

# **Workshop on Recommendation 36 Single Window Interoperability Methodology for National Single Window Alignment**

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## I. THE LATIN AMERICAN AND CARIBBEAN ECONOMIC SYSTEM

- Regional intergovernmental organization that groups 28 Latin American and Caribbean countries.
- Forum for consultation, coordination and convergence.
- Supports regional integration and cooperation.

SELA was established on 17 October 1975 by the Panama Convention

### Objectives:

"To promote intra-regional cooperation to accelerate economic and social development of its State Members."

"To provide the Latin American and Caribbean region with a consultation and coordination system to adopt common positions and strategies on economic issues in international bodies and forums and before third countries and groups of countries."





## II. INTRODUCTION

- In line with international trends and concerns expressed by Latin American and Caribbean countries, the Permanent Secretariat of SELA has developed a systematic effort aimed at:
  - Delving into international trade topics and the implementation of Information and Communication Technologies (ICT) in foreign trade processes;
  - Building thematic dialogues for regional coordination; and
  - Participating as a trusted third party in proposals for cooperation through inter-agency synergies to promote regional initiatives on these issues.
- In view of the above, the Permanent Secretariat has organized between 2010 and 2012, five Regional Meetings on Foreign Trade Single Window. The first meeting of LAC experts on SW ever organized in the region was prepared with the Ministry of Trade, Industry and Tourism of Colombia and the IFC/World Bank. In addition, SELA has published three studies on different issues dealing with SW developments in Latin American and the Caribbean, with an emphasis on international standards and interoperability. The 5th. Regional Meeting is organized with the Secretariat of Economy of Mexico, October, 2013.
- In 2012, the Permanent Secretariat developed the "Pilot Project for Interoperability and Harmonization of Foreign Trade Single Windows within the framework of the Latin American Pacific Arch", through a technical cooperation agreement between CAF, Latin American Development Bank and the Latin American and Caribbean Economic System (SELA).

### III. MAIN OBJECTIVE OF THE PILOT PROJECT

➤ To contribute to the integral development of National Single Windows (NSW) in interested countries, part of the Latin American Pacific Arch, with a regional vision whose strategic sense rests on organizational, regulatory, procedural and technical harmonization and interoperability.

**SPECIFIC  
OBJECTIVES  
OF THE  
PILOT  
PROJECT**

1. To build a methodological approach in line with the realities of the participating countries, thereby contributing to the development of NSWs and expanding the possibilities to harmonize their systems and make them interoperable among themselves and with other countries of the Latin American Pacific Arch and the region as a whole.
2. To define minimum technical requirements for the functionality of NSWs and propose a legal and institutional support required for their operation and sustainability.
3. To lay the groundwork for the conceptualization of an interoperability architecture and platform around specific solutions, with a view to extending the possibilities of making the NSWs interoperable at the regional level.

- In view of the variety of development models and levels of NSWs in Latin America and the Caribbean, the methodology aimed at:
  - Providing tools to facilitate homogeneous analysis of NSWs in their own contexts; and
  - Determining compliance with the main technical, technological and governance features, enabling the interoperability of the NSWs and identifying the use of internationally accepted standards as a good practice.
- Through the implementation of this methodology, it is possible to determine the degree to which a NSW is prepared to interoperate with others and the areas or elements where adjustments are necessary.

