



PSW
PAKISTAN SINGLE WINDOW



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PAKISTAN SINGLE WINDOW ASSESSMENT

Volume 1: Final Report





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TABLE OF CONTENTS

| | |
|--|------------|
| <i>List of Figures</i> | <i>iv</i> |
| <i>List of Tables</i> | <i>v</i> |
| <i>List of Boxes</i> | <i>vi</i> |
| <i>List of Acronyms</i> | <i>vii</i> |
| <i>Executive Summary</i> | <i>ix</i> |
| 1. Aligning UNECE Recommendation 33 with SWAM and PSWA | 1 |
| 1.1. Introduction to UN/CEFACT Single Window Assessment Methodology | 5 |
| 1.1.1. PSW Assessment- Building blocks, objectives, tools, outputs..... | 5 |
| 1.2. PSW’s Raison D’être— A ” Whole-Of-Government” Effort | 6 |
| 2. Understanding Pakistan’s Trade Dynamics | 8 |
| 2.1 Pakistan’s Structure of Trade - What it trades and how it trades | 8 |
| 2.2 Understanding Pakistan’s Current Customs Clearance Locations and Trends | 9 |
| 2.3 Forecasting Trade Dynamics for Enhanced Utilization of Pakistan Single Window | 10 |
| 2.4 Implications for PSW | 11 |
| 3. PSW Institutional Corporate Governance and Legal Framework | 14 |
| 3.1 Corporate Governance Structure | 14 |
| 3.1.1 Governing Council | 16 |
| 3.1.2 Lead agency..... | 18 |
| 3.1.3 Operating Entity (OE)..... | 19 |
| 3.1.4 Assessment of the Institutional Corporate Governance and Legal Framework..... | 21 |
| 3.2 Legal Framework enabling PSW Implementation | 22 |
| 3.2.1 Coverage of the PSW Act..... | 22 |
| 3.2.2 Governing Council and PSW Secretariat | 23 |
| 3.2.3 Lead Agency, Operating Entity and its Board of Directors, and Human Resources..... | 24 |
| 3.2.4 PSW-OE Operations | 24 |
| 3.2.5 Other Government Agencies to comply with PSW Act | 25 |
| 3.2.6 Sources of Financing for PSW | 26 |
| 3.2.7 Nondiscrimination of Documents Submitted Electronically, Required Under Other Laws | 26 |
| 3.2.8 User friendliness and accessibility to PSW System | 27 |
| 3.2.9 Data Exchange and Safety | 28 |
| 3.2.10 Use of Trade Data By PSW..... | 29 |
| 3.2.11 Integrated Risk Management System..... | 30 |
| 3.2.12 Monitoring and Evaluation..... | 30 |
| 3.2.13 Compliance and Enforcement..... | 31 |
| 3.3 Assessment of the Legal Framework enabling PSW implementation | 32 |
| 3.3.1 Enabling international data integration..... | 32 |
| 3.3.2 Admissibility of e-documents in court creating transparency and trust..... | 33 |
| 3.3.3 Safe and reliable data storage | 33 |
| 3.3.4 Comparing PSW with other countries..... | 33 |
| 3.4 Business model | 34 |
| 3.4.1 Sustainability of the Business model..... | 35 |
| 4. The Information Technology Framework Assessment | 39 |
| 4.1 Business process, functional and technical architecture | 39 |
| 4.1.1 Business Process Engineering..... | 39 |
| 4.1.2 Interoperability | 40 |
| 4.1.3 Technical Architecture | 40 |



| | |
|---|-----------|
| 4.1.4 Sufficiency of existing technical infrastructure | 41 |
| 4.1.5 24/7 Monitoring Solutions | 41 |
| 4.2 Implementation and Operations | 42 |
| 4.3 Software and hardware stacks used in Single Window | 42 |
| 4.4 Integration with Other Government Agencies and Businesses..... | 44 |
| 4.4.1 Integration with OGAs..... | 44 |
| 4.4.2 Integration with businesses: treatment providers, PSI, Banks and labs..... | 44 |
| 4.5 Global standards and models: Data standardization | 45 |
| 4.6 One-time submission of data..... | 46 |
| 4.7 User authentication tools | 47 |
| 4.8 Technical infrastructure for Data management | 47 |
| 4.8.1 Data Security..... | 47 |
| 4.8.2 Preservation, Archiving, and Storage | 48 |
| 4.8.3 Disaster Recovery..... | 48 |
| 4.9 Assessment of Information technology framework and Recommendations | 48 |
| 4.9.1 PSW to multiple PCSs – Taking the Trade and Industry Along..... | 49 |
| 5. Single Window Performance Assessment..... | 51 |
| 5.1 PSW User Functional Services Requirement Checklist..... | 51 |
| 5.1.1 Note on Goods/Single Declaration Types..... | 53 |
| 5.2 Experience of Other Government Agencies..... | 53 |
| 5.2.1 Department of Plant Protection | 54 |
| 5.2.2 Pakistan Standards and Quality Control | 57 |
| 5.2.3 Ministry of Narcotics Control..... | 59 |
| 5.2.4 Animal Quarantine Department | 61 |
| 5.3 Pakistan Customs | 64 |
| 5.4 Assessment of the Performance of Single Window based on OGA experience and recommendations | 66 |
| 5.4.1 Challenges in system use..... | 66 |
| 5.4.2 Cognitive load and behavioral shifts required within the system..... | 66 |
| 5.4.3 Complex underlying trade related processes..... | 66 |
| 5.5 Experience of Traders and Customs' Clearing Agents | 67 |
| 5.5.1 Study Population and Sample..... | 67 |
| 5.5.2 Data Collection Timelines..... | 67 |
| 6. Quantitative Assessment of Pakistan Single Window | 82 |
| 6.1 Express Analysis | 82 |
| 6.2 Key Factors based Assessment | 84 |
| 6.3 The Objectives Based Assessment..... | 86 |
| 6.4 Coverage of Total trade by PSW..... | 89 |
| 7. Assessment of PSW and Recommendations for Improvement | 91 |
| 7.1 Assessment of the Corporate Governance..... | 91 |
| 7.1.1 Accountability flows are adequate and well structured | 91 |
| 7.1.2 The Governing Council's role is paramount and well crafted | 91 |
| 7.1.3 Allowing the PSW-OE to decide the systems environment to implement the PSW | 91 |
| 7.1.4 Allowing both secondments from relevant government agencies and the ability to recruit freely from the private sector | 91 |
| 7.1.5 Enshrining the core governance of PSW in the PSW Act–Political Commitment | 91 |
| 7.1.6 Recommendations for improving the Institutional Corporate Governance | 91 |



| | |
|--|------------|
| 7.2 Assessment of the Legal Framework enabling PSW implementation | 92 |
| 7.2.1 Enabling international data integration..... | 92 |
| 7.2.2 Admissibility of e-documents in court creating transparency and trust..... | 92 |
| 7.2.3 Safe and reliable data storage..... | 92 |
| 7.2.4 Recommendations for improving Legal Framework enabling PSW implementation..... | 92 |
| 7.3 Assessment of the Information Technology Framework | 93 |
| 7.3.1 Recommendations | 94 |
| 7.3.2 PSW to multiple PCs – Taking the Trade and Industry Along..... | 94 |
| 7.4 Assessment of Performance of Single Window OGA experience | 95 |
| 7.4.1 Challenges in system use..... | 95 |
| 7.4.2 Cognitive load and behavioral shifts required within the system..... | 95 |
| 7.4.3 Complex underlying trade related processes..... | 95 |
| 7.4.4 Recommendations | 95 |
| 7.5 Assessment of User Perception Survey..... | 96 |
| 7.5.1.PSW- More than just a digital platform, but a catalyst of cultural change..... | 96 |
| 7.5.2 Use of online payments and transfer jump from 41% to 91% after PSW going live..... | 96 |
| 7.5.3 Paper based and e-documentation functional in parallel..... | 97 |
| 7.5.4 Likelihood of promoting PSW connected to city and type of industry | 97 |
| 7.5.5 Reduced time and cost- Implications for trade? | 97 |
| 7.5.6 Recommendations | 97 |
| 8. PSW- Nudging the system into a behavioral change?..... | 98 |
| 8.1 Pakistan Single Window: A Case Study in Behavioral Nudging..... | 100 |
| Bibliography | 101 |



LIST OF FIGURES

| | |
|--|----|
| Figure 1: Interfaced system- Decentralized _____ | 1 |
| Figure 2: Building Blocks for the PSW Assessment _____ | 5 |
| Figure 3: Top 10 Pakistan Import Partners – FY 2004 & FY 2022 _____ | 8 |
| Figure 4: Top 10 Pakistan Export Partners – FY 2002 & FY 2022 _____ | 9 |
| Figure 5: Custom Ports of Pakistan by % Share of total trade _____ | 10 |
| Figure 6: Associations between Customs-Collected Revenue and Facilitating Trade Across Borders _____ | 12 |
| Figure 7: PSW institutional corporate governance structure _____ | 16 |
| Figure 8: PSW Legal Framework _____ | 23 |
| Figure 9: Committees of Governing Council _____ | 31 |
| Figure 10: Surplus/Deficit trends from PSW Annual Accounts _____ | 37 |
| Figure 11: The PSW System Compared to Detailed Design Proposal _____ | 39 |
| Figure 12: Technical Architecture of PSW _____ | 40 |
| Figure 13: 8 Step Implementation Process _____ | 42 |
| Figure 14: Software and Hardware Stacks in Single Window Web Development Technology _____ | 43 |
| Figure 15: PSW users and services flow chart _____ | 44 |
| Figure 16: Cross border integration with traders and service providers _____ | 50 |
| Figure 17: Overall Satisfaction with PSW Services _____ | 68 |
| Figure 18: Satisfaction with Different Features of the PSW Platform _____ | 69 |
| Figure 19: Impact of PSW on Speed of Operations _____ | 71 |
| Figure 20: No of Hours/Days Required for Filing LPCOs & GD _____ | 72 |
| Figure 21: Impact of PSW on Cost Saving _____ | 72 |
| Figure 22: Average Reduction in Costs _____ | 73 |
| Figure 23: Impact on Ease of Business _____ | 73 |
| Figure 24: Requirement of Physical Copies Despite Digital LPCOs _____ | 74 |
| Figure 25: Payment option before and after PSW _____ | 74 |
| Figure 26: Usage of Top-Up Accounts _____ | 75 |
| Figure 27: Notification Method before and after PSW _____ | 75 |
| Figure 28: Impact of PSW on Business Volume _____ | 76 |
| Figure 29: Percentage Increase in Business Volume _____ | 77 |
| Figure 30: PSW Impact on Profitability _____ | 77 |
| Figure 31: Percentage Increase in Profits _____ | 78 |
| Figure 32: Satisfaction with PSW Reported by Women Entrepreneurs _____ | 79 |
| Figure 33: Usage of Dedicated Women Helpline _____ | 79 |
| Figure 34: Awareness of Dedicated Support Services _____ | 80 |
| Figure 35: User Feedback on Improving the PSW System _____ | 80 |



LIST OF TABLES

| | |
|---|----|
| Table 1: Harmonizing UNECE Recommendation 33 with SWAM and PSWA..... | 4 |
| Table 2: RACI Framework for PSW Institutional Corporate Governance and Legal Framework..... | 15 |
| Table 3: Sustainability Analysis on Annual Accounts of PSW | 36 |
| Table 4: Surplus/Deficit from PSW Annual Accounts..... | 38 |
| Table 5: PSW user functional services requirement checklist..... | 53 |
| Table 6: Study Population and Sample | 67 |
| Table 7: NPS across Gender, City, and Industry/Sector | 70 |
| Table 8: Express Analysis of Single Window Implementation Based on Key Elements | 83 |
| Table 9: Key Factor Based Assessment | 86 |
| Table 10: Objective Based Assessment | 88 |
| Table 11: PSW coverage: Overall total trade + Regulatory trade coverage..... | 89 |
| Table 12: Regulatory (LPCOs) Overall Trade Coverage (PSW & WeBOC) Imports and Exports..... | 90 |



LIST OF BOXES

| | |
|---|----|
| Box 1: Lead agencies in Georgia and New Zealand | 18 |
| Box 2: Legal Foundations of the Japanese Nippon Automated Cargo and Port Consolidated System..... | 24 |
| Box 3: Narrative on Enacting PSW Legislation..... | 25 |
| Box 4: Understanding Tradeverse - Pakistan's Trade Information Portal..... | 28 |
| Box 5: Enhancing PSW's Software and Hardware with Industry Standards and User Feedback..... | 43 |
| Box 6: Thailand's National Single Window System Case Study (ESCAP & ECE, 2012)..... | 45 |
| Box 7: Learning from the world: Netherlands and Australia..... | 49 |



LIST OF ACRONYMS

| Acronym | Description |
|-----------|---|
| ADB | Asian Development Bank |
| APSEA | All Pakistan Solvent Extract Association |
| APTMA | All Pakistan Textile Mills Association |
| AQD | Animal Quarantine Department |
| B2B Score | Bottom 2 Box Score |
| B2B | Business 2 Business |
| BoD | Board of Directors |
| BPR | Business process Reengineering |
| DPP | Department of Plant Protection |
| DRAP | Drug Regulatory Authority of Pakistan |
| FBR | Federal Board of Revenue |
| FCDO | Foreign, Commonwealth and Development Office |
| FGD | Focus Group Discussion |
| FPCCI | Federation of Pakistan Chamber of Commerce and Industry |
| GC | Governing Council |
| HMRC | His Majesty Revenue and Customs |
| IT | Information Technology |
| LA | Lead Agency |
| NPS | Net Promoter Score |
| MMD | Mercantile Marine Department |
| MNC | Ministry of Narcotics Control |
| MNFSR | Ministry of National Food Security & Research |
| MoC | Ministry of Commerce |
| OGA | Other Government Agency |
| PFVA | Pakistan Fruit & Vegetable Exporters, Importers & Merchants Association |
| PMU | Project Management Unit |
| POC | Point of Contact |
| PPRO | Plant Protection Release Order |
| PSQCA | Pakistan Standards & Quality Control Authority |
| PSW | Pakistan Single Window |
| PSW-OE | Pakistan Single Window - Operating Entity |
| PSW-S | Pakistan Single Window - System |
| REAP | Rice Exporters Association of Pakistan |
| RFD | Reporting Formatives Directive |
| RO | Release Order |
| SBP | State Bank of Pakistan |
| SWAM | Single Window Assessment Methodology |
| SRO | Statutory Regulatory Orders |
| T2B | Top-2 Box |
| TIPP | Trade Information Portal of Pakistan |

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| UN/CEFACT | United Nations Centre for Trade Facilitation and Electronic Business. |
| USAID | United States Agency for International Development |
| WBG | World Bank Group |





EXECUTIVE SUMMARY

The Pakistan Single Window (PSW) *Raison D'être: A "Whole-Of-Government" Effort* aims to streamline trade by providing an integrated digital platform for lodging standardized information, eliminating manual processes, and enhancing the ease of doing business. This facilitates compliance, reduces costs, and improves efficiency. UNECE Recommendation No. 33 outlines benefits for both governments and traders, including better resource allocation, increased transparency, and faster clearance.

The Pakistan Single Window Assessment includes a section on *Aligning UNECE Recommendation 33 with SWAM and PSWA* that helps the assessment team guide the assessment process based on the international standard followed by all single windows around the world. In this section, the assessment team provides a reference to the assessment report sections that address the 'Key success factors' outlined in the UNECE Recommendation No.33.

The Pakistan Single Window (PSW) was established on April 13, 2021, as part of Pakistan's commitment to the WTO Bali TFA 2017 to facilitate trade. To evaluate its progress, a third-party assessment is being conducted by Ipsos-Reenergia, following the UNECE's Single Window Assessment Methodology (SWAM). This assessment focuses on the adequacy of PSW's institutional and legal framework, IT framework, and overall performance. Specialized panels and nationwide surveys were used to gather data, with modifications made to the SWAM for PSW's advanced development stage. Findings are detailed in the completed questionnaires annexed to the report.

In the section on *Introduction to UN/CEFACT Single Window Assessment Methodology* the assessment team outlines the process followed to assess different aspects of the PSW. In the context of applying the Single Window Assessment Methodology (SWAM) to the PSW, several adaptations were made to better fit the advanced stage of the PSW's development. Although the foundational building blocks of SWAM were retained, modifications were introduced in objectives, tools, stakeholder engagement, and survey methods. Given PSW's progress, specialized teams with expertise in different domains created detailed presentations on PSW's achievements. The FGD format was customized with adapted questionnaires for the three focus areas of the PSWA—institutional and legal, information technology, and performance assessment. For institutional and IT evaluations, expert panels presented relevant information, and the assessment team filled out the FGDs questionnaires based on this data. For the performance assessment, FGDs were held with OGAs, and a nationwide phone survey was conducted for traders and Customs agents. An iterative approach ensured comprehensive understanding and accurate recording of information for all FGDs and the survey. The completed questionnaires are included in the annexures and form the basis of the subsequent sections of the PSWA report.

The section *Understanding Pakistan's Trade Dynamics* explores Pakistan's Structure of Trade by examining what Pakistan trades and the mechanisms employed in its trade processes. It starts with an Understanding of Pakistan's Current Customs Clearance Locations and Trends, highlighting key customs facilities and the evolving patterns in trade activities. The section then moves to Forecasting Trade Dynamics for Enhanced Utilization of Pakistan Single Window, which involves predicting future trade trends and identifying opportunities for the PSW to optimize its services and functionalities. Finally, it delves into the Implications for PSW, discussing how insights from trade trends and customs practices can inform strategies for improving the effectiveness of the PSW and expanding its role in facilitating international trade.

Assessing National Single Windows (NSWs) is complex due to the unique trade dynamics in each country. This chapter explains the implementation of PSW and summarizes Pakistan's trade structure. Pakistan's exports primarily target Europe and Central Asia (ECA), while imports come from ASEAN and MENA regions. Karachi handles most exports and imports. The assessment forecasts trade scenarios, predicting significant growth in trade volumes by FY43. Increased land-based trade with neighbors, particularly Iran, China, and India, will demand improved Trade and Transit Infrastructure (TTI). PSW's role is crucial in facilitating efficient cross-border trade by integrating various regulatory, trade, transport, and finance processes rather than acting solely as a customs clearance system.

The section on *PSW Institutional Corporate Governance and Legal Framework* presents an overview of the bodies, committee and agencies involved in governing the PSW system. This is based on data from presentations, FGDs, situational reports, blueprints, relevant acts, rules, and audits, aims to evaluate its corporate governance, legal framework, financing, and business model. It identifies barriers to trader interaction and inter-agency information exchange and proposes recommendations to address gaps. The PSW Act establishes the governance structure, including the Governing Council, Lead Agency, and Operating Entity, aligning with the RACI framework, which delineates roles and responsibilities: Responsible, Accountable, Consulted, and Informed.

In the section on *The Legal Framework Enabling PSW Implementation* analyses the legal basis of the governing structure constituted of The Lead Agency, Operating Entity, and its Board of Directors, along with the management of Human Resources, play critical roles in executing the PSW's mandate. The Legal Framework Enabling PSW Implementation provides a comprehensive foundation for the operation and growth of the Pakistan Single Window (PSW). The Coverage of the PSW Act ensures a robust legal basis for automating and digitizing trade processes, addressing a broad spectrum of operational, regulatory, and technological aspects crucial for PSW's success. The Governing Council and PSW Secretariat are pivotal in overseeing the strategic direction and daily operations of the PSW, ensuring alignment with the Government of Pakistan's objectives. It has been observed that the PSW-OE operations are designed to foster efficient and effective implementation of the system, leveraging expertise from both government and private sectors. The act outlines the responsibilities of Other Government Agencies to Comply with PSW Act, ensuring a cohesive approach to trade facilitation and regulatory compliance.

This section discusses *Sources of Financing* for PSW to sustain the PSW's initiatives, including public funding, donor support, and possibly user fees, *Non-discrimination of Documents Submitted Electronically*, so that electronic documents are treated with the same legal standing as paper documents, *the User Friendliness and Accessibility to PSW System* prioritized to ensure that stakeholders can efficiently navigate and utilize the system. Additionally, the assessment covers the Data Exchange and Safety protocols established to secure the exchange of trade data and protect sensitive information, while the Use of Trade Data by PSW focuses on leveraging data for decision-making and policy formulation.

The *Business Model* has been evaluated by analyzing the annual reports and costs for setting up have been studied in detail while comparing it to other countries as well. The initial phase involved heavy capital expenditures for software development and system integration. By FY 2023, PSW generated its first surplus after years of deficits. Although the first three years showed deficits due to high setup costs and the system not being operational, recent financial statements show a positive trend. PSW is now covering its operational expenses and has a growing surplus from subscription fees. Despite this progress, it is still early to determine long-term sustainability, and PSW should be given a few more years to confirm if this positive trend

continues. Future success will depend on maintaining revenue and managing expenditure effectively.

The section on *Performance of Single Window OGA Experience* contains the findings from the FGDs with OGAs, selected based on the length of time they have been integrated with PSW. The discussion with OGA focal persons was structured around SWAM questions which included learning on types and number of LPCOs processed by each OGA, the fee payment mechanism, the experience and satisfaction with PSW and suggestions for improvements among other topics.

In the Section on *Experience of Traders and Customs' Clearing Agents*, sub section 1 focuses on user satisfaction with various features of the Pakistan Single Window (PSW) system, gathering insights into how respondents feel about its functionality and effectiveness. Sub section 2 explores the impact of PSW on businesses across four key areas, detailing how the system has influenced trade operations and business outcomes. Sub-Section 3 is dedicated to capturing insights from women traders, examining the specific support and benefits PSW provides for female participants in the trade sector. Throughout the report, satisfaction and impact are measured using Top-2-Box (T2B) and Bottom-2-Box (B2B) scales to gauge overall perceptions, with findings complementing earlier assessments of PSW's effects on the trading community.

PSW users were surveyed on their satisfaction with four features of the system using a scale from 1 to 4, with 1 and 2 combined as Bottom-2-Box (B2B) and 3 and 4 as Top-2-Box (T2B). Overall, 89% of respondents expressed satisfaction with PSW services, though there was some variation across features: 80% were satisfied with the goods declaration process, 79% with the user interface and payment systems, but only 63% with the LPCO application process. The Net Promoter Score (NPS), which measures customer loyalty, showed that females (65) had a higher likelihood of recommending PSW compared to males (59). Faisalabad had the highest NPS at 78, while Karachi had the lowest at 51 despite being the largest trade center. This discrepancy suggests a need for increased awareness and targeted improvements in Karachi and Lahore to boost their NPS scores.

The section on *Quantitative Assessment of Pakistan Single Window* covers the quantitative approaches outlined in SWAM and provides an evaluation using all three approaches, *Express Analysis*, *Key Factors Based Assessment* and *The Objectives Based Assessment*, where PSW has scores 905, 86% and 90.6% respectively. The evaluation has been conducted by an internal panel of experts within the assessment team. The scores are to be validated by external experts during the validation workshop.

In the *Assessment of the Institutional Corporate Governance and Legal Framework* section, based on analysis in the previous section concludes that The PSW Act outlines a robust corporate governance structure to guide the implementation and operation of the Pakistan Single Window (PSW). The Governing Council (GC) directs PSW's development, facilitates stakeholder collaboration, and holds PSW accountable. The GC has powers such as opening accounts, imposing fees, and constituting committees. Membership includes key government officials, ensuring high-level support. The Lead Agency, Pakistan Customs, oversees PSW's operations and integration of OGAs. The Operating Entity (PSW-OE) develops and manages the system, reporting to a Board of Directors with representatives from relevant sectors. The institutional framework ensures accountability, effective HR policies, and political commitment, promoting PSW's successful implementation and evolution.

In the consequent *Recommendations* section, the team observes that while the governance structure is robust, the KPIs for monitoring PSW's performance should be reviewed and



updated to ensure they are SMART (Specific, Measurable, Achievable, Relevant, Time-bound) and adaptable as the organization evolves.

In the section Assessment of the Legal Framework Enabling PSW Implementation The assessment team finds that the legal basis for the Integrated Risk Management System is in place to identify, assess, and mitigate risks associated with the PSW's operations, enhancing the system's resilience. Monitoring and Evaluation mechanisms are essential for assessing performance and ensuring that PSW's objectives are met. Finally, Compliance and Enforcement measures are enforced to ensure adherence to legal requirements and address any violations, maintaining the system's integrity and effectiveness.

In the consequent *Recommendations* section, the team observes although the legal basis is strong, there is a need for formal feedback mechanism from users. Establishing this through a new SRO could further enhance the PSW's effectiveness by structuring regular user feedback and assessments.

The section on *Assessment of the Information Technology Framework* explores the *Business Process, Functional, and Technical Architecture* of the Single Window system, focusing on its comprehensive framework and operational aspects. It begins with *Business Process Engineering*, which examines how trade processes are reengineered for efficiency and effectiveness. The section delves into *Interoperability*, emphasizing the system's capability to seamlessly connect with various stakeholders, including government agencies and businesses. The *Technical Architecture* is detailed, covering the *Sufficiency of Existing Technical Infrastructure* and the implementation of *24/7 Monitoring Solutions* to ensure uninterrupted service. It reviews the *Software and Hardware Stacks Used in Single Window* to assess their effectiveness and explores *Integration with Other Government Agencies and Businesses* for streamlined data exchange. The section also considers *Global Standards and Models for Data Standardization* to ensure consistency and interoperability across systems, alongside *One-Time Submission of Data* principles for reducing redundancy. It covers *User Authentication Tools* to secure access and *Technical Infrastructure for Data Management*, including Data Security measures, Preservation, Archiving, *Storage* protocols, and *Disaster Recovery* strategies. Overall, this section evaluates how well the Single Window's architecture supports its operational objectives and aligns with best practices for data management and security.

The section on *Recommendations on Information Technology Framework* includes suggestions on implementing a fault-tolerant IT architecture, automating scaling processes, and supporting the development of localized Port Community Systems (PCS) to enhance reliability, scalability, and user experience.

The section on *Assessment of Performance of Single Window OGA Experience*, the team observed overall user sentiment is positive, while some challenges such as integration issues, cognitive loads, and trade process complexities have been faced. It also evaluates the experiences of various Governmental Agencies (OGAs) with the Pakistan Single Window (PSW) system, focusing on LPCO (Licenses, Permits, Certificates, and other documents) statistics, risk management systems, and overall satisfaction. The Department of Plant Protection (DPP) has issued numerous LPCOs but faces challenges with API integration and technical issues, requiring enhanced system interoperability and staff training. Pakistan Standards and Quality Control Authority (PSQCA) deals with product standards LPCOs and struggles with system navigation and responsiveness, with recommendations for improved user interfaces and support. The Ministry of Narcotics Control (MNC), responsible for narcotics LPCOs, has a positive experience but needs better data accuracy and system integration. The Animal Quarantine Department (AQD) faces usability and technical problems impacting LPCO issuance, requiring better system design and support. Finally, Pakistan Customs effectively uses



Final Report - Pakistan Single Window Assessment (PSWA)

PSW for customs compliance, benefiting from system efficiency but seeking further enhancements and automation opportunities. The assessments provide a comprehensive view of each agency's interaction with PSW, highlighting areas for improvement to enhance the Single Window system's effectiveness.

The section on *Assessment of Performance of Single Window User Perception survey* evaluates the user perception survey and observes that the Pakistan Single Window (PSW) has catalyzed a cultural shift in trade by significantly increasing traders' confidence through tutorials, FAQs, and a 24/7 helpline. Online payment usage soared from 41% to 91% post-implementation, reducing fuel usage and greenhouse gas emissions. Despite improvements, paper-based documentation remains in use alongside digital processes, with 27% still requiring physical documents. The likelihood of promoting PSW varies by city and industry, with larger cities reporting lower Net Promoter Scores (NPS). While PSW has reduced trade time and costs, most respondents haven't yet seen increased trade volumes or profitability, suggesting the need for long-term evaluations every 3-5 years to fully measure its impact.

The section on *Recommendations on Performance of Single Window User Perception survey* suggests provision of learning materials in both English and Urdu, establish robust feedback mechanisms for user queries and complaints especially allowing for user to track their query, focus on tailored training programs for women traders, set paper-free operations as a performance benchmark, and measure PSW success by tracking changes in business volume. Regular assessments should ensure that reduced time and cost for trade processes translate into increased trade activities, thereby meeting PSW's objectives.

The chapter on *PSW: Nudging the System into a Behavioral Change* is about the overarching phenomenon of PSW creating a ripple of cultural and behavioral change through a transformative institutional design. This observation stems from in-depth discussions with important stakeholders which include the PSW team, representatives from OGAs, traders and clearing agents.



1. ALIGNING UNECE RECOMMENDATION 33 WITH SWAM AND PSWA

The UNCEFACT SWAM working paper is based on the UNECE Recommendation No. 33, and this assessment is using 'Guidelines on Establishing a Single Window to Enhance: The Efficient Exchange of Information Between Trade and Government'. According to the guidelines, Pakistan Single Window can be defined as, an interfaced system (decentralized) where data is sent through the single-entry point to each agency for processing. In this system a trader can submit electronic trade declarations and all relevant information to the various authorities for processing and approval in a single application. The single-entry points may be operated by one of the participating government agencies: It may also be established as an independent body (public-private, public or private). In this approach, approvals are transmitted electronically from governmental authorities to the trader's computer. Such a system is in use in Singapore and Mauritius¹.

