SWAM

SINGLE

WINDOW

ASSESSMENT

METHODOLOGY
**SWAM Project Purpose**

- **Various interpretations** of SW, in terms of its scope, participants, and purpose, has become a pressing issue when revising Rec 33.
- Some countries faced **confusion** when instruments implements were referred to as an **SW** when, in fact, they were not.
- **Member states** to the **WTO TFA** must notify the performance of article 10.4. At the same time, the countries that notified this item as satisfied, **lacked** any **clear** assessment **methodology**.
- Necessary to develop additional indicators enabling the governments to evaluate the level of development of an SW and to answer the question: To what extent does the existing facility meet the requirements of trade facilitation and international practice and international organizations recommendations?

**SWAM Project Scope**

- Project involves developing a standard methodology for assessing the level of development of the Single window based on indicators systematized from international recommendations and Best practices of countries.
- The Project Will strengthen the capacity of countries to understand the goals and objectives of the single Window implementation and reveal the directions for further simplification of trade procedures.
Where we are now?
We need to know where our SW is and identify what the Project Manager or stakeholders need to develop, change, improve or implement.

What we want to be?
To fulfill/cover the 5 key elements and recognized as one Integral SW platforms, with the involvement of all the stakeholders.

SW Assessment Methodology
### SWAM

**Creating a Methodology will allow:**

- Once all possible reasons for an assessment are known, studied, and the root cause recognized, suitable actions can be identified to fill or mitigate the gap.

<table>
<thead>
<tr>
<th>Task</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determine if there is a Single Window in the country</td>
<td>Within the framework outlined in the Rec 33</td>
</tr>
<tr>
<td>Assess the current level of the Single Window development based on quantitative and qualitative indicators</td>
<td>Clear and common indicators, will provide an objective assessment</td>
</tr>
<tr>
<td>Identify the directions of the Single window</td>
<td>Develop and preparation for further steps to reduce the gap</td>
</tr>
<tr>
<td>Build a historical assessment and improving ranking on the single Window development process</td>
<td>Getting initial data and benchmarking for the evolution</td>
</tr>
<tr>
<td>Help countries obtain expert support and support from development institutions</td>
<td>Including investment and benefits for users and stakeholders on trade facilitation</td>
</tr>
</tbody>
</table>
Single Window Assessment Methodology

**Plan**
- Identify the gap
- Investigate the causes
- Select actions
- Implement actions
- Study the result
- Standardize & improve

**Do**
- Set time frame goal to brainstorm, prioritize and carry the implementation innovation
- Make the assessment again
- Replicate and better scale the process

**Check**
- Study the result

**Act**
- Implement actions
- Select actions
- Identify the gap
- Investigate the causes

**Features**
- Project features that make our SW improve and fully implemented
- Current status, and changes recognized
- Work on the design and development strategies
- Set time frame goal to brainstorm, prioritize and carry the implementation innovation
**DIFERENT PERSPECTIVES SWAM** DIFFERENT VISIONS to CONSOLIDATE

**REGIMES**
- Import
- Export
- Transit
- Logistics
- Bonded warehouses
- Other Regimes

**FUNCTIONS**
- Submit, Evaluate and Authorization LCPOs electronically
- Retransmission LCPOs to Customs
- Electronic payments duties and tax
- Customs declaration
- Data exchange with logistics carriers
- Monitor Procedure
- Risk Analysis Analysis

**COVERAGE BORDERS**
- Maritime Ports
- Airports
- Land Borders (truck, river, railroads)
- Postal entry points
- Economic Zones
- Free Trade Zone

**STAKEHOLDERS INVOLVED**
- Customs
- Customs Officers
- Government Agencies
- Private Sector Professionals
- Port stakeholders
- Airport Stakeholders
- Logistics
- Customs Brokers
- Government Agencies

**RESULTS**
- Significant reduction of LCPO Authorization
- Improve Time Release for Customs
- Improved information for Logistics in terms of time and feasibility
- Reduction of indirect formality cost

**IMPLEMENTATION ISSUES**
- High level government leadership
- Consensus of the GPA
- Customs Involvement and commitment
- SW Steering Committee structured
- Logistics carriers disposition and collaboration
- Technical upgrading readiness to maximize potential
- User ownership
- SW Mandatory use
This new methodology of assessing the level of the Nation Single Window (NSW) development, promotes awareness of the current status so that the key aspects and course of action can be identified to improve international trade procedures. Applying mathematical methods and quantitative indicators enables an objective evaluation of the NSW implementation level to be made.

