

Business Process Analysis for Trade Facilitation

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Agenda

1. Business Process Analysis for Trade Facilitation
2. Introduction into Unified Modeling Language (UML)
3. Three Phases of a Business Process Analysis Project
4. Successful stories

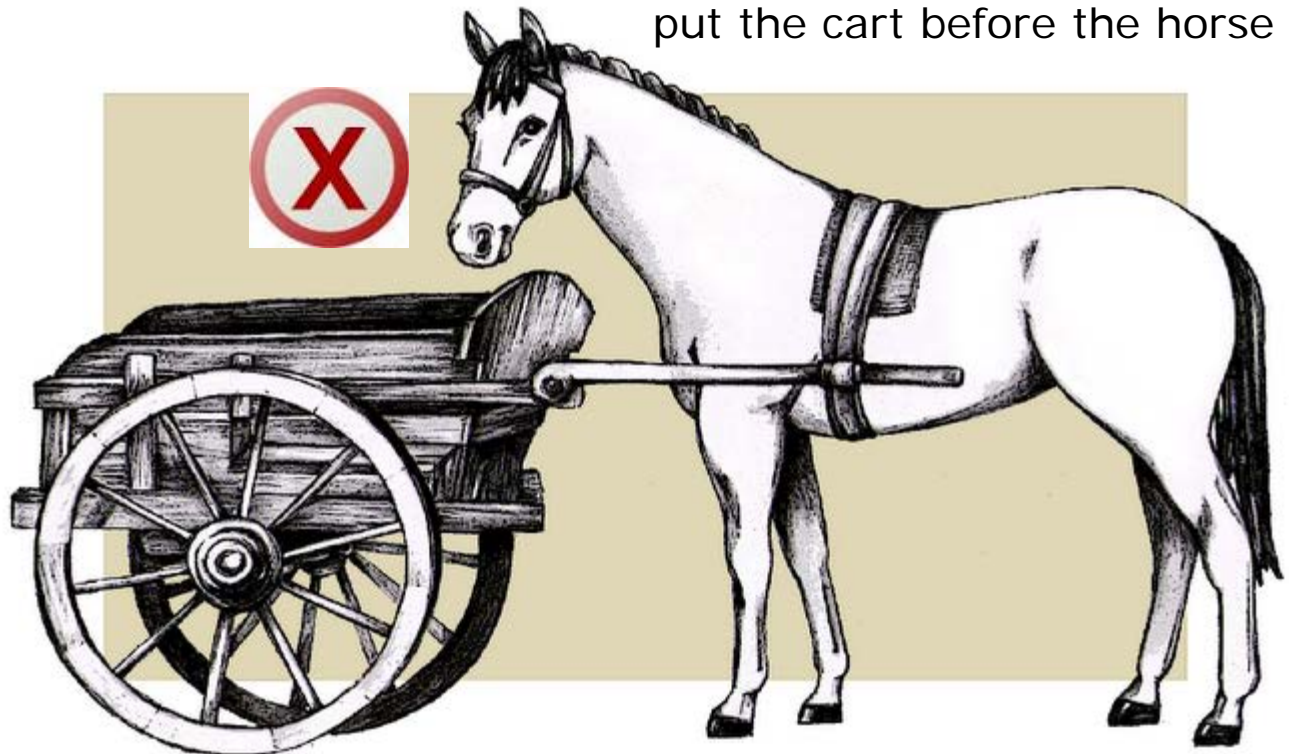
What is a Business Process?

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

- **Example**

- Import fabric from China

- Customer at End



What is..

