

Evolution of National Single Window: Concepts and Implementations

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Table of Contents

1. Evolutionary nature and challenges in planning and implementing National Single Window (NSW)
2. A systematic approach is proposed to guide policy managers, decision makers and relevant stakeholders in planning and managing the implementation of the NSW development projects.
3. Conclusions & way forward

Original Definition of Single Window (2005)*

- **Single Window is a facility** that allows parties involved in trade and transport to lodge standardized information and documents with **a single entry point** to fulfill all import, export, and transit-related **regulatory requirements**.
If information is electronic, then individual data elements should only be submitted once.

Aiming to

- enhance the **efficient information exchange** and **coordination** of traders, transport and government for **regulatory transactions**, and
- facilitate **single submission of data** or **reduction of the same data/same document submissions**.

*UN/CEFACT Recommendation and Guidelines on establishing a Single Window, UNECE, 2005
http://www.unece.org/cefact/recommendations/rec33/rec33_ecetrd352_e.pdf

After about 10 years of experiences*

Different forms of Single Window

Pre-Single Window Evolution

- Basic Customs Automation
- Trade Points Portals, e.g. Lao PDR's Trade Portal
- Trade Electronic Data Interchange (EDI)/Value Added Network (VAN)

Single Window Evolution

- A limited form of SW - **Customs Single Window**, e.g. Pakistan Customs SW
- A limited form of SW - **Port Community System**, e.g. India Port Community System
- **Trade-regulatory National Single Windows**, evolving from few number of regulatory agencies, e.g. Azerbaijan NSW (with 4 agencies), Thai NSW (from 4, to 15 to 36)
- **Extended Trade National Single Window**, e.g. Korea uTradeHub, HK DTTN
- **Transport-regulatory National Single Windows**, e.g. China LOGINK (Maritime SW)
- **Integrated National Single Window (all-regulation NSW+PCS)**, e.g. Japan NACCS
- **Integrated Sub-National Single Window**, e.g. Shanghai e-Port SW
- **Regional/Global Single Windows**, e.g. ASEAN Single Window (regional trade SW), NEAL-NET (connecting China, Japan, Korea maritime SWs)

* "Ten Years of Single Window Implementation: Lessons Learned for the Future," J. Tat Tsen - Global Trade Facilitation Conference, 2011

The First Three (3) Critical Challenges cited in several SW case studies*

1. Creating Political Will, e.g.

- ❑ Establishing it as the national commitment (by developing national strategic plan, and obtaining endorsement by the highest political institution, e.g. the Prime Minister, the Cabinet, the President,).
- ❑ Establishing it as a regional commitment, e.g. MOU signing among the Head of States to develop the National SW and the regional SW.

2. Institutionalizing the Policy, i.e. transforming the policy mandates into normal routine management, e.g.

- ❑ Institutionalize the National High-level Committee, and Project Management Group for steering and overseeing the SW implementation, by the Cabinet's mandates and by laws (with the support from several working groups, governments, business sectors and academia)
- ❑ Securing the necessary budgets to finance the project.

3. Establishing an effective inter-agency collaboration platform

* As cited by case studies of Singapore's TradeNet, Korea's uTradeHub, Malaysia NSW, Japan's NACCS, and Thailand NSW in the UNNEX Policy Brief No. 02, 03, 04, 06 and 08 respectively, and also in the UNECE Single Window Repository.

Other critical success factors*

that have also been cited in many SW case studies

- Conductive legal framework
- Other planning and implementation challenges
- Sustainability and Business/Financial Models, e.g.

In several economies,
“Special Corporate Vehicles(SCV) have been established,
e.g. Japan’s NACCS, Inc.,
Korea’s KNet,

* As cited by case studies of Singapore’s TradeNet, Korea’s uTradeHub, Malaysia NSW, Japan’s NACCS, and Thailand NSW in the UNNExT Policy Brief No. 02, 03, 04, 06 and 08 respectively, and also in the UNECE Single Window Repository.

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Why a systematic approach is needed?

Because there are so many complicated challenges to be managed such that the SW Vision could be transformed into reality.



