassessment, Goods held for further action

No

36. Head of Doc verification/inspection Unit approves ACCD/inspection act

37. Head of unit reroutes ACCD to Green channel and assessed by ASYCUDA
38. TR pays duty and tax at Treasury or Bank
39. TO processes payment, updates ASYCUDA status, and issues receipt
40. TR presents receipt to Co
41. Chief of Customs Station signs and approves ACCD and exit notice
42. Truck selected for scanning (see step 11) passes through scanner

Results of Scan?

Negative

Further inspection and if irregularities, follow up action

Positive

43. TR collects approved exit note and provides to the DR

44. OR presents Exit note to Co at Gate and removes cargo

Trucks to be released at FB
3.5.2 LCD 01 – EX Export

1. TR submits transport documents to LCD

2. TR pays 100,000 LAK processing fee to LCD and purchases ACDO forms

3. TR inputs ACDD data into ASYCUDA

4. ASYCUDA validates data and registers ACDO

5. TR prints and signs 3 copies of ACDD and attaches documents

6. TR obtains importer signature on ACDO

7. TR submits 2 copies of ACDD to LCD with attached docs.

8. If required TR submits ACDD and attached documents to OGA

9. CO face vets ACDD and if all in order registers ACDD in system

10. TR reviews declaration and resubmits as required

11. ASYCUDA assesses ACDD and assigns to a processing path

12. Reception CO passes ACDO package to Document Verification Unit

13. All ACDD packages reviewed by Document verification unit

14. CO requests clarification from TR if required

15. TR provides CO clarification missing documents as required

16. CO passes ACDO to Head of Document Verification unit

17. Refer to Inspection unit – goods inspected

Green Channel – goods released without verification

Red Lane (physical inspection of goods by customs and/or other agencies)

Yellow (Documentary Review)

Blue Lane (goods released, subject to post clearance verification)

[Note: All ACDDs are reviewed by Document verification unit – Step 13]

[Note – essentially same process as for imports]
18. Goods inspected

Irregularities detected?

Yes

19. CO completes inspection Act and submits to chief

No

20. Shipment held pending further action

21. CO completes inspection act and signs ACDD. OGA signs

22. TR pays any duty and taxes at TO or Bank

23. TO processes payment in ASYCUDA and issues receipt

24. TR returns Receipt to LCD

25. ACDD submitted to Chief of Office for approval and signature

26. Chief signs ACDD and Exit note

27. Vehicle departs
3.5.3 LCD 01 – TR Transit Procedures

Arrival

1. TR obtains MOIC Transit Permit
2. TR signs transit Contract with LCD and provides guarantee
3. TR submits MOIC Transit Permit and documents to LCD at checkpoint
4. LCD issues Transit Permit and accepts guarantee
5. Truck arrives at border
6. DR reports to IMM for passport processing
7. TR collects documents from DR

Animal Quarantine

8. If transporting animals or animal products submits transit application to AIU
   [Note: May be done at checkpoint or at MAF HQ]
   9. AIU inspects documents and animals or products
      Yes: Risk Identified by AIU?
      No risk: Permit not issued
      10. AIU issues transit permit. Proceeds to step 17
      [Note: Permit may be issued with different conditions]

Plant Quarantine

12. If transporting plants TR submits Transit permit application to PIU
13. PIU reviews documents and inspects goods
14. Risk Identified by PIU?
    Yes: Permit refused. Permit not issued
    No risk: PIU issues transit permit. Proceeds to Step 18
    [Note: Permit may be issued with different conditions]

Food and Drugs

16. If transporting foods and drugs TR submits application and documents to FDU.
17. FDU considers application and issues permit as per above steps for PIU and AIU

LCD 01 – TR Transit Procedures (continued)

**Arrival (con’t)**

18. TR pays 100,000LAK LCD processing fee and buys ACDDs
19. TR inputs ACDD data for transit operation (IM-08)
20. ASYCUDA validates and registers ACDD
21. TR prints 3 copies of ACDD, signs and attaches documents
22. TR submits 2 copies of ACDD and attached docs to LCD
23. CO face vets ACDD

24. CO inspects vehicle and load and attaches customs seal
25. CO signs and stamps transit box on ACDD & lists conditions of transit
26. Head of Customs inspection unit approves and signs ACDD
27. Head of Customs unit redirects ACDD to green and ASYCUDA assesses.

30. Truck arrives at exit checkpoint
31. TR/DR submits transit documents to LCD
32. CO inspects truck and cargo for seal etc
33. OGA inspect cargo and vehicle as well (usually joint inspection)
36. ACDD status is updated in ASYCUDA to cancel the transit operation
37. Truck and cargo depart

34. PIU sends copy of transit permit to entry checkpoint
35. PIU sends copy of transit permit to entry checkpoint
38. Guarantee cancelled

[Note: OGA will also inspect the shipment]
4 IMPORTATION OF AGRICULTURAL PRODUCTS

4.1 Overview

All imports of agricultural products (plants, seeds, fruit, vegetables etc.) must be reported upon arrival to the Plant Quarantine Inspection Unit (PIU) at the checkpoint. This unit comes under control of the Department of Agriculture and Fisheries, Ministry of Agriculture and Forestry which is responsible for ensuring that all imports of agricultural products meet the Ministry requirements, are free of pests and diseases and that all appropriate permits, certificates and licenses have been obtained.

In accordance with the Law on Plant Protection (No. 06, 09 December 2008), and the Decree on Implementation of the Law on Plant Protection (No. 229, 31 May, 2012) importers of plants and plant products must in specified circumstances obtain an Import permit for Plants issued by the MAF in advance of the importation.

Article 18 of the Decree states that import permits are required for importations from a country of origin with confirmed or suspected quarantine pests; where the importation is subject to post-entry quarantine requirements, is for a designated end use or for research purposes, is in response to a humanitarian crisis or natural disaster, or where there is a need to trace the importation of plant, plant product after entry over a period of time.

Plants, plant products or other regulated articles are permitted to be imported only through entry points designated by the MAF.

Prior to importing pesticides and seeds importers must register the product with the Department of Agriculture and Fisheries – Plant Quarantine Division at Vientiane; additionally for each importation of the registered product, an import permit must be obtained from the Department. This is done a minimum of 15 days in advance of the importation.

Imports of plants and plant products must be accompanied by an original Phytosanitary certificate issued by a recognized agency in the country of export as required by law. These requirements apply equally to the transit movement of products through the territory of the Lao PDR.

Exporters of plants, plant products and related articles must have obtained a Phytosanitary certificate issued by the competent organization within the Department of Agriculture and Fisheries (currently Vientiane head office or a provincial Plant)4 prior to export.

4 Plans are to delegate responsibility for issuance of Phytosanitary Certificates for exports to Plant Quarantine Inspection offices at international checkpoints.
The Plant Quarantine Inspection Section (PIU) of the Department of Agriculture located at the Friendship Bridge/Thanaleng border crossing is responsible for enforcing these requirements, as well as those relating to the import of fertilizers and pesticides. The unit consists of a Unit Head and seven inspectors, four of whom are located at the Friendship Bridge responsible for inspection of imports and transit shipments, and three located in Vientiane responsible for exports.

Staff reported that on average approximately 10 shipments of products for which they are responsible are processed per week, primarily from four major traders.

### 4.2 Actors

<table>
<thead>
<tr>
<th>Code</th>
<th>Actor</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR</td>
<td>Trader (importer or clearing agent)</td>
<td>- Present required documents to the Plant Quarantine Section (PQS)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Make products available for inspection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Arrange inspection team (PQS and LCD)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Pay any fees or charges</td>
</tr>
<tr>
<td>PIO</td>
<td>Plant Quarantine Inspection Officer</td>
<td>- Receive documentation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Review documentation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Inspect trucks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Inspect products (100% of consignments inspected)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Take samples for testing</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Hold suspected infected products pending tests</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Stamp permits and authorize release of goods</td>
</tr>
<tr>
<td>LCO</td>
<td>Lao Customs Officer</td>
<td>- Receive cargo reports</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Processing of ACDD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Inspection of goods and vehicles</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Release of goods</td>
</tr>
<tr>
<td>C-PIU</td>
<td>Chief of Plant Quarantine Inspection Unit</td>
<td>- Approve release of plant products</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Approve detention of products</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Authorize destruction/re-export</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Prepare report on offences/irregularities</td>
</tr>
</tbody>
</table>
### 4.3 Detailed Procedures

<table>
<thead>
<tr>
<th>Step</th>
<th>Process Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Imports</strong></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>Truck arrives at FB.</td>
</tr>
<tr>
<td>2.</td>
<td>TR advises the PQS of arrival of shipment of agricultural products and submits the original Phytosanitary certificate, any required permits issued by the Department of Agriculture and Fisheries, invoice, and packing list.</td>
</tr>
<tr>
<td>3.</td>
<td>PIO verifies documents.</td>
</tr>
<tr>
<td>4.</td>
<td>PIO inspects truck upon arrival often jointly with LCD (may be sprayed/sanitized).</td>
</tr>
<tr>
<td>5.</td>
<td>PIO inspects products if possible with LCD. Generally ACDD not provided at this time. All inspections carried out at Friendship Bridge (FB).</td>
</tr>
<tr>
<td>6.</td>
<td>PIO may carry out simple testing at FB if required.</td>
</tr>
<tr>
<td>7.</td>
<td>For more advanced analysis samples are taken and sent for laboratory testing. Some tests take lengthy time (e.g. seeds require time to germinate). Goods are held at FB pending test results.</td>
</tr>
<tr>
<td>8.</td>
<td>If test results (either local or laboratory) are not acceptable PIO will not release product. Infested or unsanitary products are destroyed.</td>
</tr>
<tr>
<td>9.</td>
<td>If all is in order, the PIO stamps and signs the original Phytosanitary certificate and import permit (if required). The original Phytosanitary certificate is retained by the PIU and copies provided to TR).</td>
</tr>
<tr>
<td>10.</td>
<td>PIO completes inspection sheet/report.</td>
</tr>
<tr>
<td>11.</td>
<td>TR presents copy of signed Phytosanitary certificate and permit (if required) with ACDD to LCD.</td>
</tr>
<tr>
<td>12.</td>
<td>ACDD processed by LCD.</td>
</tr>
<tr>
<td>13.</td>
<td>Shipment released by LCD.</td>
</tr>
<tr>
<td><strong>Exports</strong></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>TR reports export shipments of agricultural products to the PIU at FB and submits Phytosanitary certificate and export permits (must be applied for 15 days in advance of export).</td>
</tr>
<tr>
<td>2.</td>
<td>PIO verifies Phytosanitary certificates and required permits.</td>
</tr>
<tr>
<td>3.</td>
<td>PIO inspects shipment to verify product and quantities (and quality).</td>
</tr>
<tr>
<td>4.</td>
<td>If all is in order, PIO authorizes release for export.</td>
</tr>
<tr>
<td>5.</td>
<td>LCD processes export ACDD.</td>
</tr>
<tr>
<td>6.</td>
<td>Shipment released by LCD.</td>
</tr>
</tbody>
</table>
4.4 Process Map PQ – 01 Processing of Imports and Exports of Agricultural Products

PQ – 01 Procedures for processing imports/exports of Agricultural Products at Friendship Bridge/Thanaleng Border Crossing

Imports

1. Truck arrives at Friendship Bridge
2. TR advises PQO of arrival of shipment submits permits, Phytosanitary certificates, etc.
3. PQO verifies documentation.
4. PQO inspects vehicle on arrival at FB (often with LCD)
5. PQO inspects products at FB, In advance of ACDD submission (may be with LCD)

Testing required?

Yes

6. PQO takes samples of products for testing (local or at lab.)
7. Test Results?

Test Results?

Not acceptable

Infested products destroyed

Acceptable

8. If OK, PQO stamps and signs original phytosanitary cert. & permit. Retains original & returns copy to TR
9. PQO completes inspection report
10. TR submits signed, stamped permit to LCD
11. ACDD processed by LCD, duty and taxes assessed and collected
12. Shipment released by LCD

Exports

1. TR reports shipment of agricultural products to the PQO at FB
2. PQO verifies phytosanitary certificates and permits
3. PQO inspects shipment to verify product and quantities
4. If all is in order, PQO authorizes release for export
5. LCD processes export ACDD
6. Shipment released by LCD
5 IMPORT OF LIVESTOCK MEAT, MEAT PRODUCTS, AND FISH

5.1 Overview

All imports of live animals, meat and meat products and fish must be reported to the Animal Inspection Station (AIS) at the Friendship Bridge immediately upon arrival. The AIS is part of the Department of Livestock and Fisheries, Ministry of Agriculture and Forestry and is responsible for ensuring that all live animals, meat and meat products and fish imported meet the requirements of the Law on Livestock Production and Veterinary Matters (No. 03/NA, 25 July, 2008), and of the Decree on the Control of the Movement of Animal and Animal Products No. 230/GoL 4 June 2012.

Prior to importing live animals, animal products, a trader must apply to the Department of Agriculture and Fisheries office at the international checkpoints for an import permit (technical certificate) at least fifteen days before the intended importation. Imports of breeding animals must submit an application to the Headquarters of the MAF for an import permit at least fifteen days in advance. An import permit from the MAF is also required for all imports of fish (including live fish). At least one day before the importation, the importer is required to notify the AIS of the planned importation and to provide copies of the required permits, certificates and licenses.

In addition to the Technical Certificate (Permit) for importation of live animals, the following documents issued by the country of origin must be submitted to the AIS at the time of import:

- Permission of Country of Origin and Final Destination;
- Certificate of Vaccination;
- Certificate of Pedigree;
- Certificate of animal Health (sanitary certificate);
- Certificate of Blood Sampled Results analysis.
## 5.2 Actors

<table>
<thead>
<tr>
<th>Code</th>
<th>Actor</th>
<th>Function</th>
</tr>
</thead>
</table>
| TR   | Trader (importer or clearing agent) | - Present required documents to the AQS  
- Make animals/fish available for inspection  
- Arrange inspection team  
- Pay duty and tax and fees and charges |
| AIS  | Animal Inspection Station (of the Department of Livestock and Fisheries, Ministry of Agriculture and Forestry located at international checkpoints) | - Issuance of permits and certificates for imports  
- Verification of documents  
- Inspection of imports/exports/transit of live animals, meat and fish.  
- Detaining animals or products found to be unfit.  
- Authorization import/export/transit of live animals, meat and fish.  
- Reporting to the DLF HQ on results and outputs. |
| AIO-D| Animal Inspection Officer – Documentation Review | - Receive documentation  
- Review documentation |
| AIO-I| Animal Inspection Officer – Inspection | - Inspect live animals/fish  
- Issue release approval  
- Recommend detention/seizure of infected animals/fish  
- Witness destruction of infected animals/fish |
| LCO  | Lao Customs Officer | - Processing of ACDD  
- Inspection of goods  
- Release of goods |
| C-AIS| Chief of International Animal Inspection Station | - Issue permits/certificates  
- Approve release of animals/fish  
- Approve detention/seizure  
- Authorize destruction/re-export  
- Prepare report on offences/irregularities |
## 5.3 Detailed Procedures

### 5.3.1 Import of livestock, meat, meat products and animal related items

<table>
<thead>
<tr>
<th>Step</th>
<th>Process Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>TR submits application for technical certificate from Department at least 15 days in advance of import. Application must include required certificates from exporting country.</td>
</tr>
<tr>
<td>2.</td>
<td>TR notifies AIS of the planned importation of live animals, meat, meat products or fish at least one day in advance and provides a copy of the technical certificate, MOIC import license, and other certificates and permits from exporting country.</td>
</tr>
<tr>
<td>3.</td>
<td>Truck carrying livestock, meat etc. arrives at Friendship Bridge (Immigration clearance) (Note: LCD are required to notify the AIS of the arrival of a shipment of animals, animal products or animal related products, and are not permitted to release such shipments with approval from the AIS).</td>
</tr>
<tr>
<td>4.</td>
<td>TR verbally reports the arrival of shipment of live animals, live fish, meat, fish or products, animal feed and medicine to the AIS, and submits permits, certificates etc.</td>
</tr>
<tr>
<td>5.</td>
<td>Meat, meat products, fish and fish products, feed and medicine are allowed to move to Thanaleng Office (TL) for clearance and inspection.</td>
</tr>
<tr>
<td>6.</td>
<td>Live animals/fish are held at the Friendship Bridge (FB) pending clearance. (They are not allowed to move to TL).</td>
</tr>
<tr>
<td>7.</td>
<td>AIO-D reviews documentation (attached certificates etc.).</td>
</tr>
<tr>
<td>8.</td>
<td>TR arranges inspection of animals with AIO-I and if possible LCD.</td>
</tr>
<tr>
<td>9.</td>
<td>AIO-I and LCO do joint inspection of live animals/fish, to verify against documentation and for health. If shipment is suspected to be contaminated or infected, or does not have required certificate and other prescribed documents; the AIS will seize the shipment. Further action may be taken to deal with the situation.</td>
</tr>
<tr>
<td>10.</td>
<td>AIO-I at FB completes and signs Inspection Certificate of Animal and Animal Products.</td>
</tr>
<tr>
<td>11.</td>
<td>C-AI signs Inspection Certificate to authorize release, based on results of inspection.</td>
</tr>
<tr>
<td>12.</td>
<td>TR proceeds with livestock customs clearance (ACDD submission and processing at TL, including attached certificates/permits, payment etc.).</td>
</tr>
<tr>
<td>13.</td>
<td>LCD processes ACDD and supporting documentation.</td>
</tr>
<tr>
<td>14.</td>
<td>The LCD releases shipment (following payment of duty and taxes and other GA approvals).</td>
</tr>
<tr>
<td>15.</td>
<td>Shipment removed from checkpoint.</td>
</tr>
</tbody>
</table>
5.3.2 Export of livestock, meat, meat products and animal related items

1. As with Imports, exporter of live animals, meat or meat products submits an application for a permit to the AIS at least 15 days in advance of the planned export.

2. TR submits export application, export certificate, and related documents to the AIS-D at the FB office one day in advance of the export of animals, animal products, or animal related items.

3. Upon arrival of consignment at border TR presents relevant documents to the AIS-D.

4. AIS-D reviews documentation.

5. AIO-I inspects animals, animal product or animal related items.

6. AIS-O reviews documentation and inspection report and issues export authorization (Export Certificate) to TR. [TR must export animal, animal product or animal related items within 7 days of the of the authorization]

7. C-AIS send advance notice to the importing country.

8. TR provides LCD with export authorization documentation.

9. LCD processes ADCC and release shipment.

10. Shipment departs from FB for export.

5.4 Documents and forms

<table>
<thead>
<tr>
<th>Document</th>
<th>Source</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Live animals</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MAF Technical Certificate for import of livestock and fish</td>
<td>Ministry of Agriculture and Forestry</td>
<td></td>
</tr>
<tr>
<td>Permission of Country of Origin and Foreign Destination</td>
<td>Country of Origin authority</td>
<td></td>
</tr>
<tr>
<td>Certificate of Vaccination</td>
<td>Country of Origin authority</td>
<td></td>
</tr>
<tr>
<td>Certificate of Pedigree</td>
<td>Country of Origin authority</td>
<td></td>
</tr>
<tr>
<td>Certificate of Blood Sampled Analysis Result</td>
<td>Country of Origin authority</td>
<td></td>
</tr>
<tr>
<td>Inspection Certificate of Animal and Animal Products</td>
<td>Lao International Animal Quarantine Station</td>
<td></td>
</tr>
<tr>
<td><strong>Animal Products</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permission of Country of Origin and final Destination</td>
<td>Country of Origin authority</td>
<td></td>
</tr>
<tr>
<td>Sanitary Certificate for Animal Products</td>
<td>Country of Origin SPS authority</td>
<td></td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>--------------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Animal Feed Concentrate and Complement, raw material</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permission of Country of Origin and final Destination</td>
<td>Country of Origin authority</td>
<td></td>
</tr>
<tr>
<td>Certificate of Feed Quality analysis</td>
<td>Country of Origin authority</td>
<td></td>
</tr>
<tr>
<td><strong>Medicine for Animals and Equipment for livestock</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Permission of Country of Origin and final Destination</td>
<td>Country of Origin authority</td>
<td></td>
</tr>
<tr>
<td>Certificate of Quality of Origin Country</td>
<td>Country of Origin authority</td>
<td></td>
</tr>
</tbody>
</table>
Process Map AQ-01: Importation of Live animals and Fish

5.5.1 Process Map AQ-01: IM. Import of live animals, meat, meat products and fish

5.5 Process Maps for Import and Export of Live animals, Meat, Meat Products and Fish

Annex I: LNSW Business Process As Is Report
5.5.2 Process Map AQ 01- EX. Procedures for Export of live animals, meat, meat products fish and animal related products

1. TR submits permit application (15 days advance) to MAF

2. TR submits documents to AIS 1 day in advance of export.

3. Upon arrival of consignment at border TR presents relevant documents to AIS

4. AIO-D reviews documentation

5. AIO-I inspects animals, animal product or animal related items

6. C-AIS reviews docs. & inspection report, issues export authorization to TR.

7. AIS sends advance notice to importing country authorities

8. TR provides LCD with export authorization documentation

9. LCD processes ACDD and release of shipment

10. Shipment departs FB for export
6 PROCEDURES FOR FOOD AND DRUG IMPORTS

6.1 Overview

The Food and Drug Unit (FDU) at the FB/TL border crossing is responsible for controlling the importation of food, drugs (medicines) and chemicals. All imports of food drugs and chemicals require prior approval from the Ministry of Health. In the case of importation of drugs, traders must first obtain a Registration Certificate from the MOH for the drug in question. This certificate is valid for three years.

Once the Registration Certificate is obtained, the trader must request a Letter of Approval by the MOH for each importation of the drug. The Letter of Approval must be presented to the FDU at the Friendship Bridge/Thanaleng border crossing with each importation. Similarly, all imports of food require an import permit issued by the MOH, which must be submitted to the FDU at the time of or in advance of importation. Imports of chemicals also require an import permit issued by the MOH.

There are two officers assigned to the FDU at this border crossing, one is a member of the MOH headquarters Food and Drug Department, and the second is from the provincial office of the MOH.

6.2 Actors

<table>
<thead>
<tr>
<th>Code</th>
<th>Actor</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>TR</td>
<td>Trader (importer or clearing agent)</td>
<td>- Present required documents to the Food and Drug Unit (FDU)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Make products available for inspection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Arrange FDU inspection of shipments</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Pay any fees or charges</td>
</tr>
<tr>
<td>FDU</td>
<td>Food and Drug Unit located at border crossings</td>
<td>- Controlling and inspecting and authorizing the import, export and transit movement of products controlled by the Ministry of Health</td>
</tr>
<tr>
<td>FDO</td>
<td>Food and Drug Technical Officer</td>
<td>- Receive documentation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Review documentation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Inspect products (100% of consignments inspected)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Detain suspected products pending resolution by headquarters</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Stamp permits/Letters of Approval to authorize release of goods</td>
</tr>
<tr>
<td>LCO</td>
<td>Lao Customs Officer</td>
<td>- Receive cargo reports</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Processing of ACDD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Inspection of goods and vehicles</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Release of goods</td>
</tr>
</tbody>
</table>
### 6.3 Detailed Procedures

<table>
<thead>
<tr>
<th>Step</th>
<th>Process Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The MOH sends two copies of Letters of Approval and import permits to the FDU for planned imports of food, drugs and chemicals.</td>
</tr>
<tr>
<td>2.</td>
<td>The FDO retains the permits/Letters of Approval in a hard copy file for the importer.</td>
</tr>
<tr>
<td>3.</td>
<td>Upon arrival of the shipment the TR submits the Permit/Letter of Approval to the FDO along with the invoice, packing list, purchase order.</td>
</tr>
<tr>
<td>4.</td>
<td>FDO compares the Permit/Letter of Approval with the copies held in the file.</td>
</tr>
<tr>
<td>5.</td>
<td>In some cases (due to the absence of refrigeration facilities) perishable goods are allowed to proceed to inland facilities for temporary storage and inspection.</td>
</tr>
<tr>
<td>6.</td>
<td>Customs issues an “immediate release” allowing the shipment to proceed to the inland facility for inspection subject to a guarantee/deposit.</td>
</tr>
<tr>
<td>7.</td>
<td>FDU officer inspects shipment at inland destination. Proceeds to Step 13 if all is in order.</td>
</tr>
<tr>
<td>8.</td>
<td>FDO and TR inspect the shipment at checkpoint. All shipments are inspected but the level of inspection varies depending on the risk (may check only a sample of shipment).</td>
</tr>
<tr>
<td>9.</td>
<td>If FDO does not authorize the shipment, the documents are not stamped and the shipment will not be released.</td>
</tr>
<tr>
<td>10.</td>
<td>FDO prepares a Memo to the Food and Drug Department HQ outlining the problem.</td>
</tr>
<tr>
<td>11.</td>
<td>The Memo is given to the TR to bring to the FDD to request another permit or resolve the issue.</td>
</tr>
<tr>
<td>12.</td>
<td>If a permit is not issued, the goods will generally be re-exported.</td>
</tr>
<tr>
<td>13.</td>
<td>If permit is issued the TR returns to FDU and resubmits the Permit/LOA.</td>
</tr>
<tr>
<td>14.</td>
<td>If all is in order the FDO signs and stamps the Permit/Letter of Approval and returns one copy to the TR.</td>
</tr>
<tr>
<td>15.</td>
<td>TR presents the signed/stamped Permit/Letter of Approval to LCO as part of the ACDD package (See step 13).</td>
</tr>
<tr>
<td>16.</td>
<td>LCD processes ACDD.</td>
</tr>
<tr>
<td>17.</td>
<td>Shipment released.</td>
</tr>
</tbody>
</table>
## 6.4 Documents and forms

<table>
<thead>
<tr>
<th>Document</th>
<th>Source</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug Registration Certificate</td>
<td>MOH FDD</td>
<td>To register drugs, food supplements and Traditional medicines used for medicinal purposes.</td>
</tr>
<tr>
<td>Letter of Approval for Import of Drugs</td>
<td>MOH FDD</td>
<td>To authorize each import of drugs food supplements and Traditional medicines used for medicinal purposes for which a Registration Certificate has been obtained.</td>
</tr>
<tr>
<td>Food Import Permit</td>
<td>MOH FDD</td>
<td>Permit required for all imports of food and must be presented to FDO at the border.</td>
</tr>
</tbody>
</table>
6.5 Process Map FD – 01 Import of Food, Drugs and Chemicals

1. MOH sends 2 copies of Permit/LOA to FDU

2. FDO places permits/LOAs in importer file

3. Goods arrive, TR submits Permit/LOA, invoice, packing list, P.O. to FDO

4. FDO compares permit/LOA with file copy

5. Perishable goods may be allowed to proceed inland for inspection and clearance.

6. LCD issues immediate release

7. FDO inspects shipment at destination

8. FDO & TR inspect shipment (100% of shipments inspected)

9. LCD processes ACD

10. Shipment Released

11. FDO gives copy of Memo to MOH outlining problem

12. MOH issues new Permit/LOA?

13. TR resubmits Permit/LOA to FDO

14. FDO signs and stamps Permit/LOA and returns to TR

15. TR submits approved Permit/LOA to LCD with ACD

16. LCD processes ACD

17. Shipment Released

Not approved

Inspection results?

Approved

Yes

Import refused, Goods re-exported

No

7.

To Step 13
7 PROCESSING OF EXEMPT IMPORTS

7.1 Imports under the Lao Law on Investment Promotion

7.1.1 General Procedures

The GOL encourages foreign direct investment by providing incentives to potential projects, primarily in the form of tax relief through exemptions (and reductions) in import/export duties and taxes and reduced or suspended corporate income taxes. Investment projects and their related tax and other incentives are provided for under the Lao Law on Investment Promotion No.02/NA July 8, 2009 and its supporting Decree and instructions. The LCD is responsible for the administration of the duty relief and duty suspension programs through which these incentives are delivered.

An investor wishing to take advantage of the incentives offered under the Law on Investment submits proposals to the relevant ministry for initial approval. For example, hydroelectric dams and mining projects are submitted to the Ministry of Energy and Mines; tourism related projects are submitted to the Ministry of Information culture and Tourism, etc.

The Ministry of Planning and Investment has overall responsibility the Law on Investment Promotion. Once a project has been accepted by the relevant ministry, the Ministry of Planning and Investment takes the lead in developing the proposed concession agreement (where required) and in coordinating the decision making process for review and approval of the specific duty and tax exemptions.

Once the investment project is approved by the responsible Ministry, the investor submits to the Ministry of Planning and Investment a Master Plan outlining the specific, equipment, raw materials, supplies (including fuel), vehicles etc. and the quantities of each to be imported in connection with the project under the duty exemption or relief provisions.

The MPI convenes an inter-ministerial Committee to consider the master plan (which is generally a multiyear plan covering the life of the project), with participation from the relevant technical ministries, the Lao Customs Department (Policy and Legislation Division (PLD), Tax Department and the Ministry of Finance. The Committee examines the proposed plan, often using previous projects as a guide. If the Committee disagrees with the proposal the investor is asked to revise it accordingly.

Once the Master Plan is approved by the inter-ministerial committee (including representatives from the relevant ministry) the PLD prepares and submits a proposed Decree to the Minister of Finance to authorize the Master Plan including the specific quantities and duty and tax relief provisions for imports of goods. If required,
the MOF will also sign a Concession Agreement with the investor. Once signed, the Decree provides authority for the LCD to administer the Master Plan for the project.

From this point onward, the Import Export Division (IED) of the LCD assumes responsibility for the administration and control of the import of exempt goods through administration of the Master lists.

In response to a written request from the Importer/Investor the (IED) issues an authorization (permission) to import the goods listed on the Master Plan, under the duty and tax exemption or reduced rate. The Investor submits a detailed annual plan (Master List) to the IED listing the specific products and related quantities to be imported during the first year of the project. This Master List is very detailed with each product assigned a unique product code by the investor and include the specific quantities to be imported over the year. The IED reviews and approves the ML, in consultation with the relevant ministry.

Manufacturers of goods for export who are entitled to exempt imports of raw materials and related inputs prepare an annual Master List of imports which is submitted to the Ministry of Planning and Investment and to the Ministry of Industry and Commerce for consideration, in consultation with the LCD. The approved Master List is forwarded to the LCD for administration.

Investors may apply for adjustments to the master list if needed. Such requests are considered initially by the LCD-IED and if supported submitted for consideration by the inter-ministerial Committee. If the Committee agrees with the request it indicates its agreement and the LCD-IED prepares a MOF Decree authorizing the amendment the revised Master List.

The LCD is implementing a standalone computer system for managing the Master Lists for imports of vehicles and petroleum – both considered high risk commodities – that are managed by the IED and not delegated to the checkpoints. Currently a parallel manual system is maintained along with the automated system. The LCD hopes to upgrade and expand the system to accept electronic input of MLs from INVs (currently the IED staff input the ML data into the system) and to connect checkpoints, regional offices and headquarters. Limited progress has been made to date in this effort, due largely to lack of funds.
### 7.1.2 Actors

<table>
<thead>
<tr>
<th>Code</th>
<th>Actor</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>INV</td>
<td>Investor</td>
<td>- Submits application for project approval to the relevant ministry.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Prepares Master Plan and Master Lists</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Submits to the Ministry of Planning and Investment</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Discusses MP with inter-ministerial committee</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Revises MP and ML as required</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Obtains permits from LCD for imports of goods on ML</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Declares imports (ACDD etc.)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Monitors ML quantities</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Requests amendments to ML as required</td>
</tr>
<tr>
<td>TR</td>
<td>Investor (importer) or clearing agent</td>
<td>- Submit ACDD and supporting documents to LCD (including ML data)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Ensure cargo available for inspection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Arrange inspection team</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Pay and duty and tax and fees and charges</td>
</tr>
<tr>
<td>MOIC</td>
<td>Ministry of Industry and Commerce</td>
<td>- Participates in the inter-ministerial Committee</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Issues import licenses (automatic and non-automatic) for specific goods</td>
</tr>
<tr>
<td>MPI</td>
<td>Ministry of Planning and Investment</td>
<td>- Responsible for coordination of Investment projects</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Approves projects</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Convenes and chairs inter-ministerial Committee</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Prepares submission to National Assembly</td>
</tr>
<tr>
<td>MEM</td>
<td>Ministry of Energy and Mines</td>
<td>- Approval of investments in the energy and mining fields.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Participates in inter-ministerial Committee that approves (and revises) Master lists</td>
</tr>
<tr>
<td>MOT</td>
<td>Ministry of Information Culture and Tourism</td>
<td>- Issues approval of investment projects in its area of jurisdiction</td>
</tr>
<tr>
<td>-----</td>
<td>Other Ministries</td>
<td>- Issues approval of investment projects in its area of jurisdiction</td>
</tr>
<tr>
<td>MOF</td>
<td>Ministry of Finance</td>
<td>- Issues Ministerial Decree authorizing the Master Plan</td>
</tr>
<tr>
<td>LCD</td>
<td>Lao Customs Department</td>
<td>- Participates on inter-ministerial Committee to review Master Plan and Master list</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Prepares draft Decree for MOF to implement the Master Plan</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Administers Master Lists</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Issues approvals for exempt import of goods on ML</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Participates in consideration of revisions to MLs</td>
</tr>
</tbody>
</table>
| **LCD-PLD** | **Policy and Legislation Division** | - Represents LCD on Inter-ministerial Committee to review Master Plan and Master list  
- Provides input and technical advice on the MP and ML  
- Prepares Ministerial Decree for submission to the Minister of Finance. |
| --- | --- | |
| **LCD-IED** | **Import – Export Division** | - Preparation of letter of permission to import goods on the ML, and submits to DG for signature  
- Co-ordinates administration of the Master Lists, receives and reviews reports from field  
- Prepares permits for imports of vehicles and fuel products under ML for submission to DG for approval  
- Develops automated system for management of MLs  
- Administers other exemptions (diplomatic, development projects, international organizations, temporary imports, etc. (approved by Minister of Foreign Affairs)  
- Approval of exports of goods on the Export Control list (based on OGA approvals). Issue additional customs permits |
| **LCD-RO** | **Regional Customs Office**  
**Customs checkpoint** | - Approves import of items on ML (except vehicles and fuel)  
- Verifies imports and processes customs declarations  
- Inputs data into automated ML system |

### 7.1.3 Detailed Procedures

**A. Procedures for approval of Master Plan and Master List (following approval of the Investment Project and the Master Plan)**

<table>
<thead>
<tr>
<th>Step</th>
<th>Process Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>INV submits approved Master Plan of imports required for the life of the investment project to the LCD – PLD.</td>
</tr>
<tr>
<td>2.</td>
<td>PLD reviews Master Plan including discussions with INV.</td>
</tr>
<tr>
<td>3.</td>
<td>PLD prepares draft Minister of Finance Decree and Instructions approving Master Plan of exempt imports.</td>
</tr>
<tr>
<td>4.</td>
<td>LCD submits draft MOF Decree and Instructions to MOF.</td>
</tr>
<tr>
<td>5.</td>
<td>MOF considers proposal and if approved, issues Decree and Instructions to LCD, with copies to the INV and involved Government Ministries (Master Plan approved).</td>
</tr>
<tr>
<td>6.</td>
<td>INV comes to LCD HQ with proposed Master List (ML) of goods and a written request for permission to import goods on the ML, including a list of border crossings where goods on ML are to be imported (international checkpoints only).</td>
</tr>
<tr>
<td>7.</td>
<td>LCD reviews ML in consultation with the relevant ministry.</td>
</tr>
<tr>
<td>8.</td>
<td>LCD-IED issues Permission letter to INV for the Master List. (INV must take this permission letter to the checkpoint(s).)</td>
</tr>
</tbody>
</table>
### B. Procedures for administration of Master Lists

9. The ML of exempt imports of vehicles and fuel is signed (approved) by the DG.

10. IED issues instructions to LCD-ROs responsible for the international checkpoints where goods to be imported and sends out a copy of the approved ML and letter of permission. Copy also sent to responsible RO.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>11.</strong></td>
<td>In advance of submission of an ACDD for imports of vehicles and fuel, INV submits request to IED for pre-approval (these items are controlled by the IED).</td>
</tr>
<tr>
<td><strong>12.</strong></td>
<td>IED reviews request and verifies available balance of goods on ML, and adjusts the list accordingly.</td>
</tr>
<tr>
<td><strong>13.</strong></td>
<td>IED prepares permission letter for DG’s signature to INV for each importation of fuel and vehicle imports (estimated 20 permits for vehicles and 10 for fuel per week).</td>
</tr>
<tr>
<td><strong>14.</strong></td>
<td>DG signs permission letter.</td>
</tr>
<tr>
<td><strong>15.</strong></td>
<td>IED provides approved permission letter to INV.</td>
</tr>
<tr>
<td><strong>16.</strong></td>
<td>For imports of all other goods on the ML, INV submits request for permission to Customs Checkpoint in advance of (or at the time of) importation.</td>
</tr>
<tr>
<td><strong>17.</strong></td>
<td>Customs Checkpoint reviews request, verifies balance of the goods on ML and adjusts the ML accordingly.</td>
</tr>
<tr>
<td><strong>18.</strong></td>
<td>Chief of Customs Checkpoint issues permission for exempt import.</td>
</tr>
<tr>
<td><strong>19.</strong></td>
<td>Upon arrival of goods at international checkpoint INV submits ACDD to ASYCUDAWorld system with attached ML excerpt and copy of DG or IED permission letter. A specific procedure code has been assigned to LOI imports in ASYCUDA. All ACDDs indicate “attached documents” for Master List attachment.</td>
</tr>
<tr>
<td><strong>20.</strong></td>
<td>LCD checkpoint processes declaration including verification of the requested exemption, inspection of the goods etc. and goods released in the normal manner.</td>
</tr>
<tr>
<td><strong>21.</strong></td>
<td>Customs Checkpoint submits manual monthly report on Master List imports to IED (for all MLs). Separate report sent to IED on imports of fuel and vehicles.</td>
</tr>
<tr>
<td><strong>22.</strong></td>
<td>At year end INV submits Master List for coming year to IED for review and approval.</td>
</tr>
</tbody>
</table>
7.2 Processing of Other Exemptions

7.2.1 A. Imports by embassies and representatives of foreign governments, international organizations:

- The importer submits a request to the Ministry of Foreign Affairs for approval of each planned import.
- The Ministry of Foreign Affairs issues a “Note” to LCD approving the exempt import.
- Importer submits letter of application for exemption to LCD - IED along with “Note” from Ministry of Foreign Affairs
- IED reviews and submits request to DG for approval
- Once approved by DG the signed permit is returned to the importer by IED
- Imported submits approved form (permit) with ACDD at checkpoint claiming exemption.

7.2.2 B. Imports related to development projects, grant in aid etc.

- Same procedures as above, except that the importer submits the initial request for the exempt import to the Ministry of Planning and Investment, who issues the “Note” to LCD approving the exempt import.
- Procedures for all exemptions follow the same general process, although the responsible ministry varies according to the circumstance.

7.2.3 Imports by operators in Special Economic Zones

Procedures for approval of imports of goods into special economic zones are similar to those for imports for goods under the Law on Investment Promotion. Applicants are required to submit proposed import plans to the Special Economic Zone Committee that operates under the Prime minister’s Office. The Committee decides on the Master List and the LCD is advised. Once approved, the administration of the ML is much the same as for those under the Law on Investment Promotion.
7.3 Process Map LIP – 01. Exempt Imports under the Law on Investment Promotion (LIP)

A. Approval of Master Plan and Master List by LCD

1. INV submits approved MP to LCD-PLD
2. LCD-PLD reviews MP and discusses with INV
3. PLD prepares MOF Decree and Instruction approving MP
4. LCD submits Draft Decree and Instructions to MOF
5. MOF approves submission and Issues Decree and Instructions
6. INV brings proposed ML and written request for permission to IED

7. IED issues Permission letter to INV for the ML
8. DG signs ML for vehicles and fuel
9. INV submits list of checkpoints for import of goods on ML to IED
10. IED issues Instructions to checkpoints and sends copies of ML (copy to RD)

B. Procedures for Administration of ML

11. INV submits request for import of vehicles and fuel to IED
12. IED considers request, adjusts ML
13. IED prepares letter of permission for DG’s signature
14. DG signs approval letter
15. IED provides Approval letter to INV

[Fuel and vehicles]
16. INV submits request to checkpoint in advance of arrival of goods
17. Checkpoint reviews request and assigns ML
18. Chief of checkpoint issues permit to INV
19. Goods arrive and are cleared with ACOD at Checkpoint
20. LCD processes ACOD and shipment released

[Other goods]
16. INV submits request to checkpoint in advance of arrival of goods
17. Checkpoint reviews request and assigns ML
18. Chief of checkpoint issues permit to INV
19. Goods arrive and are cleared with ACOD at Checkpoint
20. LCD processes ACOD and shipment released

Attached documents:
- ML excerpt
- Permit issued by IED

21. CD submits monthly reports on ML imports to IED
22. INV submits proposed ML for next year

End of process
8 PRELIMINARY FINDINGS, CONCLUSIONS AND IMPLICATIONS FOR LNSW

8.1 Introduction

The review of operations at the Friendship Bridge/Thanaleng border crossing was carried out in late 2012 and entailed two visits to the border operation to observe processing and meet with officials from the major agencies operating on site. Follow up discussions were held with headquarters officials of the LCD and Other Government Agencies represented at the border for additional clarification. Meetings were also held with representatives of the private sector (Lao Freight Forwarders Association – LIFA).

Based on the observations at the border, and subsequent discussions, the team has documented and mapped the current procedures (AS IS process mapping). Emphasis has been placed on the four major actors at the crossing – Lao Customs Department, Plant Quarantine Inspection and Animal Quarantine Inspection Sections of the Ministry of Agriculture, and the Food and Drug Inspection Unit of the Ministry of Health. A review was also conducted of the processes involved in the import of goods exempt from duty and/or taxes under provisions of the Lao Law on Investment Promotion, and other exemption provisions.

The review has identified numerous areas of where procedures can be streamlined and simplified, areas in which inter agency coordination of verification and inspection functions can be strengthened. The general lack of automation and underutilization of existing systems are major areas where improvements can be made. Operational processes are primarily paper based (only Customs and Treasury have operating automated processing systems). The review has endeavoured to focus on identifying areas of operations where processes require modernization and streamlining in preparation for the implementation of the LNSW, and to identify the potential implications of the planned LNSW on these operations.

8.2 Major findings and conclusions

1. The LNSW offers potential to facilitate strengthening of interagency coordination and cooperation at border crossings. Inspection and clearance functions are currently not well coordinated and limited information exchange takes place between the agencies. In particular, quarantine and food and drug controls and clearance processes operate more or less independently from Customs. For example, in the case of imports requiring a permit issued by the Food and Drug Department of the Ministry of Health the trader submits the permit/license directly to F&D inspector (at Thanaleng). The F&D inspector verifies the import permit, checks attached documents, and inspects the goods with no
customs involvement, and generally in advance of submission of the ACDD. The stamped approved permit is included in the ACDD document package subsequently submitted to customs. With the exception of the LCD’s ASYCUDAWorld system and the Treasury System, all processes of the other relevant agencies are paper based and make no use of ICT.

2. The limited availability of automation and limited use of existing systems inhibits efficient border clearance procedures and trade facilitation. The main processing system operating at the border is the LCD’s ASYCUDAWorld system which has been implemented over the past 12 months. Currently only the declaration processing module (which includes a selectivity function) and revenue accounting modules are in operation. The LCD intends to expand the system to ten locations and add further functionality (transit and manifest modules) in the coming months. With the exception of the Treasury office none of the other agencies have any form of automation at the border and rely entirely on manual processes (see point 7 below).

3. Implementation of the ASYCUDA system has not been a stimulus to streamlining and simplification of procedures. The LCD has made limited changes to its procedures and processes under ASYCUDA. This has restricted the potential benefits of the system, particularly in terms of process modernization and simplification, increased trade facilitation and more effective use of customs (and other agency) control and inspection staff. From the traders’ point of view other than the requirement that they input the ACDD data into the system in addition to providing hard copies of all documentation, processing procedures remain virtually unchanged from the pre ASYCUDA operations. Once an ACDD is registered, LCD’s procedures replicate the pre ASYCUDA operations. Additional issues related to ASYCUDAWorld implementation include:

a. Implemented of the selectivity module of ASYCUDAWorld has been limited, and lacks credibility. While the system is designed to apply selectivity profiles that combine a number of indicators (country of export, specific commodity, value, duty rates, importer/exporter etc.) only single selectivity indicators are currently input into the system. As a result the risk management capacities of the system (while somewhat limited to start) are underutilized, and more worrisome, the system’s assignment of ACDDs to processing paths is all but ignored by officers. All ACDDs and attached documents are checked (yellow channel) by the documentation verification unit, and most if not all shipments are physically examined. Currently some 60% of ACDDs are directed to the Red channel (physical inspection) by the system. Documentation verification staff then selects another 20% for inspection resulting in an overall physical examination rate of at least 80%. Other government agencies are inspecting virtually 100% of goods for which they are responsible, reflecting the absence of a risk management regime.

b. The ASYCUDA selectivity module includes limited criteria related to Other Government Agencies’ (OGAs’) permit, license or certificate requirements. To date participation of the OGAs in the risk management process has not been secured. As is noted below (see point 7) the selection of these declarations for verification is an entirely manual process. These agencies inspect virtually 100% of all shipments and the selection process is carried out outside the ASYCUDA processing system, and independent of the LCD. Invariably it is the trader (agent) who initiates the inspection process by contacting the responsible agency to arrange for the goods inspection.

5 Given that the system is relatively new and given concerns about quality of documentation, such a high verification rate may be justified. However, LCD management should be taking concrete steps to reduce this rate.
c. The decision by the LCD to limit to 10 the number of items per ACDD creates additional declarations and related documentation, increases costs for traders, and generates additional work for customs. This problem is particularly acute in cases of shipments of mixed goods which could attract a large number of tariff lines each of which would require a separate item on the ACDD. Similar concern was expressed with the handling of temporary imports (for exhibitions) where large numbers of items may be involved. Another example was outlined of an export shipment of a temporary resident’s personal effects with over 500 items resulted in submission of 50 ACDDs. Each of these ACDDs would cost the trader 100,000LAK, and excessive charge. ASYCUDA can handle a large number of items on a single declaration without difficulty yet the LCD has imposed this restriction. Reportedly, most ACDDs include less than 10 items; however larger importers (particularly importers of mixed loads) are constrained by this policy. This matter will need to be reviewed in the development of the Revenue and Fee Structure for the LNSW to avoid excessive costs to traders.

d. Traders are required to purchase pre-formatted, numbered watermarked ACDD documents (three per declaration) from the LCD headquarters as a security measure. This is of questionable value as a security measure (and is rarely a requirement in a modern customs administration), and creates additional cost and time for traders particularly as the trader must purchase the ACDDs at LCD HQ, travel to the Thanaleng Office to input the data into ASYCUDA (unless they have DTI) and print off the three copies of the ACDD, return to the importer to obtain their signature and stamp on the document and then travel back to the Thanaleng office to submit the package to the LCD for processing. While hard copy declarations will continue as a requirement for some time pending implementation of e-transaction legislation, consideration should be given to eliminating this requirement and to permitting traders to print ACDDs directly from ASYCUDA without use of the pre-printed form.

e. The LCD requirement for individual ACDDs for each vehicle or motorcycle in a single consignment results in additional paperwork and data input by traders and increased costs, and also generates additional processing by LCD. ASYCUDA is capable of issuing an official document/receipt for each vehicle in a consignment (including vehicle identification number etc.) for purposes of vehicle registration (as was done in Cambodia). Such a system would provide adequate control on the registration of vehicles and reduce the burden to the trade. This policy will need to be reviewed in the development of the Revenue and Fee Structure for the LNSW.

f. The requirement that importers/consignees sign all ACDDs (in addition to the signature of the declarant/agent) results in additional cost and time to the trade. There appears to be no legal requirement for the importer/consignee to sign ACDDs presents on their behalf by authorized customs brokers. ACDD signed by declarant should be sufficient. Development and implementation of a qualified customs broker program including security and performance standards would greatly reduce the risk of misrepresentation by brokers. Abuse would result in license suspension or cancellation.

g. The Treasury office is not using the receipt issued by ASYCUDA. Treasury continues to issue its own receipt rather than accepting the ASYCUDA generated receipt (despite the offer to reformat the ASYCUDA receipt to match the Treasury form). This reflects a certain resistance to change and a missed opportunity to streamline processing and make full use of ASYCUDA.
4. The Customs transit procedures do not appear to comply with the provisions of the CBTA and related annexes. Current procedures appear to be in a state of uncertainty. Lao has signed the CBTA annexes relating to transit, and have entered into bilateral and tri lateral MOUs with Viet Nam and Thailand, but the agreed procedures have not been implemented. Plans are to introduce the ASYCUDAWorld Transit module in the near future, but it is not clear how the automated procedures will interface with the CBTA manual documentation and control procedures. This matter will need to be rationalized to ensure traders are not faced with duplicate procedures. This report does not assess the merits of the CBTA procedures; however it appears the transportation industry has been very slow to participate in its operation for a number of reasons including the high level of security required for the guaranteeing and issuing organizations and business considerations (e.g. the lack of available back haul loads).

5. Transit permits are required from a number of Government Agencies. In all cases the trader must obtain a transit from the MOIC as well as from the LCD. In addition, goods controlled by LPIAs must be covered by separate transit permits issued by the LPIAs. All permits are manually issued and follow separate processing procedures. Some are issued at head offices (or [provincial offices while others may be obtained locally). Controls on transit movement of goods require streamlining and simplification, and need to comply with international agreements.

6. Coordination and cooperation between other Government Agencies (OGAs) and the LCD require strengthening. Each of the inspection agencies is located in their own separate office facility. The trader is relied upon to initiated coordinated (joint) cargo inspections and contacts each of the agencies to arrange for the inspection. While for the most part joint inspections are carried out, the Food and Drug Unit do their own inspections without customs involvement generally in advance of the submission of the ACDD. The other agencies are not involved in the customs declaration process. They have no access to the ASYCUDA system and operate entirely on a manual, transaction by transaction basis, reviewing permits, licenses etc. selecting consignments for inspection and authorizing release through stamping and signing permits, certificates etc. Under these conditions, sharing of information, coordination of inspection and verification is difficult.

Notification to other agencies of goods requiring permits depends on human intervention by the trader, rather than through the automated declaration processing system. Reportedly, ASYCUDA contains some selectivity criteria related to products and prohibited/restricted products although generally the items are not classified according to the customs tariff code so it is difficult to enter them in the system.
7. The border clearance process lacks an inter-agency approach to risk management, and ASYCUDA’s risk management functionality is not developed. The ASYCUDA selectivity module depends on human intervention to input selectivity criteria and profiles if it is to be effective. Risk profiles consist of a combination of specific risk indicators and criteria that are developed by a risk management team and input into the system. In light of the limitations of the ASYCUDA selectivity module (primarily its dependence on human intervention, weaknesses in providing feedback on results, and lack of a dynamic risk capacity), and in order to support an inter-agency approach to risk management, it may be appropriate to consider including a risk management function in the LNSW. The LNSW risk management system would be more dynamic, reflect all agency requirements, including those of the LCD, and would replace the ASYCUDA system’s Selectivity Module. This matter is discussed in detail in the Report on Risk management under Task Cluster 7.

8. The other government agencies present at the border lack operational automated systems, and the issuance, administration and control of permits, licenses and certificates is entirely manual. Plant and Animal Quarantine and Food and Drug inspection units all receive hard copies of licenses, permits etc. issued by their respective permit/license granting offices (Vientiane, or district offices) either by mail, or in some cases hand delivery by the trader. There is no electronic transmission of the documents. Approval for release of shipments is achieved by stamping and signing permits/certificates etc. by the inspector. The approved documents are then submitted by the trader as attachments to the customs declaration (ACDD) package for review by Customs. Currently the other government agencies do not have access to ASYCUDA to indicate their release (or detention) of shipments for which they are responsible. All controls and reporting are manual.

9. Data duplication and incompatibility – lack of standardization/harmonization of data: Customs has difficulties including OGA requirements in the declaration processing system (ASYCUDA) as for the most part OGAs do not identify the customs tariff code of goods requiring permits licenses etc. In order to include these items in the selectivity system all products need to be assigned a tariff code (while a further detailed breakdown of commodities is desirable the Tariff code is essential). In addition, data requirements amongst OGAs are not consistent and there is a great deal of duplication of information (information about the importer, products etc) in the various forms and permits. The data sets and formats need to be standardized. If ASYCUDA is to be used to support enforcement of permit requirements all controlled products need to be assigned a tariff code.

10. The process for approving importation plans (master lists) of goods exempt from duty and taxes for investment projects operates on a standalone basis. The LCD has been attempting to implement an automated system for managing the Master Lists but there is no planned linkage between the ML system and the declaration processing function of ASYCUDA. While the process of applying for approval of an investment project may not lend itself to the single window, consideration should be given to including the process of applying for approval of the Master Plan (of imports) and possibly administration of the annual Master Lists in the LNSW. Once the Lists are approved and customs assumes responsibility for their administration and management, there is a need to interface this standalone automated system with the declaration processing system (ASYCUDA), ideally through the LNSW.
11. Volume of imports/exports requiring OGA licenses and permits is low. While official statistics on volumes were not provided, officials of the OGAs involved at the Thanaleng/Friendship Bridge border offices provided the following estimates of weekly transaction volumes:
   a. Plant Quarantine – 10 shipments per week
   b. Food and Drug – 20 shipments per week
   c. Animal Quarantine – 10 – 20 shipments per week.
   An average of 1500 shipments per week is reportedly cleared at this border crossing. Based on the above estimates some 40 – 50 ACDDs per week, or approximately 3.3% of total declarations, require permits/licenses from OGAs. This relatively low volume needs to be taken into account when considered LNSW application to the clearance/processing functions. In a number of cases a permit covers a period of time so may be used for several imports.

12. Streamline and eliminate duplication in transit procedures. Consider including transit permit application/issuance in the LNSW for LPIAs. In addition to streamlining and automating the customs procedures involved, the requirement for permits (in particular from the MOIC) should be re-examined and rationalized. All agencies involved in the transit controls should make use of the ASYCUDA transit module (or possibly the LNSW) for control and cancelling of transit movements.

13. The split clearance operations between Friendship Bridge and Thanaleng are inefficient. The split inspection operation results in potential duplication of efforts and creates challenges in coordinating inspections at the two sites. Currently about 10% of trucks remain at Friendship Bridge and are released from there once ACDD processing is completed at Thanaleng. Generally, goods for government projects (and other exempt consignments) bulk petroleum, and goods that can be easily verified (i.e. no detailed inspection required) are held for release at the FB. In addition to the separation of customs and other inspection agency staff, this also results in a great deal of travel back and forth between the two sites by traders who must still deliver hard copies of documents to the various agencies at the two sites. The Red Tag/Green Tag procedure used to control the vehicles is completely manual and the system used to record incoming vehicles and cargo is a standalone database not connected to the Thanaleng office. The split operation may create some risk of diversion of vehicles moving to Thanaleng for inspection and clearance, although officials maintain there have been very few instances of loss of control.

14. Operation and usage of the State Warehouse at Thanaleng needs to be rationalized. Currently approximately 90% of trucks crossing the Friendship Bridge report to the Thanaleng Warehouse for clearance and release (the remainder stay at the FB pending ACDD processing and release). Upon arrival at Thanaleng the trucks report to the State Warehouse where details of the vehicle and the cargo are recorded in a manual system. A significant proportion of trucks off load their cargo into the Warehouse. Cargo inspections take place by customs and the other agencies (as noted earlier virtually 100% inspection). Traders must pay warehouse fees to the State Warehouse even if goods are not off loaded in addition to storage fees should the cargo remain in storage (Customs allows up to 30 days before an ACDD must be presented). There is no control exercised on cargo in advance of the submission of an ACDD even for goods stored for an extended time. This is a potential area of weak control.

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6 In many cases this is done to facilitate the transfer of cargo from foreign to Lao based vehicles due to the delivery terms (incoterms) agreed between the buyer and seller. In other cases the trader is awaiting documentation or for one reason or another does not want to clear the shipment immediately.
8.3 Preliminary Suggestions on the Way Forward

Within the context of the development of the LNSW, and building on proposals to streamline and simplify the permit granting processes as contained in the Lao Trade Portal Sub Component, Roadmap for Process Simplification and Harmonization Interim Report (PM Group October 31, 2012) a number of steps can be taken to improve inter agency coordination, cooperation and information sharing at the border operations in preparation for the LNSW.

This section proposes some potential areas of action to streamline and harmonize border clearance operations and to support full implementation of the LNSW. Specific detailed recommendations for reengineered procedures and processes (the “To Be” procedures) are contained in Part 2 of this report.

1. Develop a clear policy and strategy to reduce over time the number of border inspections carried out by the LCD and OGAs through risk management. The current level of physical inspection is unsustainable at somewhere between 80 and 100% of shipments. Inspections are not risk based and are the norm rather than the exception in goods clearance. They far exceed the rates of neighbouring countries (for example the level of physical inspection in Cambodia is approximately 20%), and do not reflect international best practice. Reduced inspection rates can be achieved through a combination of the application of risk management at both the strategic and operational levels, better inter-agency cooperation and coordination, and monitoring of results of inspections. An inter-agency approach to risk management should be developed. This could entail a dynamic, inter-agency driven risk management system housed in the LNSW that would either replace or supplement the ASYCUDA selectivity module. This issue is addressed in more detail in the Risk Management Report (Task Cluster 7).

