

Module 7 – Project Management Phase

2:

Elaboration Phase (Detailed Feasibility Analysis)

Supported by



Authored by
Dr. Somnuk Keretho
UNNExT Advisory Committee
Director, Institute for IT Innovation
Kasetsart University
sk@ku-inova.org



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The Objectives of this module

- ❑ To discuss about **the elaboration phase**, and **how to conduct this detailed feasibility analysis**, including
 - ❑ the **purpose** of the elaboration phase (feasibility study),
 - ❑ **who should conduct** the feasibility study,
 - ❑ **suggested contents** of the study, and
 - ❑ **what** should we do with the outcome of the study.

SW Project Management Process in 5 Phases

1. **Inception Phase (Preliminary)** – Developing a concept paper for preliminary and initial discussion
2. **Elaboration Phase** – Conducting detailed feasibility study
3. **Planning Phase** – Formulating a SW high-level master plan
4. **Execution Phase (Implementation & Oversight)**
 - SW Project Implementation and
 - Monitoring and Controlling the project's progress
5. **Feedback & Lessons-learned Phase** – Collecting lessons learned and suggesting opportunities for SW improvement and extensions.

The purpose of the elaboration phase

- The purpose of the feasibility study is **to provide decision-makers** with an **insight into the options** available and their **consequences** for each involved governmental authority and each involved business sector, e.g.
 - ❑ **detailed analysis of “as-is” and “to-be”** procedures and documentation,
 - ❑ **possible service functions** to be provided by the **“to-be” applications architecture**,
 - ❑ **technical and interoperability** issues,
 - ❑ **legal infrastructure**
 - ❑ **implementation options** i.e. full or phased implementation) and the possible steps,
 - ❑ **financial and business concerns**, e.g. options for investment (by public, public-private, or private only), and other required resources, free services or fee charge for services, how to sustain the operational cost, etc.
 - ❑ **potential benefits and risks**,
 - ❑ **a time frame**, and
 - ❑ **implementation and management** institutions and strategy.

Who should conduct this detailed study? What should we do with the outcome?

- **A task force** (or called, a working group) comprising of all stakeholders' representatives should be identified and mandated to actively involve in this study, normally by the assistance of a consulting team who may do the detailed analysis, reporting, facilitating the discussion, consolidating the feedback and refinement of the final report and most (if not all) of the agreement.
- The outcome of this study should be presented, refined, then (hopefully) **finalized, and approved by the high-level Project Management Group**.
 - The **next step of formulating a (more detailed) SW master plan** can be mandated by the Project Management Group **as a way forward***.

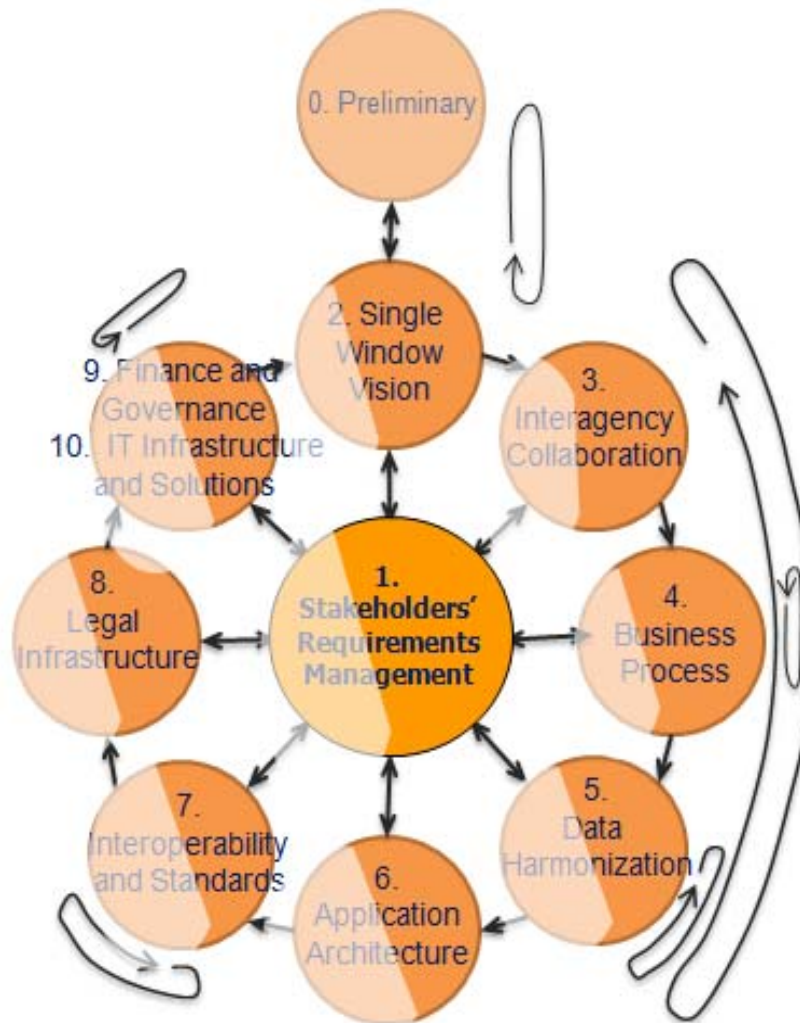
* In some cases, the SW high-level master plan may be developed along with the feasibility study and then at the same time be approved by the Project Management Group.