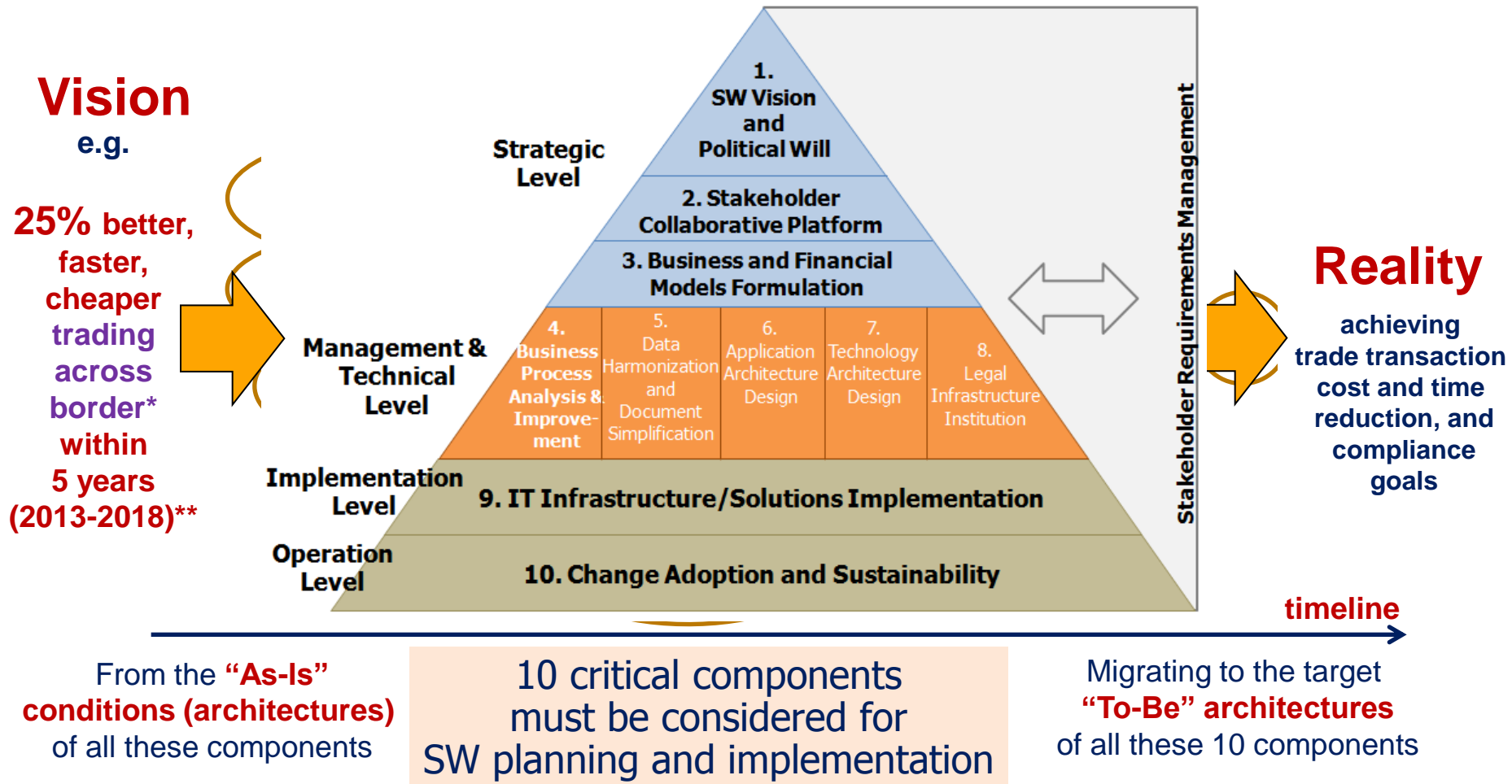
* Referring to World Bank's Trading Across Border Indicators (www.doingbusiness.org)

****Within an economy or a regional economic cooperation, measurable goals should be mandated by its Leaders.**

Recommendation 1: Applying Enterprise Architecture Concept*

for strategic planning, detailed design, implementation & operations

Complexity of Single Window can be handled by decomposing its challenges into smaller and more manageable sub-components.



For large-scale e-government projects, EA frameworks are recommended in many literatures and in practices, e.g. TOGAF, US FEA.

Recommendation 2: Ten Critical Success Components

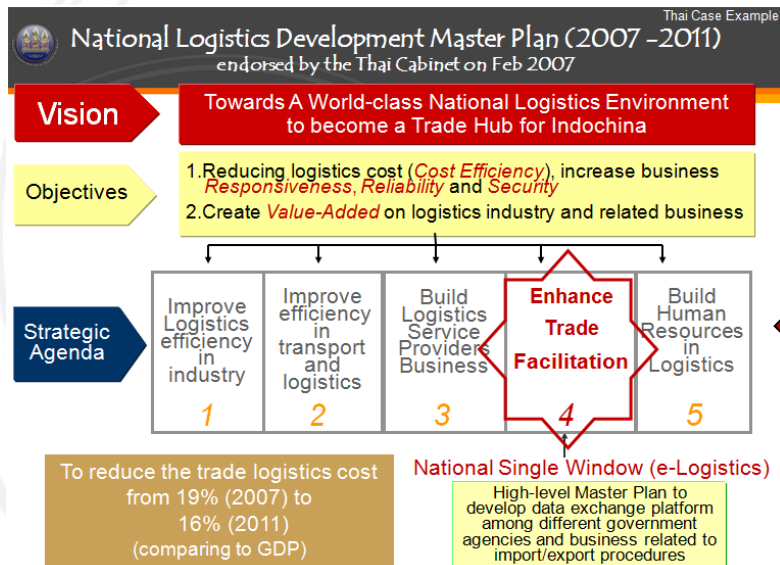
must be analyzed to understand the "as-is" and its bottlenecks, propose the "to-be", reconcile and agree...



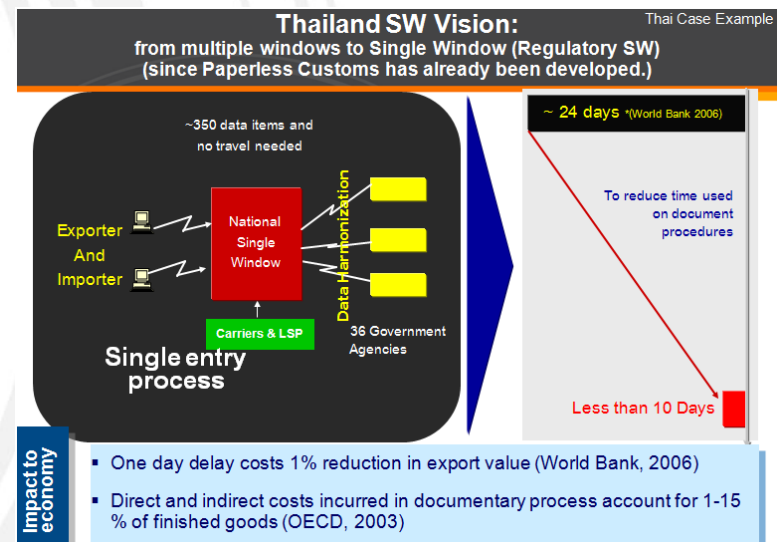
Recommendation 3: SW Vision & Goals Alignment

