

Business Process Analysis (BPA): Introduction and foundation

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. Business Process Analysis for Trade Facilitation
2. Introduction into Unified Modeling Language (UML)
3. Experiences of applying BPA in ESCAP member countries
4. Way forward: An integrated and sustainable trade facilitation performance monitoring systems



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What is..

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

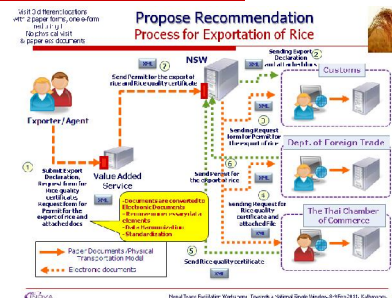
Example

- Ordering a
- Issuing a C
- Customs c



put the cart before the horse

Business process in the context of trade facilitation can be complex



Documents related to Exportation of Rice (Thai case)

(from purchase order until the cargo container leaving the sea port)
36 Documents involving 15 parties, and more than 1,140 data elements to be filled in

Buy/Pay Docs	Regulatory Docs
1. Proforma Invoice (39)	21. Master Sea Cargo Manifest (17)
2. Purchase Order (39)	22. House Sea Cargo Manifest (27)
3. Commercial Invoice (51)	23. Export Declaration (114)
4. Application for Letter of Credit (24)	24. Good Transition Control List (27)
5. Letter of Credit (32)	25. Application for Permission to Export Rice (KP, 2) (24)
6. Packing List (25)	26. Sales Report (KP 3) (21)
7. Cargo Insurance Application Form (20)	27. Application for the Collection of the Permit for the Export of Rice (A, 3) (35)
8. Cover Note (23)	28. Permit for the Export of Rice (A, 4) (35)
9. Insurance Policy (24)	29. Application for Certificate of Standards of Product (MS, 15/1) (44)
10. Booking Confirmation - Border Crossing (30)	30. Certificate of Analysis (17)
11. Booking Confirmation - Border Crossing (30)	31. Certificate of Product Standards (MS, 24/1) (45)
12. Booking Request Form - Inland Transport (16)	32. Certificate of Fumigation (21)
13. Booking Confirmation - Inland Transport (18)	33. Application for Phytosanitary Certificate (PG, 9) (29)
14. Bill of Lading (42)	34. Phytosanitary Certificate (33)
15. Empty Container Movement Request (TKT 305) (28)	35. Application for Certificate of Origin (42)
16. Request for Port Entry (TKT 308.2) (27)	36. Certificate of Origin (38)
17. Equipment Interchange Report (EIR) (24)	
18. Container Loading List (28)	
19. Container List Message (32)	
20. Outward Container List (34)	

* Number in parenthesis is the no. of data elements



Why conduct a Business Process Analysis?

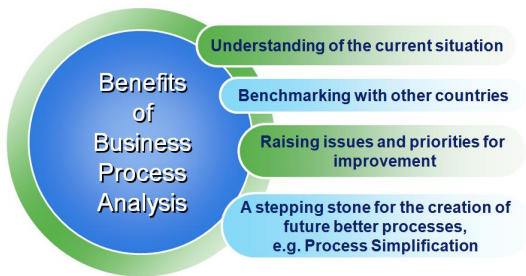
Business Process Analysis is a practical study

- to understand attributes of business processes, and their relationships

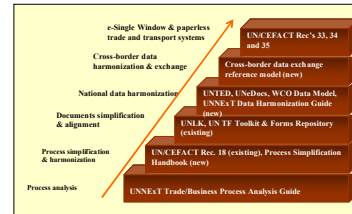


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What are benefits of Business Process Analysis?