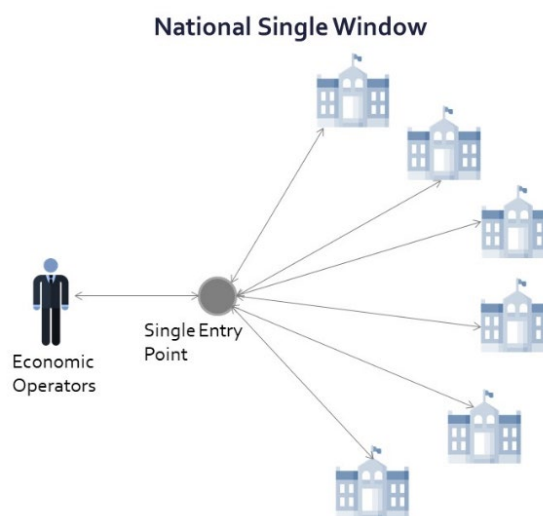


Figure 1: Interfaced system- Decentralized

The below given matrix draws from the key factors' approach available in the guidelines and gives the appropriate reference from the Pakistan Single Window Assessment based on the UNCEFACT SWAM working paper.

| Key Factor UNECE Recommendation no. 33 | Definitions from Recommendation No 33 | SWAM and PSWA |
|--|---|--|
| 1. Political will | The existence of strong political will on the part of both government and business to implement a Single Window is one of the most critical factors for its successful introduction. Achieving this political will requires proper dissemination of clear and impartial information on objectives, implications, benefits and obstacles in the establishment of the Single Window. The availability of resources to establish a Single Window is often related to the level of political will and commitment to the project. Establishing the necessary political will is the foundation stone upon which all the other success factors rest. | In Section 3.1.4.5, having LA as Lead Agency and the finance minister as Chairperson of the GC, PSW ensures cooperation and commitment at the highest level. |
| 2. Strong Lead Agency | Related to the need for political will is the requirement of a strong, resourceful and empowered lead organization both to launch the project and see it through its various development stages. This organization must have the appropriate political support, legal authority, human and financial resources, and links with the business community. In addition, it is essential to have a strong individual within the organization who will be the project, Champion. | Section 3.1.2 |
| 3. Legally enabling environment | Establishing the necessary legal environment is a prerequisite for Single Window implementation. Related laws and legal restrictions must be identified and carefully analyzed. For example, changes in legislation can sometimes be required to facilitate electronic data submission/exchange and/ or an electronic signature | Section 3.2, including subsections 3.2.1 to 3.2.1.3 |

¹ Recommendation and Guidelines on establishing a Single Window to Enhance the Efficient Exchange of Information Between Trade and Government, Recommendation No. 33 (2020 edition)



| Key Factor UNECE Recommendation no. 33 | Definitions from Recommendation No 33 | SWAM and PSWA |
|---|---|--|
| | system. Furthermore, restrictions concerning the sharing of information among authorities and agencies, as well as organizational arrangements for the operation of a Single Window, may need to be overcome. Also, the legal issues involved in delegating power and authority to a lead agency need to be examined. | |
| 4. Partnership between Government and Trade | A Single Window is a practical model for co-operation between agencies within government and between government and trade. It presents a good opportunity for a public-private partnership in the establishment and operation of the system. Consequently, representatives from all relevant public and private sector agencies should be invited to participate in the development of the system from the outset. This should include participation in all stages of the project, from the initial development of project objectives, situational analysis, and project design through to implementation. The ultimate success of the Single Window will depend critically on the involvement, commitment and readiness of these parties, to ensure that the system becomes a regular feature of their business process. | Section 3.2.3- both the GC and BoD include members from the private sector (FPCCI, PBC). |
| 5. Collaboration Framework | This could be defined as a strategic mechanism, encompassing the whole Single Window deployment project, which helps to support transformation and efficient change management processes such as a trade facilitation outline. Such long-term, global and coordinated reform requires an organizational structure driven by the right framework to effectively implement comprehensive and reliable operations. An optimized collaboration strategy is important, even at early stage of a Single Window project, to make informed decisions, eliminate delays, reduce overlaps, and to avoid communication breakdowns, etc. | Sections 3.1.1 and 3.1.2 detail the MOUs between PSW and GC, and PSW and LA. Additionally, these MOUs with OGAs as well |
| 6. Establishment of Clear Project Boundaries and Objectives | As with any project, establishing clearly defined goals and objectives for the Single Window at the outset will help guide the project through its various development stages. These should be based on a careful analysis of the needs, aspirations and resources of the key stakeholders, and on the existing infrastructure and current approaches to the submission of trade-related information to the government. As stated previously, this analysis should involve all key stakeholders from both government and trade. A Single Window should generally be perceived as part of a country's overall strategy to improve trade facilitation. | The PSW design document outlined a comprehensive plan for governance structure, legal environment, estimated costs, and change management, among other aspects. PSW has successfully implemented this plan, which is now evident in both legislation and operations. |
| 7. User Friendliness and Accessibility | Accessibility and user friendliness are also key factors for the success of a Single Window project. Comprehensive operating instructions and guidelines should be created for users. Help Desk and user support services, including training, should be established, especially in the early implementation phase of the project. The Help Desk can be a useful means for collecting feedback on areas of difficulty and bottlenecks in the system, and this information can be a valuable tool in its further development. The need for and value of practical training courses for users cannot be over-emphasized, especially in the early implementation phase of the project. It is also important to address the multilingual requirements in some countries. It is essential | Section 3.2.8 Trade Information Portal Section 4 Section 5.1 |



| Key Factor UNECE Recommendation no. 33 | Definitions from Recommendation No 33 | SWAM and PSWA |
|--|--|---|
| | that the design of the system be attuned to the real ICT capacities of the country or region in which it will operate. Keeping in view of the potential future technological developments in this area, the maximum number of users should be able to utilize the Single Window from the moment it is launched. In some cases, this may dictate the use of a paper-based system or a dual paper/on-line approach, designed around the limited on-line access capacities of a given geographical area | |
| 8. International Standards and Recommendations | The implementation of a Single Window entails the harmonization and alignment of the relevant trade documents and data sets. To ensure compatibility with other international systems and applications, these documents and data models must be based on international standards and recommendations. This is true even if the Single Window is designed to operate without using electronic data communications. Whenever electronic data interchange is involved, the harmonization, simplification and standardisation of all data used in international trade are an essential requirement for smooth automatic operation of the Single Window. The harmonization of data used by different participants in their legacy system can be one of the biggest challenges for automated Single Window implementation. UN/CEFACT trade facilitation recommendations (such as UN/CEFACT Recommendations Number 1 and 18) contain valuable information for Single Window implementation of the system. | UNECE guidelines are followed. All data shared by PSW is harmonized. Please refer to Section 3.2.8 for details on the Trade Information Portal. |
| 9. Identification of Possible Obstacles | It is possible that all players in government and/or trade may not welcome the implementation of a Single Window. In such cases, the specific concerns of opponents should be identified and addressed as early as possible in the project. Identified obstacles should be considered individually, considering the local situation and requirements. Cost can be a major obstacle, but this must be balanced against future benefits. However, it is important to be clear about the financial implications of the project so that the decision regarding full or phased implementation can be made. Legal issues also constitute a significant potential problem area. | The change management program by PSW has been reflected in several areas within the assessment. |
| 10. Funding and Sustainability | A decision on the financial model for the Single Window should be reached as early as possible in the project. This could range from a system totally financed by government (e.g. the Netherlands) to an entirely self-sustainable model (e.g. Mauritius). Also, possibilities for public-private partnerships should be explored, if this is deemed a preferred approach. Clarity on this point can significantly influence decision-makers to support the implementation of the system. | Section 3.4 |
| 11. Training | To avoid transformation pitfalls and delays during implementation, Single Window operators should drive change management by providing training and tools to all stakeholders. Project governance will bring training and capacity building to users and stakeholders so they can be ready to understand the challenges and to assess the best strategies and tools to bring the project to a successful result. Adequate preparation and capacity building are necessary to avoid risks and misunderstandings. The Single Window Champion must provide intensive training, constant support, access to best practices in project management and technical knowledge, and ongoing feedback and encouragement | Same as 5 |
| 12. Promotion and Marketing | Promotion and marketing of a Single Window is particularly important and should be carefully planned. The promotion | A 24/7 helpline is a highly effective |



| Key Factor UNECE Recommendation no. 33 | Definitions from Recommendation No 33 | SWAM and PSWA |
|--|---|---|
| | <p>campaign should involve representatives from all the key government and trade stakeholders in the system, as these parties can provide valuable information on the expectations of the user community and help to direct the promotion and marketing messages. A clear implementation timetable should be established and promoted at the earliest possible stage of a Single Window project, as this will assist in the marketing of the project and will help potential users to plan their related operations and investments according to this schedule. Marketing should clearly identify the benefits and cost savings as well as specific points relating to the increased efficiency derived from the implementation of Single Window operation.</p> | <p>marketing and customer facilitation tool that fosters trust in the system. Further improvements can be considered for the future</p> |
| <p>13. Communications Strategy</p> | <p>Establishing a proper mechanism for keeping all stakeholders informed on project goals, objectives, targets, progress (and difficulties) creates trust and avoids the type of misunderstanding that can lead to the undoing of an otherwise good project. Within this context, it is extremely important to handle stakeholders' expectations properly, and it is worth remembering the business adage of promising less and delivering more (rather than the other way round). It is also important to remember that stakeholders often do not expect miracles: solving simple practical problems can generate significant goodwill to carry the project through difficult patches along the development path.</p> | <p>This implementation is required. Please find recommendations in Section 7.4.4.</p> |

Table 1: Harmonizing UNECE Recommendation 33 with SWAM and PSWA



1.1. Introduction to UN/CEFACT Single Window Assessment Methodology

1.1.1. PSW Assessment- Building blocks, objectives, tools, outputs

The Pakistan Single Window (PSW) has been instituted as part of Pakistan’s efforts to facilitate trade and in line with its commitments under the WTO Bali TFA 2017 Article 10.4², wherein as part of ratification, Pakistan committed to development of a National Single Window placing it under Category C of the TFA.

The Pakistan Single Window (PSW) came into being as a legal entity as an Act of Parliament, on 13th April 2021. The PSW’s journey like all TF is work in progress but it has made major strides in its formative years. PSW is now undertaking a third-party assessment of itself with the following objectives.

- a) Adequacy of its institutional and enabling environment, and governance.
- b) Identification of gaps in its services.
- c) PSW’s impact on time and cost associated with cross -border transactions.
- d) User satisfaction with the system performance

The present PSW Assessment (PSWA) exercise is being conducted by the Ipsos-Reenergia (Ipsos-Reenergia) team following the UNECE [UN / CEFACT] White Paper on Single Window Assessment Methodology (SWAM)³ and in compliance with the Terms of Reference (ToR) issued by the PSW.

The PSWA was, therefore, conducted using survey questionnaires in three broad areas, given as follows:

- a) Institutional and legal framework
- b) Information technology framework
- c) Single Window Performance assessment

This is visually represented in Figure 2

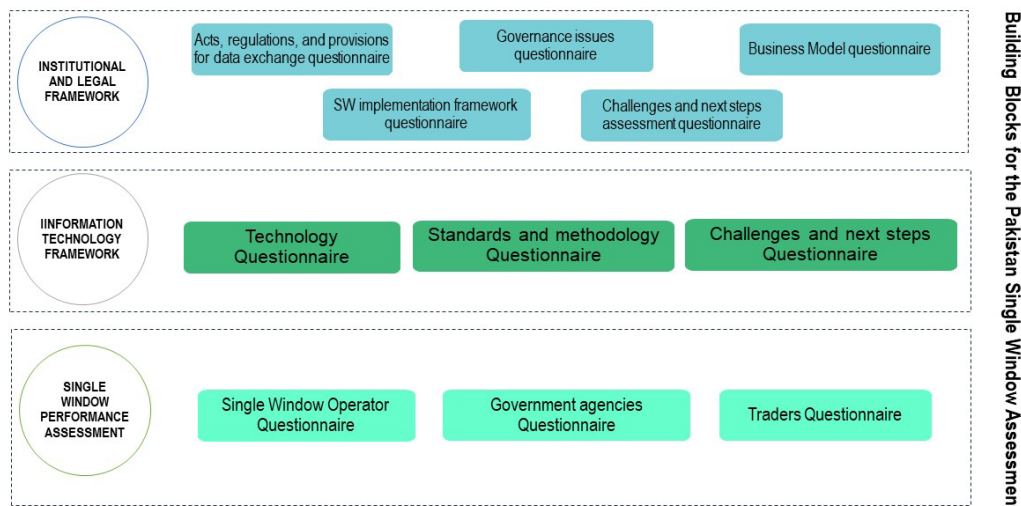


Figure 2: Building Blocks for the PSW Assessment

² Fefer, R.F. & Jones, V.C. 2017, WTO Bali TFA 2017 Article 10.4, WTO Trade Facilitation Agreement, Analyst in International Trade and Finance, Specialist in International Trade and Finance, 3 March.

³ UNECE 2023, UN/CEFACT White Paper on Single Window Assessment Methodology (SWAM), August.

In the context of applying the Single window Assessment Methodology (SWAM), a few adaptations pertaining to objectives, tools, stakeholders, and conduct of surveys were made. The building blocks of the PSWA remained the same as those of the SWAM.

Since the PSW is at an advanced stage of development, specialized teams already exist for different domains within PSW, therefore a panel of experts specialized in different subject areas were formulated and they prepared detailed presentations on the progress made by PSW so far.

The typical FGD format was modified as follows.

- i. FGD questionnaires were adapted for each of the 3 areas of focus of the PSWA, and additionally, a special questionnaire was prepared for the nationwide users' survey.
- ii. For the institutional and legal, and for the information technology areas of the PSWA, the specialized panels relevant to each area were asked to present the relevant details and the assessment team filled in the FGD questionnaires based on the provided information.
- iii. For the performance assessment area, FGDs were conducted directly with selected samples of OGAs along with members of the PSW team. For the traders and Customs agents, a phone-based nationwide survey was conducted.
- iv. For all FGDs an iterative format was adopted to ensure facts were well understood and duly recorded. This was applicable for both the FGDs and the nationwide users' survey.
- v. The completed questionnaires are in the annexures, and the following sections of this PSWA report are based on them.

1.2. PSW's Raison D'être— A " Whole-Of-Government" Effort

The overarching aim of all NSWs is to expedite the flow and exchange of information between trade actors and regulators and thereby reduce the time and cost of doing business. Specifically, the concept of a Pakistan Single Window encompasses the following elements.

- a) *Integrated Digital Platform*: where parties involved in trade can lodge standardized information and documents. It acts as a single-entry point for fulfilling all import, export, and transit-related regulatory requirements.
- b) *Elimination of Manual Processes*: This shift toward automation enhances efficiency and reduces administrative burdens.
- c) *Ease of Doing Business*: The PSW supports simplification, harmonization, and digitalization of trade-related processes, improving ease of doing business while ensuring compliance with regulations.

Globally, the benefits of NSWs are –

1. Increasing government revenues
2. Enhance compliance with trade rules and regulations
3. Improved resource allocation efficiency toward both compliance and revenue and thus improved trade facilitation
4. Better trade statistics – improving transparency across the trade value chain.

While the above are the stated benefits the PSW is aiming towards, globally, the NSWs benefit the governments and the trade in different ways.

UNECE Recommendation No. 33 lists these as follows.

Government - (a) providing a 360-degree view of each cross-border trade transaction, (b) effective and effective deployment of resources, (c) correct (and often increased) revenue yield, (d) improved trader compliance, (e) enhanced security, and (f) increased integrity and transparency.

Traders - (a) tangible cost savings, (b) faster clearance and release, (c) predictable application and explanation of rules, (d) more effective and efficient deployment of resources, and (e) increased transparency.

There are several successful models of Single Windows across the world, but to be able to have a fair comparison, it is essential to place Pakistan Single Window and Pakistan's trade patterns and its' dynamics with its regional and international trade partners.



2. UNDERSTANDING PAKISTAN'S TRADE DYNAMICS

Assessing NSWs can always be challenging as each country has certain bespoke trade dynamics and requires different focus depending on what is traded and how. This chapter lays out the reasons for the implementation of PSW followed by a summary of Pakistan's structure of trade.

2.1 Pakistan's Structure of Trade – What it trades and how it trades

In this section, the assessment team builds on one of their past research projects, "Investment Opportunities in Trade and Transit Infrastructure in Pakistan"⁴ to describe how trade with partners has changed over the past 20 years and how the existing infrastructure is supporting the current trade-related movement/clearance in Pakistan. The assessment team also explores the forecasts in different trade scenarios and presents the one that involves trade liberalization and reforms in hard and soft trade and transit infrastructure. The aim is to use current trade dynamics and predictions about the future to contextualize the role of PSW now and the impact of its advancement on Pakistan's overall trade.

Understanding Pakistan's current trade state and trends provides valuable insights as the PSW aims to boost efficiency. By identifying the significant locations where exports and imports are cleared, along with emerging trends, we can better utilize the PSW platform to facilitate seamless cross-border trade and achieve the overarching objectives of enhanced transparency and efficiency. Pakistan's trade happens primarily with Europe and Central Asia (ECA), the Middle East and North Africa (MENA), North America, and ASEAN countries. There is little trade (less than 5%) with South Asia.

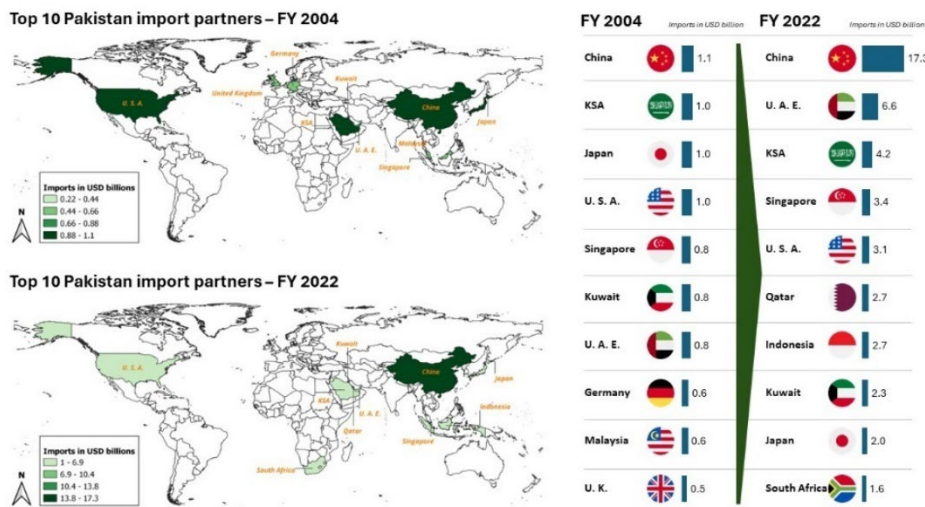


Figure 3: Top 10 Pakistan Import Partners – FY 2004 & FY 2022

In the past 20 years, exports to the ECA region have increased from 25% (\$2.95 billion) in FY2003 to 39% (\$12.24 billion) in FY 2022. Meanwhile, exports to North America fell from 20% (\$2.40 billion) to 19% (\$5.95 billion) despite a nominal increase in trade value. This was not as significant a change as witnessed for the ECA region; the exports to ASEAN increased from 17% (\$2.01 billion) to 18% (\$5.51 billion) indicating a shift towards more regional integration. Similarly, the highest share in 2003, imports for Pakistan are from the ASEAN region, and it has been growing over the years, e.g., it was 36% (\$4.68 billion) in FY 2003, and it rose to 43% (\$30.54 billion) in FY 2022. Imports from the MENA region was the same in FY 2003 and FY

⁴ Reenergia 2023, Pakistan: Investment Opportunities in Trade and Transit Infrastructure, USAID.



2022. However, there was a significant decline in imports from the ECA region, from 18 % (\$2.34) in FY2003 to 9%(\$6.23) in FY 2022.

Figure 3 shows how the countries Pakistan imported from to have also changed over the past 20 years. While imports from China have been the highest in both 2004 and 2022 some important shifts such as UAE moving from 7th place (2004) to 2nd place (2022), UK completely exiting the top 10 countries Pakistan imported from indicate a significant change in import partnerships.

Similarly, USA continues to dominate as the top destination for Pakistani goods while UK slipped from 2nd place to 4th from 2004 to 2024, while Netherlands jumped from last place to 7th. South Korea is no longer in top ten destinations for Pakistani exports in 2022 like it used to be in 2004.

These trends are interesting to note because a change in the partnership dynamics implies the need for change in trade policy and strategies to attract FDI and facilitate investors.

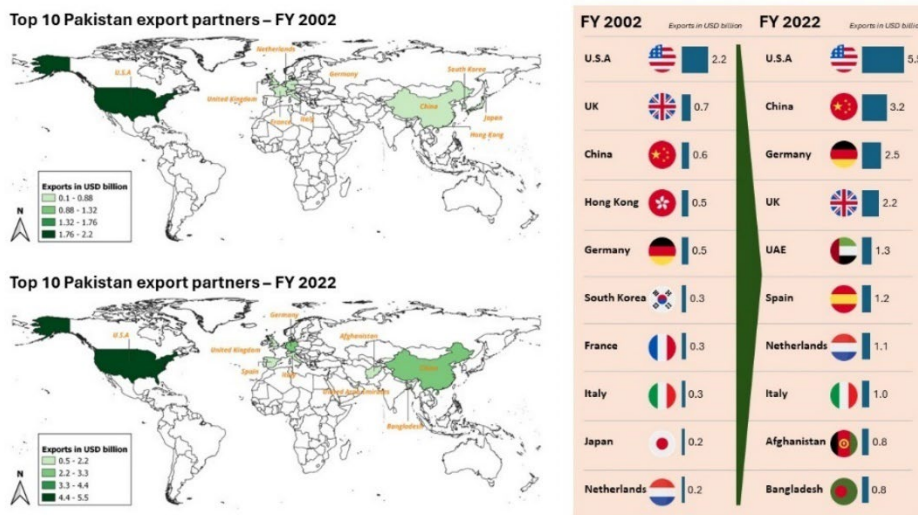


Figure 4: Top 10 Pakistan Export Partners - FY 2002 & FY 2022

2.2 Understanding Pakistan's Current Customs Clearance Locations and Trends

To understand the major locations at which Pakistan's exports and imports are cleared, the report utilizes data from each collectorate in the country, obtained from Pakistan Single Window (PSW) for the years 2017 to 2023 at a 4-digit level. The data underscores the diverse contributions of different collectorates, emphasizing their respective roles in facilitating international trade. About 76% of all exports are handled in Karachi (Port Qasim and Karachi Port East and West and MCC Port Qasim). The other busiest port is the Lahore Air Freight Unit, which manages about 8.1% of total exports for Pakistan, followed by the Islamabad Air Freight Unit, which mostly carries surgical goods and medicaments. Torkham and Chaman carry a small portion of the total exports to Afghanistan.



Custom ports of Pakistan by % share of total trade

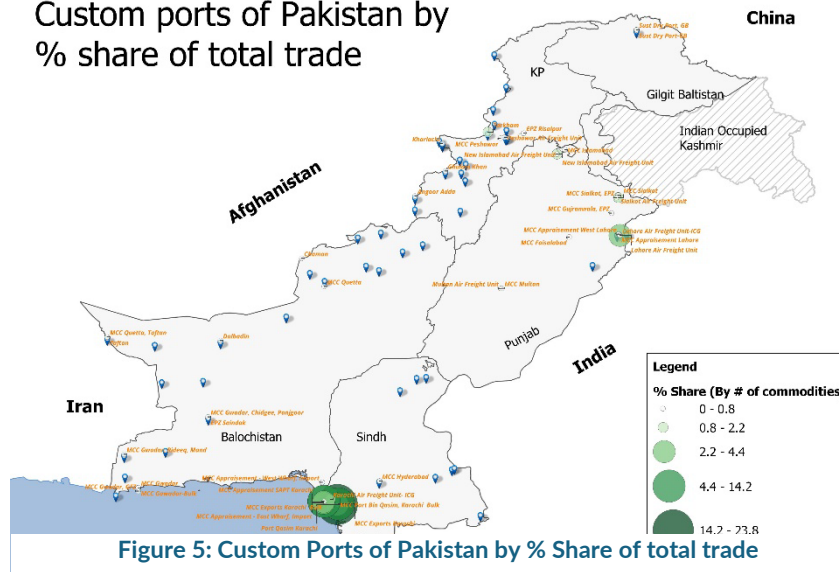


Figure 5: Custom Ports of Pakistan by % Share of total trade

Port Qasim (PQA) leads with a substantial 40.4% share of the total exports, followed by Karachi Port (KPT) at 34.3%. Lahore Air Freight unit contributes 8.1%, while Sialkot and Islamabad represent 3.44% and 3.42%, respectively. Lahore Dry holds a share of 1.79%, and Chaman contributes 1.77%. Faisalabad, Ghulam Khan, and Quetta each have shares of 0.48%, 0.2%, and 0.17%, respectively. Kharlachi KPK, Multan, and Peshawar account for 0.15%, 0.08%, and 0.08%, respectively. Multan Dry, Angoor Ada, Gujranwala, Saindak, Risalpur, Gwadar, and Sust collectively represent smaller shares ranging from 0.06% to 0.01% of the total exports.

The total value of all imported commodities across all collectorates is USD 10,128.18 million⁵. MCC Port Qasim, EPZ and Karachi Air Freight Unit handle about 83% of all imports coming into Pakistan, implying that Karachi is taking a disproportionately big load for all import handling. MCC Appraisalment Karachi East secures the top position, contributing 19.13% to the total value. MCC PMBQ-Bulk follows closely, representing **18.54%** of the total. Other notable collectorates include MCC Appraisalment Karachi West, Port Qasim (Imports)-Karachi, and MCC Appraisalment - East Wharf, each contributing significantly to the overall value of imported commodities.

2.3 Forecasting Trade Dynamics for Enhanced Utilization of Pakistan Single Window

In the context of Pakistan’s current trade dynamics, the impact of Pakistan Single Window (PSW) is being assessed through the application of SWAM. But to ascertain how PSW’s advancement and development may affect Pakistan’s trade, need a prediction of Pakistan’s trade in the future. The assessment team has forecasted imports and exports within three scenarios using the Ghemawat model.

The low case (Scenario 1) forecast shows demand for trade and transit infrastructure will grow to USD 303 billion by FY43, compared to USD 98 billion in FY23. The base case (Scenario 2) shows that the total trade volumes will rise to USD 347 billion by FY43, a growth of around 250% from USD 98 billion in FY23. The high case (Scenario 3) prediction shows that in terms of value, total trade is projected to rise to USD 480 billion by FY43, compared to FY23.

⁵ The data for trade with respect to collectorate was obtained from Pakistan Single Window (PSW) for the years 2017 to 2023 at 4-digit level.



For this study, we will be assuming that there is a high likelihood of getting to the base case and a likelihood of getting to the high case. Thus, overall, we will be using the following assumptions based on a trade volume of approximately USD 400 billion with a plus-minus 15% error margin.

The neighborhood land-based trade will change; however, more pressure will be placed on the Iran-Pakistan border, and, to some extent, trade will increase at both China-Pakistan and India-Pakistan borders. Not only will there be more land-based Trade and Transit Infrastructure (TTI) connectivity required with India, but we can also easily assume that given allowances for third-party trade to transit across/through Pakistan, this land-based connectivity requirement will also increase with other immediate neighbors Iran, Afghanistan, Central Asian Republics and even somewhat with China, with dualization of KKH (more tunnels and snow/rock galleries) thereby improving connectivity between Southwestern China and Northern Pakistan—we however not assume that in 20 years massive TTI investments (like, e.g., all-weather tunnel and rail connectivity) will be made.

With an increasing share of services, including transit trade, IT & communications, and Pakistan acting as the real land bridge, we can expect overall TTI connectivity requirements for all modes/types to ramp up. It is only under this scenario that we also start functioning as a neighboring beneficiary of two of the world's largest markets and economies in 2043—China and India. This will pave the way for higher returns on high-quality TTI, e.g., expansion of Gwadar, possible all-weather solutions by rail with China and Central Asia, and improved air connectivity TTI.

2.4 Implications for PSW

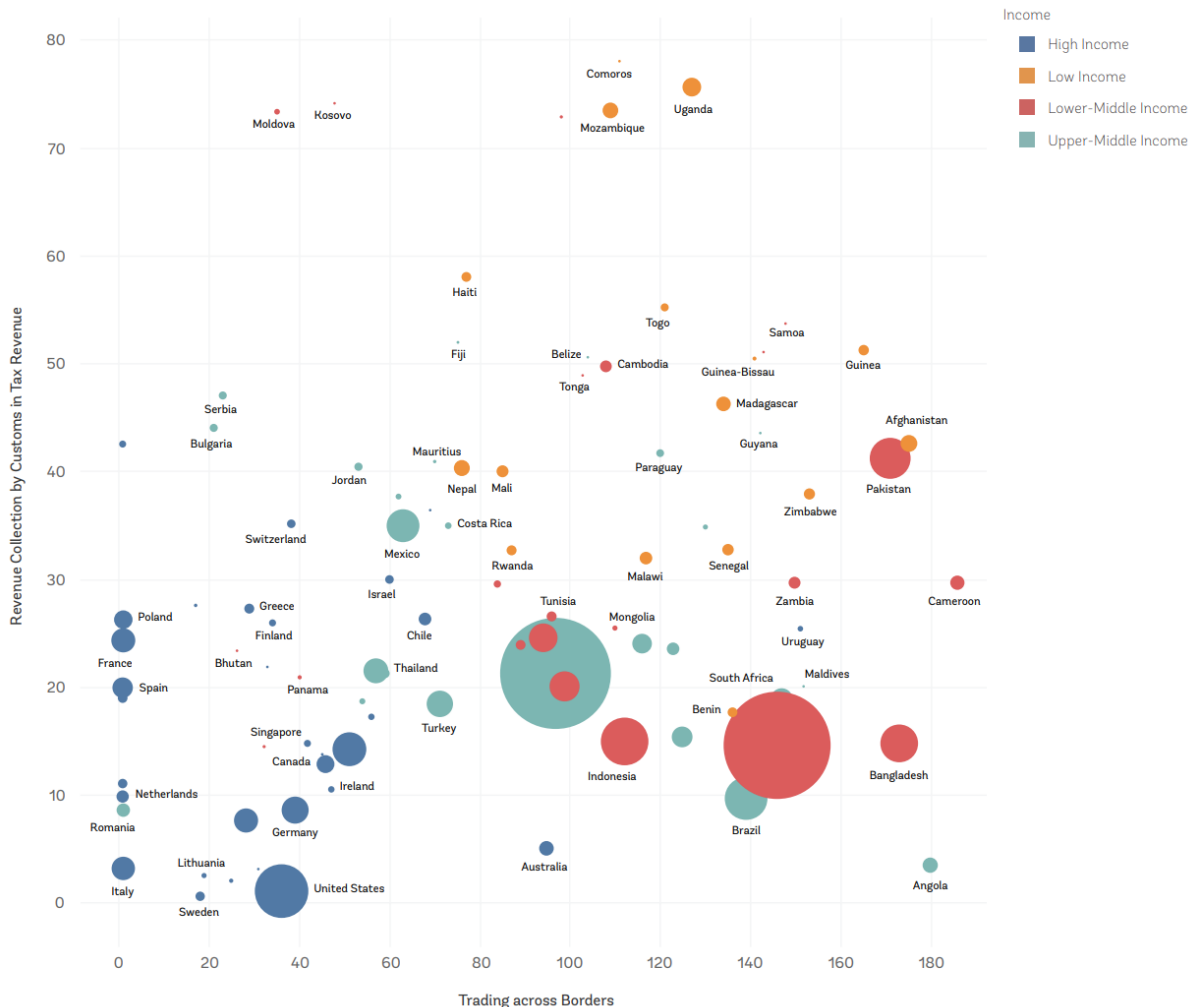
PSW is a virtual system available to all users involved in cross-border trade.-border trade. However, PSW must be able to cover all the various trade flows based on bulk, break-bulk, liquid (vessel and pipeline), and containerized trade.

PSW operates not as a Customs clearance system but rather as an amalgamation of all processes (regulatory, trade and commerce, transport and logistics, and finance), public and private, required to undertake a cross-border trade transaction, irrespective of the form of the trade.

PSW has and will always have an uphill battle in brining about trade facilitation reforms if Pakistan continues the trade regressive policies of collecting tax revenues as well as tariffs through Customs.



he natural limitation to the development of the PSW will continue to be the internal Customs clearance software (We BOC) engine as well as the Customs regulatory and control processes along with those of the OGAs and the other non-government institutions involved in the process.



Sources: WCO 2017; World Bank Group 2017 Doing Business Indicators.
Note: While more recent Doing Business results are available, for purposes of comparison, 2017 results are used.

Figure 6: Associations between Customs-Collected Revenue and Facilitating Trade Across Borders

The above figure, taken from WCO based on WBG work, clearly shows that PSW has an uphill task by the very nature of Pakistan's taxation system. As explained above, the focus on capturing revenue from traders other than that based on tariffs and transport and logistics-related fees and fines at the border will limit trade facilitation and, thereby, the real effectiveness and efficiency of PSW. This challenge persists in internal non-tariff revenue collection as well such as sales tax, income tax and corporate tax. PSW's innovation in systems and processes may not be able to override the structural problems at institutional level including but not limited to the taxation system.

Having said that, in the given environment, based on the above and the structure of Pakistan's trade, the PSW will need to start focusing on expanding its outreach to ensure coverage to seaports and airports with rollout to internal dry ports and certain key border ports. This will

require the development and encouragement of port community systems and other required infrastructure in the following order.

- i. Seaports – Port/Terminals Community Systems
- ii. Airport Community Systems
- iii. Internal and Border Ports' Community Systems

This will naturally require PSW to operate with a more open front end and ensure its coverage expands to include all types of trade flows.



3. PSW INSTITUTIONAL CORPORATE GOVERNANCE AND LEGAL FRAMEWORK

This section of the assessment pertains to the assessment of the legal and institutional framework eco-system of the PSW. The analysis is based on data acquired from presentations and FGDs with the core team at PSW, as well as the key documents from situational assessment reports, blueprints of the PSW projects, all the acts, rules, and regulatory orders relevant to the governance and operations of PSW, any audits and annual reports and internal assessment data shared by the PSW. The assessment is also informed by relevant global best practices, i.e., single windows in other countries, and the analysis is based on how they compare to Pakistan.

The questionnaires from SWAM's section 8.1.1 relate to NSW's (a) legal and regulatory framework, (b) governance issues, (c) business model, (d) regulations, acts, and provisions for data exchange, and (e) challenges and next steps. These questionnaires were adapted to the PSW context—all 5 FGD questionnaires comprised this part of the PSWA.

This chapter/section is based on what the assessment team learned and analyzed from these questionnaires.

The purpose of conducting an analysis of the institutional corporate governance and legal framework for PSW is to:

- i. Evaluate the current corporate governance structure.
- ii. Assess the legal framework for the development and implementation of the PSW, including identifying any legal gaps that may hinder its development.
- iii. Analyze the financing and business model for the PSW's operation.
- iv. Identify barriers that may impede trader interaction with government agencies in export, import, and transit transactions, as well as inter-agency information exchange and e-commerce development; and
- v. Develop proposals and recommendations to address the identified corporate governance and legal gaps and barriers [if any].

3.1 Corporate Governance Structure

The PSW Act sets up the institutional corporate governance structure for PSW with the following parts.