National SW Vision, Goals and its Planning should be aligned and integrated as a part of the related national/regional development agenda
(quantitative goals with a time frame should be defined and mandated)

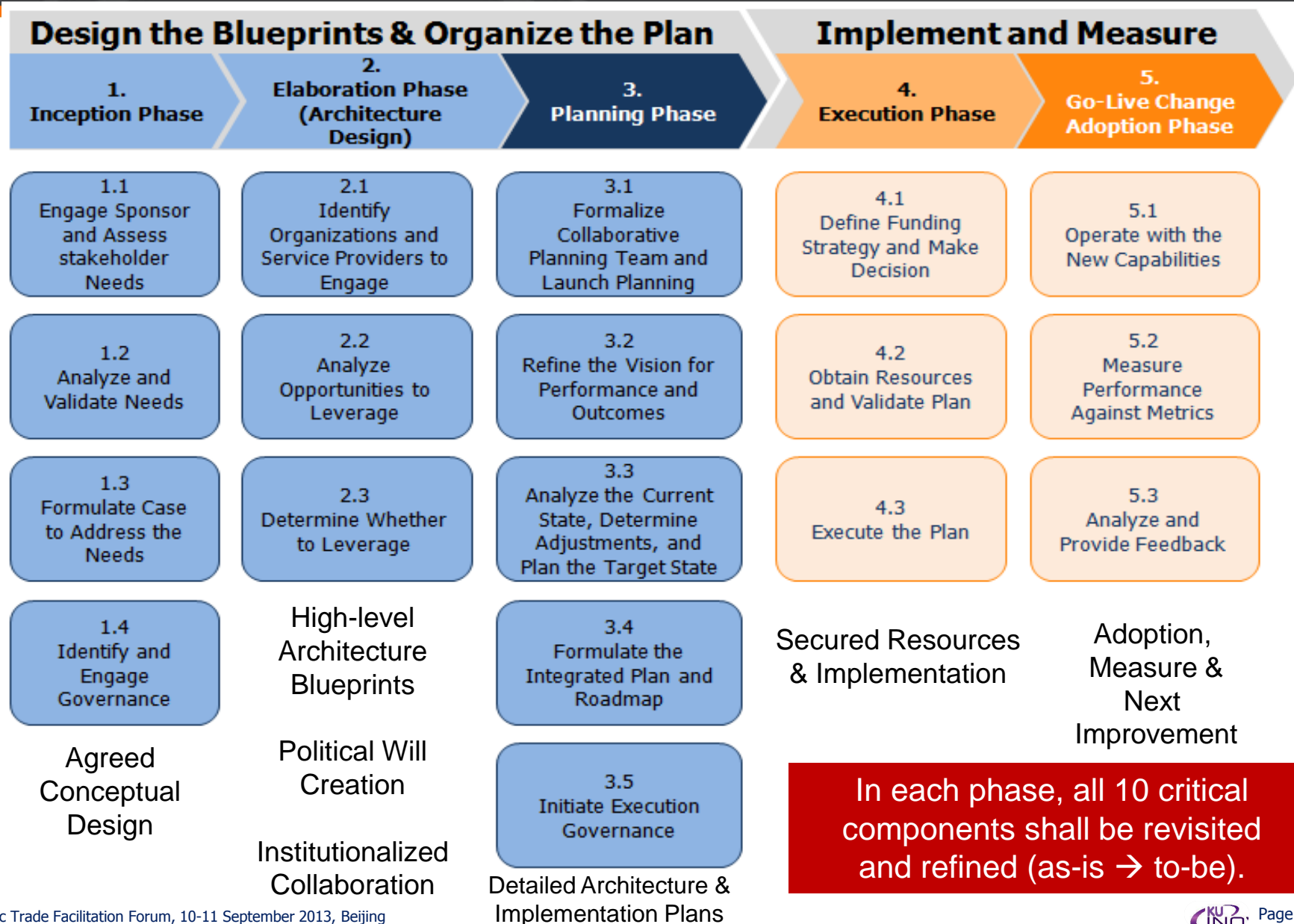
Thailand Case – Trade Facilitation & SW agenda is holistically integrated within the National Logistics Development Plan



Vision & Goals Alignment with National and Regional Agenda



Recommendation 4: Systematically managing NSW projects with Collaborative Project Management Methodology (5 phases)



Recommendation 5: A Staged Approach be adopted to develop a SW

- A long-term & continuously-improved development roadmap but a bite size SW project(s) should be implemented iteratively.
 - [Customs SW] – Economies with traditional customs automation systems should upgrade them to paperless Customs SW.
 - [Port Community System] - Economies with Customs SW should then electronically link with business/transport stakeholders in their major ports.
 - [Regulatory NSW] - Economies with Customs SW can extend their systems to a small set of selected OGAs in the 1st phase, then involving more OGAs gradually, e.g. Thailand NSW now extends interconnection to all 36 agencies.
 - [Integrated NSW] – Few economies now combining PCS & Regulatory NSW into an integrated logistics NSW environment, e.g. Japan's NACCS
 - [Integrated Sub-national SW] – For some economies, they can decide to establish a sub-national or provincial-level Integrated SW.
 - [Regional or cross-border SW] – Electronic information exchange between economies shall be implemented incrementally based on business cases.

