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NSW Newsletter

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Warmest wishes for a Happy & Prosperous New Year 2026!

SPOTLIGHT ARTICLE

Sri Lanka's Trade Transformation: KPMG Leads Validation for the Functional & Technical Requirement Specification for NSW System

Project Implementation Unit (PIU), Trade National Single Window System (TNSWS), facilitated a Validation Workshop on the Functional & Technical Requirement Specification for the Development of the TNSWS on 16th December 2025, at the Bandaranaike Memorial International Conference Hall (BMICH), Ruby Hall, Colombo 07. The event brought together representatives from 18 Government Agencies, 05 Private Sector Chambers, Trade Associations and Ministry of Finance to review and validate findings of the draft final report presented by KPMG Technology Solutions Pvt. Ltd, and to receive an update on the legal and regulatory gap analysis by the World Bank.

In redefining the landscape of cross-border trade, the PIU - TNSWS, of the Department of Trade & Investment Policy, Ministry of Finance, Planning & Economic Development, facilitated a validation workshop for the Functional & Technical Requirement Specification (F&TRS) Assessment of the TNSWS. This workshop was carried out by KPMG Technology Solutions Pvt Ltd, who conducted the F&TRS Assessment marking a pivotal milestone in transitioning Sri Lanka toward a unified digitized, paperless trade ecosystem.

The session commenced with the opening remarks of Dr Adam Bawa Issadeen, Cross Border Process Management Specialist, welcoming the participants on behalf of the PIU. Thereafter, Mr. Kathirgamathamby Tharshan, IT Specialist, PIU, shared the purpose and objectives of the workshop. He provided a synopsis of the specific pillars: Functional, Non-Functional and Technical requirements gathered from the various GAs, in order to obtain the endorsement needed to move into the next phase of the project.

A Single Digital Gateway for Trade

The representatives of KPMG Technology Solutions team led by Shirantha Fernando, Senior Manager IT Advisory, along with the NSW Consultant Mr. Aleksei Bondarenko, navigated through the presentation, setting the stage for a comprehensive guide on the F&T Assessment with TNSW as a "Central Intelligence Hub" to streamline the submission of trade-related information. The presentation depicted the

current plight of traders who navigate through multiple government agencies, often facing repetitive manual paperwork. Therefore, TNSW is to serve as a "Single Submission" model, where all trade-related information is submitted once electronically, reaching all relevant Integrated Government Agencies (OGAs) simultaneously.

Therefore, the TNSWS shall act as the Central Intelligence Hub serving as the "heart" of the system that manages data harmonization, risk scoring on predictive risk profiling and multi-agency workflow orchestration between the Private Sector and the Public Sector.

Key Innovations and Global Standards to Deliver Benefits to All Stakeholders

The TNSW system is built to align with international standards, specifically *UN/CEFACT Recommendation No. 33* and the *World Customs Organisation (WCO) Data Model*. This ensures that Sri Lanka's trade data is interoperable with foreign National Single Windows, such as the ASEAN Single Window model.

The Path Forward: Addressing Challenges

Despite the technical progress that's intended and expected, the KPMG team also highlighted critical organizational and technical concerns. Few of these are navigating hurdles centered on legal and regulatory alignment, operational reform and system integration. In terms of legal & regulatory alignment, a pressing need is to officially recognize digital signatures and authenticated electronic documents, while establishing a clear governance structure that defines the roles of lead and participating agencies. Operationally, agencies need to overcome resistance to move away from manual, paper-based processes through structured change management and capacity building. Harmonizing business processes is required to eliminate duplicate or redundant requirements. Technically, the focus is on achieving seamless interoperability between the TNSW and existing legacy systems via standardized Application Programming Interfaces (APIs). The APIs are the digital "plugs" or "translators" that allow different government agency systems to talk to each other automatically without human intervention. Therefore, these standardized APIs act as a universal language that forces these different systems to follow the same rules when exchanging trade data. This ensures that agencies maintain regulatory autonomy and data ownership while adhering to shared data quality and validation standards to prevent duplicate information. Furthermore, addressing resource constraints, such as limited IT expertise and budgets for OGA's system upgrades, remains essential for ensuring the system's long-term sustainability and accountability.

