

# Single Window Implementation Framework

Developing collaborative e-Government/e-Business platform for increasing trade competitiveness

**AFACT – Asia Pacific Council  
for Trade Facilitation and  
e-Business**



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**2011 AFACT EDICOM Conference**  
**“Best Practices in Trade Facilitation and e-Business -  
How Single Window Fulfills Trade Facilitation”**  
Taipei City, 4<sup>th</sup> November 2011

# Speaker - Dr. Somnuk Keretho



## Current Position

- Director, Institute for IT Innovation, Kasetsart University, Bangkok



## Education

- Ph.D. (Computer Science)  
University of Louisiana at Lafayette, USA  
(Fulbright Scholarship)
- M.Eng. (Computer Applications)  
Asian Institute of Technology
- M.Eng. & B.Eng. (Electrical Engineering)  
Kasetsart University.

## Expertise

- ICT Innovation for Trade & Trade Facilitation
- Enterprise Architecture for Single Window  
Strategic Planning & Implementation
- Business Process Analysis and Improvement
- Data Harmonization and Interoperability
- Process-based Software Engineering.



# Objectives of this presentation

- To introduce a recommended framework, called **SWIF** (Single Window Implementation Framework), as *a holistic and architecture framework* to support policy managers and stakeholders for their planning and management of SW implementations.
- Based on this framework, *a managerial guideline*, is proposed to assist policy managers and decision makers in *developing* high-level **SW master plans**, and in *managing* and *overseeing* the implementation of these plans.

## A global training on this topic in Geneva, Switzerland, 14-15 December 2011

- A UN global training on Single Window Planning and Implementation will be conducted in Geneva, Switzerland, 14-15 December 2011.
  - <http://www.unece.org/tradewelcome/capacity-building-for-trade-facilitation/global-trade-facilitation-conference/capacity-building-workshop.html>
- During A Global Trade Facilitation Conference 2011, 12-13 December 2011
  - <http://www.unece.org/tradewelcome/capacity-building-for-trade-facilitation/global-trade-facilitation-conference/swglobalconference2011.html>



# Topics of this presentation

1. **What & Why** do we need *Single Window (SW)* or sometimes called, *e-Logistics platform*?
2. **SWIF**, *a holistic and architecture framework* to support policy managers and stakeholders in their decision-making and management of Single Window implementations.
3. **Case examples**
4. **Conclusions & Recommendations**

**The issue is about**

**Increasing**

**National Trade Competitiveness**

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**by improving**  
**Import/Export Procedures and**  
**Documents Handlings**  
**among Government Agencies,**  
**Business Entities and**  
**Logistics/Transport Service Providers**

**(this is called “Trade Facilitation” improvement)**



# 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 700 data elements to be filled in

- |   |  |
|---|--|
| 1. Proforma Invoice (35)                            | 21. Master Sea Cargo Manifest(17)  |
| 2. Purchase Order (39)                              | 22. House Sea Cargo Manifest (37)  |
| 3. Commercial Invoice (50)                          | <b>23. <i>Export Declaration (75,39)</i></b>   |
| 4. Application for Letter of Credit (24)            | 24. Good Transition Control List (22,3)  |
| 5. Letter of Credit (32)                            | <b>25. <i>Application for Permission to Export Rice (KP. 2)</i></b>                          |
| 6. Packing List (25)                                | 26. Sales Report (KP 3) (21)   |
| 7. Cargo Insurance Application Form (20)            | <b>27. <i>Application for the Collection of the Permit for the Export of Rice (A. 3)</i></b> |
| 8. Cover Note (23)                                  | <b>28. <i>Permit for the Export of Rice (A. 4) (32)</i></b>                                  |
| 9. Insurance Policy (24)                            | <b>29. <i>Application for Certificate of Standards of Product (MS. 13/1) (44)</i></b>        |
| 10. Booking Request Form – Border Crossing (24)     | <b>30. <i>Certificate of Analysis (17)</i></b>   |
| 11. Booking Confirmation – Border Crossing (31)     | <b>31. <i>Certificate of Product Standards (MS. 24/1) (45)</i></b>                           |
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| 14. Bill of Lading (40)                             | <b>34. <i>Phytosanitary Certificate (34)</i></b>   |
| 15. Empty Container Movement Request (TKT 305) (19) | <b>35. <i>Application for Certificate of Origin</i></b>                                      |
| 16. Request for Port Entry (TKT 308.2) (27)         | <b>36. <i>Certificate of Origin (38)</i></b>   |
| 17. Equipment Interchange Report (EIR) (24)         |  |
| 18. Container Loading List (18)                     |  |
| 19. Container List Message (32)                     |  |
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\* Number in parenthesis is the no. of data elements

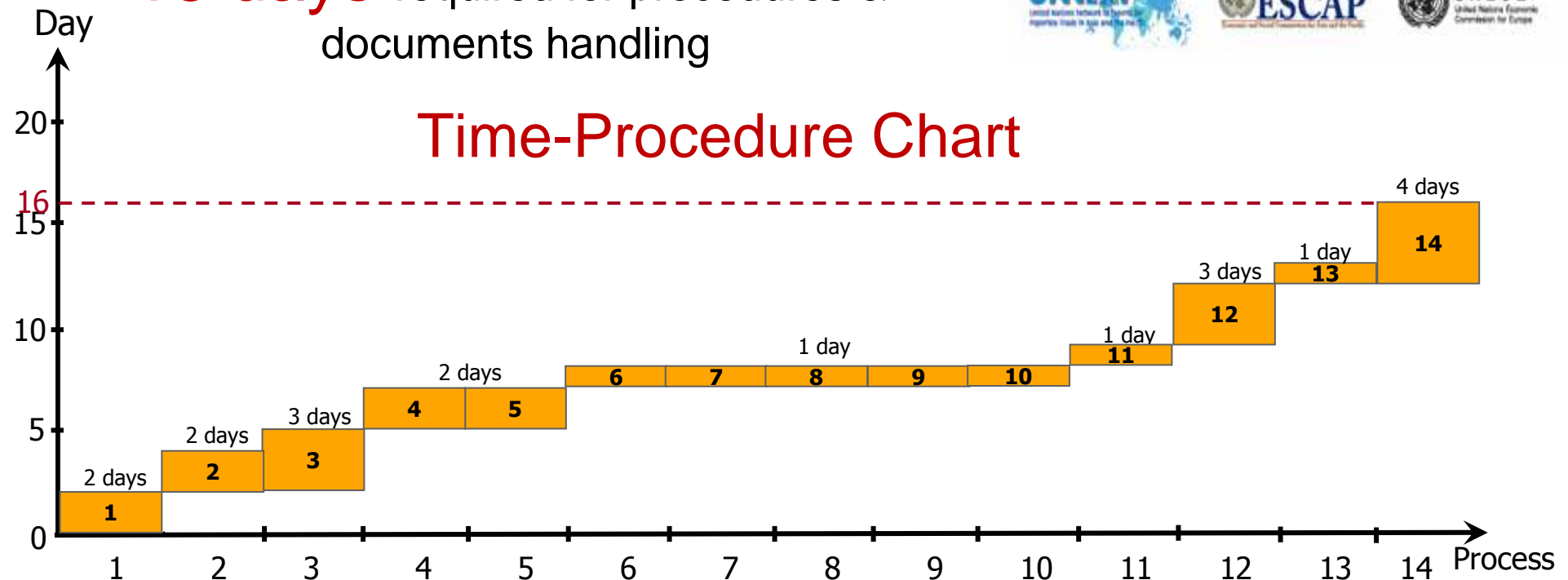
# Conduct Business Process Analysis - Exporting Jasmine Rice from Thailand -

## BUSINESS PROCESS ANALYSIS GUIDE TO SIMPLIFY TRADE PROCEDURES



**16 days** required for procedures & documents handling

### 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



# Time & Cost for Exporting Goods from Taiwan, China

Trading Across Borders in

## Taiwan, China

Indicator	Taiwan, China	East Asia & Pacific	OECD
<a href="#">Documents to export (number)</a>	6	7	4
<a href="#">Time to export (days)</a>	12	22	11
<a href="#">Cost to export (US\$ per container)</a>	655	906	1,032
<a href="#">Documents to import (number)</a>	6	7	5
<a href="#">Time to import (days)</a>	12	23	11
<a href="#">Cost to import (US\$ per container)</a>	720	954	1,085

Taiwan, China – **ranking 23<sup>th</sup> among 183 countries (2012 DB Report)**  
(ranking 21<sup>th</sup> in 2011 DB Report)

World Bank's Trading-Across-Border Data, [www.doingbusiness.org](http://www.doingbusiness.org)  
checking data on 3 Nov 2011.

## These indicators can help decision makers to understand the importance of import/export procedures in improving national competitiveness

Indicators	Lao PDR	India	Taiwan
Documents to export (number)	9	8	6
Time to export (days)	44	16	12
Cost to export (US\$ per container)	1,880	1,095	655

Reference - World Bank's Doing Business – Trading Across Border (3 Nov 2011) [www.doingbusiness.org](http://www.doingbusiness.org)

The costs and procedures involved in exporting (and importing) a standardized shipment of goods are studied. Every official procedure involved is recorded - starting from the final contractual agreement between the two parties, and ending with the delivery of the goods.

# Documents & Procedures for exporting a standardized cargo\*



## Trading Across Borders in Nepal

Export Procedures	Duration (days)	US\$ Cost
Documents preparation	14	285
Customs clearance and technical control	4	300
Ports and terminal handling	4	275
Inland transportation and handling	19	1,100
Totals	41	1,960

### Export documents

Bill of lading  
 Cargo release order  
 Certificate of Origin  
 Certificate of payment  
 Commercial invoice  
 Customs transit document  
 Insurance certificate  
 Packing list  
 Single Administrative Document (SAD)



## Trading Across Borders in Korea, Rep.

Export Procedures	Duration (days)	US\$ Cost
Documents preparation	2	50
Customs clearance and technical control	1	30
Ports and terminal handling	2	100
Inland transportation and handling	2	500
Totals	7	680

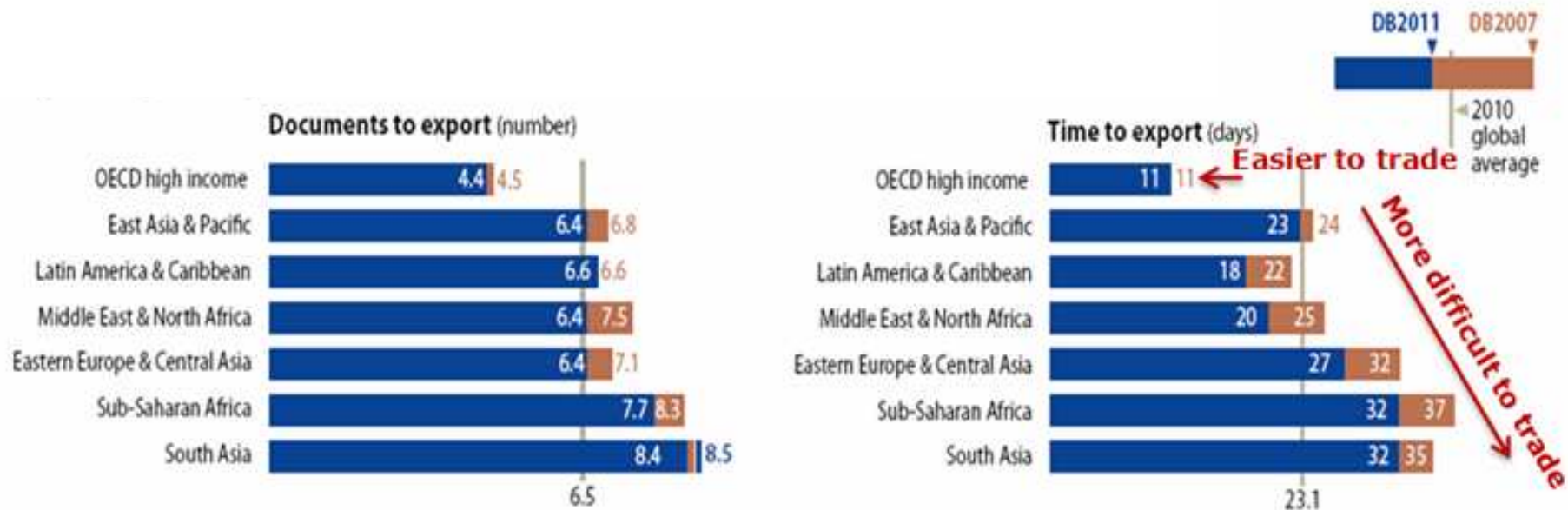
### Export documents

Bill of Lading  
 Customs export declaration  
 Packing list

\* More documents will be needed for agriculture or dangerous goods.