A Staged Approach for SW Development (but not necessary in sequential fashion)

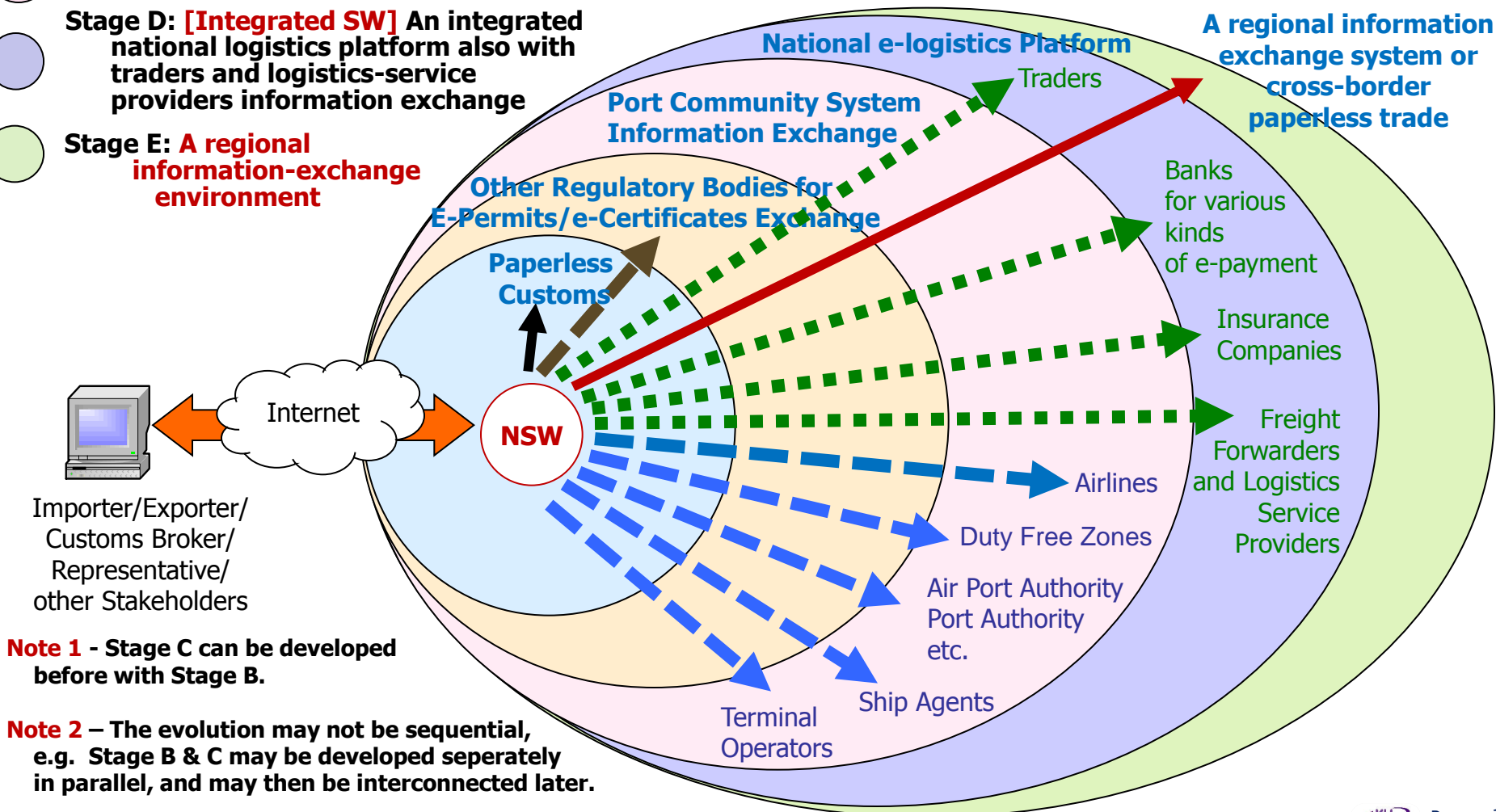
Stage A: [Customs SW] Paperless Customs + e-Payment for Customs Duty + e-Manifest + and electronic risk-based inspection

Stage B: [Regulatory SW] Connecting Other Government Back-end IT systems, and e-Permit/e-Certificate Exchange with Paperless Customs System

Stage C: [PCS] e-Document/Data Exchange among Stakeholders within the (air, sea) port community