The F&TRS Assessment workshop ended with a Q&A Session and the individual OGAs clarifying with KPMG representatives on areas that required final endorsement to conclude the assessment report.

Update on the Legal and Regulatory Gap Analysis

During the latter end of the workshop, Mr. M M M Rishaffy, Trade Facilitation Consultant, World Bank Group, presented an update of the ongoing Legal and Regulatory Gap Analysis. The details of the research conducted including the key challenges, legal Issues faced in establishing a TNSW and the required support of the participating agencies, in order to submit the report by the end of 2025 and to prepare for the validation workshop in by early January 2026, was expressed.

Sureni Wijesinghe
Change Management and Capacity Building Specialist - TNSWSP

Functional & Technical Requirements for the Trade National Single Window (TNSWS)

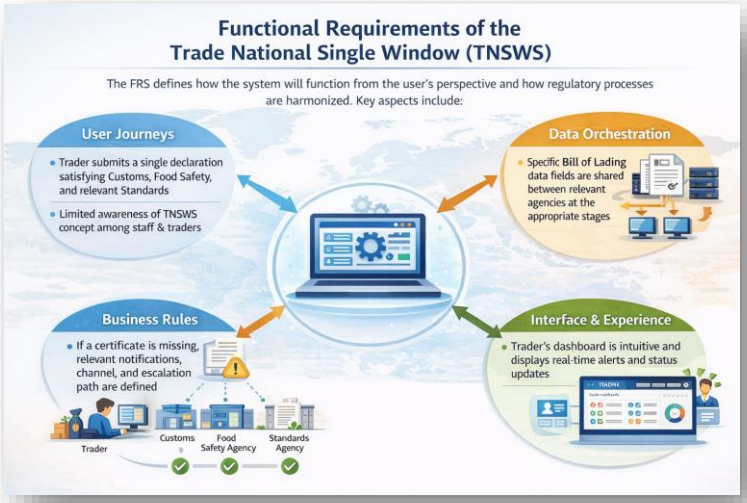
In the High-Level Design of the **National Single Window (NSW)**, the promise is compelling: a single digital gateway transforming cross-border trade.

This assignment focused on a detailed requirement analysis for the implementation of a Trade National Single Window System, Sri Lanka. This was conducted by KPMG Team together with the NSW Consultant which embedded their international expertise in such a transformation. I've learned that the bridge between this assignment and reality is not built alone. It is built on two meticulously crafted documents: the **Functional Requirement Specification (FRS)** and the **Non-Functional and Technical Specification.** These are the twin blueprints that ensure we build the right system and build the system right.

This is considered the critical most phase of the assignment. Before a single line of code is written, we must answer two fundamental questions: **What must the system do?** (Functional) and **how will it (the system) do it, at its core?** (Technical).

Therefore, our role is to translate hundreds of complexes, often siloed regulatory processes into clear, unified workflows. For example, the FRS defines:

- **User Journeys:** How does a coffee importer submit a single declaration that satisfies Customs, Food security and the relevant Standards required by multiple agencies?
- **Data Orchestration:** What specific data fields from a Bill of Lading are shared? with whom? and at what stage?
- **Business Rules:** If a certificate is missing, who is notified? through what channel? and what is the escalation path?
- **Interface & Experience:** What does the trader's dashboard look like? What alerts do they receive?



