From Farm to Border: Business Process Analysis and Process Simplification

Cross Border Supply Chains: Business Process Analysis – Khan Salehin
Izmir, July 1, 2015
A Generic Agro Product Supply Chain Structure

Information, goods, procedures

Producer
Wholesalers
Exporter
Regulatory Agencies
Export Customs

Information, goods, procedures

Bank

Information, goods, procedures

Consumer
Retailers
Importer
Import Customs
Import Agent

Source: adapted from Sirimanne 2011
What is a Supply Chain?

- An international Supply Chain are the end-to-end Business Process that delivers goods from the seller to the buyer.
- Reference model: UN/CEFACT Buy-Ship-Pay Model
Trade Movement – 3 Kinds of Flow

**Physical Goods**
- Seller (Exporter)
- Buyer (Importer)
- Seller
  - Exporters
  - Post-Harvesters
  - Farmers
  - Freight Forwarders
- Buyer
  - Importers
  - Traders
  - Consumers
  - Wholesalers
  - Traders
  - Other-Government-Agencies

**Payment**
- Banks
- Customs
- Freight Forwarders
- Ship Agent
- Terminal-Operator
- Transport-Operators
- Carriers
- Cargo Insurance

**Information/Documents**
- Traders
- Exporters
- Farmers
What is a Business Process?

- A Business Process is a collection of related and structured activities or tasks that produce a specific service or product.

- Example
  - Movement process of dried apricot for example, from Malatya to Istanbul port
  - Applying and Issuing Process for a Certificate of Origin
  - Customs Clearance Process at the Border Point
What is a Business Process Analysis?

- An analysis and modelling of business processes for improvement and automation
- Business Process Analysis is a practical study

Example

- Documenting existing practice in an administration/company
- Describing a “Standard Procedure”
- Identifying quantitative indicators
- Providing a basis to measure time/costs at different steps
- Providing a specification for automation of the process
Why conduct a Business Process Analysis?

- to understand attributes of business processes, and their relationships
- to understand the practicality of a trade transaction process
What are benefits of Business Process Analysis?

- Understanding of the current situation
- Benchmarking with other countries
- Raising issues and priorities for improvement
- A stepping stone for the creation of future better processes, e.g. Process Simplification
From Paper to Paperless Trade: A Stepwise Approach

Data Model and Digital Documents
Develop electronic documents

Data Analysis and Simplification
Analyse information in the documents

Document Simplification
Simplify paper documents

Business Process Analysis and Simplification
Understand and simplify business processes
## Outputs of BPA

<table>
<thead>
<tr>
<th>Step</th>
<th>Deliverable</th>
</tr>
</thead>
<tbody>
<tr>
<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>
<tr>
<td><strong>Phase I</strong></td>
<td></td>
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<tr>
<td><strong>Step 2: Develop a detailed plan and secure resources</strong></td>
<td>Detailed project plan including an estimation of human resources required, schedules, and software supported tools</td>
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<tr>
<td></td>
<td>A list of potential interviewees and their contact information</td>
</tr>
<tr>
<td><strong>Step 3: Acquire background information</strong></td>
<td>A folder of background information about the business processes under the investigation</td>
</tr>
<tr>
<td></td>
<td>A list of guiding questions for the interview</td>
</tr>
<tr>
<td><strong>Phase II</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Step 4: Conduct interview and document captured data</strong></td>
<td>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</td>
</tr>
<tr>
<td></td>
<td>A set of business process descriptions that describes activity diagram and lists all related rules and regulations</td>
</tr>
<tr>
<td></td>
<td>Activity diagram illustrating integrated processes in the business domain</td>
</tr>
<tr>
<td></td>
<td>Time-Procedure chart displaying time required to complete each business process</td>
</tr>
<tr>
<td><strong>Phase III</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Step 5: Analyze the “as-is” processes and identify bottlenecks</strong></td>
<td>A set of observations of the as-is business processes that have the potential for improvement</td>
</tr>
<tr>
<td><strong>Step 6: Develop and propose recommendations</strong></td>
<td>Final report with recommendations which may include diagrams of “to-be” business processes</td>
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</tbody>
</table>
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

• Airport (Chiengmai)
• Sea Port (Chiengsan)
• Dry Port (Maesai)

• Dry Port (Mukdahan)
• Dry Port (Nongkai)

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

• Sea Port (Lamchabang)

• Train Station
• Dry Port
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
Step II: Data collection and process description

Objectives:

- Record the **process**
- Record **cost/time/risks**
- **Validate** data
- Process description consists of **diagrams and text**

### Related laws, rules, and regulations

- Regulation of railways operations (available in Russian only):
  - A list of commercial stations by office road
  - Order to approve the "Rules of cargo transportation;"
  - Conventional bans
  - The organisation of transport operation by freight cars, repair of freight and inventory accounting of freight cars
  - Agreement on International Goods Transport by Rail (SMGS)
  - Application for SMGS consignment notes
  - Order No. 554 of the Minister of Transport and Communications of Kazakhstan
  - Request for transportation (the application form PG-12), Annex 1
  - National Transport Code
  - Agreement on the order of operation, repair, accounting and settlement for the use of freight cars inventory of the park, leased (temporary use), and use on international routes

### Process participants

- Carrier - National Railway Company (Kazakh Railways or Russian Railways)
- Rail car operating company
- Exporter

### Input and criteria to enter/begin the business process

- The Importer and the Exporter have already agreed about delivery of purchased products to a certain destination