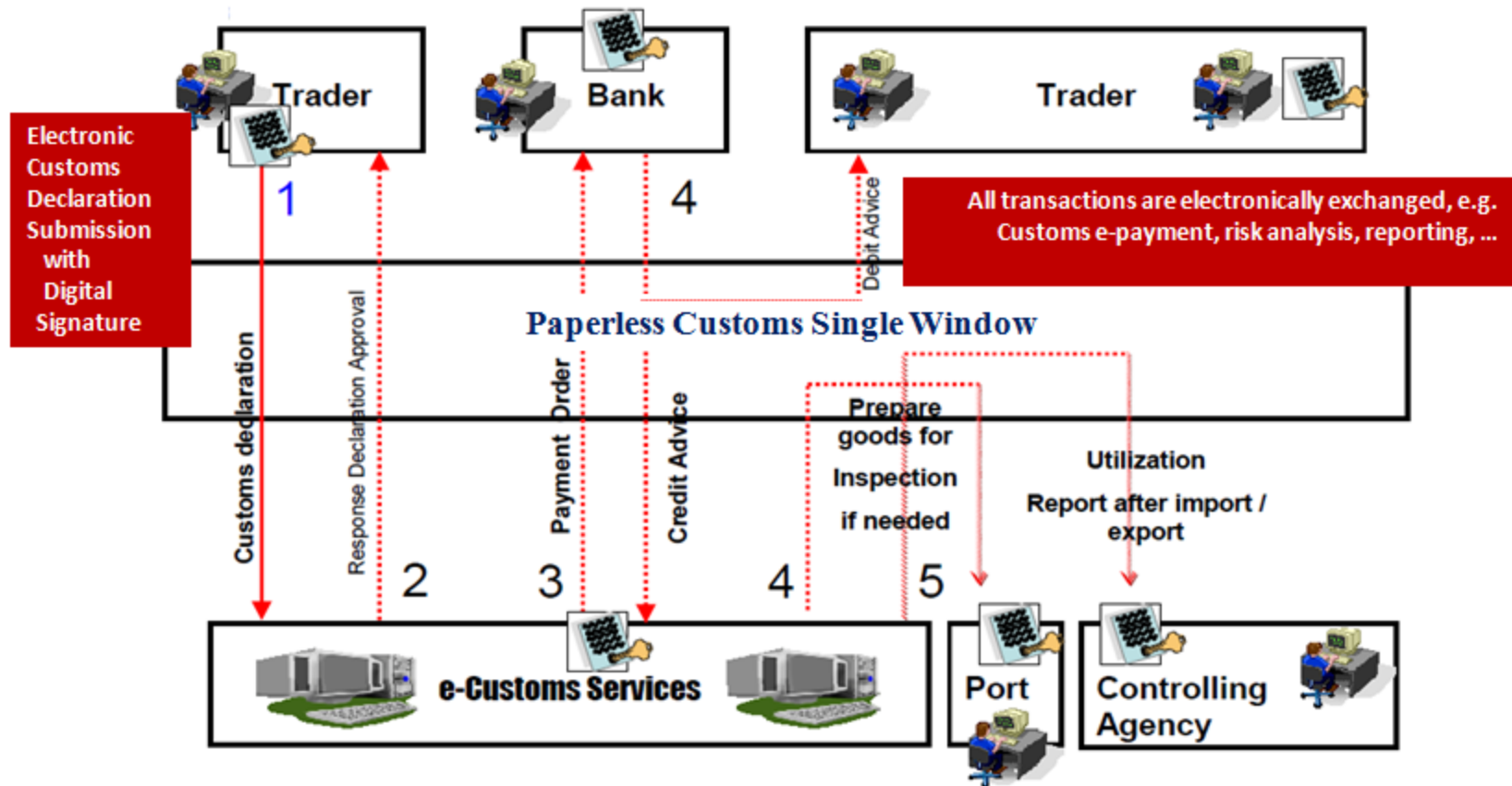
Stage D: [Integrated SW] An integrated national logistics platform also with traders and logistics-service providers information exchange

Stage E: A regional information-exchange environment



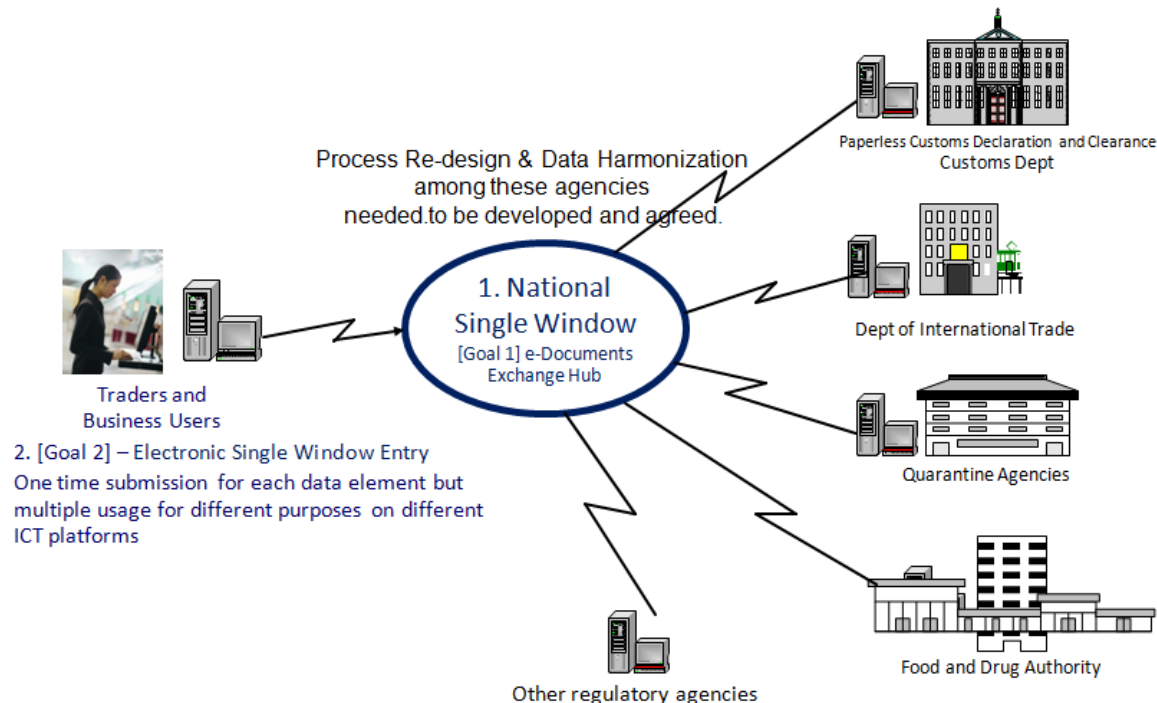
A. Customs Single Window

Preferred Features/Functions for Paperless Customs Single Window –
Electronic Customs Declaration Submission with electronic signature +
e-Payment for Customs Duty +
e-Manifest + and electronic risk analysis
for speeding up customs clearance and reducing # of physical inspections



B. Regulatory Single Window

- Gradually linking Customs SW to few selected OGAs first (based upon key strategic goods, economic gains, willingness and readiness etc.)
 - **Thailand NSW** (1st Phase) connecting electronically only to 4 other government agencies (with high volumes of electronic permits issuing), then to all 36 trade/transport regulatory agencies (2nd Phase)
 - **Azerbaijan NSW** in operation with 4 gov agencies (to be extended more later).