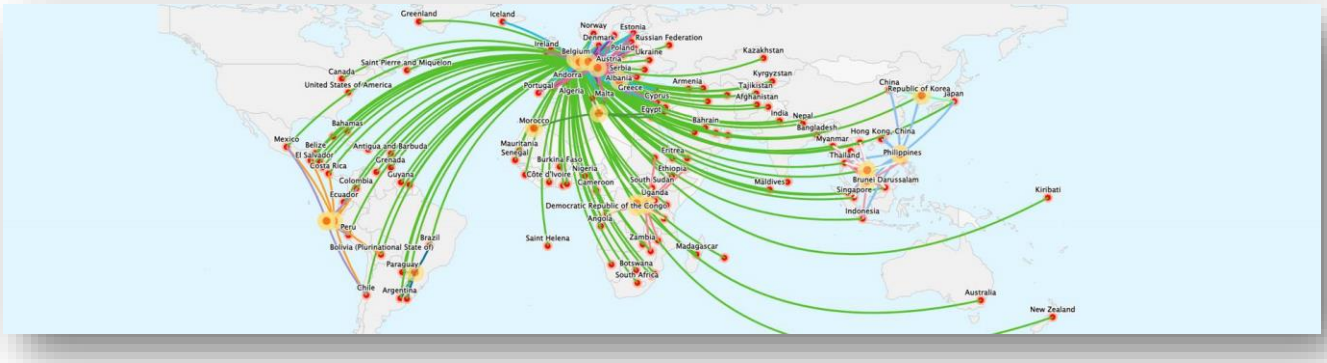
The Technical Specification (TS): The "How will it (the system) do it, at its core? "

If the FRS is the rulebook, the TS is the engineering schematic. It details the High-Level architecture that will bring those rules to life, focusing on non-negotiable pillars:

- **Interoperability & Integration:** How will the NSW platform connect securely to dozens of legacy agency systems? We specify API protocols, data standards (like World Customs Organization (WCO) Data Model), and message formats.
- **Security & Sovereignty:** How is data encrypted, and what standard is used for data encryption during transit of data? Where are the servers located? How is access controlled and audited? This section is paramount for building trust.

In essence, the **Functional & Technical (F&T) Specifications are the foundations of project success.** They align expectations, mitigate monumental risks and provide the definitive guide for vendors and developers.

Tharshan Kathiragamathambi
IT Specialist II - TNSWSP



ONE Window for All Trade: Sri Lanka Gears Up for Major Reform

Validation workshop reveals gaps, sets stage for streamlined cross-border trade

Colombo, September 2025 – *Trade National Single Window System Project*, convened a validation workshop on the *Need Assessment and Baseline Setting for the Development of the Trade National Single Window System (TNSWS) on 30th September 2025 at Forecastle, Lighthouse Galley, Colombo 01.* ***The event brought together representatives from 18 Government Agencies, 05 Private Sector Chambers, and Trade Associations to review and validate findings of the draft final report on the Need Assessment and Baseline Setting.***

"Photographs courtesy of the Media Unit of the Ministry of Finance, Planning & Economic Development"

The main purpose of this workshop is to present the results and obtain stakeholder validation to ensure accuracy and consensus before moving to the next phase of the Project. The assessment, conducted by M/s Deloitte Advisory Services (Pvt) Ltd., examined the readiness of Government Agencies across key areas including business processes, legal and regulatory frameworks, IT infrastructure, and human resource capacities. Preliminary findings indicate that while progress has been made, readiness levels differ significantly among agencies, underscoring the importance of establishing a common baseline before moving forward with system integration.

Speaking at the opening session, Project Director, Mr. Neelakanth Wanninayake emphasized the importance of collaborative effort: *"The Single Window is not merely a technology project but a reform initiative requiring commitment, harmonization, and ownership by all stakeholders."*

Presentations were delivered by experts including Dr.Issadeen Adam Bawa, Coordinated Boarder Process Management Specialist, who outlined the findings of the need assessment, and IT specialists who introduced the backend portal developed for stakeholder communications. The workshop also featured sessions on legal gap analysis, IT integration requirements, and the forthcoming phase on preparing functional and technical specifications and procurement documents.

