

Business Process Analysis (BPA): Practical Implementation

Workshop on National Trade Facilitation Strategy of
Kyrgyzstan and Business Process Analysis (BPA)
Foundation Training
14 June 2013, Kyrgyzstan

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Agenda

1. Defining the Scope of a BPA Project
2. Planning a BPA Project
3. Conducting Business Process Modeling



2

Scope of a BPA Project

Business domain of interest

- Within an organization e.g., in-house software development
- Across organizations e.g., customs clearance, issuance of permit for crocodile skin import, frozen shrimp export

Coverage

- The stage of the international supply chain under investigation i.e., "Buy", "Ship", or "Pay"
- The environment and conditions in which the business domain of interest operates such as mode of transport, term of delivery, term of payment, country of destination, country of origin (given that regulatory requirements vary from one country to another)

Strategic importance

- Public sentiment
- Legislative priorities
- Economic rationale e.g., strategic export product, perceived threats in the international trade



3

Tips

- Be precise on the scope of the BPA
 - Specify the environment and conditions in which the business domain of interest operates at the early phase of the BPA project
- Set the scope from the project beneficiary's perspective
 - With limited resources, detailed modeling and analysis of business process for exporting one product is not possible. In this case, the project emphasis should be oriented towards project beneficiary.
 - If the beneficiary is an exporter, the emphasis is on what the exporter has to do in order to ship the cargo to the destination country.
 - If the beneficiary is a carrier, the emphasis is on what the carrier has to do in order to leave the port of departure.
- Break the project into sub-projects if the scope is relatively large
 - E.g., if the project requires the analysis of business process for exporting 10 country's strategic products, break the project into 10 sub-projects and define the project scope for each of them



4

Drawing a Use Case Diagram (1)

Based on the outcome of **desk research**,

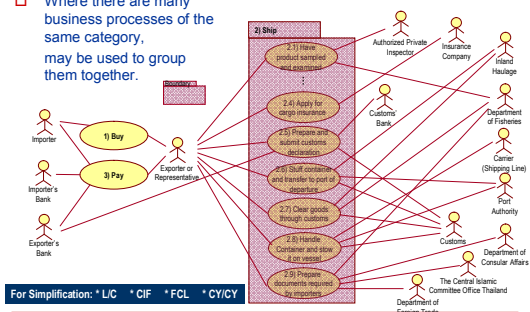
- Identify key business processes and name it using a descriptive verb phrase
 - Clear goods through customs
 - Handle Container and slow it on vessel
- Identify stakeholders
 - Exporter or Representative
 - Customs
 - Inland Haulage
 - Port Authority
 - Carrier (Shipping Line)
- Identify relationships between stakeholders and key business processes



5

Drawing a Use Case Diagram (2)

- Where there are many business processes of the same category, may be used to group them together.



For Simplification: 'LC' 'CIF' 'FCL' 'CY/CY'



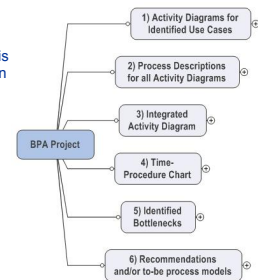
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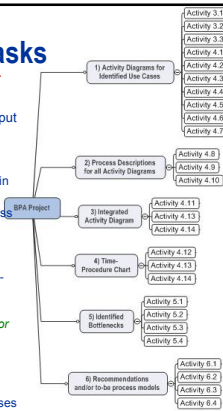
Identifying BPA Project Tasks

- Develop a work breakdown structure for a BPA project
 - A work breakdown structure is an output-oriented description of project tasks. It typically starts with outputs. The work components of outputs are then broken down into tasks necessary to achieve them.