2. Implement changes to ASYCUDA system requirements:
   a. eliminate requirement to purchase pre-printed ACDDs
   b. increase limit of items per ACDD (to at least 100)
   c. permit multiple vehicles and motorcycles to be declared on one ACDD (develop separate receipt document for individual vehicles)
   d. eliminate need for consignees/importers to sign ACDDs
   e. develop with OGAs selectivity criteria for permit, license and certificate requirements for products using customs tariff codes
   f. reach agreement with Treasury to accept ASYCUDA generated official receipt

3. In the medium term, provide OGAs direct access to ASYCUDA. Their access would be restricted (through user profiles) to viewing and reviewing declarations of products for which they are responsible, reviewing/monitoring declarations for compliance, reporting of inspection results, and communicating release authorizations. This would be an important first step to developing common systems in the LNSW environment.
4. Examine feasibility of integrating the management of exemptions (Master Lists) into the LNSW or
ASYCUDA. As a first step carry out a review of the existing procedures for submission, evaluation and
approval of investment projects and the requests for exemptions, through to the on-going
administration of the MLs. (Note – further review required).

5. Reconfigure operation between Friendship Bridge and Thanaleng Offices to a more integrated
operation to facilitate LNSW implementation. Thanaleng could continue as the declaration
processing/clearance point (where ACDDs are submitted, documentary reviews carried out (by all
agencies) and physical inspections conducted (with the exception of livestock that requires frontier
inspection). The FB would become a cargo reporting and release point. This would require installation of
ASYCUDA at FB to allow release of goods via the system and avoid back and forth movement by agents
to clear goods. Traders that wish to clear their goods immediately could wait at the Bridge for ACDD
processing and once clearance has been approved they could be released from there. (Release advice
issued by ASYCUDA system). If an inspection is required, the vehicle would proceed to Thanaleng for
inspection and release. Even if a shipment is to be inspected they could wait at the FB pending scheduling
of the inspection. Traders who did not want to clear their goods immediately could deliver them to the
Thanaleng Warehouse for temporary storage pending ACDD submission (up to 30 days). The two sites
could function as an integrated operation. An assessment of the parking space available at FB would
need to be undertaken.

6. Co-location of inspection agencies in the LCD office at Thanaleng. As a first step towards the
single window environment the location all inspection agencies in one office would provide a more
streamlined, integrated service to the trading public, including better coordination of document
review and goods inspection and encourage greater cooperation. This would be a one-stop service
where traders could input data, lodge documents, schedule inspections and address queries all
at one site. This approach would facilitate closer working relationships between the agencies,
facilitate implementation of standard operating procedures including a single declaration
including OGA documents, simultaneous assessment/processing of documents by all agencies, and
single inspection and release.

7. Rationalize use of ASYCUDA manifest system with procedures at TH/FB. Currently there is a lack of
traceable controls on cargo or trucks between FB and TH (no indication of level of risk). ASYCUDA
manifest module would be difficult to implement in the highway mode (inconsistent cargo document
formats and poor quality data). It would generate additional work and paper for private sector with
little gain as most goods are cleared as soon as possible after arrival. The challenge (barring advance
provision of electronic cargo data) is how to capture the data in a standard format and how the data
would be input (do not want customs to be inputting the data). One option is to use a manifest
control system (ASYCUDA) only for cargo that is not clearing immediately but is held temporarily at the
Warehouse. Implementation of the cargo manifest module for all transactions would be of doubtful
benefit to either the trade or the LCD.
Annex J:

LNSW Business Process ‘To Be’ Model
1 Management Summary

This is the second report commissioned under Task Cluster 6 (BPR) of World Bank Project Number: 8004650 Technical Assistance for Preparation of a Lao PDR National Single Window. The first report “IMPORT / EXPORT ‘AS-IS’ PROCESS REPORT”, (the “AS-IS” Report) was produced in January, 2013 and documented the current operating procedures for clearance of goods, identified areas of potential streamlining and modernization, and changes required to support implementation of the LNSW.

This report sets out reengineered processes for the import export and transit of goods to be introduced by License and Permit Issuing Agencies (LPIAs) of the GOL (referred to as Other Government Agencies –OGAs) and the LCD at the border under the LNSW concept. The proposed “TO-BE” processes are based on the results of the business process analysis in the “AS-IS” Report, on a review of various documents prepared under the Lao Trade Development Facility, and on international best practice.

The Report concluded that; a) the LNSW offers potential to facilitate strengthening of interagency coordination and cooperation at border crossings; b) the lack of automation and limited use of existing systems inhibits efficient border clearance procedures and trade facilitation; c) implementation of the ASYCUDAWorld system has not been a stimulus to modernization in the LCD; d) the LCD makes limited use of risk management and inter-agency risk management processes is not well developed; e) cooperation and coordination between LCD and OGAs needs strengthening; and f) the split operation at Thanaleng/Friendship Bridge is inefficient. The private sector has expressed concerns about the lack of consistency and transparency in the processes, and about inefficiencies in clearance procedures that result in delays and additional costs.

The most frequently quoted and generally accepted definition of a Single Window is the one contained in the UN/CEFACT Recommendation 33 which defines a Single Window as:

“A facility that allows parties involved in trade and transport to lodge standardized Information and documents with a single entry point to fulfill all import, export, and transit related regulatory requirements. If information is electronic, then individual data elements should only be submitted once.”

As a member of ASEAN Lao PDR has signed the 2005 ASEAN “Agreement to Establish and Implement the ASEAN Single Window” and related Protocol. As a result the ASEAN definition of SW quoted below takes on greater significance and should be adopted as the working definition of the LNSW.

“The National Single Window is a system which enables

- A Single Submission of data and information;
- A Single and Synchronous processing of data and information; and
- A Single Decision-making for Customs release and clearance of cargoes”

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1 Cite them here
2 UN/CEFACT Recommendation No. 33, Geneva, July 2005
The proposed LNSW is expected to encompass the electronic registration of traders with the LPIAs, application for and issuance of licenses certificates and permits required for import/export/transit operations, the electronic declaration of goods to the LCD and other government agencies at the border and electronic clearance/release of goods. The following operating principles are proposed for the goods clearance processes under the LNSW:

1. A trader (directly or through a broker or agent) would interact with government on-line in real-time through the single window for all stages in the import/export process (registration, license/permit issuance, goods declaration and release, and payment).
2. The trader uses the Single Window to monitor the progress of transactions and to monitor the performance of the services.
3. Physical visits to government agencies at all stages in the processes will be reduced to a minimum, and data required by any government agency for a transaction would be submitted only once using standardized and harmonized data formats.
4. Once submitted, data would be available to authorized government officials involved in the transaction.
5. Requirements for paper documents will be eliminated or reduced to the minimum required by law and to the degree needed to ensure effective controls are maintained.
6. Within the provisions of relevant legislation (Law on Electronic Transactions, Customs Law), electronic authorizations (signatures) and “stamping” of documents will be employed.
7. Border agencies will co-locate officials, and coordinate, and where feasible, integrate their processing and inspection processes.
8. Risk management techniques will be applied at all stages in the registration, permit and license approvals and border clearance operations by all agencies in a coordinated transparent manner, making maximum use of ICT.
9. An inter-agency approach to risk management will be in operation (including an automated risk management system in the LNSW).
10. Inter-agency Memoranda of Understanding (MOUs) and related Service Level Agreements (SLAs) between the LCD and OGAs will be in place.
11. An integrated enforcement data base incorporating information on all enforcement actions and results from LCD and OGA verification activities will be in operation.
12. Authorized Traders will be able to submit customs declarations (ACDDs) in advance of goods’ arrival (pre-arrival processing).
13. Electronic payment of duty taxes and fees and charges processed by banks/treasury will be linked directly to the SW. Payment options will be offered to traders.
14. Increased reliance by LCD (and OGAs) on post clearance controls.
15. Timely, accurate and comprehensive trade related statistics will be readily available.
The proposed border clearance processes that will be in effect with full implementation of the electronic SW are based on the assumptions that; a) the Permit and License issuance processes in the LPIAs have been fully automated and integrated with the LNSW; b) the Law on Electronic Transactions has been implemented and its provisions (along with those of individual legislation such as the Customs Law) are applied to the procedures for import/export; c) an inter-agency/integrated approach to Risk Management has been put in place; and d) the recommended Functional and Technical Architecture of the LNSW has been adopted.

The current paper-based approach to control will be replaced by risk-based controls developed through a coordinated, inter-agency approach to risk management based on analysis of electronic data (both historical and transactional) rather than on the review of documents on a transaction by transaction basis. Inspections will continue to be used as a significant control mechanism for government, but the rate of interventions will be reduced and will be driven by the risk management process.

Under the LNSW trade transactions will to the greatest extent feasible be electronic. This will mean fundamental changes to the border clearance operations – for both traders and government agencies. The following scenario is intended to illustrate how an importer would operate under the Lao National Single Window – “The Mekong River Enterprise Inc.”

Mekong River Enterprise Inc. (MRE) is a medium sized trader that imports consumer and food products on a regular basis. The company has been established for several years and has a good compliance record with the Lao Customs Department (LCD). The company does its own customs clearance and does not use a customs broker. Under the new LNSW processes a typical importation generally occurs as follows:

MRE enters into a purchase agreement with a Thai based supplier to purchase grocery products. The goods are to be delivered by truck across the Friendship Bridge. MRE is registered with LNSW and therefore with Lao Food and Drug Department of the Ministry of Health, with Customs Department and its ASYCUDA-World system and with the Lao Trade Portal. A MRE official logs on to the LNSW and accesses the Lao Trade Portal (LTP) website (as a registered trader) to identify any license/permit requirements for the goods he plans to import. He enters the Customs tariff code (or a description of the goods) and the LTP identifies the specific permit and licensing requirements for goods and the responsible Permit, License Issuing Agency (PLIA). In this case a permit is required from the Food and Drug Department of the Ministry of Health to import food.

The MRE official completes an on line application for the required permit and submits it along with electronic copies of supporting documentation to the Food and Drug Department via the LNSW. Within a matter of minutes, MRE receives notification that the license application has been approved and an electronic permit issued. [Using risk profiles input by the Food and Drug Department; LNSW has recommended that ‘fast lane’ processing of the permit application is appropriate for MRE. FDD has not changed that designa-
In the past year very few of MRE’s shipments have been inspected as they have a very good compliance record. In this case the shipment is selected by the risk management system for a random inspection. MRE is notified electronically via the SW (by SMS and email) and a joint LCD/FTD inspection is carried out. MRE is notified of the outcome of the inspection. As all is in order, the shipment is authorized for release and MRE receives notification via the LCD. The transporter then removes the shipment from the border checkpoint under the electronic release notice issued by LCD’s AW system via the LNSW.

Because MRE have deferred payment privileges they pay duty, taxes and fees five days after release. The amounts due are journalised into the LNSW Trader accounts. Payment is made electronically through their bank and an electronic receipt is issued via the SW.
Enhancements to existing systems and development of new systems, policies and procedures by the LCD and OGAs will be needed to prepare for implementation of the LNSW. A phased approach to implementation of these changes is proposed as follows:

**Phase 1:** Streamlining/improvements to existing processes including:

- Improvements to the ASYCUDAWorld system operation by:
  - Increasing the number of items that can be declared on an ACDD (from 10 to 100),
  - Allowing multiple vehicles to be declared on a single ACDD (with individual receipts issued for purposes of vehicle registration and control),
  - Allowing traders to print ACDDs directly from ASYCUDAWorld without use of the pre-printed form,
  - Eliminating the requirement for importer/consignee signature on ACDDs submitted by agents,
  - Co-location of OGAs with LCD at border checkpoints to facilitate closed coordination and cooperation – joint inspections – one stop service, and
  - LCD and OGAs to identify selectivity criteria and risk profiles to be input to the ASYCUDAWorld selectivity module. Increasing use of OGA risk profiles and selectivity indicators in AW.
  - Examine feasibility of integrating the management of exemptions (Master Lists) into the LNSW or ASYCUDA

**Phase 2:** Building on the initiatives taken in Phase 1, this phase entails steps to further enhance the operation of AW, additional streamlining and simplifying of procedures, and strengthening inter-agency cooperation and coordination and risk management, including:

- Expanding remote access to AW to select traders (leased line or web-based),
- Increasing the number of GOL Kiosks for input of ACDDs,
- Closer integration of the Treasury system and AW allowing the generation of an AW receipt for duty and tax payments,
- Implementing a GOL policy with respect to levels of physical inspection of goods,
- Introducing trader self-assessment,
- Further strengthening inter-agency risk management coordination and cooperation,
- Providing limited access to AW by OGAs, and
- Pilot testing acceptance of scanned licenses and permits with ACDD submission.
2 Introduction

Creation of the Lao National Single Window offers the potential for significant benefits to the trading public as well as to the Government of Laos. Persons applying for government certificates, permits and licenses required under GOL legislation for the import and export of goods can expect greater certainty and consistency, reduced levels of paperwork, and time savings leading to lower transaction costs. GOL License/Permit Issuing Agencies (LPIAs) can improve levels of service and efficiency while strengthening the management of controls on sensitive goods in accordance with GOL policies and legislation. Potential benefits to be achieved through the LNSW in the goods clearance processes at the border are equal to if not greater than those at the license/permit issuance stages, largely resulting from less complex procedures, reduced clearance times and better inter-agency coordination.

This is the second report commissioned under Task Cluster 6 (BPR) of World Bank Project Number: 8004650 Technical Assistance for Preparation of a Lao PDR National Single Window. The first report - "IMPORT / EXPORT 'AS-IS' PROCESS REPORT" - was produced in January, 2013. This second report proposes streamlined and harmonized procedures for import, export and transit operations within the LNSW environment. As with the first report, it addresses operations that take place at the border for the clearance of goods, including those carried out before clearance (pre arrival customs declaration or cargo document submission, advance rulings), during clearance (declaration, assessment, inspection and release of goods), and after clearance (post clearance audit, investigation etc.).

In late 2012 and early 2013 a two part report “Roadmap for Process Simplification and Harmonization” was prepared under the Lao PDR Trade Portal Project (Project ID P106165) which is part of the Lao Trade Development Facility (TDF). The report examines the current situation with the LPIA processes which generally occur in advance of the actual import/export of goods, and proposes a new IT based approach for the registration of traders and the processes of applying for, approving and issuance of certificates, permits and licenses, as well as a workload management system. The Roadmap proposes a phased approach to implementation of the simplification and harmonization model, leading eventually to the rationalization of the license/permit regime including more sophisticated automated systems, elimination of non-essential permits and licenses, and legislative changes.

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This report complements and builds on the proposals contained in the Roadmap reports. It sets out proposals for new and enhanced clearance processes for the import, export and transit of goods carried out by LPIAs (referred to as Other Government Agencies –OGAs) and the LCD. The new processes are based on the analysis contained in the “AS-IS” Report and also reflect the overall vision of the LNSW, take into account the proposals in the Roadmap, and conform to international best practice. This report will provide input to the Technical and Functional Architecture and Technical and Functional Specifications delivered under Task Cluster 4 of the Technical Assistance in relation to the goods clearance process, and will be of use in developing the user requirements for the LNSW.

Chapter 3 of this report summarizes the ‘AS-IS’ Report which documented and mapped the current business processes at the Friendship Bridge/Thanaleng Border crossing of the Ministry of Agriculture and Forestry – Plant Quarantine Unit, and Animal Quarantine Unit; the Ministry of Health – Food and Drug Unit; and the Lao Customs Department (LCD). The report only deals with these organizations as they are the government agencies permitted to have a full time presence at the border (in addition to Treasury and Immigration) for purposes of controlling the entry and exit of goods and persons4. The ‘AS-IS’ Report also identifies a number of recommendations for revisions to operating policies, streamlining operations and strengthening inter agency coordination and cooperation which are aimed at assisting the GOL improve its operations and service delivery at border crossings while preparing the way for the implementation of the LNSW.

In order to set the scene for the reengineered processes in support of the LNSW, Chapter 4 presents the underlying principles that should guide the border clearance processes under the LNSW and to reinforce them, presents a brief scenario of an import transaction using a fictitious Lao company. Chapter 5 presents in considerable detail the proposed border processes under the LNSW (the TO-BE Process) for the import/export/transit operations, including for the OGAs operating at the border. The final chapter of the report – Chapter 6 proposes a number of policy and procedural developments needed to prepare the LCD and the OGAs for full implementation of the Single Window. Additional details on the proposed processes and step by step comparison of the “AS-IS” and “TO-BE” processes along with explanatory notes are contained in the four Appendices to the report.

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4 Prime Minister’s Office Notice No. 405 (Notice on the Elimination of Authorities at the Border Check Points) March 14, 2007
3 Current Border Clearance Process ("AS-IS" Report Findings)

The IMPORT/EXPORT AS-IS Process Report documents the current border clearance procedures of the GOL agencies authorized to have a permanent presence at the border for the clearance of goods – the Lao Customs Department, the Plant Inspection Office and Animal Inspection Office of the Ministry of Agriculture and Forestry, and the Food and Drug Inspection Unit of the Ministry of Health (referred to collectively as OGAs - other Government Agencies). The Ministry of Finance Treasury office is also located at the border crossing for the collecting and accounting of duty and tax and other revenues.

The overall process currently followed for border clearances can be summarized as follows:

With the exception of the LCD and Treasury, none of the OGAs present at the border have any form of automated systems and all documentation and processing is manual. Traders carry documents between offices and in all cases approval for release is by way of signatures and stamps. While joint cargo inspections are carried out in the majority of cases, they are generally initiated and coordinated by the trader. In the case of an ACDD submitted by an agent, once the ACDD is printed at Thanaleng the agent must obtain signatures of the consignee/importer often requiring travel to the importer's office. Traders/agents also have to move back and forth between the Friendship Bridge and Thanaleng offices during the clearance process. The split operation creates additional complications and delays in clearing goods and proposals to rationalize the operations are provided.

All imported, exported and transit goods must be declared on an ACDD (ASEAN Customs Declaration Document) to the Lao Customs Department (LCD) which holds the final authority for the release of goods. Traders input the ACDD data into AW using computers in the Kiosk at the border. Once the ACDD is validated they print of hard copies for submission to the LCD. Other Government Agencies (OGAs) are involved in the clearance of specified goods regulated by their individual legislation. At the border points the OGAs conduct documentary reviews and in virtually all cases physically inspect the shipment and their authorization is

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5 Traders input the ACDD data to the ASYCUDAWorld system at Kiosks set up at the Thanaleng Office. A very small number of traders are authorized to input the ACDD data from their offices via DTI.
required before shipments of products they regulate can be released by the LCD. The OGAs are not co-located with the LCD with each occupying its own separate office. Apart from Treasury, other Government agencies do not have access to the ASYCUDAWorld system. All approvals and releases are done on a manual basis with signatures and official stamps applied to documents.

While the staff at the border endeavour to make the best of their situation, the lack of automation support and inefficient procedures impact on their effectiveness. Traders for their part express concerns about the lack of consistency and transparency, and inefficiencies in clearance procedures and the resulting delays, uncertainty and additional costs they encounter.

Major findings and conclusions of the IMPORT/EXPORT AS-IS Process Report include:

- The LNSW offers potential to facilitate strengthening of interagency coordination and cooperation at border crossings;
- The limited availability of automation and limited use of existing systems inhibits efficient border clearance procedures and trade facilitation;
- Implementation of the ASYCUDAWorld system has not been a stimulus to streamlining and simplification of procedures in the LCD. ACDD processing has changed little from manual procedures, and limited use is made of the AW selectivity module;
- The Customs transit procedures do not appear to comply with the provisions of the CBTA and related annexes;
- Transit permits are required from a number of Government Agencies;
- Cooperation and coordination between LCD and OGAs needs strengthening;
- The border clearance process lacks an inter-agency approach to risk management, and ASYCUDA’s risk management functionality is not developed;
- The other government agencies present at the border lack operational automated systems, and the issuance, administration and control of permits, licenses and certificates is entirely manual;
- Data duplication and incompatibility – lack of standardization/harmonization of data;
- The process for approving importation plans (master lists) of goods exempt from duty and taxes for investment projects operates on a standalone basis;
- The split operation at Friendship Bridge/Thanaleng is inefficient;
- Operation of the Thanaleng State Warehouse needs to be rationalized; and
- Volumes of imports/exports requiring Other Government Agency (OGA) authorizations are relatively low.

The AS-IS report also provides some preliminary suggestions for the way forward to overcome the current issues and begin preparations for the LNSW:

- Develop a clear policy and strategy to reduce over time the number of border inspections carried out by the LCD and OGAs through an interagency approach to risk management;
- Co-locate inspection agencies in the LCD office at Thanaleng;
- Implement changes to customs declaration processing system (AW) requirements;
- eliminate requirement to purchase pre-printed, pre-formatted ACDDs
- increase limit of items per ACDD (from 10 to at least 100)
- permit multiple vehicles and motorcycles to be declared on one ACDD (develop separate receipt document for individual vehicles)
- develop with OGAs selectivity criteria for permit, license and certificate requirements for products using customs tariff codes
- reach agreement with Treasury to accept ASYCUDA generated official receipt
  • In the medium term, provide OGAs direct access to ASYCUDA;
  • Reconfigure operations between Friendship Bridge and Thanaleng Offices to a more integrated operation to facilitate LNSW implementation;
  • Rationalize use of ASYCUDA manifest system with procedures at TH/FB;
  • Complete development and implementation of the automated system for management of master lists and explore interface with AW/LNSW.

These recommendations are expanded upon in Chapter 6 of this report.
4. Operating Principles for Border Clearance under the LNSW

4.1 Single Window Definition

Numerous definitions and descriptions of a Single Window (SW) exist, but the most frequently quoted and generally accepted definition is the one contained in the UN/CEFACT Recommendation 33 which defines a Single Window as

“A facility that allows parties involved in trade and transport to lodge standardized Information and documents with a single entry point to fulfill all import, export, and transit related regulatory requirements. If information is electronic, then individual data elements should only be submitted once.”

As a member of ASEAN Lao PDR has signed the 2005 ASEAN “Agreement to Establish and Implement the ASEAN Single Window” and related Protocol, and in so doing has committed to develop and implement the Lao National Single Window (LNSW) by 2012. Accordingly, the definition of SW contained in the ASW Agreement takes on greater significance and should be adopted as the working definition of the LNSW.

The ASEAN definition reads as follows:

“The National Single Window is a system which enables
-  A Single Submission of data and information;
-  A Single and Synchronous processing of data and information; and
-  A Single Decision-making for Customs release and clearance of cargoes”

The implications of this definition in terms of the LNSW are spelled out clearly in the Report “Strategic Options for Implementation of a National Single Window” produced under the Lao PDR Trade Portal Subcomponent as follows:

This implies that; 1) each separate data item pertaining to the release/clearance of a shipment is only required to be supplied once (whether by a commercial operator or a government agency); 2) that the handling of the data in a specific release/clearance process by government agencies should involve one-time handling, from a Trader’s perspective, and that 3) there is a single point of decision for the release/clearance of cargoes by Customs on the basis of decisions, if required, taken by line ministries and agencies and communicated in a timely manner to Customs.

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6 UN/CEFACT Recommendation No. 33, Geneva, July 2005
7 Lao PDR Trade Portal Sub Component – Strategic Options for Implementation of a National Single Window, PM Group, October 2011, p. 4-5
The words ‘single and synchronous processing of data’ imply the existence of an electronic submission and of a facility that processes all the data in a single point on behalf of all government agencies and that provides Customs with all the data it requires (including set out in permits from other agencies) only once, something that can obviously only be achieved in a shared electronic environment.

The SW envisaged for Lao PDR is that of a “regulatory” or “formalities” single window, that is one concerned with formalities and procedures of government regulatory agencies, as compared to a “logistics” or “port community network” that is concerned with wider transportation and logistics processes and related economic operators. Accordingly, the concepts and operational options for the LNSW relate exclusively to the processes involved in obtaining government approvals (registration, licensing, permits certificates etc.) for imports and exports and with the procedures, data requirements and formalities involved in the actual import and export clearance operations.

4.2 Operational Principles for LNSW Border Operations

A Single Window can have many manifestations depending on the environment, technical capacities and of course the identified requirements of the Government and the trade. It is envisioned that the proposed LNSW will encompass the electronic registration of traders with the License and Permit Issuing Agencies (LPIAs), application for and issuance of licenses certificates and permits required for import/export/transit operations, the electronic declaration of goods to the LCD and other government agencies at the border and clearance/release of goods (including potentially payment). As noted earlier, this report addresses the border clearance operations of the LCD and OGAs represented at the border under the LNSW. Listed below are a number of operating principles for the operation of the goods clearance processes under the LNSW:

1. A trader (directly or through a broker or agent) would interact with government on-line in real-time through the single window, use that window as the conduit for subsequent intermediate transactions, when necessary, and for the final transaction that obtains the release of goods.

2. The trader uses the Single Window to track and trace the progress of applications (for permits licenses etc.) and of border clearance (customs declarations processing, goods verification, OGA procedures and final release), and to monitor the performance of the services.

3. Physical visits to government agencies at all stages in the processes will be reduced to a minimum through use of remote data entry via the SW. Data required by any government agency related to a transaction or parties involved would be submitted only once using standardized and harmonized data formats.

4. Once submitted, data would be available to authorized government officials involved in the transaction, subject to security and access controls and in accordance with inter agency agreements.

5. Requirements for paper documents will be eliminated or reduced to the minimum required by law and to the degree needed to ensure effective controls are maintained by the government agency. In all cases, even where hard copies of documents are required, information will be transmitted to GOL...
agencies electronically (with any required supporting hard copies provided subsequently). GOL responses to traders will also be electronic.

6. Within the provisions of relevant legislation (Law on Electronic Transactions, Customs Law), electronic authorizations (signatures) and “stamping” of documents will be employed to reduce reliance on hard copy documents and to reduce procedural steps (scanning, as well as electronic signatures).

7. Border agencies will co-locate officials, and coordinate, and where feasible integrate their processing and inspection processes (in order to achieve maximum benefits from the SW).

8. Risk management techniques will be applied at all stages in the registration, permit and license approvals and border clearance operations by all agencies in a coordinated transparent manner, making maximum use of ICT. The objective should be to reduce interventions to the minimum level required to assure compliance. (Government, as part of its trade facilitation strategy, should consider establishing targets for reduction of inspections subject to control and monitoring of results).

9. To achieve 8, an inter-agency approach to risk management will be in operation. An automated risk management system will function as a component of the LNSW. Risk indicators and risk profiles will be developed reflecting all agency interests and all customs declarations (ACDDs) will assessed through the LNSW RM system which will be linked to AW.

10. Inter-agency Memoranda of Understanding (MOUs) and related Service Level Agreements (SLAs) between the LCD and OGAs that establish the framework for inter–agency cooperation will be in place. Where feasible OGAs will delegate non-technical or low-technical verification functions (documentary and physical goods inspection) to the LCD in accordance with the respective SLA.

11. An integrated enforcement data base incorporating information on all enforcement actions and results from LCD and OGA verification activities will be in operation.

12. Authorized Traders will submit pre-arrival customs declarations (ACDDs) in advance of goods’ arrival. Pre-arrival processing will allow government agencies to better assess risks in advance of the goods arrival, and reduce delays in goods clearance.

13. An automated system for management of “master lists” of goods imported under duty relief provisions under the Law on Investment Promotion.

14. Electronic payment of duty taxes and fees and charges processed by banks/treasury will be linked directly to the SW to facilitate prompt release of shipments once paid. Options for payment will be offered to traders.

15. Increased reliance by LCD (and OGAs) on post clearance verification activities will ensure compliance (post clearance verification, post clearance audit) thereby enabling reduction of the rate of interventions at time of clearance.

Timely, accurate and comprehensive trade related statistics will be readily available to meet GOL needs as well to provide public information to a wide range of users.
5 Border Clearance “TO BE” Process under the LNSW

5.1 Introduction

This section presents the proposed operational processes for border clearance under LNSW. Table 1 outlines the proposed operating procedures for the clearance of goods under the LNSW, including imports, exports and transit transactions. Table 2 presents the proposed export processes and Table 3 the proposed Transit processes. Processes for transactions involving other Government Agencies (OGAs) operating at the border (MAF – Plant and Animal Quarantine Inspection units and MOH Food and Drug Inspection) are contained in Table 4. The four Appendices contain matrixes that compare proposed processes with the existing (AS-IS) processes and provides additional explanations and comments on the new processes and the changes required for their implementation.

As noted the AS-IS Process Report was based on the on-site review of operations at the Friendship Bridge/Thanaleng (FB/TL) border crossing operations in late 2012 by the project team, on discussions with representatives from PLIAs and LCD headquarters officials, and consultations with the private sector. Some of the proposed processes in this TO-BE Report are specific to the FB/TL operation and may not apply elsewhere (given the split operation between the FB and TL offices). However the majority of the proposed clearance procedures would operate at all border crossings and are proposed for national implementation.

5.2 Overview of “TO BE” Process

The Border clearance processes that will be in effect with full implementation of the electronic SW are based on the assumptions that; a) the Permit and License issuance processes in the LPIAs have been fully automated and integrated with the LNSW; b) the Law on Electronic Transactions has been implemented and its provisions (along with those of individual legislation such as the Customs Law) are applied to the procedures for import/export; c) an inter-agency/integrated approach to Risk Management has been put in place; and d) the recommended Functional and Technical Architecture of the LNSW has been adopted.

A number of policy and procedural changes in current border clearance processes that are identified in Chapter 6 of this Report are considered important pre-requisites to full implementation of the LNSW and to the achievement of the anticipated benefits.

The Lao National Single Window as defined in the terms of reference for this project could be represented diagrammatically as follows:8

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8 Technical Assistance for Preparation of a Lao PDR National Single Window - FUNCTIONAL AND TECHNICAL ARCHITECTURE Report, PM Group, February 2013
The LNSW vision of an environment in which trade transactions between the GOL and the private sector are electronic will mean fundamental changes to the border clearance operations - for both traders and government agencies. The current paper-based approach to declaration and control will be replaced by one in which controls are based on assessed risks determined through a coordinated, inter-agency approach based on analysis of electronic data (both historical and transactional) rather than on a review of documents on a transaction by transaction basis. Inspections will continue to be used as a significant control mechanism for government, but the rate of interventions will be reduced and will be driven by the risk management process. Greater reliance will be placed on post release control activities such as the LCD’s Post Clearance Audit to verify (and encourage) compliance.

5.3 Scenario of Import under the LNSW

To illustrate how an importer would operate under a fully implemented vision of the Lao National Single Window, the following scenario is offered – The Mekong River Enterprise Inc.

Mekong River Enterprise Inc. (MRE) is a medium sized trader that imports consumer and food products on a regular basis. The company has been established for several years and has a good compliance record with the Lao Customs Department (LCD). The company does its own customs clearance and does not use a customs broker. Under the new LNSW processes a typical importation generally occurs as follows:
MRE enters into a purchase agreement with a Thai based supplier to purchase grocery products. The goods are to be delivered by truck across the Friendship Bridge. MRE is registered with LNSW and therefore with Lao Food and Drug Department of the Ministry of Health, with Customs Department and its ASYCUDAWorld system and with the Lao Trade Portal. A MRE official logs on to the LNSW and accesses the Lao Trade Portal (LTP) website (as a registered trader) to identify any license/permit requirements for the goods he plans to import. He enters the Customs tariff code (or a description of the goods) and the LTP identifies the specific permit and licensing requirements for goods and the responsible Permit, License Issuing Agency (PLIA). In this case a permit is required from the Food and Drug Department of the Ministry of Health to import food.

The MRE official completes an online application for the required permit and submits it along with electronic copies of supporting documentation to the Food and Drug Department via the LNSW. Within a matter of minutes, MRE receives notification that the license application has been approved and an electronic permit issued. [Using risk profiles input by the Food and Drug Department; LNSW has recommended that ‘fast lane’ processing of the permit application is appropriate for MRE. FDD has not changed that designation and the permit is processed automatically.] The permit reference is stored in MRE’s Trade Data Folder and is recorded in the database of certificates, permits and licenses maintained in the LNSW. The Food and Drug Inspection Unit at the Friendship Bridge/Thanaleng border crossing is notified via the LNSW of the permit issuance.

Once MRE receives electronic trade documents from supplier including an invoice, packing list, transportation documents, and any certificates/permits licenses such as inspection certificates, export permits etc. issued by the Thai Government, they are ready to submit their ACDD. MRE is a registered importer with LNSW and is approved for DTI from its own office via LNSW VPN or internet connection. The firm is also authorized to submit ACDDs in advance of arrival of the goods, and has deferred payment privileges.

Five days in advance of the anticipated importation date the MRE official logs on to the secure LNSW website, brings up the MRE trade data file for this importation, completes a customs declaration (ACDD) for the shipment and submits it for processing by the Lao Customs Department ASYCUDAWorld (AW) System via the LNSW. Previously submitted information regarding the company and this transaction does not have to be resubmitted as the data is stored in the TDF. Electronic copies of supporting documentation (invoices, packing list, transportation documents etc. if available) are submitted with the ACDD.

The ACDD is received via the LNSW, at the LCD. Once validated by the system, the ACDD is subjected to risk assessment in the LNSW and forwarded to the LCD (AW). Notification is also sent to the Food and Drug Unit. MRE is able to check on the status of the ACDD processing via the LNSW. In the past year very few of MRE’s shipments have been inspected as they have a very good compliance record. In this case the shipment is selected by the risk management system for a random inspection. MRE is notified
electronically via the SW (by SMS and email) and a joint LCD/FDU inspection is carried out. MRE is notified of the outcome of the inspection. As all is in order, the shipment is authorized for release and MRE receives notification via the LNSW. The transporter then removes the shipment from the border checkpoint under the electronic release notice issued by LCD’s AW system via the LNSW.

Because MRE have deferred payment privileges they pay duty, taxes and fees five days after release. The amounts due are journalised into the LNSW Trader accounts. Payment is made electronically through their bank and an electronic receipt is issued via the SW.

5.4 Proposed “TO BE” Processes

5.4.1 “TO BE” Import Process

The proposed reengineered import clearance processes under the LNSW are contained in the following table. Additional details on the proposed processes and a detailed mapping to the existing processes is contained in Appendix 1.

Table 1: “TO-BE” Import Process under LNSW

<table>
<thead>
<tr>
<th>Import</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre Arrival Processing</strong></td>
</tr>
<tr>
<td>1. Trader obtains any required permits/licenses/certificates from the LPIA electronically. The data is retained in the trader’s Trade Data Folder (TDF) and notification sent to the LPIA officials at the border checkpoint (OGAs).</td>
</tr>
<tr>
<td>2. In advance of the arrival of the goods, authorized Traders may submit electronic customs declarations (ACDDs) and attached documents to the LCD through the SW. Trader accesses trade data folder and inputs additional data not provided at time of license/permit issuance (in the case of goods requiring PLIA licenses etc.). Advance cargo data would be submitted directly to AW.</td>
</tr>
<tr>
<td>3. The pre-arrival ACDD data is validated in the SW and if all is in order the data is forwarded to the LCD (AW). Notification is sent to the OGA at the checkpoint of the receipt of the data. The OGA responsible for the goods in question is identified according to an indicator in the SW linked to the tariff code of the goods. The issued licenses permits etc are stored in a Certificate, License, and Permits database (CLP database) which the official can access).</td>
</tr>
<tr>
<td>4. Risk assessment of the data carried out by the Risk Management system and communicated to the AW Selectivity module. RM system will likely operate at the SW level, or possibly AW Selectivity Module used). Decision can be made on the treatment of the shipment upon arrival. Where advance</td>
</tr>
</tbody>
</table>
cargo data provided risk assessment would focus on non-revenue risk identification (contraband, smuggled goods etc.) Data is stored pending goods arrival. Potentially, LCD could process the ACDD and duty and taxes could be collected in advance of the arrival of the goods (self-assessment by authorized traders).

5. Upon arrival of the goods the Trader notifies the LCD (AW) (and as applicable OGAs) via the SW, and provides any additional data or documents required (see below).

6. Goods receive expedited clearance and release subject to the risk assessment and the identified treatment of the goods by OGAs and the LCD through the RM system.

<table>
<thead>
<tr>
<th>Cargo Clearance Processes upon arrival of Goods</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. Truck arrives at entry gate at Friendship Bridge.</td>
</tr>
<tr>
<td>8. Driver reports to Immigration for passport control (passport or border pass).</td>
</tr>
<tr>
<td>9. Cargo data transmitted to LCD via AW in advance of (See 2 above) or at the time of arrival. Cargo data input to AW manifest module and a unique reference number assigned to the import. This reference number used to link the ACDD with the cargo documentation.</td>
</tr>
<tr>
<td>10. If importing live animals, meat or meat products or plants, driver reports immediately to AIU or PIU.</td>
</tr>
<tr>
<td>11. *Data on the vehicle and cargo input to a local vehicle control system and decision made as to where goods to be held for clearance (Friendship Bridge or Thanaleng) Vehicles proceed to Thanaleng only if a) importer does not want to clear goods on the same day, b) the goods are to be trans-loaded from a foreign truck to a Lao truck for onward transportation, or c) if goods are selected for inspection). All other vehicles park at the Friendship Bridge pending ACDD processing and release. Vehicles with cargo not selected for inspection (i.e. green, yellow or blue channel) will be cleared and released from Friendship Bridge once ACDD processed, and need not stop at Thanaleng.</td>
</tr>
<tr>
<td>12. *For vehicles proceeding to Thanaleng for clearance, an electronic control note issued by a local “vehicle control system”.</td>
</tr>
<tr>
<td>13. All trucks subject to risk assessment for scanning through the risk management system. Specific criteria for scanning established and entered into RM system. Scanning results recorded in RM system.</td>
</tr>
<tr>
<td>14. Trader scans and submits additional documents via SW with ACDD. For goods requiring PLIA licenses, permits etc. most supporting documents submitted electronically to SW in advance and stored in the trade data folder created at the time of license/permit issuance. Driver may have some foreign documents that were not available in advance (packing list, cargo manifest, etc.) and would provide them to the agent/trader. System notifies PIU/AIU of update to TDF.</td>
</tr>
<tr>
<td>15. Registered Trader (or an authorized agent) inputs ACDD and supporting data into SW. Preferred option is Direct Trader Input by authorized traders/agents from their office via the internet. Traders may input data to SW at border office kiosk, or at SW kiosks located at GOL offices in major towns</td>
</tr>
</tbody>
</table>

9 Note: Procedures considered unique to the FB/TL operation are marked with an asterisk (*)
Previously submitted data (i.e. at time of registration at LPIA and permit application) is retrieved from Trade Data File on SW by trader and is not resubmitted.

Advance submission of ACDD data and attached electronic documents to SW an option (see above Pre-arrival processing).

Possible Options to be offered traders for data input:

Option 1: Full electronic data submission - no requirement for hard copy of ACDD or attached documents at time of clearance. Assuming implementation of appropriate legislation (Law on Electronic Transactions, required amendments to other legislation), and related procedures and policies. Scanned (or electronically generated) copies of attached documents submitted via SW with ACDD. Trader would be required to retain hard copies of supporting documents and to make them available if requested by LCD (or OGA) at a later date for review or for PCA etc. (most such importers would be subject to PCA). Electronic release authorization issued. This option would be made available to highly compliant traders who meet established requirements and obligations.

Option 2: Electronic submission of ACDD and attached documents with hard copies of all documents provided to LCD (and as required OGAs) at time of final release, (or if requested by the LCD or OGA during processing based on a specific requirement). Alternatively, traders could be allowed to submit hard copies within a specified period following release (say within one week). Electronic release authorization issued. This option could be made available to importers/agents with good compliance records.

Option 3: Electronic submission of ACDD and scanned supporting documents, with hard copies provided at time of lodgement. Similar to current procedures. Electronic release authorization issued. This option would be for traders who do not meet compliance standards for Option 1 or 2, or who chose this option due to their own circumstances.

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16. Data validated by SW (parsing), and if successful, the ACDD registered in AW. For goods requiring OGA release approval, notification of the ACDD submission sent from SW to the relevant agency in addition to LCD. AW would validate ACDD data.

17. LCD Officer (CO) vets electronic ACDD and attached documentation on AW system including electronic copies of attached documents. Where hard copies of documents submitted at time of lodgement (or at time of release), document vetting function would continue. For goods subject to OGA requirements data would be reviewed by the OGA (vetted) to ensure their documentary and data requirements met, either on line or with hard copies.

18. In cases of discrepancies, missing data or documents or other errors in the ACDD and attachments LCD/OGA contacts trader (via email/SMS/telephone – by the communication method preferred by the trader) and requests corrective action (as per current procedures). Hard copies returned if presented.

19. In response to message, trader revises and resubmits information electronically to LCD (AW) and to OGA via SW. If hard copy documents, trader reviews documents, re-enters data if necessary, and resubmits documents (or provides missing documents).

20. Once vetting of ACDD submission complete risk assessment of the data (for LCD and OGA) carried out using the SW Risk Management system. Results communicated to the AW Selectivity module. (RM system may be a separate system operating at the SW level, or possibly AW Selectivity Module used.)
21. AW assigns ACDD a processing path based on risk assessment direction (Green – release; Yellow-documentary review; Red – physical inspection; Blue – post clearance verification). Procedures same as existing AW processing steps.

22. Green Channel: ACDD assessed and assessment notice issued. (Proceed to step 30 – release)

23. Yellow Channel: ACDD referred to LCD document verification unit (and to OGA) for documentary verification via AW selectivity module (based on Risk Management system assessment).

24. Customs Officer reviews electronic documentation in AW for ACDDs that are assigned to the Yellow channel. OGA reviews electronic documents to ensure compliance with requirements. (Note: The LCD on line documentation verification could be carried out at a central location by specialists, and need not be carried out at the border clearance office.)

25. Trader notified in case of discrepancies or for clarification/additional information to support declaration. (May be by SMS, Email etc. according to the traders preferred communications method). Customs officer/OGA requests hard copies if necessary from Trader.

26. Trader provides additional information via electronic message to LCD/OGA via SW (or if requested in hard copy). Trader may need to discuss issues with Customs officer/OGA.

27. Once verification completed satisfactorily, the electronic ACDD is referred in AW to Unit Head for review and authorization with recommendation to release or refer for inspection recorded in AW. (If ACDD to be released proceed to Step 30) Decision to approve or refer for inspection made by Unit Head and AW updated accordingly.

28. Red channel: ACDD referred electronically through AW to Inspection Unit (LCD) and via SW to OGA as required for physical inspection. AW may be used to assign inspector(s) to do inspection. OGAs notified as appropriate via system. Trader advised of inspection (time and location) via SMS, email or by telephone according to the trader’s preferred communication method.

29. Physical inspection carried out by joint inspection team based on assessed risk and inspection “instructions” issued in AW from RM system or officer referrals, in the presence of the trader.

30. Inspecting Officers record inspection results in RM system and electronic reports of inspection reviewed by Head of LCD Inspection Unit and management of OGAs involved via the SW. Reports to include details of inspection, findings, selectivity indicators or profiles that generated inspection, further action etc. This information used to update risk profiles and for analysis in RM system.

31. If inspection identifies irregularity the findings are communicated to the unit Head and the goods held pending further action. If serious irregularity, follow up investigation/enforcement taken as required (by LCD and or OGA as appropriate), including seizure of goods, penalty etc.
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<table>
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<tbody>
<tr>
<td>32.</td>
<td>Enforcement actions recorded in SW enforcement data base. Information used to update risk profiles and to prepare management and other reports.</td>
</tr>
<tr>
<td>33.</td>
<td>If no irregularities detected and all in order, electronic approval entered in AW by Head of Inspection unit.</td>
</tr>
<tr>
<td>34.</td>
<td>OGA indicates approval for release via LNSW to AW.</td>
</tr>
<tr>
<td>35.</td>
<td>ACDD status is redirected to Green by Unit head and the ACDD is assessed by AW and the system issues an electronic assessment notice to the trader via the LNSW (duty and taxes and possibly fees and charges payable).</td>
</tr>
<tr>
<td>36.</td>
<td>Trader makes single payment of duty taxes and fees and charges. System accounts for revenue by type and for each agency (duty and tax revenue by tax type, fees and charges by type assigned to appropriate accounts). Direct payment through banking system or Treasury. Payment options in place including prepaid accounts, deferred/periodic payment etc.</td>
</tr>
<tr>
<td>37.</td>
<td>Treasury Office processes payment through treasury system and issues AW generated receipt/payment notice to trader.</td>
</tr>
<tr>
<td>38.</td>
<td>Electronic receipt recorded in system. Trader can print hard copy of receipt and of ACDD if required.</td>
</tr>
<tr>
<td>39.</td>
<td>Final release approval by Chief of Office in AW and transmitted to Trader (and OGA) via SW (SMS, Email). (Recommend delegation of this responsibility).</td>
</tr>
<tr>
<td>40.</td>
<td>Exit note issued by AW and transmitted via SW to trader, OGA and to Gate office to allow exit of vehicle.</td>
</tr>
<tr>
<td>41.</td>
<td>At gate, exit can be authorized electronically. Driver may require hard copy of exit note.</td>
</tr>
</tbody>
</table>

### 5.4.2 “TO BE” Export Process

Processing of export shipments will be similar to import procedures, with the exception that in most instances there is no payment of customs duties and taxes, although fees and charges may apply. This Table sets out the general export processing procedures with a focus on the LCD. Additional details and explanations as well as mapping of the TO-BE Processes with the AS-IS processes are contained in Appendix 2. As with imports, a number of products require export licenses, permits or certificates issued by other government permit issuing agencies (PIAs). More detailed descriptions of the export procedures for these goods are contained in Table 3.
Table 2: - “TO-BE” Export Process under LNSW

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Trader submits electronic transport documents (cargo manifest) to LCD (within 24 hours of arrival of goods at border).</td>
</tr>
<tr>
<td>2.</td>
<td>Trader submits electronic customs declarations (ACDDs) and attached data and/or required documents to the LCD through the SW. Trader accesses trade data folder (TDF) and inputs additional data not already provided at time of export-related license/permit/certificate issuance (in the case of goods requiring PLIA licenses etc.). (Note: ACDD may be submitted in advance of arrival of the goods for export. Procedures similar to import – (see Table 1 step 1))</td>
</tr>
<tr>
<td>3.</td>
<td>The ACDD data is validated in the SW (parsing) and if all is in order the data is forwarded to the LCD (AW) the ACDD is registered in AW. Notification of receipt of the data is automatically sent to the responsible OGA at the checkpoint by SW. The OGA involved is identified by an indicator in the SW linked to the tariff code of the goods (see Table 4 for detailed export procedures for OGA regulated products).</td>
</tr>
<tr>
<td>4.</td>
<td>LCD Officer (CO) vets electronic ACDD and attached documentation on AW system including electronic copies of attached documents. Where hard copies of documents submitted at time of lodgement (or at time of release), document vetting function would continue.</td>
</tr>
<tr>
<td>5.</td>
<td>OGA vets permit/license/certificate data (and in most cases hard copy documents as well) and verifies that they are for the shipment being exported, that the data is complete and accurate, etc. (see Table 2).</td>
</tr>
<tr>
<td>6.</td>
<td>In cases of discrepancies, missing data or documents or other errors in the ACDD and attachments LCD/OGA contacts trader (via email/SMS/telephone or traders preferred method of communication) and requests corrective action (as per current procedures). Hard copies returned if presented.</td>
</tr>
<tr>
<td>7.</td>
<td>In response to message, trader revises and resubmits information electronically to LCD and to OGA via LNSW. If hard copy documents, trader reviews documents, re-enters data if necessary, and resubmits documents (or provides missing documents).</td>
</tr>
<tr>
<td>8.</td>
<td>Once vetting of ACDD submission complete, the ACDD is assessed (LCD and OGA selectivity criteria/profiles) using the SW Risk Management system and treatment communicated to the AW Selectivity module.</td>
</tr>
<tr>
<td>9.</td>
<td>ACDD processed according to the processing channel assigned by AW based on the risk assessment (green, yellow, red or blue).</td>
</tr>
<tr>
<td>10.</td>
<td>ACDDs assigned to the green channel are assessed, and once payment made the goods released through the system.</td>
</tr>
<tr>
<td>11.</td>
<td>For ACDDs assigned to the Yellow channel the documentary verification takes place and subject to satisfactory result (no irregularities) the ACDD is processed by AW.</td>
</tr>
</tbody>
</table>
12. Trader notified in case of discrepancies or for clarification/additional information required to support declaration (may be by SMS, Email etc. according to the traders preferred communications method).

13. Trader provides additional information via electronic message to Customs Officer (or if requested in hard copy). Trader may need to discuss issues with Customs Officer.

14. Once verification completed satisfactorily, the electronic ACDD is referred in AW to Unit Head for review and authorization with recommendation to release or refer for inspection recorded in AW.

15. For ACDDs assigned to the Red channel the physical inspection takes place and subject to satisfactory result (no irregularities) the ACDD is processed by AW. Joint LCD and OGA inspections as required.

16. Inspection results recorded in AW and transmitted to LNSW RM system. Electronic reports provided to Head of Unit. Reports also sent to OGAs involved via the LNSW.

17. If irregularities are discovered during verification, the shipment is not released and is held pending resolution of the issue. This may involve discussions with trader etc.

18. Cases of serious irregularities will be subject to further actions (penalties, seizure etc.)

19. If no irregularities detected and all in order, electronic approval entered in AW by Head of Inspection unit. If all is in order, the ACDD is assessed and any duty taxes and fees paid electronically.

20. As required according to the goods, OGA indicates approval for release via SW to AW.

21. ACDD status is redirected to Green by Unit head and the ACDD is assessed.

22. Trader makes single payment of duty taxes and fees and charges.

23. Treasury Office processes payment through treasury system and issues AW generated receipt/payment notice to trader.

24. Shipment approved for release in AW and release note communicated to trader and to OGA via SW.


### 5.4.3 “TO BE” Transit Process

The procedures envisaged for the processing of transit movements under the LNSW environment assumes that the transit functionality of the ASYCUDAWorld system will be implemented. Currently, transit movements require transit permits issued by the Ministry of Industry and Commerce by the LCD (plus a transit contract), and in the case of goods regulated by License and Permit Issuing Agencies (primarily the Ministry of Health, and Ministry of Agriculture and Forestry as well as numerous other agencies) separate permits are required. While there may be some justification for these permits, collectively they add up to a significant paper burden for the trade. The use of the SW based licensing system proposed under the Roadmap will reduce the amount
of information provided as once entered the data regarding a particular shipment would be available in the traders TDF and the CLP database for electronic submission of all permits. Ideally a common permit format that could be used by all agencies will be developed as part of the simplification and harmonization of the PLIA processes. In the procedures outlined below the individual permits are identified but with the LNSW the multiple submissions of common data would be eliminated.

Laos currently has bilateral transit agreements with Viet Nam and Thailand. These arrangements include the requirements for transit permits from each state and prescribe the documents required for the movement, including vehicle registration etc. Additionally, Laos has committed to implementation of the transit program under the GMS Cross Border Transport Agreement (CBTA), but to date there has been little participation by the transport sector in the initiative due in part to the relatively low volumes of transit traffic and the perceived high costs involved. It appears no decision has been taken as to how this system (which is a manual system) would operate with ASYCUD World\textsuperscript{10}. Therefore the proposed process below does not take into account possible procedures under the CBTA. The process does take into account the requirements of the existing agreements. Appendix 3, contains additional details on the processes as well as mapping of the AS-IS to the TO-BE processes.

Table 3: “TO-BE” Transit Processes

<table>
<thead>
<tr>
<th>Transit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Office of Entry</strong></td>
</tr>
<tr>
<td>1. Trader obtains electronic transit permit from MOIC and LCD via the SW. Data stored in TDF and is recorded in the database of certificates, permits and licenses maintained in the LNSW.</td>
</tr>
<tr>
<td>2. The transit permit data is retained in the Trade Data Folder (TDF) and notification sent via SW to the LCD officials at the border checkpoint.</td>
</tr>
<tr>
<td>3. Transit guarantee submitted to LCD. (Standing guarantee is an option that would eliminate need for individual guarantees. Transit system would manage guarantees – either AW or CBTA transit system.)</td>
</tr>
<tr>
<td>4. Truck arrives at border checkpoint.</td>
</tr>
<tr>
<td>5. Driver reports to Immigration for passport processing (passport or border pass).</td>
</tr>
<tr>
<td>6. Most documents submitted electronically in advance through SW. Driver may have some foreign documents (packing list, cargo manifest, etc.) which would be given to the trader. Additional documents scanned and submitted with ACDD via LNSW.</td>
</tr>
<tr>
<td>7. If transporting animals, meat or meat products, an import permit from the destination country, a transit permit application accompanied by a veterinary certificate from the country of origin is submitted in advance via the SW and stored in the TDF. Notification sent to AIU by LNSW.</td>
</tr>
</tbody>
</table>

\textsuperscript{10} Laos has signed the ASEAN Agreement on Transit and related protocols which will see the eventual implementation of an IT based regional transit system. However implementation of the system is some years off and therefore it has not been included in this report.
<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>8.</td>
<td>Electronic documents reviewed in SW system by AIU officer. As required animals or products inspected. Joint inspections where more than one agency involved.</td>
</tr>
<tr>
<td>9.</td>
<td>If all in order, the AIU authorizes the transit for the shipment via the SW.</td>
</tr>
<tr>
<td>10.</td>
<td>If risk identified with shipment the trader is notified through SW of refusal to allow transit.</td>
</tr>
<tr>
<td>11.</td>
<td>If transporting plants, plant products, seeds, fertilizer or pesticides the trader submits an electronic application to the PIU via the SW for authorization of the transit movement. This request may be submitted in advance of arrival of the shipment and stored in the TDF.</td>
</tr>
<tr>
<td>12.</td>
<td>PIU reviews electronic application in system.</td>
</tr>
<tr>
<td>13.</td>
<td>If Phytosanitary risk identified, PIU may deny permission and either detain shipment or require re-exportation. Notification of decision recorded in system and transmitted to LCD and to trader.</td>
</tr>
<tr>
<td>14.</td>
<td>If no risk identified, PIU issues electronic permit through the SW. LCD advised through SW of the approval and permit issuance (hard copy may be provided if required).</td>
</tr>
<tr>
<td>15.</td>
<td>For food and drug products the trader submits an electronic permit application via the LNSW with copies of permits, licenses and certificates (as required) to the Food and Drug Unit, Ministry of Health (FDU). This should be done in advance of the arrival of the shipment.</td>
</tr>
<tr>
<td>16.</td>
<td>Electronic permit issued by FDU and stored in the Trade Data Folder. (Hard copy may be provided if required). FDU at checkpoint notified of issuance of the permit by SW.</td>
</tr>
<tr>
<td>17.</td>
<td>Trader pays 100,000LAK customs processing fee. Subject to decision regarding LNSW fees, Customs processing fee may continue to be assessed as separate fee.</td>
</tr>
<tr>
<td>18.</td>
<td>Trader inputs ACDD data for transit operation using Direct Trader Input via the LNSW. Advance submission of ACDD data and attached electronic documents an option</td>
</tr>
<tr>
<td>19.</td>
<td>LNSW validates data.</td>
</tr>
<tr>
<td>20.</td>
<td>Once validated data sent to LCD AW and notification sent to OGA (if involved) ACDD registered in AW.</td>
</tr>
<tr>
<td>21.</td>
<td>LCD Officer (CO) vets electronic ACDD and attached documentation on AW system including electronic copies of attached documents. For goods subject to OGA requirements data reviewed by the OGA (vetted) to ensure their documentary and data requirements met.</td>
</tr>
<tr>
<td>22.</td>
<td>LCD/OGA inspection team inspects vehicle and affixes customs seal to container or truck trailer –as required, joint inspection with OGAs.</td>
</tr>
<tr>
<td>23.</td>
<td>LCD input data into ASYCUDA system for control (transit module).</td>
</tr>
<tr>
<td>24.</td>
<td>Head of LCD Unit enters electronic approval in AW, with any conditions for the transit movement (i.e. route, time frame).</td>
</tr>
</tbody>
</table>
25. Head of Unit redirects ACDD in ASYCUDA to green, and ACDD is assessed by system.

26. Final release approval by Chief of Office recorded in AW and transmitted to Trader (and OGA) via SW (SMS, Email).
   Transit document/permit provided to driver.

27. Vehicle departs entry border post and proceeds to exit border station in accordance with instructions issued by LCD (route, time allowed etc.).

**Office of Exit**

28. Truck arrives at exit border post.

29. Driver/trader submits transit permits and attached documents to LCD and OGA as required.

30. Customs Officer and as required OGAs inspect vehicle/container to ensure seal have not been tampered with and that goods have not been removed. (Generally detailed cargo inspection is not carried out.)

31. ACDD status updated in AW – transit movement terminated.

32. Electronic notification sent through LNSW to acquit ACDD and to cancel permits for OGAs as required.

33. ACDD status is updated in ASYCUDA to cancel the IM 08 Transit operation. (Note this is a procedure with AW).

34. If all is in order the truck is allowed to depart.

35. The transit guarantee/deposit is cancelled or refunded by LCD through AW and trader notified via LNSW.

5.5 Other Government Agencies (OGAs)

5.5.1 Overview of OGA “TO BE” Processes

With the introduction of the LNSW, the operating procedures and processes undertaken by the representatives of the Permit and License Issuing Agencies (PLIAs) located at the border and involved in the clearance of goods (referred to collectively in this document as OGAs) will change significantly. Currently these agencies all operate in an entirely manual environment with no ICT support systems in place. OGA officers have no access to the LCD’s ASYCUDAWorld (AW) System and rely entirely on physical interventions (both of documents and consignments) to verify the validity of permits licenses and certificates issued by their administrations, and to determine the admissibility of goods for which they are responsible.

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11 While there are numerous agencies involved in issuing permits, licenses and certificates for the import or export of goods only the Ministry of Agriculture and Forestry (Animal Inspection Unit, Department of Livestock and Fisheries, and Plant Inspection Unit, Department of Agriculture) and the Ministry of Health (Food and Drug Department) are represented on a full time basis at border crossings. Accordingly, this document addresses the operations of these agencies and their procedures at the border under the proposed LNSW.
While these agencies have their individual mandates and responsibilities under their respective legislative bases, they share common procedures when it comes to their involvement in the clearance of cargo at the border (e.g. verification of licenses and permits, high inspection rates) and in their relationships with the lead agency – the LCD (joint inspections, release authorization). Thus, with some minor variations their operating procedures at the border under the Single Window environment will follow a common work flow, as will their interaction with the LCD via the LNSW. Accordingly a generic processing model has been outlined for these agencies with individual variations noted.

