An export transaction is seen as an integrated process, rather than a series of fragmented activities.

The emphasis is on the overall improvement of the end-to-end value chain.

UNNEXT Business Process Analysis Guide
Why Business Process Analysis?

Objectives:

- Shared understanding of the process: who, what, how, why?
- Shared terminology: description for parties, documents, procedures..
- What are the issues: time, costs, risks, market access?
- Actions: What can be done?
- Priorities: Where to start?
## Outputs of BPA

<table>
<thead>
<tr>
<th>Phase</th>
<th>Step</th>
<th>Deliverable</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Step 1: Define project scope</strong></td>
<td>- Use case diagram illustrating business domain, process areas, process participants, and key business processes</td>
</tr>
</tbody>
</table>
| Phase I | **Step 2: Develop a detailed plan and secure resources** | - Detailed project plan including an estimation of human resources required, schedules, and software supported tools  
- A list of potential interviewees and their contact information                         |
|       | **Step 3: Acquire background information**     | - A folder of background information about the business processes under the investigation  
- A list of guiding questions for the interview                                          |
| Phase II | **Step 4: Conduct interview and document captured data** | - A set of activity diagrams illustrating activities that come in a specific order and decision points, actors who perform those activities, defined inputs and outputs of each activity, criteria for entering and exiting the business process, relationships among actors, and information flow  
- A set of business process descriptions that describes activity diagram and lists all related rules and regulations  
- Activity diagram illustrating integrated processes in the business domain  
- Time-Procedure chart displaying time required to complete each business process |
|       | **Step 5: Analyze the “as-is” processes and identify bottlenecks** | - A set of observations of the as-is business processes that have the potential for improvement |
| Phase III | **Step 6: Develop and propose recommendations** | - Final report with recommendations which may include diagrams of “to-be” business processes |
Phase I: Scope Setting

Example:

- Regulatory and business requirements related to the operation and management of port before, upon, and after the import and export of containerized ordinary cargoes through all modes of transportations (road, rail, air, and sea)
  - Carrier scheduling for port use
  - Cargo handling

- Import
  - Starting point: when a carrier enters port
  - Ending point: when cargo is picked up and transferred to an importer

- Export
  - Starting point: when cargo arrives port
  - Ending point: when cargo is on board and ready to be transferred to the country of importer

Site Visited
- No. of Interviews = 45
- Phone & email interviews
  - No. of Interviews = 16

- Airport (Chiangmai)
- Sea Port (Chiangsan)
- Dry Port (Maesai)

- ICD (Ladkrabang)
- Suvannabhumi Airport
- Sea Port (Unithai)
- Etc.

- Dry Port (Mukdahan)
- Dry Port (Nongkai)

- Sea Port (Lamchabang)

- Train Station
- Dry Port

- Sea Port (Lamchabang)
Phase I: Scope Setting

Example: Importation by Sea

Draw a use case diagram to illustrate the business domain with process areas and high-level business processes as well as stakeholders associated with each of them.

Example: Capturing the Stakeholders involved in importation by sea

- Vessel Agent
- Maritime Pilot’s Station
- Marine Department
- Port Operator
- Customs
- Other Government Agencies
- Importer or Representative
- Terminal Operator
- Haulage/Truck
- Bank

Business Processes

- Enter a seaport
- Report cargo manifest
- Unload cargo
- Clear goods through customs
- Pay for goods
- Handle cargo at the terminal
- Arrange the transport for the pick-up of goods
- Prepare to enter a seaport

Stakeholders:

- Vessel Agent
- Maritime Pilot’s Station
- Marine Department
- Port Operator
- Customs
- Other Government Agencies
- Importer or Representative
- Terminal Operator
- Haulage/Truck
- Bank
Step II: Data collection and process description

Objectives:

- Record the **process**
- Record **cost/time/risks**
- **Validate** data

Process description consists of diagrams and text.
Phase II: Data Collection and Process Documentation

Example: Prepare to Enter a Seaport Process

For each process, draw an activity diagram that describes activities and associated documentary requirements.

- Vessel Agent
  - Prepare documents
    - Application for Vessel Entering Port Area
    - Request for Maritime Pilotage
      - General Declaration
  - Receive

- Marine Department
  - Receive

- Maritime Pilot’s Station
  - Receive
  - Assign pilot officer

- Port Operator
  - Receive
  - Prepare the allocation of equipments
Phase II: Data Collection and Process Documentation

Example: Activity Diagram of Prepare to Enter a Seaport Process

**Swimlane** shows a boundary of activities to be carried out by a responsible actor.

**Initial State** shows the starting point for the sequence of activities.

Sequence of actions carried out to achieve a specific goal

Document associated with each action

Final State shows where the sequence of activities reaches its end.
Step III: Bottlenecks and improvements

Objectives:

- Identification: What are the bottlenecks?
- Actions: How to improve?
- Priority: Where to start?

Low hanging fruit: biggest improvement with lowest cost (short-medium-long term)
Phase III-1: Process Analysis
Example: Prepare to Enter a Seaport Process (Existing Process)

Problems:
- Duplicated Information
- High Cost and Time for sending and receiving documents
- Data Inconsistency
Phase III-2: Recommendation Development

Example: Time – Procedure Chart of Importation by Sea

9 Main processes
1. Prepare documents for import
2. Prepare to enter a seaport (Vessel)
3. Enter a seaport (Vessel)
4. Report cargo manifest
5. Unload cargo
6. Clear goods through customs
7. Arrange the transport for the pick-up of goods
8. Handle cargo at the terminal
9. Pay for goods
## Summary of a study: Usage Time for Import

<table>
<thead>
<tr>
<th>Transport Mode</th>
<th>As-Is Usage Time (day)</th>
<th>To-Be Usage Time (day)</th>
<th>Expected Reduced Time (day)</th>
<th>Expected Reduced Time (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Import by Ship</td>
<td>20</td>
<td>12</td>
<td>8</td>
<td>40.00</td>
</tr>
<tr>
<td>Import by Airplane</td>
<td>10</td>
<td>8</td>
<td>2</td>
<td>20.00</td>
</tr>
<tr>
<td>Import by Truck</td>
<td>10</td>
<td>7</td>
<td>3</td>
<td>30.00</td>
</tr>
<tr>
<td>Import by Train</td>
<td>11</td>
<td>9</td>
<td>2</td>
<td>18.18</td>
</tr>
</tbody>
</table>

**Criteria (following UN/CEFACT Recommendation No 18, and other)**

- Reduce time for Traveling, Sending and Receiving Documents by humans
- Reduce time for Preparing Documents for next step
- Reduce time for Making Payment
- Reduce time for Searching Information
- Reduce time for Verifying Information
Overall BPA Project Management

1. Inception Phase
   - Thinking about the direction (to do or not do)
   - Preparation
   - TOR development (scoping the objectives)
   - Overall Plan

2. Project (Execution) Phase
   - Detailed Plan
   - Data Collection
   - Capture/Document the process in details
     - Provide recommendations
   - Submit the final reports

3. Post-Project Phase
   - Push the recommendations to implementation
Thank you

Markus.Pikart@unece.org

The UNNEXT Business Process Analysis Guide, training materials and studies are available online at: http://www.unescap.org/unnext/tools/business_process.asp