5 KEY ELEMENTS

- Parties involved
- Standardized information and documents
- Single entry point
- Fulfilling regulatory requirements
- Single submission of individual data elements
For the purposes of evaluating a successfully functioning SW for each key factor, a number of indicators have been identified that describe the most important legal format and technological and information technology factors, grouped pursuant to Section L of the revised version of Recommendation No. 33 on SW development.

The experts shall assess the key factors affecting a NSW development, based on the conclusions made after analyzing the materials received and applying the above-mentioned number of standards by means of the verbal–numerical Harrington scale, which defines a certain response interval for assessment. Each standard is evaluated by grades.

When selecting the gradation, the key factors are evaluated subject to the international recommendations and standards as well as to their compliance with successful international experience in the development of SW and trade facilitation.
### 5 KEY ELEMENTS OF SW FORMULA

Rapid-analysis of a SW availability based on key elements is expressed as a percentage:

\[
O_e = \frac{\sum_{i=1}^{e} O_{ei}}{E} \times 100
\]

Where \(O_e\) – overall assessment based on five elements of a SW;

\(\sum_{i=1}^{e} O_{ei}\) – sum of assessments per element of SW;

\(E\) – number of elements of SW (\(E = 5\)).

The computed value \(O_e\) describes the NSW implementation progress as a percentage. Further to this computation, a key factors–based assessment of successful functioning of a SW is calculated.

<table>
<thead>
<tr>
<th>SW Element</th>
<th>Not implemented</th>
<th>Partially implemented</th>
<th>Implemented</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parties involved in trade and transport (both from the public and private sector)</td>
<td>0</td>
<td>0.5</td>
<td>1</td>
</tr>
<tr>
<td>Standardised information and documents. Use of internationally recognised standards for SW implementation for the coordination between stakeholders and between countries.</td>
<td>0</td>
<td>0.5</td>
<td>1</td>
</tr>
<tr>
<td>Single entry point (an entry point means the facility where all data concerning a transaction should be submitted electronically; an economic operator should only need to submit their data to one such entry point for their transaction).</td>
<td>0</td>
<td>0.5</td>
<td>1</td>
</tr>
<tr>
<td>Fulfilling regulatory requirements (which implies that a SW fulfils a government function and, as such, it has received a relevant mandate from the government to perform these actions).</td>
<td>0</td>
<td>0.5</td>
<td>1</td>
</tr>
<tr>
<td>Single submission of individual data elements (individual data elements that have been submitted should not need to be submitted again; this does not mean that all individual data elements must be sent at the same time in a single submission, it could be sent progressively).</td>
<td>0</td>
<td>0.5</td>
<td>1</td>
</tr>
<tr>
<td>Key factor</td>
<td>Standards to describe the key factors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Political will</td>
<td>The government and executive power support implementation of a NSW. In the case of change in government and (or) executive power leadership, keeping the goal current within the transition period. A high-ranked official (no lower than that of deputy prime minister) is designated in charge of supervising the project. Business world provides public support to the implementation of the NSW.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strong lead agency</td>
<td>The authorised agency responsible for implementing the NSW is provided by legislation. The consultative body is available comprising state authority representatives, members of organisations and the business community. The authorised agency coordinates and accomplishes implementation of the NSW. The authorised agency provides control over the obligations incurred, periodically reviewing and updating strategic plans based on the current situation and future public expectations.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partnership between government and trade</td>
<td>Participation of the business community in the meetings of the unit of expert coordination on NSW. Keen interest of the business world in developing a NSW (local projects e.g. data portal, terminal, B2B networks), business associations’ on-site meetings, road maps, participation in evaluating regulators activities.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clear project boundaries and objectives</td>
<td>Available goals and targets approved. The concept (strategy) of implementing a NSW is adopted by legislation. Project implementation dates have been set. There is a detailed plan (program, road map) to have the project implemented.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Key factor</td>
<td>Standards to describe the key factors</td>
<td>Example grade for Russia (1–5)</td>
<td></td>
</tr>
<tr>
<td>----------------------------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------</td>
<td></td>
</tr>
<tr>
<td>Legally enabling environment</td>
<td>Availability of legislatively adopted:</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rules, governing the exchange of B2G and G2G e-data and e-documents, and their paper counterparts of similar status.</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Rules vesting the right to file information with the government authorities only once.</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Provisions on e-customs, e-commerce (including payments), transport, logistics with respect to validity of e-documents, submitting and exchanging data using e-signature (UNCITRAL rules).</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Provisions on public–private partnership to finance and operate the system.</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Provisions on admissibility of e-documents and messages as evidence in the court.</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Provisions on the cooperation of government authorities at the border.</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>International standards and</td>
<td>Application of the UN\CEFACT recommendations on the development of a NSW.</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>recommendations</td>
<td>Information has been streamlined, harmonised and simplified as outlined in UNECE recommendations such as Recommendations No.1 and No.18.</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Relevant international data exchange standards are used, such as the WCO Data Model and/or UN/CEFACT data libraries and Reference Data Models.</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Application of international standards in designing and implementing information system and technologies when developing a SW (ISO, GS1 etc.).</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Financial model</td>
<td>Availability of financial resources (government, public-private partnership).</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Co-financing of the project by members of the business community.</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Promotion and marketing</td>
<td>Promoting the project on a NSW implementation by drawing attention to the project, organising educational events, presentations and advertising campaigns.</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>A well-designed policy of marketing services provided for the NSW.</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Publishing reports and keeping the interested public informed of accomplishing the project objectives, project progress, as well as any difficulties occurred.</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Restoring operability in case of</td>
<td>It has been specified what personnel should do in case of emergency and force majeure to promptly restore the operability of the information systems.</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>emergency</td>
<td>Data-copying tool is provided for and applied to promptly restore operability of a NSW.</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The roadmap is specified for participants of trade and government authorities in case of information systems failure.</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>
Gradation on each key factor is dependent:

\[ O_{PN} = \frac{\sum_{i=1}^{n} O_k}{K_k}, \]  

(2)

where \( O_{PN} \) – key factor assessment; \( N \) – key factor number;

\[ \sum_{i=1}^{n} O_k \] - sum of the indicators in grades per key factor subject to a collective expert assessment, where 1 = very low, 2 = low, 3 = medium, 4 = above medium, 5 = high.

\( K_k \) – the number of indicators, describing the key factor. Thus, an average value is computed for each key factor to determine the level of implementing a particular factor in the country.

The assessment of overall key factors of a successful NSW development is expressed as:

\[ O_{kf} = \frac{\sum_{i=1}^{N} O_{Pi}}{N}, \]  

(3)

where \( O_{kf} \) – overall key factors assessment

\[ \sum_{i=1}^{N} O_{Pi} \] – sum of key factors assessments

\( N \) – number of key factors (\( N = 10 \)).

Value \( O_{kf} \) determines a national SW development subject to the key factors in percentage.

\[ O_{kf}(\%) = \frac{O_{kf} \times 100}{m}, \]  

(4)

Where \( O_{kf}(\%) \) – overall assessment of a NSW implementation subject to the key factors of a successful NSW development in percentage.

\( m \) – marginal grade on the key factor (\( m = 5 \)).
### Indicators to Assess a NSW with Respect to Achieving the Objectives