# Some countries are easier & faster, but some countries are more difficult to trade.

Complications in terms of required documents and procedures, and time for exporting a standardized container of goods (regional averages)

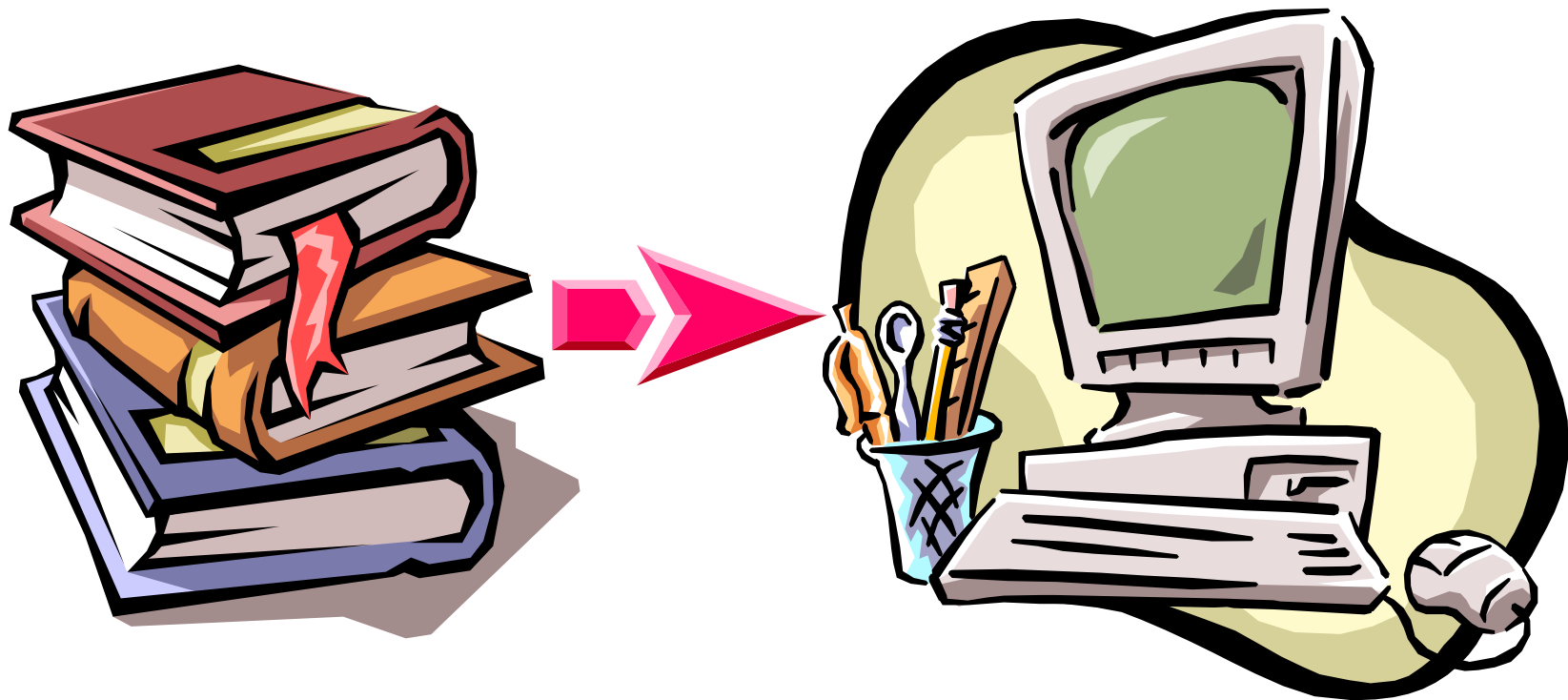


# Why trading across borders in many countries are difficult, time consuming and expensive?

- Procedures and documents handling remain largely paper dependent
- Missing and incorrect documentation slows progress through the supply chain
- Keeping documents & freight in sync is complex and costly
- Multiple parties capturing the same data is inefficient and error prone

# Why trading across borders in some countries are easier, faster and less risky?

Mainly because those countries gradually transform their paper-based environments into **Collaborative e-Government/e-Business** platform.



**Paper-based  
Environment**

**Paperless or e-Document  
Environment**



## Economic Impacts

*because of the delay on trading across borders*

- Each *additional day of delay* (e.g. because of trade logistics procedures) *reduces trade* by at least *1%*

Ref: “**Trading on Time**,” Simeon Djankov, Caroline Freund, and Cong S. Pham, World Bank (2007).

- “**Direct and Indirect Cost** from import/export-related procedures and required documents is about *1-15% of product cost.*”

Ref: “**Quantitative Assessment of the Benefits of Trade Facilitation**,” OECD (2003).

# SWIF – Measurement of Impacts (Example) Thai Case

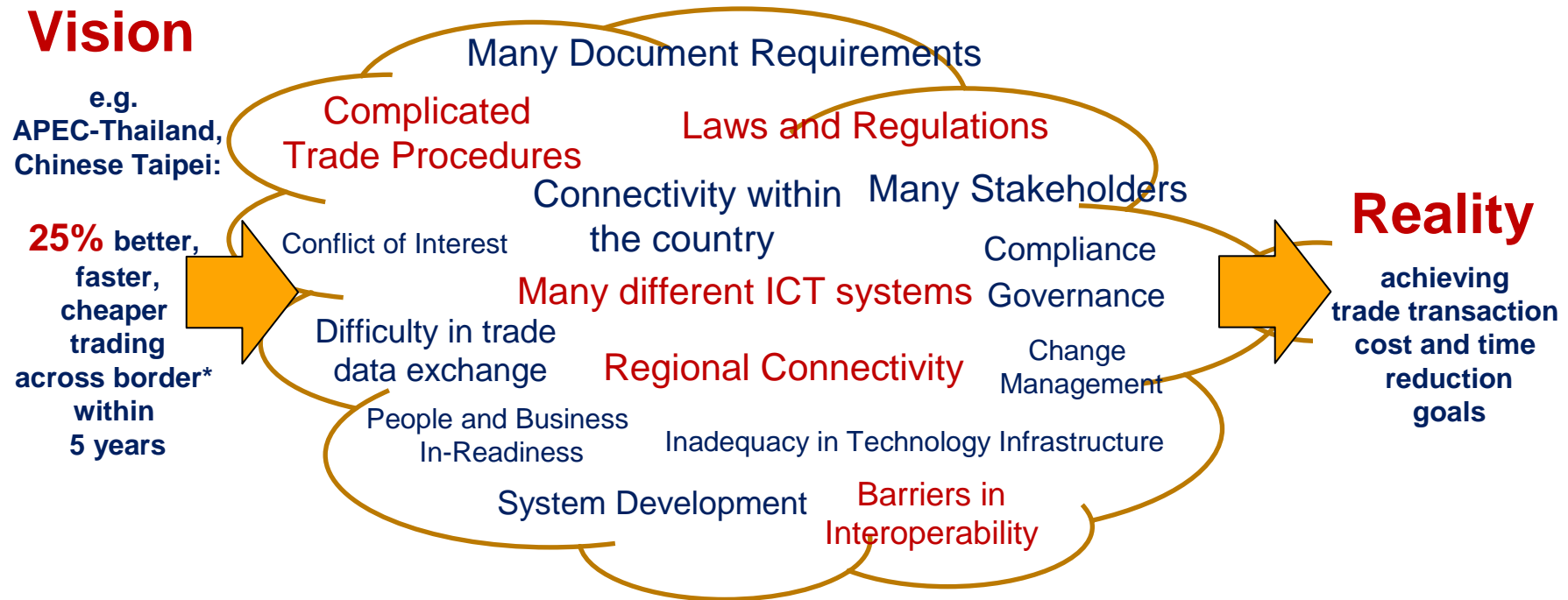
NSW in Thailand (2009) - through reform, and applying IT for **Paperless Customs** and **NSW**

Trading Across Borders data	Doing Business 2007	Doing Business 2008	Doing Business 2009
Rank		51	10
Documents for export (number)	9	7	4
Time for export (days)	24	17	14
Cost to export (US\$ per container)	848	615	625
Documents for import (number)	12	9	3
Time for import (days)	22	14	13
Cost to import (US\$ per container)	1042	786	795

Transaction Cost reduction from 848 to 625 (~220 USD) per container  
(x 3.5 million TEU per year) = **770 Million USD** transaction cost reduction per year

# The reasons behind this presentation: So many challenges in implementing Vision into Reality

There are a lot of challenges to be tackled.



\* Referring to World Bank's Index ([www.doingbusiness.org](http://www.doingbusiness.org))

# Topics of this presentation

1. **What & Why** do we need *Single Window (SW)* or sometimes called, *e-Logistics platform*?
2. **SWIF**, *a holistic and architecture framework* to support policy managers and stakeholders in their decision-making and management of Single Window implementations.
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# Architecture Concept for Single Window Planning and Implementation

- SWIF adapts the concept of **enterprise architecture** and **architecture development methodology\*** to describe steps how to systematically derive the single window **strategic architecture** and **the master plan** for SW implementation.

**SWIF Authors:** Markus Pikart (UNECE), Thayanan Phuaphanthong and Somnuk Keretho (Kasetsart University, Thailand), Wout Hofman (TNO), and Eveline van Stijn and Yao-Hua Tan (Vrije Universiteit Amsterdam)

\* Adopted from An Enterprise Architecture Framework, called TOGAF-9.

# Purposes of SWIF

- To provide policy managers & stakeholders with guidelines in:
  - Formulating visions and policies that address the need for SW implementation;
  - Identifying performance measures;
  - Systematically decomposing and structuring SW implementation challenges;
  - Planning and governing the overall implementation of Single Window by providing the foundation for developing the national Single Window Master Plan.





# It's about National Competitiveness

## *From Competitiveness to logistics strategy to NSW*

Thai Case

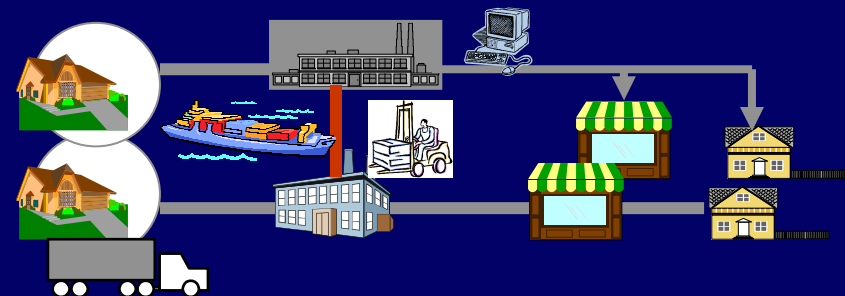
Cabinet Brain Storming  
(20 January 2003)



7 Visions



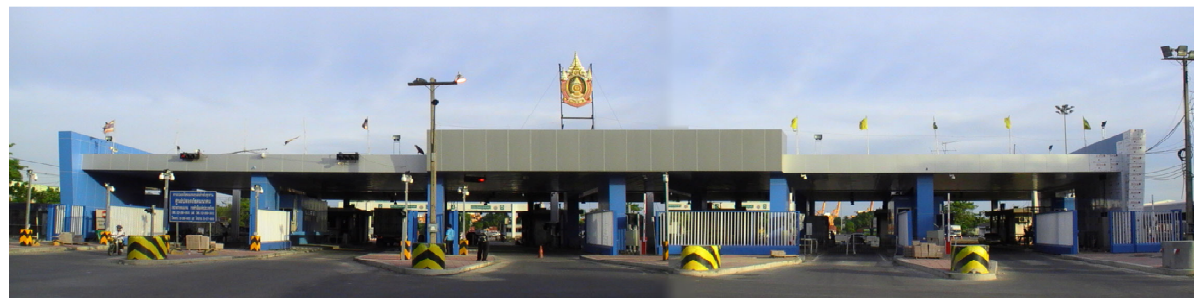
1. Stable Economic Development Platform
2. Active International Player
3. World Leader in Niche Market
4. Innovative Nation with Wisdom and Learning base
5. Entrepreneurial Society
6. Society of Cultural Pride with Global Sense
7. Country of Decent Environment for Living



Logistics Development Strategies  
(May 2005 to February 2007)

# Thai Government Policy

- **National Logistics Master Plan (2007-2011)**
  - a national development agenda to become the world-class trade logistics hub
    - Reducing logistics cost (Cost Efficiency)
    - Increasing speed (Responsiveness)
    - Raising safety & certainty (Reliability and Security)