The procedures outlined below cover the clearance processes that occur subsequent to the issuance of the permits, licenses certificates etc. in advance of the commencement of the import process and arrival of the goods. Generally they are issued at the PLIA headquarters in Vientiane or at Provincial offices. The permit issuing processes under the LNSW are dealt with in the Lao Trade Portal Sub Component, Roadmap for Process Simplification and Harmonization (Interim Report and Final Report), PM Group February 1, 2013 and are not covered in this Report.

Under certain circumstances the cargo clearance process may commence in advance of the actual arrival of the goods with the submission of permits etc. to the border offices of the PLIAs, and in some case with the pre arrival processing of clearance documents (ACDD and related supporting documents). For the most part however, the clearance procedures begin with the arrival of the consignment at the border crossing. Appendix 4 contains additional details and supporting comments and explanations about the proposed processes.

5.5.2 “TO BE” Processes 0 OGAs\textsuperscript{12}

Table 4: “TO-BE” Processes – Other Government Agencies (OGAs)

<table>
<thead>
<tr>
<th>Import Processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre Arrival Processing – Cargo reporting and customs declaration (ACDD)</td>
</tr>
<tr>
<td>1. OGA receives electronic notification of import permits and letters of authorization certificates issued by the PLIA head office via the SW (permit data stored in a Certificate, License, and Permits database (CLP database). OGA officers can access database for goods within their area of responsibility to review information, based on their user profile and access levels in the SW.</td>
</tr>
<tr>
<td>2. In advance of the arrival of the goods authorized Traders may submit electronic customs declarations (ACDDs) and attached documents to the LCD AW via the SW. Trader accesses trade data folder (TDF) and inputs additional data not already provided at time of trader registration and license/permit issuance by the relevant PLIA. Advance cargo data would be submitted directly to AW.</td>
</tr>
</tbody>
</table>

\textsuperscript{12} OGAs include: Food and Drug Inspection Unit (FDU) of the Ministry of Health, Plant Inspection Unit (PIU) and Animal Inspection Unit (AIU) of the Ministry of Agriculture and Forestry.
3. The advance ACDD data is validated in the LNSW and forwarded to the LCD (AW) where the data is stored pending arrival of the goods.

4. The SW sends an electronic notification to the OGA involved of the submission of the ACDD data for goods for which they are responsible. The SW identifies the responsible OGA based on the tariff code of the goods.

5. In the case of imports of live animals, meat or meat products at least one day in advance of the arrival of the shipment, the importer submits a notification of the planned importation to the SW (updates the TDF).
   The SW sends a notification of the data submission to the Animal Inspection Station (AIS) at the checkpoint of arrival. Additional may also be submitted at this time (certificates issued by the exporting country etc.)

6. Risk assessment of the data is carried out by LCD and the responsible OGA using the Risk Management system (including risk profiles and indicators from OGAs) and results are communicated to the AW Selectivity module. Decision can be made at this time on the treatment of the shipment upon arrival which would be held in AW until the goods arrival.

7. Upon arrival of the shipment the Trader (or transporter) notifies the LCD and the OGA via the SW of the arrival and provides any additional data or documents required (electronically).

8. Goods receive expedited clearance and release subject to the risk assessment and the identified treatment of the goods by OGAs and the LCD through the RM system.

**Clearance Processes upon goods arrival**

9. Truck arrives at entry gate.

10. Driver reports to Immigration for passport control (passport or border pass).

11. For goods with PLIA licenses, permits etc. most supporting documents submitted electronically to SW in advance and stored in the trade data folder created at the time of license/permit issuance. Driver may have some foreign documents that were not available in advance (packing list, cargo manifest, certificates etc.) and would provide them to the agent/trader. [Note: Authorization for agents to represent traders recorded in SW]

12. Registered Trader (authorized agent) inputs ACDD and supporting data into SW via web. Preferred option is Direct Trader Input by authorized traders from their office. Traders may input data to SW at border office kiosk, or at SW Kiosks located at GOL offices in major towns (regional offices etc.) Note: Previously submitted data (i.e. at time of trader registration at LPIA and permit application) is retrieved from Trade Data File on SW by trader and is not resubmitted. Additional data may include shipment details (packing list, transport documents) transporter/vehicle details etc. Advance submission of ACDD data and attached electronic documents to SW an option (see above Pre-arrival processing).

13. Data validated by SW (parsing), and ACDD registered in AW. For goods requiring OGA release approval, notification of the ACDD submission sent from SW to the relevant agency in addition to LCD.
14. OGA officer accesses Certificate, License, and Permits database (CLP database) in LNSW and reviews (vets) submitted data and electronic (and if provided, hard copy) attached documentation to ensure their documentary and data requirements are met.

15. In cases of discrepancies, missing data or documents or other errors OGA officer contacts trader (via email/SMS/telephone) and requests corrective action (as per current procedures). Hard copies returned if presented.

16. In response to message, trader revises and resubmits information electronically to OGA via SW. If hard copy documents, trader reviews documents, re-enters data if necessary, and resubmits documents (or provides missing documents). As required LCD data (ACDD) updated by trader.

17. If permits/license in order and all information provided (vetting successful), OGA indicates action it requires to be taken based on Risk Management system/risk assessment – physical inspection, documentation verification, or release without inspection and records the action (treatment) in the LNSW.

18. The treatment determined by the OGA is communicated from the SW RM system to AW (selectivity Module) which assigns the ACDD a processing path based on risk assessment direction i.e. Green, Yellow, Red or Blue processing channel along with any special instructions.

19. If ODA requires shipment to be inspected (based on risk assessment) shipment is held for OGA inspection. AW will be notified via the LNSW that shipment to be examined (red channel).

20. Due to the absence of refrigeration facilities perishable goods (meat, fish, plant products etc.) may be permitted by the OGA to proceed to inland facilities for temporary storage and inspection. Customs issues an “immediate release” subject to a guarantee/deposit (LCD requirements).

21. Trader advised of inspection (time and location) via SMS, email or by telephone according to the trader’s preferred communication method. Advice would come from the OGA or LCD.

22. Physical inspection for OGA purposes are carried out by joint LCD/OGA inspection team (either at border crossing or at inland location) based on assessed risk and inspection “instructions” from RM system or officer referrals, reflecting OGA policy (e.g. mandatory physical inspection).

23. OGA may require samples of product for testing (particularly plant material, seeds etc. by PIU). Sample taken and simple testing done on site. For more advanced analysis samples are taken and sent for laboratory testing. Some tests take lengthy time (e.g. seeds require time to germinate). Goods are held at border pending test results. Status of shipment processing recorded in SW and AW (i.e. held pending test results).

24. If test results (either local or laboratory) are not acceptable OGA (PIU) will not release product. AW advised via SW of the decision. Infested or unsanitary products are destroyed. AW updated (ACDD may be cancelled).

25. Inspecting Officers record inspection results in RM system and electronic reports of inspection reviewed in SW by OGA manager and Head of LCD Inspection Unit. (Test results may also be recorded in SW system).
Reports to include details of inspection, findings and selectivity indicators or profiles that generated inspection, further action etc. This information is used to update risk profiles and for analysis in RM system.

26. If inspection identifies irregularity related to OGA requirements the findings are communicated to the OGA manager and the goods held pending further action. If serious irregularity, follow up investigation/enforcement taken as required by OGA, including re-exportation/destruction of goods, seizure, assessment of penalty etc.

27. Trader informed of outcomes of inspection (if irregularities identified). Trader may deal with OGA HQ to discuss and resolve problem. If issue resolved clearance process would resume.

28. Enforcement actions are recorded in SW enforcement data base (including test results). Data used to update risk profiles and to prepare management and other reports.

29. If inspection is non-resultant, OGA indicates release approval on line through SW to the LCD/AW. The status of ACDD is updated in AW. Approval of attached documents (e.g. SPS certificates and veterinary certificates etc. noted in SW (TDF).

30. The ACDD is processed through AW and the shipment is authorized for release (following payment of duty and taxes and fees).

31. OGA receives notification of shipment release via SW.

32. OGA acquits permit/license in the CLP to ensure it is not reused.

33. Shipment removed from checkpoint.

Export Processes

1. Trader applies for and receives export permits, licenses certificates etc. required for exports. Electronic and hard copy documents issued by PLIA via SW (foreign authorities will likely require hard copy documents).

2. As with imports a Trade Data Folder (TDF) is created for the export transaction in the LNSW.

3. OGA receives notification of the TDF via the LNSW.

4. At least one day in advance of export the trader advises OGA via the SW of export date location etc.) by updating the TDF.

5. Trader submits export ACDD via SW (same options as for imports) along with any additional attached documents.

6. The SW sends an electronic notification to the OGA involved of the submission of the ACDD data for goods for which they are responsible. The SW identifies the responsible OGA based on the tariff code of the goods.
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<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>7.</td>
<td>OGA reviews permit/license/certificate data (and in most cases hard copy documents as well) and verifies that they are for the shipment being exported etc.</td>
</tr>
<tr>
<td>8.</td>
<td>OGA indicates requirement for inspection via SW to AW based on legal requirements and risk assessment through RM system.</td>
</tr>
<tr>
<td>9.</td>
<td>If inspection required OGA coordinates inspection with LCD and trader notified (SMS, Email etc.) of inspection – time/location.</td>
</tr>
<tr>
<td>10.</td>
<td>OGA inspector records results of inspection in SW and data used to update enforcement data base and RM system.</td>
</tr>
<tr>
<td>11.</td>
<td>In the case of live animals meat and meat products the Animal Inspection Unit (AIU) issues an export authorization (Export Certificate) to the trader via the SW (electronic and hard copy). [Trader must export animal, animal product or animal related items within 7 days of the of the authorization] AIU sends advance notice to the importing country. This certificate will in future be transmitted to the importing country authorities via the ASW.</td>
</tr>
<tr>
<td>12.</td>
<td>If export is approved, OGA indicates release approval on line through SW to the LCD/AW. The status of ACDD is updated in AW. Approval of attached documents (e.g. SPS certificates and veterinary certificates etc. noted in SW (TDF).</td>
</tr>
<tr>
<td>13.</td>
<td>The ACDD is processed through AW and the shipment is authorized for release (following payment of any duty and taxes and fees).</td>
</tr>
<tr>
<td>14.</td>
<td>OGA receives notification of shipment release via LNSW.</td>
</tr>
<tr>
<td>15.</td>
<td>Where required OGA records acquittal of the permit/license in the TFD via LNSW.</td>
</tr>
</tbody>
</table>

### 5.6 Processing of Exempt Imports (Law on Investment Promotion)

#### 5.6.1 “TO BE” Process Overview

An investor wishing to take advantage of the incentives offered under the Lao Law on Investment Promotion submits proposals to the relevant line ministry for initial approval.  

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13 For example, hydroelectric dams and mining projects are submitted to the Ministry of Energy and Mines; tourism related projects are submitted to the Ministry of Information Culture and Tourism, etc.
Once the investment project is approved by the ministry, the investor submits to the Ministry of Planning and Investment a Master Plan for the life of the project outlining the specific equipment, raw materials, supplies (including fuel), vehicles etc. and the quantities of each to be imported in connection with the project under the duty exemption or relief provisions. An inter-ministerial committee reviews the Master Plan and once approved the LCD (Policy and Legislation division (PLD) prepares a Decree for the Minister of Finance to authorize the Master Plan including the specific quantities of items and the applicable duty and tax relief provisions.

The TO-BE Process outlined below assumes the implementation of an automated Master List System in the LCD that is linked to AW and with part of the process interconnected though the LNSW. The LCD has been developing its ML system but requires additional support and funding to implement the system.

The proposed processes rely heavily on the use of electronic transmission of the ML and replacement of hard copy permits etc. with electronically generated ones that are retained in the automated system. The major change is that investors, rather than the LCD, will create and update the Master List (subject of course to LCD approvals). Reporting and updating of the MLs will be far simpler, faster and more accurate in an automated environment.

### 5.6.2 “TO BE” Process Map

Table 5: “TO-BE” Process- Exempt Imports under the Law on Investment Promotion

<table>
<thead>
<tr>
<th>TO-BE Process</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Procedures for approval of Master Plan and Master List (following approval of the Investment Project)</td>
<td></td>
</tr>
<tr>
<td>1. An approved investment project is assigned a reference number (project number) by the MPI.</td>
<td></td>
</tr>
<tr>
<td>2. The investor prepares a Master Plan of goods to be imported under the approved investment.</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td></td>
</tr>
<tr>
<td>4. Investor submits the proposed Master Plan to the MPI. The submission would include the assigned project reference number, and the investors identification number (most likely the TIN). These identifiers would be used throughout the entire process of approval and administration of the Master Plan and Master Lists.</td>
<td></td>
</tr>
<tr>
<td>5. MPI convenes a meeting of an inter-ministerial committee to review the MP (there may be some back and forth between the MPI and the investor for clarification etc.)</td>
<td></td>
</tr>
<tr>
<td>6. The inter-ministerial committee approves the Master Plan.</td>
<td></td>
</tr>
<tr>
<td>7. The investor is advised of the approval and is sent a copy of the approved MP. A separate approval document may be issued. This would likely be in electronic form.</td>
<td></td>
</tr>
<tr>
<td>Step</td>
<td>Description</td>
</tr>
<tr>
<td>------</td>
<td>-------------</td>
</tr>
<tr>
<td>8.</td>
<td>The relevant Ministries and the LCD are officially notified of the approval by the MPI.</td>
</tr>
<tr>
<td>9.</td>
<td>LCD (Policy and Legislation Division – PLD) prepares and submits a proposed Decree to the Minister of Finance to authorize the Master Plan including lists of the products and quantities to be imported over the life of the project for which duty and tax relief will be provided. MOF considers proposal and if approved, issues Decree and Instructions to LCD, with copies to the INV and involved Government Ministries.</td>
</tr>
<tr>
<td>10.</td>
<td>The investor is notified by the PLD when the Decree is issued.</td>
</tr>
<tr>
<td>11.</td>
<td>The investor submits the proposed Master List (ML) of imports planned for the first year of the project (includes list of checkpoints where goods to be imported) to the LCD electronically.</td>
</tr>
<tr>
<td>12.</td>
<td>LCD reviews the ML in consultation with the relevant ministry as required.</td>
</tr>
<tr>
<td>13.</td>
<td>LCD issues ‘Permission letter’ to investor and creates a file in the LCD’s automated Master List system (identified by investor TIN and the project reference number). (DG approval required for vehicle and fuel on the ML). Permission letter may be issued electronically.</td>
</tr>
<tr>
<td>14.</td>
<td>DG approval required for vehicles and fuel on the ML. (Could be delegated to Director IED).</td>
</tr>
<tr>
<td>15.</td>
<td>Ministries (MPI plus responsible ministry) advised by LCD of approval of ML.</td>
</tr>
<tr>
<td>16.</td>
<td>Customs checkpoints notified of approved ML (and receive authorization to access the investor’s folder in the automated ML system).</td>
</tr>
<tr>
<td>A.</td>
<td>Procedures for administration of Master Lists and processing of ACDD</td>
</tr>
<tr>
<td>17.</td>
<td>In advance of arrival of goods the investor submits an electronic ACDD to AW via SW and attaches an electronic list of the products on the ML being imported in a data format that can be uploaded to the ML system. The ACDD contains identifiers (TIN, Project reference number, ML reference number) to link to the ML system.</td>
</tr>
<tr>
<td>18.</td>
<td>LCD (at the checkpoint or at headquarters for sensitive goods) reviews the ACDD and validates the attached list of ML items.</td>
</tr>
<tr>
<td>19.</td>
<td>If the list is not approved it is returned to the investor electronically to be revised.</td>
</tr>
<tr>
<td>20.</td>
<td>If approved, the list is processed in the automated ML system and the ML is updated (quantity of the product being imported deducted from list). (Note – fuel and vehicle imports may require HQ approval although this could be delegated to the checkpoint, and monitored by HQ.)</td>
</tr>
<tr>
<td>21.</td>
<td>LCD sends a notice of approval of the list of goods to be imported (i.e. issues an electronic permit) to the investor and notifies the checkpoints.</td>
</tr>
<tr>
<td>22.</td>
<td>Upon arrival of the goods, the trader advises LCD of goods arrival through LNSW and the ACDD is processed in AW. Indication of the permit number/code is included along with the link to the ML system (investor TIN/reference number of project).</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>23.</td>
<td>ACDD processed in the normal manner and release approved.</td>
</tr>
<tr>
<td>24.</td>
<td>Monthly reports on MLs generated from the system (pre-programmed reports).</td>
</tr>
<tr>
<td>25.</td>
<td>At year end, investor submits report on ML to LCD.</td>
</tr>
<tr>
<td>26.</td>
<td>Investor submits electronic ML for new year to LCD. LCD notifies other agencies of submission and review/approval process begins.</td>
</tr>
<tr>
<td>27.</td>
<td>Investor is notified of approval of ML and new ML set up in LCD’s ML system.</td>
</tr>
</tbody>
</table>
6 Preparations for LNSW Implementation

Proposed clearance processes under new LNSW operating environment will require preparatory enhancements to existing systems and in some cases development of new policies and approaches. Such modernization initiatives are, strictly speaking, not part of the LNSW initiative but they are important preparations for the LNSW and the changes it entails for operations at the LCD and OGAs. A number of issues that impact on current operations as well as posing challenges for the LNSW were discussed in the AS-IS Report, and a number of suggestions were made to deal with them. Many of these proposed changes can be implemented by the respective agency in advance of and separate from the LNSW initiative. A phased approach to implementation of these changes is proposed as follows.

**Phase 1: Streamlining/improvements to existing processes.** During this initial Phase the LCD and OGAs would introduce modernization initiatives to streamline and simplify current operating procedures, strengthen inter-agency cooperation and coordination, and improve use of existing automated systems—primarily ASYCUDAWorld. Changes would be preparatory in nature in regards to the LNSW implementation, and would reflect current legislation and regulations of the GOL as well as international, regional and sub-regional commitments. Actions to improve inter-agency coordination and cooperation at border crossing would be taken without introduction of new automated systems.

The Friendship Bridge/Thanaleng border crossing has been used as the location for reviewing the existing procedures, and a number of suggestions are made to improve the operations there, often related to the somewhat unique situation with its split operation. While most recommendations are applicable to all international border crossings, some are particular to this crossing. Additionally, given the advanced stage of ASYCUDA World implementation (11 locations, covering over 90% of ACDD volumes) the proposals are based on the ASYCUDA operating environment.

1. **Implement changes to the declaration processing under AW;**
   a. **Increase the number of items that can be accounted for on a single ACDD.** There is no clear reason behind the LCD policy that limits to 10 the number of items that can be accounted for on a single ACDD. ASYCUDAWorld can accommodate far greater numbers of individual items. The LCD advises that few ACDDs contain more than 10 items, thus this procedural change would be relatively easy to implement with minimal impact on the LCD operations. For the trade it would offer some cost savings and improvements in efficiency. A study could be undertaken to determine the impact on the number of ACDDs processed and the resultant impact on the LCD’s revenue from the processing fee (100,000LAK per ACDD).
   b. **Allow importers to declare multiple vehicles on a single ACDD.** Currently LCD policy requires a separate ACDD for each imported motor vehicles and motor cycle in a consignment. The ACDDs are

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14 Primarily WCO, WTO, ASEAN, GMS Cross Border Transport Agreement (CBTA) commitments. The GOL has signed bilateral agreements with Viet Nam, Cambodia and Thailand on customs cooperation and mutual assistance, and on transportation.
used as proof of import and duty payment for purposes of vehicle registration. However the same result can be achieved if each vehicle were reported as a separate item on the ACDD and the vehicle details included (VIN number etc.). Individual AW-generated receipts can include the details required for purposes of registering and controlling vehicles, and would provide the security required to avoid abuse. (Such an approach is utilized by customs administrations in the region that operate the AW system and it has proven to be an effective and less burdensome approach.) In the long run as part of the LNSW, consideration should be given to the inclusion of the Ministry of Transport in the SW for purposes of processing/registering imported vehicles.

c. Eliminate the requirement for traders to purchase pre-formatted, numbered watermarked ACDD documents (three per declaration) from the LCD. Traders should be allowed to print ACDDs directly from ASYCUDAWorld at the time of data input (either at the kiosk in the customs office or at importers’ premises if using DTI) without use of the pre-printed form. As an interim step, blank (unformatted) security/watermarked paper could to be used, but in the medium term the use of preformatted security paper should be discontinued. In time systems based security measures will ensure the integrity of systems through the LNSW security functions.

d. Eliminate the requirement for consignee/importer signature on ACDDs. It is not clear if this is a national policy but reportedly it is the requirement at FB/TL. The Lao Customs Law does not require importer/consignee signature on an ACDD. The signature of the declarant on the ACDD, who would be acting as an authorized agent on behalf of the importer should be sufficient. Development and implementation of a qualified customs broker program including security and performance standards would greatly reduce the risk of misrepresentation by brokers. Abuse would result in license suspension or cancellation. In the meantime this requirement should be eliminated or applied only in cases where there is doubt as to the status of the agent/declarant.

2. Where feasible co-locate other Government Agencies present at the border checkpoints (Plant and Animal Quarantine and Food and Drug) with the LCD. Traders should be able to deal with all government agencies at one counter or office location and not have to move back and forth to ensure documentation is processed. This will strengthen interagency coordination and cooperation and provide more efficient service to the trade while improving control and verification efforts. This move is also in accordance with the CBTA commitments (Single Stop Service, Transit and single window operational concepts).

3. LCD and OGAs to carry out preliminary identification of selectivity criteria and risk profiles for goods for which they are responsible and they should be input to the ASYCUDAWorld selectivity module. This matter is addressed in detail in the Risk Management Report (Task Cluster 2). Currently there is minimal selectivity input into the ASYCUDAWorld system from OGAs, and they operate outside of the system’s risk management function. In the longer term it is expected that the inter-agency risk management system will be incorporated into the LNSW, but in the interim agreed risk factors risk criteria/indicators and risk profiles) could be input to the ASYCUDAWorld selectivity module. Headquarters and local inter-agency risk management teams could be formed to begin this process.

4. Examine feasibility of integrating the management of exemptions (Master Lists) into the LNSW or ASYCUDA. As a first step carry out a review of the existing procedures for submission, evaluation and approval of investment projects and the requests for exemptions, through to the on-going administration of the MLs. (Note – further review required)
Phase 2: Improve ASYCUDAWorld System, further strengthen inter-agency cooperation and risk management, and introduce new policies and procedures. Building on the initiatives in Phase 1, a number of additional changes can be implemented to enhance the operation of AW, streamline and simplify procedures, strengthen inter-agency cooperation and coordination, and strengthen risk management in preparation for the planned LNSW implementation. Suggested initiatives include:

1. **Expand remote AW DTI to select traders.** Currently a very small number of traders are permitted DTI access to the AW system from their offices. The LCD should take steps to increase the number of DTI participants (either via leased line – for larger volume traders, or direct web access for lower volume traders). While most likely only a relatively small number of traders would have the financial and technical capacity to introduce this mechanism, the LCD should launch an initiative to encourage additional traders to sign up. Typically a relatively small number of traders account for a significant volume of ACDDs and of percentage of revenue paid. These traders could also be offered facilitation benefits such as allowing submission of hard copies of ACDDs post release for those assigned to the Green Channel, and for Yellow or Red, at the time of clearance.

2. **Increase the number of GOL Kiosks for input of ACDDs.** In addition to installation of the Kiosks at all ASYCUDAWorld sites, the LCD should consider providing Kiosks at other locations such as LCD headquarters in Vientiane, Regional/Provincial Offices etc. Eventually Kiosks could be installed at government offices in larger population centers. While the requirement for hard copy documents will continue for some time, this initiative would offer greater flexibility to traders and would set the stage for the eventual reduction of hard copy documentary requirements (at least at the time of clearance).

3. **Closer integration of the Treasury system and AW allowing the generation of an AW receipt for duty and tax payments.** The AW receipt should be satisfactory as an official GOL receipt for payment of revenue. While a minor procedural change it would simplify traders’ interaction with the LCD, reflect a closer working relationship between CD and Treasury, and demonstrate acceptance of the capabilities of the AW system and preparation for the LNSW implementation.

4. **Develop GOL policy with respect to levels of physical inspection of goods on import.** While the GOL and the border control agencies including the LCD are committed to increased use of risk management techniques to reduce levels of physical inspections (and to improve their effectiveness) this message has not been taken up by operating staff and virtually all shipments are physically checked to a greater or lesser degree. A clearly stated Government policy from the highest levels stating the longer term goal of reducing the rate of inspections (perhaps to a specific maximum level) based on a well-defined risk management policy and systems and a supporting inter-agency governance structure is required.

5. **Develop trader self-assessment.** For identified reliable traders the LCD can begin to introduce the concept of self-assessment whereby the declaration by the trader is immediately accepted by the AW system (once validated) the duty and taxes assessed and paid. Following this the system would carry out its selectivity assessment and determine the treatment of the ACDD. If all is in order the goods can be released immediately. In the case of queries or errors the system would reassess the ACDD and a demand for additional payment issued. Faster clearances would result.
6. **Further strengthen inter-agency risk management coordination and cooperation.** This would include development of inter-agency memoranda of understanding on Risk Management and formation of inter-agency risk assessment/evaluation teams at national and local levels. These teams would update selectivity parameters (indicators, strengthen profiles etc. – both commodity related and entity (trader, exporter, origin etc.), and would begin to monitor and evaluate their effectiveness and modify accordingly. (Based on specific recommendations in the Risk Management Report)

7. **Provide limited access to AW by OGAs.** On selective basis OGAs could be granted access to AW for ACDDs for goods for which they are responsible in order to verify declarations, communicate hold for inspection decisions and for authorizing release. Interagency agreements (MOUs) would be required for this initiative, but it would be a positive step towards the more integrated approach envisaged under the LNSW.

8. **Pilot test acceptance of scanned licenses and permits with ACDD submission.** While the requirement for hard copies would not be eliminated entirely, this would be a solid step towards the eventual move (on a controlled basis) to a paperless environment for qualified traders. Options exist as to when the hard copy documents are required (before or after release)

**Phase 3: Border Clearance Processes with SW implementation.** The Border clearance processes that will be in effect with full implementation of the electronic SW incorporating the license/permit issuance and border clearance processes are outlined in Chapter 5 of this report and in the Appendices, and are not repeated here. In summary, the realization of the LNSW vision of an environment in which transactions between the GOL and the private sector are to the greatest extent feasible done electronically will mean fundamental changes to the border clearance operations - for both traders and the government agencies. A risk based approach to controls at all stages in the permit/license granting processes through to the goods clearance processes will be in place. Inter-agency coordination and joint operation of the risk management system will ensure trade is not disrupted in an effort to achieve effective controls.

Implementation of these new processes assumes that a) the Permit and License issuance processes in the LPIAs have been fully automated and integrated with the LNSW; b) the Law on Electronic Transactions has been implemented and its provisions (along with those of individual legislation such as the Customs Law) are applied to the procedures for import/export; c) an inter-agency/integrated approach to Risk Management has been put in place; and d) the recommended Functional and Technical Architecture of the LNSW has been adopted.
### Appendix A: MATRIX OF CURRENT AND PROPOSED IMPORT PROCESS – GENERAL

#### General Cargo Import Process under LNSW

<table>
<thead>
<tr>
<th>General cargo import processes under LNSW</th>
<th>Current Procedures</th>
<th>Proposed Process</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre Arrival Processing – customs cargo reporting and customs declaration (ACDD)</td>
<td>1. Trader obtains any required permits/licenses/certificates from the LPIA electronically. The data is retained in a Trade Data Folder (TDF) and notification sent to the LPIA officials at the border checkpoint (OGAs).</td>
<td>The permit issuing processes are dealt with in the Lao Trade Portal SubComponent, Roadmap for Process Simplification and Harmonization (Interim Report and Final Report), PM Group, February, 2013. This table outlines the clearance processes that occur subsequent to the issuance of the of OGA permits, licenses certificates etc. Under certain circumstances the clearance process may commence in advance of the actual arrival of the goods.</td>
<td></td>
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<tr>
<td></td>
<td>2. In advance of the arrival of the goods, authorized Traders may submit electronic customs declarations (ACDDs) and attached documents to the LCD through the SW. Trader accesses trade data folder and inputs additional data not provided at time of license/permit issuance (in the case of goods requiring PLIA licenses etc.). Advance cargo data would be submitted directly to AW. The data would be forwarded to the LCD (AW) and OGAs according to the goods in question for processing.</td>
<td>Implementation of pre arrival submission of ACDDs and required supporting documents and data (in accordance with Article 29 of the Customs Law (2012) would enable the LCD and OGAs to assess risks of shipment (revenue and other compliance) and to decide on its treatment. Trade would be facilitated by this advance processing and government agencies would save time and effort in processing the importation of goods.</td>
<td></td>
</tr>
</tbody>
</table>

15 The procedures described in this table are for the clearance process at the Friendship Bridge/Thanaleng border crossing. Due to the split operation some of the procedures at this location are unique and would not be replicated at other sites. This site is the first checkpoint to implement the ASYCUDAWorld system which will be rolled out to an additional 10 sites in 2013. The procedures proposed under the LNSW environment assume implementation of ASYCUDAWorld and are therefore applicable to all 11 sites (with the exception of the unique procedures at the FB/TL crossing).
<table>
<thead>
<tr>
<th></th>
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<th>In the case of pre arrival submission of cargo data the LCD and OGAs would be able to do risk assessments of the shipment, primarily focusing on detection of illegal products or high risk imports of legitimate goods (e.g. plants and seeds, pesticides, animals from high risk areas).</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.</td>
<td>The pre-arrival ACDD data is validated in the SW and if all is in order the data is forwarded to the LCD (AW). Notification is sent to the OGA at the checkpoint of the receipt of the data. The OGA responsible for the goods in question is identified according to an indicator in the SW linked to the tariff code of the goods.</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Risk assessment of the data is carried out by the Risk Management system and communicated to the AW Selectivity module. Data is stored pending goods arrival.</td>
<td>RM system will likely operate at the SW level, (or possibly AW Selectivity Module used). Decision can be made in advance on the treatment of the shipment upon arrival. Where advance cargo data provided risk assessment would focus on non-revenue risk identification. Potentially, LCD could process the ACDD and duty and taxes could be collected in advance of the arrival of the goods (self-assessment by authorized traders).</td>
</tr>
<tr>
<td>5.</td>
<td>Upon arrival the Trader would notify the LCD (ASYCUDA) (and as applicable OGAs) via the LNSW, and provide any additional data or documents required.</td>
<td>Electronic notification via SW.</td>
</tr>
<tr>
<td>6.</td>
<td>Goods receive expedited clearance and release subject to the risk assessment and the identified treatment of the goods by OGAs and the LCD through the RM system.</td>
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</tbody>
</table>
### Cargo Clearance Processes upon arrival of Goods

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
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<tbody>
<tr>
<td>1</td>
<td>Truck arrives at entry gate at Friendship Bridge (FB).</td>
<td>7</td>
<td>Same procedure</td>
</tr>
<tr>
<td>2</td>
<td>DR reports to Immigration for passport processing (passport or border pass).</td>
<td>8</td>
<td>Same procedure</td>
</tr>
<tr>
<td>3</td>
<td>DR (or TR) reports to LCD office at FB and submits the Thai Carrier Export Report for exported goods.</td>
<td>9</td>
<td>If the LCD implements the Cargo Manifest module of AW, traders/transporters will be able to submit cargo data in advance of (or at the time of) arrival of the vehicle at the border. Data may come from the Thai export cargo report or from a Lao report. Feasibility of using the Thai data will require investigation. Data will be stored in AW pending submission of ACDDs to clear shipment.</td>
</tr>
<tr>
<td>4</td>
<td>If importing live animals, meat or meat products, or fish or fish products DR reports to Animal Inspection Station (AIS), Agriculture and Fisheries Department, Ministry of Agriculture and Forestry at the FB for inspection. Live animals/fish are not allowed to depart the Bridge until AIS authorizes movement (refer to Section 5, Animal Quarantine procedures).</td>
<td>10</td>
<td>Same basic procedure although AIS/PIU would have advance information regarding the shipment from the information in the CLP data base. Trader will no longer need to submit separate manual report of arrival of shipment to the AIS/PIU.</td>
</tr>
<tr>
<td>5</td>
<td>If importing plants, plant products, seeds, fertilizer or pesticides the DR reports to the Plant Inspection Unit (PIU) Agriculture and Fisheries Department, Ministry of Agriculture and Forestry at FB for verification of permits, certificates etc. and inspection. (Refer to section 4 – Plant Inspection Procedures).</td>
<td></td>
<td>As above</td>
</tr>
</tbody>
</table>

(See 10 and 14 below)
6. **CO at FB records importer/exporter, vehicle, driver and cargo information (the Thai Carrier Export Report)** on a standalone computer system and assigns a number to the transaction.

11. *Data on the vehicle and cargo input to a local vehicle control system and decision made as to where goods to be held for clearance (Friendship Bridge or Thanaleng)*

- Vehicles proceed to Thanaleng only if a) importer does not want to clear goods on the same day, b) the goods are to be trans-loaded from a foreign truck to a Lao truck for onward transportation, or c) if goods are selected for inspection all other vehicles park at the Friendship Bridge pending ACDD processing and release.
- Vehicles with cargo not selected for inspection (i.e. green, yellow or blue channel) will be cleared and released from Friendship Bridge once ACDD processed, and need not stop at Thanaleng.

This system would be implemented locally and would build on the existing system. Significant change in determination of where goods should be held pending clearance. New procedure would see fewer trucks sent to TL, and expedited clearance. Feasibility of this approach depends in part on availability of parking facilities for vehicles at FB.

7. **CO stamps the Carrier Export Report and writes a registration number on the form.**

Automated system would replace this procedure (Step 11 and 12)

8. **CO decides if truck to proceed to Thanaleng (TL) for customs and Other Government Agency (OGA) processing and clearance, or to remain at FB until clearance (including ACDD processing) at TL.**

(Note: All ACDDs are submitted at TL via ASYCUDA.)

Automated system would replace this procedure (Step 11 and 12)

9. **CO issues Red-tag if truck to proceed to TL for inspection, and truck proceeds to TL.**

12. *For vehicles proceeding to Thanaleng for clearance, an electronic control note issued by a local “vehicle control system”.

10. **CO assigns Green tag if truck to be inspected/cleared at FB.**

    - **Note:** 90% of trucks are sent to TL, and 10% are processed at FB. The decision is based on the importer, the customs regime or the commodity. Cargo cleared at the Friendship Bridge (Green-tag) includes:

See Step 11
<p>| | |</p>
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</table>
|   | - Goods exempt from customs duty  
  - imports by Government (exempt)  
  - imports for Government approved investment projects  
  - imports for diplomatic missions, international organizations  
  - imports by/for Government approved development projects  
- Bulk commodities (e.g. petroleum)  
- Live animals, plant products (AQ and PQ)  
Goods that may be scanned due to their nature, type of transport etc. and that can be physically inspected at the FB |
<p>| 11. | CO at FB selects vehicles for scanner inspection (Goods that are practical to be scanned) Trucks are scanned upon departure from the Friendship Bridge facility (see step 41). (Note: Trucks sent to TL are generally not scanned as will be inspected at warehouse) |
| 12. | TR collects documents from driver, including certificates required by PIU, or AIU, and assembles supporting documents (invoice, packing lists, Lao permits etc.) |
| 13. | All trucks subject to risk assessment for scanning through the risk management system. Specific criteria for scanning established and entered into RM system. Scanning results recorded in RM system. |
| 14. | Trader scans and submits additional documents via SW with ACDD. For goods requiring PLIA licenses, permits etc. most supporting documents submitted electronically to SW in advance and stored in the trade data folder and the CLP data base created at the time of license/permit issuance. Driver may have some foreign documents that were not available in advance (packing list, cargo manifest, etc.) and would provide them to the agent/trader. System notifies PIU/AIU of update to TDF. |
|   | Rather than the current process of scanning all vehicles that can be scanned (with some specific exceptions), the scanner operation would be based on risks associated with the shipment, vehicle etc. Reports on the outcomes of scanning to be documents in RM system. Unless original documents required (for instance, SPS certificates, veterinary certificates etc. issued by exporting country) there will be no requirement to provide hard copy documents at this time. |</p>
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<tbody>
<tr>
<td>13.</td>
<td>For food and drug products TR submits permits, licenses and certificates (as required) to the Food and Drug Unit, Ministry of Health (FDU) at Thanaleng (ACDD is not provided to FDU).</td>
<td>See 14 above.</td>
</tr>
<tr>
<td>14.</td>
<td>TR pays 100,000LAK customs processing fee. (Note: TR is required to purchase 3 copies of the ACDD form from LCD for 5,000LAK for each declaration).</td>
<td>See step 36 below</td>
</tr>
<tr>
<td>15.</td>
<td>TR inputs ACDD data into ASYCUDA at TL.</td>
<td>15. Trader inputs ACDD data to LNSW. Option for Direct Trader Input from traders' office via the LNSW is available for qualified traders. Advance submission of ACDD data and attached electronic documents an option. Traders may continue to input at Customs office kiosk if prefer – option provided. Traders may input data from Kiosks located at any customs office (e.g. Vientiane HQ) Possible Options to be offered traders for data input: Option 1: (Subject to implementation of appropriate legislation, procedures and policies). For highly compliant traders who meet established requirements and obligations, full DTI expanded to all traders who meet technical and other requirements. Leased line or internet option depending on circumstances. Smaller traders/agents may continue to input data at LCD kiosks. Additional sites for input should be provided at various customs office locations (e.g. in Vientiane for goods clearing at the FB/TL checkpoint. Trader need not be physically at the checkpoint to input ACDD. Option 1 would be offered to a relatively small number of highly trusted traders with solid compliance records. All processing of customs declarations and attached</td>
</tr>
</tbody>
</table>
### Annex J: LNSW Business Process 'To Be' Model

**16.** ASYCUDA system validates the ACDD and if accepted registers the ACDD.

**17.** Once validated and registered, TR prints three copies of the ACDD (two for customs, and one for the trader), signs as the declarant, and attaches supporting documents, including receipt for processing fee.

<p>| | |</p>
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<tbody>
<tr>
<td>16.</td>
<td>Data validated by SW (parsing), and if successful, the ACDD registered in AW. For goods requiring OGA release approval, notification of the ACDD submission sent from SW to the relevant agency in addition to LCD. AW would validate ACDD data.</td>
</tr>
<tr>
<td></td>
<td>Validation of the ACDD and attached documents would be done by the LNSW when data submitted according to LCD and OGA requirements.</td>
</tr>
</tbody>
</table>

**16.** Data validated by SW (parsing), and if successful, the ACDD registered in AW. For goods requiring OGA release approval, notification of the ACDD submission sent from SW to the relevant agency in addition to LCD. AW would validate ACDD data.

**17.** Reduced/eliminated requirement for ACDD printing at this point in the processing. (Trader may require hard copy for their own use)

Electronic data submission – no requirement for hard copy of ACDD or attached documents at time of clearance. Scanned (or electronically generated) copies of attached documents submitted via LNSW with ACDD. Trader required to retain hard copies of supporting documents and make them available if needed at a later date for PCA etc. (Most such importers would be subject to PCA). Electronic release authorization issued. No need for hard copy release documents.

Option 2: Electronic submission of ACDD and attached documents with hard copies of all documents provided to LCD (and as required OGAs) at time of final release, (or if requested by the LCD or OGA during processing based on a specific requirement). Provision for submission of hard copies within a specified period following release (say one week) is also an option. Electronic release authorization issued. No need for hard copy release documents.

Option 2 can be a transitional process or continued for traders who are not considered highly compliant. While hard copies of documents would be required, release notification would be electronic.

Option 3 is essentially status quo with the exception that electronic copies of attached documentation would be submitted (either as part of the Permit License issuance process through the SW, or at time of ACDD processing, and release authorizations would be electronic. Use of this option should decline over time.

Reduced/eliminated requirement for ACDD printing at this point in the processing. (Trader may require hard copy for their own use)
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<tbody>
<tr>
<td>18.</td>
<td>TR (agent) obtains signature and stamp of the consignee (importer) on the ACDD (either the TR travels to the importer’s premises, or in some cases the TR has the blank ACDD pre-signed by the consignee).</td>
<td>Eliminate this procedure.</td>
</tr>
<tr>
<td>19.</td>
<td>TR returns to TL with signed copies of ACDD (unless pre-signed by importer).</td>
<td>Eliminate this procedure.</td>
</tr>
<tr>
<td>20.</td>
<td>TR presents two copies of the ACDD and attached documents to the LCD Declaration Reception Counter.</td>
<td>Eliminate for most transactions</td>
</tr>
<tr>
<td>21.</td>
<td>CO face vets the ACDD (ensures fully completed, that all required documents are attached, proper signatures affixed etc.) (If all in order, proceed to Step 24).</td>
<td>17. LCD Officer (CO) vets electronic ACDD and attached documentation on AW system including electronic copies of attached documents. Where hard copies of documents submitted at time of lodgement (or at time of release), document vetting function would continue. For goods subject to OGA requirements data would be reviewed by the OGA (vetted) to ensure their documentary and data requirements met, either on line or with hard copies.</td>
</tr>
<tr>
<td>22.</td>
<td>If documents are missing or submitted documents contain errors the CO rejects the declaration and returns the ACDD to the TR for correction.</td>
<td>18. In cases of discrepancies, missing data or documents or other errors in the ACDD and attachments LCD/OGA contacts trader (via email/ SMS/telephone – by the communication method preferred by</td>
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<tr>
<td>23.</td>
<td>The TR reviews the rejected ACDD package, makes corrections, or obtains missing documents. If data re-entry required TR must purchase new ACDD forms and re-enter ACDD into ASYCUDA (Step 15). If only attached documents require adjustment TR resubmits ACDD package to LCD Declaration Reception Desk (Step 20).</td>
<td>19. In response to message from SW, trader revises and resubmits information electronically to LCD (AW) and to OGA via SW. If hard copy documents, trader reviews documents, re-enters data if necessary, and resubmits documents (or provides missing documents).</td>
</tr>
<tr>
<td>24.</td>
<td>If face vetting OK, ASYCUDA assigns ACDD to a processing path (Green – release; Yellow – documentary review; Red – physical inspection; Blue – post clearance verification) through the selectivity module. Note: Approximately 60% are assigned to Red Channel by system.</td>
<td>20. Once vetting of ACDD submission complete risk assessment of the data (for LCD and OGA) carried out using the SW Risk Management system. Results communicated to the AW Selectivity module. (RM system may be a separate system operating at the SW level, or possibly AW Selectivity Module used.) If the LCD implements a self-assessment process, once an ACDD data package is validated by the LNSW, the ACDD would go to final assessment by the AW system and the trader notified by the system of payment amount required. Trader can then make payment. Assessment of the ACDD takes place before inspection/verification, and is based on the trader’s declaration – i.e. self-assessment. Risk assessment is expected to be carried out at the SW level in order to include risk profiles parameters etc. of OGAs as well as LCD. The selectivity module of ASYCUDA would continue to be used to communicate the risk profiles and treatment to the LCD and OGA staff. (refer to the Risk Management Report) The percentage of ACDDs referred for verification and physical inspection will be reduced over time to more reasonable levels.</td>
</tr>
<tr>
<td>25.</td>
<td>LCD Reception CO passes ACDD package to Documentation Verification CO for review.</td>
<td>21. AW assigns ACDD a processing path based on risk assessment direction (Green – release; Yellow – documentary review; Red – physical inspection; Blue – post clearance verification). Procedures same as existing AW processing steps Currently all ACDDs documents are reviewed (i.e. Yellow channel. New process would see</td>
</tr>
<tr>
<td>Step</td>
<td>Description</td>
<td>Notes</td>
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</tr>
<tr>
<td>22.</td>
<td>Green Channel: ACDD assessed and assessment notice issued. (Proceed to step 30 – release)</td>
<td></td>
</tr>
<tr>
<td>23.</td>
<td>Yellow Channel: ACDD referred to LCD document verification unit (and to OGA) for documentary verification via AW selectivity module (based on Risk Management system assessment).</td>
<td>In accordance with updated Risk Management system not all ACDDs will be subjected to documentary review (yellow channel) as is the case at present. Low risk ACDDs channelled directly to Green with no verification of documents.</td>
</tr>
<tr>
<td>24.</td>
<td>Customs Officer reviews electronic documentation in AW for ACDDs that are assigned to the Yellow channel. OGA reviews electronic documents to ensure compliance with requirements.</td>
<td>Review of the electronic documentation by the verification CO. (Note: The LCD on line documentation verification could be carried out at a central location by specialists, and need not be carried out at the border clearance office.)</td>
</tr>
<tr>
<td>25.</td>
<td>Trader notified in case of discrepancies or for clarification/additional information required to support declaration. (May be by SMS, Email etc. according to the traders preferred communications method).</td>
<td>In some cases the CO may require hard copy documentation to carry out the verification. Verification of documentation, tariff classification and regime, valuation, origin etc.</td>
</tr>
<tr>
<td>26.</td>
<td>Trader provides additional information via electronic message to CO (or if requested in hard copy) TR may need to discuss issues with CO.</td>
<td></td>
</tr>
<tr>
<td>27.</td>
<td>Once verification completed satisfactorily, the electronic ACDD is referred in AW to Unit Head for review and authorization with recommendation to release or refer for inspection recorded in AW. (If ACDD to be released proceed to Step 30)</td>
<td>Over time this responsibility could be delegated to Customs Officers. The Unit Head's role would be to provide guidance and support and to monitor decisions for accuracy, consistency etc.</td>
</tr>
<tr>
<td>28.</td>
<td>TR provides required clarification, additional information to Verification CO.</td>
<td></td>
</tr>
</tbody>
</table>

In some cases the CO may require hard copy documentation to carry out the verification. Verification of documentation, tariff classification and regime, valuation, origin etc.

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The LCD on line documentation verification could be carried out at a central location by specialists, and need not be carried out at the border clearance office.
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<tr>
<td><strong>30.</strong></td>
<td>If inspection required, ACDD and attached documents are passed to customs inspection team (Red channel). (Proceed to Step 32.)</td>
<td><strong>28.</strong> Red channel: ACDD referred electronically through AW to Inspection Unit (LCD) and via SW to OGA as required for physical inspection. Trader advised of inspection (time and location) via SMS, email or by telephone according to the trader’s preferred communication method.</td>
</tr>
<tr>
<td></td>
<td>Decision to approve or refer for inspection made by Unit Head and AW updated accordingly</td>
<td>AW may be used to assign inspector(s) to do inspection. OGAs notified as appropriate via system.</td>
</tr>
<tr>
<td><strong>31.</strong></td>
<td>If goods require OGA examination, the TR contacts the OGA and coordinates joint examination. (Often OGA inspection is carried out in advance of ACDD processing. PIU and AIU may do joint inspections with LCD either at the FB or TL; FDU do independent inspection).</td>
<td>Eliminate this procedure.</td>
</tr>
<tr>
<td></td>
<td>Customs (or joint) inspection team examines goods at warehouse (if cargo offloaded) or on truck (if not off loaded). All shipments are examined. Intensity of examination depends on risk assessed by customs officers PIU officers and AIU officers. Risk profiling is not coordinated.</td>
<td>This step will be eliminated as the SW system will be used by the OGA to notify LCD (and trader) that an inspection is required (Step 28).</td>
</tr>
<tr>
<td><strong>32.</strong></td>
<td>29. Physical inspection carried out by joint inspection team based on assessed risk and inspection “instructions” issued in AW from RM system or officer referrals, in the presence of the trader.</td>
<td>Inspections to be risk based and the overall percentage of shipments inspected will be reduced over time through application of RM.</td>
</tr>
<tr>
<td></td>
<td>33. When inspection completed, CO completes “inspection act” on ACDD document and signs ACDD. Submits to head of Inspection Unit for review. If all is in order proceed to Step 36.</td>
<td>30. Inspection results recorded in AW and transmitted to LNSW RM system. Electronic reports provided to Head of Unit. Reports also sent to OGAs involved via the LNSW. Reports to include information on results, details of findings, selectivity indicators or profiles that generated inspection.</td>
</tr>
<tr>
<td></td>
<td>COs and OGAs could be provided with tablet devices to allow input of inspection results and details directly in the system as the inspection is carried out. Information will be sent to the RM system to validate risk criteria, provide input to update criteria and to monitor effectiveness of inspections and of the risk criteria used. Inspection results data to be codified to allow analysis by RM system.</td>
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<tr>
<td>34.</td>
<td>If the inspection detects irregularities, CO notes the irregularities in the “inspection act” in ASYCUDA and the shipment is held pending resolution of the matter.</td>
<td>31. If inspection identifies irregularity the findings are communicated to the unit head and the goods held pending further action. If serious irregularity, follow up investigation/enforcement taken as required (by LCD and or OGA as appropriate), including seizure of goods, penalty etc.</td>
</tr>
<tr>
<td>35.</td>
<td>Further action may be taken including seizure etc. in cases of serious discrepancies</td>
<td>32. Enforcement actions recorded in SW enforcement data base. Information used to update risk profiles and to prepare management and other reports.</td>
</tr>
<tr>
<td>36.</td>
<td>If all is in order the head of customs Inspection Unit (red channel) or Document verification unit (yellow or green channel) signs/approves ACDD.</td>
<td>If enforcement data base implemented, the details of the case would be entered in the system at that time. Details of case would also be used to update risk criteria in the RM system.</td>
</tr>
<tr>
<td>37.</td>
<td>ACDD status is redirected to Green by Unit head and the ACDD is assessed by ASYCUDA and the system issues and assessment notice.</td>
<td>33. If no irregularities detected and all in order, electronic approval entered in AW by Head of Inspection unit.</td>
</tr>
<tr>
<td>38.</td>
<td>TR pays duty and taxes at Bank or Treasury depending on the amount. If paid at the Bank, Bank issues payment notice (receipt) to TR.</td>
<td>If self-assessment implemented, assessment takes place at step 16 (when electronic ACDD is validated -and if hard copy -face vetted).</td>
</tr>
<tr>
<td></td>
<td>36. Trader makes single payment of duty taxes and fees and charges. System accounts for revenue by type and for each agency (duty and tax revenue by tax type, fees and charges by type assigned to appropriate accounts). Direct payment through banking system or Treasury. Payment options in place including prepaid accounts, deferred/periodic payment etc.</td>
<td>Fees and charges levied at time of clearance should be accounted for on the ACDD and the revenue coded to the respective agency. (Single, electronic payment). Options will be required for small traders who prefer to pay by cash or cheque. Note: If self-assessment revenue and fees paid at Step 16 – see comment.</td>
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<tr>
<td>39.</td>
<td>TO processes payment, inputs payment information (including bank advice/receipt if paid at Bank) into ASYCUDA and issues 2 copies of receipt to TR. (ASYCUDA updates payment information).</td>
<td>37. Treasury Office processes payment through treasury system and issues AW generated receipt/payment notice to trader.</td>
</tr>
<tr>
<td>40.</td>
<td>TR returns Treasury receipt to Customs.</td>
<td>Electronic receipt issued via LNSW. Note: if self-assessment implemented the receipt would be issued at Step 16.</td>
</tr>
<tr>
<td>41.</td>
<td>ACDD package, including exit note submitted to the Chief of Customs at Thanaleng for approval and signature. (Deputy Chief may sign in his absence).</td>
<td>39. Final release approval by Chief of Office in AW and transmitted to Trader (and OGA) via SW (SMS, Email).</td>
</tr>
<tr>
<td>42.</td>
<td>Trucks selected for scanning at FB precede though scanner.</td>
<td>(Recommend delegation of this responsibility). If electronic transactions legislation (and implementing decree) not in place, one hard copy of the ACDD would be required. Chief would sign and return to TR.</td>
</tr>
<tr>
<td>43.</td>
<td>TR collects approved exit note and provides to DR.</td>
<td>40. Exit note issued by AW and transmitted via SW to trader, OGA and to Gate office to allow exit of vehicle.</td>
</tr>
<tr>
<td>44.</td>
<td>DR proceeds to gate and provides exit note to the CO. Truck departs.</td>
<td>41. At gate, exit can be authorized electronically. Driver may require hard copy of exit note for own purposes.</td>
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<td>If AW/LNSW system available at gate.</td>
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# Appendix B: MATRIX OF CURRENT AND PROPOSED EXPORT PROCESS – GENERAL

<table>
<thead>
<tr>
<th>Step</th>
<th>Current Process</th>
<th>Proposed Process</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>TR submits transport documents (cargo manifest) to LCD at TL (within 24 hours of arrival of goods at border).</td>
<td>1. Trader submits electronic transport documents (cargo manifest) to LCD (within 24 hours of arrival of goods at border).</td>
<td>Electronically submitted.</td>
</tr>
<tr>
<td>2.</td>
<td>TR pays 100,000LAK customs processing fee. (Note: TR also required to purchase 3 copies of the ACDD)</td>
<td>See Step 20 below</td>
<td>Fees and charges levied at time of clearance should be accounted for on the ACDD and the revenue coded to the respective agency. (Single, electronic payment). Options will be required for small traders who prefer to pay by cash or cheque. The customs processing fee could be accounted for on the ACDD and collected as part of a single payment. Arrangements required to ensure revenue credited directly to the LCD.</td>
</tr>
<tr>
<td>3.</td>
<td>TR inputs ACDD data into ASYCUDA at TL at time of or in advance of arrival of truck (within 15 days of submission of transport documents). ACDD from LCD for 5,000LAK.</td>
<td>2. Trader submits electronic customs declarations (ACDDs) and attached data and/or required documents to the LCD through the SW. Trader accesses trade data folder (TDF) and inputs additional data not already provided at time of export-related license/permit/certificate issuance (in the case of goods requiring PLIA licenses etc). (Note: ACDD may be submitted in advance of arrival of the goods for export. Procedures similar to import – see Table 1 step 1)</td>
<td>As with input transactions options for data input are provided – see Appendix 1 DTI expanded to all traders who meet technical and other requirements. For smaller traders/agents data may be input at LCD kiosks at various customs office locations (e.g. in Vientiane for goods clearing at the FB/TL checkpoint. Trader need not be physically at the checkpoint to input ACDD.</td>
</tr>
<tr>
<td>4.</td>
<td>ASYCUDA system validates the ACDD and if accepted registers the ACDD.</td>
<td>3. The ACDD data is validated in the SW (parsing) and if all is in order the data is forwarded to the LCD (AW) the ACDD is registered in AW. Notification of receipt of the data is automatically sent to the respon-</td>
<td>Validation of the ACDD and attached documents would be done by the LNSW when data submitted according to LCD and OGA requirements.</td>
</tr>
</tbody>
</table>
5. Once validated, TR prints and signs three copies of the ACDD (two for customs, and one for the trader) and attaches supporting documents, including receipt for processing fee.

Reduced requirement for ACDD printing at this point in the processing.

4. LCD Officer (CO) vets electronic ACDD and attached documentation on AW system including electronic copies of attached documents. Where hard copies of documents submitted at time of lodgement (or at time of release), document vetting function would continue.

The need for vetting should be reviewed if validation (Step 3 above) covers data in attached documents as well as ACDD.

5. OGA vets permit/license/certificate data (and in most cases hard copy documents as well) and verifies that they are for the shipment being exported, that the data is complete and accurate, etc. (See table 2)

The need for vetting should be reviewed if validation (Step 3 above) covers data in attached documents as well as ACDD.

6. TR (agent) obtains signature and stamp of the consignee (importer) on the ACDD (either the TR travels to the importer’s premises, or in some cases the TR has the blank ACDD pre-signed by the consignee).

Eliminate this requirement.

7. TR presents two copies of the signed ACDD and attached documents to the LCD Declaration Reception Counter for face vetting and processing.

Where hard copies of documents submitted at time of lodgement, this function would continue.

Procedure can be eliminated for electronic submission of documents. Co can do vetting/review on system (ASYCUDA) including reviewing electronic copies of attached documents.