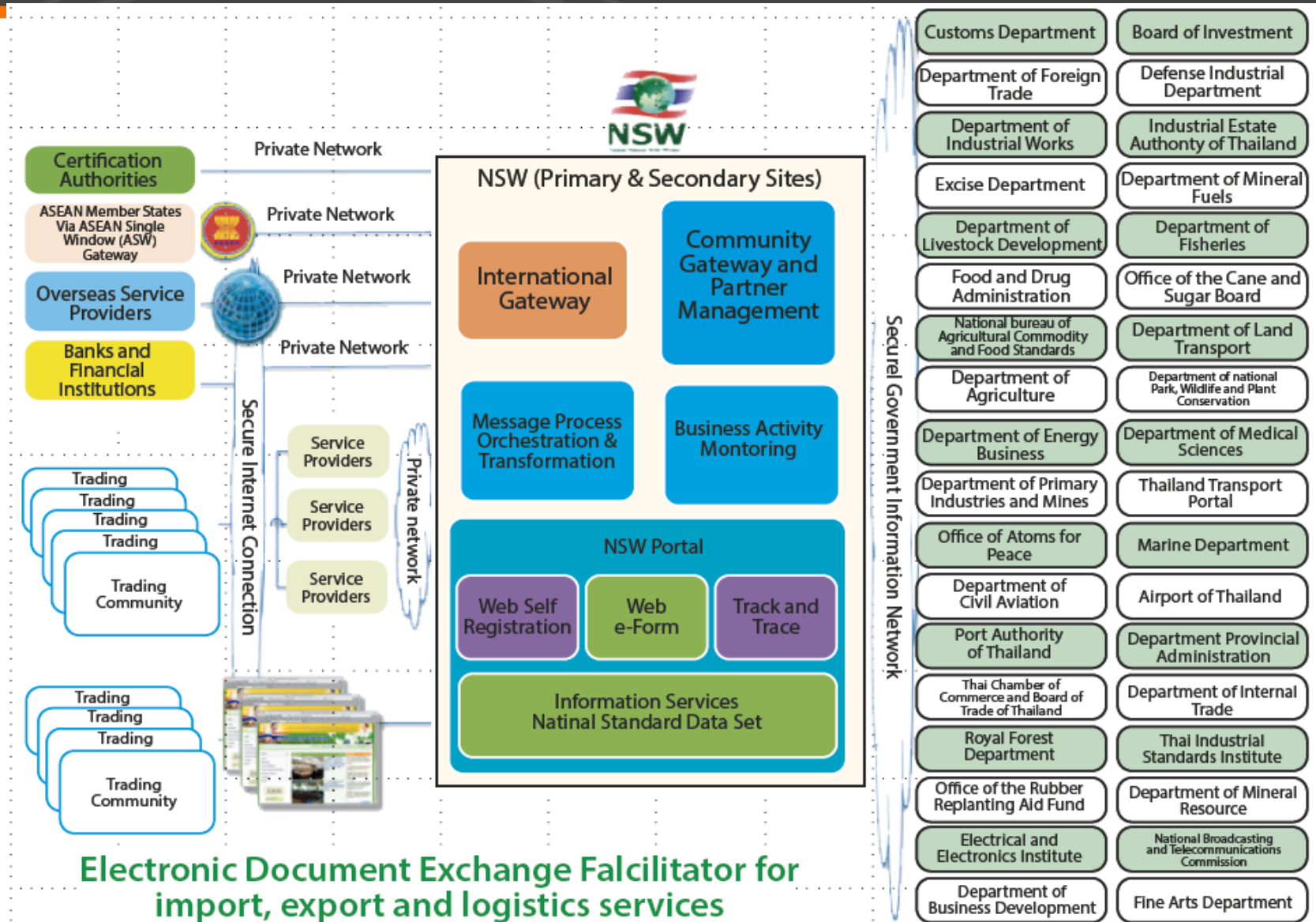


Goal 1- Electronic information exchange for better clearance coordination

Goal 2 – Single Window Entry is more difficult to achieve (e.g. data harmonization exercise must be implemented)

Thailand (Regulatory) NSW Environment

(single data submissions for all agencies have not been achieved yet)