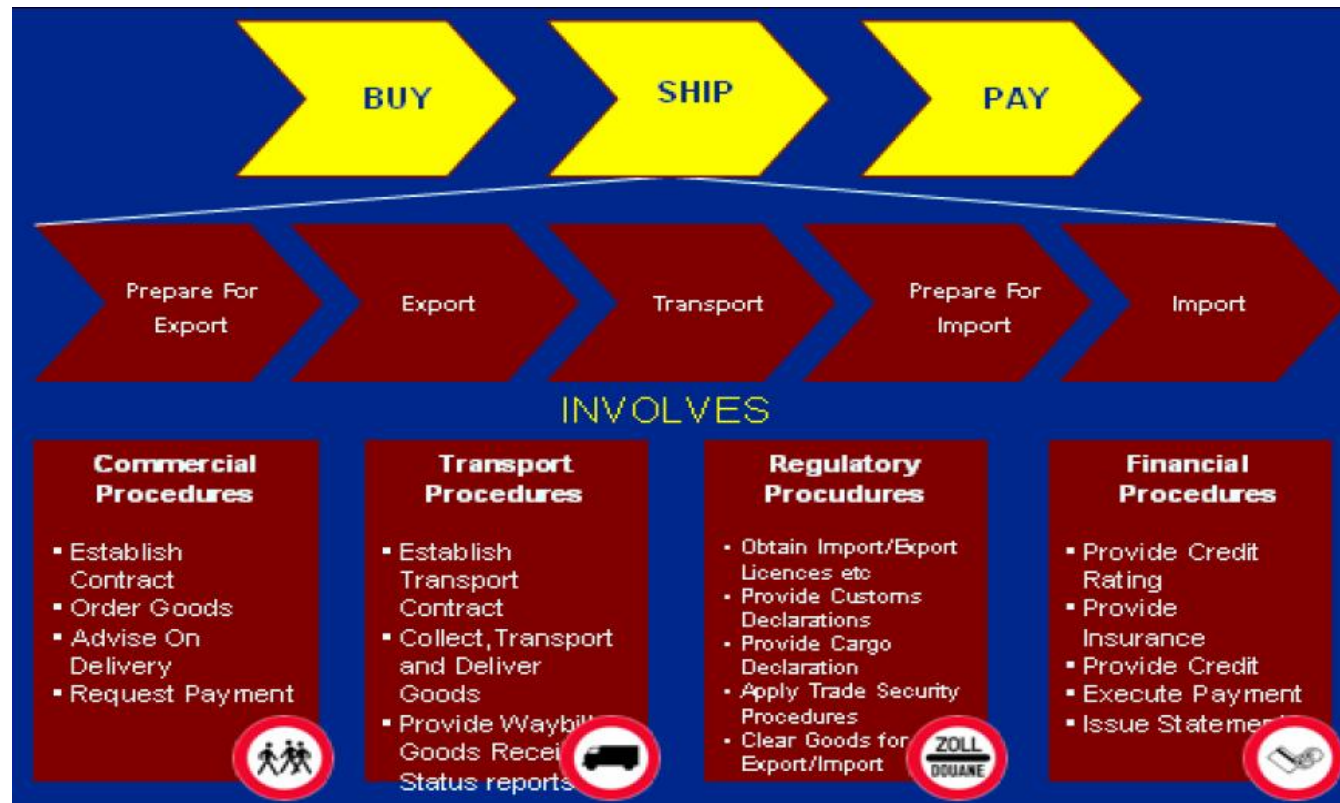
□ ..a Business Process Analysis?

An analysis and modelling of business processes for improvement and automation

□ Example

- **Documenting** procedure for customs clearance
- **Listing** the documents required
- **Measuring** time/cost