8. If required TR submits ACDD and attached documents to OGA for processing/approval.

As above data submitted electronically via SW.
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<thead>
<tr>
<th>9.</th>
<th>If documents are missing or submitted documents contain errors the CO rejects the declaration and returns the ACDD to the TR for correction. (If all is OK proceed to Step 11).</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.</td>
<td>In cases of discrepancies, missing data or documents or other errors in the ACDD and attachments LCD/OGA contacts trader (via email/SMS/telephone or traders preferred method of communication) and requests corrective action (as per current procedures). Hard copies returned if presented.</td>
</tr>
<tr>
<td>10.</td>
<td>The TR reviews the rejected ACDD package, makes corrections, or obtains missing documents. If data re-entry required TR must purchase new ACDD forms and re-enter ACDD into ASYCUDA (Step 3). If only attached documents require adjustment TR resubmits ACDD package to LCD Declaration Reception Desk (Step 7).</td>
</tr>
<tr>
<td>7.</td>
<td>In response to message, trader revises and resubmits information electronically to LCD and to OGA via SW. If hard copy documents, trader reviews documents, re-enters data if necessary, and resubmits documents (or provides missing documents).</td>
</tr>
<tr>
<td>11.</td>
<td>If face vetting OK, ASYCUDA assigns ACDD to a processing path (Green – release; Yellow - documentary review; Red – physical inspection; Blue – post clearance verification) selectivity module.</td>
</tr>
<tr>
<td>8.</td>
<td>Once vetting of ACDD submission complete, the ACDD is assessed (LCD and OGA selectivity criteria/profiles) using the SW Risk Management system and treatment communicated to the AW Selectivity module.</td>
</tr>
<tr>
<td>9.</td>
<td>ACDD processed according to the processing channel assigned by AW based on the risk assessment (green, yellow, red or blue).</td>
</tr>
<tr>
<td>10.</td>
<td>ACDDs assigned to the Green channel are assessed, and once payment made the goods released through the system.</td>
</tr>
<tr>
<td>12.</td>
<td>In all cases (Green, yellow, red and blue) ACDD and attached documents are passed to the Document Review unit for verification of the information.</td>
</tr>
<tr>
<td>13.</td>
<td>All ACDDs and attached documents reviewed by Doc. Verification unit.</td>
</tr>
<tr>
<td>11.</td>
<td>For ACDDs assigned to the Yellow channel the documentary verification takes place and subject to satisfactory result (no irregularities) the ACDD is processed by AW.</td>
</tr>
<tr>
<td>12.</td>
<td>Risk assessment is expected to be carried out at the SW level in order to include risk profiles parameters etc. of OGAs as well as LCD. The selectivity module of ASYCUDA would continue to be used to communicate the risk profiles and treatment to the LCD and OGA staff. (refer to the Risk Management Report).</td>
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Currently all ACDDs are verified.
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<tbody>
<tr>
<td>14.</td>
<td>CO requests clarification from TR if needed.</td>
</tr>
<tr>
<td>15.</td>
<td>TR provides clarification to CO.</td>
</tr>
<tr>
<td>16.</td>
<td>If all is in order, the ACDD is submitted to the Head of the Unit who decides if ACDD to be redirected to Green channel for assessment by the system. (Proceed to Step 22 – if duty or tax payable or to Step 25 if none payable), or referred for physical inspection (Step 17).</td>
</tr>
<tr>
<td>17.</td>
<td>ACDDs assigned to the red channel are referred to the inspection unit.</td>
</tr>
<tr>
<td>18.</td>
<td>Goods are inspected, generally in conjunction with other agencies as required.</td>
</tr>
<tr>
<td>19.</td>
<td>If the inspection detects irregularities CO notes the irregularities in ASYCUDA and the shipment is held pending resolution of the matter.</td>
</tr>
<tr>
<td>12.</td>
<td>Trader notified in case of discrepancies or for clarification/additional information required to support declaration. (May be by SMS, Email etc. according to the traders preferred communications method).</td>
</tr>
<tr>
<td>13.</td>
<td>Trader provides additional information via electronic message to CO (or if requested in hard copy) TR may need to discuss issues with CO.</td>
</tr>
<tr>
<td>14.</td>
<td>Once verification completed satisfactorily, the electronic ACDD is referred in AW to Unit Head for review and authorization with recommendation to release or refer for inspection recorded in AW.</td>
</tr>
<tr>
<td>15.</td>
<td>For ACDDs assigned to the Red channel the physical inspection takes place and subject to satisfactory result (no irregularities) the ACDD is processed by AW. Joint LCD and OGA inspections as required.</td>
</tr>
<tr>
<td>16.</td>
<td>Inspection results recorded in AW and transmitted to LNSW RM system. Electronic reports provided to Head of Unit. Reports also sent to OGAs involved via the LNSW. Reports to include information on results, details of findings, selectivity indicators or profiles that generated inspection.</td>
</tr>
<tr>
<td>17.</td>
<td>If irregularities are discovered during verification, the shipment is not released and is held pending resolution of the issue. This may involve discussions with trader etc.</td>
</tr>
<tr>
<td></td>
<td>Inspections to be risk based and the overall percentage of shipments inspected will be reduced over time through application of RM. Cos and OGAs to be provided with tablet devices to allow input of inspection results and details directly in the system. Information will be sent to the RM system. Results Data to be codified to allow analysis.</td>
</tr>
<tr>
<td></td>
<td>COs and OGAs could be provided with tablet devices to allow input of inspection results and details directly in the system as the inspection is carried out. Information will be sent to the RM system to validate risk criteria, provide input to update criteria and to monitor effectiveness of inspections and of the risk criteria used. Inspection results data to be codified to allow analysis by RM system. Both resultant and non-resultant inspections should be documented. Enforcement action to be recorded in Customs enforcement data base.</td>
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</tr>
<tr>
<td>20.</td>
<td>Further action may be taken including seizure etc. in cases of serious discrepancies.</td>
</tr>
<tr>
<td>18.</td>
<td>Cases of serious irregularities will be subject to further actions (penalties, seizure etc.) As per current procedures</td>
</tr>
<tr>
<td>21.</td>
<td>If all is in order, the custom officer completes the inspection act and signs back of ACDD. The OGA official indicates approval of release by signing and stamping the permit/license.</td>
</tr>
<tr>
<td>19.</td>
<td>If no irregularities detected and all in order, electronic approval entered in AW by Head of Inspection unit.</td>
</tr>
<tr>
<td>22.</td>
<td>The CO submits ACDD to Head of unit who reassigns ACDD to Green channel in ASYCUDA and the ACDD is assessed by the system.</td>
</tr>
<tr>
<td>20.</td>
<td>Electronic release approval given in ASYCUDA by OGAs as appropriate.</td>
</tr>
<tr>
<td>21.</td>
<td>ACDD status is redirected to Green by Unit head and the ACDD is assessed (final).</td>
</tr>
<tr>
<td>23.</td>
<td>TR pays any duty and taxes payable at Bank or Treasury depending on the amount.</td>
</tr>
<tr>
<td>22.</td>
<td>Trader makes single payment of duty taxes and fees and charges.</td>
</tr>
<tr>
<td>24.</td>
<td>TO processes payment, inputs payment information (including bank advice if paid at Bank) into ASYCUDA and issues 2 copies of receipt to TR.</td>
</tr>
<tr>
<td>23.</td>
<td>Treasury Office processes payment through treasury system and issues AW generated receipt/payment notice to trader.</td>
</tr>
<tr>
<td>25.</td>
<td>TR returns Treasury receipt to Customs.</td>
</tr>
<tr>
<td>24.</td>
<td>Approval of release by Chief of Office can be done in system if electronic transaction legislation in place.</td>
</tr>
<tr>
<td>26.</td>
<td>ACDD package, including exit note submitted to the Chief of Customs Office for approval and signature (Deputy Chief may sign in his absence).</td>
</tr>
<tr>
<td>27.</td>
<td>In the absence of electronic transactions legislation etc. one hard copy may be required. Chief would be required to sign and return to TR. Consideration should be given to delegating authority to Deputy Chief or unit Heads.</td>
</tr>
</tbody>
</table>
## Appendix C: MATRIX OF CURRENT AND PROPOSED TRANSIT PROCESSES

<table>
<thead>
<tr>
<th>Step</th>
<th>Current Process</th>
<th>Proposed Process</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>TR obtains a MOIC transit permit for the transit operation (at provincial office or in Vientiane).</td>
<td>1. Trader obtains electronic transit permit from MOIC and LCD via the SW.</td>
<td>Trader should be able to submit one application for both permits. Recommend one permit that can be used by both agencies.</td>
</tr>
<tr>
<td>2.</td>
<td>TR signs a contract with the LCD regarding the transit movement.</td>
<td>2. The electronic transit permit data is stored in TDF and is recorded in the database of certificates, permits and licenses maintained in the LNSW.</td>
<td>The requirement for this contract should be reconsidered and if possible eliminated if single permit implemented.</td>
</tr>
<tr>
<td>3.</td>
<td>The TR submits the transit permit and guarantee (which may be in the form of a bank guarantee, cheque or cash) and transit contract to LCD at the arrival checkpoint.</td>
<td>3. Transit guarantee submitted to LCD. Standing guarantee is an option that would eliminate need for individual guarantees. Transit system would manage guarantees – either AW or CBTA transit system.</td>
<td>Sufficient guarantees and security are provided for under provisions of the CBTA transit regime. The requirement for this additional document and contract is questionable. Possibly the guarantee could be recorded and administered in the ASYCUDA securities module and linked to the transit module. Hard copies of permits required by driver in case of checks en route. Separate permit may not be required and transit ACDD used for this purpose.</td>
</tr>
<tr>
<td>4.</td>
<td>LCD issues customs transit permit and accepts the security/deposit.</td>
<td>4. Truck arrives at border checkpoint.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Truck arrives at border post.</td>
<td>4. Truck arrives at border checkpoint.</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>DR reports to Immigration for passport processing (passport or border pass).</td>
<td>5. Driver reports to Immigration for passport processing (passport or border pass).</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>TR collects documents from DR, and assembles supporting documents (invoice, packing lists, Lao permits etc.).</td>
<td>6. Most documents submitted electronically in advance through LNSW. Driver may have some foreign documents (packing list, cargo manifest, etc.) which would be given to the trader. Additional documents scanned and submitted with ACDD via SW.</td>
<td>Lao issued licenses, permits and certificates would be processed via the SW. In many cases foreign permits certificates etc. would be provided in advance (electronically) and submitted through the LNSW and stored in the trader's folder.</td>
</tr>
<tr>
<td>No.</td>
<td>Description</td>
<td>Requirements for these foreign documents to be reviewed.</td>
<td>Comments</td>
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</tr>
<tr>
<td>8.</td>
<td>If transporting animals, animal products, or animal related items TR submits a copy of the import permit from the destination country, a transit permit application accompanied by a veterinary certificate from the country of origin to the Animal Inspection Unit (AIU).</td>
<td>PLIA controls on transit set out in legislation. Permit application process to be integrated to reduce duplicate data entry.</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>AIU reviews documentation and inspects animals, animal products or animal related items.</td>
<td>Some hard copies of documents (particularly those from foreign sources) will likely still be presented – ideally they should be scanned with the ACDD submission.</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>If all requirements met and no risk identified the head of the AIU issues a transit permit.</td>
<td>Consideration to combining transit permits into one electronic document (LCD, FDD, AIU and PIU requirements)</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>If risk identified, permit may not be issued or conditions of permit revised.</td>
<td></td>
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</tr>
<tr>
<td>12.</td>
<td>If transporting plants, plant products, seeds, fertilizer or pesticides the TR submits an application for authorization to the PIU for the transit movement of the goods.</td>
<td>This application would be through the SW and would use data already provided in TDF – no duplication of data.</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>PIU reviews application and inspects the goods, and verifies the certificates from exporting country.</td>
<td>Inspection carried out as part of joint team – See Step 22</td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>If Phytosanitary risk identified, PIO may deny permission and either detain shipment or require re-exportation.</td>
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<tr>
<td>15.</td>
<td><strong>PIU issues authorization (permit) for transit if all in order.</strong></td>
<td>14. If no risk identified, PIU issues electronic permit/authorization through the SW. LCD advised through SW of the approval and permit issuance. (Hard copy may be provided if required)</td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td><strong>For food and drug products TR submits permits, licenses and certificates (as required) to the Food and Drug Unit, Ministry of Health (FDU).</strong></td>
<td>15. For food and drug products the trader submits an electronic permit application via the LNSW with copies of permits, licenses and certificates (as required) to the Food and Drug Unit, Ministry of Health (FDU). This should be done in advance of the arrival of the shipment.</td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td><strong>FDU issues transit permit for food and drug products.</strong></td>
<td>16. Electronic permit issued by FDU and stored in the Trade Data Folder. (Hard copy may be provided if required). FDU at checkpoint notified of issuance of the permit by SW. As noted above consideration to using a combined transit permit for all involved agencies should be considered to eliminate redundant permits and data input.</td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td><strong>TR pays 100,000LAK customs processing fee. (Note: TR also required to purchase 3 copies of the ACDD from LCD for 5,000LAK).</strong></td>
<td>17. <strong>Trader pays 100,000LAK customs processing fee. Subject to decision regarding SW fees, Customs processing fee may continue to be assessed as separate fee.</strong> To be determined according to the LNSW fee structure.</td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td><strong>TR inputs ACDD data for transit operation (Customs Regime IM8 into ASYCUDA).</strong></td>
<td>18. <strong>Trader inputs ACDD data for transit operation using Direct Trader Input via the SW. Advance submission of ACDD data and attached electronic documents an option.</strong> Same process as for all ACDD input procedures.</td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td><strong>ASYCUDA system validates and registers the ACDD.</strong></td>
<td>19. <strong>SW validates data.</strong></td>
<td></td>
</tr>
<tr>
<td>21.</td>
<td><strong>Once validated and registered, TR prints three copies of the ACDD (two for customs, and one for the trader), signs as the declarant, and attaches supporting documents, including receipt for processing fee, and bank guarantee or other security.</strong></td>
<td>20. Once validated data sent to LCD AW and notification sent to OGA (if involved) ACDD registered in AW.</td>
<td></td>
</tr>
<tr>
<td>No.</td>
<td>Activity Description</td>
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<tr>
<td>22.</td>
<td>TR presents two copies of the ACDD and attached documents to the LCD Declaration Reception Counter.</td>
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<tr>
<td>23.</td>
<td>ACDD and attached documents face vetted and processed by LCD.</td>
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<tr>
<td>24.</td>
<td>CO inspection team inspects vehicle and affixes customs seal to container or truck trailer.</td>
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<tr>
<td>25.</td>
<td>CO completes and signs transit box of ACDD indicating conditions of transit (route, time allowed).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26.</td>
<td>If all is in order the head of customs inspection unit sign/approves ACDD.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27.</td>
<td>Head of Customs Unit redirects ACDD in ASYCUDA to green, and ACDD is assessed by system.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28.</td>
<td>ACDD signed and stamped by chief of office.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29.</td>
<td>DR departs entry border post and proceeds to exit border station in accordance with instructions issued by LCD (route, time allowed etc.).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30.</td>
<td>Truck arrives at exit border post.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21.</td>
<td>LCD Officer (CO) vets electronic ACDD and attached documentation on AW system including electronic copies of attached documents. For goods subject to OGA requirements data reviewed by the OGA (vetted) to ensure their documentary and data requirements met.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22.</td>
<td>LCD/OGA inspection team inspects vehicle and affixes customs seal to container or truck trailer –as required, joint inspection with OGAs.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23.</td>
<td>LCD input data into ASYCUDA system for control (transit module).</td>
<td></td>
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<tr>
<td>24.</td>
<td>Head of LCD Unit enters electronic approval in AW, with any conditions for the transit movement (i.e. route, time frame).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25.</td>
<td>Head of Unit redirects ACDD in ASYCUDA to green, and ACDD is assessed by system.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26.</td>
<td>Final release approval by Chief of Office recorded in AW and transmitted to Trader (and OGA) via SW (SMS, Email). Transit document/permit provided to driver.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27.</td>
<td>Vehicle departs entry border post and proceeds to exit border station in accordance with instructions issued by LCD (route, time allowed etc.).</td>
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</tr>
</tbody>
</table>

Exit Checkpoint Procedures

<table>
<thead>
<tr>
<th>No.</th>
<th>Activity Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>28.</td>
<td>Truck arrives at exit border post.</td>
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<td></td>
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</tr>
<tr>
<td>31.</td>
<td>DR/TR submits transit ACDD and attached documents to LCD CO.</td>
</tr>
<tr>
<td>32.</td>
<td>CO inspects vehicle/container to ensure seal have not been tampered with and that goods have not been removed. (Generally no cargo inspection is carried out).</td>
</tr>
<tr>
<td>33.</td>
<td>Depending on the goods the AIU, FDU or PIU officers inspect shipment as required (jointly with LCD) to verify seals etc. (where present).</td>
</tr>
<tr>
<td>34.</td>
<td>PIU sends copy of transit document to PIU at entry checkpoint.</td>
</tr>
<tr>
<td>35.</td>
<td>AIU sends copy of transit documents to AIS at entry checkpoint.</td>
</tr>
<tr>
<td>36.</td>
<td>ACDD is updated in AW to cancel the IM 08 Transit operation. (Note this is the procedure with AW).</td>
</tr>
<tr>
<td>37.</td>
<td>If all is in order the truck is allowed to depart.</td>
</tr>
<tr>
<td>38.</td>
<td>The transit guarantee/deposit is cancelled or refunded by LCD.</td>
</tr>
</tbody>
</table>
### Appendix D: MATRIX OF CURRENT AND PROPOSED OGA IMPORT PROCESSES

#### Pre Arrival Processing – Cargo reporting and customs declaration (ACDD)\(^{16}\)

<p>| | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>OGA receives electronic notification of import permits and letters of authorization certificates issued by the PLIA head office via the SW (permit data stored in Certificate, License and Permit database in the SW pending arrival of goods). OGA officers can access the CLP database for goods within their area of responsibility to review information, based on their user profile and access levels in the SW.</td>
</tr>
<tr>
<td>2.</td>
<td>Implementation of Pre arrival submission of ACDDs and required supporting documents and data which is provided for in Article 29 of the Customs Law -2012 would enable the LCD and OGAs to assess risks of shipment (revenue and compliance) and to decide on its treatment in advance of the arrival of the shipment. Trade would be facilitated by this pre-arrival processing and government agencies would save time and effort in processing the importation of goods.</td>
</tr>
<tr>
<td>3.</td>
<td>The advance ACDD data is validated in the LNSW and forwarded to the LCD AW where the data is stored pending arrival of the goods.</td>
</tr>
<tr>
<td>4.</td>
<td>The SW sends an electronic notification to the OGA involved of the submission of the ACDD data for goods for which they are responsible. The SW identifies the responsible OGA based on the tariff code of the goods.</td>
</tr>
<tr>
<td>5.</td>
<td>The practice of keeping hard copy folders with permits/licenses/letters of approval in the OGA office at the border will be eliminated as the documents will be stored in the trader folder in the SW and can be accessed by the OGA inspection office on line. If required, hard copies will be presented at time of ACDD processing for OGA.</td>
</tr>
</tbody>
</table>

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\(^{16}\) While there are differences between the specific requirements of the License and Permit Issuing Agencies – referred to as Other Government Agencies – OGAs – at the border, the overall processes at the border are similar. Therefore once set of “TO-BE” processes has been outlined for all these agencies, and this Matrix includes the procedures of the OGAs operating at the border – MAF – Plant and Animal Quarantine and MOH Food and Drug Control, in addition of course to the LCD.
<p>| | |</p>
<table>
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</thead>
<tbody>
<tr>
<td><strong>6.</strong></td>
<td>Risk assessment of the data is carried out by LCD and the responsible OGA using the Risk Management system (including risk profiles and indicators from OGAs) and results are communicated to the AW Selectivity module. Decision can be made at this time on the treatment of the shipment upon arrival which would be held in AW until the goods arrival.</td>
</tr>
<tr>
<td></td>
<td>With pre arrival submission of cargo data the LCD and OGAs would be able to do risk assessments of the shipment, primarily focusing on detection of illegal products or high risk imports of legitimate goods (e.g. plants and seeds, pesticides, animals from high risk areas).</td>
</tr>
<tr>
<td><strong>7.</strong></td>
<td>Upon arrival of the shipment the Trader (or transporter) notifies the LCD (AW) and the OGA via the LNSW of the arrival and provides any additional data or documents required.</td>
</tr>
<tr>
<td></td>
<td>Clearance would be expedited based on the pre arrival information and analysis by LCD and the OGA involved.</td>
</tr>
<tr>
<td><strong>8.</strong></td>
<td>Goods receive expedited clearance and release subject to the risk assessment and the identified treatment of the goods by OGAs and the LCD through the RM system.</td>
</tr>
</tbody>
</table>

### Cargo Clearance Processes upon arrival of Goods

<table>
<thead>
<tr>
<th>Proposed Process</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>9.</strong> Truck arrives at entry gate.</td>
<td></td>
</tr>
<tr>
<td><strong>10.</strong> Driver reports to Immigration for passport control (passport or border pass).</td>
<td></td>
</tr>
<tr>
<td><strong>11.</strong> For goods with PLIA licenses, permits etc. most supporting documents submitted electronically to SW in advance and stored in the CLP database (as well as in the trader's trade data folder created at the time of license/permit issuance). Driver may have some foreign documents that were not available in advance (packing list, cargo manifest, certificates etc.) and would provide them to the agent/trader. [Note: Authorization for agents to represent traders recorded in SW]</td>
<td>Note: Previously submitted data (i.e. at time of trader registration at LPJA and permit application) is retrieved from Trade Data File on SW by trader and is not resubmitted. Additional data may include shipment details (packing list, transport documents) transporter/vehicle details etc.</td>
</tr>
<tr>
<td><strong>12.</strong> Registered Trader (authorized agent) inputs ACDD and supporting data into SW via web. Preferred option is Direct Trader Input by authorized traders from their office. Traders may input data to SW at border office kiosk, or at SW Kiosks located at GOL offices in major towns (regional offices etc.)</td>
<td></td>
</tr>
<tr>
<td><strong>13.</strong> Data validated by SW (parsing), and ACDD registered in AW. For goods requiring OGA release approval, notification of the ACDD submission sent from SW to the relevant agency in addition to LCD.</td>
<td></td>
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</tr>
<tr>
<td><strong>14.</strong></td>
<td>OGA officer accesses Certificate, License, and Permits database (CLP database) in SW and reviews (vets) submitted data and electronic (and if provided, hard copy) attached documentation to ensure their documentary and data requirements are met.</td>
</tr>
<tr>
<td></td>
<td>Data/permits in LNSW CLP database.</td>
</tr>
<tr>
<td><strong>15.</strong></td>
<td>In cases of discrepancies, missing data or documents or other errors, OGA officer contacts trader (via email/SMS/telephone) and requests corrective action (as per current procedures). Hard copies returned if presented.</td>
</tr>
<tr>
<td></td>
<td>Messaging capacity in LNSW. TR resubmits or amends the permit application to the MOH through LNSW based on discussions with HQ officials.</td>
</tr>
<tr>
<td><strong>16.</strong></td>
<td>In response to message, trader revises and resubmits information electronically to OGA via SW. If hard copy documents, trader reviews documents, re-enters data if necessary, and resubmits documents (or provides missing documents). As required LCD data (ACDD) updated by trader.</td>
</tr>
<tr>
<td></td>
<td>OGA action would be recorded in the LNSW and communicated to the LCD. If goods to be inspected etc. OGA risk criteria and profiles would be developed and recorded in the LNSW RM module. Additionally, officers may make selectivity decisions based on particular case. OGA approval indicated in the LNSW and sent to the LCD before shipment can be released.</td>
</tr>
<tr>
<td><strong>17.</strong></td>
<td>If permits/license in order and all information provided (vetting successful), OGA indicates action it requires to be taken based on Risk Management system/risk assessment – physical inspection, documentation verification, or release without inspection and records the action (treatment) in the SW.</td>
</tr>
<tr>
<td></td>
<td>Risk criteria (selectivity criteria) will be established in a risk management system in the LNSW based on the assessed risks of products and individual shipments. The risk rating will be used to determine the treatment of the shipment in AW (green, yellow, red or blue processing channels). In most cases, under current policy shipments will be inspected. The intensity and extent of inspection will be identified in the risk criteria. ACDDs will be assessed according to these FDU risk criteria when processed through the LNSW and communicated to AW electronically.</td>
</tr>
<tr>
<td><strong>18.</strong></td>
<td>The treatment determined by the OGA is communicated from the SW RM system to AW (selectivity Module) which assigns the ACDD a processing path based on risk assessment direction i.e. Green, Yellow, Red or Blue processing channel along with any special instructions.</td>
</tr>
<tr>
<td></td>
<td>If ODA requires shipment to be inspected (based on risk assessment) shipment is held for OGA inspection. LCD (AW) will be notified via the LNSW that shipment to be examined (red channel).</td>
</tr>
<tr>
<td></td>
<td>Due to the absence of refrigeration facilities perishable goods (meat, fish, plant products etc.) may be permitted by the OGA to proceed to inland facilities for temporary storage and inspection. Customs issues an “immediate release” subject to a guarantee/deposit (LCD requirements).</td>
</tr>
<tr>
<td>---</td>
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</tr>
<tr>
<td>21.</td>
<td>Trader advised of inspection (time and location) via SMS, email or by telephone according to the trader’s preferred communication method. Advice would come from the OGA or LCD.</td>
</tr>
<tr>
<td>22.</td>
<td>Physical inspection for OGA purposes are carried out by joint LCD/OGA inspection team (either at border crossing or at inland location) based on assessed risk and inspection “instructions” from RM system or officer referrals, reflecting OGA policy (e.g. mandatory physical inspection).</td>
</tr>
<tr>
<td>23.</td>
<td>OGA may require samples of product for testing (particularly plant material, seeds etc. by PIU). Sample taken and simple testing done on site. For more advanced analysis samples are taken and sent for laboratory testing. Some tests take lengthy time (e.g. seeds require time to germinate). Goods are held at border pending test results. Status of shipment processing recorded in SW and AW (i.e. held pending test results)</td>
</tr>
<tr>
<td>24.</td>
<td>If test results (either local or laboratory) are not acceptable OGA (PIU) will not release product. AW advised via SW of the decision. Infested or unsanitary products are destroyed. AW updated (ACDD may be cancelled).</td>
</tr>
<tr>
<td>25.</td>
<td>Inspecting Officers record inspection results in RM system and electronic reports of inspection reviewed in SW by OGA manager and Head of LCD Inspection Unit. (Test results may also be recorded in SW system) Reports to include details of inspection, findings, selectivity indicators or profiles that generated inspection, further action etc. This information is used to update risk profiles and for analysis in RM system.</td>
</tr>
<tr>
<td>26.</td>
<td>If inspection identifies irregularity related to OGA requirements the findings are communicated to the OGA manager and the goods held pending further action. If serious irregularity, follow up investigation/enforcement taken as required by OGA, including re-exportation/destruction of goods, seizure, assessment of penalty etc.</td>
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</tr>
<tr>
<td>27.</td>
<td>Trader informed of outcomes of inspection (if irregularities identified). Trader may deal with OGA HQ to discuss and resolve problem. If issue resolved clearance process would resume.</td>
</tr>
<tr>
<td>28.</td>
<td>Enforcement actions are recorded in SW enforcement database (including test results). Data used to update risk profiles and to prepare management and other reports.</td>
</tr>
<tr>
<td>29.</td>
<td>If inspection is non-resultant, OGA indicates release approval on line through SW to the LCD/AW. The status of ACDD is updated in AW. Approval of attached documents (e.g. SPS certificates, veterinary certificates etc. noted in SW (TDF)) Alternatively the OGA could have direct access to AW to indicate release approval. Final release approval granted by LCD. If required TR can print off approved permit (electronic signature of FDO).</td>
</tr>
<tr>
<td>30.</td>
<td>The ACDD is processed through AW and the shipment is authorized for release (following payment of duty and taxes and fees).</td>
</tr>
<tr>
<td>31.</td>
<td>OGA receives notification of shipment release via SW.</td>
</tr>
<tr>
<td>32.</td>
<td>OGA acquits permit/license in the CLP to ensure it is not reused.</td>
</tr>
<tr>
<td>33.</td>
<td>Shipment released.</td>
</tr>
</tbody>
</table>
# Appendix E: MATRIX OF CURRENT AND PROPOSED LOIP EXEMPT IMPORT PROCESSES

<table>
<thead>
<tr>
<th>Current Process</th>
<th>Proposed Process</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Procedures for approval of Master Plan and Master List (following approval of the Investment Project and the Master Plan)</td>
<td>1. An approved investment project is assigned a reference number (project number) by the MPI.</td>
<td>Required to identify the project in the automated systems (AW and the ML automated system)</td>
</tr>
<tr>
<td></td>
<td>2. The investor prepares a Master Plan of goods to be imported under the approved investment project.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Investor submits the proposed Master Plan to the MPI. The submission would include the assigned project reference number, and the investors identification number (most likely the TIN). These identifiers would be used throughout the entire process of approval and administration of the Master Plan and Master Lists.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. MPI convenes a meeting of an inter-ministerial committee to review the MP (there may be some back and forth between the MPI and the investor for clarification etc.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. The inter-ministerial committee approves the Master Plan.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>6. The investor is advised of the approval and is sent a copy of the approved MP. A separate approval document may be issued. This would likely be in electronic form.</td>
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</tbody>
</table>

\[17\text{ Note: Steps 1 – 7 in the Proposed Column reflect operations that take place in advance of the final approval of the Master Plan. They were described in the AS-IS report but were not included in the Process Maps. They are included here as they relate to the planned development of the automated MP system. The actual processing begins at step 8.}\]
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<tr>
<th>Step</th>
<th>Description</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>1.</td>
<td>INV submits approved Master Plan of imports required for the life of the investment project to the LCD-PLD.</td>
<td>Approved plan need not be submitted as copy of approved MP provided by MPI to LCD.</td>
</tr>
<tr>
<td>2.</td>
<td>PLD reviews Master Plan including discussions with INV.</td>
<td>Redundant as the MP already reviewed and approved by Inter-ministerial committee.</td>
</tr>
<tr>
<td>3.</td>
<td>PLD prepares draft Minister of Finance Decree and Instructions approving Master Plan of exempt imports.</td>
<td>Same procedure</td>
</tr>
<tr>
<td>4.</td>
<td>LCD submits draft MOF Decree and Instructions to MOF.</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>MOF considers proposal and if approved, issues Decree and Instructions to LCD, with copies to the INV and involved Government Ministries (Master Plan approved).</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>INV comes to LCD HQ with proposed Master List (ML) of goods and a written request for permission to import goods on the ML, including a list of border crossings where goods on ML are to be imported (international checkpoints only).</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>LCD reviews ML in consultation with the relevant ministry.</td>
<td>This could be done electronically – no need to send hard copies of ML to other Ministries.</td>
</tr>
<tr>
<td>8.</td>
<td>LCD-IED issues Permission letter to INV for the Master List. (INV must</td>
<td>Permission could be issued electronically. The permission</td>
</tr>
<tr>
<td></td>
<td>submit this letter to the INV.</td>
<td></td>
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<tr>
<td>9.</td>
<td>The ML of exempt imports of vehicles and fuel is signed (approved) by the DG.</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>IED issues instructions to LCD-ROs responsible for the international checkpoints where goods to be imported and sends out a copy of the approved ML and letter of permission. Copy also sent to responsible RO.</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>In advance of submission of an ACDD for imports of vehicles and fuel, INV submits request to IED for pre-approval (these items are controlled by the IED).</td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>IED reviews request and verifies available balance of goods on ML, and adjusts the list accordingly.</td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>LCD’s automated Master List system (identified by investor TIN and the project reference number). Permission letter may be issued electronically.</td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>Ministries (MPI plus responsible ministry) advised by LCD of approval of ML.</td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Customs checkpoints notified of approved ML (and receive authorization to access the investor’s folder in the automated ML system).</td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>In advance of arrival of goods the investor submits an electronic ACDD to AW via SW and attaches an electronic list of the products on the ML being imported in a data format that can be uploaded to the ML system. The ACDD contains identifiers (TIN, Project reference number, ML reference number) to link to the ML system.</td>
<td></td>
</tr>
<tr>
<td>17.</td>
<td>LCD (at the checkpoint or at headquarters for sensitive goods) reviews the ACDD and validates the attached list of ML items.</td>
<td></td>
</tr>
<tr>
<td>18.</td>
<td>If the list is not approved it is returned to the investor electronically to be revised and resubmitted.</td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>If approved, the list is processed in the automated ML system and the ML is updated (quantity would be recorded in the investor’s folder in the ML system. LCD now would have electronic file of the ML.</td>
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**B. Procedures for administration of Master Lists**

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<tbody>
<tr>
<td>11.</td>
<td>In advance of submission of an ACDD for imports of vehicles and fuel, INV submits request to IED for pre-approval (these items are controlled by the IED).</td>
</tr>
<tr>
<td>12.</td>
<td>IED reviews request and verifies available balance of goods on ML, and adjusts the list accordingly.</td>
</tr>
<tr>
<td>13.</td>
<td>IED prepares permission letter for DG’s signature to INV for each importation of fuel and vehicle</td>
</tr>
<tr>
<td>14.</td>
<td>Ministries (MPI plus responsible ministry) advised by LCD of approval of ML.</td>
</tr>
<tr>
<td>15.</td>
<td>Customs checkpoints notified of approved ML (and receive authorization to access the investor’s folder in the automated ML system).</td>
</tr>
<tr>
<td>16.</td>
<td>In advance of arrival of goods the investor submits an electronic ACDD to AW via SW and attaches an electronic list of the products on the ML being imported in a data format that can be uploaded to the ML system. The ACDD contains identifiers (TIN, Project reference number, ML reference number) to link to the ML system.</td>
</tr>
<tr>
<td>17.</td>
<td>LCD (at the checkpoint or at headquarters for sensitive goods) reviews the ACDD and validates the attached list of ML items.</td>
</tr>
<tr>
<td>18.</td>
<td>If the list is not approved it is returned to the investor electronically to be revised and resubmitted.</td>
</tr>
<tr>
<td>19.</td>
<td>If approved, the list is processed in the automated ML system and the ML is updated (quantity would be recorded in the investor’s folder in the ML system. LCD now would have electronic file of the ML.</td>
</tr>
</tbody>
</table>

**Conditions and instructions for administering the ML can be recorded in the ML file. Regional Office would have access to the ML system for monitoring.**

**LCD can decide to delegate this authority. The ML system makes it easier to monitor transactions.**

**Eliminates need for LCD to update the ML. LCD to decide on level of delegation.**

**May be delegated to IED. Eliminate need for permission letter as the...**
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<tr>
<td><strong>imports</strong> (estimated 20 permits for vehicles and 10 for fuel per week).</td>
<td></td>
<td>approved list of items would be recorded in the ML system. Using automated system authority may remain with the DG or could be delegated.</td>
</tr>
<tr>
<td><strong>14.</strong></td>
<td>DG signs permission letter.</td>
<td></td>
</tr>
<tr>
<td><strong>15.</strong></td>
<td>IED provides approved permission letter to INV.</td>
<td>LCD sends a notice of approval of the list of goods to be imported (i.e. issues an electronic permit) to the investor and notifies the checkpoints.</td>
</tr>
<tr>
<td><strong>16.</strong></td>
<td>For imports of all other goods on the ML, INV submits request for permission to Customs Checkpoint in advance of (or at the time of) importation.</td>
<td></td>
</tr>
<tr>
<td><strong>17.</strong></td>
<td>Customs Checkpoint reviews request, verifies balance of the goods on ML and adjusts the ML accordingly.</td>
<td></td>
</tr>
<tr>
<td><strong>18.</strong></td>
<td>Chief of Customs Checkpoint issues permission for exempt import.</td>
<td>Permission can be given in AW. Can eliminate need for separate permission letter.</td>
</tr>
<tr>
<td><strong>19.</strong></td>
<td>Upon arrival of goods at international checkpoint INV submits ACDD to ASYCUDAWorld system with attached ML excerpt and copy of DG or IED permission letter. A specific procedure code has been assigned to LOI imports in ASYCUDA. All ACDDs indicate “attached documents” for Master List attachment.</td>
<td>21. Upon arrival of the goods, the trader advises LCD of goods arrival through LNSW and the ACDD is processed in AW. Indication of the permit number/code is included along with the link to the ML system (investor TIN/reference number of project).</td>
</tr>
<tr>
<td><strong>20.</strong></td>
<td>LCD checkpoint processes declaration including verification of the requested exemption, inspection of the goods etc. and goods released in the normal manner.</td>
<td>22. ACDD processed in the normal manner and release approved.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Customs may want to verify the information in the ML system to ensure the same goods are being imported. The ML system can be accessed and the ML and transactions reviewed on line.</td>
</tr>
</tbody>
</table>

22. At year end INV submits Master List for coming year to IED for review and approval.

23. Monthly reports on MLs generated from the system (pre-programmed reports).

24. At year end, investor submits electronic report on ML to LCD.

25. Investor submits electronic ML for new year to LCD. LCD notifies other agencies of submission and review/approval process begins.

26. Investor is notified of approval of ML and new ML set up in LCD’s ML system.
Annex K:
Overall and General Risk Management Model
1 Management Summary

A risk management model has been proposed for the use of government agencies participating in the Lao National Single Window (LNSW). The proposed model includes several steps, one of which involves deciding on what treatments to use to counter particular risks. These treatments are subsequently applied when that risk arises. However, in order to apply these treatments effectively, it is necessary to identify any instances of the risk occurring. Good risk profiling can help do this and as such, is an enabler for Risk Management.

A structured approach is required in order to develop effective profiles. In the LNSW, to be effective a profile must be current and identify only the license or permit applications or import or export consignments that it is intended to identify. Because risks change (over time) there is an ongoing need to review profiles. Accordingly, the steps in this structured approach could also be seen as phases within a continuing cycle. These steps or phases are:

- Gather information
- Collate information
- Analyse information
- Profile creation
- Record results
- Review results

Guidelines explaining what should occur in each of these steps are provided in Appendix B. However it should be apparent from just looking at the list of steps that information plays a vital role in risk profiling. While the information required by each agency may vary slightly depending on the responsibilities of the agency, generally requirements will be similar. In addition to import and export data, all agencies will require details of any instances of non-compliance, including full details of data relating to each incident, e.g. origin, HS code, value weight, exporter, importer, broker, place of entry or exit etc. Where available, information on detections in other countries is also important as it can provide an important insight into emerging risks or trends.

Analysis of the data should allow the agencies to identify characteristics which are commonly associated with licence or permit applications or consignments presenting particular levels of risk, whether high, medium or low. These characteristics can then be used to construct profiles which can be used in the LNSW to identify applications or consignments of similar risk levels. Once identified these applications or consignments can be dealt with using procedures which are appropriate to the level of risk they present.

Currently none of the agencies that will be associated with the LNSW have access to all the data that they will need to undertake the type and level of analysis which is necessary to create good quality, effective profiles. What data they have is sometimes incomplete, inaccurate and in a format which makes analysis for profiling purposes very difficult. In addition, they do not have access to analytical tools or software which allows them to undertake the type of analysis that is required. The introduction of the LNSW will provide
solutions to both these issues. Initially, because quality and complete historical data won’t be available, the data available through the LNSW will limit what analysis can be undertaken. Over time however, as more and more data becomes available, the quality of the analysis should improve leading to the development of more effective risk profiles.

Before profiling can begin in the agencies it will be necessary to conduct information campaigns to raise the general of knowledge about risk management and profiling within each agency. Currently, apart from the Lao Customs Department (LCD), the level of knowledge about these matters in agencies is low. Ideally the development of profiles for an agency should be undertaken by a small group of trained officers within that agency. These officers will need detailed training on risk management and profile development.
2 Introduction

2.1 Context

As documented in the Trade Facilitation Strategic Plan for Lao PDR (2011-2015), the Lao Government has made a commitment to improve the level of trade facilitation in Lao as an enabler for economic growth. Articulated in the Strategic Plan is the Government’s intention to “move towards a single windows service for cross border trade, based on risks assessment as tools for more effective control” 1 as one means of improving trade facilitation.

While the Trade Facilitation Strategic Plan imposes a liability to facilitate trade on the agencies associated with the LNSW, those agencies also have a responsibility to ensure that the laws designed to protect the people, the economy and the environment are upheld in regard to international trade. These agencies are faced with the challenge of finding a balance between control and facilitation which allows them to control trade to the extent necessary to fulfil their responsibilities and at the same time facilitating trade to the greatest extent possible.

The controls utilised by the PIAs should be limited to the minimum needed to ensure their main objectives are met and should be carried out on a selective basis using risk management techniques to the greatest extent possible. To do this the agencies should:

- focus on high-risk areas and therefore ensure more effective use of available resources
- increase ability to detect offences and non-compliant traders and travellers
- offer compliant traders and travellers greater facilitation
- expedite trade and travel

A Risk Management model has been proposed for use by government agencies in the Lao National Single Window (LNSW).

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1 Ministry of Industry and Commerce, 2011, p.4
This model consists of six processes, as depicted in the diagram below.

Risk treatment, the fifth step in the process, is about identifying the most appropriate strategies (or risk treatments), for those risks that are to be actively dealt with and then putting those strategies into place.

These strategies or risk treatments might require that only applications for licenses or permits which are assessed as high risk need to be approved by a senior officer, e.g. the Deputy Director General, whereas all others may be approved by a lower ranking officer. Other risk treatments might include a requirement to examine supporting documents to verify details on a license application or import declaration if they are assessed as medium risk. The physical inspection of cargo to confirm what is being imported or exported matches with what is recorded in the relating documentation or the drawing and testing of samples to ensure goods comply with health or safety standards might only be undertaken on occasions when a consignment is considered high risk.

After it is decided what action will be taken to address a particular risk the relevant agency needs a way of identifying instances where that risk is more likely to occur. Risk profiles provide a way of doing that. Good
profiles can be very effective in identifying transactions, consignments, importers, exporters, etc. which require closer scrutiny.

For example, if it is decided that commercial consignments of live chickens present a high risk of a particular virus carried by poultry entering the country from country X, it may be decided that blood samples should be taken from 5% of the chickens in each consignment and tested for the virus. The whole consignment may need to be isolated in a designated quarantine area until the testing shows that they are not infected. A profile could be developed which is designed to identify all instances of imports of chickens from country X. This profile could be run against the data included in all import declarations. Any time a match occurs against the declaration would go “red”. Instructions on what action needed to be taken should be included in the information provided when the profile matches. In this case the matter would presumably be referred to a Quarantine officer to arrange for the sampling, testing and quarantining of the chickens.

There are many definitions of a “profile” however for the purposes of the LNSW it is a combination of characteristics, information or indicators which can be used to identify transactions, consignments or entities which ostensibly present a particular level of risk and require predetermined treatment. While profiles are commonly used to identify instances of high risk, they may also be used to identify instances of low risk.

For the purpose of the LNSW, the development of risk profiles should be thought of as a measure that can provide agencies with a ‘picture’ of non-compliance, whether deliberate or unintentional.

Many instances of non-compliance have common characteristics. Through analysis of data, particularly data relating to previous detections of non-compliant entities or consignments, it should be possible to identify what these characteristics are. An example of how this might be done is shown under the section on “Analyse Information” in Appendix B. By looking for these characteristics, agencies will be more likely to identify high-risk consignments or entities and those that require specific controls or actions.

The development and application of risk profiles therefore may be regarded as one tool which allows the whole concept of risk management to be put into practice. By using profiles agencies are able to adopt a more targeted approach to their intervention by identifying the high risk license/permit applications or consignments and only taking more intensive action in regard to those. Adopting streamlined processes and following a policy of minimal intervention for lower risk applications and consignments enables the remainder to be facilitated. The benefit of this approach is that it allows more resources to be focused on the high risk applications and consignments and fewer resources to deal with the remainder.

Looking at this in a different way, by minimising the processing and the level of personnel required to process an application for a low risk license or permit, resources, including more senior personnel, are free to concentrate on the high risk applications or other work, including policy or strategic work. In this way the agencies can become more effective and productive and legitimate trade is facilitated. If profiles are based
on good analysis of relevant data their use for the targeting of high risk license/permit applications and high risk consignments should be significantly more effective and less costly than subjecting all or even a simple random selection of applications or consignments to the same treatment.

2.2 Scope of Work

Initial risk profiles tailored to the needs of each agency was to be the second output to be delivered as part of a risk management strategy and model for agencies participating in the LNSW. This was to be achieved by assisting each agency to formulate risk profiles which were to be applied electronically.

After consultation with agencies during two missions to Vientiane in October/November 2012 and January/February 2013 it became apparent that apart from the LCD, agencies are still a long way from the point they need to be before they would be able to implement risk management or to draft profiles. Consequently it was agreed with the World Bank to instead provide a framework which agencies could use for developing profiles as and when the LNSW is implemented.

2.3 Profile Development

Developing profiles involves the gathering of relevant information and the collation and analysis of that information with the aim of identifying particular characteristics which can then be used for detecting non-compliance. This is explained in more detail in the guidelines for using risk profiles in the LNSW at Appendix B.

Each of the agencies participating in the LNSW should develop their own profiles as they each have their own unique risks to deal with. Consequently it is entirely feasible that a consignment which may be a high risk for one agency may be a low risk in another. However this is not always the case. The personnel involved in the development of profiles should have a good understanding of the agency’s business and the risks it faces.

For practical reasons it would be sensible for one national profiling unit to be established in each agency. This central unit would need to take into account any particular differences or requirements of the different provinces when creating profiles. For example, the type of goods and the risks associated with imports from a particular country might be quite different from those from elsewhere. If the volumes of imports from that country are low then, from a national perspective, these importations may present a high risk. However, because of the volume of imports from that country to the Lao province sharing its border, the risk of these imports may be high in that province. Profiles can be developed and distributed manually or by electronic means, although it is proposed that for the agencies operating through LNSW the profiles would be incorporated into the risk management feature of the system.
Before this can be done it will be necessary to identify the type of information required and then establish whether that information is available. It is quite often the case that relevant data is collected but accessing that data in a way that is useful for analysis is problematic.

The type of information that will be required will vary from agency to agency, depending on their role and their interests at the border. Therefore it is important that, to the greatest extent the law permits, the data available to one agency participating in the LNSW is also available to the other participating agencies for their risk management and profile development purposes. This should include recorded instances of non-compliance. This is because an entity which does not comply with one agency’s requirements is also likely to not comply with those of other agencies.

An effective profile is based on good analysis. Through analysis it should be possible to identify particular characteristics which are present in instances of non-compliance. The availability of accurate, relevant, complete and up-to-date information is therefore crucial to the development of profiles. Currently such information is not readily available however this will change with the introduction of the LNSW. Accordingly the first step in developing a profile is to collect all available information relevant to the risk being treated. Data regarding prior instances of non-compliance, any intelligence which might be relevant and data on the results of audits or inspections should be obtained. This data should then be analysed to try and identify characteristics which might be common to the particular risk being considered. If there appears to be a pattern then these characteristics can be used to make a profile.

Profiles should not be created and left in the system indefinitely. The presence of ineffective or redundant profiles inevitably leads to a slowing down of the system and more license/permit applications, declarations or consignments being subjected to higher levels of scrutiny than is necessary. This can also lead a loss of confidence in the profiles and may even lead to apprehension about risk management in general. It is important that profiles are regularly reviewed, in accordance with a structured programme, to ensure that they are doing what they are designed to do, i.e. that they are effective.
3 Status

3.1 License and Permit Issuing Agencies

Over the course of the risk management specialist’s two missions to Vientiane meetings were held with the following agencies:

- Ministry of Industry and Commerce - Department of Import and Export
- Ministry of Energy and Mines - Department of Mines
- Ministry of Agriculture and Forestry - Department of Planning and Cooperation
  Department of Agriculture, Plant Quarantine Division
  Department of Livestock and Fisheries
- Ministry of Health - Food and Drug Department
  Bureau of Food and Drug Inspection

It was not possible to arrange a workshop on risk management and profiling for license and permit issuing agencies which was planned to occur during the second mission. However a detailed session on risk management and profiling was presented to representatives from the agencies during a two day workshop on Change Management. Representatives from the Departments of Livestock and Fisheries, Agriculture, Food and Drug, Import and Export, Standardization and Metrology and LCD attended this workshop.

The knowledge gained from these meetings was supplemented with the knowledge shared by the other consultants on the team and obtained through their meetings and other workshops and seminars with these agencies. The findings of the Business Process Reengineering consultant, relating to current processes, and the “Roadmap for Process Simplification and Harmonization” recently adopted by the trade related government agencies were also very helpful.

Based on this understanding it is clear that risk management and profiling could be used by the license or permit issuing agencies to determine what action should be undertaken at two critical points;

- when an application for a license or permit is received; and
- when an import or export declaration is submitted.

However, before profiling could be introduced a number of issues need to be addressed.

Knowledge of risk management and profiling within the agencies does vary but overall it is very rudimentary. As identified in the report on the proposed risk management model for the LNSW, management
and staff in each of the agencies associated with the LNSW should be provided with a basic knowledge of risk management and profiling through a programme of agency wide publicity and information sessions. In addition, comprehensive training on risk management and the development and application of profiles should be provided to those chosen to develop profiles prior to the implementation of the LNSW in their agency.

Data required for analysis for risk management and risk profiling needs to be captured and stored where it is easily accessible to those involved in those processes. Currently this is not the case. Not all necessary data is captured in every instance, some data is retained in the provinces and is not combined in a national data base and a considerable amount of data is not held electronically. These factors, combined with no or limited analytical tools make accessing and analysing complete and reliable data very difficult. The LNSW should overcome these deficiencies by including functionality which will meet the data requirements and provide the tools necessary to analyse that data.

To ensure a high quality and to avoid duplication of risk profiles it is advisable that profiling is undertaken by a small group of trained specialists, located centrally in each of the agencies. This group would be required to create profiles on behalf of all the regions. As mentioned previously, the specific needs of the different provinces may vary as the risks faced by one province will sometimes be different to those faced by other regions.

The current range of treatments used by license and permit issuing agencies to deal with risk is quite narrow. Generally pre-clearance treatments such as examining documentation and inspecting cargo are used. The agencies should review the current range of activities they use to treat risk. Options other than pre-clearance interventions may be appropriate in some instances. For example, the use of post clearance audits or field testing would allow cargo to be released sooner and, depending on the risk, it may still provide adequate control.

Currently the requirement for licenses for some products is primarily to enable the licensing agency to gather statistics in order to monitor the export or import of the product. Data available from ASYCUDAWorld or the LNSW should be the source for those statistics.

### 3.2 Customs Department

Several meetings were held with representatives of the Lao Customs Department in October 2012 and in January and February of 2013. This included site visits to the Thanaleng Customs office and the Friendship Bridge border post. In early February 2013 a workshop on risk management and profiling, tailored for the LCD and attended by fourteen LCD officers, was also conducted.
While there is clearly some knowledge of the theory of risk management and profiling amongst LCD officers, in practice it is still new and its application is limited. Even where it is used it is at a basic level. The officers believe that as ASYCUDAWorld is rolled out to more Customs border crossings it will enable risk management to be deployed more broadly throughout the country. However, while the rollout of ASYCUDAWorld may provide a tool which can be used by LCD for part of the risk management process, alone it does not guarantee that a structured or systematic approach to Risk Management, utilising profiles based on analysis of data, will be put into practice. The need for change management and a business process reengineering program which makes risk management a fundamental element of every day operations is also necessary.

As previously reported in the paper on Risk Management in the Lao PDR National Single Window, LCD selectivity criteria tend to be based on a single data field rather than a combination of several fields, as is expected in a profile. This contributes significantly to the high percentage of declarations which are unnecessarily going “red”, i.e. requiring a high number of pre-clearance inspections and achieving very limited results. Hence delaying clearance and negatively impacting trade facilitation. By moving away from the use of a single data field for the selectivity criteria the number of declarations which go “red” and are subject to inspection should be much less. Then the declarations which do go “red” should be those which genuinely present a higher risk and consequently the ratio of detections to inspections should increase.

However, as discussed elsewhere in this report, profiles should be based on analysis of accurate, relevant, complete and up-to-date data. For an agency such as the LCD this should include all historical data relating to importations and exportations and data relating to all seizures and other instances of non-compliance detected. Details of each instance of a match against a profile and the results of any subsequent action, whether positive or not should be available to those tasked with the responsibility of developing profiles. In addition, details of post clearance audits and the results, whether adverse or not, should be available for analysis. At the moment not all of this information is available, at least not as a combined, national data base which includes all the data held by the provinces. The LNSW should provide the solution to this problem.

As with the other agencies, to ensure quality and to avoid duplication, the responsibility for developing profiles within LCD should be centralised. LCD has a Risk Management team under the Deputy Director of Post Clearance Audit which could undertake this role.
4 Conclusions

The adoption of risk management by the government agencies associated with the LNSW will allow them to direct their resources towards the license and permit applications and cargo consignments which present a high level of risk. Streamlined processes, requiring less intervention, can then be used to deal with the remaining applications and consignments. The adoption of risk management can therefore result in:

- More effective use of resources - by directing resources towards those transactions which present a high risk, the ratio of number of detections of non-compliance to the number of interventions should increase;
- Improved levels of trade facilitation – by introducing streamlined or simplified procedures and minimal intervention for non-high risk applications and consignments, legitimate trade is facilitated.

Risk profiles enable risk management to be put into practice. Profiles can be used to identify applications for licenses/permits or consignments of cargo which present a particular level of risk, for example, high, medium or low. The appropriate treatment for that level of risk can then be applied. For example a low risk consignment might be cleared immediately, subject to the payment of any duties or fees, without further checking. Additional documentation and permits maybe required before a medium risk consignment is cleared. A high risk consignment might necessitate the verification of supporting documents and permits by a physical inspection of the cargo.

To ensure good quality and effective risk profiles a systematic approach to the development and maintenance of profiles is necessary. This should involve a number of important steps in a continuing cycle:

- Gather information
- Collate information
- Analyse information
- Profile creation
- Record results
- Review results

The guidelines in Appendix B provide details of what is involved in each step however, as these steps suggest, information plays a vital role in risk profiling. Currently none of the agencies associated with the LNSW have access to all the data that they need to create good quality profiles. What data they have is sometimes incomplete, inaccurate and in a format which makes analysis for profiling purposes very difficult.

The LNSW should provide the facility to collect, store and retrieve all the data that would be required. A lot of that data will be collected as information is input through the LNSW as part of the license and permit application and import or export declaration process. However some data, such as the results of cargo inspections, will need to be input by agency officials. In order to use the data for analysis it is essential that it
can be easily accessed, sorted, queried etc. The LNSW should also provide agencies with the tools and access they need to analyse the data.

It is advisable that the development and ongoing review of profiles for each agency should be undertaken by one small team in the agency. The members of that team would require intensive training in risk management and risk profiling. The general level of knowledge of risk management in the agencies, with the exception of the LCD, is very low. There is a need for an information campaign in each agency to raise the level of knowledge about risk management and the use of risk profiles in all agencies.
Appendix A: BIBLIOGRAPHY OF REFERENCE MATERIALS

Pugliatti, L 2011, Roadmap for Process Simplification and Harmonization Interim Report, PM Group Dublin
Pugliatti, L 2013, Roadmap for Process Simplification and Harmonization, PM Group Dublin
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Siva, R 2010, National Single Windows for Trade - Implementation Considerations, presentation given in Vientiane on behalf of WB Washington DC
Appendix B: Guidelines for Using Risk Profiles in the LNSW

Risk profiling is a tool that puts risk management into practice. A profile is a combination of characteristics, information or indicators which can be used to identify transactions, consignments or entities which ostensibly present a particular level of risk. While profiles are commonly used to identify instances of high risk, they may also be used to identify instances of low risk.

Risk profiling replaces the need to examine all documents and goods, and even random examinations, with a planned and targeted working method. In the context of the LNSW, profiling is about identifying those characteristics of …

- applications for licenses or permits and
- declarations for imports or export

… which indicate that they may present an unacceptably high level of risk. These characteristics are then put into a profile which will be used in the LNSW to identify applications or declarations which contain these characteristics, i.e. are high risk. These applications, declarations or the consignments to which they relate can then be subjected to more intensive scrutiny or intervention than those which do not have these characteristics.

The number of profiles that may be required by each agency will depend on the risks they must deal with. As more data becomes available through the LNSW, better quality analysis should be able to be undertaken and the profiles an agency develops should become more precise. Over time it is expected that the number of profiles each agency has in the LNSW will increase, however the improved analysis should result in more accurate matching. Therefore more profiles should not necessarily result in more total matches but in better quality matches, i.e. genuinely high risk.

The following actions should be taken when implementing risk profiling in the LNSW.

**Gather information**

This first step involves the identification of the type of information which will be useful to an agency for profiling purposes. This may vary from agency to agency but, in addition to import and export data, all would presumably require details of any instances of non-compliance, whether this was detected by examination of documents, cargo inspection or post transaction audits or field checks. Full details of data relating to each incident would be required e.g. origin, HS code, value, weight, exporter, importer, broker, place of entry or exit etc. This information would be required for all detections in Lao PDR.
If available, information on detections in other countries may also be considered. This is because in an international trading environment, what happens in one country is likely to be repeated in others. For example, if one country discovers that imports from a particular supplier are being incorrectly described on the commercial documentation, then there is a strong possibility that exports from that supplier to other countries will also be incorrectly described. A recent example of this is the discovery of horse meat in food products imported into the United Kingdom. This in turn led to the other countries discovering horsemeat in food products.

Information on how the authorities in another country discovered a breach of requirements may also be useful in deciding what treatment should be used to deal with a particular risk. For example if a breach was only discovered through a particular type of laboratory test then the treatment might require a sample of the product to be taken and subjected to that test.

Information from authorities in countries which have imported products from Lao PDR may also be very helpful in developing profiles relating to exports. For example if the overseas authorities have discovered inferior quality or illegal products in cargo exported from a particular province in Lao PDR, the details about those consignments would be helpful in developing profiles focused on exports from that region and designed to stop a reoccurrence of such exports.

Other data relating to the type of entity involved in a non-compliant incident, the size of the business, how long it has been in operation, the number of importations or exportations, the number of employees etc. would be required when trying to identify high risk license or permit applicants. For example, analysis of data may show that the most likely entity to be non-compliant is a sole trader who has been in business for less than 3 years and imports less than 5 times in a year. A profile could be developed which requires that an application for an import permit from such a person be subjected to a full documentary and past record check and for the permit to be approved by a senior official of the agency.

If the information identified as necessary for risk management and profiling purposes is not currently available action needs to be taken to ensure that it is collected and available in future. Some of the required information may be collected by other agencies. With the introduction of the LNSW, all data submitted through it will be stored in electronic format. The LNSW will provide the functionality required to access and analyse the data. Subject to any legal constraints, the data collected via the LNSW by any agency should be accessible to all other agencies through the LNSW. While it is not always the case, a trader who is prepared to try and circumvent one agency’s rules is probably also likely to do the same with other agencies.

**Collate information**
All the required information needs to be brought together in a format which facilitates analysis. This may entail the merging of data from provincial offices or multiple sources.
**Analyse information**

The aim of the analysis is to identify any common characteristics amongst the data relating to the instances of non-compliance. How this might be achieved is shown in the following hypothetical example. Analysis might show that if there were X,000 importations of rice (HS Code 10063019) during 2012, on 12 occasions a particular fungal disease was discovered. Further analysis of the data relating to those 12 occasions reveals that in 10 of the 12 cases the rice came from country A and the remaining 2 from country B. However there were hundreds of other importations of rice from these countries and these did not have the fungal disease. The data might also show that all the diseased rice from country A was exported by Jezza Trading Corp. and the diseased rice consignments from country B were exported by Wacky Ltd. During 2012 both these companies exported many, many times to Lao PDR and each consignment was inspected but the fungal disease was only discovered on the 12 occasions. Looking at the value of the shipments it is discovered that the price per tonne for the shipments containing the diseased rice was $US200 whereas the normal price for rice from these suppliers is usually between $US300 and $US500 per tonne.