Key objectives of the workshop included validating baseline data, refining processes and sub-processes of each agency, and establishing a data collection mechanism to support the next stage of the Trade National Single Window System project.

The workshop concluded with a discussion on the way forward, which includes finalizing the functional and technical specifications, developing procurement documents, and ensuring that the legal and institutional frameworks support smooth implementation. Officials emphasized the importance of continued collaboration between Government Agencies and the private sector to address gaps and strengthen institutional capacity.

The TNSWS project, once implemented, is expected to streamline cross-border trade procedures by providing a single electronic gateway for traders to submit regulatory documents, thereby reducing delays, enhancing transparency, and strengthening Sri Lanka's competitiveness in global trade.

L.G. Anuja Tillekaratne
Project Secretary – TNSWSP

Challenges and Risks in Implementation of Trade National Single Window System and Recommendations for Change

The implementation of Trade National Single Window System (TNSWS) is a significant step toward modernizing the country's trade facilitation framework in Sri Lanka. Understanding the existing features, environment, challenges, risks and stakeholder needs is a pivotal role in ensuring that the TNSWS is designed and implemented in alignment with international best practices, regulatory requirements and technological advancements. Project Implementation Unit (TNSWS) conducted a Need Assessment and Baseline Setting via Ms. Deloitte Advisory Services (Pvt) Ltd. The objective of need assessment is to assess institutional readiness and operational capacity of the participating Government Agencies (GAs) to align with TNSWS's technical, legal and procedural requirements. The assessment has captured information of the process, legal, technological and human resource environments of 18 participatory Government Agencies involved in trade facilitation, mainly on the issuance of CLPRs related to imports, exports and transshipments, as well as traders' viewpoints through 5 Chambers of Commerce.

While there is strong government commitment and stakeholder engagement, the targeted change management, communication, and capacity-building strategies will be paramount to achieving Sri Lanka's vision of a seamless, integrated and paperless international trade facilitation environment. Several challenges and risks have been identified by GAs with regards to moving towards TNSWS. These challenges are categorized as challenges and risks relating to business processes, legal environment, IT readiness and human resource capacity below.

Challenges in Implementation of TNSWS

The challenges encountered in implementing TNSWS include business process-related challenges, restrictions in legal environment, limitations in IT readiness and constrains in human resource capacity in broad level and those challenges are discussed in detail below.

a) Traders frequently face duplicative procedures and manual handoffs, such as entering data into online systems and then having to also submit hard copies or the same information multiple times. Many agencies also require manual handoffs for making applications due to lack of a digitized system.

b) Incomplete or inaccurate submissions of documents and data and resubmitting applications to the system lead to delays and added workload for officers in the Government Agencies.

c) Agencies use siloed systems, with lack of structured mechanisms for inter-agency real-time data exchange. Absence of Application Programming Interfaces (APIs) and Memorandum of Understandings (MoUs) among most agencies slow down risk-based inspections and joint clearances.

d) There are operational bottlenecks as the traders have to visit the locations of certain GAs physically, delays in processing and additional costs.

e) Physical infrastructure gaps that include poor labs for testing of consignment samples, outdated computers, lack of generators, inadequate border offices and limited IT devices in some of the GAs and their ranches.

f) Many laws and regulations are pre-date of digital trade. Several do not clearly authorize electronic records or digital signatures, creating uncertainty.

g) While some agencies e.g. Sri Lanka Standards Institution, Inland Revenue Department, Department of Imports & Exports Control, Sri Lanka Cargo, Department of Commerce, Sri Lanka Customs have advanced IT systems, some agencies have partial digitization, but their systems don't cover end-to-end processes, creating hybrid inefficiencies.

h) Many agencies indicated lack of a dedicated IT team/ officer to support IT operations. It was further observed that several agencies had no SOPs for data quality control and validation. With regards to data backup and disaster recovery plans, most agencies either had none or were still at a preliminary stage.