BPA is the basis for implementing other trade facilitation measures



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Business Process Modeling (1)

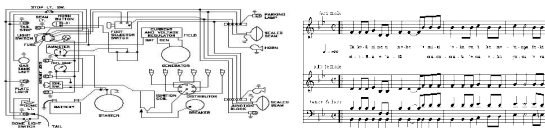
What

- A technique for documenting a business process and its attributes
 - 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
 - Information flow
 - Associated rules and regulations
 - Quantitative indicators such as number of steps as well as time and cost required to complete a particular business process

Business Process Modeling (2)

Why

- Modeling helps quickly clarify complex problems and scenarios
 - Would you build a house without a plan or design?
- To establish a common understanding about a business process

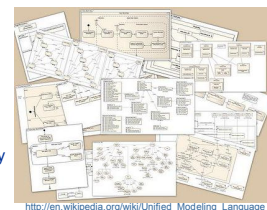


A common language for electrical engineer

A common language for musician

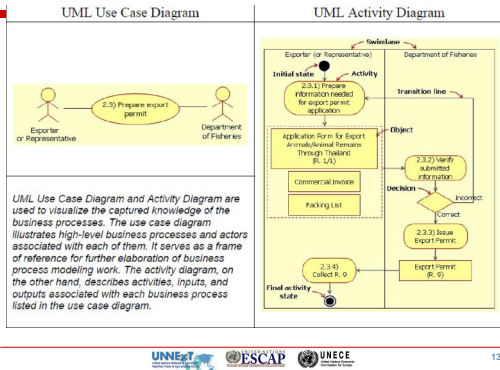
Unified Modeling Language (UML)

- A set of standard graphical notations for documenting a business process and business requirements
 - Is widely recognized and used among practitioners in business community as well as those in IT and software industry
 - Allows business domain experts to communicate procedural and documentary requirements with IT implementation or software development team

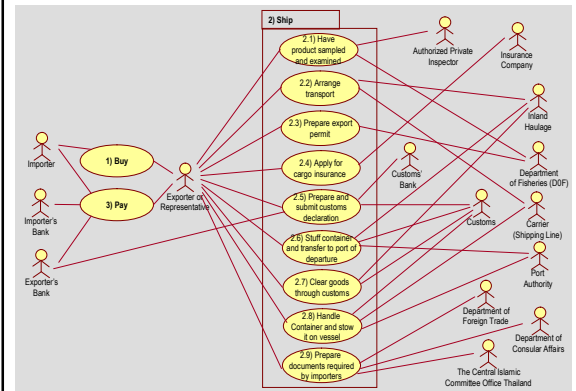


http://en.wikipedia.org/wiki/Unified_Modeling_Language

UML Diagrams for BPA



Thailand's Export of Frozen Shrimp



UML Notations for Use Case Diagram

Notation	Description
	Actor <ul style="list-style-type: none"> Represents a role in a particular business process Is labeled with a role name
	Use Case <ul style="list-style-type: none"> Represents a business process Is labeled with a descriptive verb phrase
	Relationship Association <ul style="list-style-type: none"> Link actors with business processes that they participate in
	Subject Boundary <ul style="list-style-type: none"> Represents a process area Includes the name of a subject boundary on top

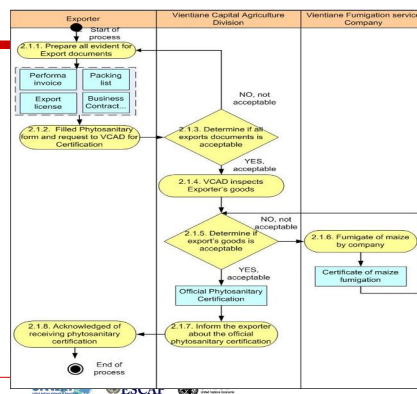
UML Notations for Activity Diagram

Notation	Description	Notation	Description
	Initial State <ul style="list-style-type: none"> Represents the beginning of a set of activities 		Swimlane <ul style="list-style-type: none"> Is used to break up individual actions to individuals/ agencies that are responsible for executing their actions Is labeled with the name of the responsible individual or agency
	Final Activity State <ul style="list-style-type: none"> Indicates the completion of the business process 		Activity <ul style="list-style-type: none"> Represents a non-decomposable piece of behavior Is labeled with a name that 1) begins with a verb and ends with a noun; and 2) is short yet contain enough information for readers to comprehend
	Final Flow State <ul style="list-style-type: none"> Indicates that further activities cannot be pursued 		Transition Line <ul style="list-style-type: none"> Indicates a sequential flow of actions and information in an activity diagram
	Fork (Splitting of Control) <ul style="list-style-type: none"> Visualizes a set of parallel or concurrent flow of actions 		Decision <ul style="list-style-type: none"> Represents the point where a decision has to be made given specific conditions Attached with labels addressing the condition on each transition line that comes out of an activities and connects to a decision point or vice versa
	Join (Synchronization of Control) <ul style="list-style-type: none"> Indicates the end of parallel or concurrent flow of activities 		Object <ul style="list-style-type: none"> Represents a document or information that flows from one activity to another activity (labeled with the name of a document)