Analysis of the three entities who imported the diseased rice revealed that all three were located in Province 3. One was a sole trader and the other two were newly formed private companies. All used the same Customs broker (broker license no. 1234).

Even if instances of non-compliance have not been detected analysis can help identify potential indicators of high risk. Through analysis of data it should be possible to establish the characteristics of a normal importation or exportation of a particular product. This analysis might also highlight past consignments where these characteristics were different. This information can be useful in identifying targets for audits or field testing but it can also be used as the basis for future profiles.

**Creating the profile**

The next step in the process is to use the information obtained through the analysis to construct a profile. It is important to note that the more selection criteria included in a profile the more accurate the target selection. For example, if the only selection criteria in a profile was “origin = China” then all cargo from China would be selected. This might be despite the fact that an agency may not be interested in all commodities coming from China, or goods coming from particular parts of China. By including more criteria the selection can be more refined or targeted.

In order to maintain control over the quality of the profiles access to the profiling system should be restricted to a small number of personnel who have the knowledge necessary to create an effective profile. For the same reason all profiles should be approved or authorised by someone other than the profile creator before they are activated, generally this would be the profile creator’s supervisor.

A register of profiles should be kept to keep track of profiles and to avoid duplication of profiles. The register should include a reference number, the date the profile was created, who created it, who authorised its
activation, what the profile criteria are, the reason the profile was created, what action should occur when there is a match against the profile, when it should be reviewed and the date the profile will expire. It should also be used to record details and outcomes of any reviews.

Using the same details as those in the section on analysis as an example, the matching criteria for a profile used at the declaration stage might look something like “If origin = A and exporter = Jezza Trading Corp. and HS=100630 and unit value <$300” and “If origin = B and exporter = Wacky Ltd and HS=100630 and unit value <$300”. Generally electronic systems have difficulty matching against free text fields such as may be shown in the “owner” field. Consequently the use of unique reference codes or numbers instead of text provides better results. The Tax Identification Number (TIN) is an ideal unique reference for importers.

The profile needs to make it clear what should happen when there is a match. This should have been decided as part of the risk management process when developing the profile. In the rice example the most likely treatment is to withhold the release of the consignment until the rice can be inspected and tested. Under a risk management regime, all or a percentage of other importations which do not match against this profile may be released without inspection.

Again using the details in the rice example, the matching criteria for profiles used at the permit application stage might be “Province=3 and entity type= sole trader and broker = 1234” and be “Province=3 and entity type= private company and year of incorporation > 2011 and broker = 1234”.

Applications for permits which match against profiles used at that stage should be subjected to greater levels of scrutiny and may require the approval of a senior member of staff, whereas those that don’t may be subjected to minimum checks and approved by a less senior staff member.

The person who has to deal with the consequence of a profile match, e.g. the person who must inspect or test the rice or who must check on the permit applicants background needs to know why the profile was created in the first place. This information should be available through the LNSW.

It is important to note that there may be variations in profiles and the need for particular profiles based on geographic location. For example a province which shares a border with Vietnam may well have the need for some different profiles to those required by a province sharing a border with Thailand or China.

Record results
All instances of matches against a profile should be automatically recorded in the LNSW. The results of the action taken as a consequence of the profile match should also be recorded in every instance, i.e. recording that nothing wrong was discovered is just as important as recording details of any matters of non-compliance detected. This information should be recorded in the LNSW by the person who took the action.
Review profiles

On a regular, scheduled, basis profiles should be reviewed to ensure that they are still required and that they are producing the desired result. If the profile has an expiry date the review should occur before that date so that, if the profile is still required, the expiry date can be extended.

Risks can change over time. In some cases the risk which a profile has been designed to treat may no longer be a threat or has been downgraded. For example, profiles which may have been created to deal with an outbreak of a particular animal disease may not be needed or the treatment might be modified if the outbreak has past and there have been no recorded instances of the disease from source countries for an extended period of time. In other cases, a decision might be made to reduce the requirement to take action to only a percentage of matches against the profile, for example for every second or fourth match.

In short the review process can result in one of three outcomes:
- Keep the profile - it is effective and the risk it addresses still exists so extend its validity period
- Delete the profile - it has been ineffective or replaced by a more effective profile or the risk no longer exists
- Modify the profile - amend some of the selection criteria or the treatment that is required when a match occurs

Reviewing a profile requires the same sort of analysis and access to the same types of data as was required for the analysis conducted before the profile was created. The records of the results from matches against the profile should be considered as part of the review process.

The results of the review and action taken as a consequence of it should be approved by someone other than the person who reviewed the profile. Again this would generally be the reviewer’s supervisor. Details of when a profile was reviewed, by whom, the outcome and who approved the outcome should be recorded in the profile register.
Annex L:
Risk Management Profiling Guide
1 Management Summary

A risk management model has been proposed for the use of government agencies participating in the Lao National Single Window (LNSW). The proposed model includes several steps, one of which involves deciding on what treatments to use to counter particular risks. These treatments are subsequently applied when that risk arises. However, in order to apply these treatments effectively, it is necessary to identify any instances of the risk occurring. Good risk profiling can help do this and as such, is an enabler for Risk Management.

A structured approach is required in order to develop effective profiles. In the LNSW, to be effective a profile must be current and identify only the license or permit applications or import or export consignments that it is intended to identify. Because risks change (over time) there is an ongoing need to review profiles. Accordingly, the steps in this structured approach could also be seen as phases within a continuing cycle. These steps or phases are:

- Gather information
- Collate information
- Analyse information
- Profile creation
- Record results
- Review results

Guidelines explaining what should occur in each of these steps are provided in Appendix B. However it should be apparent from just looking at the list of steps that information plays a vital role in risk profiling. While the information required by each agency may vary slightly depending on the responsibilities of the agency, generally requirements will be similar. In addition to import and export data, all agencies will require details of any instances of non-compliance, including full details of data relating to each incident, e.g. origin, HS code, value weight, exporter, importer, broker, place of entry or exit etc. Where available, information on detections in other countries is also important as it can provide an important insight into emerging risks or trends.

Analysis of the data should allow the agencies to identify characteristics which are commonly associated with licence or permit applications or consignments presenting particular levels of risk, whether high, medium or low. These characteristics can then be used to construct profiles which can be used in the LNSW to identify applications or consignments of similar risk levels. Once identified these applications or consignments can be dealt with using procedures which are appropriate to the level of risk they present.

Currently none of the agencies that will be associated with the LNSW have access to all the data that they will need to undertake the type and level of analysis which is necessary to create good quality, effective profiles. What data they have is sometimes incomplete, inaccurate and in a format which makes analysis for profiling purposes very difficult. In addition, they do not have access to analytical tools or software which
allows them to undertake the type of analysis that is required. The introduction of the LNSW will provide solutions to both these issues. Initially, because quality and complete historical data won’t be available, the data available through the LNSW will limit what analysis can be undertaken. Over time however, as more and more data becomes available, the quality of the analysis should improve leading to the development of more effective risk profiles.

Before profiling can begin in the agencies it will be necessary to conduct information campaigns to raise the general of knowledge about risk management and profiling within each agency. Currently, apart from the Lao Customs Department (LCD), the level of knowledge about these matters in agencies is low. Ideally the development of profiles for an agency should be undertaken by a small group of trained officers within that agency. These officers will need detailed training on risk management and profile development.
2 Introduction

2.1 Context

As documented in the Trade Facilitation Strategic Plan for Lao PDR (2011-2015), the Lao Government has made a commitment to improve the level of trade facilitation in Lao as an enabler for economic growth. Articulated in the Strategic Plan is the Government’s intention to “move towards a single windows service for cross border trade, based on risks assessment as tools for more effective control”1 as one means of improving trade facilitation.

While the Trade Facilitation Strategic Plan imposes a liability to facilitate trade on the agencies associated with the LNSW, those agencies also have a responsibility to ensure that the laws designed to protect the people, the economy and the environment are upheld in regard to international trade. These agencies are faced with the challenge of finding a balance between control and facilitation which allows them to control trade to the extent necessary to fulfil their responsibilities and at the same time facilitating trade to the greatest extent possible.

The controls utilised by the PIAs should be limited to the minimum needed to ensure their main objectives are met and should be carried out on a selective basis using risk management techniques to the greatest extent possible. To do this the agencies should:

- focus on high-risk areas and therefore ensure more effective use of available resources
- increase ability to detect offences and non-compliant traders and travellers
- offer compliant traders and travellers greater facilitation
- expedite trade and travel

A Risk Management model has been proposed for use by government agencies in the Lao National Single Window (LNSW).

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1 Ministry of Industry and Commerce, 2011, p.4
Risk treatment, the fifth step in the process, is about identifying the most appropriate strategies (or risk treatments), for those risks that are to be actively dealt with and then putting those strategies into place.

These strategies or risk treatments might require that only applications for licenses or permits which are assessed as high risk need to be approved by a senior officer, e.g. the Deputy Director General, whereas all others may be approved by a lower ranking officer. Other risk treatments might include a requirement to examine supporting documents to verify details on a license application or import declaration if they are assessed as medium risk. The physical inspection of cargo to confirm what is being imported or exported matches with what is recorded in the relating documentation or the drawing and testing of samples to ensure goods comply with health or safety standards might only be undertaken on occasions when a consignment is considered high risk.

After it is decided what action will be taken to address a particular risk the relevant agency needs a way of identifying instances where that risk is more likely to occur. Risk profiles provide a way of doing that. Good profiles can be very effective in identifying transactions, consignments, importers, exporters, etc. which require closer scrutiny.
For example, if it is decided that commercial consignments of live chickens present a high risk of a particular virus carried by poultry entering the country from country X, it may be decided that blood samples should be taken from 5% of the chickens in each consignment and tested for the virus. The whole consignment may need to be isolated in a designated quarantine area until the testing shows that they are not infected. A profile could be developed which is designed to identify all instances of imports of chickens from country X. This profile could be run against the data included in all import declarations. Any time a match occurs against the declaration would go “red”. Instructions on what action needed to be taken should be included in the information provided when the profile matches. In this case the matter would presumably be referred to a Quarantine officer to arrange for the sampling, testing and quarantining of the chickens.

There are many definitions of a “profile” however for the purposes of the LNSW it is a combination of characteristics, information or indicators which can be used to identify transactions, consignments or entities which ostensibly present a particular level of risk and require predetermined treatment. While profiles are commonly used to identify instances of high risk, they may also be used to identify instances of low risk.

For the purpose of the LNSW, the development of risk profiles should be thought of as a measure that can provide agencies with a ‘picture’ of non-compliance, whether deliberate or unintentional.

Many instances of non-compliance have common characteristics. Through analysis of data, particularly data relating to previous detections of non-compliant entities or consignments, it should be possible to identify what these characteristics are. An example of how this might be done is shown under the section on “Analyse Information” in Appendix B. By looking for these characteristics, agencies will be more likely to identify high-risk consignments or entities and those that require specific controls or actions.

The development and application of risk profiles therefore may be regarded as one tool which allows the whole concept of risk management to be put into practice. By using profiles agencies are able to adopt a more targeted approach to their intervention by identifying the high risk license/permit applications or consignments and only taking more intensive action in regard to those. Adopting streamlined processes and following a policy of minimal intervention for lower risk applications and consignments enables the remainder to be facilitated. The benefit of this approach is that it allows more resources to be focused on the high risk applications and consignments and fewer resources to deal with the remainder.

Looking at this in a different way, by minimising the processing and the level of personnel required to process an application for a low risk license or permit, resources, including more senior personnel, are free to concentrate on the high risk applications or other work, including policy or strategic work. In this way the agencies can become more effective and productive and legitimate trade is facilitated. If profiles are based on good analysis of relevant data their use for the targeting of high risk license/permit applications and high risk consignments should be significantly more effective and less costly than subjecting all or even a simple random selection of applications or consignments to the same treatment.
2.2 Scope of Work

Initial risk profiles tailored to the needs of each agency was to be the second output to be delivered as part of a risk management strategy and model for agencies participating in the LNSW. This was to be achieved by assisting each agency to formulate risk profiles which were to be applied electronically.

After consultation with agencies during two missions to Vientiane in October/November 2012 and January/February 2013 it became apparent that apart from the LCD, agencies are still a long way from the point they need to be before they would be able to implement risk management or to draft profiles. Consequently it was agreed with the World Bank to instead provide a framework which agencies could use for developing profiles as and when the LNSW is implemented.

2.3 Profile Development

Developing profiles involves the gathering of relevant information and the collation and analysis of that information with the aim of identifying particular characteristics which can then be used for detecting non-compliance. This is explained in more detail in the guidelines for using risk profiles in the LNSW at Appendix B.

Each of the agencies participating in the LNSW should develop their own profiles as they each have their own unique risks to deal with. Consequently it is entirely feasible that a consignment which may be a high risk for one agency may be a low risk in another. However this is not always the case. The personnel involved in the development of profiles should have a good understanding of the agency’s business and the risks it faces.

For practical reasons it would be sensible for one national profiling unit to be established in each agency. This central unit would need to take into account any particular differences or requirements of the different provinces when creating profiles. For example, the type of goods and the risks associated with imports from a particular country might be quite different from those from elsewhere. If the volumes of imports from that country are low then, from a national perspective, these importations may present a high risk. However, because of the volume of imports from that country to the Lao province sharing its border, the risk of these imports may be high in that province. Profiles can be developed and distributed manually or by electronic means, although it is proposed that for the agencies operating through LNSW the profiles would be incorporated into the risk management feature of the system.

Before this can be done it will be necessary to identify the type of information required and then establish whether that information is available. It is quite often the case that relevant data is collected but accessing that data in a way that is useful for analysis is problematic.
The type of information that will be required will vary from agency to agency, depending on their role and their interests at the border. Therefore it is important that, to the greatest extent the law permits, the data available to one agency participating in the LNSW is also available to the other participating agencies for their risk management and profile development purposes. This should include records of instances of non-compliance. This is because an entity which does not comply with one agency’s requirements is also likely to not comply with those of other agencies.

An effective profile is based on good analysis. Through analysis it should be possible to identify particular characteristics which are present in instances of non-compliance. The availability of accurate, relevant, complete and up-to-date information is therefore crucial to the development of profiles. Currently such information is not readily available however this will change with the introduction of the LNSW. Accordingly the first step in developing a profile is to collect all available information relevant to the risk being treated. Data regarding prior instances of non-compliance, any intelligence which might be relevant and data on the results of audits or inspections should be obtained. This data should then be analysed to try and identify characteristics which might be common to the particular risk being considered. If there appears to be a pattern then these characteristics can be used to make a profile.

Profiles should not be created and left in the system indefinitely. The presence of ineffective or redundant profiles inevitably leads to a slowing down of the system and more license/permit applications, declarations or consignments being subjected to higher levels of scrutiny than is necessary. This can also lead to a loss of confidence in the profiles and may even lead to apprehension about risk management in general. It is important that profiles are regularly reviewed, in accordance with a structured programme, to ensure that they are doing what they are designed to do, i.e. that they are effective.
3 Status

3.1 License and Permit Issuing Agencies

Over the course of the risk management specialist’s two missions to Vientiane meetings were held with the following agencies:

- Ministry of Industry and Commerce - Department of Import and Export
- Ministry of Energy and Mines - Department of Mines
- Ministry of Agriculture and Forestry - Department of Planning and Cooperation
  Department of Agriculture, Plant Quarantine Division
  Department of Livestock and Fisheries
- Ministry of Health - Food and Drug Department
  Bureau of Food and Drug Inspection

It was not possible to arrange a workshop on risk management and profiling for license and permit issuing agencies which was planned to occur during the second mission. However a detailed session on risk management and profiling was presented to representatives from the agencies during a two day workshop on Change Management. Representatives from the Departments of Livestock and Fisheries, Agriculture, Food and Drug, Import and Export, Standardization and Metrology and LCD attended this workshop.

The knowledge gained from these meetings was supplemented with the knowledge shared by the other consultants on the team and obtained through their meetings and other workshops and seminars with these agencies. The findings of the Business Process Reengineering consultant, relating to current processes, and the “Roadmap for Process Simplification and Harmonization” recently adopted by the trade related government agencies were also very helpful.

Based on this understanding it is clear that risk management and profiling could be used by the license or permit issuing agencies to determine what action should be undertaken at two critical points;

- when an application for a license or permit is received; and
- when an import or export declaration is submitted.

However, before profiling could be introduced a number of issues need to be addressed.

Knowledge of risk management and profiling within the agencies does vary but overall it is very rudimentary. As identified in the report on the proposed risk management model for the LNSW, management
and staff in each of the agencies associated with the LNSW should be provided with a basic knowledge of risk management and profiling through a programme of agency wide publicity and information sessions. In addition, comprehensive training on risk management and the development and application of profiles should be provided to those chosen to develop profiles prior to the implementation of the LNSW in their agency.

Data required for analysis for risk management and risk profiling needs to be captured and stored where it is easily accessible to those involved in those processes. Currently this is not the case. Not all necessary data is captured in every instance, some data is retained in the provinces and is not combined in a national database and a considerable amount of data is not held electronically. These factors, combined with no or limited analytical tools make accessing and analysing complete and reliable data very difficult. The LNSW should overcome these deficiencies by including functionality which will meet the data requirements and provide the tools necessary to analyse that data.

To ensure a high quality and to avoid duplication of risk profiles it is advisable that profiling is undertaken by a small group of trained specialists, located centrally in each of the agencies. This group would be required to create profiles on behalf of all the regions. As mentioned previously, the specific needs of the different provinces may vary as the risks faced by one province will sometimes be different to those faced by other regions.

The current range of treatments used by license and permit issuing agencies to deal with risk is quite narrow. Generally pre-clearance treatments such as examining documentation and inspecting cargo are used. The agencies should review the current range of activities they use to treat risk. Options other than pre-clearance interventions may be appropriate in some instances. For example, the use of post clearance audits or field testing would allow cargo to be released sooner and, depending on the risk, it may still provide adequate control.

Currently the requirement for licenses for some products is primarily to enable the licensing agency to gather statistics in order to monitor the export or import of the product. Data available from ASYCUDAWorld or the LNSW should be the source for those statistics.

3.2 **Customs Department**

Several meetings were held with representatives of the Lao Customs Department in October 2012 and in January and February of 2013. This included site visits to the Thanaleng Customs office and the Friendship Bridge border post. In early February 2013 a workshop on risk management and profiling, tailored for the LCD and attended by fourteen LCD officers, was also conducted.
While there is clearly some knowledge of the theory of risk management and profiling amongst LCD officers, in practice it is still new and its application is limited. Even where it is used it is at a basic level. The officers believe that as ASYCUDAWorld is rolled out to more Customs border crossings it will enable risk management to be deployed more broadly throughout the country. However, while the rollout of ASYCUDAWorld may provide a tool which can be used by LCD for part of the risk management process, alone it does not guarantee that a structured or systematic approach to Risk Management, utilising profiles based on analysis of data, will be put into practice. The need for change management and a business process reengineering program which makes risk management a fundamental element of every day operations is also necessary.

As previously reported in the paper on Risk Management in the Lao PDR National Single Window, LCD selectivity criteria tend to be based on a single data field rather than a combination of several fields, as is expected in a profile. This contributes significantly to the high percentage of declarations which are unnecessarily going “red”, i.e. requiring a high number of pre-clearance inspections and achieving very limited results. Hence delaying clearance and negatively impacting trade facilitation. By moving away from the use of a single data field for the selectivity criteria the number of declarations which go “red” and are subject to inspection should be much less. Then the declarations which do go “red” should be those which genuinely present a higher risk and consequently the ratio of detections to inspections should increase.

However, as discussed elsewhere in this report, profiles should be based on analysis of accurate, relevant, complete and up-to-date data. For an agency such as the LCD this should include all historical data relating to importations and exportations and data relating to all seizures and other instances of non-compliance detected. Details of each instance of a match against a profile and the results of any subsequent action, whether positive or not should be available to those tasked with the responsibility of developing profiles. In addition, details of post clearance audits and the results, whether adverse or not, should be available for analysis. At the moment not all of this information is available, at least not as a combined, national data base which includes all the data held by the provinces. The LNSW should provide the solution to this problem.

As with the other agencies, to ensure quality and to avoid duplication, the responsibility for developing profiles within LCD should be centralised. LCD has a Risk Management team under the Deputy Director of Post Clearance Audit which could undertake this role.
4 Conclusions

The adoption of risk management by the government agencies associated with the LNSW will allow them to direct their resources towards the license and permit applications and cargo consignments which present a high level of risk. Streamlined processes, requiring less intervention, can then be used to deal with the remaining applications and consignments. The adoption of risk management can therefore result in:

- More effective use of resources - by directing resources towards those transactions which present a high risk, the ratio of number of detections of non-compliance to the number of interventions should increase;
- Improved levels of trade facilitation – by introducing streamlined or simplified procedures and minimal intervention for non-high risk applications and consignments, legitimate trade is facilitated.

Risk profiles enable risk management to be put into practice. Profiles can be used to identify applications for licenses/permits or consignments of cargo which present a particular level of risk, for example, high, medium or low. The appropriate treatment for that level of risk can then be applied. For example a low risk consignment might be cleared immediately, subject to the payment of any duties or fees, without further checking. Additional documentation and permits maybe required before a medium risk consignment is cleared. A high risk consignment might necessitate the verification of supporting documents and permits by a physical inspection of the cargo.

To ensure good quality and effective risk profiles a systematic approach to the development and maintenance of profiles is necessary. This should involve a number of important steps in a continuing cycle:

- Gather information
- Collate information
- Analyse information
- Profile creation
- Record results
- Review results

The guidelines in Appendix B provide details of what is involved in each step however, as these steps suggest, information plays a vital role in risk profiling. Currently none of the agencies associated with the LNSW have access to all the data that they need to create good quality profiles. What data they have is sometimes incomplete, inaccurate and in a format which makes analysis for profiling purposes very difficult.

The LNSW should provide the facility to collect, store and retrieve all the data that would be required. A lot of that data will be collected as information is input through the LNSW as part of the license and permit application and import or export declaration process. However some data, such as the results of cargo inspections, will need to be input by agency officials. In order to use the data for analysis it is essential that it can be easily accessed, sorted, queried etc. The LNSW should also provide agencies with the tools and access they need to analyse the data.
It is advisable that the development and ongoing review of profiles for each agency should be undertaken by one small team in the agency. The members of that team would require intensive training in risk management and risk profiling. The general level of knowledge of risk management in the agencies, with the exception of the LCD, is very low. There is a need for an information campaign in each agency to raise the level of knowledge about risk management and the use of risk profiles in all agencies.
Appendix A: BIBLIOGRAPHY OF REFERENCE MATERIALS

IBM & Kimberley, P 2008, ‘Project Summary Report – March 14th 2008; review and Redevelopment of Laos Import/Export/Transit Regime, IBM Belgium
Pugliatti, L 2011, Roadmap for Process Simplification and Harmonization Interim Report, PM Group Dublin
Pugliatti, L 2013, Roadmap for Process Simplification and Harmonization, PM Group Dublin
Pugliatti, L 2011, Strategic Options for the Implementation of a National Single Window – Final v1.0, PM Group Dublin
Siva, R 2010, National Single Windows for Trade - Implementation Considerations, presentation given in Vientiane on behalf of WB Washington DC
Appendix B: Guidelines for Using Risk Profiles in the LNSW

Risk profiling is a tool that puts risk management into practice. A profile is a combination of characteristics, information or indicators which can be used to identify transactions, consignments or entities which ostensibly present a particular level of risk. While profiles are commonly used to identify instances of high risk, they may also be used to identify instances of low risk.

Risk profiling replaces the need to examine all documents and goods, and even random examinations, with a planned and targeted working method.

In the context of the LNSW, profiling is about identifying those characteristics of …

- applications for licenses or permits and
- declarations for imports or export

… which indicate that they may present an unacceptably high level of risk. These characteristics are then put into a profile which will be used in the LNSW to identify applications or declarations which contain these characteristics, i.e. are high risk. These applications, declarations or the consignments to which they relate can then be subjected to more intensive scrutiny or intervention than those which do not have these characteristics.

The number of profiles that may be required by each agency will depend on the risks they must deal with. As more data becomes available through the LNSW, better quality analysis should be able to be undertaken and the profiles an agency develops should become more precise. Over time it is expected that the number of profiles each agency has in the LNSW will increase, however the improved analysis should result in more accurate matching. Therefore more profiles should not necessarily result in more total matches but in better quality matches, i.e. genuinely high risk.

The following actions should be taken when implementing risk profiling in the LNSW.

**Gather information**

This first step involves the identification of the type of information which will be useful to an agency for profiling purposes. This may vary from agency to agency but, in addition to import and export data, all would presumably require details of any instances of non-compliance, whether this was detected by examination of documents, cargo inspection or post transaction audits or field checks. Full details of data relating to each incident would be required e.g. origin, HS code, value, weight, exporter, importer, broker, place of entry or exit etc. This information would be required for all detections in Lao PDR.

If available, information on detections in other countries may also be considered. This is because in an international trading environment, what happens in one country is likely to be repeated in others. For
example, if one country discovers that imports from a particular supplier are being incorrectly described on the commercial documentation, then there is a strong possibility that exports from that supplier to other countries will also be incorrectly described. A recent example of this is the discovery of horse meat in food products imported into the United Kingdom. This in turn led to the other countries discovering horse meat in food products.

Information on how the authorities in another country discovered a breach of requirements may also be useful in deciding what treatment should be used to deal with a particular risk. For example if a breach was only discovered through a particular type of laboratory test then the treatment might require a sample of the product to be taken and subjected to that test.

Information from authorities in countries which have imported products from Lao PDR may also be very helpful in developing profiles relating to exports. For example if the overseas authorities have discovered inferior quality or illegal products in cargo exported from a particular province in Lao PDR, the details about those consignments would be helpful in developing profiles focused on exports from that region and designed to stop a reoccurrence of such exports.

Other data relating to the type of entity involved in a non-compliant incident, the size of the business, how long it has been in operation, the number of importations or exportations, the number of employees etc. would be required when trying to identify high risk license or permit applicants. For example, analysis of data may show that the most likely entity to be non-compliant is a sole trader who has been in business for less than 3 years and imports less than 5 times in a year. A profile could be developed which requires that an application for an import permit from such a person be subjected to a full documentary and past record check and for the permit to be approved by a senior official of the agency.

If the information identified as necessary for risk management and profiling purposes is not currently available action needs to be taken to ensure that it is collected and available in future. Some of the required information may be collected by other agencies. With the introduction of the LNSW, all data submitted through it will be stored in electronic format. The LNSW will provide the functionality required to access and analyse the data. Subject to any legal constraints, the data collected via the LNSW by any agency should be accessible to all other agencies through the LNSW. While it is not always the case, a trader who is prepared to try and circumvent one agency’s rules is probably also likely to do the same with other agencies.

**Collate information**

All the required information needs to be brought together in a format which facilitates analysis. This may entail the merging of data from provincial offices or multiple sources.
**Analyse information**
The aim of the analysis is to identify any common characteristics amongst the data relating to the instances of non-compliance. How this might be achieved is shown in the following hypothetical example.

Analysis might show that if there were X,000 importations of rice (HS Code 10063019) during 2012, on 12 occasions a particular fungal disease was discovered. Further analysis of the data relating to those 12 occasions reveals that in 10 of the 12 cases the rice came from country A and the remaining 2 from country B. However there were hundreds of other importations of rice from these countries and these did not have the fungal disease. The data might also show that all the diseased rice from country A was exported by Jezza Trading Corp. and the diseased rice consignments from country B were exported by Wacky Ltd. During 2012 both these companies exported many, many times to Lao PDR and each consignment was inspected but the fungal disease was only discovered on the 12 occasions. Looking at the value of the shipments it is discovered that the price per tonne for the shipments containing the diseased rice was $US200 whereas the normal price for rice from these suppliers is usually between $US300 and $US500 per tonne.

Analysis of the three entities who imported the diseased rice revealed that all three were located in Province 3. One was a sole trader and the other two were newly formed private companies. All used the same Customs broker (broker license no. 1234).

Even if instances of non-compliance have not been detected analysis can help identify potential indicators of high risk. Through analysis of data it should be possible to establish the characteristics of a normal importation or exportation of a particular product. This analysis might also highlight past consignments where these characteristics were different. This information can be useful in identifying targets for audits or field testing but it can also be used as the basis for future profiles.

**Creating the profile**
The next step in the process is to use the information obtained through the analysis to construct a profile. It is important to note that the more selection criteria included in a profile the more accurate the target selection. For example, if the only selection criteria in a profile was “origin = China” then all cargo from China would be selected. This might be despite the fact that an agency may not be interested in all commodities coming from China, or goods coming from particular parts of China. By including more criteria the selection can be more refined or targeted.

In order to maintain control over the quality of the profiles access to the profiling system should be restricted to a small number of personnel who have the knowledge necessary to create an effective profile. For the same reason all profiles should be approved or authorised by someone other than the profile creator before they are activated, generally this would be the profile creator’s supervisor.

A register of profiles should be kept to keep track of profiles and to avoid duplication of profiles. The register should include a reference number, the date the profile was created, who created it, who authorised its
activation, what the profile criteria are, the reason the profile was created, what action should occur when there is a match against the profile, when it should be reviewed and the date the profile will expire. It should also be used to record details and outcomes of any reviews.

Using the same details as those in the section on analysis as an example, the matching criteria for a profile used at the declaration stage might look something like “If origin” = “A and exporter” = “Jezza Trading Corp. and HS” = “100630 and unit value < $300” and “If origin” = “B and exporter” = “Wacky Ltd and HS” = “100630 and unit value < $300”. Generally electronic systems have difficulty matching against free text fields such as may be shown in the “owner” field. Consequently the use of unique reference codes or numbers instead of text provides better results. The Tax Identification Number (TIN) is an ideal unique reference for importers.

The profile needs to make it clear what should happen when there is a match. This should have been decided as part of the risk management process when developing the profile. In the rice example the most likely treatment is to withhold the release of the consignment until the rice can be inspected and tested. Under a risk management regime, all or a percentage of other importations which do not match against this profile may be released without inspection.

Again using the details in the rice example, the matching criteria for profiles used at the permit application stage might be “Province” = “3 and entity type” = “sole trader and broker” = “1234” and be “Province” = “3 and entity type” = “private company and year of incorporation > 2011 and broker” = “1234”.

Applications for permits which match against profiles used at that stage should be subjected to greater levels of scrutiny and may require the approval of a senior member of staff, whereas those that don’t may be subjected to minimum checks and approved by a less senior staff member.

The person who has to deal with the consequence of a profile match, e.g. the person who must inspect or test the rice or who must check on the permit applicants background needs to know why the profile was created in the first place. This information should be available through the LNSW.

It is important to note that there may be variations in profiles and the need for particular profiles based on geographic location. For example a province which shares a border with Vietnam may well have the need for some different profiles to those required by a province sharing a border with Thailand or China.

**Record results**

All instances of matches against a profile should be automatically recorded in the LNSW. The results of the action taken as a consequence of the profile match should also be recorded in every instance, i.e. recording that nothing wrong was discovered is just as important as recording details of any matters of non-compliance detected. This information should be recorded in the LNSW by the person who took the action.
Review profiles

On a regular, scheduled, basis profiles should be reviewed to ensure that they are still required and that they are producing the desired result. If the profile has an expiry date the review should occur before that date so that, if the profile is still required, the expiry date can be extended.

Risks can change over time. In some cases the risk which a profile has been designed to treat may no longer be a threat or has been downgraded. For example, profiles which may have been created to deal with an outbreak of a particular animal disease may not be needed or the treatment might be modified if the outbreak has past and there have been no recorded instances of the disease from source countries for an extended period of time. In other cases, a decision might be made to reduce the requirement to take action to only a percentage of matches against the profile, for example for every second or fourth match.

In short the review process can result in one of three outcomes:
- Keep the profile - it is effective and the risk it addresses still exists so extend its validity period
- Delete the profile - it has been ineffective or replaced by a more effective profile or the risk no longer exists
- Modify the profile - amend some of the selection criteria or the treatment that is required when a match occurs

Reviewing a profile requires the same sort of analysis and access to the same types of data as was required for the analysis conducted before the profile was created. The records of the results from matches against the profile should be considered as part of the review process.

The results of the review and action taken as a consequence of it should be approved by someone other than the person who reviewed the profile. Again this would generally be the reviewer’s supervisor. Details of when a profile was reviewed, by whom, the outcome and who approved the outcome should be recorded in the profile register.
Annex M:
Change Management and Communications Report
1 Management Summary

Key components (Task Clusters) of the assignment to prepare the LNSW Blueprint for Implementation require the development of technical and functional architecture, service specifications, options for changed business processes, service level agreements, fee structures, legal frameworks and risk management models to guide and support the development and implementation of the LNSW. The assignment also includes the development of a change management and communications strategy for agencies participating in the LNSW. This is in recognition of the fact that successful introduction of any single window will require more than equipment and technology, and will rely heavily on the readiness, energy, capability and commitment of the people who will implement and use it on a day to day basis – both in the trade community and in government departments.

The following report details a situational awareness of the change management and communications elements necessary to support the successful implementation of the LNSW. It also outlines key change management and communications strategic directions which should be incorporated within a final LNSW implementation plan. This document is a “deliverable” under the technical assistance contract.

Although no final decisions have yet been taken on the precise scope and coverage of the LNSW, it is clear that the introduction of the LNSW, as envisaged, will involve inter alia the introduction of new technology and tools for use by a number of the key participants in the trade process, automation of and changes to a number of current business processes, the introduction of some new business methodologies (e.g. risk management) and the streamlining of current processes in the trade context. These will require the agencies, traders and staff involved to acquire new skills and adapt to new technologies, new service expectations, new business processes, new mechanisms for communicating and working together and new and rigorous oversight and monitoring processes to govern the changed environment.

The current level of preparedness (or readiness) and capacity to embrace the likely changes ahead varies between the key agencies and traders at the current time. More detail is provided in body of this report, but for example, in some agencies and trade related companies computer literacy and competence is already relatively high, but in others it is presently either non-existent or very low. In one agency (Lao Customs Department) there is at least one core system introduced for automating trade transactions (ASYCUDAWorld) and some plans for other systems to be introduced, but none of the agencies involved have widespread application of automated workflow management systems or embedded enterprise electronic data systems. All agencies currently rely heavily on paper based processes for trade transactions and even a gradual move away from this reliance will likely be a challenge for many involved.
One of the very significant benefits of the LNSW, as currently proposed by the project, is that it will support agencies in their streamlining and automation efforts, through the rollout of automated workflow management tools and the introduction of risk management into permit issuing and regulatory processes. While this will be highly beneficial to the trade and participating departments, as well as significantly contribute towards the Lao PDR government objective of modernisation and trade facilitation, it is likely that some staff in both headquarters and provinces will initially find the changes daunting and challenging and will require careful preparation, training and support throughout the LNSW introduction and transition process.

Significant benefits will come from major change, and significant change always brings uncertainty and potential for resistance. Effective change management will, therefore, need to be integral to any implementation strategy – to balance a focus on support and engagement for the individuals and stakeholders involved as a priority, alongside plans for the technical and physical rollout of any new equipment or systems.

There will be many hundreds of individuals directly affected by the introduction of the LNSW, and many hundreds more that will have some indirect interest in it. For this reason communications and change support (including capacity building and training) will need to be segmented and tailored to meet the needs of classes of stakeholders as well as the needs of the individuals involved. Some recommendations on how this can be approached are included in the body of this report.

Because of the diverse nature of LNSW impacts, the change and communications program elements of implementation will need to be delivered centrally as well as at an individual department level. Each agency will need to identify senior implementation change sponsors as well as some dedicated change management resources as part of the overall LNSW implementation plan. Agency based change coordinators will need to be appointed as part of agency implementation teams and should be enabled and expected to work together across departments and ministries, as well as with the single window operator and lead department on a coordinated change process. A proposed framework for this is included in later sections of this report.

In summary, based on the technical and functional architecture proposed for the LNSW and the recommended work and workflow changes that accompany them, the successful introduction of a National Single Window for Lao PDR border agencies and traders will require timely and effective communications, engagement, marketing, training, facilitation, monitoring and staff and technical support strategies. It will also require a mechanism for central and regular monitoring of the progress of change initiatives (and of implementation more generally) to ensure coordinated and effective use of available resources and to embed a "review and improve" approach to the changes. These will need to commence immediately - with engagement and communications to inform any final decisions about the functional and technical specifications and will need to continue for at least the first year of implementation.

In the report sections below we examine in more detail these key issues and outline in more depth both the issues and strategies for consideration in the implementation phase.
2 Introduction

2.1 Context of the Project

NOTE: This report needs to be read in conjunction with the report on a Functional and Technical Architecture for the LNSW.

The Trade Facilitation Strategic Plan for Lao PDR (2011-2015) produced by the Ministry of Industry and Commerce identifies trade facilitation as an important factor in Lao PDR being able to meet its objective of moving from least developed country status by 2020 (Ministry of Industry and Commerce, 2011, p3). The Plan envisages improved coordination among concerned agencies and proposes a strengthened institutional set up for trade facilitation. The establishment of a Lao National Single Window (LNSW) “as a single point of electronic submission and lodgement of requests, documents and declarations needed to satisfy all import, export and transit requirements” is the latest facet of actions being taken in support of reform and modernization to advance trade facilitation in Lao PDR.

A National Single Window will allow traders to electronically submit information required by multiple government agencies for export, import, and transit procedures only once. Each of the agencies will use the information provided through the Single Window to process and clear cargo utilising an integrated and risk based process. This should lead to significant time and cost savings for business and greater effectiveness for agencies. With the implementation of the LNSW, the licensing and permit issuing agencies will have the opportunity to introduce a level of automation, electronic processing and risk management into the trade processes connected to the LNSW (See the separate PM Group report on a Functional and Technical Architecture for the LNSW).

The LNSW will build upon the skills, experience and success stemming from introduction of the Lao PDR Trade Portal (LTP) by the Department of Imports and Exports (DIMEX) and the on-going implementation of the ASYCUDAWorld declaration processing system by the Lao Customs Department (LCD).

In Lao PDR there are currently in the order of 200,000 Customs entries lodged annually by approximately 6,000 traders or their representatives. There are around 28 different types of certificates, licenses or permits (including the ACDD) required in the trade context – ranging from a requirement for all traders to be formally registered, through to specific permit requirements for specific commodities (e.g. cement, motor vehicles, steel, roof tiles). Some permissions apply to an individual importation and some relate to a longer period import plan which has been submitted and approved by relevant agencies. Some permits are clearly designed to place restrictions or conditions on potentially dangerous or harmful goods (e.g. some medicines, foodstuffs, live animals) whilst others seem to exist largely for statistical purposes. In the Import/Export “To Be” Process Report (prepared by Business Process Expert on this Project) and in the Roadmap for Process Simplification and Harmonisation (prepared by the LTP Project) some recommendations are made about altered arrangements for some of these.
Currently all certificates, licenses and permits require the manual lodgement, processing and payment of applications, and even in the case of the use of the ASYCUDAWorld system (for Customs ACDD declarations) traders are still required to lodge a full paper declaration with all accompanying documents.

Whilst the Lao Customs Department has begun the process of automating the Customs clearance process through the introduction of the ASYCUDAWorld system, other agencies involved in the import and export process do not as yet have automated systems for processing or managing permits or approvals relevant to the trade process. In fact, while many of the agencies have access to the internet and email for some of their staff, it is clear that there are very few enterprise EDI systems in place in the key agencies that will participate in the proposed LNSW and (almost universally) They rely on paper based systems for receipt, processing and approval of trade related documents, permits or licenses. Moreover, it is clear that even in the case of internet and e-mail usage, system reliability is patchy and bandwidth limitations often mean that web based communications can be slow.

The LNSW, as proposed, will provide an automated system for processing applications for trade certificates, permits and licences, and will establish a common IT system for data input, collection and transmission between responsible agencies and traders (and their representatives). The LNSW can also provide fundamental electronic workflow management capability for the participating permit and license issuing agencies, to enable the electronic receipt and movement of requests for licenses and permits required by the trade. This will enable the key trade related agencies to move to automate current manual processes and over time, to move to less reliance on paper records, paper based forms, and paper based approvals and clearances.

The proposed LNSW will also enable traders to complete their license applications and Customs declarations at their own offices, and submit them to the relevant agency and the Customs ASYCUDA World system over the internet. The system will allow for entry of core date once only, rather than multiple times as currently required. It will also remove the need for multiple keying of trade related data and therefor greatly reduce the risk of transcription error.

Whilst the majority of permits, licenses, certificates and declarations are transacted at department headquarters in Vientiane (or in the Vientiane Province) many are also processed at the provincial or border post level. To cater for this, the LNSW, as proposed, will provide connectivity and processing capacity at a possible 87 different government sites throughout Laos, and will provide for access by up to 10,000 traders via web based interfaces.

### 2.2 Scope of Work

PM Group, Ireland, and their consortium partner, the Centre for Customs and Excise Studies (CCES) from the University of Canberra, Australia, have been contracted to undertake the World Bank-funded assignment
providing ‘Technical Assistance for the Preparation of a Lao PDR National Single Window’.

Task Cluster 6 of the assignment includes the development of a Change Management and Communications Strategy for the LNSW. This is a “deliverable” for the assignment.

This report represents that deliverable and incorporates the core elements necessary for agencies to develop their Automation, Communications and Change Management Plans.

In preparing the proposed change management and communications strategy, an examination has been made of the “as is” situation (where are we now) and the desired “to be” vision (what do we want to achieve) for trade related government processes that are in scope for the LNSW. This informs an analysis of change steps required to move between the two stages (now and future), which in turn, has then been used to guide the proposed change strategies.

This report, draws heavily on the “to be” work of the other task clusters of the assignment, on the Lao PDR Trade Facilitation Plan and on the findings of the Lao PDR Trade Portal Project report - a Roadmap For Process Simplification and Harmonisation. This report makes no comment about the recommended “to be” picture, except as it relates to the application of change strategies. Judgements about the desired future state will properly and ultimately be the subject of Lao PDR government decision, but many of the change management and communications strategies would likely be relevant regardless of those decisions.

In this Change Management report we examine the opportunities and challenges faced by the key government agencies and the trading community in introducing a LNSW. We explore the application of longstanding and world recognised, good practice change management techniques in supporting the LNSW as it is introduced, we recommend some supporting structures and processes that should be introduced to facilitate change and we propose change management strategic directions for inclusion in any final implementation plan. We also suggest some core communications strategies for the LNSW which are based on other successful experiences in the Lao PDR context.

In summary, the body of this report outlines both;
- A proposed framework and strategic direction for the change management element of the LNSW; and
- Core communications dimensions of an LNSW implementation plan.

2.3 Project Methodology

This report has been prepared based on inputs from the three key experts involved: Mr Alistair Gall, Project Leader, Mr Keovisouk Dalasane, Lao Trade Facilitation Expert and Mr Trevor Van Dam, Change Management Specialist. It is also based on information gathered during interviews with key agencies and participants involved in the trade process, input from participants at two Change Management Skills workshops held in Vientiane in December 2012 and February 2013, experience gained by those
leading the Lao Trade Portal project and by the team which led the training for ASYCUDAWorld in the Lao Customs Department.

The assistance of the LNSW Secretariat team and in particular of Ms. Anisara Sombounkhan and Ms. Sanya Khamson was also much appreciated and contributed greatly to the final report.

Considerable research was undertaken, principally focusing on available reports on trade facilitation and procedures relating to the work of the license and permit issuing agencies in Lao PDR. This was supplemented by site visits to the border post at the Friendship Bridge and to the Thannaleng Clearance Warehouse.

The work of the other technical assistance consultants was reviewed to establish the likely architecture, functional model and specifications of the desired end model and accompanying business processes.

The change management workshops and individual meetings also assisted greatly in identifying current approaches, challenges, needs and opportunities in managing a change in Lao PDR.

The recommendations in this report are founded on a large body of change management literature and experience – including the work of John Kotter and his “Eight Steps for Successful Change Management” (see: The Heart of Change, Kotter, JP, Harvard Business School Press: Boston, MA, 2002). A list of reference materials on Change Management which have been utilised in producing this report is contained at Appendix A.

A list of the six (6) key Lao PDR Government licensing, permit issuing and trade processing agencies that participated in the change management workshops is at Appendix B. A list of the current paper based certificates, licenses and permits which could be considered in scope for change as part of the LNSW is at Appendix C.

2.4 Change Management – What is it and why do it?

Change Management is a structured process for taking an organisation from where it is now to where it needs or wants to be. In better practice project implementation, change management is generally included as a key part of any overall implementation program, where people and processes will be substantially affected by the desired change. Change management programs focus on the people dimensions of the move to a new outcome.

Research and experience shows that major change will often lead to a level of discomfort for (at least some of) those affected by it. People may lack the skills necessary to function in the new environment, they may not see the benefit of the change for themselves or they may be threatened by it. They may lack confidence to try new things or they may be slow to adopt new techniques. Some may actively resist the change and others may passively resist.
Change planning contemplates the potential for resistance, and incorporates strategies for overcoming or at least neutralising it. Successful change management can build strong champions for change and enthusiasm for the outcomes sought. Effective change management supports the move to the new business model. Successful change management recognises the importance of early engagement with stakeholders and the importance of hearing and understanding the concerns they may have.

The key principles of successful change management are relatively straightforward but can easily be overlooked in major projects. The 8 key principles can be summarised as:

- Establish the need for and importance of the change. Build a sense of urgency!
- Establish a strong and senior guiding team.
- Establish the vision and understand how the vision will impact those affected by it.
- Engage stakeholders early, often and honestly. Communicate for “buy in” to the vision.
- Establish a capable change team and empower them to provide necessary support, training and encouragement to those who need it.
- Set short as well as long term goals – and then celebrate and recognise short term improvements along the way.
- Be persistent – maintain progress and continue momentum.
- When the change has been implemented continue to articulate the relationship between new behaviours and organizational success.

Although specific decisions about the technical and functional scope of the LNSW had not been taken at the time this report was written, on the basis of the stated objectives of the Lao PDR government and the work of the various consultants, a reasonably robust picture of the core elements of the future impact of the LNSW can be deduced. An examination of these potential impacts makes it clear that the LNSW will introduce a range of new equipment and technology to trade related transactions, along with some important and potentially substantial changes to internal agency and external business processes. These changes will involve a move away from many current methods and the introduction of many new processes. The full introduction of the LNSW will not only comprise the acquisition and use of new technology, but will involve new knowledge, skills and techniques for those who participate in the trade and clearance function. The people involved will be central to the ultimate success of the LNSW and all in envisages. As such, the level of support or resistance from the key stakeholders and stakeholder groups and the strategies used to gain and give support need to be included in the early stages of implementation planning.

It is important that those people and stakeholder who will be most directly affected are engaged and informed at the earliest stage, and supported, encouraged and skilled as implementation begins. The body of this report will address strategies to do that.
3 Change Management and Communications Situational Awareness

3.1 Driving Forces

In preparing change plans it is important to build an appreciation of the current environment and to identify the positive (or driving) and potential negative (or restraining) forces that are present and relevant to achieving the objective sought.

The primary aim of this situational awareness is to enable the guiding team to leverage the positive influences, clearly articulate the need for change and develop strategies to address the potential restraining forces that will influence the successful implementation of the change. Ideally in change planning, every obstacle should be seen an opportunity to build new alliances and supporters.

Whilst this situational awareness is a summary, it is illustrative of the general state of readiness for the LNSW and is an important step in formulating subsequent change strategies.

Positive Forces

In the current environment there are many key positive driving factors supporting a successful introduction of the LNSW. These represent substantial building blocks for change. Participants at the two change management workshops that were held in Vientiane indicated that in general Lao PDR has a relatively good track record with change programs and has a workforce receptive to central change directions. The key positive driving factors can broadly be summarised as:

- **Government directed and clear driving forces (Trade Facilitation Plan and 5 year economic development plan).**
  The use of Information Technology to facilitate trade is directly in line with the Government of Lao PDR’s commitment made in the Trade Facilitation Strategic Plan 2011-2015. One of the guiding principles of the strategy is to “enable Information Technology to facilitate trade”. The Plan also lists as a strategic measure “improve basic infrastructure to be up-to-date, for example, Information Technology” and one of the measures of success is that “the volume of trade requirements or procedures will be significantly reduced or automated”. These objectives can all be achieved through the introduction of the proposed LNSW.

- **ASEAN commitment and active Lao participation in ASEAN Single Window working group.**
  As a member of ASEAN, Lao PDR has an obligation to implement a National Single Window. Lao PDR has signed the ASEAN “Agreement to establish and Implement the ASEAN Single Window”. It was clear during workshops and interviews that Lao officials treat their ASEAN obligations very seriously and there was universal acceptance amongst Lao officials that the LNSW was a clear and committed obligation that needed to be implemented.
Lao PDR is also actively represented on the ASEAN SW working group so is well positioned to learn from and influence ASEAN directions and experience.

- **Trade eager to see improved, more streamlined and less costly trade approval processes (cost and time) and are generally supportive of automation if it will achieve these.**

It is clear that a number of the significant and influential traders and freight forwarders in Lao PDR are very supportive of initiatives that will streamline, simplify and accelerate the permit and clearance processes. The trade has adapted very well to the introduction of ASYCUDA World in Customs and is already relatively computer literate. The trade is not automatically supportive of automation per se but is supportive of arrangements that will reduce multiple handling of documents and multiple physical visits to the government regulators offices. The LNSW offers them significant opportunity to meet their wishes and it could generally be expected that the trade will be supportive – dependant on cost and time benefits.

- **Steering Committee has been established.**

  As part of its commitment to Trade Facilitation and the ASEAN trade facilitation agenda, the Government of Lao has already established a Trade Facilitation Steering Committee and a National Single Window Steering Committee (LNSWSC). The LNSWSC is chaired by the Vice-Minister for Finance and has senior level representatives from each of the major permit issuing and border agencies. The Committee is capable of directing the efforts of the affected agencies in both the decision making and implementation phases of the LNSW.

- **Secretariat team in place.**

  The LNSWSC already has a part time Secretariat team in place in Customs to support its efforts. This team should be very familiar with the scope of LNSW possibilities and the likely needs of the implementation planning process. This team may be well positioned to form the core of an implementation team, but it will need to be expanded when decisions have been made on the way forward – possibly through secondment of members from the other affected key agencies. It should be noted, however, that the implementation team will need to be a full time dedicated resource when implementation planning commences.

- **Preliminary agreement with a provider for delivery.**

  We understand that in January 2013 the Government of Lao entered into an agreement with a private sector provider to establish a Joint Venture for the build and operation of a LNSW. This means that the key decision to proceed with building a LNSW has now been made – subject to final agreements about architecture and functional specifications. The JV partner should be able to leverage both local and international capacity to build and operate the Single Window.

- **Technical Assistance Mission - visioning workshop and other related workshops have been held.**

  This Technical Assistance assignment itself represents a positive driver. The assignment, with substantial World Bank backing, has assembled a team of highly experience international and local experts to provide insight and input to shaping a blueprint for the LNSW. A number of the Specialists have extensive experience in design and delivery of government single windows elsewhere in Asia and further afield. The reports of those experts represent a significant body of knowledge to help drive and shape the vision and the final LNSW solution. As part of the technical assistance program a number
of workshops have already been held which have helped build some awareness among stakeholder agencies and trader organisations of the possible blueprint.

• Concept been explored for some time – general awareness amongst senior members of agencies involved in the trade process in Vientiane.

The concept of an LNSW has been discussed and explored by relevant Lao government agencies for several years. Preliminary work has been done with the support of US Aid and through the Trade Portal Roadmap project. A number of senior LAO officials have had the opportunity to see first-hand (through study tours and workshops) what other countries in the region have achieved or what they intend to develop with their single window projects. The officials involved have therefore already had exposure to some good practice models and are aware of the range of NSW possibilities.

• Some general awareness amongst senior trade representatives.

In the course of this technical assistance project there have been a number of interactions with senior representatives of the trade. This has included interviews and discussions, and attendance by a number of trade representatives at the LNSW “Visioning Workshop” held in Vientiane in November 2012. The Lao Chamber of Commerce and LIFFA are also represented on the LNSWSC. At least a number of senior representatives of the trade will, therefore, have a general awareness of the LNSW and its possibilities. This awareness, however, will need to be substantially enhanced prior to any implementation – some suggestions regarding this are included later in this report.

• Some press coverage to date.

There have been a number of press articles over the past several months on the LNSW which have publically outlined LNSW expectations and coverage. These articles have also been posted on the Lao Trade Portal so a number of traders and members of the public will also have seen some general material on the concept.

• Some existing computer literacy in Vientiane based public service and larger trader community.

It is clear that in Vientiane at least there is quite a high level of existing computer literacy amongst government agency staff and some of the trading community. Many trained traders and their staff are already using the LCD ASYCUDAWorld system for loading ACDD data and many privately use e-mail, text, Google and the web more generally in their work and home life. This means that there is at least some pre-existing comfort levels for using computers.

• Lao Trade Portal and ASYCUDAWorld implemented.

The Lao PDR government already has two computerisation/automation initiatives fully or partially implemented. Both the Lao Trade Portal and ASYCUDA represent major projects which have been established. It is clear that the capacity to implement automation projects is developing within some agencies.

• Lao government workforce is open to new technology and a number appear eager to see introduction of some automation.

A number of the agency staff spoken with were clearly already very comfortable with using web based technology in their everyday life and were very open to the possibility of applying information technology in the office. Whilst there was very limited experience with enterprise applications amongst the staff, they were largely receptive to the possibilities that automation offers.
• General support for streamlining and simplifying processes by trade regulatory agencies. In discussions with senior staff from the license and permit issuing agencies, as well as those from LCD, it is clear that there is a high level of awareness amongst them of the government's trade facilitation agenda, streamlining and simplification goals, and a general desire to see that commitment translated into action. This means that the senior officials involved in the LNSW will readily see the prospect it offers for significant advancement or achievement of the government's policy - and as such can be expected to give a high level of open and public support to staff and traders.

• High staff retention rates in Lao government agencies. Turnover in Lao PDR government agencies is very low by international standards. This means that many staff have already got considerable experience in their license, permit or border control roles. If staff can be effectively trained, practiced and prepared for the LNSW they will likely be in a position to utilise the new skills and knowledge for some time (subject to rotation and mobility issues covered later).

• Private uptake of e-banking (ATMs) increasing rapidly in Lao PDR. In the past 5 years the population of Lao PDR (and Vientiane in particular) have increasingly embraced the introduction of electronic banking and the use of ATM machines for their day to day financial transactions. The major banks have clearly invested in electronic banking capacity and infrastructure and as such both the banks and the community are now much better prepared for the possible introduction of electronic financial transactions in the government processes. One option for the final LNSW is, over time, to utilise e-transactions for fee and duty payments. Because of the recent changes in financial infrastructure and private acceptance of e-banking, this will likely be met with much less resistance than in previous years.

Potential Restraints
Potential restraining factors, however, also exist in the current environment and those that are considered significant will need to be addressed in the final implementation plan.

In identifying these it is important to state that they in no way represent criticism, rather they are a reflection of the current state of technical development and experience typical in many less developed and developing countries. By identifying potential restraining forces we can begin to prepare for them in our forward planning. By doing this we can develop specific responses, actions or strategies to meet the potential restraints.

The key potentially restraining forces in the Lao PDR environment can be summarised as:

• Limited awareness and understanding of the LNSW concept and intent amongst general staff in agencies and in general trading community. To date it would appear that information about a possible LNSW has been somewhat limited and mostly only communicated to senior government and trade officials – largely those involved in the initial visioning workshop or the prior study tours or Steering Committee meetings. Whilst the interviews and workshops conducted by the current technical assistance team have served to spread some level of awareness, much more will be required to inform and engage those who will be affected by the LNSW. This communications and engagement will be required very early and resources should be dedicated
now to awareness building in the relevant groups.

- Provincial awareness likely very low.
  Based on the relatively narrow general level of awareness of the LNSW (even in Vientiane) it is likely that there will be even less awareness in provinces and border posts. The earlier the people affected in these places can hear of intentions, the more likely will be the opportunity to create some enthusiasm for what is to come.

- Computer literacy and comfort not universal – lack of IT systems knowledge and capacity.
  Whilst it is clear that many Lao government staff and traders are familiar with general web technology, it is also the case that at least some of the smaller and less frequent traders and some of the government agency staff will not have the same level of capability at present. These people will potentially see any new electronic system as a new burden, and may be uncomfortable with the change. There is also very limited experience of agency wide workflow processing systems, the maintenance and support needs of those systems or the governance frameworks necessary to operate them. The implementation team will need to seek to understand and identify these people and issues and tailor appropriate support.

In the case of Lao PDR Provinces, it appears that the daily use of computers is not yet as widespread as in the capital. Experience of the LCD team responsible for the ASYCUDA training rollout was that a number of the students nominated by the trade had very limited computer literacy and had real difficulty in adapting to the use of the system. In that case they often had to go back to trading companies to identify more suitable students. Even for some Customs staff they were required to provide some basic computer skills training before they could move on to delivery of any ASYCUDA systems training.

- Web coverage and reliability low.
  Whilst w.w.web capacity is quite widespread in Vientiane, we are advised that this is much less widespread in Lao PDR provinces. Even in Vientiane there can be variations in bandwidth availability, speed and reliability of web capacity and we understand that this is even more marked in the regions. Web reliability and speed will be an important factor in LNSW user satisfaction and there may be some resistance by traders to embrace a web-based system in the early stages.

- Limited budgets – cost and time of implementation for agencies and traders.
  The financing and maintenance costing of the LNSW will be a critical issue for traders and government agencies alike. Very few have budget capacity to fund systems development or technology acquisition. The LNSW proposed solution envisages use of web based interconnectivity so may reduce the need for major purchases by traders but the workflow management systems will be significant for the government agencies and they currently have very limited financial capacity to make any investments in new equipment without financial support.