Trade Process: Buy-Ship-Pay Model

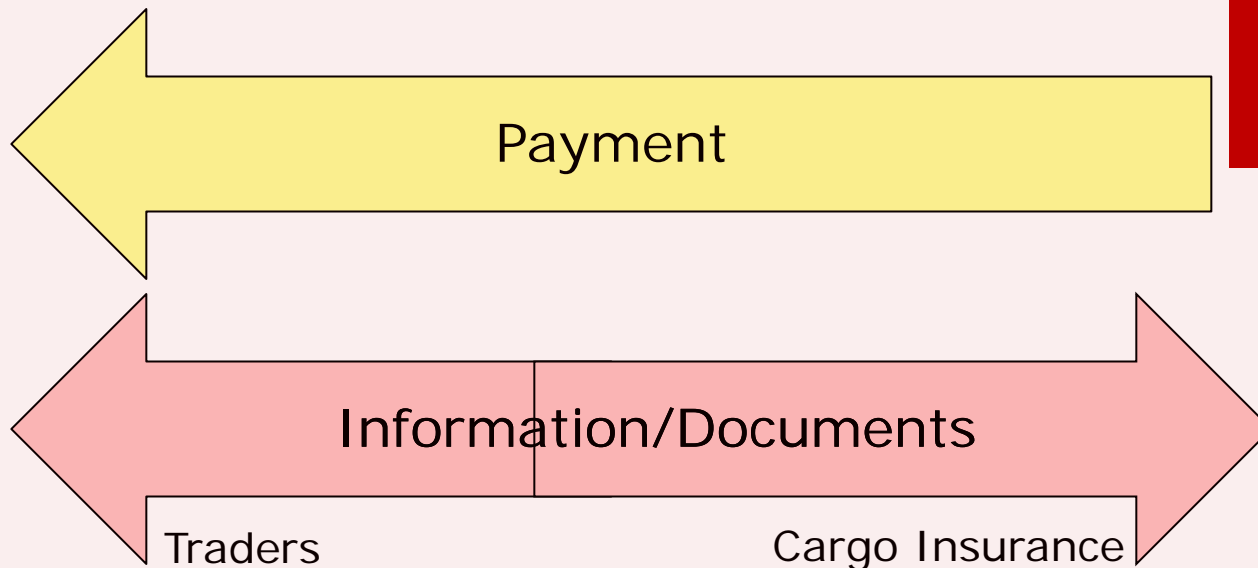


Trade Movement – 3 Kinds of Flow



Trade
Facilitation
Improvement
-
Efficiency in
procedures &
document
handlings

Our
Improvement
Opportunities



Traders

Cargo Insurance

Exporters

Banks

Importers

Traders

Freight Forwarders Customs Officers Ministry of Health Ministry of Agriculture

Ship Agents Transport-Operators Economic Operators Other regulatory agencies

Chamber of Commerce Terminal-Operators Carriers

Documents related to Exportation of Rice

(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

1. Proforma Invoice (35)
2. Purchase Order (39)
3. Commercial Invoice (51)
4. Application for Letter of Credit (24)
5. Letter of Credit (32)
6. Packing List (25)
7. Cargo Insurance Application Form (20)
8. Cover Note (23)
9. Insurance Policy (24)
10. Booking Request Form – Border Crossing (25)
11. Booking Confirmation – Border Crossing (30)
12. Booking Request Form – Inland Transport (16)
13. Booking Confirmation – Inland Transport (18)
14. Bill of Lading (42)
15. Empty Container Movement Request (TKT 305) (20)
16. Request for Port Entry (TKT 308.2) (27)
17. Equipment Interchange Report (EIR) (24)
- 18. Container Loading List (28)**
19. Container List Message (32)
20. Outward Container List (34)

Transport Docs

21. Master Sea Cargo Manifest(17)
22. House Sea Cargo Manifest (37)

Regulatory Docs

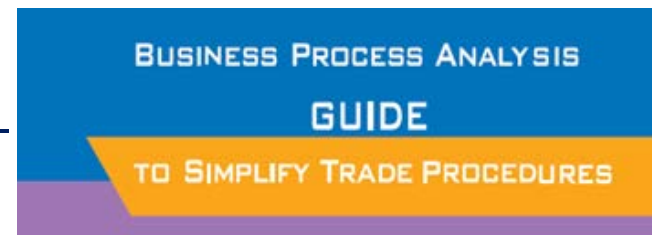
- 23. Export Declaration (114)**
- 24. Good Transition Control List (27)**
- 25. Application for Permission to Export Rice (KP. 2) (24)**
26. Sales Report (KP 3) (21)
- 27. Application for the Collection of the Permit for the Export of Rice (A. 3) (35)**
- 28. Permit for the Export of Rice (A. 4) (35)**
- 29. Application for Certificate of Standards of Product (MS. 13/1) (44)**
- 30. Certificate of Analysis (17)**
- 31. Certificate of Product Standards (MS. 24/1) (45)**
- 32. Certificate of Fumigation (21)**
- 33. Application for Phytosanitary Certificate (PQ. 9) (29)**
- 34. Phytosanitary Certificate (33)**
- 35. Application for Certificate of Origin (42)**
- 36. Certificate of Origin (38)**

A Business Process Analysis

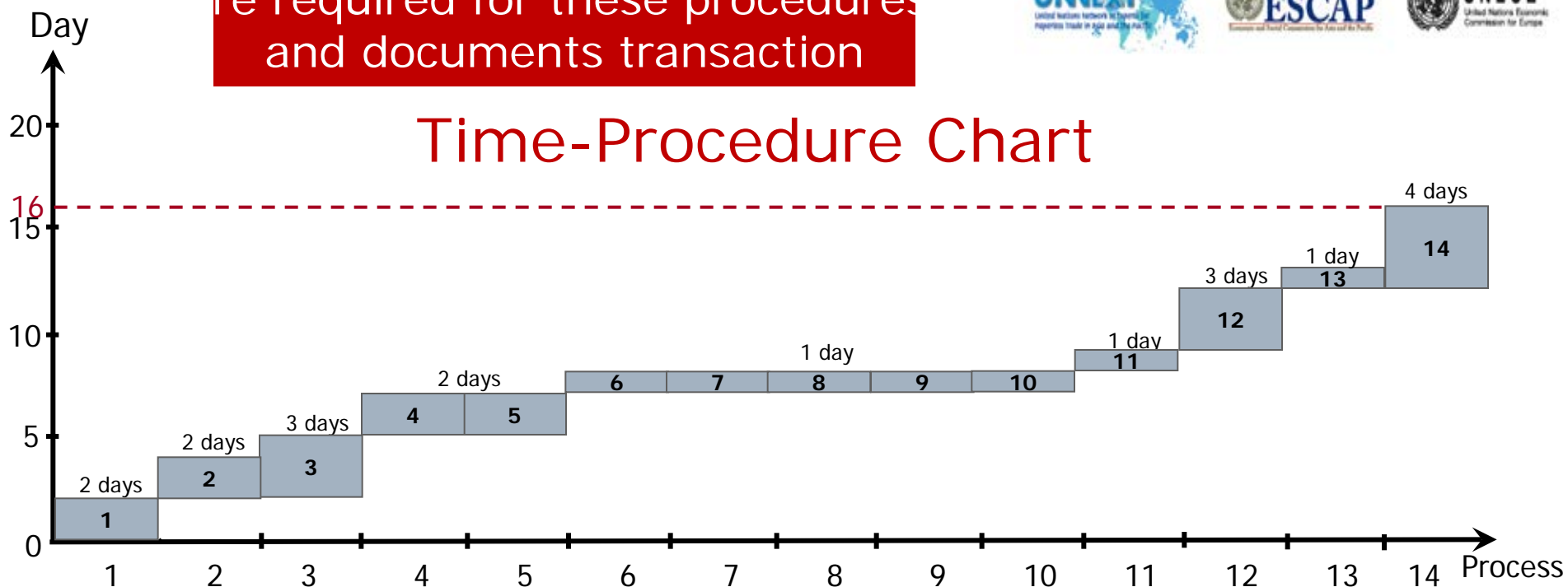
- in Exporting Jasmine Rice from Thailand -