Exercise:
You may work alone or with someone sitting next to you

Look at this activity diagram, please tell:

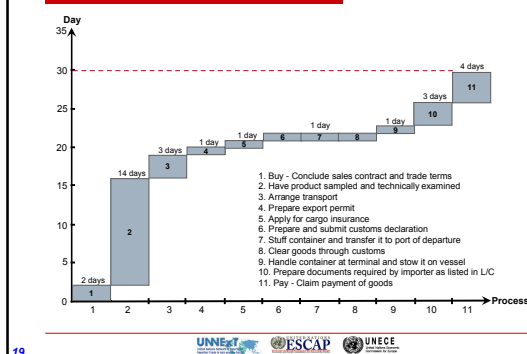
- Who are the actors involved in business process?
- How many documents are submitted/circulated?



Output of BPA

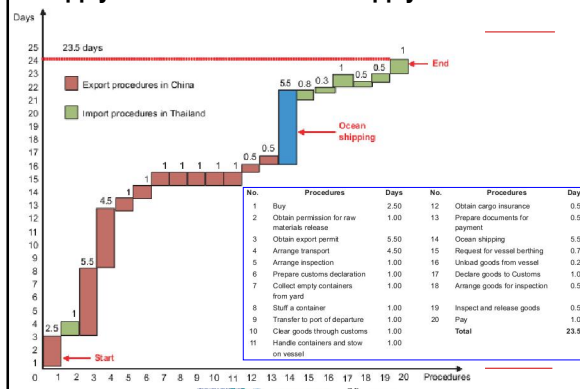
Category	Outputs
As - is	<ul style="list-style-type: none"> Use 'case diagram' showing the scope of the business process analysis project Activity diagrams Process descriptions, including a list of trade forms and documents, as well as a list of trade-related laws, rules and regulations Integrated activity diagram Time-procedure chart
Diagnosis	A list of identified bottlenecks
Recommendations	Recommendations to improve the business process

Apply BPA to supply chain within a country



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Apply BPA to cross-border supply chains



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ARTNeT* Regional Study of Import and Export Processes

	Export Processes						
	Bangladesh	China	India	Japan	Nepal	Sri Lanka	Thailand
Import Processes	Bangladesh		Cotton Yarn				Sugar
	China			Fabrics*, Auto parts	Vegetable ghee (fuel)*		
	India	Garments*			Vegetable ghee*, Fabrics*	Rubber tyres	Auto parts*
	Japan	Shrimp*	Garments			Tea	
	Nepal		Textile & clothing*				
	Sri Lanka		Fabrics**	Used cars			
	Thailand		Electronics				

Notes: * indicates import processes excluded from analysis; ** indicates export processes excluded from analysis.

Asia-Pacific Research and Training Network on Trade

SATNET Asia Project

- ✓ Network for Knowledge Transfer on Sustainable Agriculture Technologies and Improved Market Linkages in South and Southeast Asia – SATNET Asia
- ✓ Countries involved: Bangladesh, Cambodia, India, Lao PDR, Myanmar, Nepal



Diagnostic Studies for Five Countries in South and Southeast Asia

Bangladesh	Business (Trade) Process Analysis: Export of Jute Bags to India and Import of Wheat from India
Cambodia	BPA for Export of Maize and Cassava from Thailand and China
Lao PDR	BPA for Export of Maize to Thailand and Import of Animal Feed from Thailand
Myanmar	Export of Mango and Rice to China, Import of Palm Oil from Malaysia
Nepal	Export of Cardamom to India and Import of Rice from India

Purpose of National Stakeholder Consultation and Expert Group Meetings

- ❑ Verification of data and trade process and procedures
- ❑ Discussion of the bottlenecks of the trade procedures or processes
- ❑ Recommendations for simplification of procedures or any other measures to facilitate trade.