Suggested Contents of the study

1. Project Needs and Potential Benefits of a Single Window
2. Organizational Aspects and Interagency Collaboration
3. Human Resources and Training
4. Legal Infrastructure
5. Procedures, Information and Documentation
6. Technical aspects of a Single Window
7. Impact assessment
8. Implementation Options
9. Financial Options and Business Models
10. Promotion and Communications

How to conduct a detailed feasibility study?

SW Development Cycle



During a detailed feasibility study, all components related to SW implementation will be analyzed again but with much more details than in the preliminary study.

It is strongly recommended that this study be based on **direct face-to-face interviews with key players in both government and trade**, complemented by **relevant questionnaires** to collect information from **a wider circle of potential participants and users**.

Several meetings among key stakeholders and focus groups for presentation of findings, obtaining feedbacks and refinement should be conducted.

How to conduct a detailed feasibility study? (cont)

- ❑ Using the **SW development cycle** (as explained in the previous slide).
- ❑ Using the **architecture concept** (i.e. try to describe all key issues as clearly as possible, where possible **using diagrams/pictures to help conveying the messages** so that verification, validation, and refinement can be less ambiguous, and then common understandings and agreements by relevant stakeholders can be easily reached.)
 - ❑ Developing several **architectures***/pictures and each picture (suitable for a different viewpoint) with
 1. Several **smaller components**
 2. **Inter-relationships (links)** between those components
 3. **Governing principles** for each component and/or each relationship, **e.g. who is in charge of each component.**