- Governing Council
- Lead Agency
- PSW Operating Entity (the company)
- PSW System (the digital system)

The PSW's Institutional Corporate Governance and Legal Framework align with the RACI structure outlined in the PSW's design document:

- i. Responsible: the person or entity performing the activity or work.
- ii. Accountable: the person or entity ultimately responsible and having Yes/No/Veto authority.
- iii. Consulted: the person or entity providing feedback and contributing to the activity.
- iv. Informed: the person or entity needs to be informed of decisions or actions.

| Entity | Accountable |
|---|--|
| PSW Governing Council | The Governing Council is ultimately accountable for ensuring the PSW delivers on its mandate and meets stated vision, mission and objectives. MOU between PSW-GC drives this. GC is financed by Act and has a permanent secretariat – PSW Secretariat. |
| Entity | Responsible |
| Pakistan Customs - Lead Agency | Customs as the designated lead agency shares the responsibility with the PSW-OE to deliver as per the strategic direction and scope – MOU between PSW-Pakistan Customs drives this. |
| Pakistan Single Window - Operating Entity | |
| Entity | Consulted |
| Stakeholder Advisory Committee | The stakeholder advisory committee, or any other committee established by the GC may be consulted from time to time to assist with the development or provide strategic assistance to the PSW. IRMS and M&E committees already functional. |
| Included OGAs | Referring to OGAs that are directly impacted by the PSW in terms of applications for LPCO's coming via the PSW. These OGAs will have to be constantly consulted on any development or changes that emanate from the PSW. |
| Port Authorities | The port authorities will be consulted and engaged in terms of defining a mutually beneficial processing and integration model between the PSW and the PCS. |
| Transport Associations Trade Associations Bank Associations | Transport, trade and bank associations, or any other association impacted by the PSW will be consulted and engaged as part of the change management and communication strategy of the PSW to garner support and buy-in and ensure alignment. |
| Entity | Informed |
| Users | Users will have to be informed of the services provided by the PSW, of changes to the trade transaction processing, of training required/suggested and any other pertinent information about the PSW. |
| Government of Pakistan | The GOP will be kept informed of PSW progress, milestones and strategic direction through GC and if required PSW and Pakistan Customs. |
| Regional Partners | Regional partners will be kept informed of the service offering and any applicable standards or specifications of the PSW. |
| Unimpacted OGAs | OGAs not involved in trade processes thereby excluded from the PSW environment will be kept informed of its progress and service offering in line with the objective of becoming a Centre of excellence and service provision for all Government agencies. |

Table 2: RACI Framework for PSW Institutional Corporate Governance and Legal Framework

Pakistan Single Window (PSW): Institutional Corporate Governance

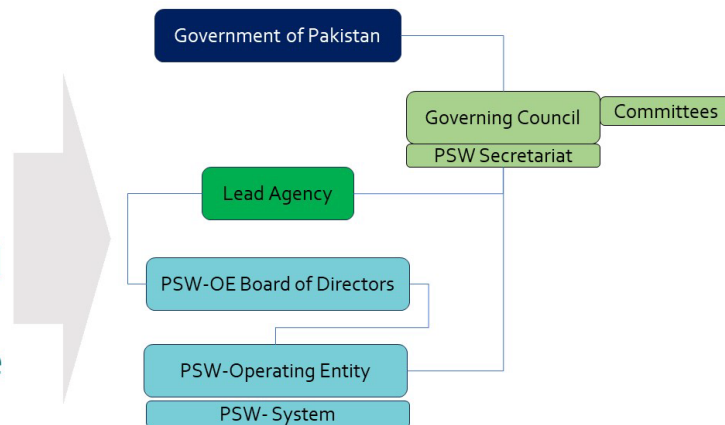


Figure 7: PSW institutional corporate governance structure

3.1.1 Governing Council

3.1.1.1 Purpose

According to the PSW ACT, “The Governing Council with relation to the Pakistan single window shall perform such functions as the Federal Government may by rules prescribe which may *inter alia* include

- a) Establishing the direction, principles, monitoring and maintaining oversight of information and communication technology system,
- b) Serving as the interface and collaborator between all relevant stakeholders for early implementation and smooth operations, and
- c) Establishing, managing and monitoring performance against the agreed benchmarks as per the memorandum of understanding with the lead agency and operating entity to ensure achievement of the anticipated outcomes.”

Summarizing why GC exists:

- Directs the development and evolution of the PSW (the system),
- Facilitates collaboration of PSW with all trade stakeholders, and
- Oversees PSW on behalf of the Government to hold PSW accountable.

3.1.1.2 Powers of the GC

- a) Opening and maintaining a separate account for GC’s own expenditures incurred in the performance of its functions or in the exercise of its powers.
- b) Imposing and levy fees and service charges for any services provided for and on behalf of the PSW-OE, based on recommendations of the LA .
- c) Coopting any trade stakeholder, but this stakeholder does not have any voting power.
- d) Inviting any persons or representatives of the trade or professional bodies or organizations to participate in its deliberations, make recommendations, submit reports and provide any assistance as the GC may deem appropriate, and pay them appropriate remuneration.
- e) Constituting specific committees of two or more members of the GC to perform specific tasks for the GC – such as, presently these are a) Committee of the GC on Integrated Risk Management System and b) Committee of the GC on Monitoring and Evaluation.

- f) Specifying the application of PSW and any ancillary systems thereto to any OGAs, Pakistan Customs, and other entities and organizations in matters related to cross border trade and transit trade, binding these organizations to timelines.
- g) Specifying the procedure for dispute resolution for any disputes arising during the implementation of this Act and appointing a committee from among its members for this purpose on a case-to-case basis.
- h) Replacing the operating entity, upon the recommendation of LA in case on non-performance or failure in achieving performance benchmarks (as reported in audit reports) for three consecutive years.⁶
- i) Recommending to the Federal Government to change or replace the LA due to non-performance or failure in achieving performance benchmarks (as reported in audit reports) for three consecutive years.⁷
- j) Making regulations for carrying out the purposes of this Act which shall not be inconsistent with the provisions of this Act and the rules made thereunder.
- k) Amending the Schedule in the Act (including a list of OGAs to be integrated into PSW) to add any entry thereto, omit any entry therefrom, and amend any entry therein.

3.1.1.3 Membership of the GC

The GC is chaired by the Federal Minister in-charge of the Division of the Government of Pakistan (GoP) allocated the “business of the” PSW Act – this being the Ministry of Finance and Revenue, through the Revenue Division.

The SRO 787 (1) 2022 specifies that members may include:

- i. Secretary, Minister of Commerce,
- ii. Secretary, Ministry of National Food Security and Research,
- iii. Secretary, Ministry of Maritime affairs, Secretary,
- iv. Ministry of National Health Services, Regulation and Coordination,
- v. Secretary Ministry of Science and Technology,
- vi. Ministry of Narcotics Control, Additional Secretary,
- vii. Prime Minister’s Secretariat
- viii. Member Customs, Federal Board of Revenue
- ix. Chief Executive Officer from PSW-OE.

Subsequently, the Chairman of the Federal Board of Revenue has also been included in the GC vide SRO 437 (I)/2022.

3.1.1.4 Secretariat of the GC

Though not compulsory, GoP has notified a permanent secretariat of the GC⁸, led by the head of the Lead Agency (LA), to act as a secretary to the GC, to:

- (a) Convening meetings of the GC with the approval of the Chairperson of the GC.
- (b) Heading the work of the secretariat; and
- (c) Present membership of the GC and the secretariat.

⁶ PSW Act 2021, Section 6, sub section 2.

⁷ PSW Act 2021, Section 5, sub section 3

⁸ PSW Act, 2021, Section 4, sub section 9



3.1.1.5 Memorandum of Understanding (GC and PSW)

The MOU between PSW and GC outlines that PSW is responsible to the GC for supporting the development, operation, and maintenance of PSW and its allied systems, PSW performance analysis and reporting, performance audits, collection and utilization of funds, change management and public outreach, system security and data protection, and other related activities.

Similarly, the GC is to provide the PSW with all the support it requires, ensure performance is up to par by conducting performance audits, support the PSW in acquiring any land and existing infrastructure, supervise and facilitate in aligning any laws and regulations, procedures, processes, documentary, information and fee requirements of Customs and OGAs that may affect the operations of the PSW system, implementation of the risk management systems and the allied components of the PSW system.

Appendix C of this MOU shares a list of benchmarks for PSW to report against, which are very specific in nature and pertain mostly to the initial phases of PSW development and implementation. For example, processing 80% of all LPCOs by June 2023. There are specific agencies that focus on the rollout of system benchmarks. The UNECE guidelines do recommend using SMART KPIs, which focus on improvement of transparency, time and cost reduction, reduction in red tape, and improved user satisfaction and coverage. The guidelines recommend flexibility and a balance between facilitation and control-related indicators.

3.1.2 Lead agency

3.1.2.1 Purpose

The PSW Act stipulates Pakistan Customs as the lead agency for PSW. It is the responsibility of the lead agency to -

“Establish an operating entity for the development, acquisition, roll out, operations, maintenance, upgrading, enhancements and marketing of the PSW and its allied systems, OGAs including Pakistan Customs itself and other relevant stakeholders.”

3.1.2.2 Powers of LA

The Lead Agency’s (LA) function, therefore, is to enable and supervise the establishment and smooth operation as well as the continuous development of the PSW. The LA is essentially the overseer of the PSW OE (the company) and is accountable to the GC.

The LA and the GC, and the Pakistan Single Window- Operating Entity (PSW-OE) are related through Memoranda of Understanding (MOU), which also contains performance benchmarks and other requirements from the PSW-OE & PSW-System (PSW-S). Thus, there is a clear MOU between Pakistan Customs the LA and PSW—refer to section 3.1.2.4 and 3.1.1.5.

Learning from Georgia and New Zealand

Like the PSW, not all single windows elsewhere in the world may have their customs department in the lead. For example, for Georgia’s Single Window ‘The Georgia Revenue’ manages and maintains the system and six other ministries support the department in its function. These include the Ministry of Internal Affairs, Ministry of Defense, Ministry of Internally Displaced Persons from the Occupied Territories, Labor, Health and Social Affairs, Ministry of Culture, Sports and Youth, and the Ministry of Environment Protection and Agriculture. The diverse nature sheds light on what sectors of the economy are deemed important in the regulatory ecosystem.

New Zealand on the other hand has a Single Window entirely independent of its customs department, where a data privacy act is the key document supporting the functioning of the single window and the old Customs’ Act gives SW the authority over cross border trade.

Box 1: Lead agencies in Georgia and New Zealand

For this purpose, the LA is allowed to make regulations in consultation with the GC and notify them in the official Gazette.

3.1.2.3 Accountability of the LA

The LA must furnish agreed annual performance reports to GC based on agreed benchmarks. The LA can be changed only by the GoP if GC reports or the GoP directly asserts non-performance or failure to achieve agreed MOU based benchmarks based on the performance audit report.

3.1.2.4 Memorandum of Understanding (PSW and Pakistan Customs)

This MOU between Pakistan Customs and PSW specifies that as the Lead agency for PSW, Pakistan Customs must get support from PSW on several functions and defines the responsibilities of PSW towards Pakistan Customs. ,Primarily, these revolve around the integration of OGAs into the system, budget and financing, audits, human resource management, procurements and assets management, publicity and public outreach, and performance benchmarks. It also has rules for non-disclosure of information, cooperation, and accuracy of data, force majeure, dispute resolution, and others.

This also includes guidance on harmonization, standardization, and simplification of data, conducting business process analysis, business process modeling or re-modeling, registration/regulatory authorization, application/issuance of LPCOs, goods declaration, cargo report/conveyance report, dematerialization of supporting documents and establishing a single window environment. The MOUs also detail standards shared on interoperability, integrated risk management, coordinated border management, and post-release compliance verification in line with global best practices.

3.1.3 Operating Entity (OE)

The PSW Act requires the LA to establish an Operating Entity (OE) for the PSW (PSW-OE) under the Companies Act in Pakistan (XIX of 2017).

The PSW-OE is responsible for:

- Developing, rolling out, operating, maintaining, expanding, enhancing, replacing, and marketing the PSW and its' allied systems.

The PSW-OE has overseen/reports to its Board, which is constituted by the Federal Government.

3.1.3.1 Board of Directors

The function of the BoD is to administer the PSW-OE in line with the requirements of the 2017 Companies Act of Pakistan.

The present Board of Directors, according to the annual statements for FY 2022-2023 on 30th June 2023, the PSW Board comprised of 7 members, which include an Executive Director, 4 Ex-Officio Directors, and 2 Independent Directors. Their titles and departments are shared below:

- i. Elected at each meeting with a vote, Chairperson, Board of Directors, PSW
- ii. Chief Executive Officer (CEO), PSW Executive Director

- iii. Additional Secretary/Executive Director General (EDG), Board of Investment (BOI), Member,
- iv. Director General (DG) Reforms & Automation (Customs), FBR, Member
- v. Joint Secretary (JS), Exports & Imports (EXIM), Ministry of Commerce (MoC) Member
- vi. Nominee of Pakistan Business Council (PBC) Member
- vii. Nominee of Federation of Pakistan Chamber of Commerce & Industry (FPCCI), Member

The composition of the BoD reflects representation from ministries and departments, all of whom are directly or significantly involved in facilitating cross-border trade and domestic and international investment, as well as credible and powerful private sector bodies such as the FPCCI and PBC. This indicates support at the highest level of the regulatory ecosystem.

3.1.3.2 Replacing the OE

The PSW-OE can be replaced if it is non-performing consistently based on established benchmarks for three consecutive years. This replacement can be at the behest of the LA by the GC.

3.1.3.3 Human Resource for PSW-Operating Entity

PSW-OE is allowed to induct government officers from Pakistan Customs, OGAs, or any other relevant government ministry or division or associated departments or entity. They are seconded into PSW through a competitive process carried out according to the prescribed rules and regulations of the LA. These 'domain' officers support the implementation, operations and enhancement of the PSW, and are essential as they bring the 'domain' knowledge from their respective agencies which makes the process re-engineering and digitalization to facilitate trade, effective and efficient. These officers are entitled to a 'special PSW allowance,' in addition to their regular government pay and admissible allowances. The officers seconded to the PSW are retained or have their contracts extended based on PSW-OE internal HR performance evaluation policies. PSW-OE hires other required human resources competitively from the market on term contracts which are reviewed and extended following the review process as that for the domain officers.

Currently, domain officers have been deputed to the PSW-OE from the Customs Department and the Ministry of Commerce. However, technical requirements are documented and analyzed by business development professionals who are hired from the private sector. These requirements are primarily for the technical team developing, operating, and maintaining the PSW-S. These include product owners, technical leads and architects, software developers, software engineers—all are private sector hires with at least four-year undergraduate education as a qualification.

Then PSW has a quality assurance team and deployment team and is hired from the private sector as well. PSW hires people directly from the market for the various teams through a dedicated HR department led by the Chief Human Resources Officer.⁹

3.1.3.4 PSW-OE and PSW Operating System (PSW-S)

The PSW-OE can form partnerships for the development or acquisition of "software, hardware, system code, data, infrastructure or anything ancillary thereto effectively run the PSW."

⁹ Information share in KI by Izhar UI Haque (POC PSW) on 29th May 2024.

However, any intellectual product such as software will remain the property of the GoP unless agreed otherwise and in writing with the GC.

According to the PSW, given the sensitivity of the service PSW on behalf of the Government, presently takes a conservative approach towards outsourcing software and technology development.

3.1.4 Assessment of the Institutional Corporate Governance and Legal Framework

Based on the information provided and analyzed, the PSW has an appropriate corporate governance structure under which to implement, operate, and evolve the PSW-S.

3.1.4.1 *Accountability flows are adequate and well-structured*

The PSW-OE accountable administratively to a corporate board led by the Pakistan Customs (the LA), implies that PSW has the primary cross-border trade regulation and facilitation agency in the lead. The overall PSW oversight by the GoP through a very powerful Governing Council (GC) to whom the Pakistan Customs (the LA) is also accountable is good practice as it not only establishes a chain of accountability but also devolves responsibility for PSW implementation appropriately to the PSW-OE. The LA as well as the PSW-OE can be revised by the GoP based on pre-established KPIs agreed through proper interagency MOUs.

3.1.4.2 *The Governing Council's role is paramount and well-crafted*

The three key roles for the GC i.e., to take the PSW forward (as a system), to support collaboration between the various public and private cross-border trade stakeholders, and to hold PSW (as a system) accountable to the agreed KPIs for the GoP, are simple yet essential. Any single cross-border trade agency otherwise tends to look at the issues of cross-border trade primarily through its own lens, which often stunts the implementation of an NSW. PSW being accountable to or a part of any single government or non-government entity is also not preferable, and as such, the role of an empowered GC to facilitate collaboration amongst all trade stakeholders is well crafted.

3.1.4.3 *Allowing the PSW-OE to decide the systems environment to implement the PSW*

The PSW-OE decides whether it is the developer or acquirer or both of requisite software, hardware, system code, data, infrastructure, or anything ancillary required to implement the PSW. This along with specific GC oversight implies that PSW is not immediately running the danger of developing hard to upgrade legacy systems,

3.1.4.4 *Allowing both secondments from relevant government agencies and the ability to recruit freely from the private sector*

With this approach and ability, PSW can thus formulate a very effective and efficient HR policy and onboard the required human resources. A successful NSW implementation requires (a) domain knowledge, (b) state-of-practice and state-of-art knowledge on IT and related technologies (for both software and hardware) and data security, (c) modern corporate administration knowledge as well as (d) marketing and external communications. While (a) is often best found in the government's regulatory agencies, the rest are best available in the competitive private markets.

3.1.4.5 Enshrining the core governance of PSW in the PSW Act—Political Commitment

By enshrining the core institutional corporate governance for the PSW in the PSW Act, the GoP has, by and large, shown its political commitment to the PSW as well as ensured safeguards against political and administrative interference.

3.2 Legal Framework enabling PSW Implementation

The PSW Act 2021¹⁰ is the overarching legislation setting out the rules for implementation and operations of PSW. It is complimented by Statutory Regulatory Orders providing details on various aspects of governance, outlined briefly in the Act. The section on Legal environment will cover those in detail.

The objectives of the PSW Act are summarized as follows.

- i. Establish and operate a *single point of submission and receipt of trade data and information*,
- ii. Enable *synchronized processing of data and information*
- iii. Achieve *standardization and harmonization of documents required for regulatory control*
- iv. Adopt *integrated risk management techniques*
- v. Remove *legal, regulatory and operational barriers to electronic transactions for external trade*
- vi. Facilitate *coordination and partnership among all the relevant trade regulatory agencies and stakeholders* dealing with international trade.

Note that the PSW Act does more than establishing the PSW. It provides the complete legal enabling environment required by the PSW to facilitate trade.

3.2.1 Coverage of the PSW Act

1. Short title, extent and commencement.
2. Definitions
3. Establishment of the Single Window
4. The Governing Council
5. Lead Agency
6. Operating entity
7. Grants, funds, budget and accounts of the Governing Council.
8. Sources of Funding.
9. Application of the Pakistan Single Window and its' allied systems, maintenance of records.
10. Access to Pakistan Single Window and it allied systems.
11. Application of Risk Management system.
12. Electronic documents non-discrimination vis-a-vis paper documents.
13. Offences and punishments.
14. Other laws to apply.
15. Provision of services, sale of software and IT systems etc.
16. Indemnity.
17. Dispute resolution.
18. Overriding effect.
19. Power to amend the Schedule.
20. Delegation.
21. Power to make rules.

¹⁰ Government of Pakistan 2021, Pakistan Single Window Act, 2021



- 22. Power to make regulations.
- 23. Removal of difficulties

Given below are some highlights of the Act, and related Statutory Regulatory Orders and the Memoranda of Understanding that form the legal environment in which PSW operates.

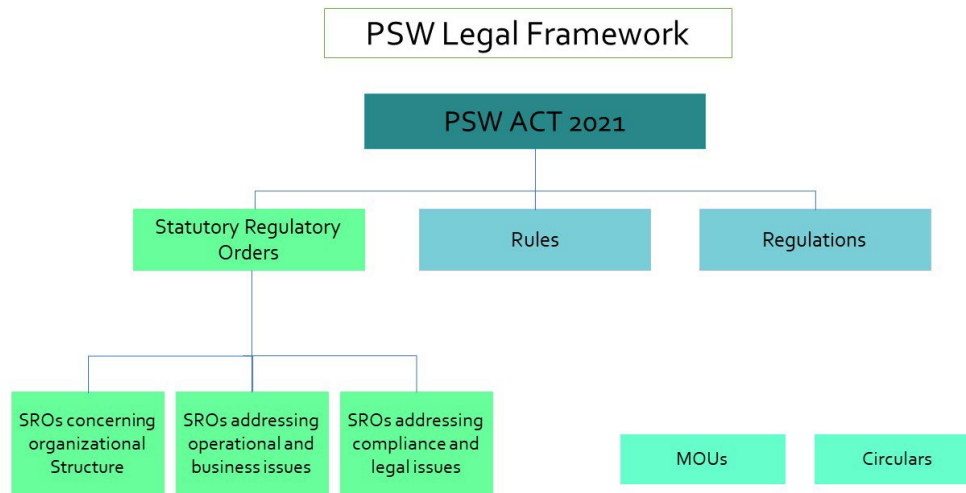


Figure 8: PSW Legal Framework

3.2.2 Governing Council and PSW Secretariat

The GC has been established by the GoP under the PSW Act, Section 4 for oversight of the PSW.

The GC was delegated all the GoPs powers except the powers of rulemaking and replacing lead agency through SRO 795(I)2021¹¹, dated 18th June 2021.

The ‘business of the PSW Act’ was delegated by the GoP to the Revenue Division of GoP through SRO 796(I)2021¹², dated 18th June 2021. Thereby also making the Minister for Finance & Revenue the ex-officio chairperson of the GC as prescribed in Section 4.(3) of the PSW Act.

The GoP notified the PSW Secretariat to the GC in The PSW Act, Section 4.(9) through SRO 790(I)2021 dated 18th June 2021.

The GoP notified the GC as an interministerial body through SRO 791(I)2021 dated 18th June 2021.

The PSW Act, Section 7.(3) Secretariat is allowed to open a bank account with SBP, which will be subject to annual audits. Section 7.(4) subjects the bank account to provisions of financial

¹¹ Government of Pakistan 2021, SRO 795(I) 2021 Ministry of Finance and Revenue - Revenue Division

¹² Government of Pakistan 2021, SRO 796(I) 2021 Ministry of Finance and Revenue - Revenue Division



laws and regulations. The accounts can be utilized for paying allowances of

Legal basis of Japan's Single Window?

Japan's national single window system, known as the Nippon Automated Cargo and Port Consolidated System (NACCS), is a pioneer in paperless trade facilitation, was established in August 1978. It has evolved significantly, offering a unified electronic platform for trade and customs procedures. NACCS, thrives due to a strong legal foundation.

The NACCS Special Rules Act laid the groundwork, and subsequent acts and international standards compliance ensure continuous improvement. Political commitment and the public-private NACCS Center solidify its effectiveness.

The foundation was laid with the Special Act of Customs Procedure through the Electronic Data Processing System (NACCS Special Rules Act 1977). This act enabled electronic submission of customs declarations, eliminating the need for physical documents.

In 1997, the system transitioned to a One Stop Service, allowing submission of data for multiple government agencies involved in trade.

In 2003, NACCS evolved into a true Single Window System, facilitating integrated clearances from various regulatory bodies. In 2005,

The Next Generation Single Window further enhanced the system by incorporating international trade facilitation agreements like the

WCO Kyoto Convention. NACCS Special Rules Act (1977) act laid the groundwork for electronic customs procedures. Electronic

Government Act (2001) promotes the use of electronic communication in government services, supporting the development of NACCS

as a single window system. Acts of relevant ministries involved in trade regulations (e.g., Ministry of Agriculture, Forestry and Fisheries)

might have specific acts governing their procedures, which are integrated into NACCS.

Promoting Interoperability: NACCS actively participates in initiatives like the Single Window Network for Asia and the Pacific (SWNAP)

to promote interoperability with other single window systems in the region. Adapting to Emerging Standards: The legal framework allows

for swift adaptation to new international agreements and standards like the WCO SAFE Framework for Security and Facilitation in

Trade.

National Policy Programs: Integrating the Single Window into national policy programs ensures smooth implementation and resource

allocation. NACCS Center: Established as a public-private partnership, this center manages and operates NACCS, fostering

collaboration between government and industry.

Promoting Interoperability: NACCS actively participates in initiatives like the Single Window Network for Asia and the Pacific (SWNAP) to promote interoperability with other single window systems in the region. Adapting to Emerging Standards: The legal framework allows for swift adaptation to new international agreements and standards like the WCO SAFE Framework for Security and Facilitation in Trade.

National Policy Programs: Integrating the Single Window into national policy programs ensures smooth implementation and resource allocation. NACCS Center: Established as a public-private partnership, this center manages and operates NACCS, fostering collaboration between government and industry.

Box 2: Legal Foundations of the Japanese Nippon Automated Cargo and Port Consolidated System

Chairperson, members, secretary or any other person hired for any activity under this Act and notified by GC, marketing, publicity, seminars and conferences, rent, hiring equipment, acquiring land, erecting buildings and any other expenses, cost, expenditures incurred for GC in performing its functions or exercising its powers.

3.2.3 Lead Agency, Operating Entity and its Board of Directors, and Human Resources

The GoP in line with the Section 5 of the Act designating Pakistan Customs as the Lead agency notified the same vide SRO 791(I)2021 dated 18th June 2021.

Pakistan Customs under Section 5 & 6 of the Act established the PSW-OE under the Companies Act 2017 – the PSW company, its Board of Directors and appointment of CEO have been provided through the Memorandum and Articles of Association registered with the Registrar of Companies.

SRO 792(I)2021 dated 18th June 2021 notified the PSW Company as the PSW-OE.

The secondment of officers of Customs, OGAs, relevant ministry or division, associated departments organizations or entities to PSW-OE is allowed under the PSW Act Section 6.(3). These secondments are governed by the PSW, dated 18th June 2021, (Deputation/Secondment of Civil Servants) Regulations, 2021.

3.2.4 PSW-OE Operations

Then PSW-OE operation, functions and responsibilities detailed in previous sections are provided for under the PSW Act Section 6.(4) and 6.(5).

Enacting the PSW Legislation – the story

In 2017, PSW was conceptualized as a 'transformative initiative'- digitalizing Pakistan's trade one milestone at a time! From 2017-2022, several foundational studies were conducted to help plan an effective initiative which included documents on Process Mapping, a time release study, legal framework, PCS Roadmap, IRMS Road map and most importantly a Project Design.

In February 2017, version 1.1¹ of a 'Situational Analysis Report' by Crimson Logic was released, which involved an assessment of requirements for a potential National Single Window (NSW), especially the documents it should cover and the requirements of OGA integration. In the same year, in November 2017, a Project Management Office (PMO) was set up in the Customs Wing, with some support from USAID. In 2019, Sovereign Border Solutions in a project design document for PSW recommended that "the PSW ACT be passed to create a provision for the establishment of a governing body (Governing Council) of PSW. As part of the implementation process, a secretariat to the Governing Council (GC) will be established, and a secretary appointed to assist in the secretariat's functions."

It also suggested the formation of the hybrid operating structure for the lead agency (Customs) is the appointment of a non-statutory stakeholder advisory committee (SAC), which will provide advice and guidance to the PSW GC (and operating entity as required) to ensure innovation and continuous improvement. The secretariat will be charged with the responsibility to ensure adequate use of resources, approve project scope, monitor achievement, and 'sign off' on the outcomes and products of the PSW sub-projects. These have been incorporated into the PSW Act 2021.

In the journey of where PSW is now, these studies are instrumental especially the design document that envisioned a robust corporate governance structure tailored to Pakistan's environment and then codified in the Act. The PSW Act 2021, was drafted by two customs officers and to help mobilize the institutional ecosystem to swiftly enact, ADB included the passing of the Act as one of its policy actions in their loan programs.

In 2021, the implementation of PSW really took off as the Act was enacted, the operating entity was given the status of a company, OGAs and banks were integrated into the system, subscription module was made available on the system, the Tradeverse- Trade information portal (TIPP) and Integrated Risk Management system was developed. In 2022 and 2023, Phase 1 and Phase 2 of OGA roll out was completed. As of July 2024, 15 OGAs, 29 banks, 6 PSI companies and 33 treatment providers have been integrated into the system.

Box 3: Narrative on Enacting PSW Legislation

These functions and responsibilities of PSW are also detailed in its Memorandum and Articles of Association under the Companies Act, 2017 and within the MoUs with the GC and LA (refer to section 3.1.1.5 and 3.1.2.4).

The PSW-OE MoU with the GC also provides for a phased implementation of PSW through its performance benchmarks provided in Appendix C of this MOU.

3.2.5 Other Government Agencies to comply with PSW Act

The Other Government Agencies (OGAs) are defined in the PSW Act Section 2.(n) as any of the regulatory authorities including their subordinate entities as listed in the Schedule (appended to the PSW Act) whether referred to jointly or severally.

The Pakistan Customs department and OGAs are required by PSW Act Section 3.(3) to participate in and form an integral part of the Pakistan Single Window, and to align their respective laws, regulations, procedures, processes and information requirements related to regulation with the PSW.

The Pakistan single window and any systems ancillary thereto are deemed to apply to any of the OGAs, Pakistan customs, other entities and organizations in any matter related directly or indirectly to the imports, exports and transit trade under the PSW Act Section 9. Additionally, the PSW Act Section 18. provides for the overriding of anything contained in any other law directly or indirectly related to the imports, exports, and transit that are in force concurrently.

The PSW Act is in closing under Section 23. deems that notwithstanding anything contained in any other law for the time being in force, the GoP in respect of rules and the LA in consultation with the GC in respect of regulations, may by notification in the official Gazette suspend any rules, regulations and notifications or provisions thereof for the removal of any difficulty in the implementation of this Act or rules or regulations made thereunder, to remove any and all difficulties in PSW implementation.

3.2.6 Sources of Financing for PSW

The PSW Act provides financing sources for the PSW and its governance model (specifically that for the GC and its PSW Secretariat). In doing so it *inter alia* defines the business model for the PSW-OE, as being a fee for service model (more in the following section).

The GC can request grants from GoP to undertake all its functions as provided by the PSW Act, Section 7 of the Act, which empowers the Fed Govt to place funds/grants at the disposal of the Governing Council to meet the expenses incurred by it and its secretariat.

The sources of financing for the PSW-OE are provided under PSW Act Section 8, which provides for multiple sources as follows.

- a. From budgetary allocations made by the GoP to the LA.
- b. Grants from the GoP to the LA.
- c. Income generated from levy of fees and service charges as provided in PSW Act Section 8.(2).
- d. Income generated from sales of products, services and investments by the PSW-OE.
- e. Any other source, as approved by the GC, upon recommendation of the LA.

The GC through SRO 1292(I)2021 dated 1st October 2021, GC has notified a levy of fee on all declarations.

PSW passed a circular dated 27 Dec 2022, to commence charging of the fee for service in line with the provisions of the PSW Act and as enabled by the GC through the relevant SRO.

3.2.7 Nondiscrimination of Documents Submitted Electronically, Required Under Other Laws

UNECE Recommendation No. 33, enlists maintenance of trade in electronic form as one of the key benefits of having a single window operating in the country. For Pakistan, The PSW Act 2021, Section 12.(1-3) outlines the rules for electronic documents, mostly LPCOs but also others.

The Act's requirement that "any documents created, retained, authenticated, notarized, duplicated, submitted, delivered or evidenced shall be deemed to have complied with, if such documents are available and retrievable in electronic form."

For the success of a single window locally and internationally, the documents generated by it must be credible and legally valid across platform. The PSW Act therefore includes in Section 12.(3) that "any permit, license, authorization or approval required under any law to be issued shall be deemed to have been lawfully issued if the same is issued in electronic form. Any information, documents, data, authentication, or authorization transmitted, received, stored, done or processed in the PSW electronically, any bear such marks, numbers, barcodes or identifiers which shall be deemed to bear electronic signatures and shall be admissible as

evidence in any legal for a within and outside Pakistan.” This gives any electronic document issued by the PSW the same legal status as the paper-based predecessors.

Similarly, SRO 406(I)/2023- Trade Data Dissemination, Data Exchange and Utilization Rules allows for strengthening the legal environment in which PSW LPCOs and other documentation is used. Details to be discussed in the following sections.

3.2.8 User friendliness and accessibility to PSW System

As mentioned in the UNECE success factors checklist at the beginning of this assessment, accessibility and user-friendliness are one of the 13 important aspects that enable a single window to operate well.