i) Of the 18 agencies, 10 either had no IT strategy/ roadmap or it was still in the initial development phase. Many agencies also had no IT-related policies or SOPs in place.

j) Centralized data sharing raises concerns about misuse. Some agencies are wary of sharing sensitive information. Awareness about data security and privacy also remains low.

k) Lack of server space and backup power are some of the key technological limitations that may also impact some agencies. It has been cited the inability to function during power cuts due to lack of generators.

l) Many agencies face HR shortages. Out of18 agencies, 12 agencies have indicated that staff shortage is a considerable barrier to implementation of TNSWS. Vacancies in approved cadres result in heavy burden placed on top officials.

m) In addition to general staff shortages, some agencies of lack dedicated IT staff, considerably hindering

their institutional capacity to manage and maintain an advanced IT system.

n) While majority of staff across all agencies have basic IT skills, many do not have exposure/ expertise in crucial areas such as managing workflow systems, integrated risk management and cybersecurity awareness. Staff of many agencies also indicated lack of adequate domain-specific expertise, such as knowledge on certificate, license, permit and recommendation (CLPR) processes and trade facilitation.

Risks in Implementation of TNSW

Need Assessment has also identified the following key risks to be considered towards the successful implementation of TNSWS and they are categorized as program risks, organizational capacity to change risks, leadership risks, and resource risks in broad perceptions.

a) A common human behavior in change is the fear among staff of losing control and power over their domain or resources. This concern is heightened in environments with limited prior experience of transparency.

b) Staff members are often comfortable with existing manual, paper-based systems and processes. Making adoption of new digital systems is initially uncomfortable to the staff members. Most agencies currently rely on paper-based processes for trade transactions and transitioning away from this environment will be a considerable challenge.

c) It has been revealed that there is limited awareness and understanding of TNSWS concept among general staff and trading community.

d) Some stakeholders harbor that expectations for reforms extend beyond the actual scope and objectives of the TNSWS project.

e) Stakeholders frequently express concerns about the absence of clearly written and easily accessible SOPs, particularly on government agency websites, which are often outdated or inconsistent. This makes it difficult to find comprehensive and reliable procedural advice.

f) Basic IT literacy is present in most government agencies. There is a lack of experience in working with and supporting sophisticated workflow systems that match the richness of TNSWS functionality. Training is required not only on using the new system but also on new policies, procedures, and processes.

g) Staff of GAs may struggle to grasp and apply new concepts such as risk management, functionalities of TNSWS, border post inspections, and dashboards. Further, GA staff may have lack of fundamental system engineering knowledge. There is also limited experience in governing integrated multi-user IT applications and networks.

h) There would be reluctance to adopt TNSWS innovations like paperless processing and digital signatures.

i) Government agencies are often not accustomed to routine, day-to day collaboration and information exchange beyond formal, manual channels, partly due to perceived legal impediments. Introducing a sophisticated system for information sharing could be met with hesitancy and fear, especially concerning data security and confidentiality.

j) Without a clear understanding of the implementation approach and their roles, staff may be reluctant to contribute to critical tasks like workflow configuration or system testing, fearing the implications of signoffs.

k) Many government agencies operate with limited resources and often work multiple shifts to manage existing workloads. The concurrent implementation of TNSWS with other IT changes and routine tasks poses a significant risk of change fatigue and staff burnout. This can lead to staff being unable to dedicate sufficient time to supporting the development and learning of the new system.