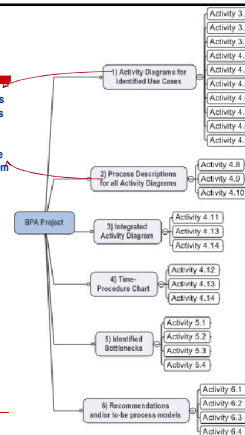


Identifying BPA Project Tasks

- Use the Business Process Analysis Guide to Capture and Simplify Trade Procedures, as an input for identifying BPA tasks for each output
 - Activity 3.1 – 3.3 and Activity 4.1 – 4.7 for the modeling of activity diagrams describing core business processes represented by use cases in the use case diagram
 - Activity 4.8 – 4.10 for the development of process description for all activity diagrams
 - Activity 4.11 – 4.14 for the development of an integrated activity diagram
 - Activity 4.12 – 4.14 for the development of time-procedure chart
 - Activity 4.15 – 4.16 for the consolidation and submission of output no. 1 – 4 to project sponsor for perusal
 - Activity 5.1 – 5.4 for the identification of bottlenecks
 - Activity 6.1 – 6.4 for the development of recommendations and/or new business processes

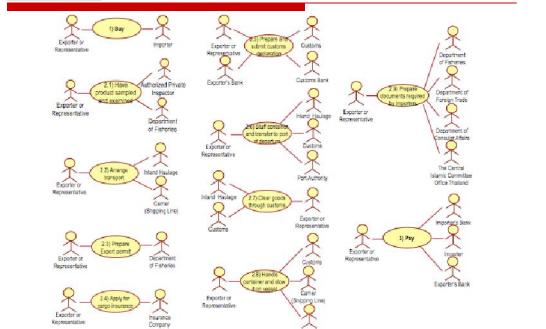


The number of key business processes and stakeholders involved in each business process must be taken into account when estimate time required for elaborating them into activity diagrams.



Small activities may be grouped into one prior to the estimation of efforts for a BPA project.

Use Case Diagram as an Input for Estimating Time Required to Complete Tasks to Product Output 1 and 2



Source: Case Study – Thailand's Export of Frozen Shrimp

Estimating Efforts for a BPA Project

$$\text{Task Estimate (PERT)} = \frac{\text{Optimistic Time} + (4 * \text{Most Likely Time}) + \text{Pessimistic Time}}{6}$$

Task/Activity (Startup Case)	Predecessor	Optimistic Time (day)	Most-Likely Time (day)	Pessimistic Time (day)	Estimated Time (day)
A.3.1-3.3	None	5	8	10	7.83
A.4.1-4.2	A.3.1-3.3	2	4	5	3.83
A.4.3	A.3.1-3.3	2	3	5	3.16
A.4.4	A.4.1-4.2, A.4.3	3	5	10	5.5
A.4.5	A.4.4	3	4	10	4.83
A.4.6	A.4.5	5	8	10	7.83
A.4.7	A.4.6	1	1	2	1.16
A.4.8	A.4.7	3	8	10	4.83
A.4.9	A.4.8	5	8	10	7.83
A.4.10	A.4.9	1	1	2	1.16
A.4.11	A.4.10	2	4	5	3.83
A.4.12	A.4.10	1	1	2	1.16
A.4.13	A.4.11, A.4.12	5	8	10	7.83
A.4.14	A.4.11, A.4.12	1	1	2	1.16
A.4.15	A.4.7, A.4.10, A.4.14	1	1	2	1.16
A.4.16	A.4.15	1	1	5	1.66

* Project Evaluation and Review Technique

Developing Project Schedule

Task/Activity (Shrimp Case)	Predecessor	Estimated Time (day)	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7
A 3.1-3.3	None	7.83							
A 4.1-4.2	A 3.1-3.3	3.83							
A 4.3	A 3.1-3.3	3.16							
A 4.4	A 4.1-4.2, A 4.3	5.5							
A 4.5	A 4.4	4.83							
A 4.6	A 4.5	7.83							
A 4.7	A 4.6	1.16							
A 4.8	A 4.7	4.83							
A 4.9	A 4.8	7.83							
A 4.10	A 4.9	1.16							
A 4.11	A 4.10	3.83							
A 4.12	A 4.10	1.16							
A 4.13	A 4.11, A 4.12	7.83							
A 4.14	A 4.11, A 4.12	1.16							
A 4.15	A 4.7, A 4.10, A 4.14	1.16							
A 4.16	A 4.15	1.66							