# Logistics Development Master Plan (2007 -2011)

endorsed by the Thai Cabinet on Feb 2007

Thai Case

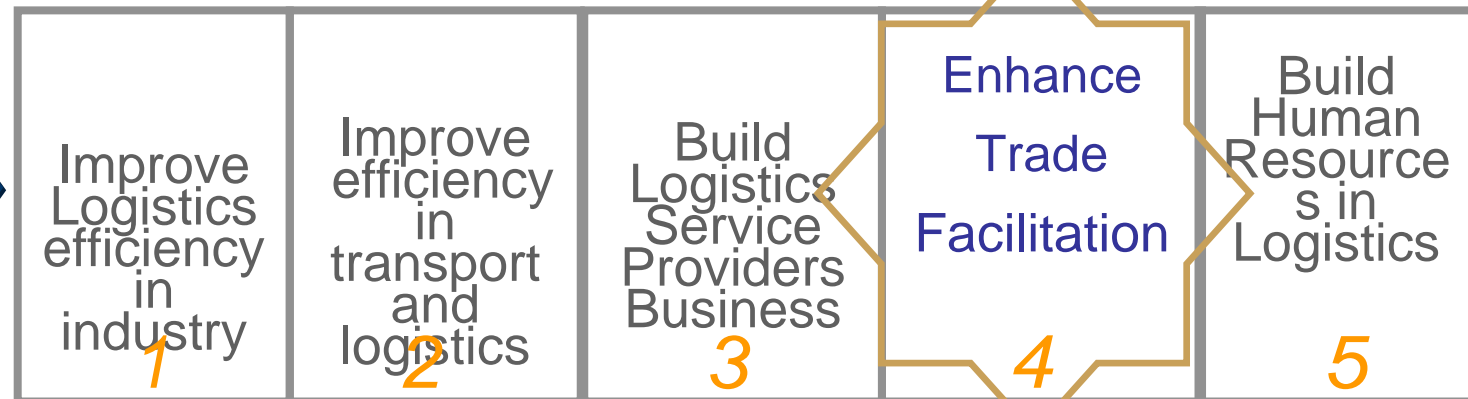
## Vision

Towards A World-class National Logistics Environment to become a Trade Hub for Indochina

## Objectives

- 1.Reducing logistics cost (*Cost Efficiency*), increase business *Responsiveness, Reliability* and *Security*
- 2.Create *Value-Added* on logistics industry and related business

## Strategic Agenda



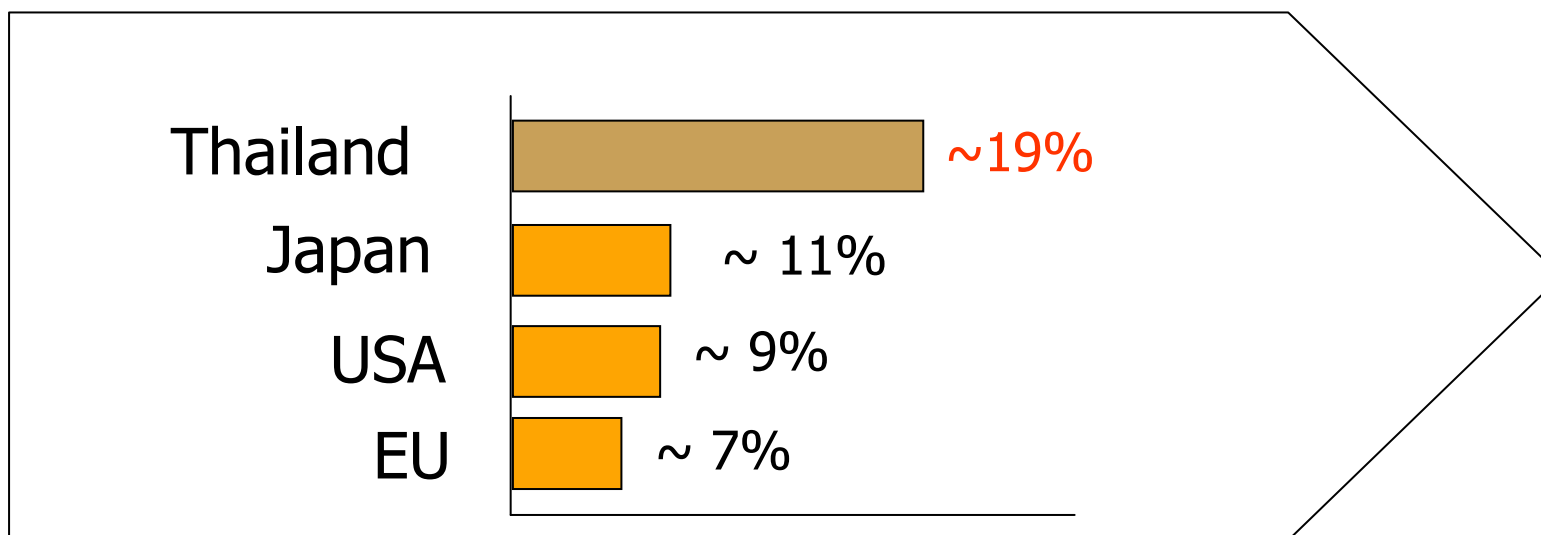
To reduce the trade logistics cost from 19% (2007) to 16% (2011) (comparing to GDP)

### National Single Window (e-Logistics)

Action Plan to develop data exchange platform among different government agencies and business related to import/export procedures

# Benchmarking National Competitiveness

Logistics Cost/GDP<sup>1</sup>

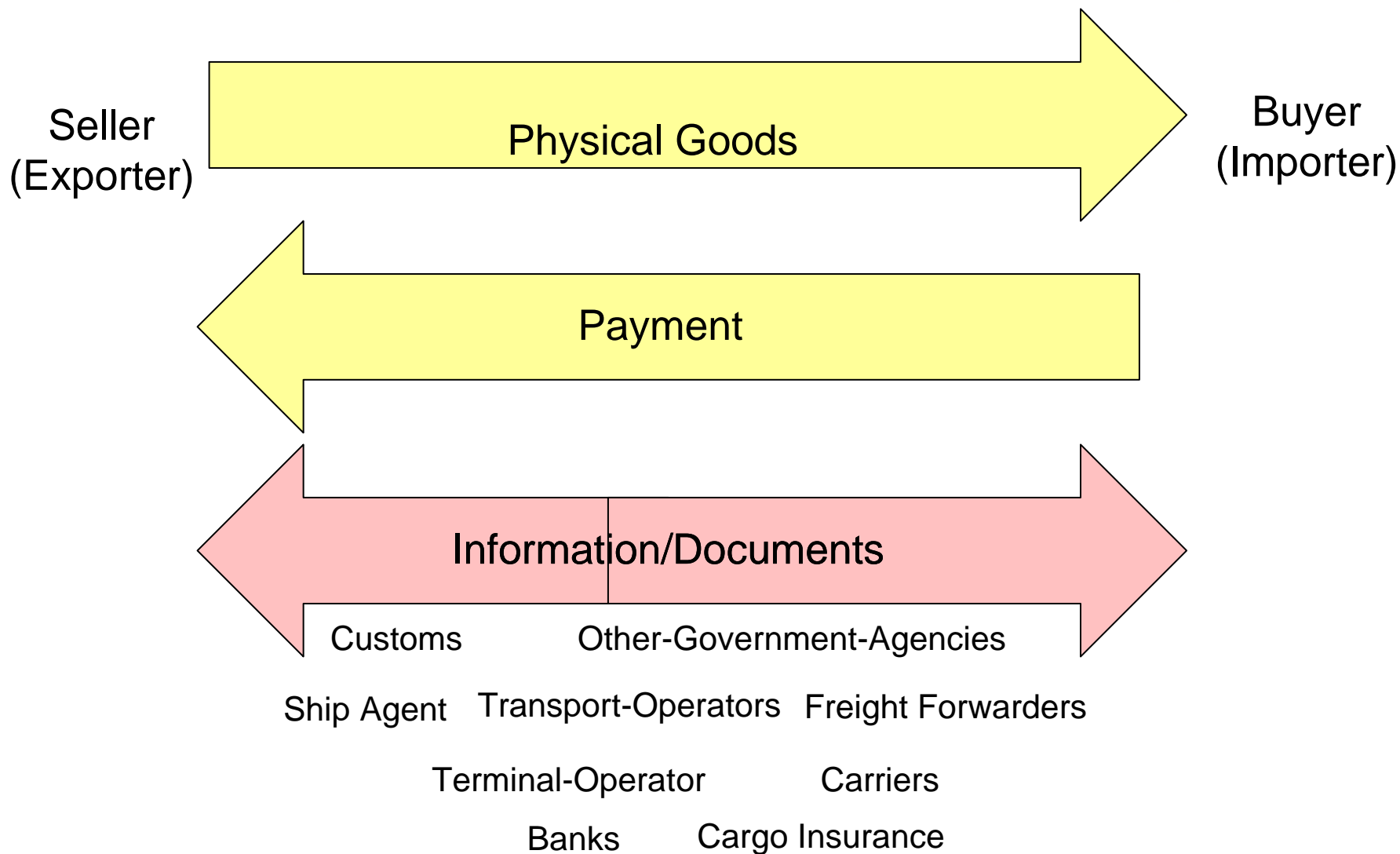


This is a threat, but also  
an opportunity for improvement.

<sup>1</sup> Ref: The Brooker Group

<sup>2</sup> Thailand GDP, 2004: ~6 million-million bath

# Trade Logistics – 3 Kinds of Flow



# Documents related to Exportation of Rice

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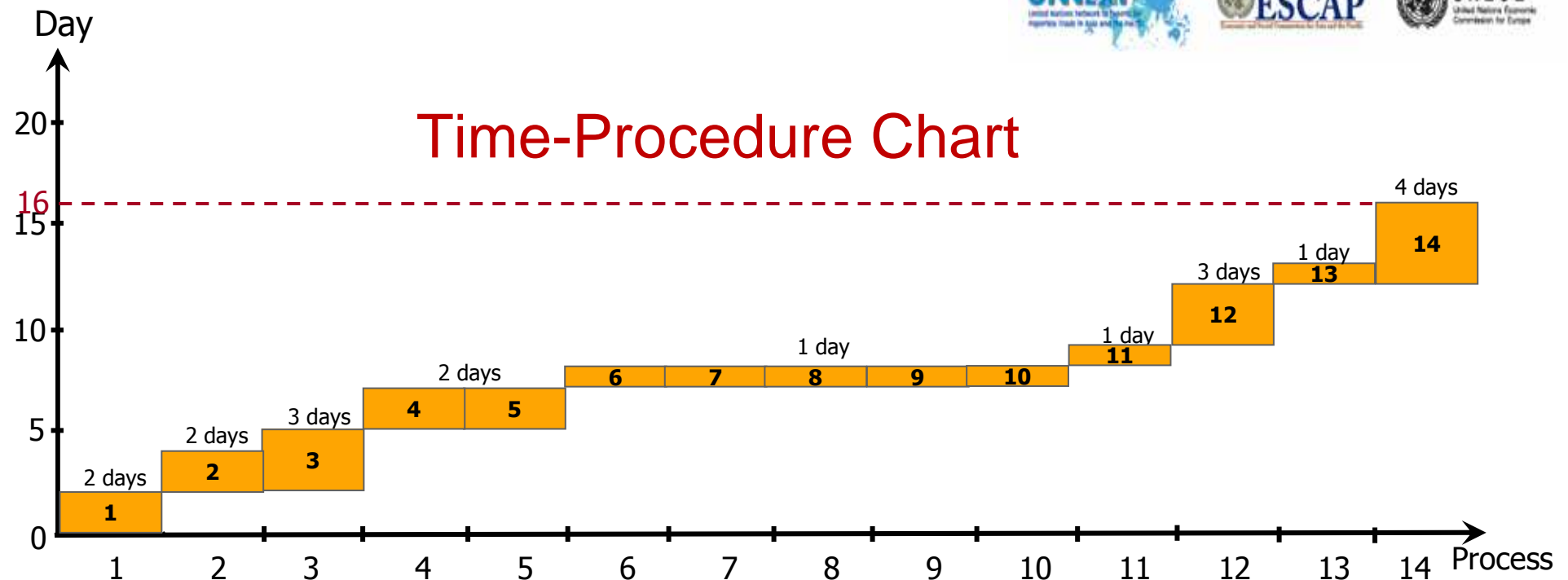