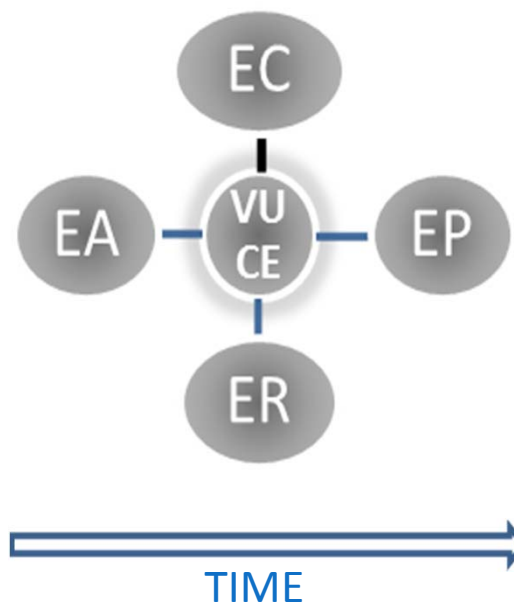
## IV. METHODOLOGICAL PROPOSAL

STEPS	METHODOLOGICAL ELEMENTS
1. Identification of path followed in the development, implementation and operation of NSWs	Systemic/holistic methodological approach: Characterization of Events (Scheme 1) Implementation of expanded Scheme 2: Characterization of previous, related, contemporary and subsequent events
1.1 Elements of Governance	Organization - Institutional framework Legal framework Human resources Budge resources Coordination mechanisms Follow-up and monitoring mechanisms
1.2 Technical Architecture	Process analysis Simplification / streamlining Compliance with standards Harmonization of data and documents Interoperability
1.3 Technological Architecture	Hardware Software Connectivity – Networking Interfaces
2. Location of the NSW according to the processes of the international supply chain	Design and implementation of Table 3: Shipping process in foreign trade transactions – Location of NSW
3. Breakdown of shipping procedures concerning official controls included in the NSW: Specific procedures and actors	Design and implementation of Format 1 Design and implementation of Format 2
4. Identification of Possibilities for Interoperability – Specific Procedures	Formulation of key questions: 1. Have the procedure included in the NSW and the document containing the data elements required by it been standardized and harmonized according to any internationally recognized data model? Which one?  2. Is the certified electronic signature being applied in the conduction of the procedure?
5. Proposal to establish a NSW Indicator (IDNSW)	$IDVun = (ISwif) * (ISOf)$



## STEP 1. IDENTIFICATION OF PATH FOLLOWED IN THE DEVELOPMENT, IMPLEMENTATION AND OPERATION OF NSWs

### APPROACH TO CHARACTERIZATION OF EVENTS - SCHEME 1





## 1.1. MINIMUM ELEMENTS OF GOVERNANCE:

- Collaboration and coordination environment;
- Defined and delimited public policy;
- Strong long-term commitment and support by high-level authorities;
- Effective management of expectations and perceptions;
- Institutional framework necessary to establish interoperability standards, ensure approval and provide the agencies involved with organizational and technical capacity-building to implement them;
- Establishment of priorities, agreements and availability of resources.
- It is considered a good practice to receive a high-level mandate to undertake the development of the NSW, identify its key benefits and designate a leading agency to develop the vision of its architecture. In addition, it is important to define its scope, identify actors and guarantee the required resources.

## 1.2. TECHNICAL ARCHITECTURE: Minimum technical elements

- It is the functional core of the NSW.
- To achieve interoperability, it is necessary to remove the technical barriers (the main obstacles to interoperability) that are related to the analysis and simplification of processes and to syntactic and semantic incompatibilities of the information to be exchanged. To that end, it is necessary to:
  - Identify the methodology used for business process modeling;
  - Perform a semantic review; and
  - Perform a syntax review; data structuring and a model of exchanging them (EDIFACT; XML).



Trade data come together in a harmonized set of data requirements and standardized messages under a specific data model.

### 1.3. TECHNOLOGICAL ARCHITECTURE: Minimum technological elements

- Hardware, software, network and connectivity infrastructure to ensure that NSW subsystems are linked smoothly;
- Establishment of communication and security protocols;
- Use of compatible standards that allow for the implementation of computer techniques to share and exchange heterogeneous information between two or more systems;
- Tools to facilitate transactions, such as electronic payments and digital signatures (or certified or qualified electronic signatures) and, where possible, services of electronic notification and time stamping, among others.
- A good practice would be the use an open, neutral and safe technological infrastructure, aimed at linking the various stakeholders through standardized electronic messages.