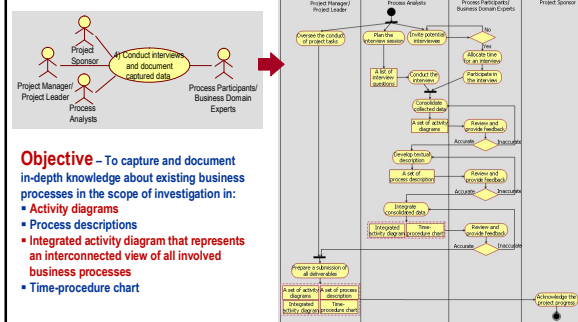
Assigning Process Analysts

- Technology skills:** The basic knowledge of UML notations, especially in use case diagrams and activity diagrams is desirable. Related work experience is complementary.
- Business/ organization skills:** It is important that the selected process analysts know or have an access to the individuals of the business domain under investigation. It is also very useful if they have knowledge of a particular organization or industry associated with the targeted business domain.
- Interpersonal/ communication skills:** Process analysts' ability to effectively communicate and interact with other project members is mostly crucial to project success. They should have the ability to create and sustain reasonably good relationships with project stakeholders and especially Process Participants/Business Domain Experts.
- Analytical skills:** Process analysts should be able to capture relevant information from verbal expression and written documents, and then formalize them in various types of BPA output.

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Conducting Interviews and Documenting Captured Data



Inviting Potential Interviewees

Potential interviewees – Process participants or business domain experts who are in charge in carrying out activities required to complete a particular business process and dealing with respective procedures and formalities associated with that business process on a daily basis

- Give self-introduction
- Inform potential interviewees about:
 - Purpose of the interview
 - Contribution of the information to be captured during the interview on the project
 - Final outputs of the project
 - Expected project outcome and impact

Sample Interview Questions (1)

Business Process Analysis:

- How many people are involved in this business process?
- What are necessary activities that an exporter/an importer has to take in order to acquire a particular document?
- What are supplementary documents that an exporter/an importer has to submit along with the application form when a particular document is requested?
- How can an exporter/importer submit the application form, how to collect the requested document (manually or electronically)?
- Are copies of documents accepted in lieu of original documents?
- Is there any fee that an exporter/an importer has to pay in order to acquire the document? If so, how much?
- What are the laws or regulations associated with these procedural and documentary requirements?
- Which business processes can be carried out in parallel?
- Which business process has to be carried out simultaneously after another business process?

Sample Interview Questions (2)

Information Flow Analysis:

- With which **other actor** in the business do you need to communicate?
- What kind of **data** do you exchange?
- What kind of **information** do you send to which actor?

Time Analysis:

- How **much time** including waiting time in average hours or days does it take to complete this entire business process from the beginning to the end?
What is the maximum and minimum time?
- How **many actual man-hours** does it require to complete this particular activity in this business process?

Cost Analysis:

- How **much in average** does it **cost** to complete this particular activity in this business process or to process one document?

Suggestions for Improvement:

- What are **problems/ bottlenecks** you encounter in procedures and regulations to import or export?
- What are **improvements** that you would like to see in the near future?

Conducting the Interview

- 1 – 2 Process analysts per an interview session
- Obtain permission from the interviewee prior to recording the interview.
- Keep the interview free-flowing and conversational, yet within a basic structured framework
- Seek interviewees' opinions and observations on bottlenecks and issues that should be improved, why, and how to improve them.
- Write down everything
- Summarize key points to confirm with interviewees correct understanding
- Respect time schedule

Thank you

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