User friendliness is defined as the ability of SW users to find adequate support through the system through help desks, training modules, and feedback collection mechanisms. Accessibility does not only include ease of access but also secure access.

The legal basis for secure access is provided in the Act and Pakistan Single Window Evidence of Identity (E01) Rules, 2022 issued vide SRO 2296(I)2022, The Pakistan Single Window (Evidence of Identity) Regulations, 2023 issued vide SRO 908(I)2023 dated 27th January 2023.

Ease of use is outlined in SRO 604 (1) 2023 on Trade Information Portal for Pakistan (TIPP).

The PSW Act, 2021 in Section 2 (p), defines “registration” to mean ‘issuance of a unique user identifier to any person or entity to access the Pakistan single window system, in a prescribed manner.’

Section 10 of the Act specifies that no person shall access, physically or electronically, the Pakistan Single Window or its allied systems or infrastructure, transmit to, or receive information from the Pakistan Single window unless that person is duly registered or authorized in the manner prescribed by rules.



What is the Tradeverse- Trade Informational Portal for Pakistan?

The Trade information Portal (TIPP) is the single access point for all information regarding trade procedures, processes, information and documentary requirements in respect of imports, exports, transit trade or any other trade related subject and transaction.

The portal is accessible to online users anywhere with an internet connection free except for any value-added services, which would be available for a subsequent user/fee. In addition to the customs and regulatory information, TIPP provides its registered users additional services like news and announcement, alerts regarding any change in regulatory requirements and other specialized content published on the portal. There are modules on information for users from OGAs and for traders.

The traders' modules help users understand processes, legal documents, forms and measures for each type of HS code. Currently, there is information on 143 processes, regulatory measures, 132 OGA's legal documents, 154 Import/Export Regulatory Measures, 25 Import sources trade statistics, 153 Application forms, 27721 Unique Commodity Codes, 10 Top commodities trade statistics, 95998 Active tariff linkages, 25 Export destinations trade statistics.

This information dissemination is a requirement for regulatory compliance with the harmonized system, as adopted in Pakistan Customs Tariff into a comprehensive list on a 12-digit code scheme. The Integrated Tariff for trade provides specific information to PSW users on applicable regulatory requirements on any HS code, at the time filling of single declaration or submitting a request for an y license, permit, certificate or other documented mandated by any Government agency.

It is the responsibility of PSW to ensure that the information on TIPP is "authentic, complete, reliable, accessible and provides complete guidance to all users as per recommended international best practices."

The PSW is responsible for content management on TIPP, PSW website and integrated tariff for trade PSW ensures that all reasonable measures are in place to prevent unauthorized access, hacking and cyber-attacks for wrong information on the TIPP and PSW website

The Government is responsible for the provision of updated information and content to the operating entity for incorporating and publishing on the PSW public sites. All content and information published on the portal will be validated by the focal person within fifteen days from the date of its' feeding in the system and posting online.

Box 4: Understanding Tradeverse - Pakistan's Trade Information Portal

3.2.9 Data Exchange and Safety

The UNECE Recommendation No 33 emphasizes the need for examining issues relating to verification and authentication of data while conducting feasibilities for Single Window operations. Recommendations No 35 and its checklist for a country to implement a legal framework that covers the electronic submission of trade documents, electronic signatures, user authentication, data sharing and data archiving. In the Situational Analysis Report by Crimson Logic, legal issues pertaining to these were highlighted, whereas in the design document by Sovereign Border Solutions, the need to have a robust legal basis was defined within the 'Data Architecture' section. Data must be accessible, is an asset, is to be defined, governed, managed, secured and shared.

This is adequately covered in The PSW Act 2021, Section 10.(6) specifies that "any trade related information, transmission, documents, data or record gathered by any of the OGAs or Pakistan Customs or any other relevant department or organization or entity under this Act shall be confidential and shall not be used except as prescribed by rules." The GoP decides the manner and mode in which data and documents may be requisitioned, or the records or transmission, conducting audit or examination of the same and allows officers of the OGAs, Pakistan Customs, or any other relevant entity.

To ensure safe exchange of data, rules on user identification and authentication have been defined in the SROs. These ensure that adequate protocols to verify user identification have been followed, information shared with all relevant agencies in the system and secure access is guaranteed to 'subscribers/users'.

Rules for user identity, verification, authentication and authorization: SRO 2296 (I)/2022 on 'Evidence of identity', where Rule 2. (4) governs rules on identification based on system integrations or electronic data interchange with OGAs and Banks. Rule 3,(1, 2, 3) applies to a Unique Identification Number issued against NTN to subscribers whose identity has been confirmed. Rule 4. (2) is about access to PSW, subscriber is responsible for the authenticity of information provided, security of their password, safe handling of data shared and restricted from PSW. Rule 5 states that no applicant whose identity is accepted through PSW subscription process prescribed by EOI regulations shall be denied access.

Regulations for user identity, verification, authentication and authorization SRO 98 (I)/2023 Evidence of identity. Rule 2.(a-e), set the requirements for any user of PSW to have a valid National Tax Number (NTN). It also sets out the rules for foreign nationals who want to set up shop in Pakistan.

In Rule 3.(1-4), the SRO outlines the procedure for registration in the system. Once the application is validated a subscription fee must be paid which can be paid through a system generated payment slip identity (PSID). Successful real-time online validations require a one-time password sent to the registered mobile number to allow further access to the system. There will be one-time biometric verifications for first time registration into the system.

Subscribers of the PSW system are to renew and revalidate the system generated UID upon expiry of the validity period as prescribed in the 'PSW Evidence of Identity Rules" which is two years. If an applicant's evidence of identity is accepted through the PSW subscription process, they cannot be denied access to the system.

PSW however, may refuse to issue an UID or suspend or cancel it if the existing subscriber is barred from foreign trade transactions under any applicable national or international law or legal, quasi legal; or administrative order by the authority, due to the involvement of subscriber in smuggling, commercial or customs fraud, identity theft, trade-based money laundering, terrorist financing or contravention of any other national or international law.

The legal basis addresses the apprehensions that exist within the traders and business community in Pakistan for their records to be used against them by authorities given that the incumbent paper-based system does have exploitative distortions.

3.2.10 Use of Trade Data By PSW

The PSW Act 2021 emphasizes the confidentiality of trade-related information, as stated in Section 10.(6). This section mandates that any trade data gathered by OGAs, Pakistan Customs, or other relevant entities must remain confidential and can only be used as prescribed by rules.

Building on this foundation, SRO 406(I)2023, issued on March 27, 2023, introduces the Pakistan Single Window Trade Data Dissemination, Exchange, and Utilization Rules, 2023. These rules cover various aspects, such as defining trade data, ensuring data confidentiality, establishing non-disclosure agreements (NDAs), and guiding data dissemination.

Rule 8.(1) outlines the commercial use of trade data, which can be shared with private sector firms for the development of value-added products and services, subject to a service charge as per Rule 7.(5). Rule 8.(3) further allows the operating entity to develop or enter partnerships with public or private entities for creating value-added products, sharing disaggregated trade data for testing and development while maintaining data confidentiality.

Rule 4 guides the dissemination of information through official websites, electronic, print, and digital media, research publications, news articles, and the compilation or publishing of cross-border trade statistics. Additionally, it covers the use of data for public policy analysis, submissions before courts, tribunals, or arbitration forums, and integration with other countries' databases under bilateral or international agreements.

Data exchange and integration with national and international systems is governed by Rule 9, which focuses on the operating entity and permits PSW to exchange trade data with other national and international organizations, including single window operators, foreign governments, and international organizations. This is done through agreements approved by the PSW GC, facilitating global integration.

Rule 10.(4) addresses access to the Pakistan Single Window (PSW) and its allied systems, along with the maintenance of records, and states that any electronic exchange of information, declarations, documents, transactions, or notices via the PSW or its allied systems is legally recognized and admissible as evidence. Rule 10.(5) mandates that the operating entity keeps records of all transmissions, documents, and messages for at least five years. Rule 10. (6) emphasizes that trade-related information must be stored or retained, with reasonable notice given to those possessing such data.

In terms of legal accountability, Rule 10.(13) outlines offences and corresponding punishments. Unauthorized copying or transmission of PSW data can lead to imprisonment for up to six months or a fine of up to one hundred thousand rupees, or both. Unauthorized interference or damage to the PSW system can result in imprisonment for up to three years or a fine of up to five thousand rupees, or both.

Currently, the PSW is integrated with the e-Phyto Hub globally, and with single windows in China, Tajikistan, and Uzbekistan. These provisions form the legal basis for current and future integrations, ensuring a secure and efficient exchange of trade data.

3.2.11 Integrated Risk Management System

The PSW system has an Integrated Risk Management system that incorporates the OGAs risk systems, whether formal or not, and allows OGAs to adopt an overall risk system. An inter-agency Risk Management Committee has been formed by the GC for providing “strategic direction, principles, policies, guidance and oversight for the IRMS, ensure collaboration amongst government agencies for the implementation of the IRMS and review outcomes and effectiveness of risk activities and impact on compliance levels in addition to the tasks assigned by the GC.” This Committee is called the GC Risk Management Committee.” Each government agency or department (OGA) is also required to constitute an operational Risk Management Committee, which is called the GA Risk Management Committee.

Section 11 of the Act provides for application of Risk management system as per rules

The Integrated Risk Management System Rules 2023 issued vide SRO 1728(I)2023 dated 23rd November 2023.

- The IRMS is applicable on all OGAs
- GC Risk Management committee
- OGA risk management Committee
- IRMS center of excellence to maintain and operate the IRMS

3.2.12 Monitoring and Evaluation

To ensure a robust mechanism of Monitoring and Evaluation, the GC has formulated a committee which was tasked to set up a mechanism of performance assessment based on some pre-set benchmarks. The GC hired consultants to formulate a M&E framework for PSW based on the indicators prescribed in the UNECE Recommendation 33, using globally comparable data such as the Logistics Performance Index of the World Bank, The Trade and Competitiveness Diagnostic Tool Kit of the World Bank among others.

The LA must submit annual performance report to GC based on performance benchmarks determined through the quarterly and annual performance reports according to the MOU with the LA and GC according to PSW Act, section 5.(4)

The Governing Council may hire services of any third party for conducting any study or analysis related to Pakistan Single Window, according to SRO 789(I) 2021 dated 18th June 2021

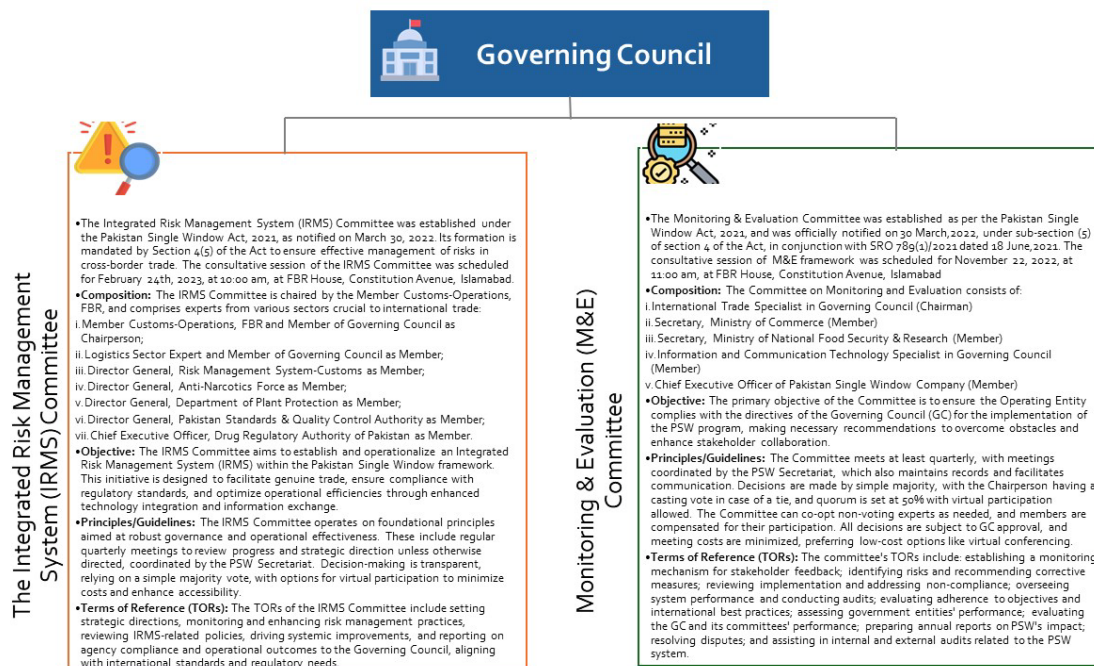


Figure 9: Committees of Governing Council

3.2.13 Compliance and Enforcement

Mandatory participation of Customs & OGA into the PSW is enabled through Section 3.(3), while application of the PSW system on Customs, OGAs, other entities, and organizations related to trade is enabled through Section 9 of the PSW Act 2021.

Section 13 provides for offenses and punishment in the context of PSW

- It criminalizes acts like
- unauthorized access, interference, copy, or transmission of data
- Unauthorized use of unique user id
- Tampering with the PSW software
- Writing malicious code etc.

Section 13.(2) provides for the appointment of a special judge for the prosecution of this offence.

The Special Judge Customs & Taxation assigned the role vide SRO 793(I)2021 dated 18th June 2021. Changes have been made to the Customs Act 1969 to cover the PSW system

Pakistan Single Window, OGAs, trade controls, documents submitted through PSW, unauthorized access, have been included in section 2 of the Customs Act 1969.

The Offences and Penalties of the PSW Act, have been incorporated in Customs Act 1969 in section 156.(1) serial 105, thus empowering Customs to take cognizance of the offences as well.

Section 14 of the PSW Act provides for other laws to apply such as the provisions of the Customs Act, 1969, The Electronic Transactions Ordinance, 2002 and the Prevention of Electronic Crimes Act, 2016.

3.3 Assessment of the Legal Framework enabling PSW implementation

The PSW is not a small project, and nor is the PSW an ordinary corporate entity, rather this is very large and complex undertaking considering which, the design, the start and rollout (which is continuing and will continue for a while) have been well executed with clearly defined policy-law, institutional requirements, as well as rules and regulations. Still, the evaluation does not for a moment consider this to be an easy task going forward and sees many challenges as well as next steps required to continue the excellent momentum, and results achieved till now.

In this section, the assessment team evaluates the quality of legal provisions in the Act and SROs to understand whether they effectively enable the PSW to achieve the required objectives of a SW. The UNECE Recommendation 33, guidelines place emphasis on robust legal basis for privacy of users of the system and their data, presence of data protection laws in the legal framework, as well as use and credibility of e-signatures and electronic data exchange enabled by laws.

Following a review of relevant legal documents as discussed at length in the sections above and an analysis of data collected through FGDs and KIs, the assessment team has found no impediment or obstruction to the operation and implementation of the PSW system within the legal framework. The 23 sections of the PSW Act 2021 cover all the major themes recommended by UNECE and SWAM.

The PSW Act provides overarching powers and overrides all other acts. Section 18 and 23 empower the GoP and the lead agency in consultation with the GC to suspend any rules, notifications or regulations for removal of difficulties in implementation of this Act or rules or regulations made thereunder. The future development plans for the single window have been outlined in their 3-year Business Plan. This includes migration of Front- end functions of Pakistan Customs to PSW.

The legal framework provides for the exchange of B2G and G2G e-data and e-documents and their use, filing information with government authorities only once, e-customs and e-commerce (including payments), submitting and exchanging data using e-signature (following UNCITRAL rules) or equivalent authorizations, and the admissibility of e-documents and messages as evidence in court.

3.3.1 Enabling international data integration

International Data integration always requires a G2G agreement which will have clauses on data protection as well as data exchange protocols. In PSW's case SROs enable PSW to pursue data integration projects without the need to get prior approval from the Government for every case.

However, the final text of the agreement being G2G in nature will always require the GoP's approval. For further details, please refer to Section 3.2.11 of SRO 406 (1) 2023, which covers rules on data dissemination and trade. The integration with e-Phyto hub and single windows in Tajikistan, Uzbekistan permits PSW to exchange trade data with other national and international organizations, including single window operators, foreign governments, and international organizations. This is done through agreements approved by the PSW GC, facilitating global integration.

3.3.2 Admissibility of e-documents in court creating transparency and trust

Section 3.2.8 gives details from the legislation that allows PSW generated documents to have the same legal status as the paper documents in the existing system, where a culture of considering paper more credible than digital documentation prevails. Reliable and legally valid e-documents are significant in the Pakistani context, where e-citizenship and digitalization of key processes within government departments is a relatively new phenomenon. The system is heavily reliant on paper-based regulatory compliance. Secure and fast ways of data exchange not only reduce the time and cost of trade within a Single Window but also create trust in the system due to greater transparency.

3.3.3 Safe and reliable data storage

PSW has dedicated data centers where archives of applications are stored on tapes. This is discussed more in the IT framework section. However, this is also important to build trust in the system and draw some parameters for record keeping. This informs the users that the availability of records is for at least 5 years. However, older records may not be available, which allows traders or users of the system to prepare accordingly and potentially keep their own records according to their business needs.

3.3.4 Comparing PSW with other countries¹³

Comparing PSW with single windows in other countries and the legal framework that enables the exchange of electronic data, it is assessed how the enabling environment in the country measures up. In Cambodia for example, electronic application for trade was enabled in 2019, where electronic customs' permits and certificates of origin were processed online. The country disallowed any paper applications for certificates applicable to the chemical industry. Gradually expanding to agriculture, forestry and fishing sectors.

The PSW Act 2021 makes it mandatory to file all applications online and OGAs are compelled to integrate into the system, all the roll out is being implemented in phases and allowances for the transitional period have been made. Integration is not made mandatory in Cambodia therefore, the cooperation between agencies is not as encouraging as in Pakistan. Cambodia also lacks the provisions for incorporating technologies such as AI and internet of things into its system. The assessment team has observed during FGDs with OGAs that the IT team at PSW is already engaging with focal person about incorporating AI into the system.

Studying the UK model, the National Maritime Single Window (NMSW), it is understood that the key legislation supporting an electronic SW is the Electronic Trade Bill/ACT which has enabled the Singular Electronic Interface for cross border trade with and within UK. This legislation gives legal status to e-trade documents such as bill of lading and bill of exchange i.e. "same legal treatment, effects and functions' as the paper documents in the English Law. PSW

¹³ Pamulapati, N. & UN.ESCAP (2023). *Single window legal framework for cross-border trade : 10 case studies*. Retrieved from: <https://hdl.handle.net/20.500.12870/6635>.

Act 2021 also has detailed rules on the status of e-documents, allowing 'admissibility' of e-documents in court and in case of any dispute. The section Legal Environment, sub-section on SROs related to Information Technology Framework, include the specific articles and clauses that enable single declaration, legal status to e-documents, definition of e-documents, allowing e-signatures and data privacy and security while exchanging data with international systems.

In the UK, the law ETDA allows the permit holder to change the form of the document from paper to an e-document depending on jurisdictional requirements. The UK also allows provision within the law for collaboration between information technology systems such as IoT, Robotic Process Automation, Distributed ledger Technology and smart contracts. The UK also commits to Reporting Formatives Directive (RFD) and submission of maritime reports and data covered by international standards.

In Georgia, the law on Commodity Exchange and Trade Exchange defines the legal relation of commodity and trade exchange and provides guarantees while Government Decree №1018 mandates that all agencies must issue documents through this system whenever requests are submitted through it. A paper-based communication system also exists in parallel, like Pakistan. For example, during FGDs team observed that MNC still carries out a paper-based process before filing application in PSW system.

In Georgia, Law on Electronic Document and Electronic Trusted Services defines the legal basis for the use of electronic documents, electronic signatures, and electronic trust services. This enables e-signatures to have same legal status as handwritten signatures. In Pakistan the PSW Act 2021, is the all-encompassing, comprehensive law that permits e-signatures and electronic exchange. Additionally, Georgian laws set the ground for establishment of a National Committee on International Trade Facilitation, which oversees all trade facilitation aspects under the WTO Trade Facilitation Agreement.

Similarly, under the Kenya Single Window Act, KenTrade, the Single Window for Kenya was instituted and operationalized. This gives Kenya Trade Network Agency the primary authority in the governance of KenTrade. The Kenyan Government's commitment to a paperless trade environment is also demonstrated through incorporation of the in the National Electronic Single Window System Act of 2022 which became the foundation of the creation and operation of the NSW.

The UNESCAP publication on case studies for 10 countries has informed this comparison with the PSW. To keep the comparison crisp a handful of comparable countries have been selected from different regions to illustrate that PSW compares sufficiently well to good practices across the world.

The PSW has one of the most robust legal frameworks, as strong as the UK, with the relevant laws, rules and regulations in place to not only accommodate existing developments but also allowing room for use of new technologies like AI, Internet of things among others.

3.4 Business model

The legal basis of the business or financial model has been covered in the Act under Section 8. (1-4) which stipulates that GoP has the power to allocate funds to the LA from the annual budget. The GoP may also give grants to LA to provide PSW with funding for development, operations, enhancement and up-gradation of the PSW- System.

PSW can also earn income generated from levy of free and service charges, income generated from sales of products, services and investments; and any other source approved by the

Governing Council, upon recommendation of the lead agency. The expenses that can be covered by the fee related income include operating expenses, enhancements and upgradation of PSW.

“All financing raised under this Act must be utilized toto meet the operating expenses and enhance PSW. This may include procurement, ownership, development, maintenance upgradation, marketing and operation expenses related to software, hardware, system code, data, infrastructure, property that PSWC requires or utilized.”

The company has the following primary revenue stream according to SRO 1292 (1) 2021,

Upfront fee – a prescribed application processing fee, fixed by the GC and notified to management from time to time, shall be charged to the traders/clearing agents who submits an online application for subscription to the PSW electronic platform and for any subsequent change/update fee, fixed by the GC and notified to management from time to time, shall be charged to the customer who submits a GD for imports/exports using Pakistan Single Window electronic platform.

The following schedule of fees is outlined.

- The subscription fee is PKR 500.
- Goods declaration fee for goods with a value up to PKR 50,000 is nil (zero).
- Goods declaration fee for goods with value above PKR 50,000 and up to PKR10,000,000 is PKR 500
- Goods Declaration fee for goods with a value above PKR 10,000,000, it is PKR 1000.

Additionally, the Federal Government may allocate additional funds to the lead agency/Pakistan Customs to the credit of operating/ PSWC on the recommendation of Governing Council. This is allowable in the case that PSW fee and service charges are not sufficient.

3.4.1 Sustainability of the Business model

To understand the context in which the question of PSW’s sustainability is to be answered, it is important to note the following points:

- a) PSW’s Act was enacted in 2021.
- b) From 2017-2022, PSW set up the knowledge foundation for Governance, structure and implementation of PSW.
- c) PSW system went live in June 2021 for the first time.
- d) The financial year 2020 is heavy with capital expenditure and setting up costs.
- e) The roll out of the integration plan for the first two phases was completed in 2022.
- f) Consequent two financial years after system going live were heavy in capital expenditure.
- g) PSW generated surplus for the first time in FY 2023.

Some of the major expenditures have been on Software Development that is specialized in their design to accommodate integration with OGAs and their business processes, especially the Integrated Risk Management Systems and components of the Port Community System. Some software solutions need to be procured from the market as they are difficult to develop and include operating systems, antivirus systems, development environment e.g. (.Net Framework), software configuration management systems used for application life cycle management system, or any specialized component used to support PSW.



Final Report - Pakistan Single Window Assessment (PSWA)

Even though PSW is a not-for-profit company, it does operate like a corporation. According to the basic financial investment principle, any project can be expected to be capital-intensive in expenditure in the first 3 years of operation. The breakeven point is reached on average after 3-5 years. With this metric in mind, PSW has been able to generate surplus income/saving in the first 2 years of operation. As the subscriber base grows and users become more comfortable with an automated trade process, this surplus may grow.

The PSW team developed and implemented the PSW- System (PSW-S) up and operational in Rs. 1.8 billion or USD 5.5 million.

The assessment team did a simple break up of all fee or operation related income and operating expenses and calculated a surplus or deficit for PSW. In the first three financial years, PSW was in deficit. These include the years in which the PSW-S was not live/operational and therefore there was no user/subscriber fee. As can be seen, for FY 2023, PSW is able to cover its operating expenses with its operating income and revenue from subscriptions.

| Sustainability Analysis on Annual Accounts of PSW | | | | |
|---|--------------|----------------|-----------------|---------------|
| Description | FY2020 (PKR) | FY2021(PKR) | FY2022(PKR) | FY 2023(PKR) |
| Income from Operations | 0 | 64000 | 41, 755, 000 | 502, 133, 100 |
| Other income | 0 | 74855 | 21, 089, 420 | 200,246, 153 |
| Revenue from Subscription related fee- Subtotal A | 0 | 139,000 | 62,844,420 | 701,379,253 |
| Operating Expense/Functional Expense | 0 | 14, 172, 913 | 108, 338, 667 | 328,613, 909 |
| Administration | 3,601, 122 | 46, 059, 654 | 128, 403, 663 | 237, 076, 449 |
| Essential expenses PSW function Subtotal B | 3,601, 122 | 60,232,537 | 236,742,330 | 565,690,358 |
| Sustainability surplus/deficit -Subtotal (A-B) | (3,601, 122) | (60,093,537) | (173,897,910) | 135,688,895 |
| Surplus/Deficit for the year ¹⁴ | (3,601, 122) | (51, 015, 781) | (177, 622, 138) | 135, 542, 181 |

Table 3: Sustainability Analysis on Annual Accounts of PSW

To assess the trend of incomes, operating expenses and surpluses, these have been plotted in a graph. The graph shows that can be observed from the revenue, operating expenses and surplus/deficit only from the core income and expenses shows an increase in PSW's propensity to remain financially sustainable.

¹⁴ These are the actual figures from annual reports from FY 2020-2024

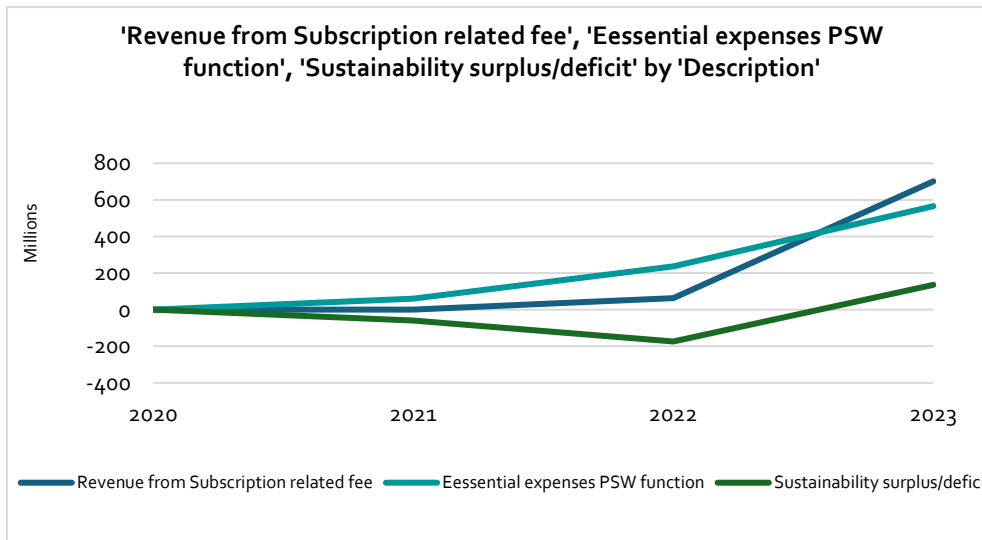


Figure 10: Surplus/Deficit trends from PSW Annual Accounts

Future projects are being planned with donor funding or through its own funds. So far PSW will remain sustainable if it can generate enough surplus to pay back any loans and keep covering its operating expenses. The deficit over the years is also less if we consider only functional expenses. PSW is a non-profit, so any profit generated is retained as savings for future projects.

After reviewing the revenue/income generated from subscription fees and functional expenditures, which are essential to running PSW, the assessment team has gathered that PSW has recently become financially sustainable. It shall remain sustainable if it continues to meet its operational expenditures.

However, it is too soon PSW's corporate lifespan to assess whether this trend will continue. PSW must be allowed a few more years to operate to see the project's real impact and financial sustainability.

Annual Report for FY 2019-20

| PAKISTAN SINGLE WINDOW STATEMENT OF INCOME AND EXPENDITURE FOR THE PERIOD ENDED JUNE 30, 2020 | | |
|---|------|---|
| | Note | For the period from April 15, 2020 to June 30, 2020 Rupees |
| INCOME | | |
| Income | | - |
| EXPENDITURE | | |
| Administrative expenses | 9 | 3,601,122 |
| TOTAL EXPENDITURE | | <u>3,601,122</u> |
| Deficit for the period - before tax | | (3,601,122) |
| Taxation | | - |
| Deficit for the period - after tax | | <u>(3,601,122)</u> |

The annexed notes 1 to 15 form an integral part of these financial statements.

Annual Report for FY 2020-21

| PAKISTAN SINGLE WINDOW STATEMENT OF INCOME AND EXPENDITURE FOR THE YEAR ENDED JUNE 30, 2021 | | | |
|---|------|---------------------|--|
| | Note | 2021 | For the period from April 15, 2020 to June 30, 2020 |
| Rupees | | | |
| INCOME | | | |
| Amortization of grant | 7 | 9,080,381 | - |
| Deferred capital grant | 8 | 44,724 | - |
| Subscription income | 19 | 64,000 | - |
| Other income | 20 | 74,855 | - |
| | | <u>9,263,960</u> | - |
| EXPENDITURE | | | |
| Operating expenses | 21 | 14,172,913 | - |
| Administrative expenses | 22 | 46,059,654 | 3,601,122 |
| Amortization of deferred capital grant | 12 | 44,724 | - |
| Finance cost | 23 | 2,450 | - |
| | | <u>60,279,741</u> | 3,601,122 |
| Deficit for the year/ period - before tax | | (51,015,781) | (3,601,122) |
| Taxation | 24 | - | - |
| Deficit for the year/ period - after tax | | <u>(51,015,781)</u> | <u>(3,601,122)</u> |



Final Report - Pakistan Single Window Assessment (PSWA)

| PAKISTAN SINGLE WINDOW STATEMENT OF INCOME AND EXPENDITURE FOR THE YEAR ENDED JUNE 30, 2022 | | | |
|---|------|----------------------|---------------------|
| | Note | 2022 | 2021 |
| -----Rupees----- | | | |
| INCOME | | | |
| Amortization of grant | 7 | 3,812,458 | 9,080,381 |
| Deferred capital grant | 8 | 967,661 | 44,724 |
| Income from operations | 19 | 41,755,000 | 64,000 |
| Other income | 20 | 21,089,420 | 74,855 |
| | | <u>67,624,539</u> | <u>9,263,960</u> |
| EXPENDITURE | | | |
| Operating expenses | 21 | 108,338,667 | 14,172,913 |
| Administrative expenses | 22 | 128,403,663 | 46,059,654 |
| Amortization of deferred capital grant | 8 | 967,661 | 44,724 |
| Finance cost | 23 | 7,536,686 | 2,450 |
| | | <u>245,246,677</u> | <u>60,279,741</u> |
| Deficit for the year - before tax | | (177,622,138) | (51,015,781) |
| Taxation | 24 | (599,093) | - |
| Deficit for the year - after tax | | <u>(178,221,231)</u> | <u>(51,015,781)</u> |

The annexed notes 1 - 30 form an integral part of these financial statements.

| PAKISTAN SINGLE WINDOW STATEMENT OF INCOME AND EXPENDITURE FOR THE YEAR ENDED JUNE 30, 2023 | | | |
|---|------|--------------------|----------------------|
| | Note | 2023 | 2022 |
| -----Rupees----- | | | |
| INCOME | | | |
| Amortization of grant | 7 | 5,433,729 | 3,812,458 |
| Deferred capital grant | 8 | 1,225,485 | 967,661 |
| Income from operations | 20 | 502,113,100 | 41,755,000 |
| Other income | 21 | 200,246,153 | 21,089,420 |
| | | <u>709,018,467</u> | <u>67,624,539</u> |
| EXPENDITURE | | | |
| Operating expenses | 22 | 328,613,909 | 108,338,667 |
| Administrative expenses | 23 | 237,076,449 | 128,403,663 |
| Amortization of deferred capital grant | 8 | 1,225,485 | 967,661 |
| Finance cost | 24 | 6,560,443 | 7,536,686 |
| | | <u>573,476,286</u> | <u>245,246,677</u> |
| Surplus / (Deficit) before tax | | 135,542,181 | (177,622,138) |
| Taxation | 25 | (23,028,864) | (599,093) |
| Surplus / (Deficit) for the year | | <u>112,513,317</u> | <u>(178,221,231)</u> |

Table 4: Surplus/Deficit from PSW Annual Accounts



4. THE INFORMATION TECHNOLOGY FRAMEWORK ASSESSMENT

This section covers the Information technology framework aspect of the SWAM methodology.