- Limited experience of governing integrated multi user IT applications systems and networks.
  Given the lack of current enterprise or integrated IT systems in place in the Lao PDR permit issuing agencies, there is currently very limited knowledge or expertise in the maintenance of such systems. Whilst set up may be possible using a centralised technical support team it will be necessary to support each agency to build some capacity for managing and at least monitoring their own workflow management systems when in place. In the absence of support it is likely that when reliability
issues arise some will be quick to criticise the changes and revert to pre-existing methods. As a minimum, some form of central help desk will be required to help agencies and individual users to resolve problems.

- Current reliance on paper and paper based processes – not all will support change.
  The agencies that will be involved in the LNSW currently all use paper based arrangements for processing permits and licenses used by the trade. These have been in place for some time and staff and managers are familiar and skilled at using them. Even in LCD, where C2000 was and now ASYCUDA is used, traders are still required to submit all relevant materials in paper form (along with the electronic ACDD). A move away from paper based process will likely be a major shift for a number of staff and it will be important to recognise the likely discomfort that will accompany a change of this nature. This discomfort will be important to acknowledge when planning engagement and communications strategies and will require time and persistence by the implementing team.

- Everyone knows the current system and process and will find new systems uncomfortable in early stages.
  Similar to the above, even if participants in the trade process find the current system cumbersome and time consuming they are all familiar with it – they know how to make the current processes work. Some will be sceptical of changes – particularly in the early stages – until they become familiar and see actual time and cost benefits. Even if, as envisaged the first phase of the LNSW delivers an automated “mirror” of the current document based process, there will likely be an initial level of discomfort for all involved.

- Possible perceived loss of power – not a strong experience of transparency.
  In the current processes, the mechanism for assessment and approval is relatively closed to the traders involved. In the LNSW ‘track and trace” capacity envisaged by the architecture a trader will have on line access to the progress of their request or submission. Whilst this may be welcomed by the traders, the government officials may resist this level of transparency. Likewise, within the government agencies, the system will allow for considerably more accurate monitoring of throughput times, numbers, decision points and accountabilities. This may not always be welcomed by the staff involved.

- Potential changes to revenue model for agencies – direct fee collection could be replaced and may not be well supported.
  One possibility offered by the LNSW is the ability to roll-up all current agency based fees into a single transaction fee for a trader at the end of the process. In the longer term it also contemplates the prospect of full electronic payment of the fees and duties owing. Agencies all currently rely on their own fee revenues, which they collect in cash at the time of processing. If agencies do not perceive equity and no loss of direct revenue in the introduction of the LNSW then they will likely oppose it. We are aware that the LCD has already been giving consideration to possible fee distribution models to address this.

- Potential trade resistance to the introduction of new fees unless clear benefits/savings in the new process.
  Traders will likely be sceptical of any new fees that are levied to establish and maintain the LNSW. They will also expect to see trade facilitation and genuine process improvements (process simplification, improved clearance times, reduction in number of physical visits) before they will willingly support new fees.
• A number of small and irregular traders who may not see any benefits. For the trader who is only an occasional importer or exporter, the benefits of a new system may not be clear. The current clearance times may not be an issue for them if they only engage in it one or two times a year. For these people, process simplification may only offer a small benefit.

• Limited culture of delegation. In the current process, final approvals pass through very senior management for signature. This means that there are currently at least four steps in the internal agency processes – culminating in signatures by Directors-General, Deputy Directors-General, Division Heads or Chiefs of Regions. The new process will not replace the final approval authority but will allow for the possibility of electronic permits rather than paper ones. This may not be well supported in the early stages but it is likely that as trade volume increases some agencies may opt for this arrangement. Electronic systems will allow for different types of monitoring and analysis so it may be that on a risk analysis basis future delegation of the authority to approve may occur.

• Limited exposure to and experience of risk management processes. The LNSW, as proposed, envisages a risk management module and risk based processes for participating agencies. Many of the permit, licensing and border processing agencies have very limited experience of formal risk management profiling or methods. Unless there is dedicated training for and support and monitoring of the use of the risk module, many users are likely to ignore it, or worse, to inadvertently create profiles that refer all submissions for more detailed scrutiny. This may well then aggravate traders who will be looking for any new system to improve process flow and reduce clearance and approval times. Risk management techniques will require effort to embed and internalise in departmental culture and process.

• Agencies not accustomed to day-to-day collaboration and information exchange – often separate and complex “stand alone” manual processes. It appears that whilst there is regular contact at the border posts between some of the agencies, and there is a level of collaboration on some specific import issues (e.g. Annual import plans) there is not a general or formal process for collaboration and information sharing between agencies. For the LNSW to be fully effective, all the agencies involved in the trade process will need to cooperate and collaborate for success. The new system will allow for structured and streamlined information flow both within and between agencies, but will only be fully effective when each agency supports others in the chain. A failure to build that collaboration early will represent a significant implementation hurdle later in the project.

• High level of role mobility in some agencies. The relative stability and longevity of agency staff was previously highlighted as a major strength. It is not uncommon for agencies, however, to have internal mobility of rotation process which results in staff movement on a regular basis. Whilst these mobility arrangements are important and useful human resource strategies, often in change programs there can be significant training and development effort put into an individual, only to see that person move to a new role within a few months. As part of the skill building and retention strategies, the implementers will need to devise arrangements to strike a balance between skills and capacity development and mobility of those trained. Failure to address
this will result in skill loss and will make it much more difficult to embed the new arrangements into the “normal way” of operating.

- Current Secretariat team small, single agency only and has many other responsibilities outside of LNSW.

Currently the LNSW Secretariat is hosted in LCD. This is a very capable but very small team that also has a number of other non LNSW projects to oversee and coordinate. Currently the team is only staffed by LCD staff. Unless the team is expanded with input from other key departments, and given a dedicated role, they will not be well positioned to support LNSW implementation. If this team is not dedicated and expanded the other affected agencies will be less likely to support desired outcomes. Whatever the final architecture that is determined for the LNSW, it is our assessment that it will require a full-time implementation team which should include representation from the key stake holding agencies. This collaboration model could also be a powerful model for future multi-agency work.

### 3.2 Understanding Stakeholders and Impacts

When planning change it is also critical to understand the key stakeholders (people, organisations or entities) that have a role in the current and future process and the likely impact the change will have on them. It is also important to understand the needs and desires of the most significant stakeholders. Key stakeholders can have a major impact on the success or otherwise of any project and a failure to acknowledge and address their needs can lead to high resistance levels.

The following table outlines the major stakeholders in the implementation of the LNSW. It also provides a preliminary analysis of the current and likely key issues for them and their likely needs (Based on workshop feedback and interviews). An examination of the table makes it clear that there are two principal types of stakeholders – 1) the government agencies and their staff and 2) traders and their staff, who will likely see overlapping but slightly different opportunities and threats arising from the implementation of the single window.

All parties will be seeking:
- a facilitation outcome, with reductions in the time taken to process applications and declarations;
- early, accurate and detailed information on the intended and likely changes to enable them to prepare;
- timely, practical and effective training when it is needed;
- service reliability; and
- support through the change process.

There will also be areas where interests, priorities and concerns may differ. For example:
- The border and permit agencies will put high importance on no loss of controls, whereas the traders will be very concerned about value for money and potential escalation of fees.
- Government agencies may put a focus on the opportunity to automate and improve some of their back office functions, whereas traders will want to see the priority on clearance and turnaround times.
• Government agencies may struggle with the move towards paperless processes and electronic payments but the traders may well see these as the most significant advantages for themselves and the trade.

These are illustrative but they highlight the importance of both early analysis in planning the change and in early and frequent engagement with key stakeholders to maximise common objectives and inform priorities in implementation.

**Key Stakeholder Analysis**

<table>
<thead>
<tr>
<th>STAKEHOLDER</th>
<th>KEY ISSUES</th>
<th>KEY NEEDS/WANTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lao PDR government</td>
<td>✓ Responsible for decisions on direction and delivery path.</td>
<td>✓ Regular and accurate advice on options and implications of decisions.</td>
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<tr>
<td></td>
<td>✓ Change must advance progress on the Trade Facilitation Strategic Plan, must meet ASEAN membership obligations and facilitate trade and economic growth.</td>
<td>✓ Regular and accurate advice on progress with implementation and on major deviations from intended outcomes, or cost, or timeframes.</td>
</tr>
<tr>
<td></td>
<td>✓ Cost and time for implementation and possible funding sources.</td>
<td>✓ Movement on ASEAN commitment.</td>
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<td></td>
<td></td>
<td>✓ Demonstrated improvement to trade performance.</td>
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<td></td>
<td></td>
<td>✓ Suitable funding source or financing strategy.</td>
</tr>
<tr>
<td>Border and License Issuing Agency management</td>
<td>✓ Cost and time for implementation.</td>
<td>✓ Suitable funding source or financing strategy.</td>
</tr>
<tr>
<td></td>
<td>✓ Fear of potential loss of controls.</td>
<td>✓ Reliable and consistent service.</td>
</tr>
<tr>
<td></td>
<td>✓ New skill required – technology and operational impact on existing work processes.</td>
<td>✓ New tools that assist department outcomes.</td>
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<tr>
<td></td>
<td>✓ Information security.</td>
<td>✓ No loss of control – enhanced control of risks.</td>
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<tr>
<td></td>
<td></td>
<td>✓ Improvements in trade facilitation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓ Lower data error rates.</td>
</tr>
<tr>
<td>Agency staff</td>
<td>✓ New skills required – technology and operational impact on existing work processes.</td>
<td>✓ Training and information on the new systems and processes.</td>
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<tr>
<td></td>
<td>✓ Fear of change.</td>
<td>✓ Job security and possibly new job opportunity.</td>
</tr>
<tr>
<td></td>
<td>✓ Possible fear of job losses.</td>
<td>✓ Support through change.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓ More interesting work.</td>
</tr>
<tr>
<td>Traders and staff</td>
<td>✓ Time and cost of permits and clearance of goods.</td>
<td>✓ Faster permit issue and goods clearance.</td>
</tr>
<tr>
<td></td>
<td>✓ New skills required and new work processes.</td>
<td>✓ Reduced costs.</td>
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<tr>
<td></td>
<td></td>
<td>✓ Value for money.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓ Service reliability.</td>
</tr>
<tr>
<td>-------</td>
<td>-------------------------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Statistical agencies and information consumers</td>
<td>✓ Consistent and Reliable Data Which is Easily Accessed and Used.</td>
<td></td>
</tr>
<tr>
<td>Treasury</td>
<td>✓ Ensure Protection of the Government Revenue.</td>
<td></td>
</tr>
<tr>
<td>Other ASEAN member states</td>
<td>✓ ASEAN Single Window Compatibility – Data Exchange Potential.</td>
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Consistent and Reliable Data Which is Easily Accessed and Used.
3.3 Current Communications Approaches.

In this Section of the report we examine the current level of general awareness about the LNSW and examine some of the current standard communications approaches used in Lao PDR. In a later Section (4.2 Communications Strategic Dimensions) we outline some additional approaches that may prove useful in the LNSW context.

As previously noted, at the present time the general level of awareness and understanding of the LNSW remains relatively low, except for a small number of senior officials and senior trade representatives. This is not surprising given the work that is still continuing on defining the possible architecture and service model for it - but it will need to change as decisions are made and implementation planning begins.

To date, general high level communications regarding the LNSW has been largely confined to press reporting of a couple of the major events (the Visioning Workshop, hosting of the ASEAN Single Window Steering Committee meeting in Vientiane and the signing of agreements with the provider) and to a few meetings of the LNSW Steering Committee. This has been complemented by some workshops and study tours, but remains centred on a relatively low number of people.

That noted, there is now a reasonable cadre of officials who have had the opportunity to participate in the study tours, attend the workshops and read the various scoping documents who are well placed to guide the decision making process on broad architecture and preferred delivery models.

Once some of the key decisions are made, it will be important to begin a much broader communications program which is aimed at informing and engaging a much wider group – so that they have some opportunity to understand and even input to the more detailed services model and any implementation planning.

We understand from feedback and observation that current communications approaches utilised in Lao PDR will generally include one or more of the following:

- **Press articles**
  
  It is common practice in Lao PDR for the press to be invited to attend major events which are held to announce new initiatives, major new policy, significant new agreements, major workshops or meetings or the enactment of new laws. This is a highly cost effective means of reaching a large number of people on issues of significance. This methodology has already been used in the LNSW context as mentioned above. The consultants are not aware of any impact analysis that has been conducted on this approach, but generally it is used internationally as an effective method for getting a few key messages to a wide group of news readers.

- **Agency websites**
  
  It is common practice in Lao PDR for agencies to post significant news events on their agency websites.
This again is a common international method of reaching a more select, but directly interested group. Whilst this approach can also be effective, website reliability can be an issue in Lao PDR.

- **Lao Trade Portal**
  - Since the establishment of the Lao Trade Portal, all agencies involved in the trade process have the ability to post material on major new developments, through DIMEX, on to the LTP. The LTP is specifically designed to be accessible by those interested in trade, so it offers a further mechanism to supplement agency based web announcements. We understand that the portal is designed to allow advice that new information is available to be “pushed” to registered users who have expressed an interest – this means that the likelihood of material being read is high.
  - It is the observation of the consultants, however, that at the present time, the use of the portal by other agencies is still developing – so this may represent a possible significant new channel for future LNSW and other trade related communications.

- **Team meetings**
  - We understand from discussions with agency officials that the concept of internal cascading verbal briefing and communications is quite common in government agencies. This involves the Director General briefing DDGs and Division heads on new initiatives, who then brief their Directors or deputies, who in turn brief their staff in team meetings.
  - This face to face briefing process can be very effective for communicating important issues to all staff – who have an opportunity to then ask questions or have discussions with their immediate supervisors. The two important planning issues in this cascading approach are 1) that the managers are well and comprehensively briefed so that they can give an accurate and comprehensive account of the issue and 2) this process will often take time and accordingly time needs to be factored into planning.
  - A feedback loop – whereby supervisors have an opportunity to report upwards on questions and issues that arise in these briefings is also critical to the success of this approach. A top down only approach will miss important feedback from the staff and those affected.

- **Workshops**
  - Workshops for internal staff or stakeholders are also a common communications mechanism used in Lao PDR. These can be a very effective means of getting important messages across and for receiving feedback (if the right people attend). But workshops are often costly to organise and host (in time and money) and even if relatively large will still only reach a limited number of people. The current strategy of using workshops to brief and engage with senior stakeholders, who will then communicate to their own staff or organisation members, can be very useful and important at milestone or decision points in the course of a major project.
  - The Lao PDR NSW Visioning Workshop held in November 2012 was one such example.

- **Training sessions**
  - Training is clearly critical for those who need to operate or implement any new system or procedure. Training of this type is already common in Lao PDR. Training is also a very effective means of communicating the intent and objectives behind new initiatives and can be instrumental in building bridges with industry when they are included.
Training, like workshops, can be expensive to deliver and have high recurrent cost (when delivering to many groups in dispersed locations) so needs to be clearly planned, structured and directed to delivering maximum outcomes for participants and the delivering organisation. Given the likely significant investment that will be required in LNSW training, it will be useful to allow for some time to explain the objectives, benefits being sought and for participants to build a good understanding of these before delivering purely procedural or technical elements. That noted, training is not a substitute for the earlier awareness raising programs that should occur at the early stage of implementation. Training in the operation and function of the LNSW when developed will be essential to achieve support, and will be imperative to support those whose work will change.
4 Change Management and Communications Strategic Directions

4.1 Change Management Strategic Directions

As covered previously, fundamentally the change management strategy for the LNSW will require a clear picture of:

- the “as is” situation (where are we now),
- the “to be” situation (where do we want to be in the future),
- who will need to come with us to get there (who are our key stakeholders and what will they want),
- how do we plan to get there (the key elements for implementation success),
- how long will it take (broad implementation timeframes) and
- how will we know when we have arrived (how will success be measured).

The change management plan needs to focus on the people dimensions of these elements and ultimately needs to complement the implementation plan that will be developed—a strategic level implementation framework will be the subject of separate report by the PM Group and is currently in development.

Whilst some elements of implementation are relatively clear and will be straightforward, other elements will require attitude and methodological shifts over some time. The integration of risk management approaches, a move to paperless processing and a move to full electronic payments represent some of these and will require a change in mindset rather than just procedure.

Notwithstanding that the full detail of the agreed future and final decisions about timeframes are not yet available, it is clear that any implementation plan will need to allow for a phased approach. This means that not all the changes will occur at once in all the agencies (the big bang approach), but rather that new system and process functionality will be progressively introduced (could be agency by agency, could be permit by permit, or could be central and then provincial— or a combination thereof). For the purposes of change strategies, the important element is that implementation will occur over time, and whilst the sum result will be significant change, it is likely to occur through a range of progressive smaller changes over a period. This allows change management plans and the size of the change management team to be more modest than in a big bang model, allowing a more gradual focus as implementation progresses. That noted the development of change management strategies and of communications plans should still be holistic in their scope and coverage—even though all elements may not require simultaneous and immediate delivery.
The following proposes some change management “directions” which should guide resource allocation, implementation plan decisions and central and agency based change planning. These strategic directions are presented in the context of the 8 principles for successful change management outlined earlier (see Section 2.4):

- Establish the need for and importance of the change. Build a sense of urgency!
- Establish a strong and senior guiding team.
- Establish the vision and understand how the vision will impact those affected by it.
- Engage stakeholders early, often and honestly. Communicate for “buy in” to the vision.
- Establish a capable change team and empower them to provide necessary support, training and encouragement to those who need it.
- Set short as well as long term goals – and then celebrate and recognise short term improvements along the way.
- Be persistent – maintain progress and continue momentum.
- When the change has been implemented continue to articulate the relationship between new behaviours and organizational success.

**PRINCIPLE 1: Establish the need for and importance of the change. Build a sense of urgency!**

**DIRECTION 1:** The need for the change has been covered previously (Lao Trade Facilitation Strategy, ASEAN obligations, potential benefits for the traders and improvements for government agencies). Whilst this establishes a mandate for the LNSW, it does not mean that those affected by it will embrace the need for change or understand or accept the importance of it. Nor does it, of itself, create a sense of action or urgency.

For this reason very early attention must be given to the development of the marketing, communications, engagement and public relations campaign - to begin the process of “buy in”. In the early stages of this, senior agency management and spokespeople will need to allocate significant time for discussions with the trade and others affected by the LNSW about why the change is necessary – what are the problems that we wish to overcome, what are the benefits we need to achieve and why do we want to do this. This engagement needs to be open and realistic.

Once this sense of purpose has been established, to create a sense of urgency it will also be important to set out some time based targets for the completion of key milestones. These milestones should have relevance for the traders as well as the government agencies (e.g. By March 2014, xx and yy permits will be able to be lodged electronically with the relevant government agency. By [x date] traders in Lao will have access to an electronic workbench that will enable them to remotely lodge xx permit applications and by [x date] to remotely lodge their ASYCUDA declaration.)

The key milestones should have a central place in the communications strategy and activity and they must be monitored and reported on both internally and publicly. If targets are simply set as a long term objective, with no defined deliverables and milestones along the way, participants are likely to lack focus and be continuously distracted by matters of the current moment. Change does not occur in a vacuum, and the day to day demands
on people will draw them away from long term goals, unless the senior guiding team has clear and defined time based targets which are regularly monitored. As stated, these milestones must also have meaning for the stakeholders, so that they can visualise some benefits being delivered by certain specified times.

**PRINCIPLE 2: Establish a strong and senior guiding team.**
DIRECTION 2: The successful achievement of lasting change requires leadership from the top, by people who have enthusiasm, commitment and passion for the desired outcome. Staff notice what their leaders believe and will pay close attention to it. For this reason the senior team needs to share a commitment and enthusiasm for the guiding purpose.

The existence of the LNSW Steering Committee is a significant first step in establishing the guiding team. The fact that the Chamber of Commerce and LIFFA are already members of the Steering Committee is significant, as it includes the two major representative groups for traders. Most of the key permits issuing agencies are also already represented, except for the Department of Health.

Once final decisions about the scope and direction for the LNSW have been taken, it would be advisable to review the Committee membership to determine if some additions may be useful.

The existing LNSW Steering Committee will not be in a position to set and monitor all of the detail of implementation and change management planning. For this reason a new, smaller LNSW Implementation Oversight Group should be established to set and monitor the more detailed implementation plans, and to ensure coordination between the agencies involved. Each of the key affected agencies should nominate a very senior officer as the agency “LNSW Sponsor” (should be at Deputy Director-General level) and these people should be on this Oversight Group. A senior representative of the provider of the single window should also be on this group.
The current LNSWSC Secretariat team has done an excellent job of supporting the LNSW Steering Committee to date, but it is not resourced or structured to manage the overall implementation. The new Implementation Oversight Group should be supported by a new, full time, implementation team – based in the lead agency. The key agencies should each contribute a staff member to this team – so that a sense of shared ownership for LNSW outcomes and progress is achieved. The proposed structure for this leading and coordinating framework could be as outlined in the figure below:

**PRINCIPLE 3: Establish the vision and understand how the vision will impact those affected by it.**

**DIRECTION 3:** To build a sense of purpose it is essential to build a vision for the LNSW. The vision should be agreed between government and the key agencies and will become the hub around which implementation, communications and change planning takes place. As previously covered, to build a sense of urgency the vision should have a timeframe. To build a sense of purpose it should also be aspirational.

For example, a vision for the LNSW could be - “By 2017 we will have Electronic and Streamlined Business to Government (B2G) and Government to Government (G2G) transactions for all Lao international trade” or “By 2017 Lao PDR will be seen as an ASEAN leader for streamlined electronic trade transactions”.

The establishment of a shared vision between government, agencies and traders will be an essential foundation for the future work. This vision should bind the milestones discussed earlier-establishing timeframes (presented as targets), broken down to some of the key milestones and achievements sought.

To achieve a shared vision, the objectives of the LAO PDR government, the needs of the various government agencies and trader preferences and benefits will all need to be reflected. As covered in the section on “Urgency” above, the establishment of the vision should, therefore, be subject to some open
and detailed discussion with all the key stakeholders in the LNSW. The Lao Chamber of Commerce and LIFFA (as well as the key affected government agencies) will be critical partners in achieving consensus and buy in at this early stage.

It would be advisable for the LNSW steering committee to devote some time to the exploration of a possible “Vision Statement” for the LNSW at one of its next meetings.

**PRINCIPLE 4: Engage stakeholders early, often and openly. Communicate for buy in to the vision.**

**DIRECTION 4:** The importance of establishing a vision has been covered previously. Communications at the very beginning of implementation planning (and then at key points along the process) will be critical to both buy in at the early stages and ultimately to longer term project success. Communications is the key to engagement, which then reinforces “buy in” by stakeholders and stakeholder groups. Stakeholder “buy in” is important if change is to be accepted, embraced and implemented by those who will be affected by it.

Whilst early stakeholder engagement is critical, it should not be seen as a one-time event that only occurs at the start of change. In the Communications Directions outlined in the next section we suggest a series of possible strategies for continuing the process of engagement with stakeholders throughout the project. In particular, we suggest that individual stakeholders need to be informed on an ongoing basis about both general developments as well as those elements which particularly relate to them. We also reinforce the importance of feedback mechanisms, to enable stakeholders to seek support, express their opinions and obtain answers to questions. This can either be by e-mail, through the internet, on the telephone or face to face.

On this latter point of face to face, it would be advisable to schedule regular meetings, briefings and information sessions for the main and influential stakeholders at several points throughout the LNSW implementation phase. In line with the principle of “know your audience” planners need to analyse the key stakeholders, seek to understand their likely responses and needs and tailor communications to them. Influential key stakeholders may need small and regular face to face meetings to maintain support and understanding, while those less directly affected and with less influence may only need written information about what is happening and when. Planning for stakeholder engagement can be informed by the Stakeholder Analysis Matrix provided in Section 3.2 of this report.

**PRINCIPLE 5: Establish a capable change team and empower them to provide support, training and encouragement to those who need it.**

**DIRECTION 5:** There is a natural tendency in the management of many long term and complex projects to give priority and focus to the technology that will be deployed (how many, what, when and where), the establishment of the legal or procedural documents (new laws or decrees or new operations manuals) and the delivery of training to operating staff (who, what skills, when and where). These are all essential and important elements of any good implementation planning, but as covered throughout this report, they need to be complemented with change planning and supported by people who have a sound understanding of reactions to and people dimensions of major change.
For this reason it is highly beneficial to have embedded in the implementation team, someone who can maintain a focus on change management planning and support. This person can offer focused change management input, advice and support to the implementation team and to senior managers responsible for the change. It is suggested that each agency should appoint a “Change Coordinator” who can report internally to the senior agency LNSW Sponsor and externally to a central Change Coordinator who is part of the national LNSW Implementation Team (see the figure below).

Change coordinators should be given preparatory training on change management and should be responsible for developing a Change Management Plan for their agency. A template for an agency Change Management Plan is provided at Appendix D. As mentioned earlier in this report, two change management workshops were held in Vientiane (one in November 2012 and one in February 2013). Consequently, there is now at least one staff member in each of the 6 key departments who has had introductory training on change.

If the implementation of the LNSW is phased (as is being recommended) initially, these coordinators need only be contact points until activity is scheduled for their department, but the central Change Coordinator is likely to be full time for the duration of implementation. Even if the Change Coordinators are working in different agencies and may be working on implementation at different times, it will be highly useful for them to meet on a regular basis throughout the implementation process.
**PRINCIPLE 6: Set short as well as long term goals – and then recognise short term improvements along the way.**

DIRECTION 6: The importance of setting some interim delivery targets in long term projects was covered earlier. Part of the reason for setting those targets is to create the sense of urgency, but it is also important to give people a sense of achievement as some of the shorter term objectives have been met. This helps build momentum and pride, and often allows for the leveraging of benefits achieved in one area to create enthusiasm in another.

As part of the LNSW change planning process, therefore, it is important to plan for visible performance improvements or “wins” along the way, to keep pressure up to deliver those wins and then to visibly recognise and reward people who made the wins possible. In the context of the LNSW there will be many opportunities to create these wins along the way. Depending on the final decisions about phasing there will be many milestones that can be set around (for example) system build and availability, agency adoption of system and process elements, delivery of services and service milestones for traders and equipment and training rollout wins.

Clearly this list is not exhaustive and can be added to as part of implementation planning. What is important is that the planners actively seek opportunities to identify the wins, and to alert the stakeholders and leaders when they have been achieved.

On the issue of rewards, it is important to note that rewards do not need to be monetary or tangible. Sometimes statements of public recognition, or peer acknowledgement can be as powerful as other types of rewards. In the Lao context, certificates and citations appear to have meaning for people, so may represent more formal recognition options.

**PRINCIPLE 7: Be persistent – maintain progress and continue momentum.**

DIRECTION 7: It is worth noting that resistance to change is inevitable. Managers should not assume that they are failing in their management of change simply because such resistance exists. On the contrary, it should be expected that the prospect of change will have a significant impact on many employees, as change inevitably brings with it an element of uncertainty about the future of the organisation and their role within it. Such uncertainty will often lead to a sense of loss of control, which in turn leads to resistance, regardless of whether the proposed change may be logical and sound. The philosopher Arthur Schopenhauer said “All truth passes through three stages. First, it is ridiculed. Second, it is violently opposed. Third, it is accepted as being self-evident” (Arthur Schopenhauer - German philosopher 1788 - 1860). The challenge for the change manager is to maintain the momentum of change through periods of ridicule and opposition, and to help employees understand the benefits of the change as well as the potential costs.
At critical stages of the LNSW implementation process it is likely that the implementation team will face barriers and uncertainty. It is at these times that persistence becomes essential – and must be driven by the senior leadership guiding team. To properly manage resistance to change a clear understanding of the specific reasons for the resistance is needed. Resistance can range from valid questioning to unfounded rejection. Resistance to change usually increases towards the end of a project as more information becomes available to the individuals affected by the change and as it moves closer to them. Assessment of resistance factors should be conducted regularly throughout the change process.

As mentioned previously, the LNSW will not just impact on the tools and procedures that apply to the trade process in Lao PDR. It will also, over time, impact on the way people think about their role and tasks – as much an organisational cultural issue as it is procedural. It is important to recognise that changes to the culture of an agency are the most difficult to manage and implement. Culture relates to “the way we do things round here”, and is the most powerful force opposing change.

Implementation of cultural change to support the full achievement of the LNSW vision will be a long-term process that will need to be managed carefully and with persistence at the senior levels. Approaches that can be effective in managing resistance include:

- Providing mechanisms for stakeholders to discuss their concerns openly, such as facilitated workshops.
- Clearly communicating to stakeholders aspects of the change such as the benefits that will accrue generally or to particular sectors and why the change has to take place to achieve those benefits.
- Providing adequate training – at the right time.
- Providing adequate support for stakeholders before, during and after implementation.
- Involving people who resist in the project as much as possible to provide assurance that their concerns are understood and being addressed.

These strategies are all covered in other parts of this report and collectively they represent a powerful suite of suggested approaches in the LNSW implementation process.
**PRINCIPLE 8: When the change has been implemented continue to articulate the relationship between new behaviours and organizational success.**

DIRECTION 8: There is always a risk in major projects that when the equipment has all been put in place, new procedures have been established and training has been given, to consider the project COMPLETED. The implementation team by this stage is generally tired and ready to move on to other roles and the leadership or guiding team is already moving on to the next major priority.

Whilst this is to an extent inevitable, it is important that the guiding team continues to reinforce why the changes were made and what the benefits have been. In this way agency leadership continues to reinforce the message that the changes are worthy and will “stick” and staff and users are given a reinforcement that the new way of operating is here to stay (at least until the next improvement).

It is also important that the guiding team has a method for monitoring the new practice, process, system or methodology to ensure that it continues to perform as hoped and is embedded as the new standard practice. This is always important, but particularly so in evolving and developing areas, where we will likely want to build on the new base for the next round of improvements. If the change is not embedded, the next improvements will require a reinvestment in the last change (again) before moving forward.

A standard practice of “plan, implement, review and improve” is important for all change management processes. This requires the establishment of review mechanisms, backed by performance indicators, to enable the monitoring of ongoing success and sustainability. For IT systems this is relatively straightforward, and performance indicators around service availability or down time, throughput rates, response times, recovery times, volume of transactions are quite common.

For the LNSW there should be service level indicators that will provide reliable and accurate information about those elements above, as well as the performance of the operator. But there should also be monitoring mechanisms in place to measure departmental achievements. For example, if risk management modules are implemented, collect data on clearance times for green versus red channel transactions. If workflow management systems are included for the permit issuing process, monitor the time taken to process permits from one point in the workflow to the next. Monitor the rejection rate of permits and monitor the total elapse time from permit application to permit grant. People tend to value and pay attention to what is measured, so the selection of these indicators becomes an important part of any review process.

### 4.2 Communications Strategic Directions

The successful introduction of a National Single Window for Lao PDR border agencies and traders will require timely and effective communications, engagement and marketing strategies, backed up by training for staff and technical support. In this section of the report we define some of the key elements of effective communications and point to some new tools and methods that could be used in implementing the LNSW.
Communication needs to be planned and managed, in the same way that change management does. For this reason it is highly advisable that a “Communications Officer” be appointed as part of the LNSW implementation team. This officer will need good writing, presentation and negotiation skills, as well as sound conceptual abilities.

As covered elsewhere, communications at the very beginning of implementation planning (and then at key points along the process) will be critical to project success. As previously stated, communications is the key to engagement, which is then a key to the achievement of “buy in” by stakeholders and stakeholder groups. Stakeholder “buy in” is important if change is to be accepted, embraced and implemented by those who will be affected by it.

Communications in this context means more than just information provision, and includes processes for two way exchanges of information, ideas and views in an advise/listen/revise/monitor loop. Reliance on a narrow one-way view of information provision for projects that involve significant process and practice change will be insufficient to achieve truly successful outcomes.

At its simplest, the definition which should guide change communications is:
“Communication (from Latin "communis", meaning to share) is the activity of conveying information through the exchange of thoughts, messages, or information, as by speech, visuals, signals, writing, or behavior” (Wikipedia dictionary – emphasis added). Communication requires a sender, a message and a recipient—although the receiver need not be present. Communications can occur across vast distances in time and space. There are a few common-sense but strategically important principles of communications that can be used to guide and shape our planning. Whether speaking informally to a small group, addressing a conference or meeting, presenting a case for change to clients or staff or writing a newsletter, a news release or formal report, the following basic principles apply:

- Know your audience.
- Know your purpose.
- Anticipate objections.
- Present a balanced picture.
- Achieve credibility with your audience.
- Present information in several ways – use different media and approaches.
- Develop a practical, useful way to get feedback.

Communications techniques can include verbal and non-verbal cues, visual and auditory aids, written methods or a combination of all these.

When communicating the idea of a change for the first time it is important to be mindful that:
- Creating Isn’t Selling
  Often the creators of an innovation feel that convincing others of the idea’s value is somehow superfluous to their activities. To them, conceiving the idea is enough. This combines with their inner
conviction that their idea will "sell itself." Change agents need to provide the important link between creators of new ideas and users.

• Ideas Need Selling
  Someone must recognize when an idea is good. It is important that when an idea is good it is sold to those who will be the ones to act on it - those who have the practical job of implementing it. Understanding users is an important activity for any change agent. People must be satisfied that a particular idea or innovation has enough merit to warrant adoption.

• Selling Ideas Takes Effort
  Selling change in process or methodology requires preparation, initiative, patience, and resourcefulness. It may take more effort than originating the idea. Communications on new ideas must be targeted to the appropriate users and relate to their needs and motivations.

• Once is Not Enough
  A new idea has to be suggested many times before it will "catch on." Initial failures at promoting a new idea are to be expected, so it is important not to get discouraged if initial results are not achieved the first time. Some ideas take years to catch on. However, first exposures are crucial to future prospects. Do it right the first time.

As covered previously, it will be important for the change effort that, once key broad decisions have been finalised, a concerted effort is made to begin the more general process of information sharing and engagement with the key stakeholder groups. This communications and engagement should be planned and delivered using a “market segmentation” approach. This means developing a communications strategy that identifies the different communications needs, desires and approaches for each of the major stakeholder groups. Whilst a general information process, using press stories and advertisements will still be needed, it should be complemented by tailored communications aimed at different groups.

Lao PDR agencies already utilise different communications medium for different market groups so the approach of multi layered communications approaches will not be new to most. In the communications strategy for the LNSW all of the current practiced methods described earlier in Section 3.3 (Current Communications Approaches) will have a significant place – but will benefit from supplementation with a range of additional approaches. These should include:

• Market segmentation
  As covered previously, the principle of “know your audience” means that planners need to analyse the key stakeholders, seek to understand their likely responses and needs and tailor communications to them. Influential key stakeholders may need small and regular face to face meetings to build support and understanding, while those less directly affected and with less influence may only need written information about what is happening and when. Those who will implement the change on a day to day basis will need both a good general understanding of the objectives of the change and detailed training support on new procedures, methodologies and processes. Planning for market segmentation can be informed by the Stakeholder Analysis Matrix provided in Section 3.2 of this report.
• **Email Awareness Campaigns**
  E-mail campaigns can be a very cost effective means of beginning the engagement process. E-mail represents a modern and very powerful mechanism for reaching a large number of affected and interested parties. The concept of email campaigns to engage affected and interested groups and individuals has been used internationally to very good effect for some time. Using email early in the communications process may provide a quick and easy means to alert a large number of affected people to the intentions and ambitions for the LNSW, and later to keep them apprised of major developments. It also provides a possible quick and easy feedback loop where recipients can choose to reply directly. The consultants understand that no central email list presently exists in any one repository in the Lao PDR agencies - but it should be possible for agencies to pool information at a very early stage to compile some early lists of traders and their email and physical addresses. Lists should be available for registered traders from DIMEX and importers from LCD. Whilst it may take a little effort to assemble such a list for the first time the long term benefit would represent a good investment. It may also be possible that LIFFA and the Chamber of Commerce have email lists of members that could also contribute to a master sheet.

• **Trade Portal**
  The LTP offers a new opportunity for the government to convey important information about the LNSW to the trading community. The LTP has the capacity to post new information and developments on its front page as well as having the capacity to push advice that new information has been posted directly to those who have registered on the site. The posting of key new information about the LNSW and its implementation on the LTP could have the dual benefit of providing a reason for traders to more regularly visit the site, and provide a new communications channel for the implementers. Because the LTP has a questions and answers mechanism, it is also feasible to use it to enable those interested in the LNSW to post questions and comments on the LNSW through the portal.

• **Newsletters**
  Periodic Newsletters can be a very powerful and efficient way of providing information updates to interested parties. These can be targeted at both affected traders and affected staff and if used regularly they can be a useful way of building up knowledge and confidence over time. Newsletters should also point readers to the LTP for more regular updates and should provide an email address where readers can raise questions about and offer input to the LNSW implementation team. An email address such as LNSWquestions/comments @ …… may be a simple means of seeking feedback. The email addresses of senders can also be reconciled with the email list mentioned earlier to continue to increase the mailing list for future updates. Newsletters can be both electronic (e-mail and posted on the LTP) and hard copy, and placed at strategic locations such as department front counters and the ASYCUDA kiosks around the country.
  Newsletters can also be provided to the industry groups – for them to pass on to members.

• **CDs and brochures**
  CDs or DVDs and brochures can also provide a supplementary information medium for traders and staff – and could also be either mailed out to registered traders or made available at kiosks.
• Department run specific community workshops/briefings
  Given the highly diversified group of traders operating in Lao PDR, and the fact that specific agencies (e.g. Health, Agriculture, Science and Metrology) will have the best knowledge of the relevant industry and trader needs, the Communications Plan should include provision for the individual agencies to provide workshops and face to face briefings for their constituents. These workshops and briefings should be facilitated by the Department’s senior LNSW Sponsor and be tailored to the needs of the particular trader groups. They can also be timed to coincide with the progressive rollout of changes (covered earlier in the Change Management Strategies Section 4.1)

• Support industry bodies to offer briefings and information to their members
  There are at least 2 major industry bodies that represent traders that have been involved in workshops relating to the LNSW. These two associations (LIFFA and the Lao PDR Chamber of Commerce) are potentially well placed to partner on member communications – as well as being potential strong allies in the marketing of the change. These two bodies should be regularly included in communications planning and rollout processes and should be encouraged and supported to provide information to their members. The key industry bodies should be given access to all materials (newsletters, email campaigns, brochures and CDs) that may assist them in both maintaining their own knowledge and in informing and advising their membership of implementation progress.

• Staff briefings by senior agency staff
  Recognising that there will be particular specific Divisions or sections of departments and department staff affected by the LNSW (license, permit and certificate issuing areas) it would be feasible and desirable for face to face briefings with them to be held at an early stage – and for those briefings to be followed up with regular updates on progress and developments. Whilst the cascading briefing process described earlier can be used for subsequent updates it would be preferable for the first briefings to be held by the senior relevant agency Change Sponsor. This senior manager will be best placed to give a comprehensive overview of the vision and objectives of the LNSW and to outline the specific anticipated benefits and impacts for the Division or Section and its staff. This message from a very senior departmental officer will be most likely to convey the sense of importance, will and urgency of the project and will generate maximum interest from the staff affected.
5 Recommendations

In the following we make only a few key strategic recommendations for Change Management and Communications to inform LNSW implementation decision making and planning. Throughout this report there are a number of additional suggestions which are made about approach, tactics and mechanisms which may be of further benefit in the change process. These are not repeated in this Section but may prove useful to the implementation team and those designated as change coordinators or project sponsors for the LNSW.

It is clear, based on the technical and functional architecture proposed for the LNSW (and the recommended business and accompanying workflow changes) that the successful introduction of a National Single Window for Lao PDR border and licensing agencies and traders will require the active engagement and support of a number of important stakeholders for whom the change will represent both opportunities and challenges. Timely and effective communications, engagement, marketing, training, facilitation, monitoring and staff and technical support strategies will need to be in place to achieve that.

Successful introduction will also require a mechanism for central and regular monitoring of the progress of change initiatives (and of implementation more generally) to ensure coordinated and effective use of available resources and to embed a “review and improve” approach to the changes. These will need to commence immediately – with engagement and communications to inform any final decisions about the functional and technical specifications and will need to continue for at least the first year of implementation.

The specific recommendations we make to support this are detailed below:

**Recommendation 1: Establish a clear Vision and Vision Statement for the LNSW.**

It is recommended that the LNSW Steering Committee agree and establish a Single Window Vision Statement as early as possible, to help guide decision making and implementation planning.

In Section 4.1 (Change Management Strategic Directions) we outlined the importance of having a high level vision for the LNSW that will have resonance for the government and major stakeholders. This vision should be aspirational as well as setting a discernible timeframe to help focus activity. An example of two possible (or complementary) vision statements is included below.

“By 2017 we will have Electronic and Streamlined Business to Government (B2G) and Government to Government (G2G) transactions for all Lao international trade” or “By 2017 Lao PDR will be seen as an ASEAN leader for streamlined electronic trade transactions”.

**Recommendation 2: Identify interim implementation wins, set deadlines and monitor them.**

It is recommended that as part of the implementation process, early attention is given to planning for visible performance improvements or “wins” along the way, to set deadlines for them, keep pressure up to deliver those wins and then to visibly recognise and reward people who made the wins possible.
The importance of setting some interim delivery targets in long term projects was covered in Section 4.1 (Change Management Strategic Directions). Part of the reason for setting those targets is to create the sense of urgency, but it is also important to give people a sense of achievement as some of the shorter term objectives have been met. This helps build momentum and pride, and often allows for the leveraging of benefits achieved in one area to create enthusiasm in another.

Depending on the final decisions about phasing there will be many milestones that can be set around (for example) system build and availability, agency adoption of system and process elements, delivery of services and service milestones for traders and equipment and training rollout.

These milestones should have relevance for the traders as well as the government agencies. For example:

- By March 2014, [xx permit type] and [yy permit type] will be able to be lodged electronically with the relevant government agency.
- By [xx date] traders in Lao will have access to an electronic workbench that will enable them to remotely lodge their ASYCUDA declaration.

**Recommendation 3: Identify a Senior LNSW Sponsor in each of the key agencies.**

It is recommended that each of the key affected government agencies should nominate a very senior officer as their agency “LNSW Sponsor”. This Sponsor should be at Deputy Director-General level.

We have noted that the successful achievement of lasting change requires leadership from the top, by people who have enthusiasm, commitment and passion for the desired outcome. Staff notice what their leaders believe and will pay close attention to it. For this reason the senior team needs to share a commitment and enthusiasm for the guiding purpose. The appointment of a very senior member of each of the agencies as change sponsors will be a powerful demonstration of commitment and importance for all others involved in and affected by LNSW implementation.

These Change Sponsors will take a leading role in the communications and change activities within their agency.

These LNSW Sponsors should be members of a new LNSW Oversight Group recommended below.

**Recommendation 4: Establish a new Implementation Oversight Group to support the LNSW Steering Committee.**

It is recommended that the LNSW Steering Committee establish a new, smaller LNSW Implementation Oversight Group which will have responsibility to set the detailed implementation plans, monitor progress against those plans and to ensure coordination between the agencies involved.

As noted in the body of this report, the existing LNSW Steering Committee will not be in a position to set and monitor all of the myriad detail of implementation and change management planning. For this reason a new
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and smaller LNSW Implementation Oversight Group should be established to set and monitor the work of the implementation team and the provider.

This group would meet regularly (perhaps monthly) and would provide reports and advice to the LNSW Steering Committee (which might meet every 3 months).

The individual agency LNSW Sponsors identified in Recommendation 3 should be on this Oversight Group. A senior representative of the provider of the single window should also be on this group.

As well as setting and monitoring the detail of implementation planning, this group can also have a major role in ensuring agency collaboration and cooperation throughout the implementation process.

**Recommendation 5: Establish a multi-agency Implementation Team.**
The current LNSWSC Secretariat team has done an excellent job of supporting the LNSW Steering Committee to date, but it is not resourced or structured to manage the overall implementation of the LNSW.

It is recommended that the new Implementation Oversight Group should be supported by a new, full time, implementation team – based in the lead agency. The key agencies should each contribute a staff member to this team – so that a sense of shared ownership for LNSW outcomes and progress is achieved.

Within the implementation team, one member should be appointed as the Communications Coordinator and one member as the Change Management Coordinator.

Note: Whilst it may not be formally required, consideration should be given to amending the Decision of the Minister of Finance (No. 2114/MOF 10 August 2012) to establish the positions and groups identified in Recommendations 3, 4 and 5 above.

**Recommendation 6: Commence a comprehensive program of information sharing and engagement.**
It is recommended that as soon as practicable, the LNSW Steering Committee should commence a comprehensive program of communications and engagement using a “market segmentation” approach.

Communications at the very beginning of implementation planning (and then at key points along the process) will be critical to both buy in at the early stages and ultimately to longer term project success. Communications is the key to engagement, which then reinforces “buy in” by stakeholders and stakeholder groups. Stakeholder “buy in” is important if change is to be accepted, embraced and implemented by those who will be affected by it.

Whilst early stakeholder engagement is critical, it should not be seen as a one-time event that only occurs at the start of change. In the Communications Directions we suggest a series of possible strategies for continuing
the process of engagement with stakeholders throughout the project. In particular, we suggest that individual stakeholders need to be informed on an ongoing basis about both general developments as well as those elements which particularly relate to them. We also reinforce the importance of feedback mechanisms, to enable stakeholders to seek support, express their opinions and obtain answers to questions. This can either be by e-mail, through the internet, on the telephone or face to face.
Appendix A: LIST OF REFERENCE MATERIALS

Books and Articles on Change and Culture

The Toolbox for Change – A practical Approach, Synnot, Bill and Fitzgerald, Rosie, Danjugah Brisbane, 2007


Managing At The Speed of Change, Conner, Daryl R., Villard Books, NY 2002


When Cultures Collide, Lewis R., Nicholas Brealey Publishing: London, UK 2002

Appendix B: LIST OF KEY AGENCIES FOR CONSIDERATION IN CHANGE MANAGEMENT PLANS

<table>
<thead>
<tr>
<th>Ministry of Finance</th>
<th>Customs Department</th>
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<td>Ministry of Agriculture and Forestry</td>
<td>Department of Agriculture</td>
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<tr>
<td>Ministry of Agriculture and Forestry</td>
<td>Department of Livestock and Fisheries</td>
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<td>Ministry of Health</td>
<td>Food and Drug Department</td>
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<td>Ministry of Industry and Commerce</td>
<td>Import-Export Department</td>
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<td>Ministry of Science and Technology</td>
<td>Standardization and Metrology Department</td>
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# Appendix C: LIST OF “IN SCOPE” CANDIDATE CERTIFICATES, LICENSES AND PERMITS (CLP)

Note: This table is an extract from the Report prepared on Functional and Technical Architecture Options for the NSW.

<table>
<thead>
<tr>
<th>#</th>
<th>Certificate, License or Permit</th>
<th>Government agencies</th>
<th>Locations</th>
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</table>
| 1. | Lodgement of Import Plan  
→ Acknowledgment receipt  
→ Road Vehicles  
→ Spare parts for road vehicles  
→ Temporary Car Imports  
Above: AHTN: 8701.20, 8701.30.20  
8701.90, 8702, 8703, 8704 (Except  
8704.31 (motor vehicles with 3 wheels)),  
8705, 8711  
→ Petroleum and Gas  
Above: AHTN: 27.10 (petroleum oil),  
27.11 (petroleum gas)  
→ Logs barks, transformed timbers  
Above: AHTN: 4403.20.10, 4407.29,  
0601.20.90  
LTP process: <mentioned in DX-01> | CLP agency:  
DIMEX  
Quantity unspecified  
Assume without basis: small number of traders and plans p.a – 1000  
Cost: <unspecified>  
Border Agency: Not applicable | Vientiane  
Not applicable |
| 2. | Application for Import/Export License  
→ Import /Export License  
→ Road Vehicles  
→ Petroleum and Gas  
→ Spare parts for road vehicles  
→ Temporary Car Imports  
AHTN: as for Import Plan  
LTP process: DX-01 | CLP agency:  
DIMEX  
Quantity unspecified  
Guestimate: From 2010 Customs data: 45000 applicable line items declared.  
Assume without basis 5 line items per permit → 9000 permits p.a.  
→ 12000 p.a. in 2013 (@7% p.a.)  
→ 16000 p.a. in 2018 (@7% p.a.)  
Cost: 10,000 LAK / licence form  
Border Agency:  
Customs | Vientiane  
Border locations specified for LNSW |
<table>
<thead>
<tr>
<th>#</th>
<th>Certificate, License or Permit</th>
<th>Government agencies</th>
<th>Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Application for Import for re-export Transit Permit → Import for re-export Transit Permit (type 1: main borders, type 2: involving traditional border) • Commodities in the list of controlled goods listed in Notification No. 0076/MoIC. DIMEX (e.g. gas, oil, motor vehicles, weapons, etc.) AHTN: as for DX-01 – t.b.c. LTP process: DX-02</td>
<td>CLP agency: DIMEX Quantity: 60/70 p.a (2012) → 100 p.a in 2018 (@7% p.a.) Cost: nil Border Agency: Customs</td>
<td>Vientiane Border locations specified for LNSW</td>
</tr>
<tr>
<td>4</td>
<td>Application for Vietnam Transit Certificate for Dangerous Goods → Vietnam Transit Certificate for Dangerous Goods • Commodities controlled dangerous commodities such as explosives or explosive materials.) AHTN: 3602 – Prepared explosive other than propellant powders; 3603 – Safety fuses; detonating fuses; percussion or detonating caps; igniters; electric detonators; LTP process: DX-02</td>
<td>CLP agency: DIMEX Quantity: 3 or 4 p.a – 1 trader (transport company) Cost: nil Border Agency: Customs</td>
<td>Vientiane Border locations specified for LNSW</td>
</tr>
<tr>
<td>6</td>
<td>Application for Certificate of Product Eligibility (for COO) → Certificate of Product Eligibility (for trader) AHTN: any LTP process: CO-01 (mentioned)</td>
<td>CLP agency: DIMEX Quantity unspecified – guestimate: xxx Cost: &lt;unspecified&gt; Border Agency: Customs</td>
<td>Vientiane or Provincial division of MoIC (see list of provinces included for LNSW) Not applicable</td>
</tr>
<tr>
<td>#</td>
<td>Certificate, License or Permit</td>
<td>Government agencies</td>
<td>Locations</td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------</td>
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<td>-----------</td>
</tr>
</tbody>
</table>
| 7. | Application for Certificate of Origin (for requesting trader in the import country)  
→ COO for DFTP Scheme for LDC for trade with India  
→ Form A for trade with country belonging to the Generalized System of Preferences  
→ Form A1 for trade under the ASEAN-India FTA  
→ Form D for trade under the ATIGA Agreement with other ASEAN countries  
→ Form S for trade under the Laos-Vietnam Preferential Tariff Agreement  
AHTN: any  
LTP process: CO-01 | **CLP agency:**  
DIMEX  
Quantity unspecified – guestimate: xxx  
Cost: Fees for COO are based on value of goods as follows:  
Less than $10,000: KIP 40,000  
$10,001 to $30,000: KIP 60,000  
$31,000 to $60,000: KIP 80,000  
$61,000 or more: KIP 100,000  
**Border Agency:**  
Customs | Vientiane or Provincial division of MoIC (see list of provinces included for LNSW) |
| 8. | Application for Import/Export License  
→ Import / Export License  
• Un-milled rice, low-standard rice, premium rice, semi-milled or fully milled rice whether filtering or not (AHTN: 1006) (import and export)  
• Steel bars and transformed steel (AHTN: 72.13, .14, .15, .16) (import only)  
• Cement, mortar, concrete (AHTN: 25.23, 38.16 ) (import only)  
LTP process: MI01 | **CLP agency:**  
Provincial division of MoIC  
Quantity unspecified – Guestimate: From 2010 Customs data: 6300 applicable line items declared – all provinces. Assume without basis 1 line items per permit  
→ 6300 permits p.a.  
→ 8000 p.a. in 2013 (@7% p.a.)  
→ 11000 p.a. in 2018 (@7% p.a.)  
Cost: 10,000 LAK / licence form  
**Border Agency:**  
Customs | Vientiane or Provincial division of MoIC (see list of provinces included for LNSW) |
| 9. | [Drugs] Form 1 (generic details)  
→ request for Form 2  
• Drugs  
• Food supplements  
• Traditional medicines used for medicinal purposes  
AHTN: incl. 0510, 1211, 1212, 30  
LTP process: DR-01 | **CLP agency:**  
Department of Food and Drugs, Drugs Division  
→ 510 p.a. in 2018 (@7% p.a.)  
[~100 traders]  
Cost: <see below – Form 2>  
**Border Agency:**  
Not applicable | Vientiane |
| 10. | [Drugs] Form 2 (detailed chemical details)  
→ Registration certificate (3 year validity) | **CLP agency:**  
Department of Food and Drugs, Drugs Division  
→ 510 p.a. in 2018 (@7% p.a.) | Vientiane |
<table>
<thead>
<tr>
<th>#</th>
<th>Certificate, License or Permit</th>
<th>Government agencies</th>
<th>Locations</th>
</tr>
</thead>
</table>
| 11 | [Drugs] Request for Re-registration Certificate  
→ Re-registration Certificate  
AHTN: as above  
LTP process: DR-01 | CLP agency:  
Department of Food and Drugs, Drugs Division  
→ 510 p.a. in 2018 (@7% p.a.)  
[~100 traders]  
Cost: unspecified  
Border Agency:  
Not applicable | Vientiane |
| 12 | Request for Letter of Approval  
→ Letter of Approval for import of drugs  
(per importation for which valid Registration Certificate / Re-registration Certificate must be in hand)  
AHTN: as above  
LTP process: DR-02 | CLP agency:  
Department of Food and Drugs, Drugs Division  
Quantity unspecified – Guestimate: From 2010 Customs data: 800 applicable line items declared – all provinces. Assume without basis 1 line items per permit  
→ 800 LoA p.a.  
→ 1000 p.a. in 2013 (@7% p.a.)  
→ 1400 p.a. in 2018 (@7% p.a.)  
[~100 traders]  
Cost: 20,000 LAK / LoA  
Border Agency:  
Customs  
Department of Food and Drugs, Drugs Division | Border locations specified for LNSW |
| 13 | Request for Import Permit (Food)  
→ Import Permit (Food)  
AHTN: incl. 02, 04, 07 to 22  
LTP process: FD-01 | CLP agency:  
Department of Food and Drugs, Food Division  
Quantity: 120/month = 1440 p.a. (2012)  
→ 2000 p.a. in 2018 (@7% p.a.)  
Cost: 1,000 LAK / permit form + 50,000 LAK / invoice attached  
Border Agency:  
Customs  
Department of Food and Drugs, Food Division | Vientiane  
Border locations specified for LNSW |
| 14 | Application for Registration Certificate for Food Supplements  
→ Registration Certificate for Food Supplements  
AHTN: t.b.d. | CLP agency:  
Department of Food and Drugs, Food Division  
Quantity: unspecified  
Assume without basis 1000 p.a.  
Cost: unspecified | Vientiane |
<table>
<thead>
<tr>
<th>#</th>
<th>Certificate, License or Permit</th>
<th>Government agencies</th>
<th>Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.</td>
<td>Application for Import / Export License for Timber, Wooden Products and Forest Products</td>
<td>Border Agency: Customs Department of Food and Drugs, Food Division</td>
<td>Border locations specified for LNSW</td>
</tr>
<tr>
<td></td>
<td>→ Export License for Timber, Wooden Products and Forest Products</td>
<td>CLP agency: Forestry Division of Provincial Office of the Ministry of Agriculture and Forestry (MAF) [Note: also involves authorization by the regional Department of MAF Permit also serves as a domestic transport approval.]</td>
<td>Provincial division of MAF (see list of provinces included for LNSW)</td>
</tr>
<tr>
<td></td>
<td>AHTN: 4403.2010 (Logs, trunk, bark, transformed timber and semi-finished timber from plantations) 4407.29(Logs, trunk, bark, transformed timber and semi-finished timber from plantations) 4409.29.00 (Logs, trunk, bark, transformed timber and semi-finished timber from plantations)</td>
<td></td>
<td>Border locations specified for LNSW</td>
</tr>
<tr>
<td></td>
<td>LTP process: FR-01</td>
<td>Quantity: 10 / year (exports – imports are negligible) → for 2018 ~20p.a.  Cost: 30,000 LAK / license</td>
<td>Border locations specified for LNSW</td>
</tr>
<tr>
<td>16.</td>
<td>Application for Import Certificate for Plants (Agricultural Products)</td>
<td>CLP agency: Department of Agriculture of the Provincial Division of the Ministry of Agriculture and Forestry Quantity unspecified Guestimate: From 2010 Customs data: 1500 applicable line items declared – all provinces. Assume without basis 1 line items per permit → 1500 applications p.a. → 1900 p.a. in 2013 (@7% p.a.) → 2600 p.a. in 2018 (@7% p.a.)</td>
<td>Provincial division of MAF (see list of provinces included for LNSW)</td>
</tr>
<tr>
<td></td>
<td>→ Import Certificate for Plants (Agricultural Products)</td>
<td>Cost: unspecified Borders Agency: Customs MAF</td>
<td>Border locations specified for LNSW</td>
</tr>
<tr>
<td></td>
<td>AHTN: 6, 12, 20, 97019010</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LTP process: AP-01</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>→ Registration Certificate for Plants (Agricultural Products)</td>
<td></td>
<td>Not applicable</td>
</tr>
<tr>
<td></td>
<td>AHTN: as above</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>LTP process: (implied from AP-01)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#</td>
<td>Certificate, License or Permit</td>
<td>Government agencies</td>
<td>Locations</td>
</tr>
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<td>-------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>18</td>
<td>Application for Permit for Import of Pesticides and Fertilizers</td>
<td>CLP agency: Department of Agriculture of the Provincial Division of the Ministry of Agriculture and Forestry</td>
<td></td>
</tr>
<tr>
<td></td>
<td>→ Permit for Import of Pesticides and Fertilizers</td>
<td>Quantity unspecified</td>
<td>Provincial division of MAF (see list of provinces included for LNSW)</td>
</tr>
<tr>
<td></td>
<td>AHTN: 3808 - pesticides, 31 - fertilizer</td>
<td>Guestimate: From 2010 Customs data: 1000 applicable line items declared – all provinces. Assume without basis 1 line items per permit → 1000 applications p.a. → 1400 p.a. in 2013 (@7% p.a.) → 1900 p.a. in 2018 (@7% p.a.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LTP process: AP-02</td>
<td>Cost: unspecified</td>
<td>Border locations specified for LNSW</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Border Agency: Customs</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Application for Registration Certificate for Plants (Agricultural Products)</td>
<td>CLP agency: Department of Agriculture, Ministry of Agriculture and Forestry</td>
<td>Vientiane</td>
</tr>
<tr>
<td></td>
<td>→ Registration Certificate for Pesticides and Fertilizers (Agricultural Products)</td>
<td>Quantity unspecified</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AHTN: 6, 12, 20, 97019010</td>
<td>Assume without basis – very few ~100 p.a.</td>
<td>Not applicable</td>
</tr>
<tr>
<td></td>
<td>LTP process: (implied from AP-02)</td>
<td>2012 (→150 in 2018)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cost: unspecified</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Request for Technical Certificate for Import of Livestock and Fish</td>
<td>CLP agency: Provincial Division of Livestock and Fisheries of the Department of Agriculture of the Ministry of Agriculture and Forestry</td>
<td></td>
</tr>
<tr>
<td></td>
<td>→ Technical Certificate for Import of Livestock and Fish</td>
<td>Quantity unspecified</td>
<td>Provincial division of MAF (see list of provinces included for LNSW)</td>
</tr>
<tr>
<td></td>
<td>• Livestock</td>
<td>Guestimate: From 2010 Customs data: 2000 applicable line items declared – all provinces. Assume without basis 1 line items per permit → 2000 requests p.a. → 2500 p.a. in 2013 (@7% p.a.) → 3500 p.a. in 2018 (@7% p.a.) Cost: unspecified</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Fish</td>
<td>Border Agency: Customs</td>
<td>Border locations specified for LNSW</td>
</tr>
<tr>
<td></td>
<td>AHTN: 01 – livestock, 03 – fish</td>
<td>MAF</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LTP process: LF01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Application for Certificate of Quality for Imported Goods</td>
<td>CLP agency: Provincial Division of the Department of Standards and Metrology, of the Ministry of Science and Technology (MOST)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>→ Certificate of Quality for Imported Goods</td>
<td>Quantity: 10 per month → 120 p.a. 2012</td>
<td>Provincial division of MOST (see list of provinces included for LNSW)</td>
</tr>
<tr>
<td></td>
<td>• Construction materials, electronic</td>
<td></td>
<td></td>
</tr>
<tr>
<td>#</td>
<td>Certificate, License or Permit</td>
<td>Government agencies</td>
<td>Locations</td>
</tr>
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<td>--------------------------------------------------------------------------------------</td>
<td>------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>equipment and others listed in a list of controlled products</td>
<td>(→ 170 in 2018)</td>
<td>Border locations specified for LNSW</td>
</tr>
<tr>
<td></td>
<td>AHTN: t.b.d.</td>
<td>[Cost: unspecified</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LTP process: SM01</td>
<td><strong>Border Agency:</strong> Customs</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>In principle (per regulations), MOST but MOST do not place officers at the borders.</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Application for Import License for Explosive Substances</td>
<td><strong>CLP agency:</strong> Department of Defense Industry of the Ministry of National Defense</td>
<td>Vientiane</td>
</tr>
<tr>
<td></td>
<td>→ Import License for Explosive Substances</td>
<td>Quantity: 3-4/year (2012) → 10 in 2018 (7% p.a.)</td>
<td>Border locations specified for LNSW</td>
</tr>
<tr>
<td></td>
<td>• Explosive substances</td>
<td>**Cost: unspecified</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AHTN:</td>
<td><strong>Border Agency:</strong> Customs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3601 – Propellant powders;</td>
<td>In principle (per regulations), MOST but MOST do not place officers at the borders.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3602 – Prepared explosive other than propellant powders;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3603 – Safety fuses; detoning fuses; percussion or detonating caps; igniters; electric detonators; 3604 – Fireworks, signalling flares, rain rockets, fog signals and other pyrotechnic articles;</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>LTP process: ND01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Application for Import License for Telecommunications Equipment</td>
<td><strong>CLP agency:</strong> Ministry of Post and Telecommunications</td>
<td>Vientiane</td>
</tr>
<tr>
<td></td>
<td>• Telecommunications Equipment</td>
<td><strong>Cost: 100,000 LAK / license</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>AHTN: incl. 8504, 8518, 8544, 88039010, 90011010, 9003040</td>
<td><strong>Border Agency:</strong> Customs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LTP process: PT01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Application for Mine Products Import/Export License</td>
<td><strong>CLP agency:</strong> Ministry of Energy and Mines</td>
<td>Vientiane</td>
</tr>
<tr>
<td></td>
<td>→ Mine Products Import/Export License</td>
<td>Quantity: 4-5 / year (2012) → 10 in 2018 (7% p.a.)</td>
<td>Border locations specified for LNSW</td>
</tr>
<tr>
<td></td>
<td>• Minerals</td>
<td>**Cost: unspecified</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Mineral products</td>
<td><strong>Border Agency:</strong> Customs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AHTN: incl. 26, 28</td>
<td>In principle (per regulations), MOST but MOST do not place officers at the borders.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LTP process: EM01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Application for Import/Export License for Gold Bars</td>
<td><strong>CLP agency:</strong> Ministry of Monetary Policy, Bank of Lao PDR</td>
<td>Vientiane</td>
</tr>
<tr>
<td></td>
<td>→ Import Permit for Gold Bars</td>
<td>Quantity: “low” (both import and export) Assume without basis: 10 2012, 15 2018</td>
<td>Border locations specified for LNSW</td>
</tr>
<tr>
<td></td>
<td>→ Export Permit for Gold Bars</td>
<td>**Cost: unspecified</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Gold Bars used as a means of</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Annex M: Change Management and Communications Report