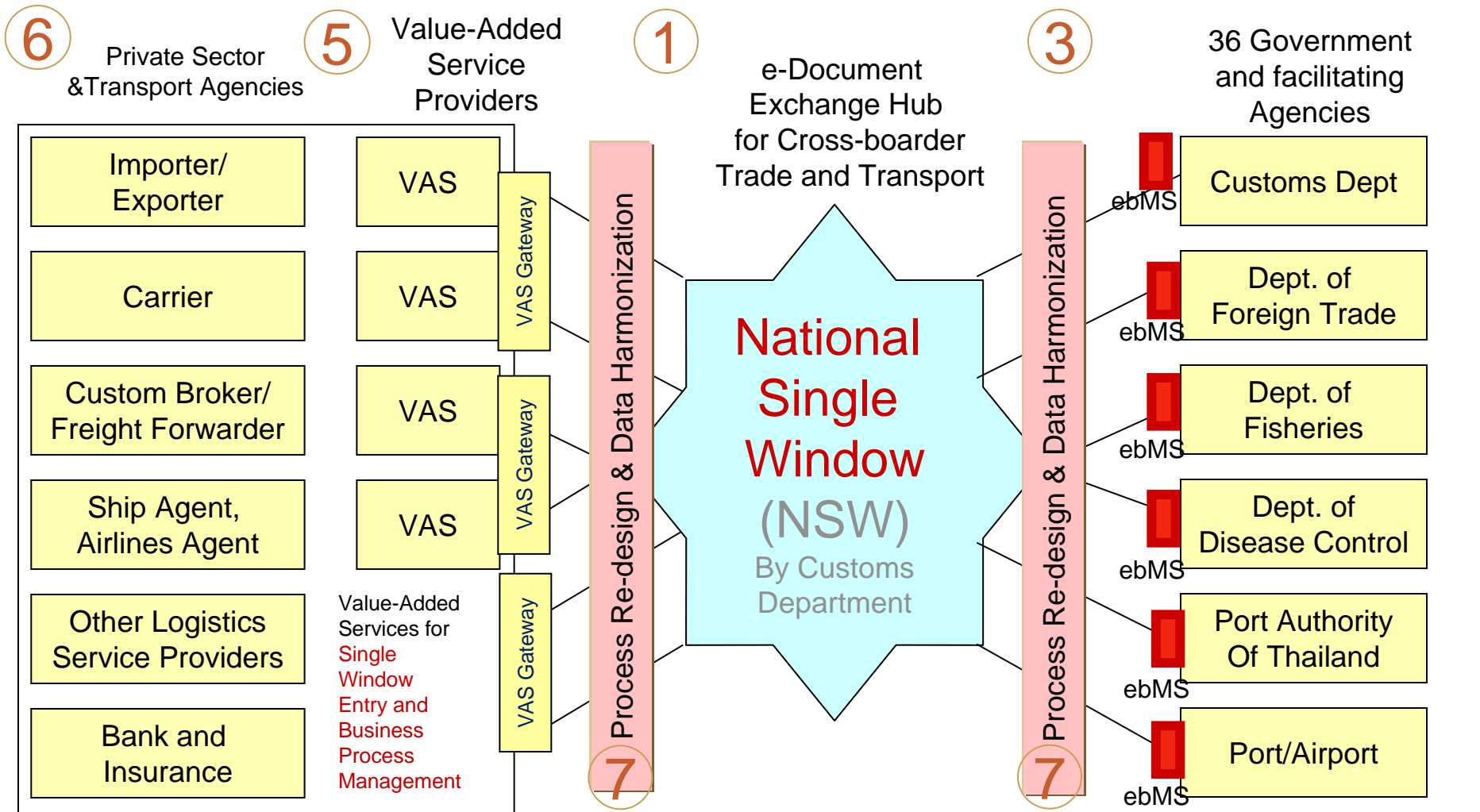
* As defined in ISO / IEC 42010:2007 Systems and software engineering, Architecture is the fundamental organization of a system comprising of a structure of components, their inter-relationships, and governing principles and/or guidelines for their design and evolution over time.

"To-Be" Thailand SW Architecture

A Case Example 2 (cont)

(referencing to the SW Roadmap - Level 2)

2 Governance Mechanism – policy decision, service charge regulation, service level agreement etc.



Other Business Parties



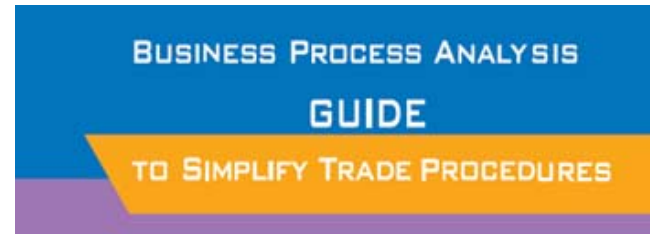
How to conduct a detailed feasibility study? (cont)

Referring to the SW Development Cycle (Business Process)

- ❑ Conducting more detailed **Business Process Analysis (BPA)** to
 - ❑ **understand the “as-is”** procedures and documentation,
 - ❑ **identify bottlenecks** and improvement opportunities, and
 - ❑ **propose “to-be”** procedures and documentation enabled by reducing and simplifying some procedures/documents, applying e-document submission, e-document exchange, and electronic processing.