# Conduct Business Process Analysis - Exporting Jasmine Rice from Thailand -

## BUSINESS PROCESS ANALYSIS GUIDE TO SIMPLIFY TRADE PROCEDURES



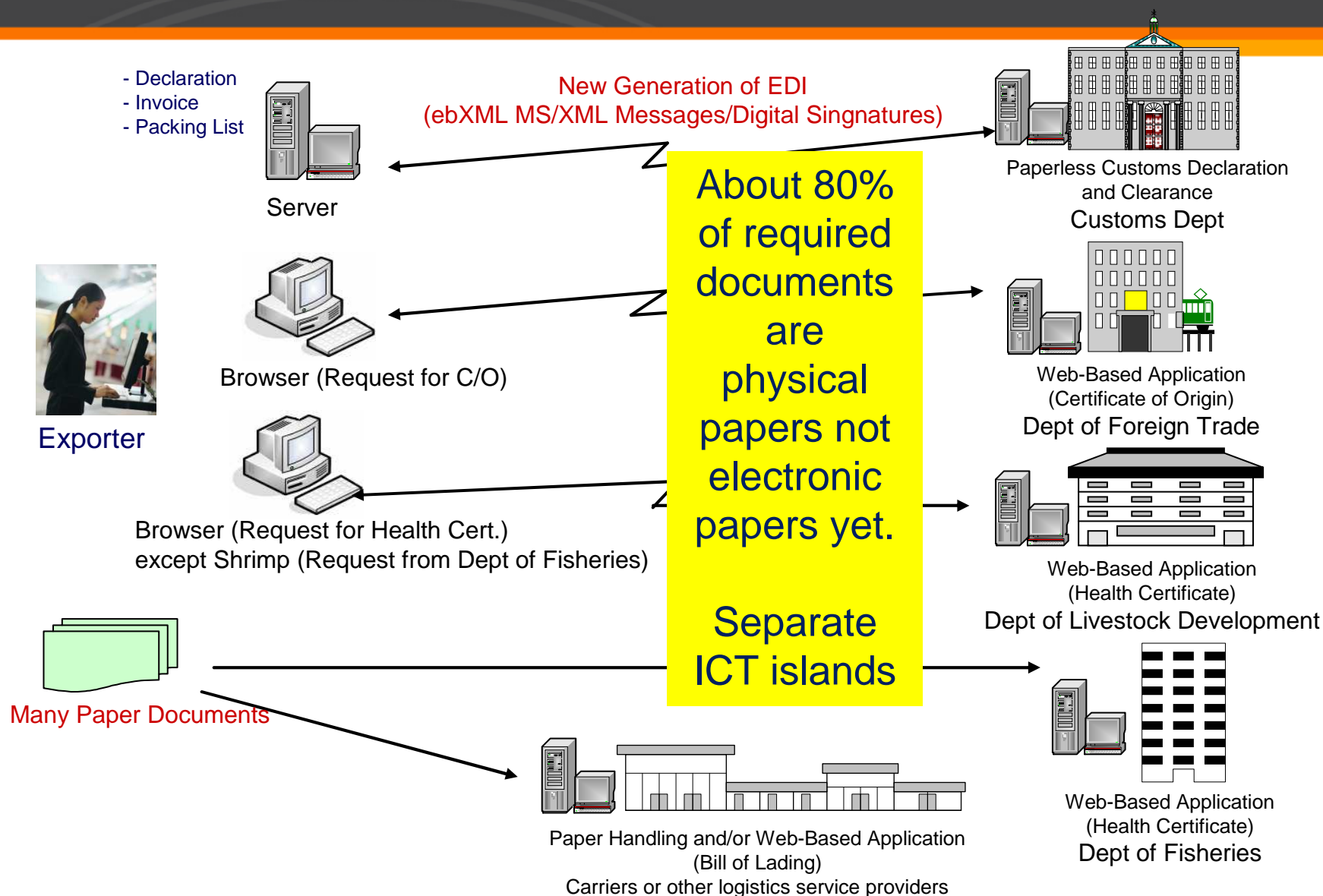
### Time-Procedure Chart



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# Situation in Thailand (2007)



# National Single Window - A Vision Scenario -

Thai Case

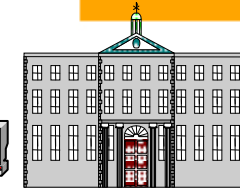
Now, technical interoperability standard (e.g. based on ebXML MS) is needed, and common definitions of data elements, and semantic data structures (common data models) among different documents required by different organizations are required also.



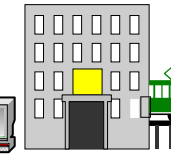
Exporter



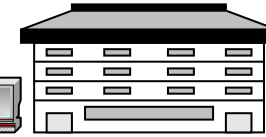
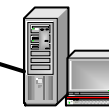
**National  
Single Window**



Paperless Customs Declaration  
and Clearance  
Customs Dept



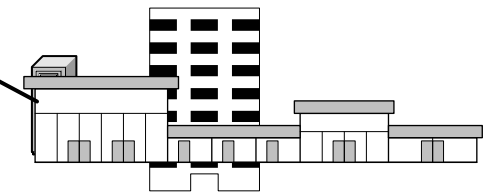
Web-Services (ebXML) Application  
(Certificate of Origin)  
Dept of Foreign Trade



Web-Services (ebXML) Application  
(Health Certificate)  
Dept of Livestock Development



Web-Services Applications  
(e.g. Bill of Lading, and other documents)  
Carriers or other logistics service providers



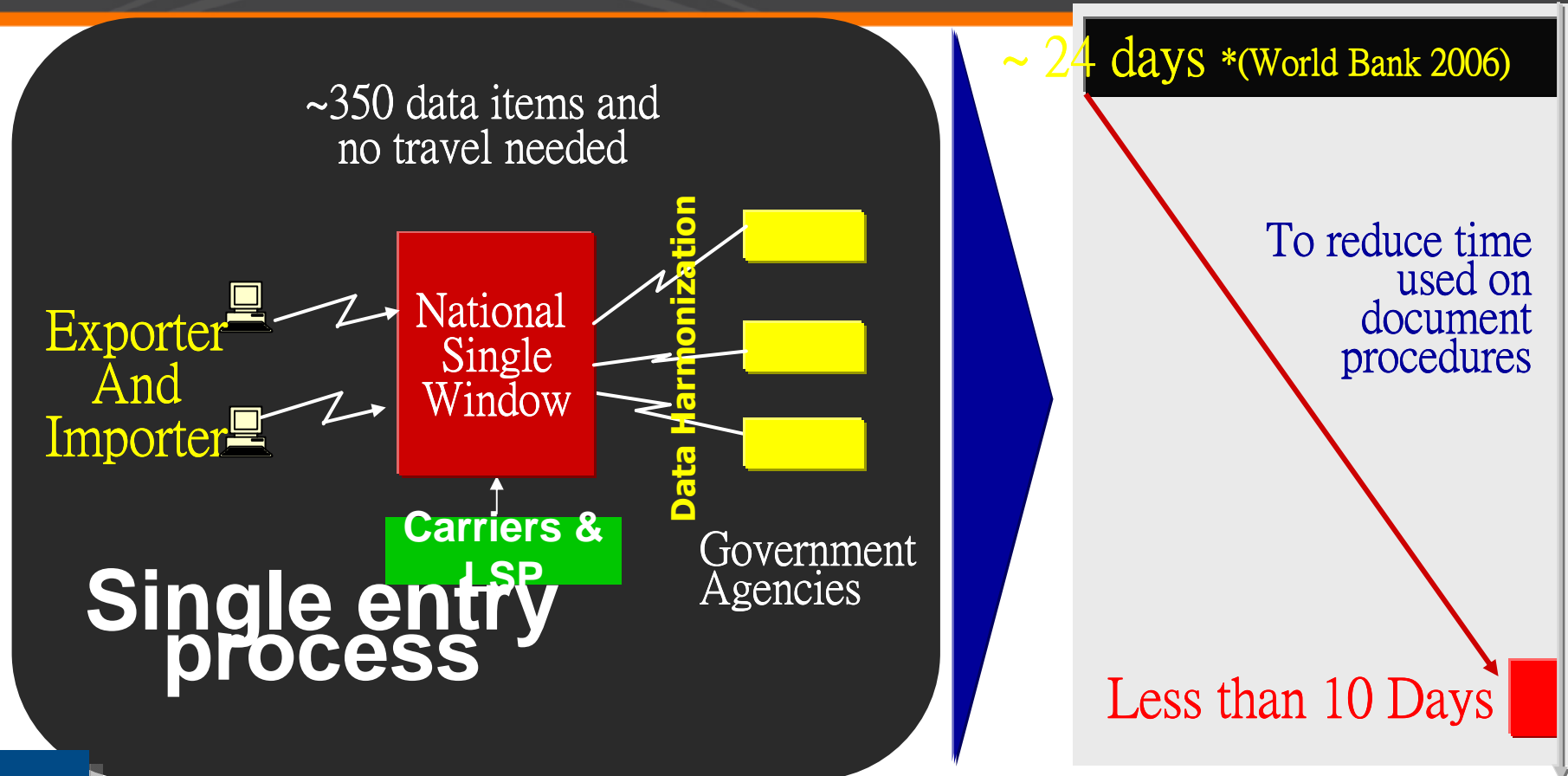
Web-Services (ebXML) Application  
(Health Certificate)  
Dept of Fisheries

## Goal - Single Window/e-Documents

One time submission for each data element  
but multiple usage for different purposes on  
different ICT platforms

# Thailand vision: from multiple windows to Single Window

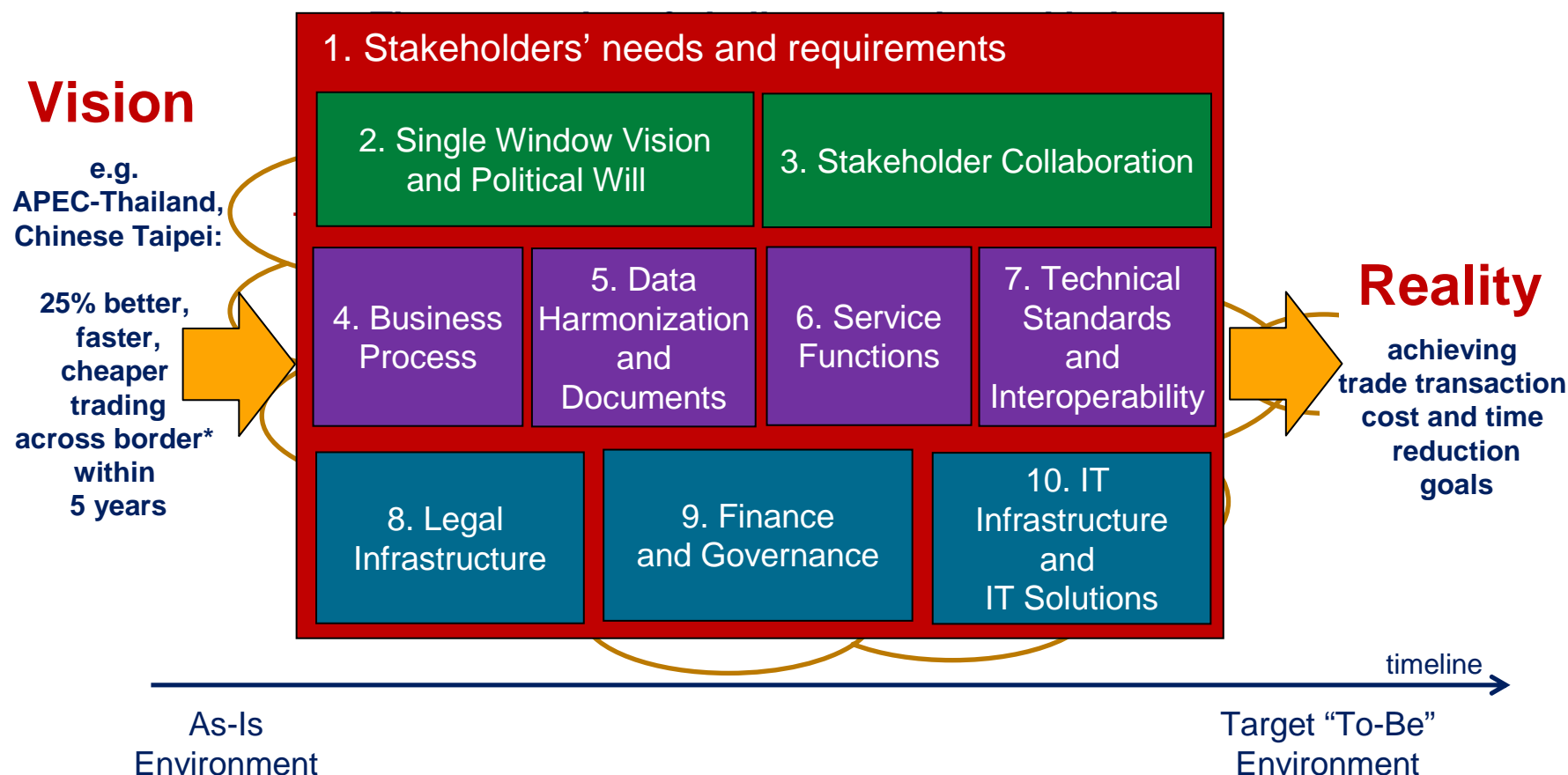
Thai Case



Impact to  
economy

- One day delay costs 1% reduction in export value (World Bank, 2006)
- Direct and indirect costs incurred in documentary process account for 1-15 % of finished goods (OECD, 2003)

# Complexity of Single Window can be handled by decomposing its challenges into different manageable sub-components.



\* Referring to World Bank's Index ([www.doingbusiness.org](http://www.doingbusiness.org))