### **Governance:**

- Organization - Institutional framework
- Legal framework
- Human resources
- Budget resources
- Coordination mechanisms
- Follow-up and monitoring mechanisms

### **Technical architecture:**

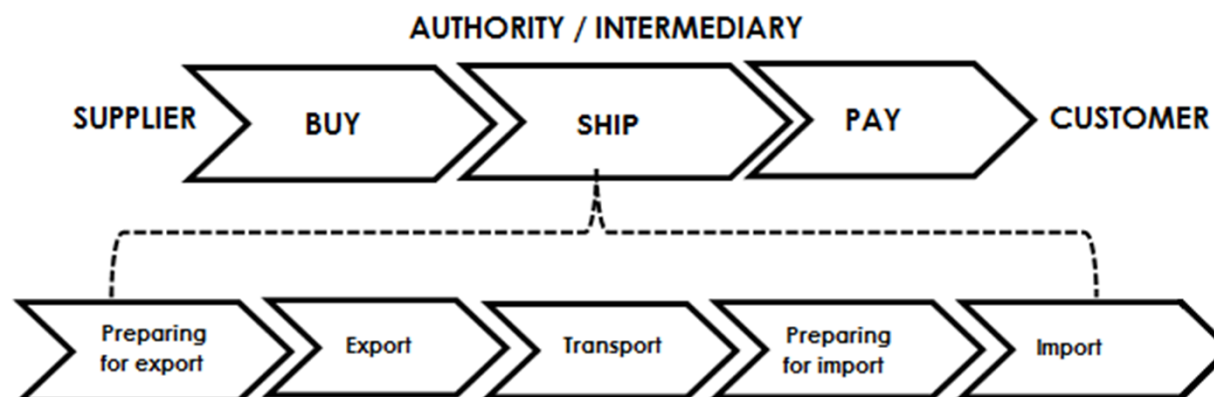
- Process analysis
- Simplification / streamlining
- Compliance with standards
- Harmonization of data and documents
- Interoperability

### **Technological architecture:**

- Hardware
- Software
- Connectivity – Networking
- Interfaces

## **STEP 2: LOCATION OF THE NSW ACCORDING TO THE PROCESSES OF THE INTERNATIONAL SUPPLY CHAIN**

### **INTERNATIONAL SUPPLY CHAIN (UN/CEFACT – Recommendation18)**



- **BUY:** Covers all commercial activities related to the demand for goods;
- **SHIP:** Covers all activities related to the transport of goods and includes the official controls;
- **PAY:** Covers all activities related to the payment of goods.

## (CONT.) STEP 2: LOCATION OF THE NSW ACCORDING TO THE PROCESSES OF THE INTERNATIONAL SUPPLY CHAIN

### SHIPPING PROCESS IN FOREIGN TRADE TRANSACTIONS

#### LOCATION OF NSW

Table 3

PREVIOUS PROCESSES				CUSTOMS PROCESSES	
(Private-private, private-public, public-public relationship) (B2B - G2B - B2G - G2G)				(Public relationship: Customs - Private: AdA direct users, transporters) (G2B)	
PRIVATE		OFFICIAL			
Process	Actor	Process	Actor	EXPORT	IMPORT
Transport	Cargo agentes, airlines shipping lines	Obtaining permits, certifications or approval prior to export	Related public entities	Application for authorization of shipments	Notice of arrival and customs clearance
Insurance	Insurers, financial institutions	Obtaining permits, certifications or approval prior to import (automatic and no automatic licenses)	Related public entities	Admission to primary zone or free trade zone	Import declaration and payment of customs duty (tariffs and VAT)
				Inspection	Inspection
				Shipping authorization	Release



## 2.1. PRIOR REGULATORY PROCESSES

- Different requirements compared to customs procedures, which are handled by other authorities involved in cross-border trade and must be met prior to shipment of goods.
- A large proportion of the administration costs of trade and time required for import/export processes is generated in these prior regulatory processes.
- United Nations instrument for the standardization of documents used in international trade and transport: United Nations Layout Key Form for Trade Documents (UNLK).
- On the basis of the UNLK, the model UNeDocs is developed: stable data architecture for the implementation of NSWs.
- The WCO, through version 3 of its Data Model, has also worked on the standardization of procedures and harmonization of data and documents required by control entities besides customs.



## 2.2. CUSTOMS PROCEDURES

➤ If the purpose is to find a solution that allows for interoperability of national systems along the international supply chain, through the generation of a single window environment, as well as interoperability of NSWs at regional and international levels, the data models of single windows and customs must be compatible and work, to the greatest possible extent, with standards that allow for the electronic exchange of data.