For a more detailed BPA guide and associated capacity building workshops request, please refer to UNESCAP/UNECE and

- “**Business Process Analysis Guide to Simplify Trade Procedures**”, UNESCAP publication, 2009
- <http://www.unescap.org/publications/detail.asp?id=1371>



How to conduct a feasibility study? (cont)

Referring to the SW Development Cycle (**Data Harmonization**)

- ❑ Conducting feasibility and potential benefits through some document analysis and data harmonization to
 - ❑ **understand the “as-is” data elements and their structures** of relevant documents, and
 - ❑ **propose “to-be” flows and structures of documents and data elements** for better data exchange, and easier (e.g. non-duplicated data entry by the users) and more automatic handlings.

With this analysis, we could identify one important sub-project to be carried as part of the overall project implementation phase which is the Data Harmonization Project.

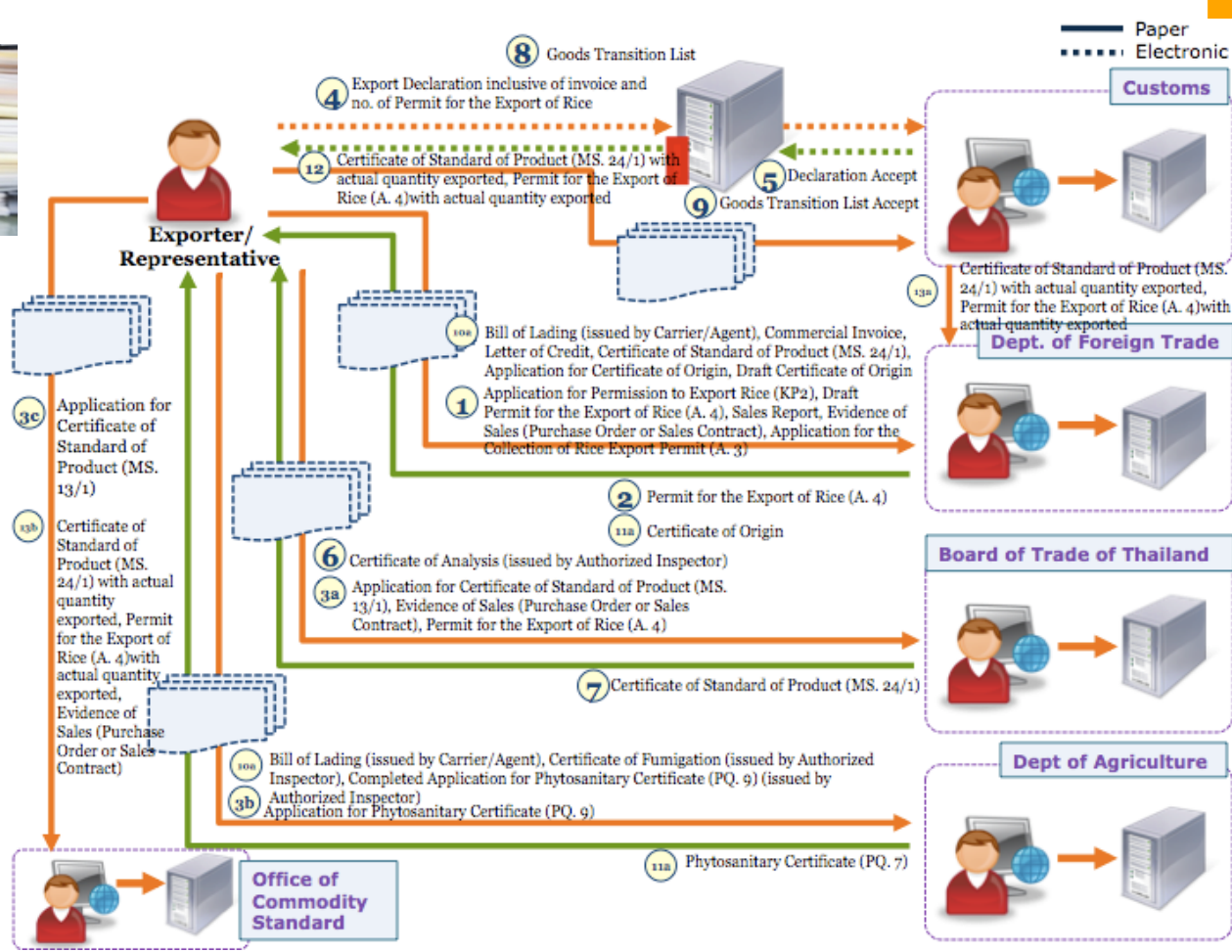
For more any capacity building workshop on Data Harmonization, and an upcoming Data Harmonization Guide, please refer to UNESCAP/UNECE.