16 days

are required for these procedures
and documents transaction



Time-Procedure Chart



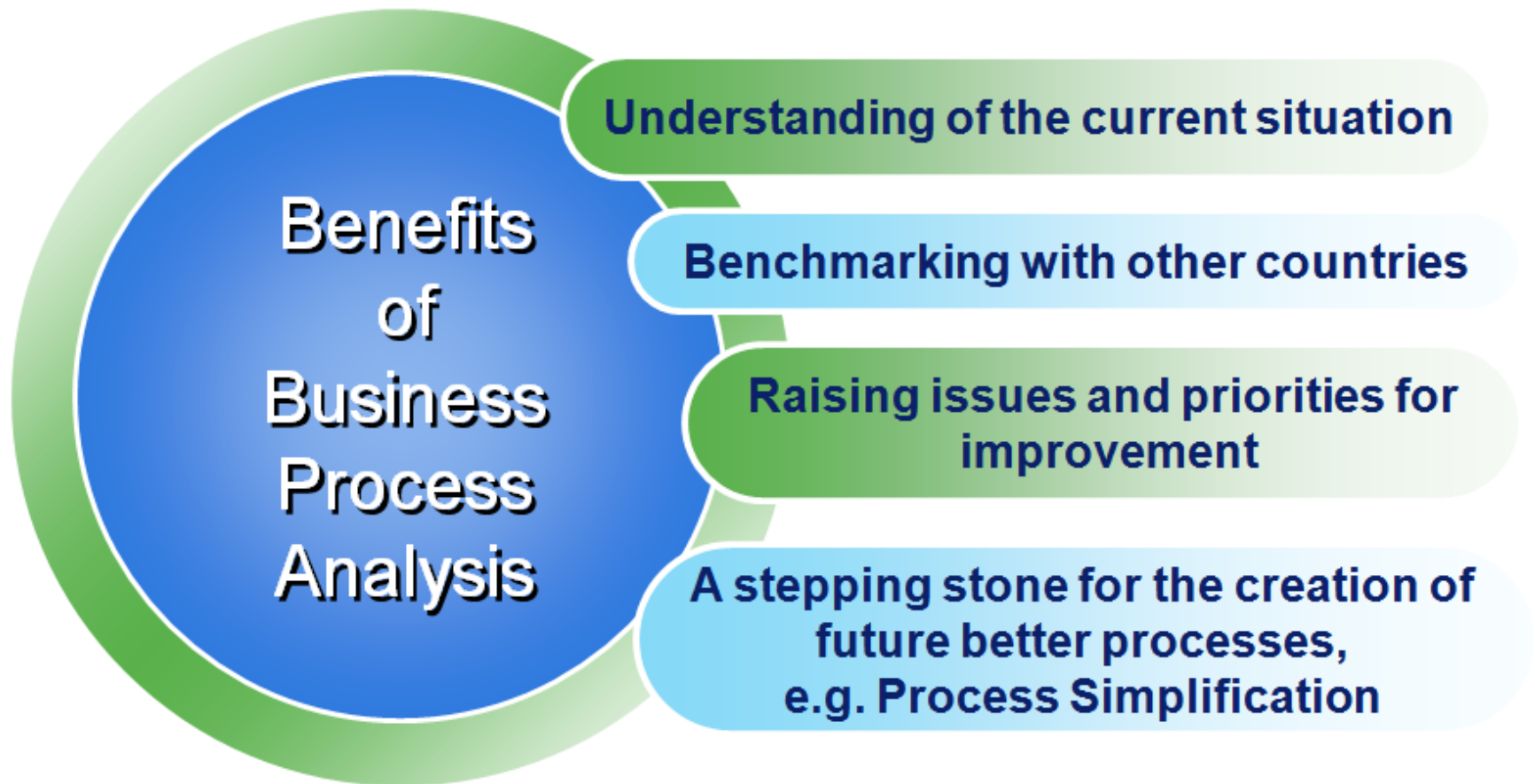
1. Buy - Conclude sales contract and trade terms
2. Obtain export permit
3. Arrange transport
4. Arrange the inspection and fumigation
5. Obtain cargo insurance
6. Provide customs declaration
7. Collect empty container(s) from yard