This section analyzes the technical, business process, and functional architecture of the PSW system, evaluating the adequacy and level of implementation of its technical components for both operation and development. It examines the system's functionality and interface, assessing the level of security and technical infrastructure provisions to mitigate risks of dysfunction. Additionally, the degree of development of IT-based services, such as e-government systems, interdepartmental information interaction, and electronic payment for services, is evaluated to determine their effectiveness in simplifying interactions and procedures. Finally, recommendations for further developing the Single Window system are provided.

The assessment of IT framework is based on detailed document review, two rounds of Focus Group Discussions (FGDs) with the IT team at PSW, one at the start of the project, and one before the data analysis and reporting phase of the assessment. The discussions followed the format of SWAM questionnaires provided in Section 8.1.2 and adapted to the context given the advanced stage of evolution the PSW is at in terms of its IT systems. The completed FGD questionnaires are included in Annex 3.2.

In summary, the assessment reviewed whether the PSW system is robust, interoperable, secure and agile and able to always meet business continuity requirements.

The PSW system is relatively true to the structure proposed in its detailed design document prepared prior to the implementation of PSW, which is show below (Figure 11).

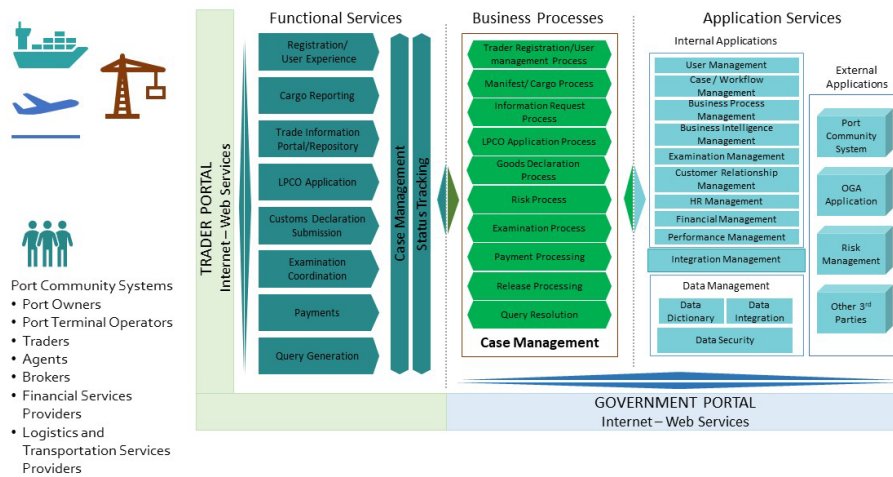


Figure 11: The PSW System Compared to Detailed Design Proposal

PSW's core functionalities revolve around centralizing and simplifying trade-related processes, providing a single point of entry for submitting, processing, and accessing information and documentation. Stakeholders, including traders, importers, exporters, regulatory agencies, service providers, and OGAs, can submit trade-related documents electronically through PSW, including customs declarations, permits, licenses, and other paperwork.

4.1 Business process, functional and technical architecture

4.1.1 Business Process Engineering

The process of developing and implementing the PSW involved several stages, each meticulously planned to ensure seamless integration, functionality, and user satisfaction. A focal person from a 'to-be integrated' OGA is appointed to facilitate communication throughout the project and works closely with the assigned domain officer. The subsequent steps involve a thorough discovery, synthesis, and analysis of information, encompassing tasks such as gathering legal references, creating stakeholder registers, and documenting existing processes to establish a baseline for improvement.

Moving forward, there is a 'requirements elicitation' phase which shapes the desired processes and produces a Business Requirement Specification (BRS) document detailing functional and non-functional requirements. Stakeholder input is sought and incorporated through verification and validation processes, aligning the BRS with organizational objectives. Mock-ups and prototypes are then iteratively designed to simulate user experiences and refine processes based on feedback.

The scope of work is further defined through comprehensive documentation, outlining project objectives and deliverables such as the *Software Requirements Specification (SRS)*, *Integrated Tariff for Trade (ITT) document*, and Integration Document for software and data integration. These documents undergo validation and approval from the OGAs as well as PSW's own technical domain team to ensure alignment with business needs and seamless interoperability.

4.1.2 Interoperability

Harmonization and standardization of data across various trade documents and regulatory agencies are facilitated by PSW, ensuring consistency and interoperability while reducing errors and duplication of efforts. Integration with external systems, including customs authorities, regulatory agencies, and banks, enables seamless data exchange, enhancing coordination across the trade ecosystem.

4.1.3 Technical Architecture

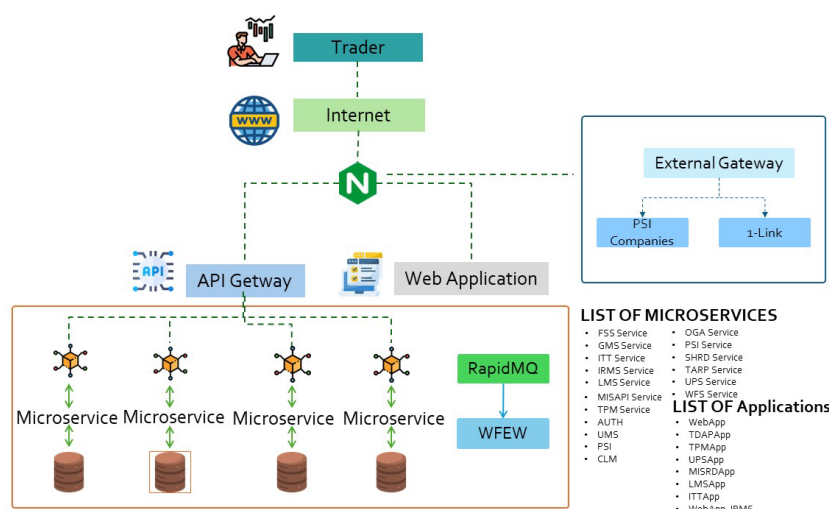


Figure 12: Technical Architecture of PSW

As shown above in Figure 12, PSW's architecture is based on microservices, comprising loosely coupled, independently deployable services, each responsible for specific business functions. These services communicate via well-defined APIs, allowing for independent development, deployment, and scaling. Various data formats, including JSON, XML, and file-based formats, are

accommodated. JSON is preferred for data exchange via RESTful APIs due to its efficiency and ease of use, highlighting the platform's flexibility in accommodating diverse integration mechanisms.

In its integration approach, PSW has adopted a flexible strategy, leveraging APIs to establish connections with external systems or developing custom modules tailored for specific integration needs. This approach ensures adaptability to diverse technological environments and facilitates smooth interoperability with partner systems. Whether through standardized APIs or custom integration solutions, PSW ensures seamless collaboration and data exchange across disparate platforms, ultimately enhancing the agility and effectiveness.

4.1.4 Sufficiency of existing technical infrastructure

As described above, the PSW is built on microservices architecture enabling a set of loosely coupled, independently deployable services, each responsible for a specific business function. These services are built around business capabilities and communicate with each other via well-defined APIs. The benefit of microservices architecture is that the modules are decoupled from each other, developed, deployed, and scaled independently of each other, failures in one service do not necessarily impact the entire system. This model enables the smooth addition and/or integration of modules and allows for indefinite growth without impacting the existing services and performance.

The services are interoperable. Single submission of data is a fundamental principle of all SWs and PSW strictly adheres to it. PSW is following the WCO data model and organized a training in August 2024 for staff, in Karachi and in collaboration with WCO.

4.1.4.1 Scaling strategy

A scaling strategy is in place to manage system load efficiently. When there is an increase in demand, PSW IT team provisions additional virtual machines (VMs) to handle the load, ensuring optimal performance and responsiveness. This approach allows resources to scale up during peak times and scale down when demand decreases, optimizing system performance. By adjusting the number of VMs based on real-time requirements, the IT Team ensures continuous availability and reliability of services. This scaling mechanism is crucial for maintaining high service levels and enhanced user experience.

4.1.5 24/7 Monitoring Solutions

The PSW has implemented comprehensive 24/7 *monitoring solutions*, consisting of two dedicated systems. One system is specifically designed to oversee the functionality of microservices, while the other is focused on monitoring database operations. *Operating on an event-based framework, these solutions generate alerts through email or communication platforms like Teams whenever predefined triggers are activated.* Alerts are promptly raised in the event of a microservice container going offline or if there's an unexpected spike in memory or storage usage, ensuring swift detection and response to potential performance issues.

Depending on the nature of the triggered event, notifications are routed to the respective teams responsible for addressing the issue. Furthermore, the PSW system is equipped with advanced capabilities to proactively detect and mitigate suspicious activities, strengthening the system against security threats. To ensure consistency and clarity in response procedures,

comprehensive documentation detailing the protocols and mechanisms for both database and infrastructure monitoring is maintained.

4.2 Implementation and Operations

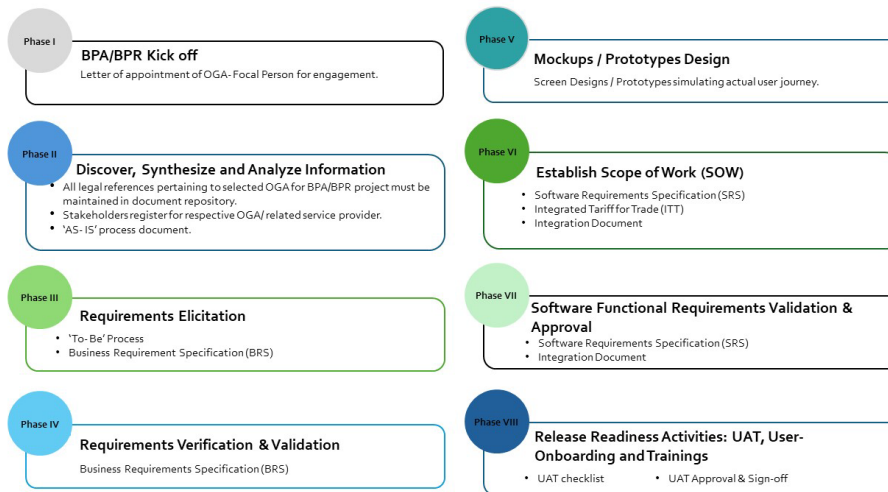


Figure 13: 8 Step Implementation Process

The PSW follows an 8-Step Implementation Process. The implementation process involves a kick-off meeting with a focal person nominated by their OGA and appointed to facilitate communication throughout the project. The next step involves discovering, synthesizing, and analyzing information, which includes gathering all legal references related to the OGA, creating a stakeholders register, and documenting the existing processes to establish a baseline for improvement.

Following this, the desired processes are defined in a requirements elicitation phase defines a Business Requirement Specification (BRS) document outlining the necessary functional and non-functional requirements is developed. The BRS is then verified and validated through stakeholder review to ensure alignment with the organization’s objectives. Subsequently, mock-ups and prototypes are designed to simulate the user journey within the proposed process, with iterative improvements based on user feedback.

Next, scope of work (SOW) is established through a comprehensive document detailing project objectives and deliverables. This includes developing a *Software Requirements Specification (SRS)*, an *Integrated Tariff for Trade (ITT)* document, and an Integration Document for software and data integration. The SRS and Integration Document are validated and approved to ensure software development aligns with business needs and systems can interoperate seamlessly.

Finally, release readiness activities are conducted, including User Acceptance Testing (UAT) to validate software functionality, user onboarding, and training sessions to familiarize stakeholders with the new workflows and systems. The UAT results are then approved and signed off, confirming the system's readiness for deployment. Figure 13 depicts the eight-step process explained above.

4.3 Software and hardware stacks used in Single Window

The PSW portal follows the latest industry standards to ensure robustness and scalability.

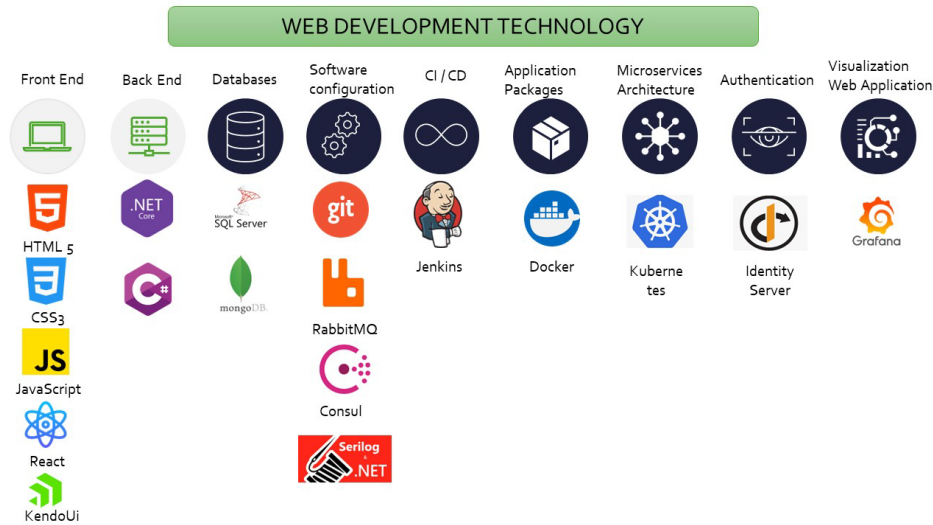


Figure 14: Software and Hardware Stacks in Single Window Web Development Technology

The core of the application is developed using .NET Core for *backend functionalities* and React for a dynamic frontend. For data management, it employs a hybrid database approach with SQL Server handling relational data and MongoDB managing non-relational data. This combination ensures efficient data storage and retrieval across different data types.

To manage *source code* effectively, Git is used as the version control system, facilitating collaborative development and code integrity. *RabbitMQ* is implemented as the queuing service, enabling efficient message brokering and smooth communication between services. For comprehensive logging of events and information, Serilog is utilized.

Streamlined integration and deployment processes are achieved through *Jenkins* (open-source automation server), which *supports continuous integration* and continuous deployment (CI/CD) pipelines. Given the portal's microservices architecture, *Docker* is used to *create and manage containerized applications*, ensuring consistent and isolated environments for each service.

Using Latest Industry Standard PSW's Software and Hardware will Improve with User-Feedback and Time.

To understand the PSW in the context of comparable systems in other countries, it may be useful to examine Singapore's TradeNet System, operational since 1989¹, which relies on a robust software and hardware stack to facilitate seamless trade processes. Its software infrastructure, comprising proprietary applications, facilitates trade documentation, permit processing, and customs clearance. These applications are integrated into a unified platform, enabling electronic document submission and reducing paperwork. Advanced technologies like electronic data interchange (EDI) ensure secure data exchange. Complemented by high-performance servers, data storage systems, and networking equipment housed in secure data centers, TradeNet's hardware stack ensures uninterrupted operation and data integrity. Leveraging cloud computing for scalability and reliability, TradeNet sets a model for other countries' single window systems, showcasing advanced IT infrastructure and proven proficiency in facilitating trade transactions. In contrast, Pakistan's Single Window initiative, while aiming for similar efficiency, may face different challenges due to its newer status. TradeNet's extensive experience and comprehensive scope make it a model for other countries' single window systems, showcasing advanced IT infrastructure and proven proficiency in facilitating trade transactions. As PSW grows and problems are identified by users through periodic assessments as well as regular feedback through customer services, it too can become a model for other countries to follow. PSW is working on engaging AI tools into its processes and dedicated to continuous improvement, which is a great plus.

Box 5: Enhancing PSW's Software and Hardware with Industry Standards and User Feedback

Kubernetes is employed as the *orchestration tool*, overseeing the deployment, scaling, and management of these containerized applications, ensuring high availability and efficient resource utilization. This sophisticated infrastructure ensures the portal remains resilient, scalable, and capable of delivering high performance under varying loads.

4.4 Integration with Other Government Agencies and Businesses

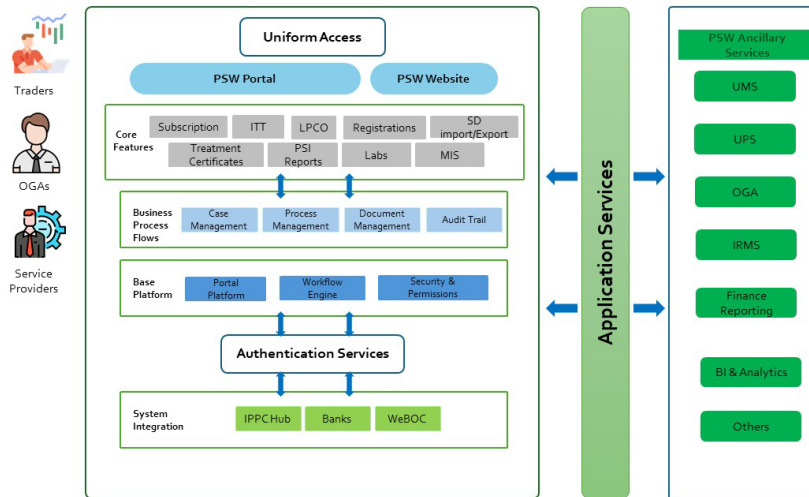


Figure 15: PSW users and services flow chart

4.4.1 Integration with OGAs

As the diagram demonstrates, in its integration with interdepartmental governmental agencies, PSW adopts a flexible strategy, leveraging APIs to establish connections with external systems or developing custom modules tailored for specific integration needs. This approach ensures adaptability to diverse technological environments and facilitates smooth interoperability with partner systems. Whether through standardized APIs or custom integration solutions, PSW ensures seamless collaboration and data exchange across disparate platforms, ultimately enhancing the agility and effectiveness.

The organization's primary data elements are aligned with the WCO data model, demonstrating standardization and interoperability between PSW and OGAs. This data model ensures consistent standardization across all data exchanges through APIs. Before initiating an integration with an OGA, a predefined format is developed and agreed upon as specified in the Integration document.

To illustrate the effectiveness of such integration strategies, we can look at a comparable initiative: *Thailand's National Single Window (NSW)*¹⁵. Like PSW, Thailand's NSW emphasizes advanced technological integration, paperless systems, and stakeholder engagement. Both systems aim to streamline trade processes, enhance efficiency, and facilitate cross-border data exchange. However, Thailand's NSW has a phased implementation approach, while PSW focuses on integrating diverse stakeholders and ensuring interoperability from the outset.

4.4.2 Integration with businesses: treatment providers, PSI, Banks and labs

¹⁵ ESCAP & ECE 2012, *Case Study: Implementation and Benefits of the National Single Window (NSW) System in Thailand*.



Final Report - Pakistan Single Window Assessment (PSWA)

An integration between PSW and the Pakistan Customs IT system, We BOC, exists, which has been established through a Restful API, allowing seamless data exchange and interaction between the two systems. However, a connection between ports and terminals is still pending. Presently, PSW primarily interfaces with laboratories, banks, and Pre-Shipment Inspection (PSI) companies for Business-to-Business (B2B) interactions.

Case Study: Implementation and Benefits of the National Single Window (NSW) System in Thailand (ESCAP & ECE, 2012).

The National Single Window (NSW) system in Thailand is a significant e-Logistics initiative aimed at improving the efficiency of documentary procedures required for the movement of goods in and out of the country. This system aligns with Thailand's strategic goals under the National Logistics Development Strategy (2007-2011) and its vision to become a world-class logistics hub for Indochina. The establishment of the NSW in Thailand is part of a broader effort to enhance trade facilitation, reduce logistics costs, and support regional economic integration, particularly within the framework of the ASEAN Economic Community (AEC). Thailand's commitment to the ASEAN Single Window Agreement necessitated the development of this system alongside procedural changes and regulatory reforms. The collaborative effort for the NSW involved multiple government agencies, including the Thai Customs Department, Ministry of Information and Communication Technology, Ministry of Commerce, and Ministry of Agriculture, among others. The implementation process included streamlining and simplifying import/export-related processes and documentary requirements, automating the submission, processing, and exchange of trade-related information, and involving various stakeholders from both the public and private sectors to ensure comprehensive and efficient system development and operation.

Benefits Realized The implementation of the NSW has yielded significant benefits for Thailand, both economically and operationally.

- **Cost Savings:** The NSW has contributed to an annual cost saving of approximately \$1.6 billion USD. This substantial reduction is primarily due to decreased trade transaction costs, which positively impact the national GDP by about 1%.
- **Efficiency Improvements:** The NSW has reduced the average trade transaction cycle time from 24 days to 14 days and decreased trade logistics costs from 19% of GDP in 2005 to 16% by 2011.
- **Enhanced Regulatory Control:** The system has provided better and more effective regulatory control and improved information management by the government, benefiting not only the business community but also various government agencies.
- **Trade Facilitation:** The NSW has facilitated a more efficient and competitive trading environment, contributing to Thailand's improved ranking in the World Bank's Trading Across Borders indicators. For instance, the cost-to-export and cost-to-import indicators showed significant reductions between 2007 and 2009, contributing to a total transaction cost reduction of approximately \$1,600 million USD annually.

Box 6: Thailand's National Single Window System Case Study (ESCAP & ECE, 2012)

In its integration approach, PSW adopts a flexible strategy, leveraging APIs to establish connections with external systems or developing custom modules tailored for specific integration needs. This approach ensures adaptability to diverse technological environments and facilitates smooth interoperability with partner systems. Whether through standardized APIs or custom integration solutions, PSW ensures seamless collaboration and data exchange across disparate platforms, ultimately enhancing agility and effectiveness.

The PSW system does not inherit any legacy systems. During FGDs with OGAs for the user survey, it was confirmed that, except for Pakistan Customs and its We BOC system, most OGAs did not have an independent IT system that needed to be merged with PSW. However, some OGAs, like PSQCA, have their own systems which are integrated with the PSW System. Simple e-filing systems are operational in other OGAs.

4.5 Global standards and models: Data standardization

The primary data elements within the organization are aligned with the WCO data model, reflecting a commitment to standardization and interoperability. PSW relies primarily on WCO data model as in the first phase it digitized B2G processes. As the scope expands to include more B2B services we will be integrating other data models. E.g. the Airport Community System (ACS) will follow International Air Transport Association (IATA) guidelines while the Port Community System (PCS) follows the International Marine Organization (IMO) data model at the application

level and the UN-EDIFACT message version D23 alpha I for integrations with external partners such as ports and terminal authorities. The data model maintains standardization across all data exchanges. Before starting any global or external integration, a predefined format specified in the Integration document is developed. These formats undergo a process of sharing, review, and consensus-building to guarantee smooth integration. The alignment of data exchange structures and formats with the WCO data model ensures interoperability, a crucial aspect of seamless information exchange. This methodology has been successfully employed in integrations with China and will be replicated in forthcoming collaborations with nations such as , Tajikistan, and Uzbekistan.

A variety of *data formats* are in use, including JSON, XML, and various file-based formats. IBM App Connect is employed to allow the smooth flow of information between disparate applications running on different hardware and software platforms. This powerful tool provides a range of connectors, including those for file-based and XML integrations, ensuring smooth interoperability. JSON is the preferred format for data exchange via RESTful APIs, given its efficiency and ease of use. PSW system is designed with flexibility in mind, capable of accommodating multiple data formats based on established integration documents.

Singapore's TradeNet, South Korea's SW, and New Zealand's Customs Service (NZCS) and various other notable examples exemplify global customs data standardization through frameworks like the UN/CEFACT Model, WCO Data Model, and UN/LOCODE, ensuring consistent, efficient trade information exchange. TradeNet facilitates electronic document submission, validating data against global standards to streamline processing. South Korea's system automates data validation and integrates seamlessly with various government databases, enhancing security and reducing redundancy. NZCS emphasizes interoperability and flexible data mapping, aligning with international standards like the WTO's Trade Facilitation Agreement to ensure accurate and compliant data exchange.

In comparison, Pakistan's Single Window aims to simplify trade processes by integrating over 77 government agencies into a single platform, promoting efficiency and transparency. Annex 6 gives details on the 77 OGAs involved in processing LCPOs for trade. At the time of assessment, 15 OGAs had been integrated into the system. These OGAs cover 65% of LPCOs required or involved in the most traded commodities in Pakistan. More details and the exact breakdown for imports and exports covered by PSW and given in Section 6.4. Furthermore, it is important to note that the PSW system has all the functionalities to process all types of LPCOs, so it is complete in terms of the integration of different LPCOs. The integration of different OGAs is a longer process which involves revisiting and reengineering processes. The plans to integrate and roll out modules are in place and swift progress is underway. For more details on which organization will be integrated in the future phases of integration, please refer to Volume II, Annex 1.1. All the major OGAs are already integrated. While still evolving, it seeks to adopt similar global standards to enhance data consistency and interoperability, reducing trade costs and fostering economic growth.

4.6 One-time submission of data

As mandated by UN/CEFACT Recommendation No. 33, the single-declaration system allows users to enter their information only once. It is triggered by specific keywords and automatically shares the information with the relevant OGA.

At PSW, parties involved in trade and transport submit standardized information and documents through a single-entry point to meet all regulatory requirements related to import, export, and transit. When information is submitted electronically, each data element is entered once.

PSW enables the sharing of all information related to international trade transactions, supported by a legal framework that ensures privacy and security in the exchange of information. The single-entry point disseminates or provides access to relevant information to participating governmental authorities or authorized agencies. It also coordinates the controls of various governmental authorities as needed.

As confirmed by the PSW IT team in the FGD, the system adheres to ISO and WCO frameworks and guidelines to achieve interoperability between systems, including those for cross-border data exchange. Semantic interoperability is ensured by establishing a common understanding of the data exchanged between systems, using standardized data models and vocabularies.

4.7 User authentication tools

In the context of onboarding an Other Government Agency (OGA), the Know Your Customer (KYC) procedure involves generating an "OGA Administrator" account upon receiving formal approval from the relevant OGA's Director General, facilitated by the Head of Operations & Support.

The "OGA Administrator" is then responsible for creating additional user accounts for OGA personnel, each assigned a specific role within the Pakistan Single Window (PSW) system. Authentication and authorization of OGA users in the system are managed solely through a user ID mechanism which is token based and has an expiry time, ensuring that each user has a unique identifier to access and perform their designated tasks within the system.

In general, the Pakistan Single Window (PSW) uses a security token-based authentication system. This system issues a *unique security token* to each user upon login. The token is a small piece of data that contains encoded information about the user's identity and permissions. It acts as a digital key that grants the user access to the PSW system and its various functions. When a user logs in, their credentials are verified, and the system generates a security token, which is sent to the user's device. For every subsequent request the user makes within the PSW system, this token is included. The system then checks the validity of the token to ensure the request is from an authenticated user. This method enhances security by ensuring that users must possess the correct token to access the system, thereby protecting against unauthorized access. Additionally, tokens are often set to expire after a certain period or can be invalidated if the user logs out, adding another layer of security.

The implementation of digitally signed e-Phyto Certificates is currently underway to facilitate the exchange of electronic certificates among European nations through the IPPC's e-Phyto Hub, a crucial component for international trade.

Additionally, the PSW is integrating with the PSQCA and banks, employing a document validation process to verify the authenticity of documents.

4.8 Technical infrastructure for Data management

4.8.1 Data Security

All network requests are facilitated through HTTPS protocols, ensuring secure communication channels. The network infrastructure is protected with robust firewalls equipped with advanced *Access Control Lists (ACLs)* that monitor and regulate traffic flow. Data protection is made sure, with encryption applied both during transmission and while at rest, safeguarding sensitive information from unauthorized access. APIs are protected with stringent authentication protocols and encryption methods, ensuring secure interfacing between applications. Web

Application Firewalls (WAFs) are deployed to provide an additional layer of security, while sophisticated anti-malware solutions protect the network from malicious software. A rigorous patch management process is in place to ensure all systems are promptly updated with the latest security patches.

4.8.2 Preservation, Archiving, and Storage

Data within the PSW system is maintained online, with backup strategies in place to ensure data integrity and availability. Backups are performed daily, with the most recent week's backups stored directly on the database server. Additionally, a copy of the backup is kept on the PSW file-sharing system for a month. Data older than a month is archived onto tapes. To enhance data security, an extra backup from the file-sharing system is transferred to tapes every day. Access to the database server is strictly controlled, limited to database administrators who are also responsible for conducting any data recovery operations. Established protocols govern data sharing for historical data requirements or audits, ensuring compliance and proper authorization.

4.8.3 Disaster Recovery

A comprehensive disaster recovery plan is in place, detailing procedures to initiate operations from the disaster recovery site in the event of an emergency or an unforeseen shutdown. Data is continuously replicated to the DR site, initially in a read-only mode to preserve integrity. Once recovery efforts commence, the data is updated to a read-write mode to facilitate the resumption of full application functionality. Detailed documentation outlines the protocols and standard operating procedures to be followed in the event of emergencies or force majeure situations, ensuring a structured and effective response to any disruptions.

4.9 Assessment of Information technology framework and Recommendations

Engaging stakeholders, including government agencies and international partners, often proves complex. Challenges in business process engineering implementation include resistance to automation due to limited computer skills in OGAs and internal communication delays, and extended onboarding times for 'computer operators' as well as [in certain cases] prolonged response times from external stakeholders through diplomatic channels further hinder progress.

Additionally, integrating systems from government agencies, the private sector, and international partners presents a significant challenge, as each entity may use different data formats, complicating smooth communication and data exchange. Some of the Legacy systems often lack APIs or standard interfaces, necessitating integration solutions that are both time-consuming and resource intensive.

Despite facing challenges in harmonizing data, PSW has effectively addressed these obstacles through the adoption of the WCO data model. This standardized approach not only streamlines integration processes but also facilitates smoother collaboration between various entities.

With ongoing advancements, PSW is well-positioned to bolster its interoperability and strengthen connections with diverse stakeholders, paving the way for seamless data exchange and enhanced efficiency in international trade operations.

In summary, PSW holds a significant potential for further enhancing its technical capabilities to integrate with other OGAs and external systems both within and beyond the country's borders. Furthermore, the assessment team recommends-

The Netherlands' SW Platform (Dutch national SW) and Australia's Integrated Cargo System (ICS) provide comparative models. Dutch national Single Window employs a service-oriented architecture (SOA) that facilitates smooth communication between government agencies. Businesses submit requests through a single portal, which routes them to relevant agencies, using standardized data formats like UN/CEFACT for seamless information exchange. This system's high level of automation minimizes manual intervention, reduces processing time, and offers real-time tracking of permit applications, ensuring transparency and predictability. Similarly, Australia's ICS leverages a centralized data repository for all trade-related information, enabling businesses to submit electronic forms that trigger automated workflows for permit approvals. ICS enforces business rules and validations to ensure data accuracy and compliance. Its advanced risk management capabilities analyze trade data to identify potential risks, allowing targeted inspections and faster clearance for low-risk shipments. Additionally, robust audit trails improve traceability and accountability. These examples highlight critical elements such as standardized data formats, SOA for modularity and scalability, centralized data repositories for efficiency, automated workflows to minimize errors, and advanced risk management for focused inspections. By adopting these best practices, Pakistan can strengthen its Single Window system, enhancing trade facilitation and economic growth.

Box 7: Learning from the world: Netherlands and Australia

- Implementing a fault-tolerant architecture is important, particularly in critical areas like monitoring, scaling, and disaster recovery (DR). To prioritize DR, it's crucial to minimize reliance on human intervention during recovery processes.
- Equipping the system with automated mechanisms to swiftly restore functionality independently, ensuring minimal downtime and maximizing resilience.
- The fault-tolerant architecture should proactively monitor tools that detect issues in real-time and trigger automated responses to mitigate potential downtime.
- Scaling processes should be automated to dynamically adjust resources based on demand. For disaster recovery, in-depth mechanisms for automated failover and failback should be enabled for seamless transitions between primary and backup environments, reducing dependency on manual intervention and ensuring continuous availability of critical services.
- Users should be promptly notified of any downtime occurrences, ensuring transparency. Likewise, notifications should be issued when the system is back online, keeping them informed of service availability.
- Recalling that PSW is to deliver on enabling secure and smooth operation of all cross-border trade operational processes, it is important for the PSW IT architecture to be progressing to deliver on reliability, design simplicity, satisfactory user experience, scalability-interoperability, high/uninterrupted availability, and security (of data).