<table>
<thead>
<tr>
<th>#</th>
<th>Certificate, License or Permit</th>
<th>Government agencies</th>
<th>Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>international payment</td>
<td>Border Agency:</td>
<td>Border locations specified for LNSW</td>
</tr>
<tr>
<td></td>
<td>AHTN: 718.1210 – Gold bars (only for gold bars as internationally recognized as medium of payment)</td>
<td>Customs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LTP process: BL01</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>26. Application for Import/Export License for Publications</td>
<td>CLP agency:</td>
<td>Vientiane</td>
</tr>
<tr>
<td></td>
<td>→ Import / export Permit for Publications</td>
<td>Ministry of Information, Culture and Tourism</td>
<td>Border locations specified for LNSW</td>
</tr>
<tr>
<td></td>
<td>• All printed publications</td>
<td>Quantity: 100 p.a. (2012) → 150 in 2018 (@7% p.a.)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Encoded CD's / DVD's</td>
<td>Cost: 5000 LAK / Application form and 100000 LAK/license</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AHTN: t.b.d.</td>
<td>Border Agency:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LTP process: MI01</td>
<td>Customs</td>
<td></td>
</tr>
<tr>
<td></td>
<td>27. Request for Exemption / concession certificate</td>
<td>Receiving agency:</td>
<td>Vientiane and Provincial offices of LCD (see list of provinces included for LNSW)</td>
</tr>
<tr>
<td></td>
<td>→ Exemption / concession certificate</td>
<td>Customs – Customs system for exemptions / concessions</td>
<td>Border locations specified for LNSW</td>
</tr>
<tr>
<td></td>
<td>AHTN: any</td>
<td>Quantity: &lt;t.b.d.&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LTP process: N/a</td>
<td>Cost: &lt;not known&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>28. ACDD</td>
<td>Receiving agency:</td>
<td>Vientiane and Provincial offices of LCD (see list of provinces included for LNSW)</td>
</tr>
<tr>
<td></td>
<td>→ Clearance Note</td>
<td>Customs - Asycuda</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AHTN: any</td>
<td>Quantity: unspecified</td>
<td>Assume lines per declaration = 3.</td>
</tr>
<tr>
<td></td>
<td>LTP process: N/a</td>
<td>ex 2010 national import data from WB: 187000 tariff lines declared</td>
<td>This gives 63000 import declarations p.a.in 2010</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(and 78000 import decs in 2013 @ p.a. 7% and 109000 import decs in 2018 @ p.a. 7%)</td>
<td>There is no available data re transit and export</td>
</tr>
</tbody>
</table>

### NOTES:

For the CLP indicated above (rows 1 to 26), subject to any de-scoping as indicated elsewhere, the LNSW / CLPIA Workbench – workflow management system is anticipated.

For the Exemption / concession certificate, item 27, it is expected that this would be outside LNSW except to the extent that the system to be implemented by LCD (work in progress) would confirm the licence to the Trader data in LNSW as a message under an agreed protocol.

For item 28, ACDD the architecture anticipates that the Trader would submit the ACDD to LNSW which would then route to Asycuda (as well as providing notification to border agencies, esp. MAF and MOH for officers to use the LNSW Border Agency Workbench).

Eventually after the customs process is completed, Asycuda would then confirm the Customs outcomes to LNSW by a message under an agreed protocol.
<table>
<thead>
<tr>
<th>#</th>
<th>Certificate, License or Permit</th>
<th>Government agencies</th>
<th>Locations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>declarations. Based on hearsay: there were ~200000 total declarations p.a. in 2012. Following from the above there might be ~120000 export and transit decs in 2012. Also following: an estimated number of declarations in 2018 would be 344000 in total at 7% p.a. Cost: 100,000 LAK / ACDD</td>
<td>Border Agency: Customs</td>
<td>Border locations specified for LNSW</td>
</tr>
</tbody>
</table>
Appendix D: TEMPLATE FOR A CHANGE MANAGEMENT PLAN

Template Change Management Plan for the Introduction of a Lao PDR National Single Window for Department of xxxxxxxx

Date Prepared: Version:

Introduction
Provide background, link to strategic goals and other changes

Project Sponsor and Change Coordinator
Each Lao PDR government agency involved in the introduction of the NSW will identify a senior manager to undertake the role of Project Implementation Sponsor. This officer will generally be at the Deputy Director-General Level and will take overall responsibility for providing strategic leadership and oversight through the implementation phase of the LNSW in their individual agency. The project sponsor will report to their relevant Director-General and will provide input and advice on progress to the LNSW cross agency Steering Committee.

The project sponsor will be supported by an Implementation Change Coordinator. Depending on the scale of change in respective agencies, the Project may be supported by an implementation team. Each Change Coordinator will have responsibility for the finalisation and implementation of an individual agency Change Management Plan – applying the core features of the central Change Management Plan for the Introduction of a National Single Window for Lao PDR Border Control, Trade Permit Issuing Agencies and Traders. The Project Sponsor and the Change Coordinator will oversee the implementation of the plan in each agency.

Project Objectives
Detail what the project will achieve.

Change Objectives and Principles
Provide details of:
- What the change process will achieve [e.g. information sharing, engagement, input into system changes];
- Principles that underpin the change plan [e.g. inclusiveness/consultation, timeliness]; and
- Ethical issues that need to be considered and how the change will address them.

Change Plan Elements
What are the main elements in the change plan? [e.g. people/culture, systems/technology, documentation, positions/roles, process, skills] Each of these elements may require a particular focus in the change plan.
Rationale for the Change
List the drivers and constraints for change.
What are the risks for the change process?

Key Stakeholder Analysis

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<th>STAKEHOLDER</th>
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Identify the key stakeholders [consider staff, other work units in SCU, management, unions, students and other clients] and:
- Analyse their response to the change [e.g. what will be their main concerns/fear, where is there likely to be support for the change];
- Identify their needs in terms of change management and consider the style of communication required [language style & level]; and
- Identify the preferred media for communicating or consulting with them about the change [e.g. sessions involving dialogue about the changes, newsletters, briefings from project team members, frequently asked questions].

Assessment of Readiness to Change
Comment on the status of the change so far [e.g. is there a high level strategy in place that stakeholders are already aware of and committed to that provides a framework for the change].
What elements might support the change [e.g. dissatisfaction with current processes; a workplace culture that supports change and innovation].
Is there strong senior support for the change?
Key Change Messages
Identify about 6 key messages to convey the change process, being upfront about gains and losses. Consider:

- What will be gained/lost for the key stakeholder groups in the change process;
- The messages from the stakeholder perspective;
- What will be their main concerns; and
- Presenting changes in a positive light even whilst acknowledging loss.

Identify Change Elements
Structures/Processes/Responsibilities/Resources/Timeframes/Performance Measures
Consider the need for particular change support structures [e.g. a change team, super users/specialists who are trained first and can support people in the workplace, involvement of users/key stakeholders at various stages, change champions in the workplace].
Consider if there is a need for transitional arrangements to support and whether the introduction of the change process needs to be staged.
What will be the impact on workloads and how will these be managed?

Develop Change Plan
Develop a change plan including performance measures [how will you know the change plan is effective?].
Ensure the plan is adequately resourced.

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Consolidation
Ensure policies, procedures and performance measures reinforce the changes.
Remove organisational barriers to the change.
Reinforce how changes have provided benefits.

Evaluation
How will the change be evaluated in relation to the achievement of the planned objectives?
How will the change management processes be evaluated – consider summative as well as final evaluations?
how can you assess your change management strategies as you implement them?
How will the evaluation outcomes be circulated and promoted to stakeholders?
How will evaluation outcomes be used in other organisational processes?
Prepared By:
Annex N:
Capacity Building & Human Resource Development Planning Report
1 Management Summary

Key components (Task Clusters) of the assignment to develop the LNSW Blueprint for Implementation require the development of technical and functional architecture, service specifications, options for changed business processes, service level agreements, fee structures, legal frameworks, change management and communications strategies and risk management models to guide and support the development and implementation of the LNSW. The assignment also includes the delivery of a Capacity Building and Development Plan for the implementation of the LNSW. This is in recognition of the fact that successful introduction of any single window will require more than equipment and technology, and will rely substantially on the readiness, skills and capability of the people who will implement and use it on a day to day basis—both in the trade community and in government departments.

The following report outlines a general conceptual framework for Capacity Building and Development which contextualises the training and development support needed for the successful implementation of the LNSW. It also details areas of human resource development which should be addressed within a final LNSW implementation plan. It offers a suggested framework for the preparation of a training and development program for the LNSW. Lastly, it suggests a range of possible training courses aimed at building the main competencies for key users of the LNSW and the possible attendant new workflow management or business processes and provides some estimates of the number of people who will require that training. This document is a “deliverable” under the technical assistance contract.

Although no final decisions have yet been taken on the precise scope and coverage of the LNSW, it is clear that the introduction of the LNSW, as envisaged, will involve inter alia the introduction of new technology and tools for use by a number of the key participants in the trade process, automation of and changes to a number of current business processes, the introduction of some new business methodologies (e.g. risk management) and the streamlining of current processes in the trade context. The agencies, traders and staff involved will need to acquire new skills and competencies to enable them to use the new technologies, new business processes and new oversight and monitoring mechanisms to best effect.

For the purposes of this report “Capacity Building” is understood to refer to a process which increases the skills, infrastructure, and resource of individuals, organisations and communities. It involves the planned development of an organisation or entity’s ability to achieve outcomes by improving skills and other capabilities—through knowledge acquisition, new technology, new infrastructure and/or training. Capacity building is directed at establishing real and sustainable improvements to performance and outcomes. Capacity building is more than just training, and can include organisational development, institutional strengthening and business process enhancements.
In the LNSW context, the new technology being proposed represents a substantial contribution of new capacity. Likewise, the proposed new business processes and operating methodologies (i.e. Risk Management) represent potential significant enhancements to performance outcomes for both the agencies involved and the trade. That noted, all of these changes will clearly need to be complemented by enhancements to the skills and competencies of the people who use them.

In this report we do not focus significant attention on the proposed new technology itself or the efficacy of the proposed new business processes and methodologies. These are adequately covered in the relevant reports on Functional and Technical Architecture, Business Process Re-engineering and Risk Management. We do, however, recognise that whilst these in themselves represent new and enhanced capacity, they necessitate some up-skilling of government agency and trader staff – in this respect they do inform our assessment and analysis of development and training needs.

The simplicity or complexity of the preparation and support given to individuals and groups, and the amount of time and effort required to prepare them, will vary greatly depending on the changes being made, the role each individual has in the business process and on the pre-existing skills and capacity of those being trained. Whilst a core component of training and development will likely be common to all, there will also be some different needs for different groups.

For example, to train an experienced technical officer who already assesses permit applications to use the proposed workflow management tools will be relatively straightforward - if they have pre-existing comfort in using computers. On the other hand, preparing a suitable cadre of staff to be effective at designing and implementing risk profiles, based on rigorous data analysis and applying best practice risk management principles, may take considerably longer and require greater in depth effort – involving training, coaching and mentoring over time. Similarly, the training required for traders who may use multiple aspects of the new LNSW will likely be more complex than that required for a staff member of a permit issuing agency who only receives and on-forwards an initial permit application.

It is clear that the LNSW human capacity building program will need to be adequately resourced, centrally coordinated and integrated with the technology and business change implementation phases that are determined. Based on the locations and functions proposed in the Functional and Technical Architecture Report we estimate that there will likely be in excess of 2300 people who will need a level of preparation or training for the LNSW, but we also suggest that a much wider group of people (government agency staff, traders and information users) should be given introductory information on the LNSW, its broad functionality and some background on why it is being introduced. This may not require training or development activity per se, but will require effective communications mechanisms – general staff briefings, newsletters etc.

Whilst the number of people who will require training, information and support to prepare them for the introduction and operation of the LNSW is substantial, we note that the system as proposed will be rolled
out to specific agencies and will encompass specific permits or licenses over time. Likewise, it may roll-out to specific locations in a managed process over time. This will allow for some staging of training delivery – both by location and agency. That noted, the bulk of traders and freight forwarders would appear to operate in Vientiane, and as such there will be a large number of this group at least who will require training early in the implementation process.

The key to successful implementation of the human capacity building program for the LNSW will, therefore, be planning:

- based on a sound understanding of the functionality and methodologies that are to be adopted;
- that clearly identifies the people to be trained and the new skills and knowledge that will be required by them;
- that is coordinated to coincide with whatever phased implementation is determined;
- which is designed to cater for pre-existing skill and competency levels of the affected staff; and
- tailored to some extent to each of the key target groups that are identified.

This will then need to be followed by training delivery approaches that meet these identified needs and that are coordinated with the affected agencies and with the trade.

This report also offers some preliminary comment on the current general level of computer literacy in the Lao PDR context – based on discussions and workshops with agency staff. In summary, it is clear that whilst there are many Lao PDR government staff and traders who are already comfortable using computers, there are likely to be some variations between the capital and the provinces, and between different government departments and different traders.

In this report we suggest that a competency based approach is utilised to plan, prepare and deliver training and development for the LNSW. Competencies to undertake a specific task are the accumulation of the skills, knowledge, behaviours and understandings required to not only do the job – but to add value to it. A competency based approach starts from an understanding of what those skills, knowledge and behaviour requirements are for the task at hand. An example of a basic competence for many government officials is literacy – the ability to read and to write effectively. In other roles interpersonal skill may be paramount and in others negotiation or analysis capability might be crucial. These are not just knowledge-based; they also have to be able to be applied.

A competency based approach also recognises that each participant will need more than just information; they may need to practice new skills and explore new knowledge for them to be fully effective at any new tasks. Conversely, a competency based approach recognises that individuals will come to the training or development process with pre-existing skills, knowledge and abilities – which may simplify or complicate the training task. The example of attempting to train a staff member in a new computer system if they have no pre-existing computer skill or experience is an obvious one.
In the report we outline 8 core proposed training courses that should be offered in the context of the LNSW implementation – and at APPENDIX C we provide an overview of who the audience should be and what those courses of training should cover. These have been developed on the basis of some simple but effective Training Needs Analysis (TNA) methodologies (including an analysis of the skills likely to be required to use the LNSW when implemented) and inputs from agency representatives who participated in a 2 day Service Level and Human Capacity Development Workshop in Vientiane on 25 and 26 April 2013.

The bulk of the proposed training will need to be delivered by the LNSW operator for the system users, but much of it will also require input, coordination and in some cases delivery by the agencies themselves.

It is important to note that in the report we do not specify training that will be required for the LNSW operating entity and its own staff, although we are conscious that such training will be required. Clearly the operating entity may need to train its own people in system and infrastructure development, maintenance and support, and also to train its own help desk staff to support the various users of the LNSW.

Finally, we note that the numbers of people who will require LNSW training in Vientiane will likely necessitate the establishment of a temporary LNSW Training Centre in the Capital (possibly in the LCD or at a new venue) and the development and availability of a training instance or version of the LNSW. A mobile training capacity will also be required for training in the Provinces. The Functional and Technical Architecture Report incorporates a provision for the training instance of the LNSW and for training PCs, but the operator will also need to establish the temporary/interim training centre, which could be required for at least the first 12-18 months of system roll-out.
2 Introduction

2.1 Context

NOTE: This report needs to be read in conjunction with the PM Group report on a Functional and Technical Architecture for the LNSW.

The Trade Facilitation Strategic Plan for Lao PDR (2011-2015) produced by the Ministry of Industry and Commerce identifies trade facilitation as an important factor in Lao PDR being able to meet its objective of moving from least developed country status by 2020 (Ministry of Industry and Commerce, 2011, p3). The Plan envisages improved coordination among concerned agencies and proposes a strengthened institutional set up for trade facilitation. The establishment of a Lao National Single Window (LNSW) “as a single point of electronic submission and lodgement of requests, documents and declarations needed to satisfy all import, export and transit requirements” is the latest facet of actions being taken in support of reform and modernization to advance trade facilitation in Lao PDR.

A National Single Window will allow traders to electronically submit information required by multiple government agencies for export, import, and transit procedures only once. Each of the agencies will use the information provided through the Single Window to process and clear cargo utilising an integrated and risk based process. This should lead to significant time and cost savings for business and greater effectiveness for agencies. With the implementation of the LNSW, the licensing and permit issuing agencies will have the opportunity to introduce a level of automation; electronic processing and risk management into the trade processes connected to the LNSW (see separate report on a Functional and Technical Architecture for the LNSW). The LNSW will build upon the skills, experience and success stemming from introduction of the Lao PDR Trade Portal (LTP) by the Department of Imports and Exports (DIMEX) and the on-going implementation of the ASYCUDAWorld declaration processing system by the Lao Customs Department (LCD).

In Lao PDR there are currently in the order of 200,000 Customs entries lodged annually by approximately 6,000 traders or their representatives. There are around 28 different types of certificates, licenses or permits (including the Customs Declaration) required in the trade context – ranging from a requirement for all traders to be formally registered, through to specific permit requirements for specific commodities (e.g. cement, motor vehicles, steel, roof tiles). Some permissions apply to an individual importation and some relate to a longer period import plan which has been submitted and approved by relevant agencies. Some permits are clearly designed to place restrictions or conditions on potentially dangerous or harmful goods (e.g. some medicines, foodstuffs, live animals) whilst others seem to exist largely for statistical purposes. In the Import/Export “To Be” Process Report (prepared by the Business Process Expert on this Project) and in the Roadmap for Process Simplification and Harmonisation (prepared by the LTP Project and accepted by the MOIC Trade Facilitation Secretariat) some recommendations are made about altered arrangements for some of these.
Currently all certificates, licenses and permits require the manual lodgement, processing and payment of applications, and even in the case of the use of the ASYCUDAWorld system (for Customs ACDD declarations) traders are still required to lodge a full paper declaration with all accompanying documents.

Whilst the Lao Customs Department has begun the process of automating the Customs clearance process through the introduction of the ASYCUDAWorld system, other agencies involved in the import and export process do not as yet have automated systems for processing or managing permits or approvals relevant to the trade process. In fact, while many of the agencies have access to the internet and email for many of their staff, it is clear that there are very few enterprise EDI systems in place in the key agencies that will participate in the proposed LNSW and (almost universally) they rely on paper based systems for receipt, processing and approval of trade related documents, permits or licenses. Moreover, it is clear that even in the case of internet and e-mail usage, system reliability is patchy and bandwidth limitations often mean that web based communications can be slow.

That noted, consistent advice from agency staff and participants at LNSW workshops is that the basic level of computer literacy in Lao PDR government agencies and in the trade community has increased markedly in recent years – with most now using email and web-browsers on a reasonably regular basis. This level of basic computer literacy will be important to the successful introduction of any web accessible new applications (such as that proposed for the LNSW).

The LNSW, as proposed, will provide an automated system for processing applications for trade certificates, permits and licences, and will establish a common IT system for data input, collection and transmission between traders (and their representatives) and the responsible agencies. The LNSW can also provide fundamental electronic workflow management capability for the participating permit and license issuing agencies, to enable the electronic receipt and movement of requests for licenses and permits required by the trade. This will enable the key trade related agencies to move to automate current manual processes and over time, to move to less reliance on paper records, paper based forms, and paper based approvals and clearances.

The proposed LNSW will also enable traders to complete their license applications and Customs declarations at their own offices, and submit them to the relevant agency and the Customs ASYCUDAWorld system over the internet. The system will allow for entry of core data once only, rather than multiple times as currently required. It will also remove the need for multiple keying of trade related data and therefore greatly reduce the risk of transcription error.

Whilst the majority of permits, licenses, certificates and declarations are transacted at department headquarters in Vientiane (or in the Vientiane Province) many are also processed at the provincial or border post level. To cater for this, the LNSW, as proposed, will provide connectivity and processing capacity at a possible 87 different government sites throughout Laos, and will provide for access by up to 10,000 traders via web based interfaces.
2.2 Methodology

This report has been prepared based on inputs from the three key experts involved: Mr Alistair Gall, Project Leader, Mr Keovisouk Dalasane, Lao Trade Facilitation Expert and Mr Trevor Van Dam, Change Management Specialist.

It is also based on information gathered during interviews with key agencies and participants involved in the trade process, input from participants at two Change Management Skills Workshops held in Vientiane in December 2012 and February 2013, at a Service Level and Human Capacity Development Workshop held in Vientiane in April 2013, the experience of those leading the Lao Trade Portal project and advice from the team which led the training for ASYCUDAWorld in the Lao Customs Department.

The assistance of the LNSW Secretariat team and in particular of Ms. Anisara Sombounkhan and Ms. Sanya Khamsone was also much appreciated and contributed greatly to the final report.

Considerable research was undertaken, principally focusing on better practice approaches to planning and delivering Human Resource Development in the context of organisational change and the introduction of new technology. An analysis was conducted of the likely new tasks for users and supporters of the proposed LNSW, and as covered above, this was supplemented by discussions with agency staff and participants at a number of LNSW workshops held in Vientiane.

2.3 Scope of Work

This report, draws significantly on the “to be” work of the other task clusters of the assignment, on the proposed LNSW Functional and Technical Architecture Report and on the findings of the Lao PDR Trade Portal Project report - A Roadmap For Process Simplification and Harmonisation. This report makes no comment about the recommended technology or “to be” picture, except as it relates to the potential implications for capacity building and development strategies. Judgements about the desired future state will properly and ultimately be the subject of GOL decision, but many of the proposed training courses and the general approach suggested would likely be relevant regardless of those decisions.

This report also builds on the proposals contained in the Task Cluster 6 Report on Change Management and Communications Situational Awareness and Strategic Directions. In that report it is made clear that the success and sustainability of the LNSW will be dependent on the effectiveness of the initial investment in preparing those who will use and oversee it.

This report explores and expands on that theme and includes a suggested framework for planning the human development program, and offers suggestions about the likely core training courses that will be required for users and overseers.
The ultimate training delivery approaches utilised to meet these identified needs should be agreed and coordinated amongst all the affected agencies and the trade.

In this report we have identified 8 proposed core training courses (two of which are more general awareness programs) that are likely to be required for the system users and the LNSW Oversight Group. At Appendix C we outline the proposed objectives, target audiences and key content for each of these courses. This material was developed on the basis of our analysis of the proposed Functional and Technical Architecture, our understanding of the general level of experience with enterprise wide systems in Lao PDR and with input from the participants at the Service Level and Human Capacity Building Workshop held in Vientiane on 25 and 26 April 2013. As mentioned previously, in the report we do not specify training that will be required for the LNSW operating entity and its staff, although we are conscious that such training will be required. Clearly the operating entity will need to train its own people in system and infrastructure development, maintenance and support, and also to train its own help desk staff to support the various users of the LNSW. On this later point, it would be useful for the LNSW operator to include one or two staff from each agency and from the LNSW Secretariat team into the help desk training for its own staff – to build some capacity in the agencies and to establish some agency contact points who can give ongoing help desk feedback and improvement suggestions.
3 Human Capacity Building

3.1 A Framework for Considering Capacity Building

There are many and varied definitions of “Capacity Building” contained within the academic literature (see Bibliography at APPENDIX A).

For the purposes of this report “Capacity Building” is understood to refer to a process which increases the skills, infrastructure, and resource of individuals, organisations and communities. It involves the planned development of an organisation or entity’s ability to achieve outcomes by improving skills and other capabilities - through knowledge acquisition, new technology, new infrastructure and/or training.

Capacity building is directed at establishing real and sustainable improvements to performance and outcomes. Capacity building is more than just training, and can include organisational development, institutional strengthening and business process enhancements. At core is the concept of planned and informed improvements in the capability of organisations and the individuals that work in them.

In the LNSW context, the new technology being proposed represents a substantial contribution of new capacity. Likewise, the proposed new business processes and operating methodologies (i.e. Risk Management) represent potential significant enhancements to performance outcomes for both the agencies involved and the trade. The Functional and Technical Architecture Report also identifies a range of new infrastructure (physical data centres etc.) that will be required to support the ongoing operation of the LNSW.

That noted, all of these changes will clearly need to be complemented by enhancements to the skills and competencies of the people who use them. Building human capacity to use the new tools available to them through the LNSW will be as important and building the new tools themselves.
3.2 A Competency Approach to Building Human Capacity

Having examined better practice international approaches to human resource development, we suggest that a competency based approach is utilised to plan, prepare and deliver training and development for the LNSW. Competencies to undertake a specific task are the accumulation of the skills, knowledge, behaviours and understandings required to not only do the job – but to add value to it. A competency based approach starts from an understanding of what those skills, knowledge and behaviour requirements are for the task at hand.

An example of a basic competence for many government officials is literacy – the ability to read and to write effectively. In other roles interpersonal skill may be paramount and in others negotiation or analysis capability might be crucial. These are not just knowledge based, they also have to be able to be applied.

A competency based approach also recognises that each participant will need more than just information, they may need to practice new skills and explore new knowledge for them to be fully effective at any new tasks. Conversely, a competency based approach recognises that individuals will come to the training or development process with pre-existing skills, knowledge and abilities – which may simplify or complicate the
training task. The example of attempting to train a staff member in a new computer system if they have no pre-existing computer skill or experience is an obvious one.

A competency based approach is consistent with directions that are being adopted by the World Customs Organisation (WCO) and many other international bodies – including the United Nations. The United Nations Industrial Development Organisation definition of Competency issued in 2002 is included below:

**UNIDO (2002):**
A COMPETENCY IS A SET OF SKILLS, RELATED KNOWLEDGE AND ATTRIBUTES THAT ALLOW AN INDIVIDUAL TO SUCCESSFULLY PERFORM A TASK OR AN ACTIVITY WITHIN A SPECIFIC FUNCTION OR JOB.

A competency based approach is also in line with the direction currently being proposed by the LCD in its new Training and Development strategy.

A competency approach generally starts from an analysis of the performance requirements of any given role or task (a job analysis) and then proceeds to describe the knowledge, skills and other attributes that are required to perform the task effectively. There are generally two broad types of competencies that relate to any given role or task – technical competencies and general competencies.

In the LNSW context, technical competencies may include an ability to use the various relevant elements of the system, or an ability to effectively evaluate a particular permit application or process a clearance document. A related general competency may be analytical ability or interpersonal skills (the later in the case of LNSW help desk staff for example).

In developing the 8 core proposed LNSW training courses we have started with an analysis of four broad groups of new roles required for sustained and effective system operation and ongoing development. The four broad groups of roles are:

- LNSW System Users (traders and freight forwarders and their staff, government agency staff and information consumers);
- LNSW System Supporters (system developers and analysts, data managers, technical support and maintenance staff and help desk staff);
- LNSW Policy and Procedure Developers (in particular for the LNSW those who will be involved in risk analysis and in developing risk profiles); and
• LNSW Overseers (in the LNSW context this includes those that will use the management dashboard to monitor agency performance, and those who have a specific role in managing and overseeing the operator contract and service standards).

These are represented in the diagram below:

Some of these task groups overlap in recognition of the fact that people may have more than one role in the ongoing operation of the LNSW – for example a policy and procedures developer may also be an overseer and a senior user may be an overseer and a policy developer.

For the case of the system supporter roles, as indicated, we have not specified any proposed training or development programs. These will clearly fall to the system operator to define and deliver – sufficient to ensure system outcomes and performance to whatever service standards are ultimately determined. That noted, the operator will need to contemplate the competencies required of its staff to deliver on system outcomes - and the operator may choose to train local Lao for those competencies, or they may bring them into Lao, or recruit already competent locals for the roles.

In the case of government agency or trader staff, however, there is an obvious need to ensure that they are given the new skills and knowledge necessary to use the system to its best effect. In training these existing staff, attention should be paid to any prerequisite competencies that will be required for the training to be effective, or be prepared to build some basic competencies where required.
3.3 Identifying Training Needs

In this section of the report we examine in more detail some of the key new roles/tasks that will be undertaken by traders and government agency staff in the LNSW context. Each of these tasks will require access to new knowledge and an ability to use it. In many (but not all) cases there will be a training and development requirement or need. We note that at least some of the base (or core) content of the various proposed training courses will be similar – covering the intent of the LNSW, its benefits, is functions, its tools and its forms.

As stated previously, we do not focus in this report on the efficacy of the proposed new technology itself or the appropriateness of the proposed new business processes and methodologies. These are adequately covered in the relevant reports on Functional and Technical Architecture, Business Process Re-engineering and Risk Management. We have already noted, however, that they will generally necessitate development and support for government agency and trader staff – in short, the new systems will only be as effective as the people who use them on a daily basis.

The simplicity or complexity of the preparation and training given to individuals and groups, and the amount of time and effort required to prepare them, will vary depending on the changes being made, the role each individual has in the business process and on the pre-existing skills and capacity of those being trained.

Whilst a core component of training and development will likely be common to all (for example - a general understanding of the LNSW as a whole) there will also be some different needs for different groups. For example, to train an experienced technical officer who already assesses permit applications to use the proposed workflow management tools will be relatively straightforward - if they have pre-existing comfort in using computers. On the other hand, preparing a suitable cadre of staff to be effective at designing and implementing risk profiles, based on rigorous data analysis and applying best practice risk management principles, may take considerably longer and require greater in depth effort – involving training, coaching and mentoring over time. Similarly, the training required for traders who may use multiple aspects of the new LNSW will likely be more complex than that required for a staff member of a permit issuing agency who only receives and on-forwards an initial permit application.

Whilst we do not address the likely training and development needs of those who will be engaged by the operator we note that the operator is likely to utilise their own staff with existing expertise and competencies, and contract or bring in consultant experts as required. The operator may well, however, recruit locally for help desk staff and is likely to train those staff in the new systems and problem resolution processes. It would be worthwhile for the operator to offer some places on any such training for a few key agency staff as part of the overall capacity building initiative.

We have previously broadly defined the key groups of tasks required for successful LNSW operation.
Leaving aside the group of supporter roles, the main new roles contained within the other three groups are broadly detailed below. In the case of each of the new roles/tasks within these groups we have undertaken an analysis of the likely new competencies required and the training that would be needed to support the development of them.

The key groups identified are:

1. **USERS:** There are four key sub-groups of general users of the LNSW or its by-product information:
   - **Traders and their staff who will submit requests for licenses or permits and lodged Customs declarations on-line.** These people will need to be competent in the use of the LNSW Trader Workbench – including an understanding of how to use a track and trace facility, how to attach images of supporting documentation, possibly how to make e-payments and how to access support and help in the event of problems arising with the system. Details of a proposed training course for these people are contained in APPENDIX C.
   - **Government Agency Workbench Users.** These are the staff of government license and permit issuing agencies that will use the license and permit workbench to receive, process and approve or reject permit and license applications, or to query traders on those applications. They will need to be competent in both internal agency processes and in using the LNSW GA permit workbench to manage internal workflow. Details of a proposed training course for these people are contained in APPENDIX C.
   - **Border Agency Workbench Users.** These are the border agency staff who will use the LNSW Border Agency Workbench to manage and complete examination and release processes. These staff will need to have a sound competence in using the Border Agency Workbench elements of the LNSW, to know how to examine a permit, license or Customs declaration in the LNSW and how to use the system to coordinate any examination of shipments as well as final release. A proposed training course for these staff is also outlined at APPENDIX C.
   - **Information Consumers.** These are the people who may seek information by-products from the LNSW. They may be Treasury or other policy officials, or academics or international agencies. There is no specific training course identified for these people – but a proposed outline for an LNSW general awareness program is also contained in APPENDIX C.

2. **POLICY AND PROCEDURES DEVELOPERS:** There are two key new roles that will be required in the context of developing and implementing LNSW related new policies and procedures:
   - **Business process designers and documenters.** It is envisaged that as part of the design and development of the LNSW, the operator will need to work with senior staff involved in each in-scope specific permit, license or clearance process to establish a new and streamlined workflow management map for each. Some high level proposed simplification to business processes is already contained in the PM Group report on Business Process Reengineering – the “To Be” Analysis as well as in the Roadmap for Process Simplification and Harmonisation but this will need to be refined in consultation with agencies when the LNSW specific workflow components are being developed. This will then need to be documented for both the system designers and the system users (the later possibly in the form of new Standard Operating Procedures (SOPs)). We have not designated a specific training program for the staff likely to be involved in this process because this can likely be more effectively
covered “on the job” – with the relevant operator consultants guiding and mentoring the relevant government agency staff. In the PM Group Service Specifications document we have included a requirement for the operator to provide some project and systems engineering seminars for affected government agencies to aid with skills transference.

- **Risk Analysts, Profile Developers and Risk Managers.** The proposed functional and technical architecture for the LNSW incorporates a risk profiling module in the system design and operation. This profiling component would be available to all participating government agencies and will facilitate the use of risk management by permit issuing and licensing agencies, and it may enhance LCDs capacity to apply selectivity. If the GOL is to obtain the significant benefits that can derive from the systematic application of risk management to trade transactions and the new functionality that can be provided in the LNSW it will need a small but effective cadre of Risk Management Analysts and Profilers, supported by senior managers who have a sound understanding of risk management techniques and applications. For this reason we are proposing two levels of risk management training in the LNSW roll-out process – a general awareness and understanding course for staff and managers who will be involved in or oversee the application of risk management to the trade transaction, followed by a more in depth course for risk analysts, profilers and their direct managers. The proposed courseware for the specific toolsets to be implemented in the LNSW is detailed at APPENDIX C.

3. **OVERSEEERS:** There are two principal new overseer roles that will be key to successful operation of the LNSW:

- **Process Managers in the Permit Issuing and Border Agencies.** These are the Assistant Directors, Directors and more senior managers who will use the Management Dashboard facilities of the LNSW for performance monitoring, analysis and reporting. The dashboard is intended to provide volumetric, throughput and other key performance monitoring data to agency managers who oversight the individual permit, licensing, declaration or clearance processes. The dashboard is intended to be tailored to the specific needs of the line management in each of the individual workflow processes. The users of the dashboard will need to have a thorough understanding of the specific license, permit or clearance workflow processes relevant to their role, a good knowledge of the functionality of the LNSW and a sound competence in using the dashboard. A specific training course is proposed for this group and is detailed at APPENDIX C.

- **Contract Managers of the LNSW.** This is the small group of very senior management (and the team that supports them) who have responsibility for the oversight of the LNSW operator; specifically the operator’s performance and conformance with contract provisions and obligations. This group sets and oversees the contract with the operator and monitors performance against the Service Level Agreements, fee and revenue obligations and overall satisfaction with service provision. This is the core group of people and roles that form the LNSW governance entity/body. We propose that a specific workshop/training course is provided to this group as soon as decisions about the functional and technical architecture and a revenue and fee model have been agreed and the operator contract has been signed. An outline of this proposed workshop is at APPENDIX C.
As previously outlined, competence is more than just information; it requires knowledge, skill and other demonstrated attributes relevant to a role, task or job. At the Service Level and Human Capacity Building Workshop held for participating agencies in Vientiane on 25 and 26 April 2013, the following preliminary competencies were identified for 5 of the 8 key new tasks outlined above. These represent an excellent building block for future competency assessments and should assist with final course design and participant selection. Further comment on participant selection is contained in the Section of this report on Other Issues to Consider in Training Delivery below.

**SOME EXAMPLES OF COMPETENCIES RELEVANT TO KEY NEW ROLES IN THE LNSW:**

<table>
<thead>
<tr>
<th>TASK 1: USE A TRADER WORKBENCH</th>
<th>TASK 2: ANALYSE RISK AND DEVELOP RISK PROFILES</th>
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</thead>
<tbody>
<tr>
<td>• Familiar with import and export procedures and license application processes.</td>
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<td>• Basic computing and internet skills.</td>
<td>• Analytical skills.</td>
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<td>• Know the business.</td>
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<td>• Operational knowledge of the import export related permit, cargo clearance and license issuing processes.</td>
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<td>• Knowledge of relevant laws and regulations.</td>
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<td></td>
<td>• Basic knowledge of statistical analysis.</td>
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<td>• Like doing research/investigation.</td>
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<td></td>
<td>• Like observing and keen to expand one's general knowledge.</td>
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<tr>
<th>TASK 3: USE A GOVERNMENT AGENCY WORKBENCH</th>
<th>TASK 4: MONITOR WORKFLOW MANAGEMENT – USE THE MANAGER DASHBOARD</th>
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<tr>
<td>• Basic analytical skills.</td>
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<tr>
<td>• Deep knowledge in one's own area of licensing (e.g. Food and Drugs officers should know how a procedure of issuing a license works).</td>
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<td>• Enthusiastic worker.</td>
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<tr>
<td>• Able to think differently, act and take responsibility.</td>
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<tr>
<td>• Good at coordinating.</td>
<td>• Analytical skills.</td>
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<td></td>
<td>• Report writing.</td>
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<td>• Basic knowledge of English and computing.</td>
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<td>• Knowledge of the internal workflow and procedures.</td>
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<td></td>
<td>• Understand the public sector rules and regulations.</td>
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<td></td>
<td>• Patience and care when dealing with data and numbers.</td>
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</table>
3.4 Determining Training Numbers

Based on the locations and functions proposed in the Functional and Technical Architecture Report we estimate that there will likely be in excess of 2300 people who will need a level of preparation or training for the LNSW, but we also suggest that a much wider group of people (government agency staff, traders and information users) should be given introductory information on the LNSW, its broad functionality and some background on why it is being introduced. This may not require training or development activity per se, but will require effective communications mechanisms – general staff briefings, newsletters etc.

Whilst the number of people who will require training, information and support to prepare them for the introduction and operation of the LNSW is substantial, we note that the system as proposed will be rolled out to specific agencies and will encompass specific permits or licenses over time. Likewise, the LNSW may roll-out to specific locations over time. This will allow for some staging of training delivery – both by location and agency. That noted, the bulk of traders and freight forwarders would appear to operate in Vientiane, and as such there will be a large number of this group at least who will require training early in the implementation process.

The largest number of broad group of people requiring formal training will be the Users – those who will use the Trader Workbench, those who use the Permit Issuer Workbench and those who will use the Border Agency Workbench. This group in total represents a little over 1900 training participants – with 2570 person days of training in total.

The potential number of participants in the three core training courses proposed for these users is outlined below:

**Using a Trader LNSW Workbench: 1 ½ days, \( 1300+ \) candidates (dependant on final decisions about functionality)**
We have been advised that there are in the order of 6000 registered traders currently operating in Lao PDR, and the functional and technical specifications for the LNSW propose a capacity for up to 10,000 trader users. Advice from the team based in LCD implementing ASYCUDAWorld is that of those 6000, only around 600 trade regularly. If we assume 2 people from each of the regular traders, plus a number of the irregular traders, there will potentially be 1300+ people who will require this training.

**Using a Permit Issuer LNSW Workbench: 1 day, 520 candidates**
This training is likely to be staggered in its rollout to allow for individual permits or agencies to be brought on line over time. That noted, there could be up to 520 staff in total that will need this training over time (estimated at 10 government agency staff at each of 52 locations – 10 locations in Vientiane and 42 locations in provinces).

**Using a Border Agency LNSW Workbench: 1 day, 100 candidates (dependant on decisions about roll-out border locations)**
This training course is directed at Border Agency staff involved in the coordination of examination or release decisions and actions. The likely target audience for this training is a minimum of 99 people (based on 3 border agencies operating at 11 border locations x a minimum of 3 staff each)

The next largest group requiring training is the policy and procedure developers. This group is considerably smaller than the general user group – but the training will be much more in depth and of a greater duration. We previously advised that we do not propose a specific training course for those in this group who will be involved is reviewing and developing new business processes and developing SOPs for the government agencies. Rather, we propose that the operator should coach and mentor these staff as part of the design phase of the LNSW permit processing function. Our estimate is that there will only be in the order of 15 – 20 people involved in that coaching or mentoring program.

The numbers of those likely to require some risk management, analysis and profiling training, however, is much larger than this. We have proposed two training courses for people in this group; an Introduction to Risk Management and a detailed Risk Analysis for Managers and Profilers. The total could be in the order of 250 government agency staff – with around 350 person days of training in total. (Note: The bulk of this group will be attending a short course of a half a day.)

**The potential numbers of participants in the two training courses proposed for Risk Management are outlined below:**

**Introduction to Risk Management: ½ day, 250 candidates**
This will be aimed at mid-level government agency staff that are involved in license or permit issuing or the border clearance process – generally “Technical Officers” or equivalent and the line managers and supervisors who oversee these processes. Across the 6 in scope agencies the potential group for this training would be in the order of 250 staff.
Risk Analysis for Managers and Profilers: 4-5 days, 50 candidates
This training is intended for the staff involved in analysing risk, developing risk profiles and treatments for risk, and for monitoring results of those profiles and treatments. These will likely be senior technical staff and their Directors and Division Heads. There may be 6-8 staff from each agency involved in the first instance of this training – giving a likely total audience of just under 50.

The last and smallest main group requiring training comprises two distinct roles:
• those who will use the LNSW Dashboard on a regular basis; and
• those who oversee the performance of the operator and its conformance with contract provisions.

We have identified two training offerings for this group. Details of the numbers of likely candidates for this training are detailed below:

Using the LNSW Dashboard: 1 day, 60 candidates
This training course is directed at those who have a day to day responsibility to monitor the effectiveness of the LNSW in individual license or permit contexts and will use it to oversee permit, license, certificate, and declaration and clearance workflow. There are likely to be in the order of 10 managerial staff from each of the 6 key agencies that will use the dashboard on a regular basis.

Contract Management for the LNSW: A Workshop of up to 3 days; 25 candidates
There would be substantial benefit in one or two workshops for the most senior members of the oversight body and their secretariat team. These are the people who will have formal responsibility for overseeing the entire LNSW service provision; specifically monitoring the performance of the operator and its conformance with contract provisions and Service Level Agreements, and monitoring the overall benefits to the trade, the government agencies and ultimately the GOL.

A diagrammatical representation of the three main groups covered in this section and the potential number of training candidates is provided below:
3.5 Other Issues to Consider in Training Planning and Delivery

In this Section we detail a number of additional considerations relevant to the design and delivery of a LNSW Human Capacity Building Program.

**Planning the LNSW Training Program.**

It is clear that the LNSW human capacity building program will need to be planned, adequately resourced, centrally coordinated and integrated with the technology and business change implementation phases that are determined by the client agencies and the operator - in concert with the trade. We have developed a matrix tool to assist training planners to specify and coordinate training objectives, content, timing, locations, resources and delivery method. The matrix tool can be found at APPENDIX B. Use of this tool will enable the training planners to estimate the resources required to deliver the training over the course of implementation and roll-out, both per course of training and in total.

Consistent with the importance of planning in this area, it is our proposal that a Training Manager should be appointed by the LNSW operator, and a Government Agency Training Co-ordinator should be appointed to the LNSW Secretariat, as soon as practicable after a supplier contract has been signed. These two people should then be involved as part of the team that will plan and Project-Manage the design, build and implementation program of the operator.

The exact resources that will be required to deliver the training courses that are suggested in this report have not been determined at this time – this will ultimately depend on final systems and functional architecture agreements - but it is clearly the case that as implementation commences, these two training planners will need to be supported by a Training Team that is established by the operator (and contributed to by the agencies).
Who should deliver training for the LNSW?
There are generally two base models that can be applied to the delivery of training for major system implementations – where the system is being developed or provided by a third party. The first is delivery of training to users by the system or service operator, and the second involves the operator training agency trainers to deliver the training. This second model is often referred to as a train the trainer approach.

The situation as we have observed it in Lao PDR is that the government agencies involved in the LNSW have very limited current capacity or resources (including funding) for training and as such are not well positioned to be able to take on what will be a reasonably substantial training task. This is not a reflection of the will or ability of those in the Administration and Training Directorates, but a reflection of limited staff and dollar capacity.

As such, in this instance it is more likely that the operator of the LNSW will have the capacity to assemble the resources and expertise required to deliver user training and development as part of implementation. For this reason, the contract negotiators for the GOL will need to consciously include the requirement for the operator to deliver training to an identified group (or groups) and to a specified level (or levels). This may have some impact on the level of investment required and fees that are ultimately to be charged.

That noted, although this is the case for the bulk of the general training for users there are two instances where the training proposed may need to be directly sourced or delivered by the agencies (likely using some international experts). This is the case in particular for both the short general risk awareness course and the longer and more detailed risk analyst and profiler training. In the case of both of these courses training delivered by experts with experience in implementing risk management in a border agency context will likely have a higher impact than training delivered by a risk management generalist.

The workshop proposed for contract managers should also be delivered independent of the operator, albeit they should have some input to it. Preparing the contract managers is properly the concern of “the client” being the GOL rather than of the operator that is to be managed.

Notwithstanding the fact that the operator of the LNSW will deliver the bulk of implementation training, government agencies will still need to work in partnership with them in the delivery of programs. This will aid to both contextualise the training for agency staff and contribute to the credibility of the programs.

Staged rollout.
Whilst the number of people who will require training, information and support to prepare them for the introduction and operation of the LNSW is substantial, we note that the system as proposed will be rolled out over time to specific agencies and specific permits or licenses. Likewise, it may roll-out to specific locations in a managed process over time. This will allow for some staging of training delivery – potentially by permit or process, by agency or by location. This may well take a number of years to be finalised, and as a minimum will likely take at least 12 - 18 months.
That noted, the bulk of traders and freight forwarders would appear to operate in Vientiane, and as such there will be a large number of this group at least who will require awareness raising and training early in the implementation process.

The delivery of LNSW training will need to be specifically included in any implementation planning and timetables developed by the operator.

**Opportunities to Practice.**

As mentioned throughout this report, the acquisition of a competence requires considerably more than just acquiring information and knowledge. It will require practice in using the new tools in day to day work. Even for those who have a reasonable level of comfort with using computers will need an opportunity to practice the methods and knowledge they gain in and during any training.

For this reason, when planning the user training in particular, it will be important to allow sufficient time, and to provide sufficient equipment, in the training environment for users to practice with the elements of the system they are expected to master. This is why a training instance of the LNSW will be so important.

Planners should consider making that training instance of the LNSW available to users even after the formal training has taken place. It may be feasible to make this available to users on-line on their own desktops or laptops - through the internet.

Lastly, the process adopted by the ASYCUDAWorld trainers of following up with course participants a few weeks or a month after the classroom training, is an excellent one, and should be adopted for the LNSW roll-out as well. This allows for users to raise any difficulties they are having, or to address any residual learning needs they may have.

**Pre-requisites.**  

We have observed previously in the report that the advice from Lao PDR agency contacts and workshop participants is that the level of computer literacy and the general level of comfort with using computers in Lao PDR has increased substantially in recent years – particularly in Vientiane. This includes the use of email, the internet and basic Microsoft Office tools. We are unable to offer informed comment on the situation in the Provinces.

The advice from the LCD officials responsible for ASYCUDAWorld training throughout Lao PDR was that in at least some instances, traders had sent staff to system training who had very limited computer experience, or little knowledge of the trade process. In these cases they were required to contact the trade companies after courses had commenced to seek suitable replacement students. This is not an effective use of scarce and valuable training resource.
For this reason we propose that the LNSW trainers should define, specify and publish some minimum prerequisite abilities for participants at the LNSW training courses – aside from possibly the general LNSW awareness program.

In this regard, a basic ability to use computers (basic computer literacy) and a sound working knowledge of relevant license, permit and import and export clearance procedures should be mandatory minimum preconditions for attendance at the bulk of LNSW user training. It would be reasonable and beneficial for the LNSW trainers to make this well known to traders, freight forwarders and government agencies when inviting nominations for training candidates.

**A Training Centre for the LNSW.**

Finally, the numbers of people who will require LNSW training in Vientiane will likely necessitate the establishment of a temporary LNSW Training Centre in the Capital (possibly in the LCD or at a new venue) and the development of a training instance or version of the LNSW. The Training Centre should be established by the LNSW operator, but should be utilised jointly by the operator and the involved government agencies in partnership. The Training Centre will need to be equipped with desks, PCs (and other end user equipment), a training instance of the LNSW and other training aids as determined (likely screens, projectors etc.). It is likely that the Training Centre will need to be in operation for at least the first 12 – 18 months of implementation of the LNSW.

**A mobile training capacity will also be required for training in the Provinces.**

The PM Group Functional and Technical Architecture Report incorporates a provision for the training instance of the LNSW and for training PCs (and other end user equipment), but has not specified the detailed infrastructure of the training centre.
4 Recommendations

**Recommendation 1:**
We recommend that a competency based approach is utilised to plan, prepare and deliver training and development for the LNSW. The adoption of such an approach for the LNSW will provide a useful base for government agencies to begin to adopt the use of competencies in their broader strategic and operational approach to human resource development. This is consistent with the direction of most international “better practice” regulatory agencies, international bodies and is already being proposed for the LCD.

**Recommendation 2:**
The LNSW human capacity building program will need to be planned, adequately resourced, centrally coordinated and integrated with the technology and business change implementation phases that are determined by the client agencies and the operator. We recommend that a Training Manager should be appointed by the LNSW operator, and a Government Agency Training Co-ordinator should be appointed to the LNSW Secretariat, as soon as practicable after a supplier contract has been signed. These two people should then be involved as part of the team that will plan and project-manage the design, build and implementation program of the operator.

**Recommendation 3:**
We recommend that the Training Program for the LNSW contain a minimum of 8 core components - as specified in Section 3.4 and APPENDIX C of this report. This comprises 5 core technical skills training courses, one senior management workshop and two general awareness programs. Multiple delivery of the courses will be required for all of these core components, except in the case of the proposed Contract Management Workshop.

**Recommendation 4:**
We recommend the adoption of some minimum course prerequisites for participants in LNSW technical training courses. These relate to general computer literacy and a sound knowledge of license, permit and import export clearance processes for all LNSW technical training. These prerequisites should be specified and made clearly known to traders and government agencies prior to them nominating training participants.

**Recommendation 5:**
It is recommended that a training instance or version of the LNSW is developed by the operator as part of its design and implementation process. This training instance of the LNSW will be critical to the success of the technical training. Options for making it available to traders and government agencies on-line or the development of online simulation based training tools should also be examined.
**Recommendation 6:**
We recommend the establishment of a temporary LNSW Training Centre in the Capital (possibly in the LCD or at a new venue). The Training Centre should be established by the LNSW operator, but should be utilised jointly by the operator and the involved government agencies in partnership. The Training Centre will need to be equipped with desks, PCs, a training instance of the LNSW and other training aids as determined (likely screens, projectors etc.). It is likely that the Training Centre will need to be in operation for at least the first 12 – 18 months of implementation of the LNSW. A mobile training capacity will also be required for training in the Provinces.
Appendix A: BIBLIOGRAPHY OF REFERENCE AND READING MATERIALS


Strategic Options for the Implementation of a National Single Window – Final v1.0, Pugliatti, L 2011, PM Group Dublin.


The Definition and Selection of Key Competencies, Organisation for Economic Cooperation and Development, 2005, Published by OECD.


### Planning Matrix

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<td>Specific Roles Affected</td>
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<td>New Competencies Required</td>
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<td>No of Staff Requiring New Competency</td>
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<td>Key Objectives of Training or Awareness Program</td>
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<td>Method of Delivery</td>
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<td>Pre-existing Competency Requirements</td>
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<td>Duration of Program</td>
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<td>Location(s) for Delivery</td>
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<td>Equipment or Tools Required</td>
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<td>When is Delivery Required</td>
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<td>Who and how many will Deliver Program</td>
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Appendix C: PROPOSED LNSW TRAINING COURSES

1. General Introduction to the Lao National Single Window

Objective:
To build a general level of background knowledge and interest about the LNSW amongst the likely key LNSW users and their staff.

Audience:
Traders and Government Agency Staff who will come into contact with the LNSW (including relevant Treasury and Statistics Officials for example).

Duration:
1-2 hours.

Content:
General introduction to the LNSW - including its background, objectives, functions, covering who are the users and what will it deliver for users, what statistical and other by-product information may be available from the LNSW, and what are the benefits to participating agencies, traders and the Government of Lao PDR, etc. This program is a general awareness session. It could be delivered face to face and/or supplemented by a handout explanatory brochures or CD/DVDs.