How to conduct Data Harmonization?

- Evaluate and select **data model** based on comprehensiveness and compliance, e.g. WCO Data Model 3.0
- Confirm that the scope of **a data harmonization project** matches the scope of the business process analysis of the Business Process Phase
- Define each **data element in terms of definition**, data type, data format, and data constraints in actual operation
- **Analyze data elements across various documents** and organize them in a comparable manner
- Map the data elements to **selected standard data model**

"As-Is" Regulatory Business Process and Documentations for Exporting Jasmine Rice

A Case Example 2 (cont)
 (referencing to the SW Roadmap
 - Level 2)



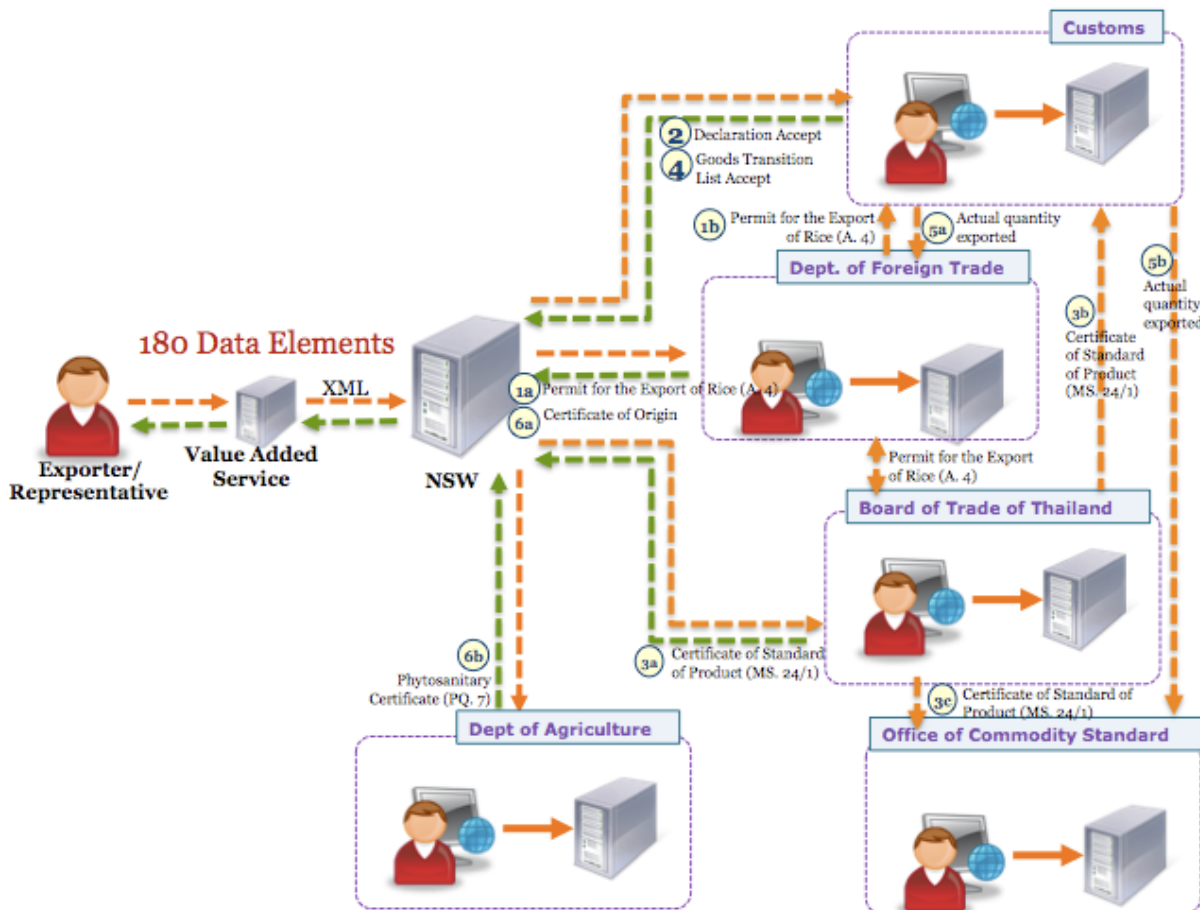
5 regulatory agencies and 17 different documents are required