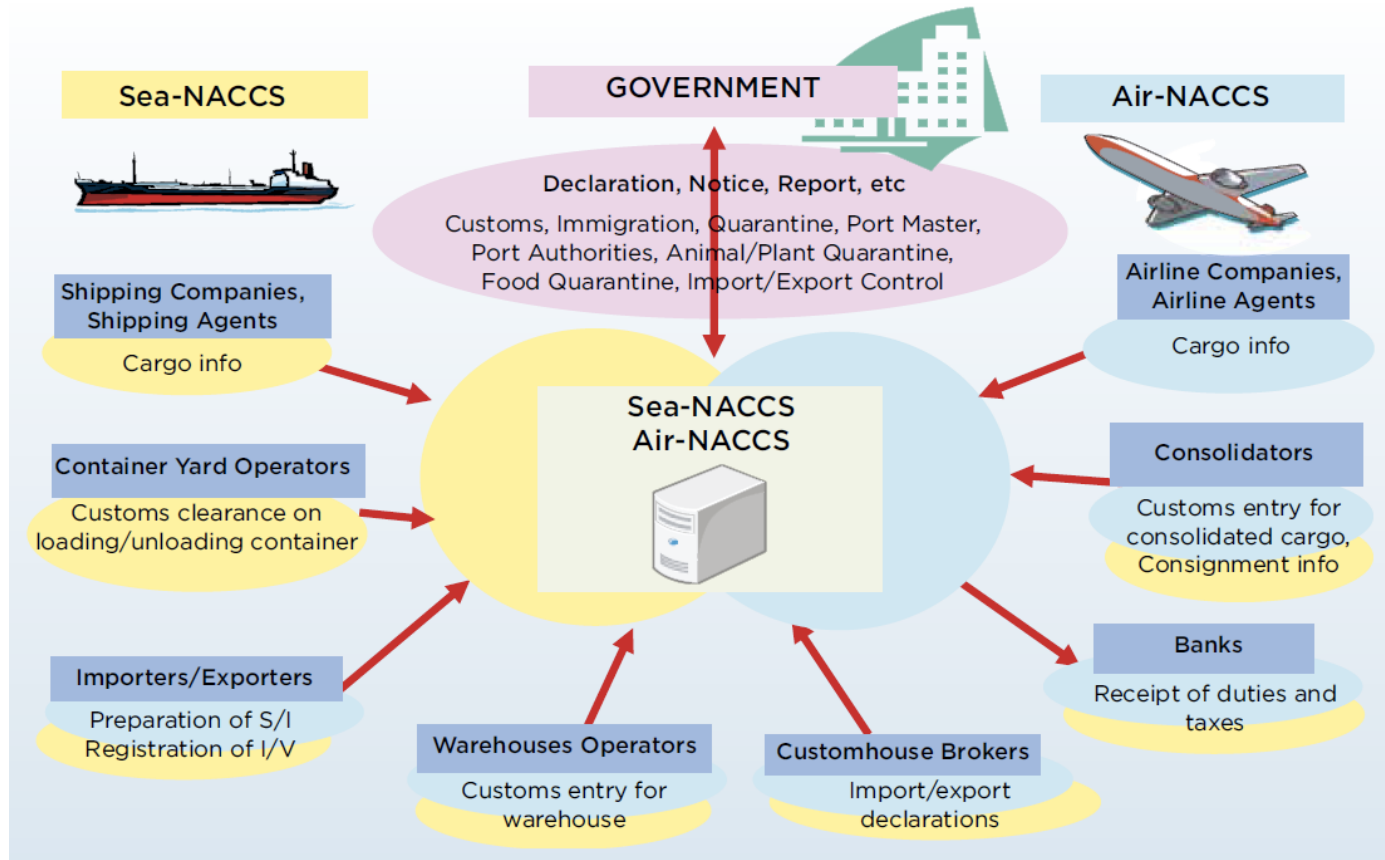
C. Port Community System (PCS)

For port coordination and efficiency

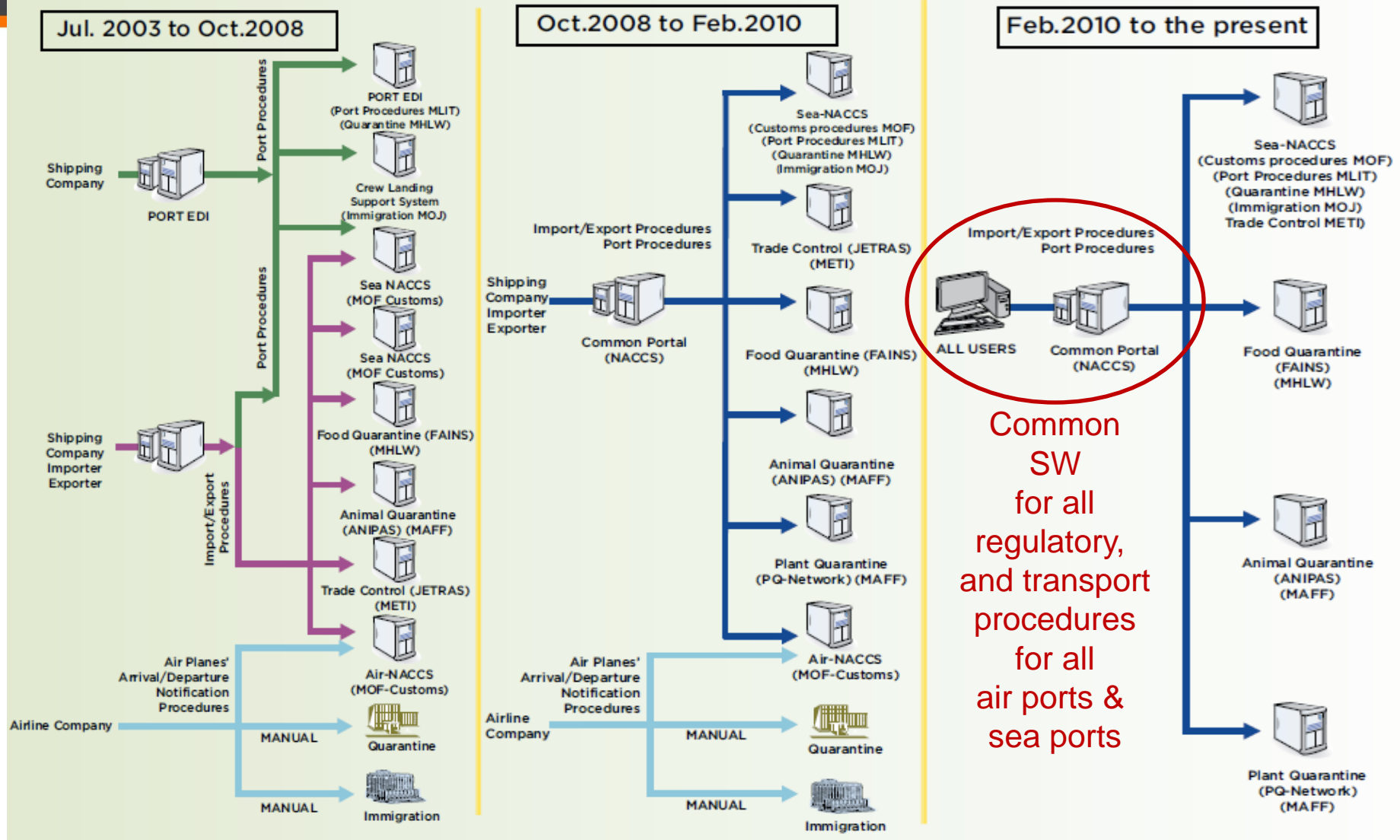
- PCS is an **electronic platform** which connects several systems operated by a variety of organizations that make up a sea port, air port or inland ports, e.g. **freight forwarders, transporters, terminal operators, ship agents, vessels**, etc.
 - Normally, connecting also with some regulatory agencies including **Customs** and **transport-related agencies**, e.g. Maritime department, and Port Authority.
- PCSs are very advanced in many EU countries, but poorly developed in many Asia-Pacific countries, except some major ports in China, Hong Kong, Singapore, and Malaysia, etc.
- **Recommendations:** PCSs should be the national development agenda for Asia-Pacific countries (all major airports, seaports).