<table>
<thead>
<tr>
<th>Business expectations – Yes or No -</th>
<th>Achievement feature</th>
<th>Government expectations</th>
<th>Achievement feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traders are able to submit all the required information and documents through the SW</td>
<td>No</td>
<td>Better co-ordination and co-operation between the governmental authorities involved in trade-related activities</td>
<td>Yes</td>
</tr>
<tr>
<td>Quicker and more accurate validation and distribution of this information</td>
<td>Yes</td>
<td>Smooth information sharing and dissemination amongst government agencies</td>
<td>Yes</td>
</tr>
<tr>
<td>SW minimised potential data errors from rekeying or reprocessing information into different systems</td>
<td>No</td>
<td>All trade-related data is maintained in electronic format and shared with the appropriate agency when it is required</td>
<td>No</td>
</tr>
<tr>
<td>Faster clearance and release times, speeded up the supply chain</td>
<td>Yes</td>
<td>Risk management techniques for control and enforcement purposes are using the data from SW in a systematic way</td>
<td>No</td>
</tr>
<tr>
<td>SW improved transparency and increased predictability, reduced the potential for corrupt behaviour from both the public and private sector</td>
<td>Yes</td>
<td>SW reduced the proportion of physical inspections to a small percentage of total consignments</td>
<td>Yes</td>
</tr>
<tr>
<td>Lower the administrative costs</td>
<td>No</td>
<td>The analysis of trade flow data and performance, and the preparation of analytical reports and statistical material can be done quickly and easily</td>
<td>Yes</td>
</tr>
<tr>
<td>SW encouraged greater trader compliance and provide enhanced transparency on regulatory requirements</td>
<td>No</td>
<td>SW ensured rapid and accurate payments to government authorities and agencies</td>
<td>Yes</td>
</tr>
<tr>
<td>SW improved trader compliance due to integration of legal and procedural requirements in a timely manner</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total number ‘yes’</strong></td>
<td><strong>3</strong></td>
<td><strong>Total number ‘yes’</strong></td>
<td><strong>6</strong></td>
</tr>
</tbody>
</table>
NSW assessment related to accomplishing the objectives of implementation is expressed as a percentage:

\[ O_b = \frac{\sum O_{bb} + \sum O_{bg}}{N_b} \times 100, \quad (5) \]

Where

\( O_b \) – overall assessment of the NSW related to accomplishing the objectives of implementing the mechanism in \%;

\( \sum O_{bb} \) – number of ‘Yes’ responses for characteristics of accomplishing the objectives of implementing the NSW for business;

\( \sum O_{bg} \) – number of ‘Yes’ responses for characteristics of accomplishing the objectives of implementing the NSW for government authorities;

\( N_b \) – total number of characteristics of accomplishing the objectives of implementing the NSW for business and government authorities; \( N_b = 15 \).

The value \( N_b \) describes the level of NSW development related to accomplishing the objectives of implementing the mechanism in a percentage.
## Assessment standards related to applying modern ICT and cutting-edge technologies within a SW

<table>
<thead>
<tr>
<th>No.</th>
<th>Indicators</th>
<th>Grade*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>NSW Information portal available</td>
<td>2</td>
</tr>
<tr>
<td>2</td>
<td>Using e-signature and (or) its equivalent in accordance with UN\CEFACT Recommendation No. 14</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>Electronic declaration system available for any customs procedure</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>Filing e-data and e-documents, which form the basis of customs declaration, to accompany commercial delivery</td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>Electronic enquiry and issuing electronic authorization documents, or information on issuing an authorization document</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>Automated calculation of the amount of duties, taxes and other charges</td>
<td>3</td>
</tr>
<tr>
<td>7</td>
<td>Online electronic payment systems (by credit cards, e-wallet, bank transfer etc)</td>
<td>3</td>
</tr>
<tr>
<td>8</td>
<td>Interdepartmental information exchange</td>
<td>2</td>
</tr>
<tr>
<td>9</td>
<td>Risk management system, including interdepartmental</td>
<td>2</td>
</tr>
<tr>
<td>10</td>
<td>Post-audit information support, including post-audit by means of remote access to trader’s personal account</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>Cross-border electronic exchange between NSWs</td>
<td>1</td>
</tr>
</tbody>
</table>

### Application of Industry 4.0. technology in the NSW

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Grade*</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>Artificial intelligence and machine learning technologies are applied</td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>Big Data analysis technology</td>
<td>1</td>
</tr>
<tr>
<td>14</td>
<td>Internet of things technology, including drones</td>
<td>1</td>
</tr>
<tr>
<td>15</td>
<td>Distributed ledger technology (Blockchain)</td>
<td>1</td>
</tr>
</tbody>
</table>
Overall assessment of the ICT basis and application of cutting-edge technologies in a NSW

\[ O_{ict} = \frac{\sum_{i=1}^{E} O_{Ei}}{E}, \quad (6) \]

Where \( O_{ict} \) – total grade of indicators of a NSW;
\[ \sum_{i=1}^{E} O_{Ei} \] – sum of grades by indicators of a NSW;
\( E \) – number of indicators of a NSW (\( E = 15 \)). The value \( O_{ICT} \) describes the development of NSW as a scores.