When:
After the general functional and technical architecture for the LNSW has been finalised and the general implementation phases and approaches have been settled. This is an awareness and interest builder only.

Where:
In Vientiane and all other provincial locations where the system will be utilised. General sessions for traders and policy agencies, and some specific licensing and border agency based sessions which would include a focus on the relevant area of activity of the agency (e.g. Customs, Health and Plant Quarantine).
2. Using a LNSW Trader Workbench

Objective:
To build a sound level of understanding of the LNSW – and in particular a sound competence in using the trader elements of the LNSW. This includes the ability to:
- lodge a permit application and an ACDD from the traders desktop;
- know how to use the track and trace capacity of the LNSW;
- know how to create and use Trade Data Folders;
- know how to upload document images in support of applications; and
- know how to seek help and user support.

Audience:
Traders and their staff who will use the LNSW in their general work.
Note: We have been advised that there are in the order of 6000 registered traders operating in Lao PDR – however advice is that there are around 600 of these that trade regularly (advice of ASYCUDA WORLD implementation team). If we assume 2 people from each of the regular traders, there will potentially be 1200+ people who will require this training.

Duration:
1 and 1/2 days for general usage training - which may need to be supplemented later by shorter web based on-line instructions and manuals for specific traders on individual permits as they are brought on-line in the LNSW.

Content:
General introduction to the LNSW - including its background, objectives, functions, who are the users and what will it deliver for users. Specific instruction on how to use all of the elements of the trader workbench to enable electronic creation and lodgement of in scope permits and licenses. Instruction on how to create and use a Trade Data Folder.

These sessions will need to allow time for participants to practice each of the learning elements – it will require access to a training version of the LNSW and sufficient computers to allow for practice. Handouts should be prepared detailing instructions for using each of the elements of the trader workbench – this may take the form of a User Guide or User Manual.

When:
After the first instance of the LNSW is ready to go live. Given the likely phased inclusion of the different permits and licenses (See reference to phasing in the Section on Issues to Consider in Training Delivery) and the likely central and provincial rollout of the LNSW, the precise timing of the first general training and provision of supplementary instruction materials will be dependent on the implementation schedule developed by the parties.

Where:
In Vientiane and all other provincial locations where the system will be utilised.
3. Using a Permit Issuer LNSW Workbench

Objective:
To build a sound level of understanding of the LNSW – and in particular a sound competence in using the permit receipt and processing elements of the LNSW. This includes:
• the ability to move a permit application through the various stages of the permit workflow process;
• the ability to use the track and trace capacity of the LNSW;
• a sound understanding of any new or changed internal business processes applying to a specific permit (or specific permits); and
• knowledge of how to seek help and support if system problems arise.

Audience:
Permit and License Issuing Agency staff who will use the LNSW in their daily work.

Note: This training is likely to be staggered in its rollout to allow for individual permits or agencies to be brought on line over time. That noted, there could be up to 520 staff in total that will need this training over time (estimated at 10 staff at each of 52 locations – 10 locations in Vientiane and 42 locations in provinces).

Duration:
1 day.

Content:
General introduction to the LNSW - including its background, objectives, functions, who are the users and what will it deliver for users. Detailed instruction in how to use the agency elements of the LNSW (specifically permit workflow management and permit approval). Use of the track and trace capacity of the LNSW. Detailed instruction on any new or changed internal business processes applying to a specific permit (or specific permits).

Note: Although the core technical elements of this training may be delivered by the operator of the LNSW, it is likely that specific government agency trainers will need to be involved at the time of delivery to enable instruction on any new internal business processes and methods that are introduce by an agency in concert with the LNSW.

This training will need to allow some time for practice on the key elements of the new system – it will require access to a training version of the LNSW and sufficient computers to allow for practice. Handouts should be prepared detailing instructions for using each of the elements of the LNSW Permit Issuer Workbench – this may take the form of a User Guide or User Manual.

When:
After the first instance of the LNSW is ready to go live in the first in-scope agencies and when it rolls out to new permits or agencies.

Where:
In Vientiane and all other provincial locations where the system will be utilised. See note in Audience Section above.
4. Using a Border Agency LNSW Workbench

Objective:
To build a sound level of understanding of the LNSW – and in particular a sound competence in using the Border Agency Workbench elements of the LNSW to manage and complete examination and release processes. To know how to examine a permit, license or Customs declaration in the LNSW. To know how to use the track and trace capacity of the LNSW. To understand the agency specific workflow management processes that support the processing of individual permit requests and approvals. To build a sound understanding of any new or changed internal business processes.

Audience:
Border Agency staff involved in the coordination of examination or release decisions and actions. Likely target audience of a minimum of 66 people (3 border agencies operating at 11 border locations x a minimum of 2 staff each)

Duration:
1 day.

Content:
General introduction to the LNSW - including its background, objectives, functions, who are the users and what will it deliver for users. Detailed instruction on the use of the system for verifying and coordinating cargo release and examination decisions. Instruction on how to look up permit or license details and on how to interact with the trader electronically.

This training will need to allow some time for practice on the key elements of the new system – it will require access to a training version of the LNSW and sufficient computers to allow for practice. Handouts should be prepared detailing instructions for using each of the elements of the LNSW Border Agency Workbench – this may take the form of a User Guide or User Manual.

When:
After the first instance of the LNSW is ready to go live.

Where:
In Vientiane and all other provincial locations where the system will be utilised.
5. Introduction to Risk Management

Objective:
To build a general level of background knowledge and understanding about the role of risk management in the permit issuing, declaration processing and border clearance processes. Develop an understanding of the general principles of and models for risk management and a preliminary understanding of how risk management is integrated and utilised in specific agency contexts.

Audience:
Government Agency Staff who are involved in license or permit issuing or the border clearance process – generally “Technical Officers” or equivalent and the line managers and supervisors who oversee these processes. Some policy and procedures officers should also attend to help integrate a risk management approach into agency planning. Some separate sessions could also be offered for Agency senior staff (Heads of Divisions and DD-Gs). This session can be offered to as many or as few staff as determined by the agency, but it should be considered a pre-requisite for those attending the longer Risk Management for Analysts and Managers course detailed separately.

Duration:
½ day.

Content:
General introduction to risk management (using the International Standards model – ISO 3100:2009). It should include the principle involved, risk management objectives and methods of application, the benefits of risk management and some examples of organisations that have successfully integrated risk management into their operations. This program should be tailored to individual agencies and agency staff – to contextualise each individual agency methods, approach and risks.

This program is a general awareness session. It would normally be delivered face to face and supplemented by handout explanatory brochures or CD/DVDs.

Note: This program is not likely to be delivered by the LNSW operator and will likely best be delivered by an external international expert in conjunction with senior risk management staff of the 6 key license and clearance agencies.

When:
Once the general functional and technical architecture has been finalised and the general implementation phases and approaches have been settled. This is an awareness and interest builder only.

Where:
In Vientiane and all other provincial locations where the system will be utilised. General sessions for agency staff - with a focus on the relevant area of activity of the agency (e.g. Customs, Health, Plant Quarantine).

Objective:
To build a sound level of competence in Risk Analysis, Profiling and Monitoring. To enable senior profile developers to use the functionality of the LNSW for analytical purposes and to enable them to develop, input and monitor effective risk profiles in the LNSW.

Audience:
Staff likely to be allocated risk analysis and profiling roles in each agency (the risk practitioners) and the managers of those practitioners. These will be the staff involved in analysing risk, developing profiles and treatments for risk and for monitoring results of those profiles and treatments. These will likely be senior technical staff and their Directors and Division Heads. There may be 6-8 staff from each agency involved in the first instance. This course can be run across agencies, or for each individual agency. Given both the technical and hands on nature of this training, no more than 15 -16 staff should attend each session.

Duration:
4 -5 days.

Content:
In addition to a more detailed version of the Introductory Risk Management Course, these staff will receive instruction on how to use agency data to analyse risk, how to develop profiles and input them into the LNSW, how to understand and monitor results of profiles (what happens when there is a match in the system) and how to develop effective targeting and selectivity methodologies.

This course will require a number of practical exercises - in risk analysis and profile development and in using the selectivity component of the LNSW. A test or training instance of the LNSW will be necessary to support this.

Note: This program is not likely to be delivered by the LNSW operator and will likely best be delivered by an external international expert in conjunction with senior risk management staff of the 6 key license and border agencies.

When:
As soon as a test or training instance of the Risk Management module of the LNSW is available.

Where:
It is likely that the staff requiring this training will all be based in Vientiane – as placing profiles into the LNSW will likely be limited to a relatively small number of experienced staff.
7. Using the LNSW Dashboard – for Managers

Objective:
To build a general level of competence and confidence in using the data analysis and monitoring tools of the LNSW Dashboard.

Audience:
Senior Government Agency staff who oversee the permit, licensing and border clearance processes. Likely to be Deputy-Directors, Directors, Division Heads and Deputy Director-Generals. Possibly a total of 10 from each participating agency.

Note: Elements of the Dashboard are likely to be tailored to specific agency or permit processes and as such this course may need to be adjusted and delivered separately for each of the agencies involved. There are likely to be no more than 10 staff from each agency that will require training on the dashboard – with a course for each of the 6 agencies.

Duration:
½ to 1 day.

Content:
General introduction to the LNSW - including its background, objectives, functions, who are the users and what will it deliver for users, what statistical and other by-product information may be available from the LNSW, benefits to participating agencies, traders and the Government of Lao PDR.

General instruction in how to use the dashboard tools to monitor license or clearance volumes, throughput rates, trends and Section or Division performance.

When:
After the first instance of the LNSW is ready to go live.
Note: Given the likely staging of rollout for the LNSW, the rollout of this manager training should be timed for each agency to align with the implementation of the agency specific workflow element of the LNSW.

Where:
In Vientiane most likely – but possibly in other provincial locations where the system will be monitored by senior officials.
8. Contract Management for the LNSW

**Objective:**
To enable the senior contract management executives and their support team to establish an agreed process and method for monitoring, management and oversight of the LNSW service contract and its attendant Service Specifications and Service Levels.

To enable this senior team to plan its approach and strategy for setting, monitoring and maintaining the “purchaser expectations” for the LNSW and delivering on its intended benefits.

**Audience:**
Senior Departmental members of the LNSW Oversight Group, and their key support personnel (the LNSW Secretariat Group). This is a small group of very senior departmental staff and the course/program should be structured as a strategic planning participative workshop.

**Duration:**
2 -3 days.

**Content:**
General overview of the LNSW functional expectations, including its background, objectives, statistical and other by-product information, expected benefits to participating agencies, traders and the Government of Lao PDR.

Detailed examination of implementation processes and plans and the legal dimensions of LNSW contract provisions (including service obligations, fees, penalties, dispute resolution processes and sanctions). Interpretation of Service Level Agreements, Service Level Objectives and how they will be reported and assessed.

Familiarisation for the Oversight Group of proposed operating methodology - including roles, responsibilities, frequency and scheduling of monitoring and reporting activities.

**When:**
Once the Operator contract has been signed and the Oversight Body has been formally appointed. Can precede the build of the LNSW.

**Where:**
In Vientiane.
Annex O:
Implementation Framework for LNSW
1 Introduction

1.1 Overview

The sections of this document outline a framework and guidance concerning implementation of ICT-based projects, specific guidance related to implementation of single window projects and guidance concerning the LNSW in particular based on the findings of the various task clusters of the LNSW Final ‘Blueprint’ Report.

1.2 Context – meaning of ‘implementation’ for LNSW

‘Implementation’ can be interpreted in several ways in the context of projects:

a. it could define the period from when activity starts to occur to put a high level concept into place until the concept is in place [for example, GOL has decided it needs a National Single Window and the implementation could be said to have started already with the preparation phase activities]; or

b. it could define the period from when a product, having been built, is to be made operational or rolled-out [for example, ‘implementation’ might mean the period after the LNSW has been built but is to be put in place for the first time for traders and GA users].

For the purposes of this framework, LNSW implementation shall be interpreted as the time or period following the preparation work by the GOL and the World Bank-commissioned Technical Assistance team, i.e., starting from now.

1.3 Key phases for ‘implementation’ for LNSW

The ‘key phases’ constituting implementation for the LNSW include:

• Decisions;
• Design and Build;
• Implement, deploy and roll-out; and
• Post-implementation, review and monitoring.

The phases are not entirely consecutive and could be expected to overlap in time:
For example, some details in the decisions phase may involve the Operator after it is contracted but in another case, the design and build activities can be expected to closely precede roll-out according to the contents of the functions (e.g. support for a particular regulatory document). Roll-out of the initial releases of content would occur before the detailed design and build of the contents of subsequent releases. In addition to the key elements shown above, from time to time imperatives for change will arise and these may require changes to contract, design, and products and so on. All such changes would need to be negotiated on equitable terms between the parties concerned.
2 General Guidance for Implementation

2.1 Project Management

The implementation of the LNSW concerns the introduction of new business processes with new ICT in a ‘low-awareness’ and a ‘low to medium-skill’ environment.

General guidance for implementation projects of new business processes and systems and new ICT should be heeded. Every large mainstream international vendor of consulting and ICT services for new business systems and new ICT publishes pertinent and practical project management literature and provides project management education.

There are also several well-regarded vendor-neutral approaches backed up by extensive literature and educational services e.g. through PMI, Prince, and ITIL (refer to the WWW links for further information).

- PMI: Project Management Institute, www.pmi.org
  PMI is one of the world’s largest not-for-profit membership associations for the project management profession, providing worldwide advocacy for project management through its globally recognized standards.

- Prince: PRojects IN Controlled Environments, www.prince-officialsite.com
  Prince is a project management methodology used extensively within the UK government as the de facto project management standard for its public projects. It is also a de facto standard across the United Nations and its subsidiary organizations, agencies and affiliates.

- ITIL: Information Technology Infrastructure Library
  www.itil-officialsite.com/home/home.aspx
  ITIL is a set of practices for IT service management that focuses on aligning IT services with the needs of business. ITIL describes processes, procedures, tasks and checklists that are not organization-specific, used by an organization for establishing integration with the organization’s strategy, delivering value and maintaining a minimum level of competency.

Additional guidance concerning implementation of ICT projects in general and specifically for single window projects, plus also experience from national single window projects in ASEAN, is provided below in a selected review of international experience. There are repeated themes that are included in those projects and these are applied and elaborated for the LNSW in this report.
2.2 International experience

2.2.1 Australian Government National Office – Project Implementation

Pre-rollout review
Following a successful development phase and before implementation or rollout of the project products, the project sponsor should assure themselves that:

- the products meet the full range of project requirements, such as functionality, reliability, and operating cost;
- key stakeholders support a move to implementation and remain committed to their role;
- there is a pre-implementation measurement (‘the baseline’) of the business outcomes and associated performance indicators;
- plans and resources for an effective rollout are in place;
- there is appropriate commercial protection of the Government’s position, (for example, (1) ensuring all operational testing is completed in accordance with the contract prior to build phase payments, (2) ensuring guarantees and indemnities will not lapse, and (3) operating contracts are safe); and
- where there have been changes to the original project scope (such as added features, or deferral of features) relevant stakeholders are aware of the changes and their implications, and communications strategies are amended as appropriate.

Project roll-out

a. Having developed the products required to fulfil the requirements of the project, the products need to be put to use. This is usually treated as a distinct project phase, covering such activities as:

- Measuring performance indicators immediately prior to introduction of new project products (to help assess the specific impact of the project);
- Installation of equipment and software, as needed;
- Training for those who will use the new products in their work;
- Publicity or communication to those who will be affected by the project;
- A key focus is communications to ensure that the project team is doing the actual delivery as planned; Build the communications strategy from business case toward end of development, so it takes into account any new issues and people and is ready to use when needed.
- Transferring data from obsolete or legacy systems to new systems;
- Ceasing use of previous products; and
- Monitoring and responding to difficulties during implementation.

b. These activities can take significant resources, and require detailed planning to avoid disruption or inconvenience. During this phase, it is likely that many people with little or no experience of the project will become involved or will be affected. Reflecting this, two main priorities during implementation are ensuring that the project products perform as expected when used in real life, and assisting people affected by the changes introduced by the project.

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1 Further details may be found at Section 4: Research Bibliography ref. (2)
c. Important areas for involvement by the project sponsor immediately before and during the project rollout phase are:

- Being confident that the project team has the resources and detailed plans for a smooth implementation. This includes providing guidance to the project team on the expected performance levels and the limit for any disruption during implementation. Given the cost implications of setting very high expectations, it is reasonable that different projects may use different resource levels to support rollout, depending on the risks and nature of potential impacts;
- Reviewing the expectations of those who approved the project in comparison with the likely short-term results, and providing appropriate briefings to avoid any surprises. These expectations can relate to the expected direct benefits of the project and to the manner of implementation;
- Reviewing implementation risks, and allocating sufficient resources to provide appropriate mitigation, including the availability of options to pause or roll back the implementation elements of the project if serious difficulties emerge;
- Managing senior-level relationships with any additional groups of people who become involved in the project following its implementation. These additional groups may be those who will use the project products, those who will benefit from the project, and additional resources engaged to support implementation;
- Close monitoring of the progress of the rollout, with prompt responses to any serious issues and a methodical approach to recording issues for less urgent resolution; and
- Active oversight of the communications strategy, including the timely provision of well-targeted information to those affected by the project and effective feedback arrangements so the sponsor is aware of any issues or concerns.

d. Following a successful implementation or rollout phase and before closing the project and transferring the products to ongoing operational use, the project sponsor should assure themselves that:

- The products, in the context of full operational use, meet the full range of project requirements, such as functionality, reliability, and operating cost;
- Any issues identified during implementation have been resolved, or have had responsibility for resolution transferred appropriately;
- Legal and contractual matters for the project are properly completed; and
- Ensure warranty, support and maintenance is in place, preferably where the development team and the operational team overlap. Lots of practical problems often emerge in the first few months of operations, and it is important to ensure that a sufficient number of the development team remain to immediately work on these problems.
2.3 Specific guidance – implementation lessons

2.3.1 New Zealand Joint Border Management System (JBMS)²

Approach:
- Very methodical, slow steps for implementation of new-message protocols and services into a business environment already with well-developed B2B services;
- Deliberative penetration testing phase (Intrusion Detection System and Intrusion Prevention System (IDS/IPS) - hacking - tests);
- Initial registration of Traders by a campaign of conversion/take-on by NZ Customs but subsequently Traders register on-line; and
- Broadly: slow and steady implementation by function groups (modules) in an environment that has existing well-operated online e-business services but moving to new and improved and multi-agency integrated functions.

² Further details may be found at Section 4: Research Bibliography ref. (1)
2.3.2 Asia-Pacific Economic Cooperation (APEC) Single Window Guide

The following is a snapshot drawn from the guide to implementation of single window projects:

**Implementation**

- Oversee and facilitate system build
- Determine transitional procedures e.g. new system run simultaneously with legacy system
- Conduct user testing
- Provide staff training and client education
- Implement a broad communication strategy e.g. fact sheets, workshops and seminars
- Provide adequate user support including a help desk facility
- Undertake capacity building activities
- Report on the progress of the implementation process
- Allocate sufficient time and resources for effective trials and pilot projects
- Ensure open publication of regulations and requirements

**Post Implementation**

- Review the progress at regular intervals/stage gates
- Assess whether the project will deliver the expected benefits and will achieve the intent
- Conduct cost/benefit return analysis
- Measure outcomes against the established success criteria
  - Stage gates
  - Key result areas
  - Key milestones
- Ensure on-going stakeholder engagement
- Maintain on-going communication with key stakeholders
- Establish maintenance procedures
- Establish post implementation decision making body to consider stakeholder requests for updates, submissions and changes

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3 Further details may be found at Section 4: Research Bibliography ref. (8)
2.3.3 Philippines National Single Window (NSW) Phase 1 
(applying for permits online)\(^4\)

Details and approach:

a. Agencies move quite independently from different start-points in terms of skills and familiarity with modern business practices, at different speeds, and with different priorities in adoption of the possibilities of rationalisation and modernisation through a change agent such ICT-based NSW; [This reinforces the need for LNSW for the needs of each agency to be addressed individually, within an overarching model, in terms of functional scope and timing of any procedural modernisation.]

b. Levels of awareness and capability within traders varies significantly; and
[This would have implications for LNSW for ‘usability’ considerations and perhaps a multi-tier education and training approach.]

c. Transition from the old system to the automated system in the context of the Philippines has taken a lengthy process. Coordination across agencies needs handholding and patience and requires strong political will.

2.3.4 Singapore TradeNet\(^5\)

Details and approach:

a. The project to deploy TradeNet was started in late 1989 and it has evolved and improved over time through a multi-phase implementation process;

b. It was designed to be adaptable and scalable;

c. Increasing transaction rates (300% increase in declarations over ten year) have seen fees reduce from S$10-S$13 in 1990 to a flat fee of S$1.98 per transaction; [This confirms the need for scalability and adaption in LNSW – technologically and in terms of business model.]

d. Different OGA have modernised their procedures at different rates and the process is ongoing with several now fully integrated through EDI and others in mid-process; [This again emphasises multi-phasing and functional and technical scalability for LNSW.]

e. Key success factors included a strong commitment of the highest level of government, a dedicated committee, and a working group (including multi-stakeholders committees and subcommittees), participation of the private sector, multiphase implementation, education and change management, and a proper legal framework;

f. The development of the system requires piloting, testing before going live, and educating users of the system for a smooth transition;

g. Managing changes in business operation for both private and public sectors is especially challenging for the transition period toward operating a new system;

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\(^4\) Further details may be found at Section 4: Research Bibliography ref. (6)

\(^5\) Further details may be found at Section 4: Research Bibliography ref. (7)
h. Educating the users of TradeNet (government officers, traders, agents, and related parties) is quite challenging and time consuming; and

i. Strong dedicated members at the steering committee and working groups are needed to articulate requirements for change, and maintain implementation momentum.

2.3.5 Indonesia National Single Window (INSW)\(^6\)

**Details and approach:**

a. Some OGAs retained their existing automated system and adapt it to link and communicate with the INSW;

b. The OGAs slowly adapted to simplified and streamlined procedures, and standardized data elements before integrating into INSW;

c. Organizational impediments have made implementation more difficult by restricting access to long term partners for technology, skill and financial resources; and

d. Handholding and collaboration between affected agencies has been essential at all levels: for project management, the technical working group and at the committee level, to build common understanding and to drive changes.

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\(^6\) Further details may be found at Section 4: Research Bibliography ref. (7)
3 Concepts and Guidance for Implementation of LNSW

3.1 Overview

Some decisions have already been taken for LNSW and formalised through a Minister’s Decision and a Concession Agreement (in principle or understanding) including:

- There shall be an ‘LNSW Governance Entity’ – initially in the form of the LNSW Steering Committee (LNSWSC) with a LNSW Secretariat team (LNSWSec) providing technical support;
- There shall be an LNSW Operator to be engaged as private sector entity formed as a Joint Venture (JV) between GOL and Bureau Veritas; and
- It shall be engaged on a concessionaire basis.

The significant next steps for GOL include:

- Using the information in the LNSW Final ‘Blueprint’ Report prepared, GOL (as represented by MOF, LCD or an ‘Office of LNSW’, etc.) negotiate with the JV Operator the final scope and details of:
  - the Functional and Technical Architecture and Specifications for LNSW; and
  - the Service Specifications for implementation and operation of LNSW; and
  - the Service Level Agreement(s).
  [The LNSW Final ‘Blueprint’ Report provides a wealth of detail about each of these products that could be used as source material or even the primary basis for negotiations.]

- Moving from the Concession Agreement (in principle or understanding) with Bureau Veritas to a Contract between GOL and the JV, including consideration of the parties to the Contract especially on behalf of the GOL (e.g. this could be Ministry of Finance as was the case for the Concession Agreement (in principle or understanding), Lao Customs Department or another party, e.g. a new ‘Office of the LNSW’ to be as a type of Regulator or Governance Entity, formed out of the NSW Secretariat).

For implementation, the majority of the tasks and activities for LNSW would be planned and executed by the JV, nevertheless:

- the GOL must be sufficiently informed, by means of the LNSW Final ‘Blueprint’ Report and other sources etc., concerning the products that it should witness or receive from the JV. Especially the project management, planning and monitoring products and deliverables that form part of the agreement or contract with the JV. The Services Specifications in the LNSW Final ‘Blueprint’ Report provide in outline, the types of planning product and services that all need to be fully defined for the build and operation of LNSW; and
- there will be tasks and activities wholly involving GOL and Government Agencies or partly involving GOL, Government Agencies and Traders.
The planning products to be provided by the JV should also include clearly defined expectations that are to be placed upon the JV, the GOL, each affected government agency, the Traders and any other affected parties.

Following on from the above:

a. the Service Level Frameworks and Models in the LNSW Final ‘Blueprint’ Report includes information about expectations that might be placed upon Government Agencies, users within Government Agencies and traders; and

b. it is our recommendation that, for each of the roll-out phases, the ‘Release’ descriptions (more or less conforming to the descriptions as set out later in this framework document) are first prepared by the JV for review by GOL (LNSW Steering Committee and Secretariat) and then jointly finalised and agreed;

c. The implementation of LNSW concerns the introduction of new business processes with new ICT in a ‘low-awareness’ and ‘low to medium-skill’ environment.

The implementation of LNSW will take affected parties in Lao PDR from the ‘as-is’ situation through transition phases to a ‘to-be’ situation with key aspects illustrated below:

<table>
<thead>
<tr>
<th>‘As Is’ Situation</th>
<th>Transition Phase</th>
<th>‘To Be’ Situation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lao Trade Facilitation Strategy</td>
<td>Lao Trade Facilitation Strategy</td>
<td>Lao Trade Facilitation Strategy</td>
</tr>
<tr>
<td>Trade Facilitation Steering Committee</td>
<td>Trade Facilitation Steering Committee</td>
<td>Trade Facilitation Steering Committee</td>
</tr>
<tr>
<td>NSW Steering Committee</td>
<td>NSW Steering Committee</td>
<td>Oversight by Governance Entity or Regulator (i.e. ‘Office of the LNSW’)</td>
</tr>
<tr>
<td>NSWSC Secretariat</td>
<td>Full time multi agency implementation team – a DG appointed as lead</td>
<td>ASEAN E-exchange of Data (when ASW ready)</td>
</tr>
<tr>
<td>ASEAN SW Requirement</td>
<td></td>
<td>LNSW Operator</td>
</tr>
<tr>
<td>No LNSW Operator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ASYCUDA paper and electronic (kiosk) ACDD</td>
<td>Online submission of ACDD and e-linked permits through LNSW</td>
<td>e-clearance with paperless processing and transactions</td>
</tr>
<tr>
<td>No coordinated single point of clearance</td>
<td>Improved co-operation by border agencies, joint inspections but paper based clearance</td>
<td>Single coordinated point of clearance (LCD)</td>
</tr>
<tr>
<td>Complex and unnecessary government processes</td>
<td></td>
<td>Streamlined government processes</td>
</tr>
<tr>
<td>Paper Permits, Certificates and Licenses</td>
<td>e- submission but still paper Permits, Certificates and Licenses</td>
<td>Electronic Permits, Certificates and Licenses (paperless processing)</td>
</tr>
<tr>
<td><strong>Paper based internal government workflow</strong></td>
<td><strong>Electronic internal government workflow</strong></td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>---------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Manual/paper document exchange between agencies</td>
<td>E-exchange of permit and other data</td>
<td></td>
</tr>
<tr>
<td>Limited awareness of LNSW</td>
<td>Growing awareness of LNSW</td>
<td></td>
</tr>
<tr>
<td>Limited interagency collaboration</td>
<td>Growing interagency collaboration</td>
<td></td>
</tr>
<tr>
<td>Limited delegation of approval authority</td>
<td>Some delegated authority</td>
<td></td>
</tr>
<tr>
<td>Cash or some bank credit payments (limited)</td>
<td>Electronic payment option for all fees and duties</td>
<td></td>
</tr>
<tr>
<td>Limited or No Risk Management</td>
<td>Improved and integrated Risk Management tools for LCD</td>
<td></td>
</tr>
<tr>
<td>No Web based processes</td>
<td>Web based processes for all major trade related permits, licenses, certificates and Customs entries</td>
<td></td>
</tr>
</tbody>
</table>

Implementation for LNSW will include the build phase and the final process of moving the solution from development status to production status in a series of pre-determined steps. This process is often called deployment, go-live, rollout or installation.

The key phases for implementation of LNSW (as identified at paragraph 1.3 above) incorporate the following:

<table>
<thead>
<tr>
<th><strong>Decisions</strong></th>
<th><strong>Functions and Technical Infrastructure</strong></th>
<th><strong>Service Specifications</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>▶ Steering Committee to decide and negotiate with JV:</td>
<td>▶ Steering Committee to decide and negotiate with JV:</td>
</tr>
<tr>
<td></td>
<td>• Scope / content for LNSW?</td>
<td>• Services to be provided by Operator</td>
</tr>
<tr>
<td></td>
<td>• Which GA's?</td>
<td>• Services by other parties</td>
</tr>
<tr>
<td></td>
<td>• Which regulatory documents?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Which sites?</td>
<td></td>
</tr>
</tbody>
</table>

Refer to LNSW Blueprint and FandTA for baseline. Refer to LNSW Blueprint and Service Specifications for baseline.
<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>Refer to</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk Management</td>
<td>› GA’s to plan growth path into use of risk management</td>
<td>LNSW Blueprint and Risk Management for baseline.</td>
</tr>
</tbody>
</table>
| Process redesign                             | › GA’s to set high level strategy for BPR thru LNSW  
› GA’s to plan use of Operator inputs for implementing WF                                                                 | Refer to: (1) LNSW Blueprint, BPR and FandTA; and (2) LTP Roadmap for baseline. |
| Governance Model                             | › Steering Committee to decide organizational structure and roles etc. of ‘Regulator’ / ‘Office of the LNSW’…                                   | LNSW Blueprint and Op/Gov Model for baseline.                            |
| Fees and charges model / levels / structures | › Steering Committee to decide model etc. …  
› SC and JV to negotiate fee levels / methods                                                                                             | LNSW Blueprint and Fee Structure and Revenue Share Model for baseline.   |
| Principles for Service Level Agreements      | › Steering Committee to decide principles etc. …  
› SC and JV to negotiate principles that would be fully defined during design and build                                                   | LNSW Blueprint and SLA Frameworks and Models for guidance.               |
| Implementation Strategy                      | › Steering Committee to layout broad principles and strategies for implementation                                                            | LNSW Blueprint and Implementation Framework [i.e. this document] for guidance. |
| Contract b/w GOL and LNSW Operator (JV)      | › Steering Committee to decide GOL contracting entity  
› Steering Committee to settle and negotiate with JV:  
• Operator mandate  
• Contractual deliverables  
• Contractual framework  
• Contractual terms   | Based on decisions taken above.                                                                                                             |
| Legislation framework                        | › Steering Committee to plan legislative needs for LNSW  
› GA’s to plan legislative needs for LNSW                                                                                                | LNSW Blueprint and Legal Gaps and Impediments for baseline               |
<p>| Design and Build                             | (the Contract would provide the baseline together with documented plans and decisions above)                                               |                                                                         |</p>
<table>
<thead>
<tr>
<th>Annex O: Implementation Framework for LNSW</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LNSW core functions and features</strong></td>
</tr>
<tr>
<td>LNSW technical infrastructure</td>
</tr>
<tr>
<td>LNSW physical infrastructure for data centres</td>
</tr>
<tr>
<td>LNSW web sites</td>
</tr>
<tr>
<td>LNSW data communications services</td>
</tr>
<tr>
<td>LNSW message protocols</td>
</tr>
<tr>
<td>LNSW security schemes</td>
</tr>
<tr>
<td>LNSW Information Consumer functions and services</td>
</tr>
<tr>
<td>➤ LNSW Risk Management engine</td>
</tr>
<tr>
<td>➤ LNSWSC and LNSWSec will provide guidance re detailed requirements</td>
</tr>
<tr>
<td>➤ LNSW Dashboards and monitoring tools</td>
</tr>
<tr>
<td>➤ Each GA will define its initial monitoring requirements with assistance of Operator</td>
</tr>
<tr>
<td>➤ LNSW Operator will build and test</td>
</tr>
<tr>
<td>➤ LNSWSC and LNSWSec will provide guidance re detailed requirements</td>
</tr>
<tr>
<td>➤ System engineering documentation</td>
</tr>
<tr>
<td>➤ LNSWSC and LNSWSec will audit from time to time</td>
</tr>
<tr>
<td>➤ User Guides / training materials / publicity materials</td>
</tr>
<tr>
<td>➤ LNSWSC and LNSWSec will review and together with LNSW Operator</td>
</tr>
<tr>
<td>➤ Training plans / engagement plans</td>
</tr>
<tr>
<td>➤ LNSWSC and LNSWSec will audit from time to time</td>
</tr>
<tr>
<td>➤ Standard Operating Procedures for LNSW Services</td>
</tr>
<tr>
<td>➤ Standard Operating Procedures for GA’s (PIA and border agencies)</td>
</tr>
<tr>
<td>➤ Regulator / ‘Office of the LNSW’</td>
</tr>
<tr>
<td>Help Desk</td>
</tr>
</tbody>
</table>
| LNSW Operator will design, build and test  
| LNSWSC and LNSWSec will test and accept with assistance of Operator |
| Change management plan |  
| LNSWSC and LNSWSec will plan and document with some assistance from the Operator |
| High-level implementation plan |  
| LNSW Operator will plan and document  
| LNSWSC and LNSWSec will review and together with LNSW Operator |
| Service Level Agreements  
- Between Operator and GOL  
- Between Operator and Trader |  
| LNSW Operator and Steering Committee will negotiate, document and promulgate initial phase SLA’s and may consult with traders during the process |
| Statements of Service Level Objectives |  
| Each GA would determine, document and promulgate its SLO |
| LNSW Governance Entity / Regulator / ‘Office of the LNSW’ or similarly titled on-going entity |  
| LNSWSC and LNSWSec to plan, design, create and operationalize the entity |

Implement / deploy / roll-out  
(the Contract would provide the baseline together with the findings / decisions of the design)

| Detailed Release Planning |  
| LNSW Operator will plan and document  
| LNSWSC and LNSWSec will review and together with LNSW Operator |
| Switch-on and continue to operate the main data centres and (per release make available user services) |  
| LNSW Operator will switch-on and operate  
| Regulator/‘Office of the LNSW’ will monitor SLA |
| Data communication services |  
| LNSW Operator will obtain and continue to provide services from common carriers/ISP’s  
| Regulator/‘Office of the LNSW’ will monitor SLA and Operator performance |
| Public and GA websites |  
| LNSW Operator will switch-on and continue to provide the facility  
| Regulator/‘Office of the LNSW’ will monitor SLA |
| Stakeholder engagement |  
| LNSW Operator  
| Regulator/‘Office of the LNSW’  
Together will conduct publicity campaigns and ongoing engagement  
<p>| Regulator/‘Office of the LNSW’ will monitor performance by Operator |</p>
<table>
<thead>
<tr>
<th>Training and education</th>
<th>▶ LNSW Operator will provide initial rounds of training for GA and Trader users. [Subsequent training will depend on agreements reached.]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training and education</td>
<td>▶ Regulator/’Office of the LNSW’ will monitor performance by Operator. [Separately, Operator will provide staff with appropriate skills and training in regard to all its obligations. The planning and preparation is left as a matter for the Operator, however, the Steering Committee and later the Regulator/’Office of the LNSW’ would monitor the Operator to ensure that it is properly prepared.]</td>
</tr>
</tbody>
</table>
| Roll-out of technical infrastructure to GA sites | ▶ LNSW Operator
▶ Implementation sites will assist with some physical logistics |
| Help Desk | ▶ LNSW Operator will switch-on and provide staff for Help desk
▶ Regulator/’Office of the LNSW’ will monitor performance by Operator |
| Support and maintenance | ▶ LNSW Operator will provide (directly and through third-parties)
▶ Regulator/’Office of the LNSW’ will monitor performance by Operator |

**Post-implementation review (per release)**
(post-implementation is not a project phase per se but rather part of the ongoing business of LNSW)

| Post-implementation review (per release) | ▶ Regulator and Operator together with stakeholders review release and provide feedback to next release |
| SLA Monitoring | ▶ Regulator and Operator monitor performance per SLA on an ongoing basis |
| SLA Administration | ▶ Regulator and Operator shall convene from time-to-time (nominally annually) to revise, redraft and promulgate SLAs |
| SLO Monitoring and administration | ▶ Each GA would monitor performance per SLA on an ongoing basis
▶ Each GA may revise, redraft and promulgate its Statement of SLO from time to time |
As stated earlier, the phases are not entirely consecutive and could be expected to overlap in time:

Decisions
Design and build
Implement / deploy / roll-out
Post-implementation review and monitoring

Roll-out of initial releases of content would occur before detailed design and build of the contents of subsequent releases.

In addition to the key elements shown above, from time to time imperatives for change will arise and these may require changes to contract, design, products and so. All such changes would be negotiated on equitable terms between the parties concerned.

For LNSW, for roll-out in particular, detailed planning, effective and frequent communication and disciplined follow-through on planning will be necessary for successful operation of LNSW with few or no false-starts. During the roll-out, many of the assumptions and simplifications and decision-deferment that can occur during preparation and build phases, can come under stress. When Traders and Government Agency users are instructed to use LNSW, short-comings that may arise from incomplete preparation and insufficient implementation planning and follow-through would become obvious. These can be embarrassing and can lead to project failure. Nearly all of the big decisions and excitement will have (or should have) occurred during the preparation (i.e. planning, design, build …), however, the intricate and often tedious multitude of trivialities of deployment makes this phase more complex. Deployment, together with exposure of the project and its products to the external parties, is the most dangerous period for the implementation.
3.2 Implementation ‘categories’ and implementation ‘sets’

In some ways, it is often appealing to contemplate an all-at-once type implementation referred to as a big bang. However, in the majority of circumstances it is impractical to implement projects for comprehensive ICT-based modernisation of business processes in a big bang. The reasons are essentially due to practical limitations on the capacity to manage a broad sweep of changes.

The alternative to big bang is phased implementation which means the segmentation of the overall new ‘system’ into sets and subsets with each subset being a usable, sensible combination of several components of the overall ‘system’. Each sub-set would then be implemented in a phase (or ‘release’) of the overall ‘system’. There may also be the need to build temporary procedures and systems etc., that are not part of the overall design but necessary to make a subset ‘work’ in a sensible and practical matter. These would then be discarded later as having been temporary artefacts.

Together the phases lead to a full implementation of the new ‘system’.

In determining the subsets there are several considerations, including categories of the new ‘system’, practical considerations and political imperatives.

Broadly speaking, for new ICT-based systems such as LNSW there are four common categories:

1. User groups;
2. Function groups;
3. Geographic groups; and for long-term implementations
4. Technological groups.

There are two obvious implementation categories for LNSW namely, the User groups and Functions groups. These are described in this document against the backdrop of the FandTA. [For the purposes of the analysis below, the geographical category is effectively subsumed by the user group category. For LNSW, the time horizon is kept short and the technological category, which can mean that the phasing in technologies and then replacing these through upgrades need not be considered.] Based on the FandTA contained in the LNSW Final ‘Blueprint’ Report, the constituents of the two dimensions (User groups and Functions groups) are defined as below.
### Implementation category #1: User groups

<table>
<thead>
<tr>
<th>1</th>
<th>Traders who could be further defined by</th>
</tr>
</thead>
<tbody>
<tr>
<td>i.</td>
<td>size</td>
</tr>
<tr>
<td>ii.</td>
<td>type (e.g. importer, exporter or transit operator)</td>
</tr>
<tr>
<td>iii.</td>
<td>geographic location</td>
</tr>
<tr>
<td>2</td>
<td>GA users who could be further defined by</td>
</tr>
<tr>
<td>i.</td>
<td>GA (although this effectively is subsumed by the functional category)</td>
</tr>
<tr>
<td>ii.</td>
<td>geographic location: Vientiane, provincial centre and border locations</td>
</tr>
<tr>
<td>iii.</td>
<td>management user (again effectively subsumed by the functional category)</td>
</tr>
<tr>
<td>3</td>
<td>LNSW Regulator users</td>
</tr>
<tr>
<td>4</td>
<td>LNSW Help desk users</td>
</tr>
<tr>
<td>5</td>
<td>Information consumers – possibly a delayed and gradual expansion into this user community to protect the core service from potential resource misallocation and performance difficulties</td>
</tr>
</tbody>
</table>

### Implementation category #2: Function groups

| 1 | LNSW Help desk online and telephone functions |
| 2 | Public web site |
| 3 | Registration – for Traders |
| 4 | Registration – for LNSW registration unit |
| 5 | Trader Workbench |
| i. | basic or general features |
| ii. | regulatory documents supported (in sets of one or more of the 28 candidate ACDD and CLP’s) |
| iii. | functions for border agencies, if not already included (e.g. for track and trace) |
| 6 | Trader LNSW XML message interface |
| 7 | CLPIA Workbench |
| ♦ | release one or more of the candidate 27 CLP’s to GA’s |
| ♦ | with each GA implementing improvements in its internal business processes with corresponding evolution of the standard workflow model using the ‘100 days’ nominated in the FandTA |
| 8 | LCD Workbench |
| i. | Basic facilities (permit enquiries, communications with Traders, GA’s) |
| ii. | pre-arrivals declarations |
| iii. | goods arrival notifications |
| iv. | requests for ‘permission letters’ regarding exemptions / concessions |
| 9 | LCD – ASYCUDAWorld integration: receiving ACDD ex LNSW and responding with outcomes following LCD processes recorded in ASYCUDAWorld and forwarded back through NSW |
| 10 | Risk management functions, perhaps by sophistication level e.g. |
| (1) | profile setting by one or more GA |
| (2) | feedback subsystems into the intelligence database with basic analysis and function |
| (3) | more sophisticated intelligence database and functions |
11 LNSW MIS functions for LNSW Regulator and GA’s
♦ these functions may be made available in sub-stages
♦ these functions are more volatile than the transactional functions (work benches etc.) with analyses and reports being constantly investigated and exploited by users

12 LNSW performance monitoring dashboards and reports for
i. LNSW Regulator, possibly in stages of increasing sophistication with evolving changes requested by the Regulator
ii. LNSW Operator
iii. GA for monitoring pertinent to their specific operation in LNSW which may be in sub-stages
iv. Note: these functions are more volatile than the transactional functions (work benches etc.) with analyses and reports constantly investigated and exploited by users

13 Fee and revenue modules – in stages as fee and revenue model evolves towards ‘good practice’

14 ASW integration
i. ACDD exchange
ii. COO exchange

15 Information services for information consumers

16 Office Automation functions for the LNSW Regulator

17 ERP functions for the LNSW Operator

18 Miscellaneous other LNSW-infrastructure functions and non-functional characteristics as defined in the FandTA that may be rolled-out in phases

There will be sensible combinations that restrict the choice of implementation ‘sets’ where an implementation set would specify the quanta in each category.

### 3.3 Considerations for when selecting implementation ‘sets’

Several considerations in the context of selecting the ‘implementation sets’ are described below:

a. The ACDD is the largest volume of regulatory documents within the scope or ambit of LNSW. Approximately 200,000 are anticipated per annum growing at say 8% p.a.

b. Approximately 75% of ACDD are not associated with another type of permit. [Note: This excludes ‘Permission letters’ related to duty exemptions and concessions for which statistics are not available.]

c. The proposed fee model comprises registration / annual membership fee and transactional fee based on line items. For revenue generation purposes, LNSW would benefit from an early implementation of submission of ACDD through LNSW.

d. From a ‘NSW’ definition perspective, the trade transactions involving border agencies (LCD, MOH – Drug Division, MOH – Food Division, MAF) are candidates for an early adopters for LNSW.
Considerations include the following: permits; transaction rates; and location of CLPIA offices. These are summarised below:

<table>
<thead>
<tr>
<th>Agency</th>
<th>Document</th>
<th>Admin Office</th>
<th>National Quantity per annum</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCD</td>
<td>ACDD</td>
<td>Border Sites</td>
<td>200,000</td>
</tr>
<tr>
<td></td>
<td>Permission letters (exemptions / concessions)</td>
<td>Vientiane, Provincial Offices</td>
<td>? 7</td>
</tr>
<tr>
<td>MOH Drug Div.</td>
<td>Letter of Approval (pharmaceuticals)</td>
<td>Vientiane</td>
<td>1,000</td>
</tr>
<tr>
<td>MOH Food Div.</td>
<td>Import Permit (Food)</td>
<td>Vientiane</td>
<td>1,500</td>
</tr>
<tr>
<td>MAF</td>
<td>Import Licence – Timber etc.</td>
<td>Provinces</td>
<td>Negligible</td>
</tr>
<tr>
<td></td>
<td>Export Licence – Timber etc.</td>
<td>Provinces</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Import Certificate – Plants</td>
<td>Provinces</td>
<td>2,000</td>
</tr>
<tr>
<td></td>
<td>Import Certificate – Pesticide and Fertilizers</td>
<td>Provinces</td>
<td>1,500</td>
</tr>
<tr>
<td></td>
<td>Technical Certificate for Import of Livestock</td>
<td>Provinces</td>
<td>2,500</td>
</tr>
<tr>
<td></td>
<td>and Fish</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Another candidate for an early adoption would be the most voluminous PIA, viz. DIMEX and MOIC with regards to import permits and COO:

<table>
<thead>
<tr>
<th>Agency</th>
<th>Document</th>
<th>Admin Office</th>
<th>National Quantity per annum</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIMEX</td>
<td>Import / Export Licence</td>
<td>Vientiane</td>
<td>10,000</td>
</tr>
<tr>
<td></td>
<td>Certificate of Product Eligibility</td>
<td>Vientiane, Provincial Offices</td>
<td>~4,000</td>
</tr>
<tr>
<td></td>
<td>Certificates of Origin</td>
<td>Vientiane, Provincial Offices</td>
<td>4,400</td>
</tr>
<tr>
<td>MOIC</td>
<td>Import / Export Licence</td>
<td>Vientiane, Provincial Offices</td>
<td>8,000</td>
</tr>
</tbody>
</table>

There are initiatives under TDF to rationalise unnecessary permits (i.e. permits that are used for efficacy in a paper-based operation but unnecessary in a thoughtfully constructed ICT-supported process) and permits used for statistics. Many permits are said to be issued ‘automatically’ are often for statistical purposes only and they may be rendered obsolete. Of the 28 candidate regulatory documents, assuming reliable and

7 Will need to be determined or established.
responsive real-time systems, examples of documents that could be eliminated without diminishing the underlying purpose include:

- Pharmaceuticals Letter of Approval – the Drug Division Registration Certificate could be used instead with automated tracking of the content of shipments, perhaps with supplementary data entered by traders at the time of declaration;
- Import Permits issued by DIMEX – instead the availability of trade data statistics could supplant the need for such permits.

As mentioned previously there may also be a need to take into account:

a. practical considerations (e.g. the roll-out of complementary ICT projects for communications infrastructure, a planned move of a GA to new premises, etc.); or
b. political imperatives (e.g. early or late implementation of a particular province or GA to garner support for the LNSW or some outcome).

Such practical considerations, except as are readily in the public domain, and political considerations are not factored into this document. Independent of the work within the scope of the LNSW, LCD is separately implementing new ICT-based systems and procedures for its part of the management of the Permission Letters for exemptions and concessions. The timing of those new systems is unknown at this time. The scheduling of LNSW implementation ‘sets’ may well be influenced when better information is available.

Based on a synthesis of the foregoing, an example of a phased implementation of LNSW might include deployment by releases as follows:

<table>
<thead>
<tr>
<th>LNSW Release 1.1</th>
<th>LCD + MAF + FDD for National Office and Vientiane Province</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Documents:</strong></td>
<td></td>
</tr>
<tr>
<td>LCD – ACDD</td>
<td></td>
</tr>
<tr>
<td>MAF – Import Certificate for Plants; Import Certificate of Pesticide and Fertilizer; Technical Certificate for the Import of Livestock and Fish</td>
<td></td>
</tr>
<tr>
<td>FDD – Letter of Approval (Pharmaceuticals); Import Permit (Food)</td>
<td></td>
</tr>
<tr>
<td><strong>Users:</strong></td>
<td></td>
</tr>
<tr>
<td>Traders using border gates at Thanaleng and Wattay</td>
<td></td>
</tr>
<tr>
<td>GA users in LCD, MAF and FDD in National Office, Vientiane Province and at Thanaleng and Wattay</td>
<td></td>
</tr>
<tr>
<td><strong>Functions:</strong></td>
<td></td>
</tr>
<tr>
<td>1 to 5, 7 to 9 as pertain to the documents defined above</td>
<td></td>
</tr>
<tr>
<td>An initial subset of 11</td>
<td></td>
</tr>
<tr>
<td>18 to the extent necessary</td>
<td></td>
</tr>
</tbody>
</table>
### Physical and Technical Architecture:
- At least the main data centre fully deployed
- Data communications service between the data center and two ISP, affected GA offices at the PIA and border gates
- Data communications equipment at the data center and affected GA offices at the PIA and border gates
- End-user equipment at the data center and affected GA offices at the PIA and border gates
- At least partial data communications, data equipment and end-user equipment for the LNSW Secretariat

Other release descriptors: according to the template defined later in this document

<table>
<thead>
<tr>
<th>Release</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LNSW Release 1.2</td>
<td>LCD + MAF + FDD for remaining provinces</td>
</tr>
</tbody>
</table>
| LNSW Release 1.2.1 | LCD + MAF + FDD for Savannakhét  
Documents:  
- As for Release 1.1 |
| LNSW Release 1.2.2 | Etc. …                                                                      |
| LNSW Release 2   | Backup data centre …                                                        |
| LNSW Release 3.1 | Next set of GA’s / regulatory documents Vientiane Province …                |
| LNSW Release 3.1.1 | Release 3 regulatory documents – Savannakhét province …                     |
| Etc. …           | Etc. …                                                                      |
3.4 LNSW Release Architectures – Overview and Guidance Notes

The LNSW FandTA specifies functional and non-functional requirements and technical architectures.

The Statement of Direction for Service Specifications outlines services required to implement and operate LNSW. The ICT requirements describe the ‘end-game’ when a fully functional, end-to-end, complete system would be in place.

It is likely and recommended that LNSW would be introduced in stages. During the stages the fully functional, end-to-end complete system would not be available but rather subsets of the complete solution. There would need to be transitional arrangements and architectures which entail parts of existing processes and system and parts of new processes and system with ‘glue’ to provide the affected parties with a sensible, usable and manageable set of business processes.

Each implementation stage needs to be described and planned. This document outlines release architectures in terms of the classifications described below. The classifications are instructive, providing an overview of the intricacies that need to be thought through and put in place.

a. Release Number and Name
   • A simple identifier and short title
     e.g. LNSW Release 1.1 ACDD + MAF + FDD for National Office and Vientiane Province.

b. Background
   • A short narrative description of the purpose, release content, and affected parties.

c. Operational period
   • The life span of the release – from / to dates.

d. Concept of operation for the release
   • Short descriptions that comprehensively cover all key aspects of the operation by Traders, GA Officers and Managers of the business processes affected by or implemented through LNSW during the release period.
   • Described in present tense as if already implemented.
   • Particularly: noting interoperation between released elements of LNSW and legacy processes not yet retired.

e. Business processes
   • Comprehensive list of business processes affected by or implemented through LNSW.
   • Identification of new or revised Standard Operating Procedures needed to be defined and promulgated by the affected Government Agencies and any other parties.

f. Organization and people
   • List of organizations and people affected by the release.
   • Identification of new or changed organizational structures and roles needed to be defined and implemented by the affected Government Agencies and any other parties.
g. Trader engagement
   • Identification and short descriptions of the services and functions available to the Trader during
     the release period.
   • Identification and short descriptions of the manner in which Traders need to be informed, take
     steps to use LNSW, use the services and can expect LNSW to perform from their perspective.

h. LNSW software functions and features
   • Comprehensive list of functions and features committed to be implemented and operated by the
     LNSW Operator for the release period.
   • Likely to include interim functions, features, technical infrastructure supplementary to the 'end-
     game' functional and technical architecture and interim business procedures to interoperate with
     legacy systems and procedures extant during the release period.

i. Operating instructions
   • For the LNSW services under the management of the LNSW Operator: brief descriptions of
     operating instructions (e.g. for start-up, shut-down, access control administration, data and services
     security, support) for the information of interested parties.
   • For services requiring action at affected stakeholders: comprehensive list of operating instruction
     information sources (online, booklet etc.) together with clear expectation of the parties required to
     take action e.g. a designated GA office at each particular site may need to start-up and / or
     shut-down routers, switches and such devices for users at the site.

j. Information systems architecture
   • Comprehensive overview that merges the portion of the FandTA implemented during the release
     period with legacy systems and procedures not yet retired.
   • Information flows (electronic or non-electronic) between the actors and systems (ICT-supported or
     manual) illustrated and briefly described.

k. Technical Infrastructure
   • For the LNSW technical infrastructure (hardware, system software, and services) to be
     implemented by the LNSW Operator at the LNSW main data centre, backup data centre, at GA sites, for
     telecommunication links, etc.: brief descriptions of technical infrastructure to be implemented for
     the release period for the information of interested parties.
   • For technical infrastructure needed by affected stakeholders not within the obligations of the
     LNSW Operator: comprehensive list of information sources (online, booklet etc.) concerning the
     requirements placed upon such stakeholders for their own supply of technical infrastructure e.g. for
     traders: their own arrangements for linking with and using LNSW (PC, PC software, scanner, internet
     service, etc.).

l. Physical Infrastructure
   • For the LNSW physical infrastructure (data centre and office space, data centre, office fit-out,
     environmental monitoring equipment and services, etc.) to be implemented by the LNSW Operator
     at the LNSW main data centre, backup data centre, and at GA sites, etc.: brief descriptions of physical
     infrastructure to be implemented for the release period for the information of interested parties.
• For physical infrastructure needed by affected stakeholders not within the obligations of the LNSW Operator: comprehensive list of information sources (online, booklet etc.) concerning the requirements placed upon such stakeholders for their own supply of physical infrastructure e.g. for GA: their own arrangements for office accommodation for equipment located at their sites, arrangements for physical security, etc..

m. Training
• Comprehensive list of training resources and facilities to be available during the release period.
• Comprehensive list of training events, with brief descriptions of content, intended students.
• Comprehensive overview of responsibility for training events.

n. Risk analysis
• Conduct a risk analysis pertinent to each release, e.g. construct a table such as the following:
  1. identify and describe the risk event;
  2. quantify each risk event in terms of probability, e.g. High, Medium, Low or a percentage;
  3. quantify the impact as a description and a value, e.g. High, Medium Low or a monetary value;
  4. identify and describe mitigation actions to reduce or eliminate the risk, together with a cost estimate and a revised risk quantification; and
  5. identify and describe recovery actions in the event of the risk event occurring with a cost estimate and description of residual effects.

<table>
<thead>
<tr>
<th>Title</th>
<th>Absorptive capacity risk</th>
<th>Probability</th>
<th>Impact</th>
<th>Res. Probability</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>Sufficiency of funds and access to expertise are merely two factors necessary for successful ICT interventions. More significant is the stakeholders willingness and capacity for change. The projects will affect business processes of many GAs and stakeholders. There will be particular difficulties for the Implementer to manage several sub-projects simultaneously and effectively introduce several new but necessary technologies. Beneficiary end-users will be required to change business practices as enabled by the planned new application software and technical infrastructure.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Mitigation Actions | • Staggering sub-projects  
  • Information sharing with end-users re project intentions and progress  
  • End-user involvement  
  • Identification, encouragement and support of proponents in end-user areas  
  • Effective training programs  
  • Effective implementation with hand holding |
| Cost Estimate: …. | Res. Probability | HIGH | Residual Impact | HIGH |
| Corrective Action or Contingency | • Regression of roll-out for affected GA | Cost Estimate: …………. |
| | • …. | Cost Estimate: …………. |
o. Implementation steps
   • Comprehensive overview of implementation actions with definition of responsible parties and
     affected parties.
   • Overview of implementation schedule.

p. Implications for other parties
   • Any implications of the release for other parties.

q. Help / support
   • Overview of Help / support arrangements provided by the LNSW Operator (including information
     concerning arrangements with third party suppliers of support and maintenance such as ICT
     hardware and software vendors).
   • Overview of Help / support arrangements provided by GA, e.g. contact points within GA’s.
   • Brief overview of methods by which stakeholders can take advantage of these arrangements
     including references to published materials (website, pamphlets etc.).

r. Regression planning
   • Set out a course of action in the event of serious unintended consequences resulting from the
     roll-out of the release, such as a roll-back to the previous operating state, or planning for periods
     of down-time while repairs or ‘work-arounds’ are put in place (if possible).

s. Other release descriptors
   • Any other information pertinent to the release for the information of interested parties
     • It is intended that these outlines would be expanded upon by the LNSW Implementer (nominally
       the BV JV) with input from and review by the GOL LNSW implementation team (plus or incl. LNSW
       Steering Committee and/or secretariat) and perhaps other stakeholders.

The responsibilities for implementation are spread over several parties:

a. LNSW implementer who would be required to supply financial resources, technological skills, resources
   and products and implement the technologies;

b. detailed planning for and execution of many of the steps in each of the categories would need to
   be undertaken by the made by the GOL LNSW implementation team with the support of the LNSW
   Implementer and affected parties (most of which would be external stakeholders: esp. the various
   participating government agencies and to some extent traders); and

c. these external stakeholders who are independent organizations that would need to approve and
   authorise and implement or allow the implement changes within their organisation.
4 Research Bibliography

References include:
1. NZ JBMS Implementation Briefing March 2013
2. From Australian Government National Audit Office
   (http://www.anao.gov.au/bpg-projectplanning/4_2_typical_project.html)
4. PRojects IN Controlled Environments – www.prince-officialsite.com