4.9.1 PSW to multiple PCSs – Taking the Trade and Industry Along

Port Community Systems (PCS) reduce the paperwork and administrative red tape often associated with intra-port logistics, leading to quicker decisions and streamlined operations, using digital collaborative platforms that enable seamless exchange of information among a port's many stakeholders, including Customs agencies, port management, shipping and logistics companies, freight forwarders, and ancillary services providers. These platforms enhance trade competitiveness, provide transparency to and more resilient supply chains, lower overall port costs, and reduce greenhouse gas emissions.

PSW is presently operating a single front-end architecture where it provides value added services directly to users, e.g., by integrating banks, providing a trade information portal, and more. At the same time PSW-OE is reaching out both backward (with OGAs) and forward (value added user services). An example of the backward reach is providing OGAs the choice between PSW providing (a) a LPCO portal, (b) complete reengineered application embedding in the OGA, and (c) simple IP based integration. At the front-end it has provided IP integration with Banks, functions such as a Trade Information Portal, and other value-added services such as duty calculations.

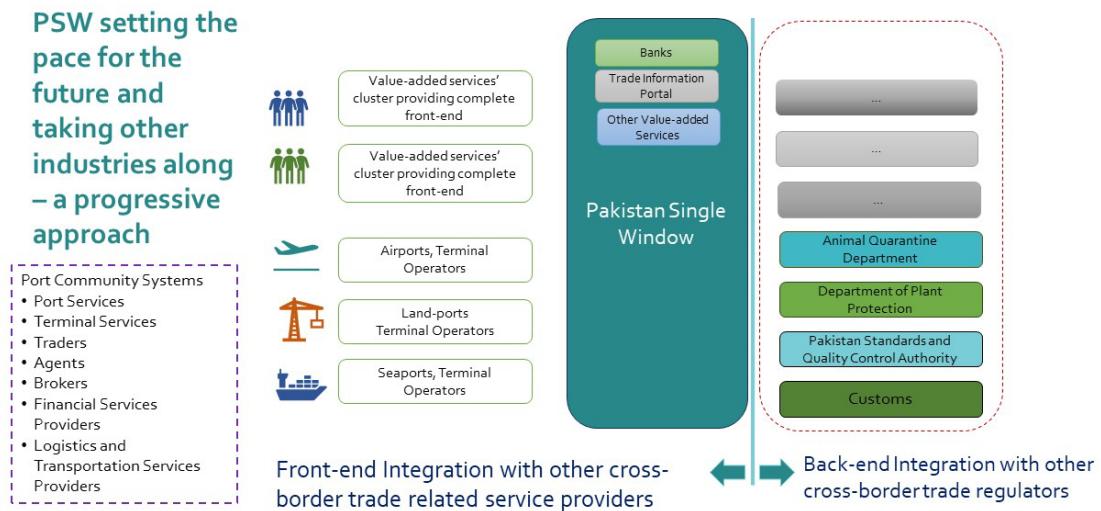


Figure 16: Cross border integration with traders and service providers

Currently PSW is utilizing certain off-the-shelf software and hardware and customizing it to their needs and applications. PSW has chosen the route to not using a complete off-the-shelf NSW system based on detailed assessments done prior to PSW implementation.

This, however, does not bar it from encouraging and supporting the development of localized Port Community Systems and integrating the same with the NSW. PSW has already taken the first such step in soliciting bids for development of an Airport Community System—a practice that will require rolling to most ports and allowing private sector to undertake this themselves.



5. SINGLE WINDOW PERFORMANCE ASSESSMENT

This PSWA section covers the following aspects: (a) PSW Functional Services Checklist; (b) experience of OGAs; (c) Pakistan Customs the Lead Agency; and (d) a nationwide PSW users survey.

5.1 PSW User Functional Services Requirement Checklist

The PSWA team adapted the general information survey FGD for PSW by utilizing the user functional services checklist from the PSW design document provided by the PSW. This approach provides a targeted understanding and recording of the services presently being provided by PSW.

PSW is under implementation and will continue to evolve in all, scope (services), coverage (trade flows), and performance, either directly implemented/provided or in partnership. The MOUs between PSW-OE and GC, and PSW-OE and Pakistan Customs (the LA) are evolving documents in the sense that they provide the phasing of the PSW scope, coverage and performance expectations of GoP.

The following Table 5 provides the status of the user functional services requirement checklist with commentary where appropriate.

| Functional Service Required | Description (as envisioned in the PSW design document) | Available in PSW at present (Y/N) | Comments |
|--------------------------------|---|-----------------------------------|--|
| 1/Registration/User Experience | Users will enjoy a managed experience for processing their trade transaction, allowing guest usage for information queries and registered usage for transaction processing. | Y | PSW website and the Trade information Portal offers a wealth of information on trade related process for Pakistan. Regulatory requirements, processing times, step-by-step procedures, integrated departments and information on applicable fees, application forms, unique HS codes. All this information is available without registration. However, to start the process of filing an SD, user will need authentication, verification from PSW for first time registration. |
| 2/Examination Coordination | When required, the PSW portal will offer users the ability to coordinate examinations related to their consignments across all government agencies | Y | The status of application and consignment can be tracked through the system. Communication with OGA can be done through the PSW system. |



| Functional Service Required | Description (as envisioned in the PSW design document) | Available in PSW at present (Y/N) | Comments |
|---------------------------------------|---|-----------------------------------|--|
| 3/Cargo Reporting | Service to enable the reporting of all cargo information related to a consignment. A unique identifier will be used to link the cargo reports to goods declarations. | Y | Each SD has a unique identifier code ¹⁶ , based on classification of GD types. Upon submission of GD/SD, PSID is generated through which the consignment can be tracked. |
| 4/Payments | Direct payment options from the PSW portal for all transaction related fees and costs. | Y | There are two channels of payments that users can use to make payments. One is Alternative Delivery Channel (ADC), and one is personal deposit account. Both can be linked to the system, so users can make payments online without having to visit the bank. Commercial banks and State Bank of Pakistan linked to the system. |
| 5/Trade Information Portal/Repository | A consolidated information repository (tariff management system) will be exposed to users to enable real-time access to trade regulatory and related information (HS Codes and associated regulatory requirements). | Y | The Tradeverse- Trade Information Portal of Pakistan is the repository for all trade regulatory and related information. Details in Box on TIPP in section 3. |
| 6/Trader/User Query Generation | Traders will have the option to log queries related to transactions or other features of the PSW portal | Y | The 24/ 7 phone helpline is available for resolving user queries in real time. |
| 7/LPCO Application | When required, traders will be directed to submit all required information to process any LPCO applications related to their trade transaction | Y | The PSW- System allows all the processes involved in the Single Declaration application that traders lodge in the system. It is integrated with all OGAs and all relevant documentational requirements are automatically presented to the user, sorted out in the system based on HS code entered by user. All the departments receive |

¹⁶ Please refer to Annex 11 in which a sample application screenshots show SD & GD status and SD Submission notification.

| Functional Service Required | Description (as envisioned in the PSW design document) | Available in PSW at present (Y/N) | Comments |
|----------------------------------|--|-----------------------------------|--|
| | | | relevant information from the PSW-S, and the user must submit data only once. |
| 8/Status Tracking | Throughout trader engagement with the PSW portal they will have the ability to view or query the status of their transactions or cases | N | Currently, the 24/7 user helpline is solving user problems in real time, and they make follow ups on the queries and their status. Users themselves cannot track the status of their complaints yet but this can be included in future improvements. |
| 9/Customs Declaration Submission | All declaration information will be captured on the PSW portal enabling seamless processing. | Y | The PSW system is transparent and allows user to view and track status of application throughout the lifecycle of the process. |
| 10/Case Management | All transactions will be processed on a case management basis for effective control and efficiency. | N | Currently individual cases/SD applications are not tracked or monitored, as also mentioned during FGDs that multiple GD application for the same consignment can be filed in the system. |

Table 5: PSW user functional services requirement checklist

5.1.1 Note on Goods'/Single Declaration Types

In international trade, the accurate classification and declaration of goods are crucial for efficient customs processing. Goods' Declarations encompass import (for consumption), export (for international markets), and transit (passing through) categories, each requiring specific filings to ensure compliance and logistical flow. Import declarations, for example, are categorized into two main types: Home Consumption, where goods are released directly for market or manufacturing use, and In-to Bond, where goods are stored in a bonded warehouse with duties paid gradually upon withdrawal. Sub-classifications like Transshipment Permit (TP), Baggage Declaration (BD) for personal baggage, Temporary Import (TI) for goods to be re-exported, and Manufacturing Bond (MB) for duty-free imports destined for manufacturing and export, further refine the process. Export declarations include standard Export GDs and Temporary Export GDs for goods temporarily sent abroad and returned. Each GD is prefixed (e.g., HC for home consumption, BD for baggage) to aid in classification and management. A coding system assigns each GD a unique identifier comprising a Collectorate Code, GD Type Code, Serial Number, and Date, integrated into customs systems like WeBOC and PSW for seamless tracking and compliance management by traders and agents alike.

5.2 Experience of Other Government Agencies



Final Report - Pakistan Single Window Assessment (PSWA)

The feedback on OGA's experience with PSW was collected based by (a) adapting the government agency questionnaire in the SWAM [8.1.3(B)], (b) selecting 4 OGAs to get a good sample from both the earlier integrated ones and the latest integrated ones, (c) prefilling the FGD questionnaires for each OGA and circulating the same, (d) conducting the FGD with each selected OGA, and (e) finally reconfirming FGD data captured with PSW and OGAs. As explained in an earlier section of this PSWA on OGAs, a final list of all 77 impacted OGAs from the 'Schedule' of the PSW Act and their functional description is provided in Annex 6. The PSW System currently has integrated (15) Other Government Agencies (OGA) namely Department of Plant Protection (DPP), Animal Quarantine Department (AQD), Federal Seed Certification and Registration Department (FSC&RD), Pakistan Standards and Quality Control Authority (PSQCA), Export Development Fund (EDF), Ministry of Narcotics Control (MoNC), Marine Fisheries Department (MFD), Mercantile Marine Department (MMD), Drug Regulatory Authority of Pakistan (DRAP) and Sindh Excise, Taxation & Narcotics Control Department (SET&NC) , Drugs Regularity Authority of Pakistan (DRAP)- Phase II, Trade Development Authority of Pakistan (TDAP), Provincial Revenue Authorities, Pakistan Tobacco Board & Integration between PSW & Special Technology Zones Authority for PSW Services along with twenty-nine (29) commercial banks, laboratories, PSIs and treatment providers.

The following is the summarized experience for the five of the fifteen OGAs integrated till now.

Four OGAs have been selected based on the duration of their integration period and the phase in integration plan of PSW along with Pakistan Customs. Those OGAs that had been integrated in Phase 1 were given more weightage as they had more experience of working through the PSW system and hence richer insights. The following OGAs were integrated in Phase 1 and were selected for the FGDs:

- 1) Department of Plant Protection
- 2) Animal Quarantine Department
- 3) Pakistan Standards and Quality Control Authority

The following OGA was selected from Phase 2 of integration:

- 1) The Ministry of Narcotics Control

Pakistan Customs was selected because it is the lead agency within the Governance Structure of the PSW and has special role in the inception/foundational phase as well as the implementation of PSW.

5.2.1 Department of Plant Protection

DPP has formally integrated into the PSW under SRO 1291(1)2021¹⁷ with effect from 1st July 2021 along with other OGAs.

5.2.1.1 DPP LPCOs

DPP is a federal entity that falls under the ambit of the Ministry of Food Security and Research. The LPCOs relevant to DPP are processed or issued by DPP include-

- Import Permits,
- Phytosanitary certificates (equivalent of export certificate),

¹⁷ Government of Pakistan 2021, S.R.O. 1291(I)/2021 - Notification under Pakistan Single Window Act, 2021 (Act no. III of 2021), 1 October.



- Release Order (the appropriate term for plant protection release orders is PPRO),
- Premises Registration – pesticides formulation, refilling, repacking and manufacturing plants and facilities premises registration in 18, 19 and 20 under the agricultural pesticides’ ordinance APO 1971¹⁸,
- Product Registration – focusing on pesticides is not yet implemented under PSW
- Business Registration.

Business registration encompasses treatment providers’ registration which includes seven types of treatments. These treatments involve fumigation of containers and commodities, hot water treatment to disinfect from fruit flies, cold treatment for citrus fruits, irradiation, heat treatment for specific wood pallets, carbon dioxide treatment and vapor heat treatment for mangoes. For DPP, given the nature of the purpose on which a business registration is applicable, the term ‘treatment providers registration’ reflects the LCPO’s purpose better.

DPP, generally, does not need any approval from other government agencies. However, depending on the commodity some prerequisites apply, for example in the case of GMOs the trader needs a license from the Federal Ministry of Climate Change. For importing seeds for commercial use and getting certification from DPP, the seed should be listed in federal seed certification to help with the process. Information is listed on DPP’s website along with SRO’s and Rules.

5.2.1.2 Users of DPP LPCOs and Transactions Handled

The users of PSW that typically submit applications, notifications or requests consist of traders involved in importing and exporting agricultural goods. These include prominent entities such as Rice Exporters Association of Pakistan (REAP), All Pakistan Solvent Extract Association (APSEA), for soybean seed, Oil imports, pulses, importers of paper, food related raw materials like Ismael Industries for peanuts and Murree Brewery for oats additionally users from sectors such as All Pakistan Textile Mills Association (APTMA), the wood industry and the Pakistan Fresh fruit and Vegetable Association (PFVA).

Ninety-five (95) % of all transactions are commercial and the remaining are non-commercial. The commercial transactions comprise mostly trading companies.

From the time of integration up until 31st March 2024, the volume of LPCO’s being processed by DPP through PSW includes about 200,000 export certificates, more than 50,000 release orders, and ~30,000 import permits [the exact figures are given in Annex 3.2.4].

5.2.1.3 Mandatory Time Limits for DPP LPCOs

There are no specific time frames for LPCO issuance mandated on DPP. However, based on the data shared by PSW it is evidenced that -

- 99% of export permits are processed within zero to 10 days, and 88% were processed within 24 hours. Details are given in Annex 3.2.4
- 99% of release orders were processed within 10 days
- 99% of import permits are also processed within 10 days .

Details in Annex 3.2.4.

¹⁸ Government of Pakistan 1971, The Agricultural Pesticides Ordinance, 1971 (II of 1971)



5.2.1.4 *DPP user identification and authentication*

KYC and ID verifications of users is the responsibility of PSW for first time subscription. PSW requires users to provide biometrics and mobile numbers for SMS verification.

5.2.1.5 *DPP fees and payments*

Payments for DPP fees and other required payments are done online through the PSW portal. Once the trader submits the completed SD/GD application, the system generates a PSID. The user is then presented with payment options as stated above. The ADC mode of payment allows users to make payments through 1-link, connected to commercial banks. The other option is to pay through the balance in personal deposit account, which is maintained in the National Bank of Pakistan, and is functional through Customs. The personal deposit account is often used by traders which must pay large amounts for processing their applications.

DPP charges their fee based on Plant Quarantine Act 1976¹⁹ and Rules 2019, Agricultural Pesticide Ordinance 1971²⁰ and Rules 1973. The combined fee includes PKR 5,000 for import permit and PKR 5,000 for release orders furthermore PKR 2,500 is charged for phytosanitary certificate and premises registration is ~PKR 250,000-500,000.

5.2.1.6 *DPP Risk Management System*

A risk management approach informs the processes of issuing LPCOs at DPP. There is a risk management system (RMS) applicable worldwide to all National Plant Protection Organizations and contracting parties to the International Plant Protection Convention. This encompasses insect, pest and disease management. This system aligns with international articles and the requirements of importing or exporting countries. DPP does not have a specific flow for the risk management system application and does this from case to case. The department currently auto-issues 17% of LPCO's and 70% of import permits following a basic experience and trader-based risk management system.

5.2.1.7 *DPP Integration with and satisfaction with PSW*

All approvals or calls for documents during the LPCO processes are now done online through PSW. The DPP does not have an internal IT system, and the integration application is provided by PSW.

DPP expressed satisfaction with the processes facilitation post PSW, rating the process pertaining to import permits as a 9/10 and similar for release orders. Overall, DPP says its users are by-and-large satisfied with the PSW system—uptake at borders like Chaman, Kharlachi and Angur Adda has also been great.

5.2.1.8 *Improvements suggested by DPP*

PSW has already successfully integrated with e-Phyto Hub including for EU. The certificates received through the Hub are legally recognized by DPP. Section 12 of the PSW Act provides legal cover for it. Nonetheless, during the FGD, certain recommendations for improvements were requested by DPP pertaining to processes involved in obtaining Export/Phytosanitary

¹⁹ Government of Pakistan 1976, *Plant Quarantine Act, 1976*

²⁰ Government of Pakistan 1971, *The Agricultural Pesticides Ordinance, 1971 (II of 1971)*

certificates. For instance, Pakistan Customs allows filing GDs for dummy containers numbers to expedite processes. Take, for example, the export of citrus containers having a time limit of 15 days in which to obtain the Phytosanitary Certificates and other approvals this can be quite challenging. This can become particularly hectic when dealing with some container numbers changing due to actual availability. The PSW system needs to allow the approvals on dummy containers to ensure that containerized goods are not spoiled, or quality is not impacted due to delays in approval. Pakistan Customs already allows this but so far this has not been automated or enabled within PSW. Integration with e-Phyto hub may cater to this problem, but this must carefully observe in the future.

DPP suggested that Phytosanitary Certificates should align with DPP requirements. Some amendments should be allowed in the PSW system before the final approval or rejection. The system needs a revisit periodically. The support system of PSW is 24/7 active so user can use anytime and get instant response from the team in most cases but if there are changes to the system PSW must consult the department which delays the process some mechanism to improve this and reduce delays. Furthermore, the business processes for GD filing can be made more comprehensive.

There are no legal obstacles or laws prohibiting the integration of OGAs with PSW or implementation of PSW there are teething problems that are not of legal nature but more a mindset problem. For example,

- Trading Corporation of Pakistan not accepting electronic lab reports, or
- Afghanistan not accepting standard black and white phytosanitary certificates but accepting the same thing printed on green paper, or
- Some countries being exempt from phytosanitary certifications, but Custom supervisors insist on manual certificates.

Mindset shift also must happen for PSW to function more freely. Recommendations by DPP illustrate the transitional realities of a physical system shifting to an automated system. This is how some of the gaps that have become common practice and accepted as standard procedure but are not efficient according to international standards reveal themselves as automation of the trade process is implemented. This is a great example of how PSW is triggering behavioral change and highlighting the gaps in existing practices.

5.2.2 Pakistan Standards and Quality Control

The Pakistan Standards & Quality Control Authority (PSQCA) plays a crucial role in promoting quality and conformity assessment in Pakistan. The main functions of PSQCA are to formulate National Standards, Conformity Assessment, Testing of products, Metrology etc. PSQCA advises the Government on standardization policies, programs and activities to promote industrial efficiency and development, as well as for consumer protection

The SRO 1292(1)2021²¹ notified PSQCA to be integrated with PSW. At present only imports are handled through PSW.

5.2.2.1 PSQCA LPCOs

PSQCA Issues following types of LPCOs'

²¹ Government of Pakistan 2021, S.R.O. 1291(I)/2021 - Notification under Pakistan Single Window Act, 2021 (Act no. III of 2021), 1 October.



- *PSQCA processes*
- *Release orders*
- *Provisional release orders*

5.2.2.2 *Users of PSQCA LPCOs and Transactions Handled*

The main users of PSQCA services through the portal are Customs clearing agents of companies or companies themselves. These companies are generally industries, commercial importers, government authorities. But so far this is for imports only and 100% of importers are trading companies.

From 1st Mar 2022 to 30th Apr 2024, PSQCA handled 5898 Release Order in less than 10 days, 96 in 10-20 days and 5 Release Orders in 20-20 days. Only 9 took longer than 30 days and none were rejected or delayed for more than this time. Details on volume given in annex 3.2.3.

5.2.2.3 *Mandatory Time Limits for PSQCA LPCOs*

PSW integration is in transition and exports are processed manually. There are no PSQCA mandated times for processing import permits or release orders, but usually provisional release orders are provided on the same day. PSQCA states that 90% of release orders are processed within 24 hours. Otherwise, samples are taken and processed differently, and consignment is not released without spot sample clearance. Overall, 99% of LPCOs are processed within zero to 10 days.

5.2.2.4 *PSQCA User identification and Authentication*

All the KYC and ID verifications are done through PSW. PSQCA does not concern itself with user credentials. The user enters the registration portal by adding details of the name of the company, the National Tax Number and Computerized National Identity Card Number (CNIC), as specified in the Act. For domestic users, email and mobile number are also required. The identity is verified with the NADRA database to confirm identity and SMS codes are sent to the registered phone number. The code is then put into the system to verify phone numbers. Once registered, the user can log in and begin their Single Declaration application.

When registering for the first time into the system, users have reported problems because the authentication and verification process requires coordination with NADRA, and this may take some time. However once registered the experience is seamless.

5.2.2.5 *PSQCA Fees and Payments*

Imports' payments are collected online and have also reduced complexity and chances of misdeclaration. Importers' visits to banks have been reduced or completely made irrelevant. The PSQCA fee schedule is simple and consists of food and non-food categories. In some cases where there is litigation or dispute, for example, for tea and lubricating oil, the fee is collected manually. Information about fees and forms is also available on PSW's TIPP and PSQCA website.

5.2.2.6 *PSQCA Risk Management System*

PSQCA has no internal defined risk management system. However, under the PSW Act 2021, OGAs must be integrated within the Integrated Risk Management system within the PSW.



5.2.2.7 *PSQCA Integration with and Satisfaction with PSW.*

The users are mostly large businesses and are coming through clearing agents, so no serious problems are being experienced. As mentioned earlier, the PSQCA integration is complete for imports but not for exports. The PSQCA Team rated their satisfaction with the PSW processes as 8/10.

5.2.2.8 *Improvements suggested by PSQCA*

The PSQCA team showed interest in comparing PSW to other countries' systems for ideas on improvements in the system because so far it seems to them that PSW is leading the way. There is also a recommendation for exploring avenues through which AI can help improve their integration and internal processing system.

5.2.3 **Ministry of Narcotics Control**

MNC is a federal entity, established in 1989, oversees the Anti-Narcotics Force (ANF), which was formed through the merger of the Pakistan Narcotics Control Board (PNCB) and the Anti-Narcotics Task Force (ANTF) in 1995. Reorganized under the ANF Act 1997, the Ministry was upgraded to a full-fledged ministry in 2002, briefly became a department of the Interior Ministry in 2013 and was reinstated as a ministry in 2017. The ministry's activities include high-level meetings on drug challenges and international cooperation efforts.

5.2.3.1 *MNC LPCOs/Quotas*

The MNC oversees the entire process of registration and issuance of 'No-Objection Certificate (NOC)' to the industry for controlled chemicals. Traders, mostly importers, must seek permission and be assigned quotas based on parameters defined by MNC. These quotas pertain to the quantity of controlled chemical that can enter Pakistan. Each business requests an amount and MNC approves, modifies or rejects the request based on their rules. Users can utilize all their quota or some. The quotas are renewed each year subject to submission of complete documentation. If the quotas must be changed, traders must approach MNC. MNC does not issue regular LPCOs like other OGAs.

5.2.3.2 *Users of MNC LPCOs and Transactions Handled*

The primary consumers are industries who work through various firms, and a few distributors who function as commercial importers, but do not represent big firms. The MNC categorizes users into two types: consumers and commercial importers. These include government departments, defense institutions, industries, commercial importers. Consumers are 80% of total users and 20% of users are commercial. The MNC process around 200,000 to 250,000 quotas per year. In the PSW system from March 2022 to March 2024, however, MNC through the Green Channel has processed 106 applications and without the Green Channel, 111 applications have been processed for imports. For export, 6 applications have been processed by MNC within the system. Details in annex 3.2.2.

5.2.3.3 *Mandatory Time Limits for MNC LPCOs/Quotas*

There are no time limits within which these quotas are to be assigned. They are dealt with on a case-to-case basis. MNC issues an NOC with a quota for a year which must be renewed once the year ends, and all documentation must be resubmitted for renewal. The approval is requested

manually and not through PSW. Once that approval is given, the user then registers with PSW and registers the quantity specified in the quota. For example, a trader is importing Hydrochloric Acid and has been assigned a quota for 1000 kilograms or liters of HCL for the whole year. The one-time permit allows trader to possess the product for a year. Different users have different limits depending on the product. The PSW system, however, needs to allow MNC to also track the percentage of quotas issued through PSW that have been used up in a year for greater transparency and accountability. If a quota needs to be increased, MNC will issue new quota after approval from ANF. More details in Annex 3.2.2. All submissions must be made through the PSW system. There is no purely manual application anymore. Like other government agencies.

5.2.3.4 MNC User identification and Authentication

KYC and ID verifications are the responsibility of PSW. Any additional documents can also be called by MNC through the PSW system.

5.2.3.5 MNC Fees and Payments

MNC does not accept any payment because no fee is charged for this service. However, an application must be processed within the PSW.

5.2.3.6 MNC Risk Management System

Since MNC has signed international conventions, a global risk management system is applied along with IRMS within PSW. The following processes are followed to ensure quality checks on the controlled chemicals imported and exported into Pakistan.

Drug regulatory Control Authority is responsible for administration of narcotics substances quotas. Once they set the limits other authorities can carry out their responsibilities around the set parameters.

A trader lodges an application requesting permission to import or export a quantity of controlled substances.

The Anti-Narcotics Force is then mobilized to conduct onsite inspections and provide a detailed report to MNC.

MNC based on DRAP guidance on quantities, then approves, rejects or delays a request for permission and consequently issues an NOC if applicable.

Coordination with other agencies in the trade partner country is also carried out to manage the quantity allowable in both countries. Details in annex 3.2.2.

MNC has no internal IT system that needed integration with PSW, but there is an e-filing system being maintained. MNC needs prior approval from ANF and DRAP before they issue any quotas.

5.2.3.7 MNC Integration with and Satisfaction with PSW.

Overall, there is satisfaction with the PSW system, and the team rated it 9/10.

MNC itself, though has no issue in adapting to and understanding the system as there is a lot of support from PSW

However, in the transitional phase, users are facing some problems in adaptation even though usually large and technologically savvy businesses are involved in this trade.

To facilitate this, MNC is carrying out the application approval process manually to help identify correct HS codes and other requirements. Once the documentation is complete, the application is lodged into the system. At present, this appears as if PSW adds an extra system of checks which is automated whereas a manual system is also present.

5.2.3.8 Improvements suggested by MNC

MNC should be able to generate periodical reports to the PSW system to improve the transparency and monitoring aspects of MNC's function. Furthermore, capabilities to track quota usage maybe further enhanced.

System based reports that MNC can generate whenever they desire will aid in carrying out the regulatory role of MNC.

5.2.4 Animal Quarantine Department

The animal quarantine department is integrated into PSW under SRO 1292(1) 2021. The Animal Quarantine Department (AQD) is an essential part of Pakistan's Ministry of National Food Security & Research. Established in 1980 under the Pakistan Animal Quarantine Ordinance 1979 and the Pakistan Animal Quarantine Rules 1980, the AQD is tasked with regulating the import, export, and quarantine of animals and animal products. Its primary goal is to prevent the introduction and spread of exotic diseases, thereby protecting the livestock industry both domestically and internationally. Headquartered in Karachi, the department operates multiple Animal Quarantine Stations across the country, including in Islamabad, Lahore, Peshawar, and Quetta. AQD provides critical services such as health certification for import/export, registration of export-oriented establishments, risk assessment, and laboratory testing of animal commodities. This department ensures high-standard quarantine services and collaborates with various agencies to maintain the health and safety of Pakistan's livestock industry

5.2.4.1 AQD LPCOs

AQD issues four types of LPCO's-

- Export certificate,
- Release orders,
- License registration,
- Provisional release orders

Export Certificates are required globally where animal processing or meat quality is involved. This must be certified, and its authenticity must be verified. In Pakistan, AQD issues this document.

AQD issues Release Order for release from Customs Bonded Area. Licenses registration is issued but not through the PSW system as there is no legal provision for registration. Traders should register with the country's veterinarian authority. Pakistan has no such provision yet, although AQD has proposed amendments in the law. AQD initiated efforts in 2016-17 and proposed amendments in 2021-22, still pending with the Ministry of National Food Security. Registration facilitates traders as per importing country requirements. For countries not

requiring registration, exporters send consignments without it. Registration is necessary for China, EU, Iran, Saudi Arabia, and UAE, but not for Qatar, Bahrain, Oman, and Kuwait.

AQD also issues a Provisional Release Order when a consignment is physically satisfactory but requires additional investigation or laboratory examination. This prevents traders from facing demurrages due to delays at the port, which can take up to 10 days for lab results. Live animals are similarly provisionally shifted to quarantine upon arrival at the port for clinical testing before final clearance. The LPCOs are issued electronically in most cases. Some countries have additional requirements, some of which are issued manually.

5.2.4.2 Users of AQDLPCOs and Transactions Handled

AQD users are typically animal exports and importers, or traders of dairy, meat, skimmed milk, leather, live products or finished products. Almost 100% of users are trading companies. They are represented by agents that handle documentation on behalf of the company, but SD/GD is under the name of the company.

AQD has issued a total of 60600 Export Certificates, out of which 60375 were issued within 10 days of request, 104 within 20 days, 36 within 30 days and only 85 took longer than 30 days.

AQD has issued a total of 36000 Release orders, of which 3491 were issued within 10 days of request, 73 within 20 days, 15 within 30 days and only 21 took more than 30 days to process.

5.2.4.3 Mandatory Time Limits for AQD LPCOs

There is no specific time limits mandated by any law for processing AQD LPCOs. However, some average processing times based on a risk management approach for the following commodities are given

- Within 24 hours - Fresh chilled meat
- Within 96 hours- Frozen meet
- 99% of export certificates and release orders are processed within 0-10 days.

The risk management approach allows those units registered with international authorities to have shorter certification time limits. Some consignments like leather or Amazon products may lack a clear origin, requiring warehouse samples for lab investigations. The department observes country specific requirements for destinations like Vietnam or Thailand and certifies based on lab reports.

Risky food items, directly entering the food chain, undergo mandatory lab analysis from approved labs within the PSW lab management system, taking around 4-5 days for clearance. A full release order can be issued within 24 to 120 hours, depending on the completeness of the document.

A provisional release order is issued because demurrage costs start to accumulate. Once the lab investigation reports are complete and submitted, a full release order is issued. However, the system won't proceed until the required information is provided.

Furthermore, there is a need to invest in facilities such as cold storage needs at major airports/Air Freight Units like Karachi, Islamabad, Lahore and Peshawar. Air Freight Units handle Prior Release Orders (PRO) for perishable consignments in a controlled environment. There needs to be a business case for such facilities to be integrated into the system and

cooperation from multi stakeholders, particularly Civil Aviation Authority as airports fall under its jurisdiction.

5.2.4.4 AQD User identification and Authentication

All the KYC and ID verifications are done through PSW. AQD does not concern itself with user credentials. The user enters the registration portal by adding details of the name of the company, the National Tax Number and Computerized National Identity Card Number (CNIC), as specified in the Act. For domestic users, email and mobile number are also required. The identity is verified with the NADRA database to confirm identity and SMS codes are sent to the registered phone number. The code is then put into the system to verify phone numbers. Once registered, the user can log in and begin their Single Declaration application.

5.2.4.5 AQD Fees and Payments

The payments are also online and collected by PSW. AQD gathers information through the PSW system and sends to trader a pay slip with a breakdown for Pakistan Customs, AQD and any other departments. The total collection is sent through One Link attached to the verified account and the transaction is directed to State Bank, which is later reconciled. The PSW charges a fee for document processing according to fee schedule in SRO 1292(1) 12021. AQD charges, prosecution and fees are variable according to each commodity in HS code.

5.2.4.6 AQD Risk Management System

There is no formal risk management system which is documented but AQD uses guidance from import policy, AQD rules and bilateral trade requirements, and World Organization of Animal Health Portal. The World Animal Health Information Systems (WAHIS) is a dynamic system that keeps changing and AQD uses this for up-to-date information. These commodities, which are part of the human food chain, include 70% meat and require inspections. AQD does not have an internal IT system capable of issuing department certificates online. It does not need any external approvals from any other OGA's, but in some cases exceptions exist. For example, when exporting live animals an NOC from the Ministry of Commerce is required to get the process started. There can occasionally be some standalone requirements. In these cases, some manual certificates are granted/required. All relevant information is also available online on PSW TIPP.