To express this as a percentage, the following formula is used:
\[ O_{ict}(\%) = \frac{O_{ict} \times 100}{m}, \quad (7) \]

Where \( O_{ict} \) (\( \% \)) – overall assessment of the ICT basis and application of cutting-edge technologies in a SW in as a percentage;
\( m \) – number of standards (\( m=4 \)).

Integral value of the current development of a NSW is calculated using the formula:
\[ O_{NSW}(\%) = \frac{O_{e}(\%) + O_{kf}(\%) + O_{b}(\%) + O_{ict}(\%)}{4}, \quad (8) \]

It is important to underline what could be considered as a normal grade for a country. With very high standards in using cutting-edge technologies, it is very challenging for any country to achieve 100 per cent.

Therefore, it is necessary to remember that the first five indicators determine whether the country has a SW. TFA 10.4
The calculations showed that the assessment of the current status of a SW development in the Russian Federation according to the relevant key factors is 59 per cent. Pursuant to the methodology, we shall further assess the NSW with regard to achieving the objectives of implementing a NSW for the government and business.

Having obtained the data on a NSW development according to the four methods proposed by the methodology, we shall calculate the integral grade for the Russian Federation.

$O_{SW\ Russia\ (%)} = \frac{50 + 59 + 60 + 48}{4} = 54\%$

The integral grade of the NSW current development in the Russian Federation, according to the authors’ methodology, is 54 per cent.
SWAM TECHNICAL STRUCTURE AND WEIGH

ADMINISTRATION TOOLS
- LCPOs Dev Tool
- Payment
- Data Base
- BPM Engine
- Message hub and interconector

INTEGRATION ENGINE

INTERCHANGE ANS SECURITY TOOLS
- CUSTOMS DECLARATION
- E-Manifest
- Risk Management Module
Each Level consider different stakeholders and committed actors. Can Methodology should consider this PPP scope but its an interpretation difficult to compare.
<table>
<thead>
<tr>
<th>LEVEL OF COMMITMENT</th>
<th>PROJECT SPONSORS</th>
<th>PROJECT TEAM</th>
<th>STAKEHOLDER FOCAL POINT</th>
<th>USERS AS STAKEHOLDERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>4- Total Commitment</td>
<td>Optimum</td>
<td>Optimum</td>
<td>Optimum</td>
<td>Optimum</td>
</tr>
<tr>
<td>3- Support for the project with a constructive attitude</td>
<td>Satisfactory</td>
<td>Satisfactory</td>
<td>Satisfactory</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>2- Understanding of the project, but low mobilization</td>
<td>Acceptable</td>
<td>Insufficient</td>
<td>Acceptable</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>1- Awareness of the project’s stakes, without further interest</td>
<td>Insufficient</td>
<td>Critical</td>
<td>Insufficient</td>
<td>Acceptable</td>
</tr>
<tr>
<td>0- Rejection of the project</td>
<td>Critical</td>
<td>Critical</td>
<td>Critical</td>
<td>Insufficient</td>
</tr>
</tbody>
</table>

**Caption:**

4- **Total commitment:** total ownership of the project and proactive participation in proceedings.

3- **Support for the project with a constructive attitude:** belief in the interest of the project and willingness to contribute to proceedings.

2- **Understanding the project, but with low mobilization:** understanding the interest of the project, with low level of involvement.

1- **Awareness of the project’s stakes, without further interest:** Knowledge of the project and its impact with refusal to be involved.

0- **Rejection of the project:** Refusal to take part in the Single Window and cooperate with the project team.
SWAM Project Status

Overall, our goal is to ensure that project gets delivered on time, with outstanding results, and preferably under many expert contribution.

- **30% Status of Completion**: We have thus far completed about 30% of the project and we need more collaboration.
- **3 / 6 Chapters to Complete**: We have thus far completed part of the Outline and working on the most important Methodology and application chapters.
- **3 Meetings**
- **>20 Experts**: This project involves and utilizes talents from many countries and regions, with plenty of experience.
- **Feb 2022 Deadline**: Due to the importance of this project, the deliverables and commitment has change as initially presented.
SWAM Project Team

Thank You

Joaquin González
Project Leader

Aleksey Bondarenko
Vice Chair

Joaquin González
Project Leader

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