### Activities and associated documentary requirements

- The Exporter contacts a carrier to reserve rail cars to the designated destinations and pre-schedules a dispatch from the
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.
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><strong>40.00</strong></td>
</tr>
<tr>
<td>Import by Airplane</td>
<td>10</td>
<td>8</td>
<td>2</td>
<td><strong>20.00</strong></td>
</tr>
<tr>
<td>Import by Truck</td>
<td>10</td>
<td>7</td>
<td>3</td>
<td><strong>30.00</strong></td>
</tr>
<tr>
<td>Import by Train</td>
<td>11</td>
<td>9</td>
<td>2</td>
<td><strong>18.18</strong></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

Timeline

Today Date

Official Project Kickoff Date

Project end Date
<table>
<thead>
<tr>
<th>Country</th>
<th>Processes</th>
<th>Recommendations</th>
</tr>
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<tbody>
<tr>
<td>Nepal – Export of Cardamon</td>
<td><strong>High transport cost due to road condition and syndicate system</strong></td>
<td>• Enforce Competition Promotion and Market Protection Act effectively</td>
</tr>
<tr>
<td></td>
<td><strong>Burden of levy of export fee by DDC (local authorities)</strong></td>
<td>• Remove export fee in conformity with the policy of making export tax free</td>
</tr>
<tr>
<td></td>
<td><strong>Customs related offices are scattered</strong></td>
<td>• Locate all Customs related offices within Customs premises</td>
</tr>
<tr>
<td></td>
<td><strong>Customs do not accept electronic copies of documents except Customs Declaration Form</strong></td>
<td>• Accept electronic copies of all documents by the Customs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Develop system of electronic submission of documents</td>
</tr>
<tr>
<td>Myanmar – Export of Rice</td>
<td><strong>Make advance payment</strong></td>
<td>- Introduce e-banking to facilitate payment</td>
</tr>
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<td></td>
<td></td>
<td>- Reduce administrative requirements in payment procedures e.g.</td>
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<tr>
<td></td>
<td></td>
<td>- Eliminate unnecessary forms (application letter, export letter with bank seal)</td>
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<td></td>
<td></td>
<td>- Reduce process steps</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Eliminate hard copies</td>
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<tr>
<td></td>
<td><strong>Arrange pre-inspection</strong></td>
<td>• Eliminate this process step unless buyer</td>
</tr>
</tbody>
</table>
# Recommendations – Export (2)

<table>
<thead>
<tr>
<th>Country</th>
<th>Processes</th>
<th>Recommendations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cambodia</td>
<td>Apply for Phytosanitary Certificate</td>
<td>Reduce activity 2.2 apply for Phytosanitary Certificate from 5-day to 3-day.</td>
</tr>
<tr>
<td>Cambodia</td>
<td>Apply for Certificate of Origin (COO)</td>
<td>Reduce activity 2.7 apply for Certificate of Origin from 2-day to 1-day.</td>
</tr>
<tr>
<td>Cambodia</td>
<td>All container goes through rigorous security check and scanning at the Port of entry.</td>
<td>Customs should use risks based assessment coupled with exporter and freight forwarder profile for selective scanning. Waive mandatory scanning for export.</td>
</tr>
<tr>
<td>Lao PDR</td>
<td>Issuance of Certificate of origin (COO) can be processed after or simultaneously with the phytosanitary and fumigation certification process.</td>
<td>The process of application and issuance of COO should be initiated simultaneously with the application for Phytosanitary and/or fumigation certification.</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>Submission of documents in processes. automation of overall export system is very essential. It will reduce the time taken to travel from one place to another for submission of documents.</td>
<td>Submission of Export Registration Certificate (ERC) should be removed.</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>Obtaining SAPTA certificate</td>
<td>Submission of Certificate of Origin (COO) should be dropped.</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>Obtaining Phytosanitary certificate</td>
<td></td>
</tr>
</tbody>
</table>
# Recommendations – Import (1)

<table>
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</table>
| Nepal – Import of Animal Feed | Electronic copies of documents except Customs Declaration Form are not accepted by the Customs  
Develop electronic submission system of documents | Accept electronic copies of all documents by the Customs  
In selected surveyed Customs points, related offices particularly Plant Quarantine Office and Food Quarantine Offices were found to be located outside of the Customs area. If these offices are located within Customs premises it can save time and document. |
| Lao PDR – Import of Animal Feed | Customs related offices are scattered  
Inspection of the importer's site by VCFD, VCTD and other concerns  
Inspection of all the consignments by Customs and Quarantine officers at the border checkpoint are conducted | The accompanying by the Vientiane Capital Trade Division during the site visit should be dropped and the brief of importer/farm's site visit by VCLFD should be shared instead for acknowledgement; in this way, the site visit will be shorter and efficient  
It can be organized at one time. The report of inspection can be simplified into one single set of reports that will consist of the following main
### Recommendations – Import (2)

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<tbody>
<tr>
<td>Bangladesh-Import of Wheat</td>
<td>Issuance of Quarantine Certificate</td>
<td>Currently a copy of the IRC is required is obtaining a quarantine certificate. This is redundant information in issuing quarantine certificate and hence needs to be removed.</td>
</tr>
<tr>
<td></td>
<td>Opening Letter of Credit (L/C)</td>
<td>Currently hard copy of the L/C details and IRC are required in opening L/C. The process can be simplified if scanned copies of the details are accepted by the banks.</td>
</tr>
</tbody>
</table>

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.

Business Process Analysis Guide by UNECE and ESCAP
THANK YOU
TEŞEKKÜRLER

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