(not counting those required by other business entities, e.g. banks, transporters, logistics providers)

Problems :

- Duplicated Information & multiple physical visits to different locations
- High Cost and Time for sending and receiving documents
- Possible Data Inconsistency

"To-Be" Data Harmonization and "To-Be" Business Process (Improvement)



As-Is

- 429 data elements to be filled in different physical documents
- Multiple submissions of identical data
- Multiple visits to government agencies (to submit and collect documents as well as to report actual quantity of goods exported)



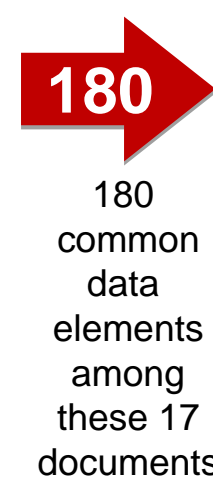
To-Be

- 180 data elements to be filled in electronically
- No repetitive submission of identical data
- No physical visit
- Electronic data cross-checking between controlling agencies
- Electronic data sharing between controlling agencies

"To-Be" Data Harmonization

to harmonize for the common-meaning data elements among different documents

Regulatory-required Documents to be prepared by the rice exporter	As-is (no. of data elements)
To obtain a permit for the export of rice (A. 4) •Application for permission to export rice (KP. 2) •Sales report (KP. 3) •Application for the collection of the permit for the export of rice (A. 3) •Draft A. 4 •Commercial invoice	150
To obtain a certificate of standards of product (MS. 24/1) •Application for certificate of standards of product (MS. 13/1) •Commercial invoice •Permit for the export of rice (A. 4) •Certificate of analysis	32
To declare to-be exported goods •Export declaration	114
To inform Customs the movement of goods to port •Goods transition list	27
To obtain phytosanitary certificate (PQ. 9) •Application for phytosanitary certificate (PQ. 7) •Bill of lading •Certificate of fumigation	29
To obtain certificate of origin •Application for certificate of origin •Draft certificate of origin •Commercial invoice •Certificate of standards of product (MS. 24/1) •Bill of lading •Letter of credit	67
To report actual quantity exported	10
	429



Example – Exchanged Documents

A Case Example 2(cont)
(to enable single window data entry)

มส. 24-001-50 No.002618

อุตสาหกรรมพาณิชย์ เลขที่ E.....
เลขที่ประจำตัวผู้เสียภาษี..... แบบ มส. 24/1

ใบรับรองเลขที่ ขม.
คำร้องขอเลขที่ ขม.

ข้าวหอมมะลิไทย

ใบรับรองมาตรฐานสินค้า

ใบรับรองมาตรฐานสินค้านี้ ออกให้แก่.....
ใบทะเบียนเลขที่ ผศ. ซึ่งประสงค์จะส่งสินค้ามาตรฐานออกนอกราชอาณาจักร เพื่อแสดงว่าผู้ถือใบรับรองมาตรฐานสินค้านี้ ได้จัดให้มีการตรวจสอบมาตรฐานสินค้า ที่จะส่งหรือนำออกนอกราชอาณาจักร ตาม มาตรา 17 แห่งพระราชบัญญัติมาตรฐานสินค้าขาออก พ.ศ. 2503 ซึ่งแก้ไขเพิ่มเติมโดยพระราชบัญญัติมาตรฐานสินค้าขาออก (ฉบับที่ 2) พ.ศ. 2522 แล้ว ปรากฏผลดังมีรายละเอียด ต่อไปนี้

1. สินค้าข้าวหอมมะลิไทย.....ประเภท.....ชนิด.....