8. Stuff container(s)
9. Transfer to port of departure
10. Clear goods through customs
11. Handle container at terminal and stow on vessel
12. Prepare documents required by importer
13. Verify the accuracy/authenticity of exported cargo
14. Pay - Claim payment of goods

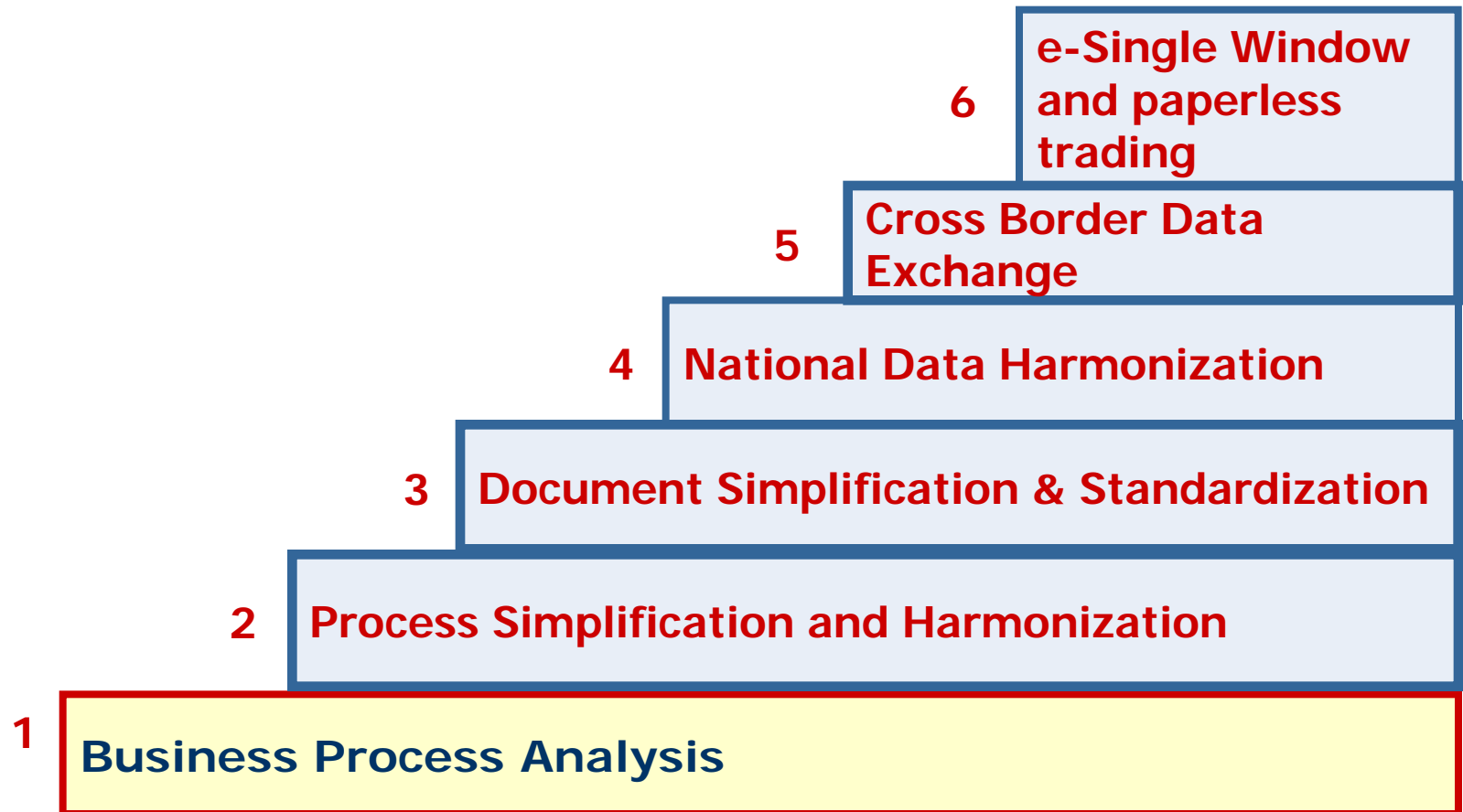
Information BPA captures



What are benefits of Business Process Analysis?