Corridor 1: Kakarvitta-Panitanki-Fulbari-Banglabandha



A joint project with Asian Development Bank

Corridor 2: Phuentsholing-Jaigaon-Hasimara-Changrabandha-Burimari



A joint project with Asian Development Bank

Corridor 3: Kathmandu-Birgunj-Kolkata



A joint project with Asian Development Bank

One of many successful stories: Cambodia experience

- ❑ In 2010, with the support of UNESCAP and UNECE, a project on BPA was implemented in Cambodia to assess trade process and procedures related to export of rice to Europe, cashew nuts to India and silk to Europe, as well as the import of pharmaceuticals from Indonesia.
- ❑ The project was carried out by a team of eleven people, comprising the lead national consultant, officials from several government agencies responsible for customs control, goods inspection and port management, and private sector representatives, in particular, from the freight forwarding industry.
- ❑ A visual presentation of the rice export procedure, as one of the outputs of the projects, provided direct feedback for senior policy makers to effect trade facilitation reform, which, in turn, decreased the costs of rice exports, and thus had a great impact on Cambodia's external trade.

Lessons learned from Implementing BPA

- ❑ Get Buy-in from the officials
- ❑ Secure adequate resources
- ❑ Clear Roles and responsibilities of the project stakeholders
- ❑ Choose a Champion
- ❑ Start small, and then evolve
- ❑ Profit from experience
- ❑ Invest in training
- ❑ Performance measurement

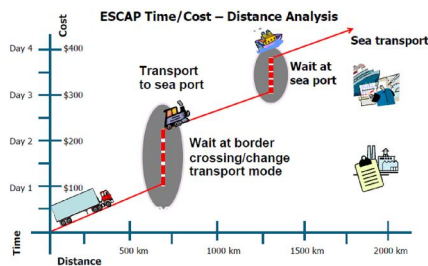
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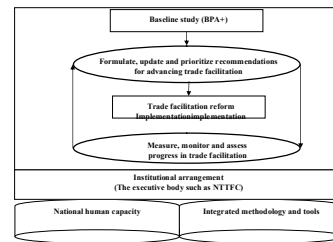
BPA +

Trade-related procedures before cargo movement	Cargo origin	Border crossing point	Border crossing point	Cargo destination	Trade-related procedures after cargo arrival
		TRS	TRS		
		TCD			
		BPA			

TRS: Time release study, mainly promoted by World Customs Organization
TCD: Time cost distance methodology, mainly promoted by ESCAP
BPA: Business Process Analysis, mainly promoted by ESCAP, ADB and UNECE



An integrated and sustainable trade facilitation performance monitoring systems



For more details, please refer to a draft paper titled
Towards integrated and sustainable trade facilitation performance monitoring systems: BPA+
Prepared by Yann Duval and Tengfei Wang
Available for downloading: <http://www.unescap.org/tid/unnext/tools/bpa+.pdf>

Typical output of the 'System'

Performance indicators	<ul style="list-style-type: none"> Time and cost needed to complete the various activities part of the import/export/transit process (e.g., "obtain import license" ...) for selected/strategic products; Average time taken from the arrival of the goods to their release (by Customs) and breakdowns of each operation between arrival and release Average time and cost involved in moving a shipment along a specified route/corridor
Process and procedure description	<ul style="list-style-type: none"> Use case and activity diagrams (i.e., standardized process and procedures maps); Time-procedures chart; and Time/Cost -distance charts Process descriptions, including a list of agencies and stakeholders involved as well as a list of, trade forms and documents and related laws, rules and regulations; A list of identified bottlenecks
Recommendations	<ul style="list-style-type: none"> An analysis of the bottlenecks and identification of possible solutions to address them Actionable and prioritized list of recommendations for implementation

To summarize

- BPA is a useful and powerful tool to analyze trade procedure and process.
- Moving forward, countries may consider
 - Using a monitoring tool drawing the strengths of BPA, Time/Cost-Distance methodology and WCO Time Release Study methodology
 - Changing from 'ad-hoc' to regular and systematic monitoring and improvements of trade process and procedures
 - Developing national capacity to monitor trade facilitation using the tools developed under the framework of UNESCAP, UNECE and UNNExT.

Thank you

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