# 10 Key Components of SW

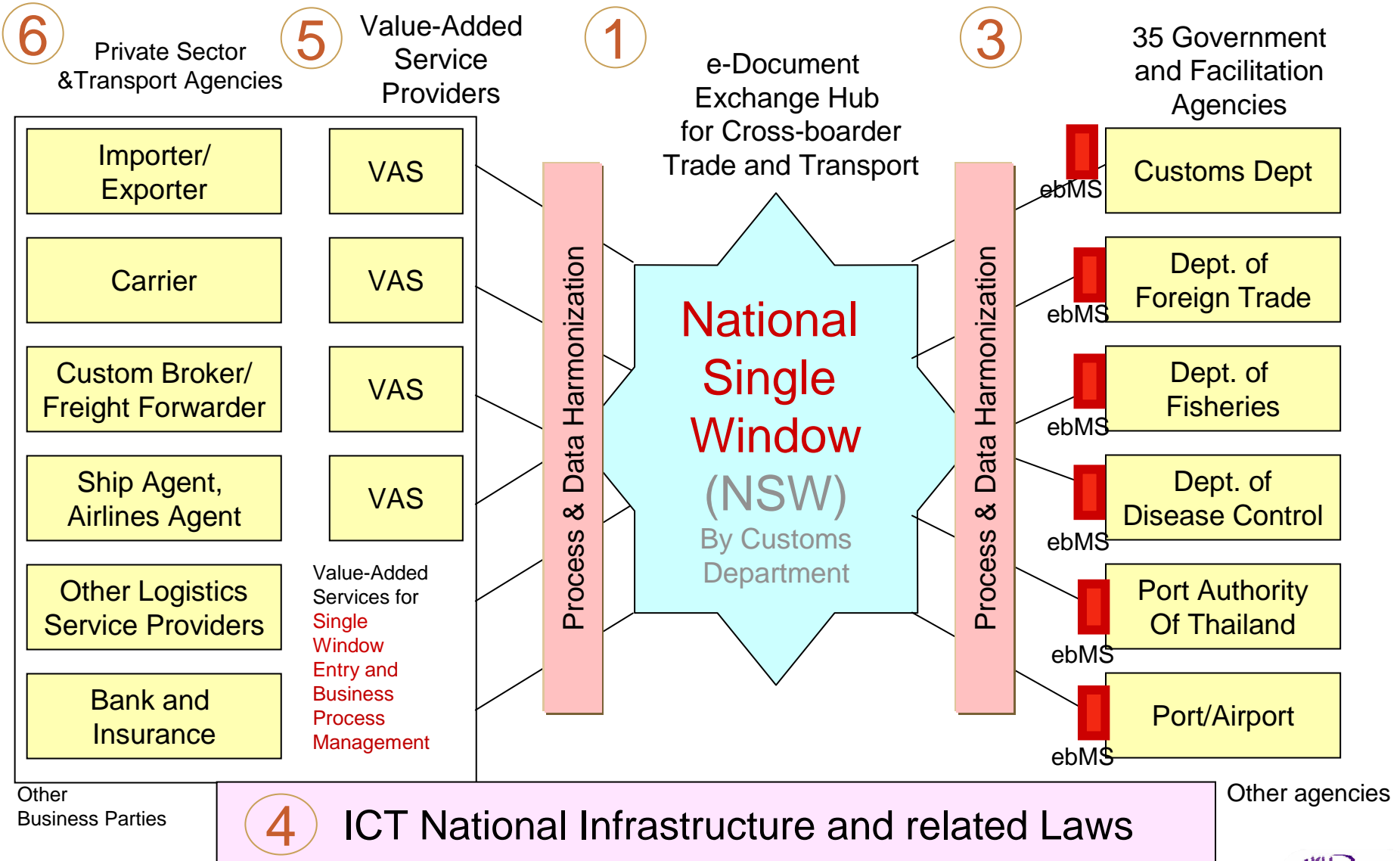
1. Stakeholders' Needs and Requirements
2. SW Vision and Political Will
3. Stakeholders Collaboration Platform
4. Business Process Analysis and Improvement
5. Data Harmonization and Document Architecture
6. Service Functions/Applications Architecture
7. Technical Standards and Interoperability
8. Legal Infrastructure
9. Business Models, Financial Issues & Governance
10. IT Infrastructure & Technical Architecture



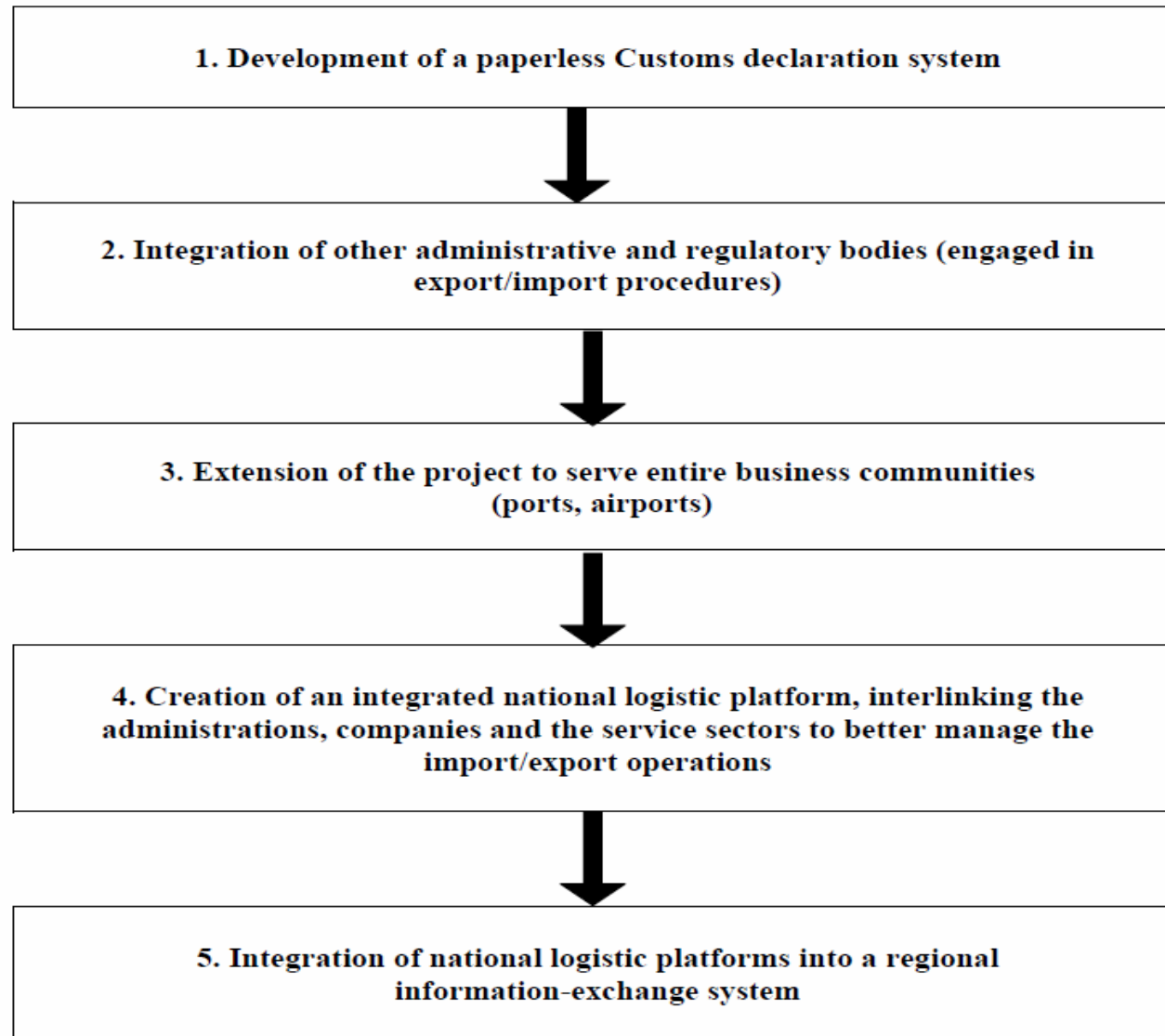
# Thailand NSW Architecture

Thai Case

## 2 Governance Mechanism – policy decision, service charge regulation, SLA etc



# Single Window Roadmap in Five Evolutionary Development Stages



# Single Window Roadmap in Five Evolutionary Development Stages

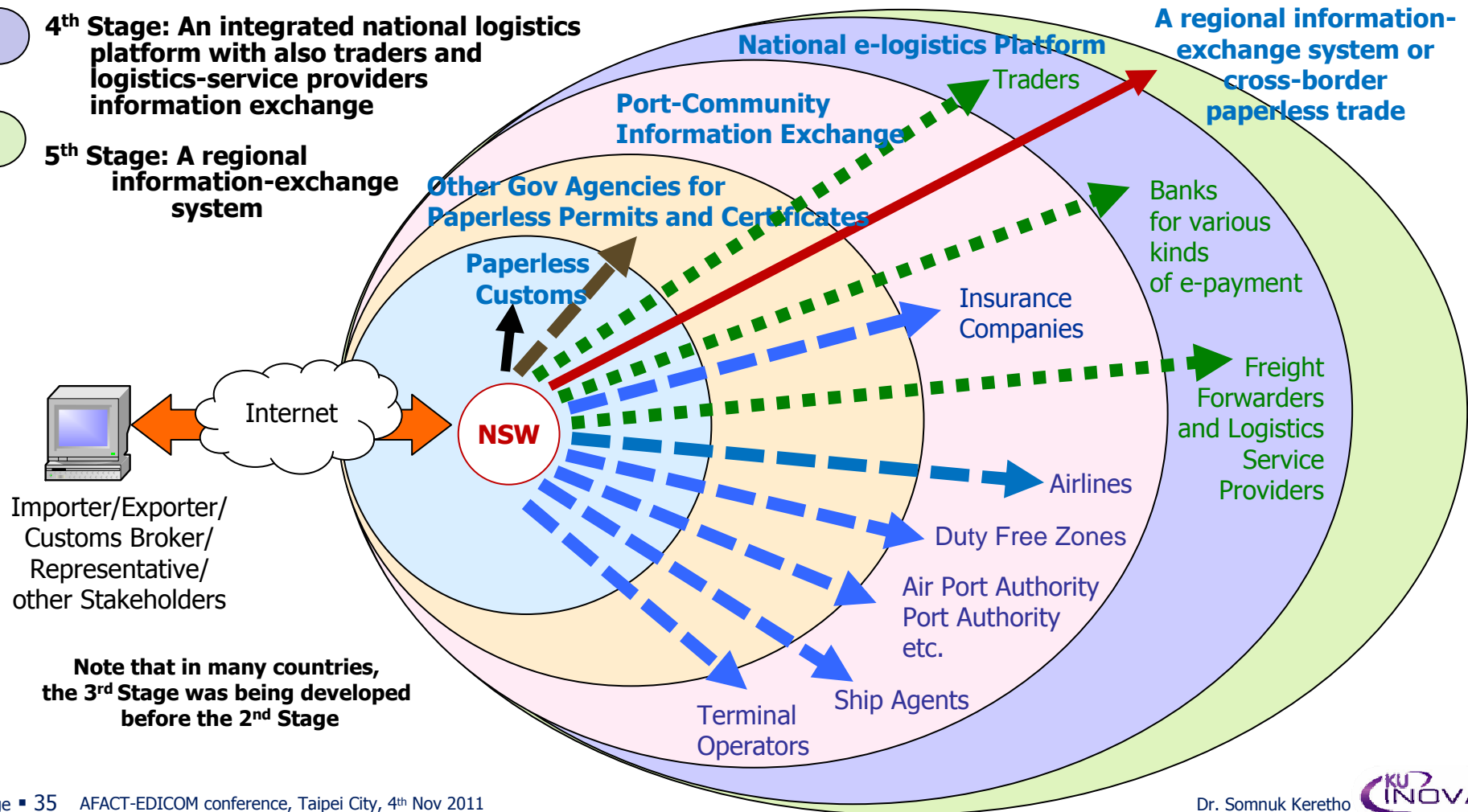
**1<sup>st</sup> Stage: Paperless Customs + e-Payment for Customs Duty + Container Loading List + Simple e-Documents Exchange with Port Authority and/or Terminal Operators**

**2<sup>nd</sup> Stage: Connecting Other Government Back-end IT systems, and e-Permit Exchange with Paperless Customs System**

**3<sup>rd</sup> Stage: e-Documents Exchange stakeholders within the (air, sea, dry) port community**

**4<sup>th</sup> Stage: An integrated national logistics platform with also traders and logistics-service providers information exchange**