BPA: first step to be taken before undertaking other trade facilitation measures



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Business Process Modeling

What

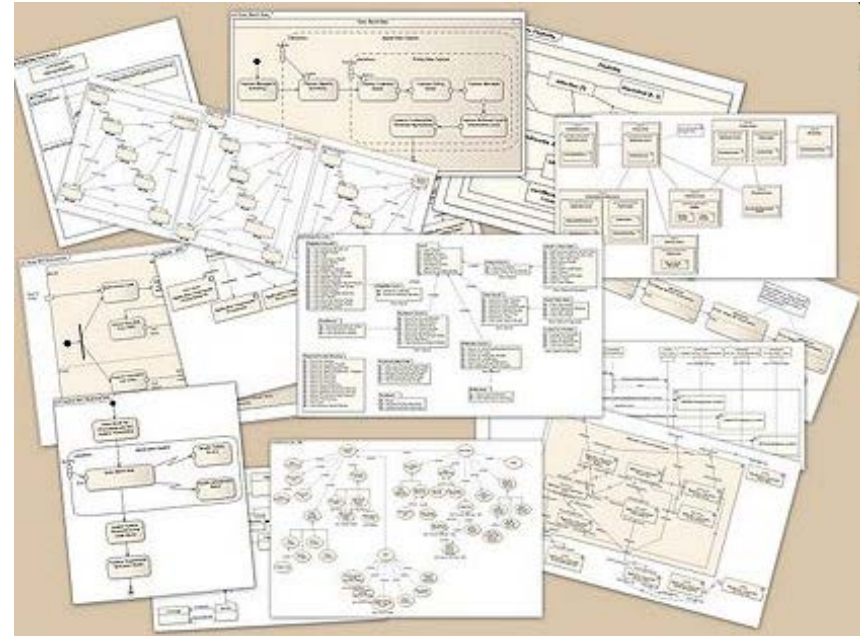
- A technique for documenting a business process and its attributes
 - Activities that come in a specific order and decision points
 - Actors who perform those activities
 - Defined inputs and outputs of each activity
 - Criteria for entering and exiting the business process
 - Relationships among actors
 - 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

Why

- To establish a common understanding about a business process that is shared by all relevant parties
- To communicate better all aspects of a business process

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

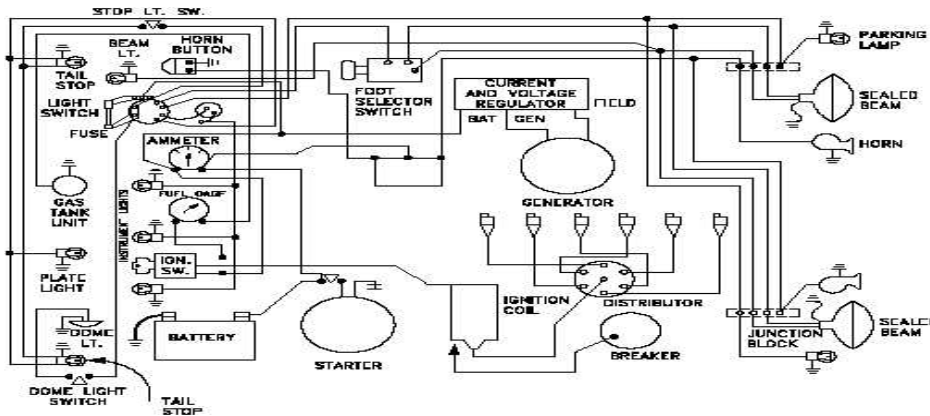


http://en.wikipedia.org/wiki/Unified_Modeling_Language

Why UML



- UML can help quickly clarify complex problems and scenarios
- UML can help establish a common understanding about a business process



A common language for electrical engineer

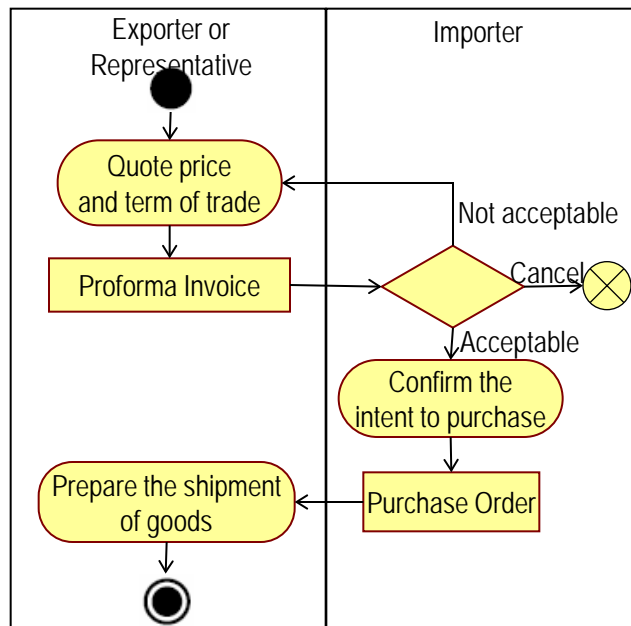
A common language for musician

UML Diagrams for BPA



Use Case Diagram

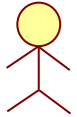


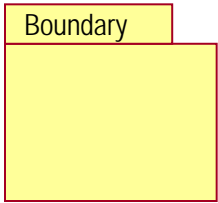
- A frame of reference illustrating a high level business process and its associated actors