5.2.4.7 AQD Integration with and Satisfaction with PSW.

AQD reports a satisfaction level of 8/10 with their experience of PSW.

Some initial 'teething' problems were reported at the onset of the integration process when API integrations were taking place, but they have been resolved effectively by the change management system implemented by the PSW.

Users have reported problems in understanding the system, especially from the leather industry, but that problem is due to low comprehension of technology and related systems.

5.2.4.8 Improvements suggested by AQD

Difficulties with the system pertain to payments and their reconciliation: There are currently two methods of making payments through PSW: the Alternative Delivery Channel (ADC) or online banking; and the use of personal deposit accounts. Once the trader submits the completed

SD/GD application, the system generates a PSID. The user is then presented with payment options as stated above. The ADC mode of payment allows users to make payments through 1-link, connected to commercial banks. The other option is to pay through the balance in personal deposit account, which is maintained in the National Bank of Pakistan, and is functional through Customs. The personal deposit account is often used by traders which must pay large amounts for processing their applications.

Most payments are made through ADC; however, a small portion is collected through personal deposit's account. All revenue collected is dispersed to respective accounts in SBP or in OGAs commercial banks. But MS1 link as per procedure approved by SBP.

In the case of AQD payments, the amounts are directly transferred by SBP or commercial bank account as a centralized payment mechanism. The respective branch of NBP shows the payments in its daily scroll. Prior to PSW's, departments were reconciling their account themselves manually, and after the shift to PSW there has been a shift from manual payments to electronic payments. The manual method is no longer required. Since the shift to PSW, there are two types of reconciliation required for department for audit purposes. One is with the Federal Treasury and one with commercial banks in different cities. There has been some confusion post shifting to PSW which presented difficulty in adapting to the system.

Other issues faced by AQD that were raised during the session do not pertain to PSW but were highlighted so PSW can take it up at appropriate forums. Sometimes the exporters do not find space for air shipments even after the airway bill has been issued. When shipment eventually finds space and the airway bill and tagging needs changes, the exporters opt for a new SD. The existing PSW-System does not allow changes to airway bills.

Technology use and awareness level at user end: Other difficulties pertain to the level of understanding and comfort with using technology at user end. For example, leather producers are struggling to understand the PSW system, especially given the complexity of AQD fee structure. Users keep mistakenly entering wrong HS codes and fees and tagging options. Clearing agents need to be enlisted for specialized services to navigate the system. SMEs face the most problems as they find it costly to engage agents for their irregular shipments. There need to be tutorial videos especially in Urdu on PSW portal for such users. It may include some guidelines on the need for input of correct HS codes into the system although tutorials cannot eliminate the risk of errors of input.

Legislation requires updates: The primary legislation 1979 AQD Act ratified in 1985, standard legislation 1989 rules. But post WTO, this has not changed. Amendments presented but pending with the Government's cabinet committee on legislative changes remain inconsistent with international norms and procedural practices.

Use of advanced technologies to improve the system: Furthermore, there is the recurring operational issue during implementation of change form request CFR. It is crucial for PSW that departments and agencies are to be informed in advance about upcoming system changes. Yet sometimes unexpected changes occur which causes stress and panic for users, especially for time sensitive air shipments. If the users are informed every 2 to 3 days in advance. Recommendations for future pertain to incorporation of AI tools for users of IRMS within PSW.

5.3 Pakistan Customs

Pakistan Customs is the LA for PSW and was interviewed along with other government agencies. Standard questionnaire for OGAs was not used in this FGD, rather an open-ended

discussion was held by the PSWA team to assess the general outlook of Pakistan Customs towards PSW and its performance.

The Pakistan Customs has been evolving its internal IT based Customs Clearance system since the 1990s. This system has today evolved into the web based one Customs system (WeBOC). This system can now be accessed through PSW. WeBOC is the core goods declaration functional services integrator that is driven by the various OGA and other required agencies/entities' functional inputs.

Multiple trade flows are processed by Customs both within and without WeBOC—by and large nearly all trade flows are covered by WeBOC at most of the Customs locations in Pakistan. Digitalizing the Customs clearance is only one part of the Customs process. The entire processes of Customs clearance and goods declaration processing including risk management and post clearance audits require reengineering as digitalization progresses.

The World Bank Group carried out a functional audit of WeBOC in 2019 which has led to activities under the current on-going WBG financed Pakistan Raises Revenue (PRR) project with FBR and including Pakistan Customs. Pakistan Customs, through this project, is implementing the Authorized Economic Operator (AEO) program and enhancing Customs operations through IT infrastructure and business process reengineering (BPR). Pakistan Customs is also procuring equipment for automated entry/exit systems at ports as well as potential software to improve Pakistan Customs digitalization. Pakistan Customs also has plans to upgrade scanners at airports and seaports over the next six to seven months. All these efforts will enable better delivery of Customs services through PSW.

Pakistan Customs is therefore currently working on a WeBOC transformation project which involves improving the existing processes and streamlining them to reduce time, cost and increase transparency through BPR and a performance management system design. A BPR study is in process, with Maersk/KGH as the consultants. And its output once implemented will only improve the PSW-WeBOC/Customs collaboration.

Pakistan Customs has been closely collaborating (within the PSW-OGAs working groups) on the OGA integrations as they have proceeded with presently 15 OGAs integrated, and this has been fundamental to the integration.

Pakistan Customs reported that there is some reluctance within the traditional Customs' structure towards PSW due to a lack of understanding of the final PSW objectives and functionalities—this is natural as the overall aim is complete transparency and facilitation of the overall cross-border trading process. Much of this reluctance stems from the increased automation which is reducing individual discretion.

Pakistan Customs is even presently one of the most automated departments in the cross-border trade chain and its staff and employees are generally supportive of PSW, aiding in legislative changes and leading automation efforts. Pakistan Customs will start change management sessions within FBR-Customs to help in understanding digitalization of customs processes to align them with PSW practices.

PSW team has an effective change management plan and has been conducting sessions to help Customs' teams to understand the larger picture of PSW. These change management sessions are slowly moving from top management to Customs to the lower and will bear the outcome understanding that PSW's role is primarily to automate and not to encroach on the functions of any OGAs.

Overall, Pakistan Customs and PSW anticipate the continuation and further deepening of this symbiotic relationship where technology aids the overall cross-border trading process without overshadowing the importance of any concerned OGA or stakeholder entity—there is political buy-in on this happening.

5.4 Assessment of the Performance of Single Window based on OGA experience and recommendations

Other government agencies were asked standardized questions adapted from the UN/CEFACT SWAM. These were adapted to the PSW context after a thorough literature review of all key documents for PSW and other methodologies for assessing trade processes.

5.4.1 Challenges in system use

Overall, the sentiment pertains to users is positive. There are ‘teething problems’ in integration. For example, PSQCA faced issues in API integration, MNC and AQD users i.e, traders and customs’ agents found it difficult to use the system because of their lack of proficiency in using digital products. AQD users such as leather importers struggle with using the system due to low literacy. They would need more accessible tutorials and education, for example, Urdu videos and step-by-step manuals on PSW website. Users who are relatively better educated are still not literate in IT systems and struggle to understand the transfer of manual processes. This is because PSW went live only three years ago. Nonetheless, recommendations to facilitate the users and enhance their understanding have been included in section 7.

5.4.2 Cognitive load and behavioral shifts required within the system

As for OGA, the present shift from manual to digital processes presents a cognitive load. The transition is also a behavioral shift requiring a change in habits, which presents cognitive challenges as well.

For example, the AQD team reported confusion in the reconciliation processes of fees that arise through alternative delivery channels and commercial banks. They showed concern for potential audit observation. Upon investigation, it became evident that the system is automating the reconciliation processes, saving the effort and time for department and State Bank. However, any change in traditional ways of doing things sparks some fear and apprehension.

5.4.3 Complex underlying trade related processes

The underlying problem in Pakistan's trade processes are brought to light as PSW reach and usage expands. For example, DPP raised the problem of PSW not allowing filing for dummy containers as Customs’ WeBOC allowed. In WeBOC, clearing agents could file a GD/SD using container numbers that might not be the actual containers for the goods being transported but were still allowed to be processed with other product related details provided in the system. PSW’s non-allowance of dummy variables has redirected traders to looking for alternative solutions such as filing a new GD/SD when the actual container is filed. Similarly, a whole application for air freight is also processed but at the last moment, consignment may not find space in the aircraft which causes delay in transporting consignment. When the space is finally obtained, a new GD/SD must be filed because changes in aircraft details make the old application redundant.

Such operational dynamics related to rules and regulations applied to practical situations, reflect badly on PSW, even though the role of a single window is to automate processes, not streamline them. If an OGA resists change especially in overall processes and not just

digitalization an increased awareness amongst OGAs and the government is requiring, however, PSW can try but can only do so much.

Although PSW has helped OGAs streamline their processes for integration into the digital platform, problems such as discussed above, cannot be resolved through automation alone. These will require infrastructural investment, political commitment from relevant departments such as Civil Aviation authority to resolve issues related to Air freight.

5.5 Experience of Traders and Customs' Clearing Agents

5.5.1 Study Population and Sample

For the assessment of PSW User Experience PSW shared a list of 72,261 users, in which 68,969 were traders and 3,292 agents. Numerous steps were taken to clean the list to ensure that the survey is conducted on the traders and agents who are genuine prospective respondents.

| Steps | Description | Traders |
|---|---|---------|
| 1 | Total List of Respondents Shared | 72,261 |
| 2 | In-active users (users who are not using PSW for goods declaration) | 25,261 |
| 3 | Total Active Users | 47,000 |
| 4 | Data Cleaning of Active Users (Data Removed) | 18 |
| 5 | Final Active List | 46,982 |
| Total Sample Size 10% of the population | | 4,698 |
| Sample Achieved | | 4,022 |

Table 6: Study Population and Sample

We exhausted the list and managed 4,022 successful interviews. After the cleaning of data, including the removal of incomplete surveys and outliers, our respondent base is 3,980.

5.5.2 Data Collection Timelines

The survey's fieldwork spanned nearly five weeks. Initially, a pilot survey ran from May 9 to May 11, during which the survey tool was rigorously tested to check the questionnaire's flow and logic. Following reviews and updates post-pilot, the main phase of fieldwork commenced on May 11, 2024, and concluded on June 8, 2024. Each interview lasted about 15 minutes and was conducted using the Ipsos Computer Assisted Telephonic Interview (CATI) system. During these sessions, respondents provided insights on their interactions with the PSW, offered suggestions for improvements, and gave feedback on PSW's specific initiatives for women traders.

The User Experience Survey is designed to capture insights into the interaction of the respondents, i.e. traders and agents (the users), with the PSW System and gauging their perceptions. To do this, we captured responses over 3 sections.

1. *Satisfaction with PSW* – this section provides insights into how respondents perceive their satisfaction with different features of the system.
2. *Impact of PSW* – this section provides detailed insights into 4 categories where PSW has made an impact on their business.
3. *Insights from Women Traders* – we have a separate section in our survey which was designed to capture insights about the dedicated supports PSW offers specifically for women traders.

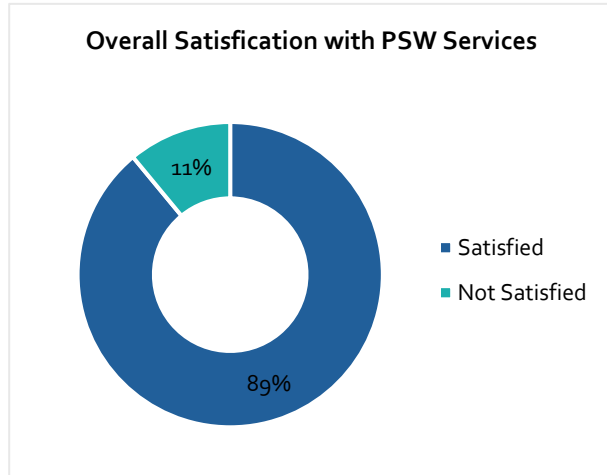


Figure 17: Overall Satisfaction with PSW Services

The levels of Satisfaction and Impact of PSW are asked at numerous places in the report to gauge perceptions of the user’s on how they perceive their business has been impacted. They are presented as Top-2-Box (T2B), measuring the two favourable responses (for example, satisfied and highly satisfied) and the Bottom-2-Box (B2B) measuring the later responses (for example, somewhat dissatisfied and highly dissatisfied).

The insights in the following sections accompany the earlier report on the impact of PSW on the operations of the trading community.

5.5.2.1 Satisfaction with PSW

The following section provides responses on certain questions aimed primarily at understanding how satisfied users are with PSW. It starts with an overall satisfaction with PSW Services followed by responses for different features of the PSW System.

5.5.2.1.1 Overall Satisfaction with PSW Services

PSW Users were asked about satisfaction on a scale of 1 – 4 for four features, with 1 being Very dissatisfied, 2 being somewhat dissatisfied, 3 being somewhat satisfied, 4 being very satisfied. The 1 and 2 were then clubbed as B2B (Very dissatisfied and dissatisfied) and T2B (Very satisfied and satisfied).

The PSW service users were questioned regarding their satisfaction with the service provided by PSW. Overall, 89% of the respondents showed satisfaction with the PSW Service, while 11% showed dissatisfaction with the service. Overall satisfaction is based on features like satisfaction with the Application process for filling goods declaration, LPCO, payment system, m and User interface (UI).

5.5.2.1.2 Satisfaction with Different Features of the PSW Platform

Following the overall satisfaction, users were asked about satisfaction on a scale of 1 – 5 for four features, with 1 being not satisfied at all, 2 being somewhat satisfied, 3 being neutral, 4 being somewhat satisfied and 5 being highly satisfied.

Users were asked about the application process for filings goods declarations, for LPCOs, the payment system on PSW and the User Interface (UI) of PSW.

5.5.2.1.2.1 Net Promoter Score (NPS)

The overall satisfaction of 89% can be compared with satisfaction across different features of the PSW System. The T2B for satisfaction with goods declarations is 80%, with user interface and payment systems is 79%. The lowest T2B is for the application process for LPCOs, with 63%.

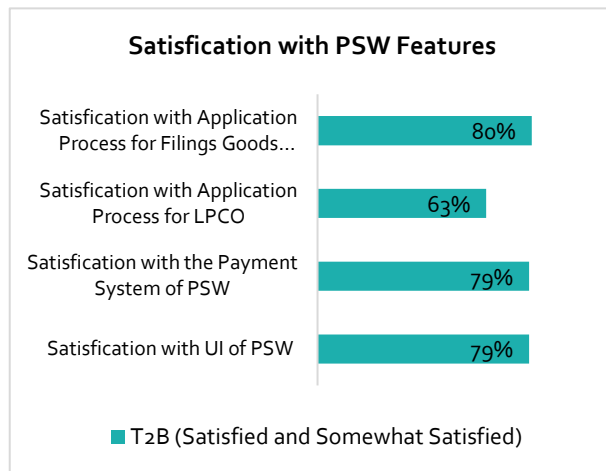


Figure 18: Satisfaction with Different Features of the PSW Platform

The Net Promoter Score (NPS) is a globally recognized metric used by businesses to gauge customer loyalty and satisfaction. It provides valuable insights into how likely customers are to recommend a product or service to others, going beyond mere satisfaction to assessing the potential for customer advocacy. For Pakistan Single Window (PSW), NPS is particularly relevant as it measures the overall satisfaction and effectiveness of the system. By implementing NPS, PSW can benchmark its performance, identify areas for improvement, and enhance user experience. Other countries can also benefit from using this methodology, especially if this is included as an indicator in the official SWAM by UNCEFACT.

The calculation of NPS is based on responses to a single question: "On a scale of 0 to 10, how likely are you to recommend using PSW to your colleagues and partners?" Based on their responses, customers are categorized into three groups:

1. *Promoters (score 9-10)*: These are highly satisfied customers who are likely to promote the system to others.
2. *Passives (score 7-8)*: These customers are satisfied but not enthusiastic. They may or may not actively promote the system.
3. *Detractors (score 0-6)*: These are dissatisfied customers who are unlikely to recommend the system and may even speak negatively about it.

Once customers are categorized, the NPS is calculated by subtracting the percentage of detractors from the percentage of promoters. The resulting score can range from -100 (if all respondents are detractors) to +100 (if all respondents are promoters). A positive score indicates that there are more promoters than detractors, while a negative score suggests the opposite.

The table on the following page highlights the NPS overall, and across sectors and cities. Females have a higher NPS (65) compared to males (59). This indicates that women are more likely to recommend PSW. However, awareness of dedicated support services is generally low. This leads to room for improvement in this score if awareness of dedicated services and usage is increased.

Faisalabad stands out with the highest NPS (78), followed by Peshawar (70) and Sialkot (69). Sialkot hosts the second highest number of businesses registered on PSW. On the other hand, Karachi has the lowest NPS (51). This is interesting to note since Karachi is the biggest trade center in the country. This city hosts the greatest number of businesses and includes the highest proportion of respondents from our sample. Additionally, the third largest city in terms of hosting the greatest number of international trade businesses is Lahore, which also ranks lower than Sialkot (55). Two of the three largest cities are at the bottom end of the NPS list.

| Category | NPS |
|--------------------------|-----|
| Overall Score: 59 | |
| Gender | |
| Male | 59 |
| Female | 65 |
| City | |
| Faisalabad | 78 |
| Peshawar | 70 |
| Sialkot | 69 |
| Quetta | 66 |
| Other | 64 |
| Multan | 59 |
| Gujranwala | 58 |
| Rawalpindi | 56 |
| Lahore | 55 |
| Islamabad | 55 |
| Karachi | 51 |

Table 7: NPS across Gender, City, and Industry/Sector

5.5.2.2 Impact of PSW

To evaluate the effectiveness of the PSW, our survey focused on five key elements. These elements were designed to test how well the PSW system meets its objectives in terms of making the businesses:

1. Faster

The survey evaluated whether the PSW system successfully reduces the time required for goods declarations, obtaining licenses, certificates, and permits, thereby enabling businesses to operate more swiftly. Furthermore, it also includes views on the changes in time to process different payment methods.

2. Cheaper

The survey reported whether the PSW system helps in reducing costs associated with applications for LPCOs, goods declarations and whether the PSW system has had any impact on cost savings overall. It assessed if the system's integration and streamlining of processes lead to overall cost savings for businesses.

3. Easier

The survey examined how the PSW system simplifies business operations. It assessed whether the centralized platform effectively reduces the need for manual processes, whether there is interoperability cross-border, and whether on an overall PSW has eased business operations.

4. Profitable

The survey also investigated the financial impact of the PSW system on businesses. It measured whether the improvements in ease, speed, and cost efficiency translate into higher revenue or higher profitability for businesses.

5.5.2.2.1 Faster

This section pertains to whether PSW has made any impact on the speed of operations. We start with their overall perspective and ask questions with regards to filing for goods declarations and applying for LPCOs.

5.5.2.2.1.1 Impact of PSW on Speed of Operations

The overall impact on the speed of operations was asked on a scale of 1 to 4 where 1 is not quick at all and 4 is very quick, where would you rate the impact of the PSW on the speed of your operations?

86% of respondents rated the impact either "Somewhat Quick" or "Very Quick". In contrast, 14% rated it as either "Not Quick at all" or "Not really quick". This indicates that most respondents perceive the PSW platform as having a positive and significant effect on the speed of their operations.

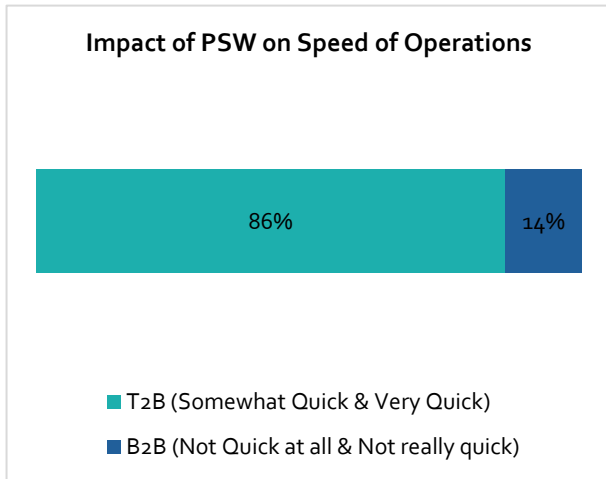


Figure 19: Impact of PSW on Speed of Operations

5.5.2.2.1.2 Impact of PSW on Filing Times for Goods Declarations and LPCOs

PSW service users were asked about the time required for filing LPCOs and Goods Declarations. The chart below displays their responses, showing the time in both hours and days.

Data shows that PSW has significantly reduced the time for filing LPCOs by approximately one-third, while the time for goods declarations has been reduced by half.

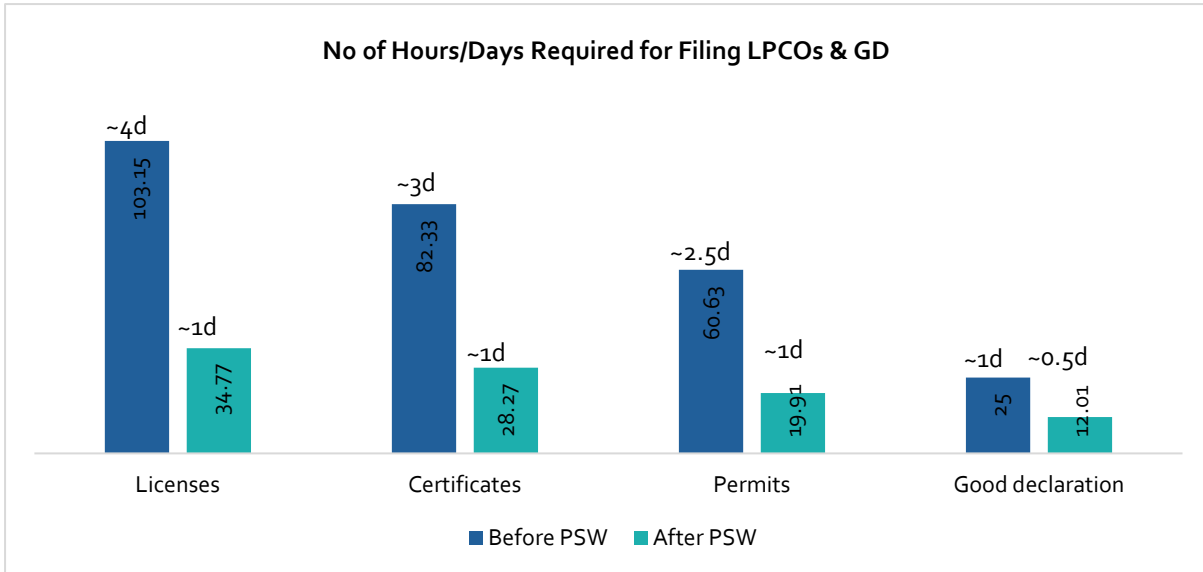


Figure 20: No of Hours/Days Required for Filing LPCOs & GD

5.5.2.2.2 Cheaper

This section pertains to the impact of PSW on making applications cheaper. Starting with overall user satisfaction, we further ask about the costs associated with filing goods declarations and applying for LPCOs.

5.5.2.2.2.1 Satisfaction with Application Cost Reduction

The impact on PSW on cost savings was asked on a scale of 1 to 4 where 1 is no cost saving at all and 4 is high-cost savings. The question asked was: where would you rate the impact of the PSW on your operational costs?

The T2B is 75%, presenting those three fourths of the respondents' report cost savings following use of the PSW system as compared to 25% of respondents who reported an increase in cost following using the PSW system.

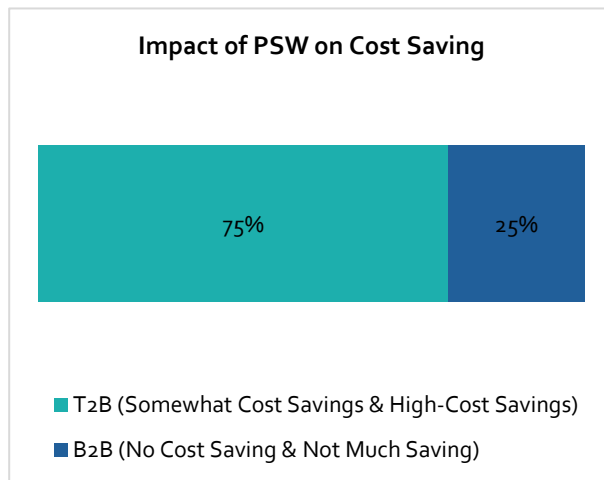


Figure 21: Impact of PSW on Cost Saving

5.5.2.2.2.2 Changes in Costs for LPCOs and Filings for Goods Declarations

Users reported their before and after costs of applying for each of the documents asked in two separate questions, first reporting the cost now and then reporting the cost before PSW. The costs include indirect costs such physical trips to the banks and OGAs, cost of printing etc. The base respondent for this question is less than the overall base. Each document has a different base of respondents. This is because we cleaned responses for those who suggested that they are unaware of the costs, thereby removing 50-60% of respondents for each of these documents. Then, we remove outliers or responses where the users have not reported their costs correctly.

For LPCOs, these are the costs of each of the documents, while for Goods Declarations they are the cost associated with the customs duties based on the goods' classification and value,

additional taxes such as VAT or GST, and processing fees for documentation and electronic filing.

The average reduction in cost is 18.75%. However, this arithmetic average is reduced due to Permits, seeing only a 14% reduction in cost. For all other three documents, the average reduction is 20%. A comparison with other countries is possible, if a similar methodology is applied which can be considered in improvements to future assessments.

Applications for Permits saw an average fall in costs of 14%, which is the smallest downward change in costs.

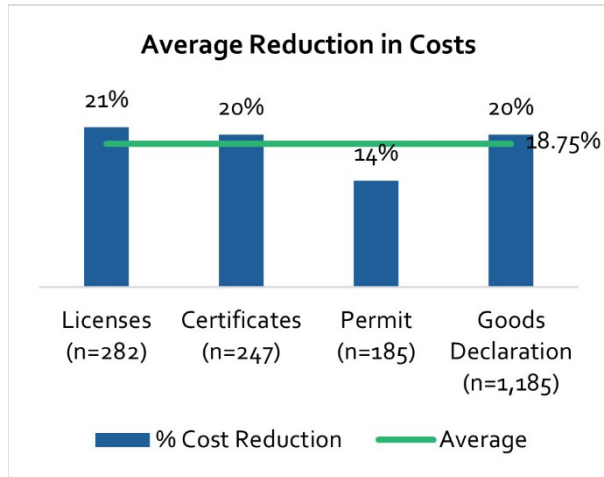


Figure 22: Average Reduction in Costs

5.5.2.2.3 Easier

This section assesses the impact of PSW on easing business operations. Ease is assessed based on changes to manual processes, the shift towards digital methods with different OGAs via the PSW platform, and overall perceptions of improved business operations.

5.5.2.2.3.1 PSW Impact on Ease of Business

The impact PSW on the ease of business was asked on a scale of 1 to 4 where 1 has no impact on making business easier to 4 where users feel that business has been made significantly easier.

As is evident from the chart, PSW has had a significant impact. 90% of respondents report either somewhat easy or very easy with only 10% reporting no ease at all.

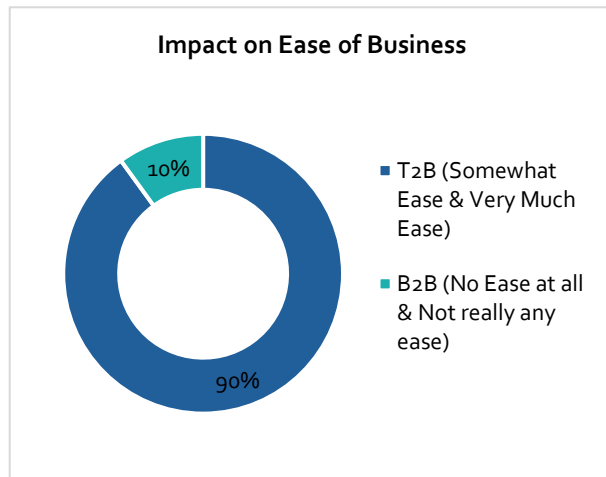


Figure 23: Impact on Ease of Business

This satisfaction is driven by numerous factors, the primary ones relate to shifting from manual to digital processes which will be explained further.

5.5.2.2.3.2 Requirement of Physical Copies Despite Digital LPCOs

We start by asking respondents whether, despite the documents received through the PSW Platform, users still require physical copies of their documents. This question does not include trade documentation, such as the original Bill of Lading, Commercial Invoice etc., which are required to be kept and submitted to banks and to customs in hard form. 73% of respondents report that they do not need physical copies of any documents.

However, discussions with FGD participants suggest that some businesses who deal with OGAs onboard PSW still require physical copies, specifically for Licenses, Certificates and Permits. This area requires attention from PSW, so a dedicated mechanism is set up which gathers information on OGAs still collecting paper-based applications. Currently, the domain officers and the focal person from each OGA are interacting on regular basis to resolve problems and keep the system going, but if this information is also visible in the system, which could be gathered via a pop-up question at the end of an application form, this would benefit the process of going completely paper free.

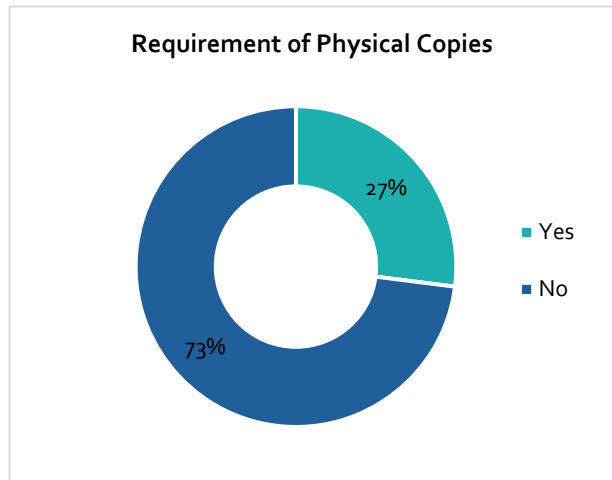


Figure 24: Requirement of Physical Copies Despite Digital LPCOs

5.5.2.2.3.3 Payment Options Usage Before and After PSW Implementation for Application and Other Fees

This was a multiple-choice question since respondents used more than one payment method. To gauge how the preference for payment options have changed, we asked two distinct questions on which methods were used before PSW and then which methods are used after PSW to make payments for Goods Declarations, LPCOs or other payments.

From the data, it is evident that the use of digital payments has almost doubled, from 41% of respondents to 81% of respondents.

Manual options, such as checks/pay orders and cash deposits have significantly reduced.

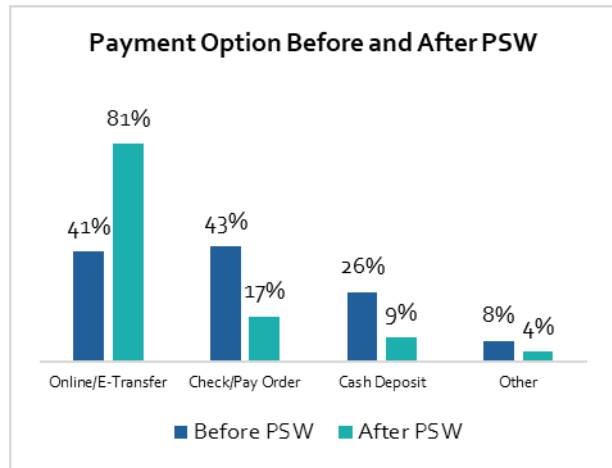


Figure 25: Payment option before and after PSW

This change from manual to digital processes, especially noting the almost double increase in online/e-transfer payments (from 41% to 81%) showcase how the payment system of PSW has made business easier for users. Furthermore, it is worthwhile to note that cash deposits have significantly reduced, from 26% to 9% showing that the manual process of using cash has been discouraged. This effect carries over to being faster as well.

5.5.2.2.3.4 Usage of Top-Up Account

A distinguished feature of PSW is the ability to use pre-paid top-up accounts, where user's deposit funds up front and use those for numerous payments. This is primarily driven to the ease of business for traders and agents, especially those which are very active in their trade operations.

49% of respondents handle payments via both methods. 29% of respondents use only a top-up account while 22% make payments in a single-payment fashion - adding funds to their PSW account only when needed.