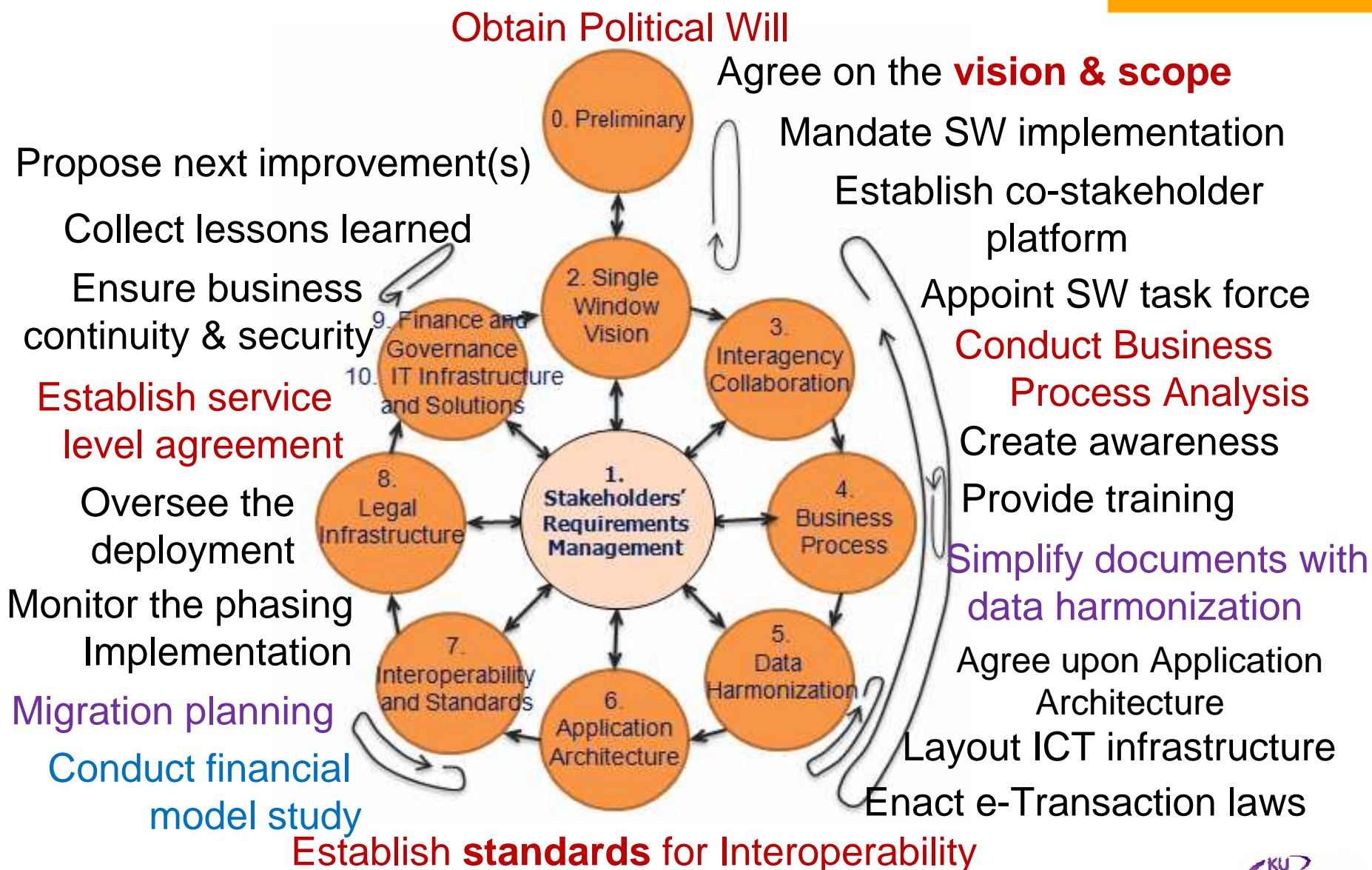
**5<sup>th</sup> Stage: A regional information-exchange system**



# SW Development Methodology



# Single Window Implementation Cycle



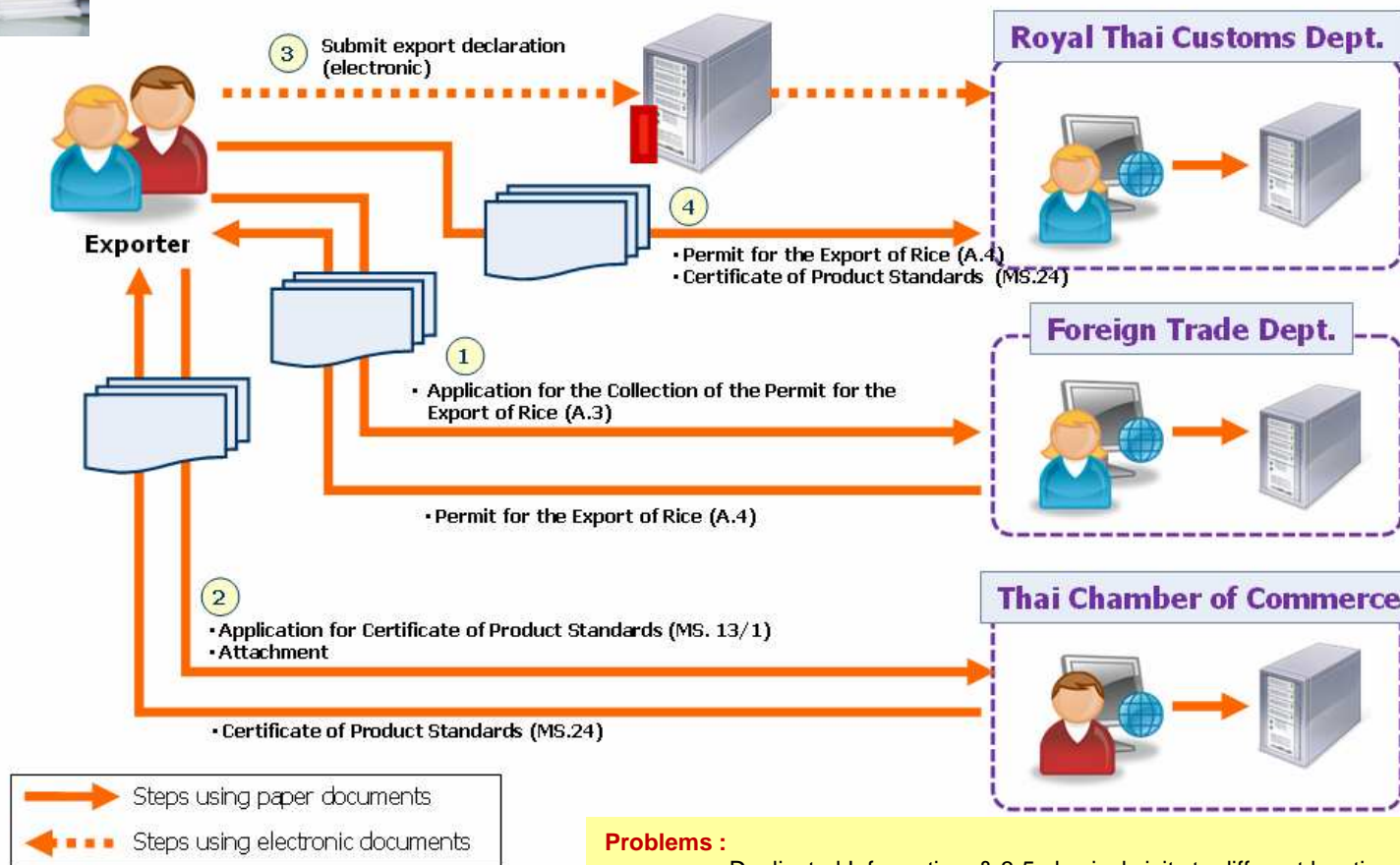


# As-Is Business Process Analysis for Exporting Jasmine Rice

Thai Case



## Example of Jasmine Rice Export Process (present)



### Problems :

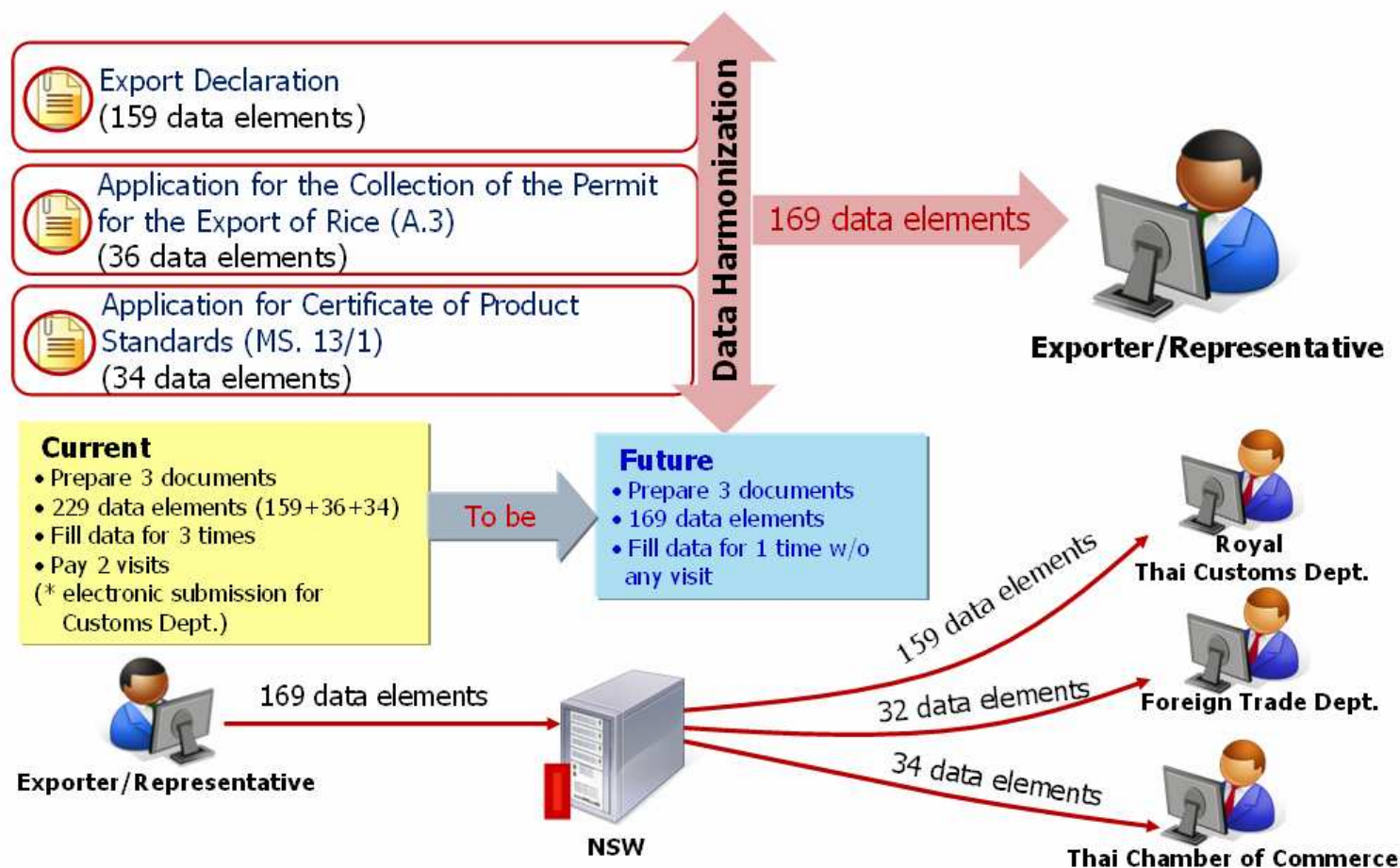
- Duplicated Information & 3-5 physical visits to different locations
- High Cost and Time for sending and receiving documents
- Possible Data Inconsistency

# Data Harmonization

- Evaluate and select **data model** based on comprehensiveness and compliance
- Confirm that the scope of **a data harmonization project** matches the scope of the business process analysis of the Business Architecture 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**

# Data Harmonization and Business Process Simplification

## Preparation of Electronic Documents for Jasmine Rice Exportation





# Example – Exchanged Documents

มส. 24-001-50 No.002618

ใบรับรองมาตรฐานสินค้า เลขที่ E.....  
เลขที่ประจำตัวผู้เสียภาษี.....

แบบ มส. 24/1

ข้าวหอมมะลิไทย

ใบรับรองมาตรฐานสินค้า

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

ใบอนุญาต  
ให้ส่งสินค้าออกนอกนอกราชอาณาจักร (ข้าว)  
(เพื่อการค้าที่เป็นการค้า)

เลขที่.....วันหมดอายุ.....

ผู้ซื้อ (ชื่อ, ที่อยู่, ในกรณีที่เป็นคนและรายกับผู้มีสินค้า)

ประเทศผู้ซื้อ.....

ประเทศปลายทาง.....

สำหรับเจ้าหน้าที่ศุลกากรบันทึก (หากไม่พอให้ต่อด้านหลัง)

ท่าเรือที่ส่งออก.....สกุลเงิน.....อัตราแลกเปลี่ยน.....