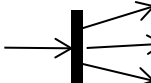
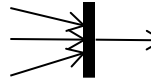

Activity Diagram

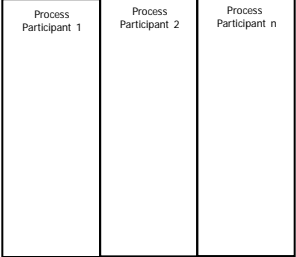

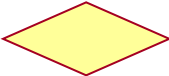
- A detailed elaboration of a use case diagram
- A graphical representation of a business process and its attributes
 - Activities that come in a specific order and decision points
 - Actors who perform those activities
 - Defined inputs and outputs of each activity
 - Criteria for entering and exiting the business process
 - Relationships among actors
 - Information flow

UML Notations for Use Case Diagram

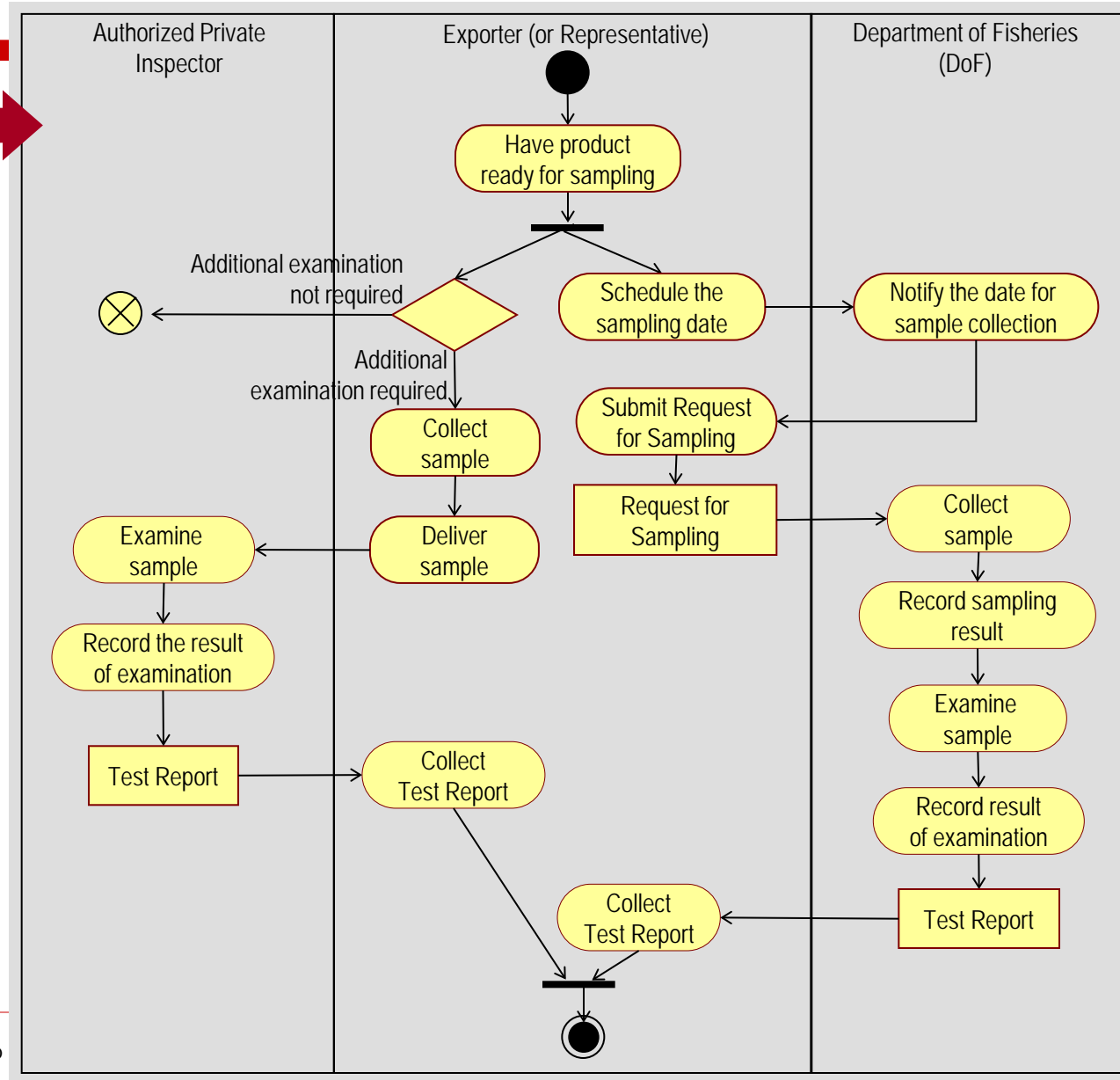
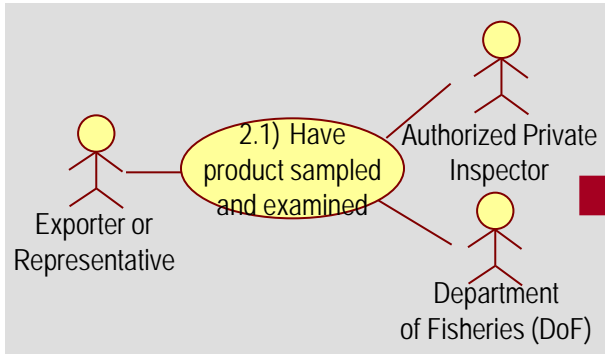
Notation	Description
 Actor/Role	Actor <ul style="list-style-type: none">□ Represents a role in a particular business process□ Is labeled with a role name
 Use case	Use Case <ul style="list-style-type: none">□ Represents a business process□ Is labeled with a descriptive verb phrase
	Relationship Association <ul style="list-style-type: none">□ Link actors with business processes that they participate in
 Boundary	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
	Initial State □ Represents the beginning of a set of activities
	Final Activity State □ Indicates the completion of the business process
	Final Flow State □ Indicates that further activities cannot be pursued
	Transition Line □ Indicates a sequential flow of actions and information in an activity diagram
	Fork (Splitting of Control) □ Visualizes a set of parallel or concurrent flow of actions
	Join (Synchronization of Control) □ Indicates the end of parallel or concurrent flow of activities
	Object □ Represents a document or information that flows from one activity to another activity (labeled with the name of a document)

