Single Window Implementation Framework (SWIF)
**Why a holistic and systematic framework is needed?**

**SW from the point of view of a policy maker:**
There are so many challenges to be tackled

**Vision**
- Complicated Trade Procedures
- Many Document Requirements
- Laws and Regulations
- Many Stakeholders
- Conflict of Interest
- Standards
- Many different ICT systems
- Connectivity within the country
- Regional Connectivity
- System Development
- Barriers in Interoperability

**Reality**
- 25% better, faster, cheaper trading across border* within 5 years (2011-2015)
- Difficulty in trade data exchange
- People and Business In-Readiness
- Lack of Understanding
- Inadequacy in Technology Infrastructure
- Change Management
- Compliance Governance

* Referring to World Bank’s Index (www.doingbusiness.org)
Situation:

- Countries had considerable, systematic project planning and implementation issues (Sea-of-death, aborted takeoff, ....)
- Implementers had gained experience in large SW project implementation, completing 4 years of ITAIDE research

Objective:

- Guide to improve planning, increased transparency and governance, reduce projects risks and costs
- Focus on consensus building, objectives, planning, performance measurement for SW
- Interdisciplinary view: policy makers, implementers and academia
- Based on a tried managerial framework
What is SWIF?

- SWIF is a systematic architecture-based framework to support the planning and implementation of a Single Window

- SWIF adapts the concept of enterprise architecture and development methodology* to describe approaches on how to
  - systematically derive the SW strategic architecture,
  - formulate a master plan, and
  - guide the implementation of the project

*Adopted from the Open Group Architecture Framework (TOGAF), Architecture Development Method (ADM)
An integrated Trade Facilitation Strategy for Greece including Single Window, 19-20 July 2012, Athens, Greece

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

Decomposing the SW challenges into ten key components

1. Stakeholder Requirements Identification and Management
2. Single Window Vision Articulation
3. Stakeholder Collaborative Platform Establishment
4. Business Process Analysis & Simplification
5. Data Harmonization & Documents Simplification
6. Service Functions Design
7. Standards and Interoperability Establishment
8. Legal Infrastructure Institution
9. Business and Governance Models Enforcement
10. IT Infrastructure & Solutions Execution

* Referring to World Bank’s Index (www.doingbusiness.org)
SW Development Cycle

1. Inception Phase
   - 1. Stakeholder Requirements Management
   - 2. SW Vision Articulation
   - 3. Stakeholder Collaborative Platform
   - 4. Business Process Simplification
   - 5. Data Harmonization

2. Elaboration Phase
   - 7. Interoperability and Standards Establishment
   - 6. Application Architecture Design

3. Planning Phase
   - 8. Legal Infrastructure Institution
   - 9. Business and Governance
   - 10. IT Infrastructure and Solutions

4. Execution Phase
   - 5. Feedback Phase
<table>
<thead>
<tr>
<th>Components</th>
<th>Objectives</th>
<th>Activities</th>
<th>Deliverables/Expected Results</th>
</tr>
</thead>
</table>
| 2 Single Window Vision Articulation | • Create and articulate joint vision, goals and scope of Single Window  
• Secure the political will and necessary resources | • Elaborate and refine broad vision, strategy, objectives, and goals of the Single Window  
• Define the scope of Single Window Implementation and constraints in terms of resources and competence availability  
• Define value proposition of the Single Window and demonstrate its relations to stakeholders priorities  
• Identify a set of key performance indicators that will serve as target quantitative goals to measure the success of the Single Window implementation  
• Develop a high level master plan that describes overarching strategies for the overall | • A high-level project management group with key stakeholders established  
• An initial high level master plan that defines project components, activities and deliverables  
• Key performance indicators that measure project performance established  
• A high-level master plan approved  
• Top level mandate to develop a Single Window, for example, by a formal decision of Prime Minister, President or the Cabinet  
• Initial finding for funding project components secured |
SWIF and use of standards

- SWIF integrates the application of standards into the project framework
  - When, were, how, for what, who?
  - Business Process Analysis
  - Data Analysis, Structure and Semantics
  - High level for project and policy managers
  - Specialised guides:
EPICSA Architecture Model

How to develop a Port Community System
The Twelve Actions

- Why choose to have a Port Community System?
- Create a Common Understanding of a Port Community System
- Long-term Operation
- Use Existing Knowledge of Port Community Systems
- Development Groups
- Legal Framework
- Customs Integration
- Identification of Core Business Processes to be Addressed
- Communication
- Ambassadors
- How to start developing a PCS - the Community
- Actions
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
Managerial models for Inter-Organizational Information Systems (IOIS) were good fit to explain SW development

A work programme is a bitter medicine (humans like to talk and dream, golden solution, ..)

The objective is not SW but Trade Facilitation ➔ objective driven SW development

SW is about a process of improvement not about development of a system ➔ Emphasis on policy aspects, change management, PKI, Trade Facilitation actions

Evolution of SW: how do Customs systems, the different PCS, eGovernment systems, Logistics systems, .. relate to a SW
Figure 3 Evolution of Single Window development

From SWIF to SW evolution model
Example: Greek National Trade Facilitation Strategy (discussion paper)

Greek National Trade Facilitation Strategy: Projects and priorities

SW development:
SWIF and SW evolution model lead to a number of questions:

- What is the role of IOIS* (PCIs, eLogistics platforms, eCustoms, eGovernance, eMaritime, ..) for facilitation of global supply chains
- How do these systems relate to SW: are they linked to a SW, do they add up to a SW, is the SW the gap between these systems?
- If a country has a complex IOIS ecosystem, does it still need a SW? If so, how would that SW look like? Or is the IOIS ecosystem the SW?
- “Single Window” equal “one”. Can it be two? Can it be zero (i.e. can it be a “Single Window environment”)?
- Impact and opportunities of IOIS on SMEs capability for Cross Border Trade

What is a “Single Window” and how does it relate to the other information systems of global trade?
Thank you

Markus Pikart, United Nations
Markus.Pikart@unece.org

Credits and materials:

Somnuk Keretho, PhD
Institute for IT Innovation, Kasetsart University, Bangkok
sk@ku-inova.org

Single Window Planning and Implementation Guide