## STEP 3: BREAKDOWN OF SHIPPING PROCEDURES CONCERNING OFFICIAL CONTROLS INCLUDED IN THE NSW: SPECIFIC PROCEDURES AND ACTORS DESIGN OF FORMATS

### Format 1: PREPARATION FOR EXPORTS / IMPORTS PERMITS, CERTIFICATIONS OR APPROVALS PRIOR TO EXPORT / IMPORT

CATEGORY	TYPE	SPECIFIC PROCEDURE	PRODUCT	RESPONSIBLE ENTITY
Sanitation	Human			
	Animal			
	Plant			
Environment Protection	SAO CITES			
National Security	Security			
	Weapons and Ammunition			
Technical Norms	Industry and Trade			
	Transport			
National Production	Industry			
	Mines			
Trade Measures	Quotas assigned by Trade Agreements and FTAs			
	Diplomatic quotas			
	Quantitative safeguards			
Others				

## **(CONT.) STEP 3: BREAKDOWN OF SHIPPING PROCEDURES CONCERNING OFFICIAL CONTROLS INCLUDED IN THE NSW: SPECIFIC PROCEDURES AND ACTORS**

**Format 2: STATISTICS OF THE PRIOR PROCEDURES IDENTIFIED IN FORMAT 1**

SPECIFIC PROCEDURE	RESPONSIBLE ENTITY	STATISTICS (MONTHLY AVERAGE LAST YEAR)
...		

### ➤ **Formats 1 and 2 allow to:**

- Identify those transactions that could be included in a proposal for interoperability of specific foreign trade procedures among NSWs;
- Measure the impact of the specific procedure on the trade of the country concerned;
- Identify which and how many actors are involved in the conduction of the procedures.

## ***STEP 4: IDENTIFICATION OF POSSIBILITIES FOR INTEROPERABILITY – SPECIFIC PROCEDURES***

### **Formulation of key questions:**

1. Have the procedure included in the NSW and the document containing the data elements required by it been standardized and harmonized according to any internationally recognized data model? Which one?
2. Is the certified electronic (digital) signature being applied in the conduction of the procedure?

If the foregoing is in line with the United Nations, the cross-border exchange of information can start at any time, depending on the stage of development of the NSW. For instance, a fully integrated NSW system can provide data on official regulations, customs, transportation and trade aspects, but at an earlier stage in the evolution of the NSW the electronic exchange of data may be possible with respect to only one of those processes.

## **Step 5: Proposal to establish a NSW Development Indicator (IDN<sub>sw</sub>)**

- The objective is to determine and visualize the level of development of the NSWs under study at any given time.
- It is based on two components: 1) degree of implementation of the activities proposed by the *Single Window Implementation Framework* (SWIFT) of UNECE-UN/CEFACT), and 2) indicator of services offered by each NSW.

$$\underline{IDN_{sw} = (ISwif) * (ISOf)}$$

$$ISwif = \Sigma F / 10$$

Where  $F = \Sigma a / n$

(NOTE: “F” = Phases of the SWIF and “a” = activities included in each phase)

$$ISOf = \Sigma \text{ Services Offered} / \text{Total \# of Services}$$

## PROPOSAL TO OUTLINE INDICATOR OF OFFERED SERVICES

Processes and Elements	Included Yes=1; No=0
1. Preparing to export (prior regulation procedures)	
1. Export (Customs procedures) ;)	
1. Transport	
1. Preparing to Import (prior regulation procedures)	
1. Import (Customs procedures)	
1. Digital signature (qualified or advanced electronic signature)	
1. Electronic payments	
INDICATOR OF OFFERED SERVICES – ISOF	$\frac{\Sigma}{7}$

$$\underline{3. IDN_{sw} = (IS_{wif}) * (ISO_f)}$$

## PROPOSED INDICATOR OF NSW DEVELOPMENT (IDN<sub>sw</sub>)

**Gathering information:** Implementation of the approach to characterization of events and the formats designed in this project by:

- External experts
- Leading authority of the corresponding NSW
- Others

### **Limitations:**

- Subjective appraisal – Can be minimized
- Need for officials dealing with the indicator to have basic and homogeneous knowledge about NSWs



## THE PROPOSED INDICATOR OF NSW DEVELOPMENT (IDN<sub>sw</sub>) WOULD ALLOW FOR :

- Outlining a roadmap of NSWs in LAC and an outlook for future regional developments;
- Identifying possible weaknesses and critical knots for the development, implementation and operation of each NSW;
- Recommending efforts for improvement;
- Expanding possibilities of making single windows interoperable;
- Conducting evaluation activities in each country, leading to self assessments of their NSWs.