Notation	Description
	Swimlane □ 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
	Activity □ 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
	Decision □ 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

How many actors are involved in trade process?



Using UML Modeling Tool for BPA

The screenshot shows the StarUML website in a Windows Internet Explorer browser window. The address bar displays <http://staruml.sourceforge.net/en/>. The website has a dark blue header with the StarUML logo and the text "The Open Source UML/MDA Platform". Navigation links include "UML 2.1 Design Tool" (supporting .NET, Java, C++, XSD, DDL, PHP, CORBA, Python & more, with a Free Trial) and "Online UML 2.0 Courses" (Easy to Learn UML 2.0 Thru Online Training Courses. Learn to Use UML). A language selector shows "English | Korean".

The main content area features a "Welcome to StarUML!" message and a description of StarUML as an open source project for developing fast, flexible, extensible, featureful, and freely-available UML/MDA platforms on Win32. It mentions the goal of building a software modeling tool and platform as a replacement for commercial tools like Rational Rose and Together.

A sidebar on the left lists navigation links: Project, About, Screenshots, Case Study, Roadmap, Contributing, Development, Downloads, StarUML Download, Modules, Templates, Support, Forum, Documentations, Articles, Commercial Support, and Links.

Below the sidebar, there is a section for "New Book" titled "Generating an MS-Word Document with StarUML (Second Edition)".

The "Featured Modules" section highlights the "Word Template Designer v1.0", which is useful for defining Microsoft Word templates for StarUML Generator. It interoperates with both StarUML and Microsoft Word, requiring Microsoft Word XP or 2003. After installation, a new menu item [Tools]->[Word Template Designer] appears in StarUML. The download link is [staruml-wordtemplatedesigner.zip \(761KB\)](#).

On the right side, there are "Ads by Google" for "Open Source BPEL4People" (Design Workflows with BPMN Execute with BPEL 2.0 Server, www.intalio.com) and "UML Diagram Software" (Easily create UML Diagrams, Lots of UML examples and templates, Free, www.edrawsoft.com). Below these are "Online Class Models" (Create, share and collaborate on class and data models online, graft.jodoro.com).

The Windows taskbar at the bottom shows the Start button, several open applications including "StarUML - The Open ..." and "bpa-training-mod1-20...", and the system clock showing 10:02.

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BPA Phases

- I. **Scope setting** – Specify a scope of processes to be analyzed
 - e.g. import and/or export processes of a specified product, through a certain mode of transportation (trucks, trains, ships or airplanes)
- II. **Data collection and process documentation** – Define and document a sequence of steps in actual practices and their attributes
 - Who involved (stakeholders/actors)
 - Procedures and documents required (input to/output from)
 - Related rules and regulation
- III. **Process analysis** – Locate bottlenecks, examine what causes them, and develop measurable and quantitative process indicators (e.g. the number of steps, time and costs required to fulfill those processes)
Recommendation development – Determine how to eliminate each bottleneck and prioritize improvement actions

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Amongst many successful stories...

SASEC corridors...

Cambodia

- A project on BPA was implemented in Cambodia in 2010 with the support of UNESCAP and UNECE.
- 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
- 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 lead agency/institution to implement/guide BPA studies and dissemination
- ❑ Start small, and then evolve
- ❑ Profit from experience
- ❑ Invest in training
- ❑ Consultation meeting is essential to verify data and information.