ปริมาณ.....น้ำหนัก.....กก. มูลค่า.....บาท
น้ำหนักเฉพาะ.....กก. น้ำหนักรวม.....กก. ราคา.....ต่อหน่วย

2.2 ปริมาณ.....น้ำหนัก.....กก. มูลค่า.....บาท
น้ำหนักเฉพาะ.....กก. น้ำหนักรวม.....กก. ราคา.....ต่อหน่วย

2.3 ปริมาณ.....น้ำหนัก.....กก. มูลค่า.....บาท
น้ำหนักเฉพาะ.....กก. น้ำหนักรวม.....กก. ราคา.....ต่อหน่วย

Rice Quality Certificate
By The Thai Chamber of
Commerce

แบบ อ. 4


ใบอนุญาต
ให้ส่งสินค้าออกป้อนราชอาณาจักร (ข้าว)
(เพื่อใช้ขารที่เป็นการค้า)

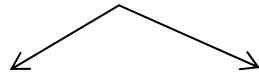
เลขที่	วันหมดอายุ
ผู้ซื้อ (ชื่อ, ที่อยู่, ในกรณีที่เป็นคนและรายกับผู้มีสินค้า)	
ประเทศผู้ซื้อ	
ประเทศปลายทาง	
สำหรับเจ้าหน้าที่ศุลกากรบันทึก (หากไม่พอให้ต่อด้านหลัง)	

ท่าเรือที่ส่งออก	สกุลเงิน	อัตราแลกเปลี่ยน
รวมเมื่อพินค้า	ประเภทคิด	น้ำหนักสุทธิ (กก./ปริมาณ)
	ราคาต่อหน่วย	มูลค่า เซฟโอดี (เงินบาท)
	ประเภทคิด	น้ำหนักสุทธิ (กก./ปริมาณ)
	ราคาต่อหน่วย	มูลค่า เซฟโอดี (เงินบาท)

Permit for the export of
rice by Department of
Foreign Trade

Example – Defining data element names and definitions for 2 documents by comparing with International Standards

2 documents required for exportation of rice



Permit for the export of rice	Rice Quality Certificate	Data Element Name	Definition
weight (kg.)	Net Weight (kg.)	Net Weight (item)	[TDED 6020] The measure of the net weight (mass) of this cross-border trade line item, excluding all packaging.
Unit Price	Price	Unit Price (item)	[TDED 5110] Price per unit of quantity on which an article item amount is calculated.
Name of transport	Ship's name	Name of Transport	[TDED 8212] Name of a specific means of transport such as the vessel name

Financial Analysis and Business Model Study

Referring to the SW Development Cycle (**Financial and Business Model Analysis**)

- It is necessary to conduct a comprehensive **cost benefit analysis**, e.g. cost of designing, developing, and maintaining individual agency systems; its potential benefits; and who should finance the development and operations e.g.
 - a system totally **financed by government** to an entirely self-sustainable model, or
 - possibilities **for public-private partnerships** with some service fees, or
 - Some parts **financially supported by private sectors** with fees.
- Clarity on the financial model can significantly influence decision-makers to support the implementation of the system.

Summary

- ❑ The feasibility study is a key element of the overall Single Window development.
 - ❑ From many real experiences, **Phase 1 (Conceptual Analysis) & Phase 2 (Detailed Feasibility Analysis)** are normally conducted iteratively in several cycles until most critical issues can be commonly understood, agreed and committed organizationally, politically and financially.
- ❑ The outputs and formal decisions from the preliminary study and the feasibility analysis should provide **some basis for the policy decision makers**, policy managers and relevant stakeholders **to formulate a SW high-level master plan** and/or a more detailed implementation plan
 - ❑ In some cases, the enough-detail plan(s) may be already included and approved in those discussions. But here we decide to explain the guide for the planning phase in the next module separately for the sake of simplified explanation and decomposition.

Group Exercise 3:

- ❑ Using an architecture-style picture to **visualize** and **decompose complicated issues into** several smaller **components**, with **relationships** (using links/lines to express relationships between components), **governance** (e.g. who is in charge of the development/operation of each component, or other governing conditions).
 1. Identify **those agencies involving** in the “to-be” regulatory SW of your country.
 2. Identify relevant **business users** who will interact with the target SW.
 3. What are the key **functions** and **documents** that should be electronically submitted and exchanged between those stakeholders?
 4. Try to **visualize the above components** by drawing some diagrams/pictures with components, relationships/links between those components, and identifying which agency should be in charge of each component.