D. Integrated NSW

- Integration of regulatory SW and PCS to streamlining all regulatory, transport and payment procedures and documentations in a SW environment, e.g. Japan's NACCS



Evolutionary Development of Japan Integrated SW (NACCS) (long-term & continuous improvement from 1977 to 2013)



(MOJ) Ministry of Justice
(MOF) Ministry of Finance
(MHLW) Ministry of Health, Labour and Welfare

(MAFF) Ministry of Agriculture, Forestry and Fisheries
(METI) Ministry of Economy, Trade and Industry
(MLIT) Ministry of Land, Infrastructure, Transport and Tourism

Ref: <http://www.naccs.jp/e/aboutnaccs/aboutnaccs.html>

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Summary

- ❑ Different Forms of Single Window have been adopted worldwide.
- ❑ SW development typically follows an evolutionary/staged pathway.
- ❑ **A Systematic Development Approach** based on an **Enterprise Architecture** concept is proposed for strategic planning, high-level architecture design, detailed design, implementation and operation.
- ❑ **Five (5)-Phase Project Management**
[Inception->Elaboration->Planning->Execution/Implementation->Adoption]
- ❑ In each phase, **ten (10) critical components** are analyzed to understand the **"as-is" and its bottlenecks**, propose better **"to-be"** conditions/architectures, collaboratively refine and agree.
For example, the proposed "to-be" business process must be discussed and agreed among key stakeholders before IT systems implementation.

Recommendations & Ways forward*

- Topics of capacity building that should be provided by international organizations or the economy herself, e.g.
 - Enterprise Architecture for SW Feasibility Study, Design and Planning
 - Collaborative/Inter-agency Project Management
- Guidelines and lessons learnt collection on governance, business/financial models for SW Sustainability should be developed, including
 - How to develop a Business Case including an estimate of the initial and operating costs, value of the benefits, sustainability, possible mechanisms for revenue collection or free-of-charge services, and sources of project funding?
 - How to examine the potential for a PPP model to the implementation of the project, including revenue streams (or some other models)?
 - What and how to set up “Special [Corporate] Vehicles (SCV)” to implement, operate and further evolve the SW environment?

*Among the 10 critical components, these issues though very crucial have not been covered much in literatures, conference or capacity building programmes.

Thank you.

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Speaker - Somnuk Keretho, PhD



Somnuk Keretho is an assistant professor of Computer Engineering Department, and the founding Director of Institute for IT Innovation (INOVA), a research and development institute of Kasetsart University, Thailand, specializing in ICT-enabled innovation, trade facilitation and e-logistics initiatives including National Single Window strategic planning and implementation, enterprise information architecture for e-government and e-business, business process analysis and improvement, data harmonization and modeling, ICT-related standards and interoperability, e-transaction related laws, and process-oriented quality software engineering.

He has led several ICT strategic projects at organizational, national and regional levels. For the past nine years, he has assisted Ministry of Information and Communication Technology, National Economic and Social Development Board, Ministry of Transport, Port Authority of Thailand, and Ministry of Agriculture in architecting “Thailand Single-Window e-Logistics” related projects including its national e-logistics strategy, implementation plans, interoperability and standards, harmonization and simplification of trade and transport-related documents and procedures, automatic electronic-gate systems development for the Bangkok Port and the Leamchabang Sea Port, and related software development projects.

Several of those projects are being aligned with some regional and international collaborations, in which Mr. Keretho has actively engaged mostly related to trade facilitation, single window and paperless trading initiatives through UNESCAP, UNECE, APEC, ASEAN and GMS. He has played several roles in catalyzing the creation of and actively contributing to the United Nations Network of Experts for Paperless Trade in Asia and the Pacific (www.unescap.org/unnext), and providing several technical supports to the APEC Paperless Trading and ASEAN Single Window Initiatives. He is the main author of the UNNExT Business Process Analysis Guide, the UNNExT Data Harmonization Guide and the UNNExT Guide for Single Window Planning and Implementation.