รวมมูลค่าสินค้า.....ประเภทพืช.....น้ำหนักสุทธิ (กก.)/ปริมาณ.....

ราคาต่อหน่วย.....มูลค่าสุทธิ (กก.)/ปริมาณ.....

ประเภทพืช.....น้ำหนักสุทธิ (กก.)/ปริมาณ.....

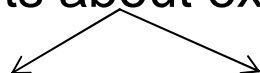
ราคาต่อหน่วย.....มูลค่าสุทธิ (กก.)/ปริมาณ.....

Rice Quality Certificate  
By The Thai Chamber  
of Commerce

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 about 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

# Interoperability

Interoperability is needed for connectivity  
not only within the country, but also among regional member countries

## Interoperability is needed in 4 levels

- **Common Business Process (Process Harmonization)**
- **Document and Data Simplification (Data Harmonization)**
- **Common Technical Communication Protocols**
- **Legal Harmonization**

**Standards are needed** to achieve the above interoperability.

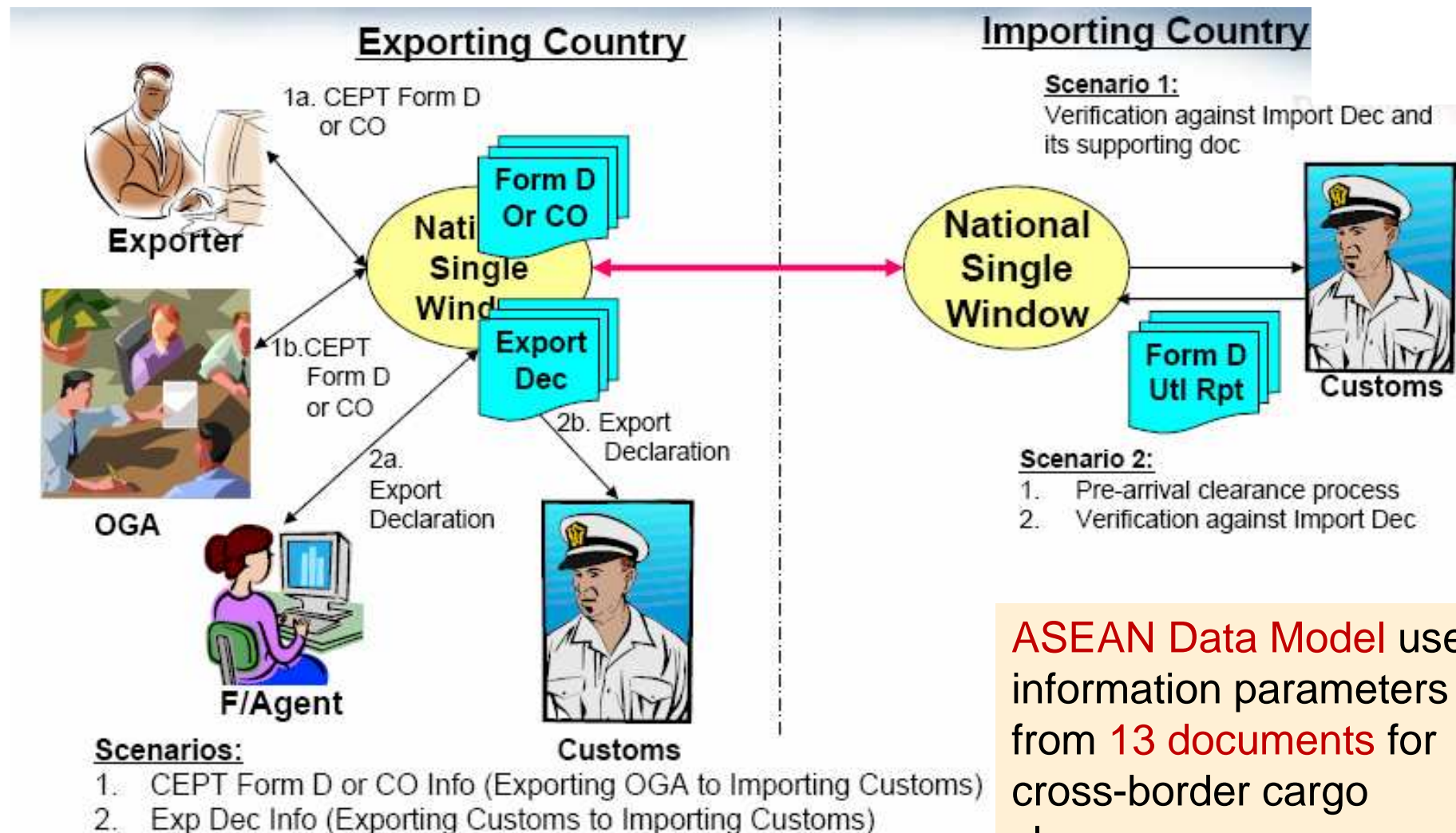
# Using Standards for Document & Data Simplification

- **Objective:** Define data from a business perspective; harmonise, simplify, standardise data and documents

- UNLK: Align documents to international standards
- Code Lists: Define codes and data formats
- UNTDED: Define data using standard semantic
- Compare data among documents and simplify

**Standards & Tools:** UN Layout Key, UN/TDED (ISO 7273), ECE/CEFACT Recommendations, CCL, CCTS, WCO Data Model 3.0, IATA,...

# A Regional Connectivity: ASEAN Single Window



**ASEAN Data Model** uses information parameters from **13 documents** for cross-border cargo clearance.

# Thai Case Example

## TH e-GIF Thailand e-Government Interoperability Framework

Standard recommendations for Collaborative e-Government,  
and particularly for Thailand NSW,  
e.g. all 35 government agencies using  
ebXML Messaging Services for  
e-Document Exchange through NSW exchange hub.



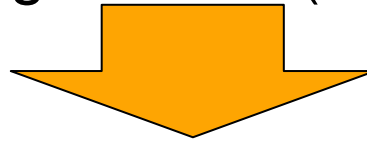


# Components within TH e-GIF

1. **National-level policy recommendations** for promoting Collaborative e-Government Development
2. **Methodology** on how to develop Collaborative e-Government by adopting **Enterprise Architecture** Approach (EA Development Methodology)
3. Guidelines on how to conduct **business process analysis**
4. Steps on how to conduct **data harmonization** exercises with common data set and formats, and e-documents
5. Recommended **technical protocols** and **standards** for **interoperability** (95 items within 7 categories)

# Laws and Regulation

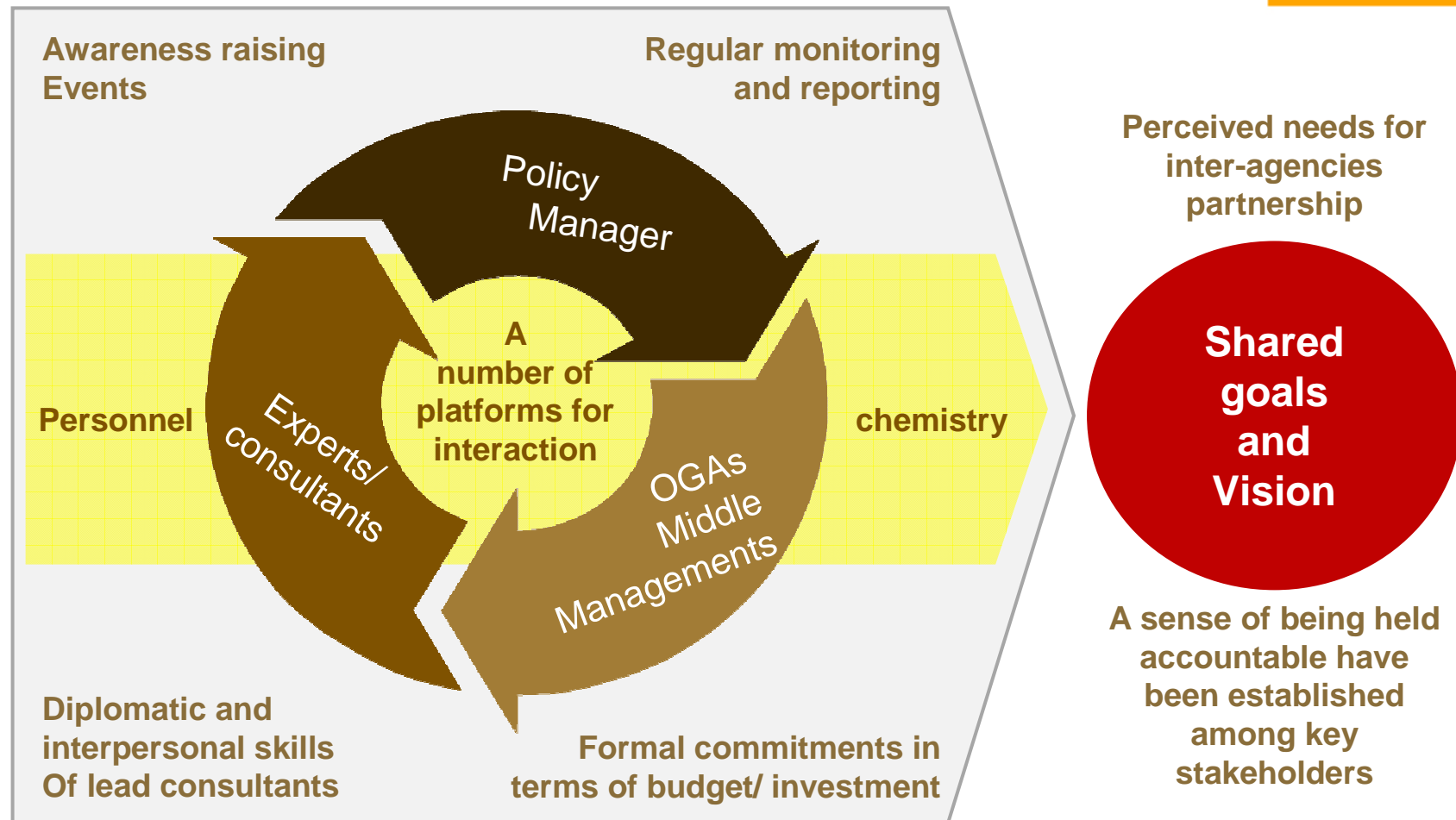
- Electronic Transaction Act (2001, 2008)  
(legalizing electronic documents and transactions)
- Royal Decrees on e-Government Implementation (2006)
- Decrees and Guides on Secured e-Transaction (2010)  
(based on ISO 27001)
- Regulations on Paper Digitization (2010), etc



- Each government department **still needs** some **regulations** for officials and business users to use e-document submissions and paperless systems, e.g. as officially mandated by the Director General.