## PROPOSED INDICATOR OF NSW DEVELOPMENT (IDN<sub>sw</sub>)

- The proposal to establish an indicator to measure the development of NSWs, within the framework of this pilot project, leaves room for discussion and refinement;
- The proposal complies with the main objective of encouraging the possibility of developing it through a more complex, interdisciplinary technical work which could be carried out on a regional scale, through technical cooperation, with the participation of intergovernmental, multilateral agencies and regional integration organizations, in inter-institutional synergy.

## V. GENERAL CONCLUSIONS AND RECOMMENDATIONS

- The methodological construction included outlining and adapting appropriate instruments, such as:
  - The approach to characterization of events, which from a systemic standpoint, allows for analyzing and understanding the path followed in planning, developing and implementing an FTSW; and therefore detect weaknesses and critical knots, as well as defining improvements and opportunities;
  - Design of formats: Table 3: General expeditious process for foreign trade operations and location of the FTSW, as well as Forms (1 and 2) prepared to gather information about the procedures, including the specific arrangements carried out as part of those processes, the actors involved and their respective statistics. This may allow the countries concerned for identifying common procedures and consequently simplifying them, thereby making their interoperability feasible within the framework of bilateral and intra-regional trade.

## ➤ V. (Cont) GENERAL CONCLUSIONS AND RECOMMENDATIONS

- A conceptual framework was developed to ensure the use of a common language as regards the core concepts and subjects dealt with in this pilot project, namely: NSW, Interoperability, Harmonization and Data Models.
- In building the methodology, an aspect standing out is the initial proposal for designing a development indicator of the NSW (IDNsw). Once its structure it technically improved, the indicator is expected to allow for measuring in a comprehensive manner the performance of single windows and their development in the various countries of Latin America and the Caribbean.

## V. (Cont) GENERAL CONCLUSIONS AND RECOMMENDATIONS

- In view of the crucial importance of standardization and data harmonization, it is a good practice for NSWs to use the internationally accepted data standards, such as those of UN/CEFACT and the WCO, since they are intended to favour integration and harmonization at regional and international levels. Adopting them can make a difference in assessing the competitiveness of an economy in terms of the ease with which foreign trade transactions can be made.

## V. (Cont.) GENERAL CONCLUSIONS AND RECOMMENDATIONS

- It is of strategic importance for the countries of Latin America and the Caribbean to find ways to actively participate in the international Working Groups dealing with trade facilitation issues, in general, and particularly those relating to foreign trade single windows, such as those formed within the context of UN/CEFACT and the WCO. Also, it would be highly beneficial for the region to gain knowledge about the best practices developed in these international bodies, through workshops and training activities.
- It is of the utmost importance to promote institutional capacity building in the countries of the region, in synergy with the various integration and cooperation organization, so as to foster the development of NSWs in their different phases as well as their related procedures, through training programmes for capacity building and related activities.

## **V. (Cont.) GENERAL CONCLUSIONS AND RECOMMENDATIONS**

- It is highly recommended to replicate the methodological basis proposed in this document to other interested countries in Latin America and the Caribbean. In this way, they will have the opportunity count on a homogeneous analysis to detect possible weaknesses or critical knots that may emerge during the development, implementation and operation of each NSW. In this regard, a recommendation is made to make the greatest efforts for the further development and improvement of single windows, so as to increase the possibilities to make them interoperable and ensure their operation within an integrated and interrelated environment.



## FINAL REFLECTION

- In short, the results of this Pilot Project, in the medium and long term, are expected to lead to the facilitation of the procedures associated with foreign trade, transparency, efficiency and legal and technical security of such procedures, thus reducing costs in the supply chain and promoting cross-border paperless trading; for the sake of improving trade capacities of the countries, increasing both the region's competitiveness global trade and intra-regional trade flows in Latin America and the Caribbean, as well as with Asia and the Pacific and other regions of the world. Ultimately, they are expected to give a decisive boost to digital integration processes, within the framework of the regional integration processes, in a world whose growing globalization demands renewed efforts for innovation and leadership.

**THANK YOU VERY MUCH**

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