Recommendations for Change

The following recommendations are proposed based on assessment of the current level of readiness across the 18 Government Agencies, to be integrated within a TNSWS, in terms of their business processes, legal environment, IT maturity and HR capacity.

a) IT Integration and Interoperability

Currently, a selected number of government agencies utilize automated systems for trade-related processes. These systems often operate in isolation, resulting in fragmentation and technological incompatibilities, which in turn cause inefficiencies and duplication of data management efforts. The 18 agencies have been classified into three categories based on their IT maturity and digital readiness for TNSWS integration. It is proposed that agencies which already operate modern ICT systems can be directly integrated to the TNSWS via APIs and messaging protocols, while those lacking the internal IT infrastructure be connected through a web interface to TNSWS for electronic submissions, approvals, and data sharing.

b) Phased Approach to Implementation

A phased approach will support towards improved resource efficiency and utilization as well as enable effective monitoring and feedback loops among key stakeholders. To ensure visibility of early success, it is suggested that a public TNSWS dashboard should be operated, trader testimonials captured, pilot tests run, and a National Common Data Set adopted.

c) Risk Management and Security

Risk-based inspections should be adopted to minimize delays and optimize resource use. It is proposed that agencies should develop clear SOPs and inspection

criteria to support this approach. Cybersecurity and data privacy must be prioritized. Securing digital archiving and access controls in TNSWS will protect sensitive information and build trust among stakeholders.

d) **Monitoring and Evaluation**
Establishing key performance indicators (KPIs) such as clearance times and digital adoption rates will enable effective monitoring of NSW progress. Annual reporting to parliament, independent audits, and public dashboards will ensure transparency, accountability, and continuous improvement.

e) **Staff Skills and Knowledge**
Staff skills and knowledge of the 18 GAs were assessed in terms of domain expertise, basic IT skills as well as knowledge of relevant laws and regulations. It is proposed that staff of GAs with a medium-to-high level of readiness be provided "refresher training" in the relevant areas, while staff of agencies with a low level of readiness be provided more advanced training. It is further suggested that domain-related training should include topics such as integrated risk management, system-specific training, IT literacy training, cybersecurity and basic troubleshooting.

f) **Staff Availability**
Many agencies face HR shortages. As such, addressing these HR gaps is critical for successful transition. It is recommended that adequate planning and investment should be made to ensure the availability of suitable staff with the required expertise.

g) **Attitudinal Readiness**
Although almost all agencies indicated a high level of readiness with regards to staff attitudes and receptivity to change, it is recommended that effective change management and staff awareness be carried out to ensure organizational buy-in across strategic, managerial and operational staff levels.

h) **Business process reengineering (BPR)**
It is noted that direct automation of paper-based processes will not yield significant benefits. Therefore, it is essential that agencies must undertake comprehensive business process reengineering (BPR) to streamline internal workflows to maximize efficiency. It is proposed that agencies assess and eliminate redundant CLPRs and help them simplify procedures in alignment with trade facilitation principles.

i) **Facilitating a conducive legal and regulatory environment**
Many agencies identified no major obstacles within their governance frameworks, with regards to electronic data management and data sharing. However, it noted that there is a broader need in Sri Lanka for outdated laws to be revised, in order to recognize digital signatures, electronic records and data sharing. Government of Sri Lanka is actively guiding the nation toward a digital economy. This presents the ideal opportunity to undertake the legal modernization which is essential for seamless TNSWS integration. It is anticipated that the facilitation of digitally enabled cross-border trade will be a central component in the proposed digital economy ecosystem. It is proposed that a detailed study of the agency-wise regulatory framework be undertaken in order to identify the specific reforms to be introduced.

j) **Trader and stakeholder engagement**
Engaging the private sector from the outset ensures that the TNSWS meets user needs and gains broad support. It is proposed that trader inputs be considered in the planning, design, and testing phases. Moreover, pilot tests will validate system functionality, while public dashboards and trader testimonials will help build confidence and promote adoption.

Concluding Remarks

Establishment of the Trade National Single Window System has great potential to streamline processes; enhance transparency; and increase competitiveness is involved with many challenges and risks. There are resistances to change from stakeholders, gaps in digital infrastructure, inadequate interagency cooperation, and need for capacity development. The challenges and risks can be mitigated through strong political commitment, stakeholder collaborations, robust legal framework and phased implementation. Project Implementation Unit has great commitment to determine the changes in order to drive the Trade National Single Window System on the correct track.

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