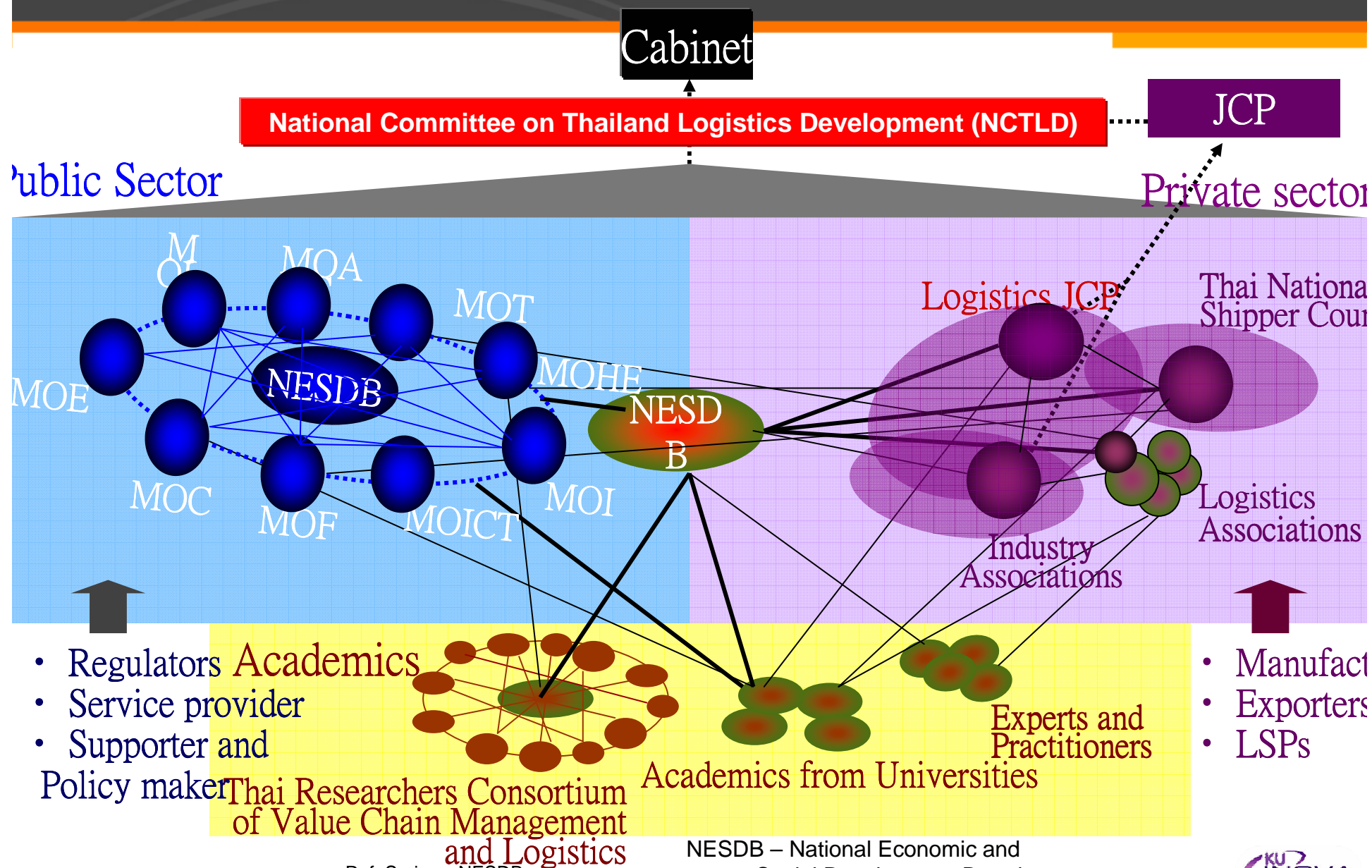


# Stakeholder Management for effective inter-agency coordination and collaboration



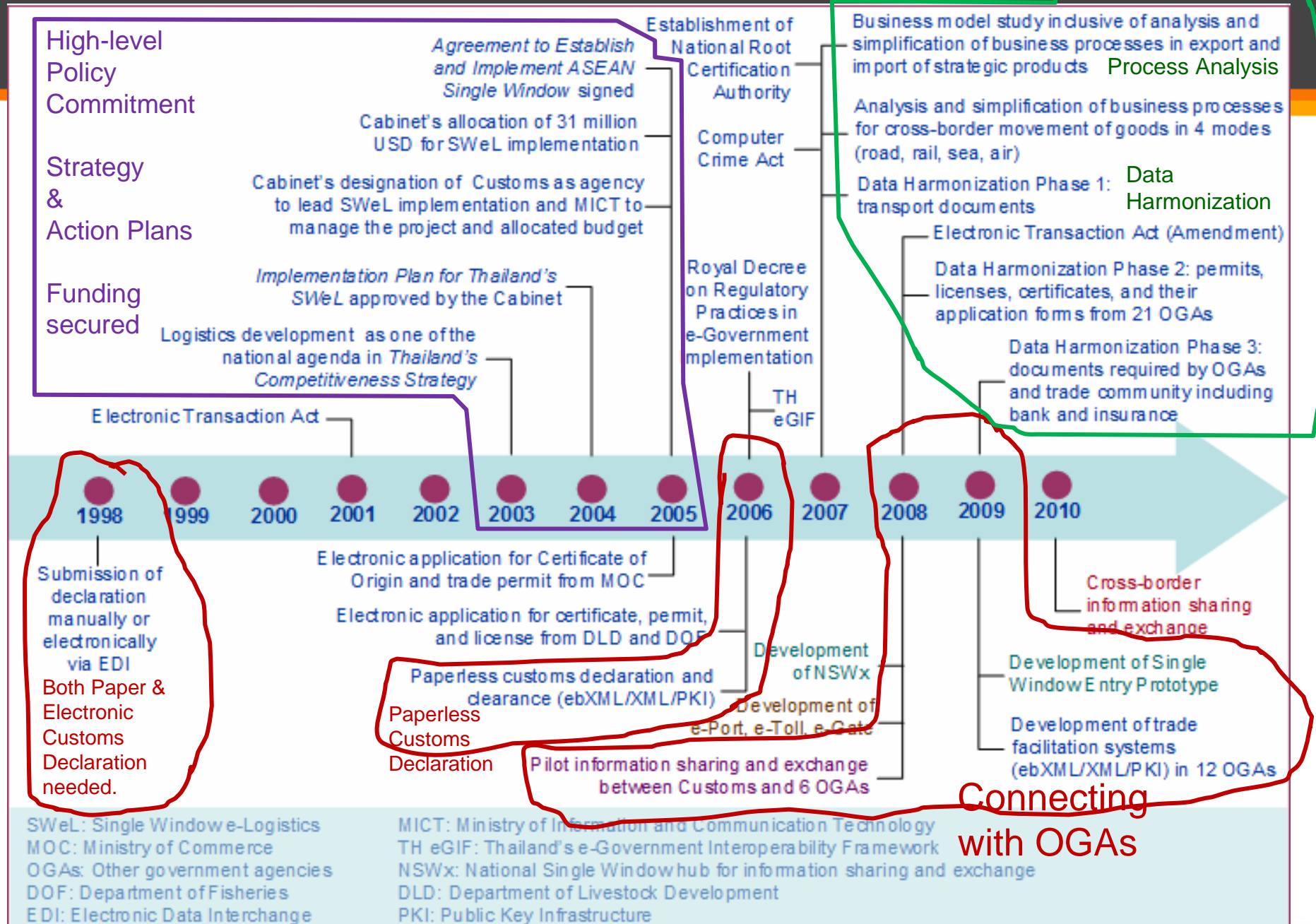
**Source:** Adapted from Phuaphanthong **et al.** *Establishing Interagency Collaboration in Large-Scale Systems Development : Lessons Learned from an E-government Project for Trade and Transport Facilitation*. The 15<sup>th</sup> Americas Conference on Information Systems, San Francisco, California August 6<sup>th</sup>-9<sup>th</sup> 2009.

# A Network of partnership... Thailand NSW Case



# A Network of partnership... Thailand NSW Case

Levels/ Drivers	Platform	Interplay
<b>Political I will</b>	<ul style="list-style-type: none"> <li>National Committee on Competitiveness</li> <li>Cabinet decree</li> <li>NCTLD and NSW Sub committee</li> </ul>	<ul style="list-style-type: none"> <li>Source of legitimacy and budget</li> <li>Source of authority for NESDB, MICT, Customs Dpt.</li> <li>NSW Master Plan, comprising multi-ministry</li> <li>Regular meetings drive progress</li> </ul>
<b>Strategic</b>	<ul style="list-style-type: none"> <li>Sub committee on NSW Logistics and Trade Facilitation issues</li> <li>Designating Lead Agencies (MICT, NESDB, Customs Dpt.)</li> <li>MICT enforced allocating budget to 12 Dpt.</li> </ul>	<ul style="list-style-type: none"> <li>Informal meeting and dialogue create mutual trust and understanding</li> <li>Lead consultant helped draw out over all architecture and model</li> <li>Cooperation via budgeting and procurement process</li> </ul>
<b>Operational</b>	<ul style="list-style-type: none"> <li>Customs' two Sub working groups on streamlining BP + aligning data required and technical communication protocol</li> </ul>	<ul style="list-style-type: none"> <li>Customs procedure reform implemented by Customs Dpt. forced some OGAs to come along</li> </ul>





# Key Initiatives: Thailand's National Single Window

Stage V<sup>Thai Case</sup>  
(2015 - )

Cross-border  
Electronic  
Transaction  
&  
ASEAN  
Single Window

Stage  
IV

(2008-  
2015)

National  
Single Window

Stage III  
(2006-2008)

Customs  
Paperless Services

Stage II  
(1998 -2006)

Customs  
EDI Services

Stage I  
(1998 )

Manual  
Operations

- The Customs Department of Thailand is undertaking the **National Action Plan for NSW (2010-2015)** consisting of :
  1. Establishment of National Single Window System
    - 35 Departments in 12 Ministries signed MOU with the Customs Department
  2. Reprocess and streamline rules and regulation to support electronic transaction via NSW

# Next Steps to Move Forward

- |  |  |   |
|--|--|---|
| <ul style="list-style-type: none"> <li>Completion of <b>National Single Window (NSW)</b> and be ready to connect with ASEAN Single Window (ASW) by 2015. <b>Streamlining rules and regulations</b> to support</li> </ul> | <ul style="list-style-type: none"> <li><b>Accelerate</b> the <b>CBTA</b> with the <b>same standard</b> being adopted among all the member countries and eventually <b>develop all documentation processes</b></li> </ul> | <ul style="list-style-type: none"> <li><b>Develop information and communication technology</b> in order to track and trace the goods being transferred within the region as well as <b>improve logistics and supply chain management</b></li> </ul>   |
| <p>electronic transaction via <b>NSW</b></p> <ul style="list-style-type: none"> <li><b>Capacity building</b> of trade facilitation-related among government officials, private sector, users and operators</li> </ul>    | <ul style="list-style-type: none"> <li>Promote <b>Business Matching</b> among member countries in order to create worthiness of commodity transportation</li> </ul>  | <p>especially on Road Safety and Maintenance <b>Issues</b></p> <ul style="list-style-type: none"> <li><b>Develop border cities</b> into the region's <b>gateways</b> with the preparation being emphasis on the issues of <b>Cross-border Facilities/ Single Window Inspection</b></li> </ul> |

# Topics of this presentation

1. **Why** do we need *National Single Window (NSW)* or so called, *e-Logistics*?
2. **SWIF**, *a holistic and architecture framework* to support policy managers and stakeholders in their decision-making and management of Single Window implementations.
3. **Case examples**
4. **Conclusions & Recommendations**

# Conclusions - 1

- The SWIF aims to support **policy managers** and **stakeholders** with a systematic way to address SW implementation challenges
- The SWIF makes use of **enterprise architecture** and the **Architecture Development Methodology** (TOGAF), adapted to the specific context of SW
- SW implementations need to **align** with the national but also international setting and developments for the long-run success
- SW implementations typically follow **a step-wise approach** and the SWIF provides a coordination mechanism between the overall SW Programme and sub-projects



# Conclusions - 2

- The SWIF provides a **holistic overview of SW implementations** and how **different guidelines & techniques** relate to the implementation process.
- The SWIF also provides **a structure for case comparison**, to synthesize lessons learned
- Extended and future guidelines and recommendations can be "plugged" in the SWIF
- The adoption of the SWIF to the specific objectives, needs and requirements of a national SW project delivers **the National Master Plan for the Single Window implementation**.

# Recommendations - 1

- Adopt the **SWIF-Single Window Implementation Framework** to develop and manage the SW Master Plan (at the national level and the regional level).
- **Establish the Measurable Trade Facilitation Vision (or Single Window Vision)** at the national level, and aligning with the regional level,  
e.g. 25% better, faster and cheaper Trading Across Border within 2015
- Conduct detailed **Business Process Analysis** (based on, for example, some key export products, strategic trade partners, and/or through major ports) to identify bottlenecks, and also propose **better, faster and cheaper Business Process** (that is feasible by e-documents, and Single Window functions).

# Recommendations - 2

- Prioritize the SW scope(s) for **iterative implementation** based upon the context, needs and the strategy of the country, e.g.
  - Development of e-customs declaration first, then e-cargo clearance at some major ports, etc.
- Analyze and agree upon the **new business process** as the common standard for **within-the country connectivity**, and **regional connectivity** (e.g. single-stop cargo clearance at the border).
- Conduct the targeted **document and data simplification** based on international standards, e.g. UNLK, WCO DM 3.0, CCL, ...
- Adopt international standards for **technical interoperability**, e.g. ebXML Message Services, UN/CEFACT XML NDR, ...
- Develop your **SW architecture** (Business, Data, Application, Technology)
- Handle your **change management** carefully.....

# References

- Eveline van Stijn, Thayanan Phuaphanthong, Somnuk Keretho, Markus Pikart, Wout Hofman, and Yao-Hua Tan, "Single Window Implementation Framework (SWIF)," Free University Amsterdam, Kasetsart University, Bangkok, UNECE and published as an EU-supported ITAIDE D5.0:4b deliverable.
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- Thayanan Phuaphanthong, Tung Bui, and Somnuk Keretho, "Harnessing Interagency Collaboration in Inter-organizational Systems Development: Lessons Learned from an E-government Project for Trade and Transport Facilitation," International Journal of Electronic Government Research (IJEGR), Vol. 6, No. 3, July-September 2010.
- Somnuk Keretho, "(draft) Managers' Guide for Single Window Planning and Implementation" October 2011, to be published as an UNNExT guide and a global training will be conducted in December 2011, Geneva  
<http://www.unece.org/tradewelcome/capacity-building-for-trade-facilitation/global-trade-facilitation-conference/workshop-programme.html>

# Thank you.

“Dear friend, I pray that you may enjoy good health and that all may go well with you, even as your soul is getting along well.”

3 John 2 [The Holy Bible].



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