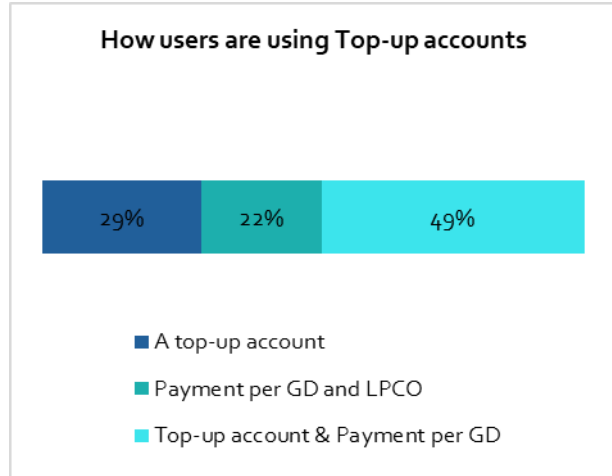


Figure 26: Usage of Top-Up Accounts

5.5.2.2.3.5 Notification and Application Updates Methods: Past vs. Present

We ask users two different questions on what notification methods are used before PSW in case a user wishes to seek an update or communicate with or receive communication with an OGA or relevant department.

This is a Multiple-Choice question where respondents have reported the methods they used, before and after PSW. It is important to consider that this is not the reporting of a preferred way of communication, and only reflects how PSW has shifted the trend from manual processes to easier ones.

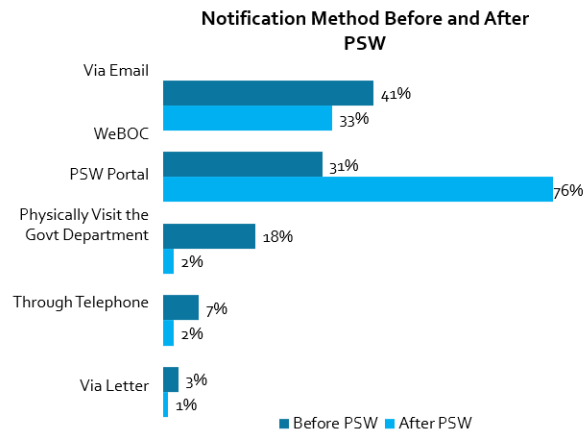


Figure 27: Notification Method before and after PSW

Before PSW, most respondents received notifications via email for their application submission to concerned Government departments. The Web Based One Customs Portal (WeBOC), which is now integrated with PSW, was used by 31% of respondents.

While 31% of respondents suggested using WeBOC before PSW, the percentage of respondents who access WEBOC through PSW has risen from 31% to 76%. The use of email has reduced to 33% and other means, including manual letters, telephone calls to concerned departments and physical visits, have significantly reduced.

5.5.2.2.4 Monetary Impact

There are numerous factors which impact the business, revenues, and profits of traders beyond Single Window systems. For traders in Pakistan, national and international macroeconomic conditions, including the exchange rates, have a significant impact.

Section 4.2 of the UN-CEFACT Recommendation No. 33 (2005) states "As the Single Window enables governments to process submitted information, documents, and fees both faster and more accurately, traders should benefit from faster clearance and release times, enabling them to speed up the supply chain."



Final Report - Pakistan Single Window Assessment (PSWA)

Furthermore, it states that “If the Single Window functions as a focal point for the access to updated information on current trade rules, regulations, and compliance requirements, it will lower the administrative costs of trade transactions and encourage greater trader compliance.” As confirmed by FGD participants and insights from the telephone interviews, PSW is not directly related to changes in business level, revenues, or profits.

As per the Single Window Assessment Methodology (SWAM, 2023) single window systems can increase revenue for traders by reducing cargo clearance times, simplifying procedures, and minimizing the need for document verification. They can also provide increased business through faster approvals from government agencies and better coordination between them. Hence, the increases in revenue and profitability mentioned in this section are an indirect result of PSW.

In this context, we ask specific questions to respondents to assess whether the ease and speed of business achieved by PSW translated to increased revenues (as a proxy for business levels) and profits.

5.5.2.2.4.1 Impact of PSW on Business Volume

Users were asked whether, due to impact, they have experienced a change in their business volume. They had the option to report either no change, or an increase or a decrease. They also had the option to not wish to disclose. 3% of users did not wish to disclose any impact.

62% of respondents report that no change has taken place in their business volume. This is in line with the insights from FGDs with traders and agents, suggesting that the PSW system itself is not the cause of increased business.

However, due to the indirect benefits explained earlier, there are respondents (28%) who suggested an increase in revenues. A smaller percentage of respondents, 7%, reported that their revenues have decreased.

5.5.2.2.4.2 Percentage Increase in Business Volume

Following the question on the impact on business volume, we asked for the percentage increase in business volume. This question was asked only to respondents who reported an increase in the previous question. The range of options for their response increased by 10%, from 10-25%, from 25-50%, and over 50%.

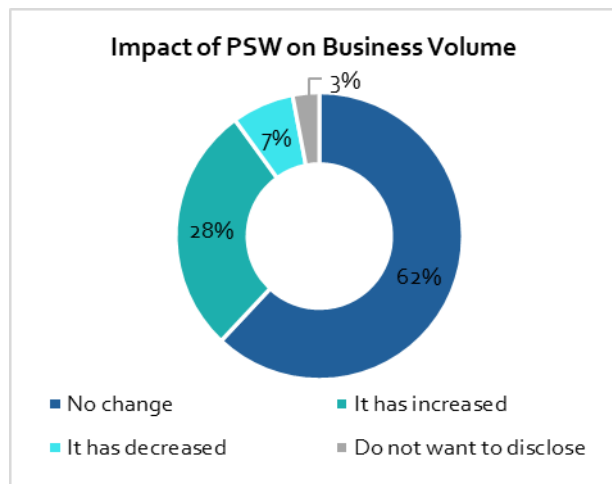


Figure 28: Impact of PSW on Business Volume

To calculate the average percentage increase in business volume, we first determined the midpoints for each range, which is 5%, 37.5% and 75%. Then, we calculated the weighted sum of these midpoints using their respective frequencies and divided this sum by the total number of respondents (100%). Hence, we compute that the average percentage increase of approximately 25.25%.

From the 28% of respondents who did report an increase in business volume, the average increase is 25.25%. 33% of respondents saw an increase up to 10%, 32% saw an increase between 10-25%.

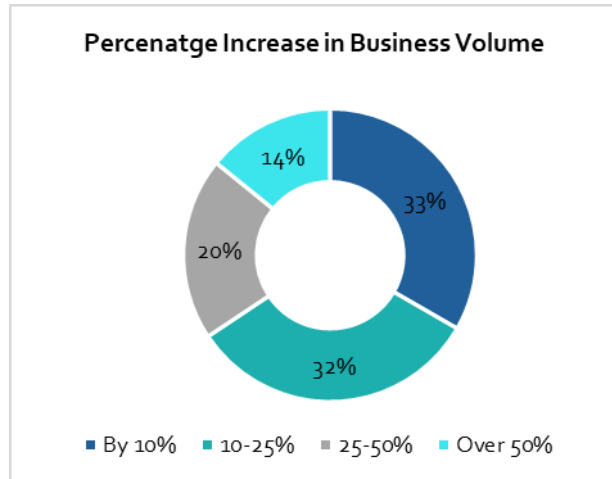


Figure 29: Percentage Increase in Business Volume

A smaller group (20%) experiences a significant increase of 25-50%, and 14% report an exceptional increase of over 50%. This indicates that while most businesses benefit from modestly to moderately from the PSW initiative, a notable minority experience substantial or dramatic revenue growth.

5.5.2.2.4.3 Impact of PSW on Business Profits

Like the question about business revenues, we delve deeper into whether any business has experienced a change in its net profits. This distinction is made to understand whether the changes in revenues translate into changes in profits since changes in revenues themselves may also be offset by changes in costs.

The respondents had the option to report no change in profits, either an increase or a decrease, or not to disclose any impact. Four percent of respondents did not wish to disclose any impact.

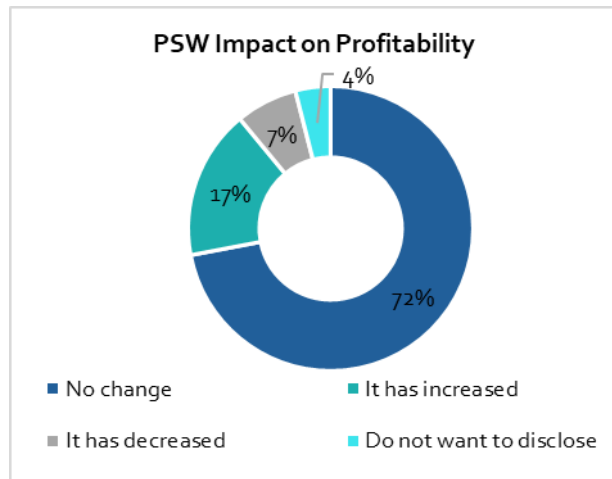


Figure 30: PSW Impact on Profitability

The PSW system itself is not a direct cause of increased revenue. It is, however, driven by numerous factors, as explained above., as explained above. In Section 2.2, users reported an average cost reduction of approximately 18%. This explains how PSW's impact on revenues and cost reduction, coupled with the impact on ease of doing business and speed of business, can translate into increased profits for PSW users.

More respondents (72%), compared to the ones in the earlier question (62%), reported no change in profits. However, 17% of respondents suggest that profits have increased.

The respondents which reported changes in profits are fewer than the respondents who reported changes in revenues. Nevertheless, these two questions show that changes in revenues have translated to changes in profits.



5.5.2.2.4.4 Percentage Increase in Profits

Following the question on impact on profits, we asked for the percentage increase in profits. This question was asked only to respondents to report an increase in the previous question. This allows us to delve deeper into the actual monetary impact or monetary benefits user's experienced following the use of PSW compared to using the previous systems.

The 17% of respondents who reported an increase in profits following utilization of PSW, the majority (41%) report increasing profits by 10%. Following this, the trend shows lesser respondents as each profit class increases. 34% of respondents suggest an increase in profits of 10-25%, 17% report an increase in profits of 25-50% and 8% report seeing an increase in profits of over 50%.

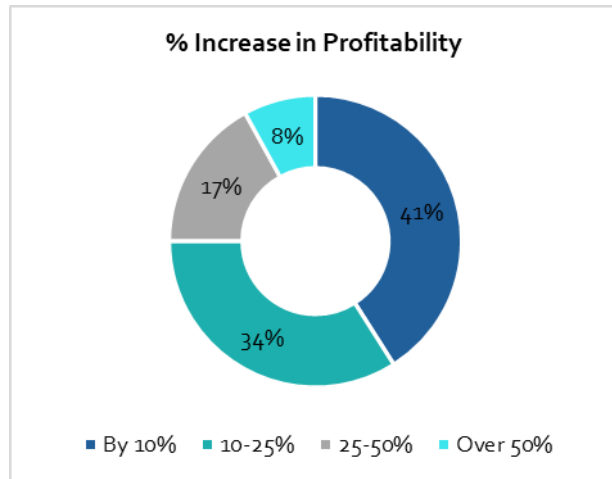


Figure 31: Percentage Increase in Profits

To calculate the average percentage increase, we first determined the midpoints for each range (10%, 17.5%, 37.5%, 75%) and calculated the weighted sum using the frequencies and then divided the weighted sum by the total number of respondents (100), resulting in an average increase of approximately 20.4%.

5.5.2.3 Insights from Women Traders

There are numerous dedicated support services for women trader's offered by the PSW, including guidance on business management and dedicated support helplines. Our survey included a separate section to gain insights from the women trader's registered on the PSW platform.

PSW has launched the dedicated PSW Women Helpline to provide guidance and support to women traders engaged in cross-border trade.

In addition to the Women Entrepreneurship Program, Khadija, to boost the entrepreneurship of women in the international trade domain, some of the services offered are guidance on using the PSW System, education and support in navigating trade laws, training in entrepreneurship and management and dedicated supports to helping in system glitches and technical issues.

Our study encompassed insights and a dedicated section for women traders. This is important since PSW has dedicated support services, which include a dedicated helpline, administrative training, legal counsel, and support in understanding the complex international trade environment.



5.5.2.3.1 Overall Satisfaction with PSW

We segregated the overall satisfaction of PSW as in Section 1 by gender to highlight how women traders perceive satisfaction. Results are like results from the overall satisfaction in Section 1.

Out of all female respondents, and 38% were very satisfied, 50% were satisfied, 3% were dissatisfied and 9% reported being very dissatisfied. These results indicate a high level of satisfaction, with most respondents (88%) indicating they are satisfied or very satisfied with the PSW System, reflecting a positive reception among users.

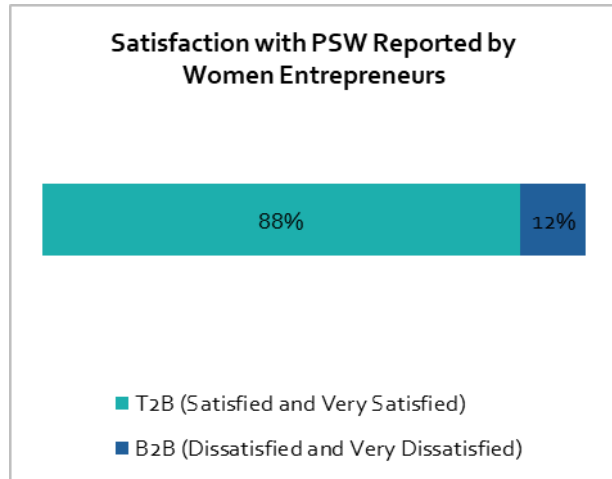


Figure 32: Satisfaction with PSW Reported by Women Entrepreneurs

5.5.2.3.2 Awareness of Dedicated Support Services

This question is asked only from women traders to gauge how aware they are of the supports outlined above. PSW has made tremendous efforts to enhance the user experience of women traders. Furthermore, there are also numerous self-help guides and explanations for various features on the PSW website.

PSW also has a dedicated helpline which runs 24/7 to assist women traders on any issues faced with regards to navigating the system or system glitches. Nevertheless, results show that only 3% of women had used the service. This reflects a general lack of awareness of dedicated support services.

Furthermore, despite special support services for women, the general awareness for support services is also low. Only 18% of women users are aware of any of the following services:

1. Guidance on Using PSW System, Trade Laws Education/Guidance,

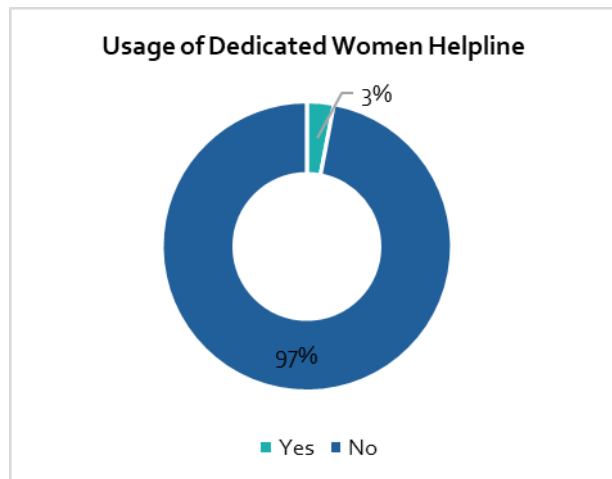


Figure 33: Usage of Dedicated Women Helpline



2. Training in Entrepreneurship/Management and
3. Help with system glitches and technical issues.

5.5.2.3.3 Suggestions to PSW

PSW service users were invited to provide suggestions for improving the PSW system. The question asked was “What improvements do you think can be made to the Single Window to enhance its usefulness?”. The question was multi-response. Of those surveyed, 53% responded with valuable feedback. These suggestions have been categorized into five broad categories:

1. The application process should be made easy to understand
2. Develop a Mobile App and Enhance System Features
3. Provide Training Sessions on Filing Procedures
4. Server Stability Should be Improved
5. Expand Services, and Integrate with Other Agencies

1. The application process should be made easy to understand

Almost half of the respondents highlighted the need for improvements in the application filing process. Specific suggestions included:

- i. Streamlining the Process: Respondents found the current process to be lengthy and cumbersome. They recommended shortening the overall processing time.
- ii. User Autonomy: Importers and exporters should have the ability to process and file their applications independently.
- iii. Simplified Banking System: The current payment system is complicated. A separate section dedicated to payments could help streamline this process.
- iv. Enhanced Communication: Improving the communication process and upgrading the call center could provide better support to users.

2. Develop a Mobile App and Enhance System Features

A significant portion of respondents emphasized the need for overall system enhancements. Key suggestions included:

- i. Mobile Application: Developing a mobile app to facilitate easy navigation and day-to-day business operations.

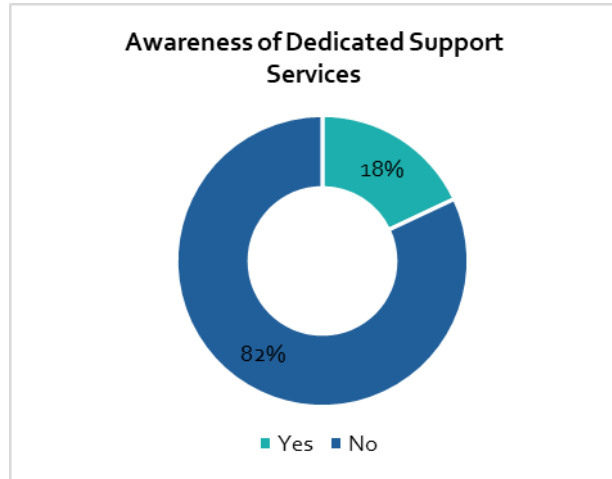


Figure 34: Awareness of Dedicated Support Services

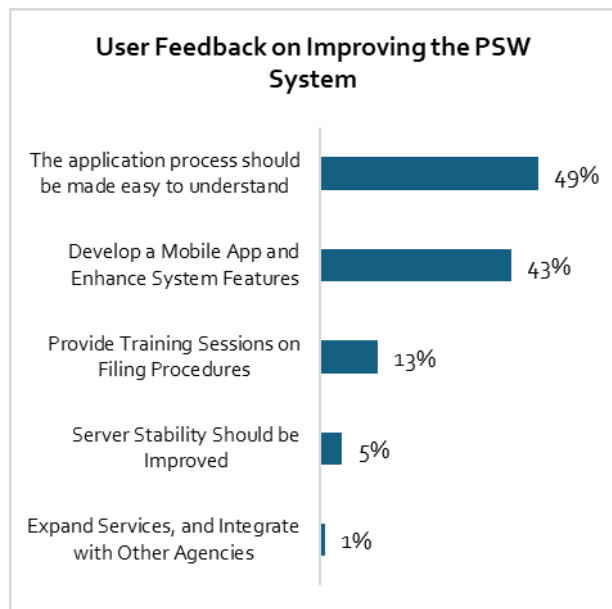


Figure 35: User Feedback on Improving the PSW System

- ii. Automated Messaging: Enabling automated messaging to notify users when an activity is initiated or completed.

3. Provide Training Sessions on Filing Procedures

Some respondents were not fully aware of the overall functionality of the PSW system. They suggested:

- i. Educational Sessions: Conducting sessions by PSW officials to explain the system and its processes in detail.

4. Server Stability Should be Improved

A smaller group of respondents pointed out issues with server performance. Their recommendations included:

- i. Server Stability: Improving server management to prevent crashes during high usage periods.
- ii. Mobile Browser Compatibility: Ensuring that the system works smoothly on mobile browsers.

5. Expand Services, and Integrate with Other Agencies

- i. Issuing Certificates: Facilitating the issuance of all necessary certificates from the PSW portal.
- ii. Adding Dry Ports: Incorporating more dry ports into the system.
- iii. Integration with Other Agencies: Merging certain functions with other agencies, such as shipping companies, to streamline operations.
- iv. Independence in Operations: Ensuring that the system allows users to operate independently without external interference.
- v. Coordinated Timings: Synchronizing the operating hours of all interlinked departments to enhance efficiency.



6. QUANTITATIVE ASSESSMENT OF PAKISTAN SINGLE WINDOW

To quantitatively assess the progress of Single Window (SW) implementation, three approaches have been proposed:

- i. The Express Analysis Approach: Evaluates the availability of SW in the country based on five key elements.
- ii. The Key Factors-Based Assessment Approach: Assesses the successful functioning of SW based on key factors.
- iii. The Objectives-Based Assessment Approach: Evaluates the achievement of SW implementation objectives for both government and business.

6.1 Express Analysis

To determine the availability of Single Window in a country, an assessment can be conducted by examining the available resources to meet the five key elements of the Single Window definition. If any of the key elements are missing, it can be concluded that a Single Window has not been fully implemented. This approach allows for a rapid assessment of the Single Window's availability.

| No | Feature | Not implemented | Partially implemented | Implemented |
|----|--|-----------------|-----------------------|-------------------|
| | Grade range | 0 | 0.5 | 1 |
| 1 | Parties involved in trade and transport (both from the public and private sectors) | N/A | 0.5 ²² | N/A |
| 2 | Standardized information and documents. Use of internationally recognized standards where they exist for the coordination between stakeholders and government. | N/A | N/A | 1 ²³ |
| 3 | 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). | N/A | N/A | 1 ²⁴ |
| 4 | Fulfilling regulatory requirements (which implies that a Single Window fulfils a government function and, as such, it has received a relevant mandate from the government to perform these actions). | N/A | N/A | 0.5 ²⁵ |

²² Parties related to transport are not, yet part of the system hence partially implemented.

²³ These documents are automated and incorporated into the digital system and automatically presented to user upon input of HS code while filing a Goods' Declaration/Single Declaration.

²⁴ Trade Data Dissemination, Exchange and Utilization Rules 2023²⁴ (SRO 406 (1) 2023) makes it mandatory within the system that user must provide relevant information only once, triggering the necessary responses from relevant agencies. This practice is confirmed visa FGDs with traders and clearing agents using PSW digital platform.

²⁵ The PSW Act 2021, gives PSW Company a clear mandate to digitize cross border trade, increase transparent, reduce time, cost and complexity in the trade process. PSW has full functionality for all type of LPCOs required for cross border trade. Even though out of 77 OGAs, 15 are integrated but they cover 71% of overall trade and 79% of export related LPCOs.



Final Report - Pakistan Single Window Assessment (PSWA)

| No | Feature | Not implemented | Partially implemented | Implemented |
|---|---|-----------------|-----------------------|-----------------|
| 5 | Single submission - every data item and every document (image or e-document) submitted by a trader as part of an international trade transaction would be submitted to the SW only once and then reused as necessary for all agencies/authorities involved. | N/A | N/A | 1 ²⁶ |
| The score for Pakistan Single Window is $(0.5+0.5+1+1+1 = 4/5 * 100) = 80\%$ ^{27 28} | | | | |

Table 8: Express Analysis of Single Window Implementation Based on Key Elements

²⁶ Same as footnote 3.

²⁷ Based on scoring by internal review panel within third party evaluators/assessors of Pakistan Single Window

²⁸ As an illustration, suppose that three key features are fully implemented (scored 1) while the other two are only partially implemented (scored 0.5). The overall score would be calculated by adding up the individual scores and dividing them by the total number of features, resulting in a score of 0.8 out of 1 or 80%. On the other hand, let's consider a scenario where two key features are fully implemented while the remaining three are not implemented at all. The overall score would be calculated by adding up the individual scores and dividing by the total number of features, resulting in a score of 0.4 out of 1 or 40%.



6.2 Key Factors based Assessment

Grade: 1 - very low / 2 - low / 3 - medium / 4 - above medium / 5 - high

| Key factor | Indicators to describe the key factors | Grade |
|--|--|-----------------|
| 1. Political will | <ul style="list-style-type: none"> The government and executive power support the implementation of the Single Window. In the case of change in government and (or) executive power leadership, maintaining the strategy, vision and goals of the Single Window through the transition and beyond. A high-ranked official who has the authority to make and impose decisions related to SW and is supported by the prime minister/president shall be designated in charge to supervise the project. The business community provides public support for the implementation of the Single Window. | 5 ²⁹ |
| 2. Strong lead agency | <ul style="list-style-type: none"> The Single Window is supported by legislation or governmental decree, providing a strong mandate for the lead agency. A consultative body is established, including representatives from relevant state authorities, organizations, and the business community, to ensure transparency and inclusiveness in decision-making. The lead agency regularly reviews and updates its strategic plans, ensuring alignment with current needs and future expectations of the public. | 5 ³⁰ |
| 3. Engagement and Collaboration between Single Window and Business Community | <ul style="list-style-type: none"> The business community actively participates in the meetings of the authorized Single Window lead agency. High level of interest and involvement from the business world in developing the Single Window, including local projects such as data portals, terminals, and B2B networks. Business associations host on-site meetings, create road maps, and participate in evaluating regulators' activities. Established trade forums provide a platform for the trade community to communicate and receive support regarding Single Window queries, issues, and enhancements. Year-to-year growth in the number of companies adopting and integrating the Single Window within their businesses and processes. | 4 ³¹ |
| 4. Ease of use, accessibility, and support | <ul style="list-style-type: none"> Availability of comprehensive and up-to-date user guides, instructions, and self-learning resources online. Availability of a help desk or customer support, as well as an online feedback/enquiry form. Integration with the Trade Information Portal (TIP) or regular publication of information on international trade processes, taxes and duties, HS classification, and the latest trade updates on the Single Window (SW) portal, if TIP is not available. Utilization rate of SW services for regulatory filings (EXIM Declarations) and LPCO submissions, graded as low (0% to under 30%), medium (30% to | 4 ³² |

²⁹ The PSW Act 2021, assigns Pakistan Customs as the lead agency, a Governing Council, headed by the finance minister as the supervisory arm of PSW and PSW Company as the operating entity for PSW.

³⁰ Same as above. The Lead agency cannot be changed unless there is a change in the law through the Parliament. The GC can replace the operating entity in case of non-performance.

³¹ The PSW Board of directors has representation from Federal Chambers of Commerce and Industries (FPCCI) and Pakistan Business Council (PBC) and has private sector experts in the Governing Council. Through assessment such as PSWA, the PSWC aims to incorporate feedback from the beneficiaries or users. However, room for improvement remains

³² The PSW has user guides, tutorials, FAQs and link to Tradeverse or Trade Information Portal of Pakistan (TIPP) which has information on all relevant LPCOs for each HS code and other trade related data.



| Key factor | Indicators to describe the key factors | Grade |
|---|---|-----------------|
| | 50%), above medium (50% to under 70%), and high (70% and over). | |
| 5. Legal or Governance Framework | <ul style="list-style-type: none"> Establishment of rules for the exchange of B2G and G2G e-data and e-documents, and their use. Provision to file information with government authorities only once. Provisions related to e-customs, e-commerce (including payments), transport, and logistics concerning the validity of e-documents, and submitting and exchanging data using e-signature (following UNCITRAL rules) or equivalent authorizations. Provisions related to the admissibility of e-documents and messages as evidence in the court. Provisions related to the cooperation of government authorities at the border. Provisions related to public-private partnerships to finance and operate the system if required. Provisions related to terms and conditions for users of Single Window system, and that the conditions of use, including corporate governance of the SW, are consistent with the legal framework, complete and legally fair. | 5 ³³ |
| 6. Standardization and Interoperability | <ul style="list-style-type: none"> Compliance with UN/CEFACT recommendations such as Recommendations No.1 and No.18 for streamlined harmonized, and simplified information. Adoption of relevant international data exchange standards, such as the WCO Data Model and/or UN/CEFACT data libraries and Reference Data Models. Utilization of other applicable international standards, such as ISO and GS1, for designing and implementing the Single Window. | 5 ³⁴ |
| 7. Financial Sustainability | <ul style="list-style-type: none"> Availability of financial resources from government, banks, international bodies, and public-private partnerships. Co-financing of the project by members of the business community. Presence of a self-sustaining operating model | 4 ³⁵ |
| 8. Public Awareness and Communication | <ul style="list-style-type: none"> Public outreach activities are conducted to promote the implementation of the Single Window project, including organizing events, presentations, and advertising campaigns to raise awareness. An effective marketing strategy is in place to promote the Single Window services. Improving transparency through regular publication of progress reports and updates to inform stakeholders of project achievements, challenges, and the status of the implementation of the Single Window system. | 5 ³⁶ |

³³ PSW Act 2021 and the related SROs (around 10) form a robust legal and institutional for PSW, allowing detailed provisions for data exchange and dissemination and allowances for e-signatures and legal status of e-documents.

³⁴ The PSWA has been assessed against the guidelines of Recommendation 33, and respective sections have been identified that align SWAM and UNECE recommendation 33. The PSW Act 2021 is also informed by the recommendation and ensures the Single Declaration principle is followed in the system.

³⁵ Annual statements of PSW have been studied from the year 2020 to 2024, revenue and operational expenditure assessed along with the surplus and deficit to gauge that PSW has been able to cover its operating expenses from its' subscription income and in the foreseeable future appears sustainable.

³⁶ PSW's most effective marketing tool is its' 24/7 helpline that resolves user queries and troubleshooting issues in real time basis. This creates an interactive engagement with target market and trust in the system. Furthermore, the PSW website is a tool rich with data including TIPP.



| Key factor | Indicators to describe the key factors | Grade |
|--|--|-----------------|
| 9. Operational Continuity and Disaster Recovery | <ul style="list-style-type: none"> ● Clarity of emergency response procedures for operational personnel to restore system operability in case of emergencies or force majeure events. ● Availability of backup and restore processes to ensure system continuity and data recovery. ● Implementation of data governance policies to ensure privacy, security, and compliance. ● Clarity of recovery plans in case of disasters or system disruptions. | 5 ³⁷ |
| 10. Environmental and Social Sustainability | <ul style="list-style-type: none"> ● The percentage of paperless transactions processed through the SW compared to the total transactions processed. ● Reduction of greenhouse gas emissions: Total distance saved by traders due to reduced physical visits to government agencies through SW. ● Sustainable use of resources: Percentage of energy-efficient electronic devices used in the SW system. ● Equal access to the Single Window System (depending on the percentage of users from different regions or demographics who have access to and use the SW system). ● Social inclusion and diversity (depending on the percentage of SW staff from diverse backgrounds and the level of inclusion policies implemented in the workplace). | 1 ³⁸ |
| <p>Seven key factors receive medium responses while the remaining three factors receive high responses, the score is calculated as follows: $(4 \times 3 + 5 \times 6 + 1 \times 1) / 10 = 4.3$ out of 5 This score indicates a general evaluation of 86%.</p> | | |

Table 9: Key Factor Based Assessment

6.3 The Objectives Based Assessment

37 The IT framework section has details on this, and to summarize PSW has effective data recovery mechanisms in place, have domain officer for each type of risk domain for the system that actively monitor and issue alerts and timely warnings in case of any issues with the system

38 This is still at strategic level and PSW still must take up this focus in the coming years hence a low score.



| Objective Based Assessment ³⁹ | | |
|---|--|-------------------------|
| No | Government expectations | Grade (Max score 75) |
| <i>Grade: 1 - very low / 2 - low / 3 - medium / 4 - above medium / 5 - high</i> | | |
| 1 | Improved coordination and cooperation among government agencies involved in trade- related activities | 4 ⁴⁰ |
| 2 | Efficient and seamless sharing of trade-related information among different government agencies | 5 |
| 3 | Maintaining all trade-related data in an electronic format and sharing it with the appropriate agency as and when required | 5 |
| 4 | Use of Single Window data for risk management purposes to minimize physical inspections and reduce inspection time | 5 |
| 5 | Quick and easy analysis of trade flow data and performance, and the ability to prepare analytical reports and statistical material | 5 |
| 6 | Increased efficiency in revenue collection through streamlined processes and reduced paperwork | 3 ⁴¹ |
| 7 | Improved trader compliance through the integration of legal and procedural requirements in a timely manner | 3 ⁴² |
| 8 | Simplified, harmonized, and automated procedures across different government agencies involved in trade-related activities. | 5 |
| No | Business expectations | Grade |
| 9 | Traders can submit all the necessary information and documents via the Single Window only once. | 5 |
| 10 | Validation and distribution of information and documents are faster and more accurate. | 5 ⁴³ |
| 11 | The Single Window minimizes the potential for data errors that may occur when re-entering or reprocessing information into different systems. | 5 ⁴⁴ |
| 12 | Faster clearance and release times help speed up the supply chain. | 5 |
| 13 | The Single Window improves transparency and predictability, reduces the potential for corrupt behavior from both the public and private sectors. | 5 |
| 14 | Administrative costs are lower. | 3 ⁴⁵ |
| 15 | The Single Window encourages greater trader compliance and provides enhanced transparency on regulatory requirements. | 5 ⁴⁶ |

³⁹ This is based on an internal expert review and will be further enhanced through an average expert score for each question after the conclusive workshop which will have an expert panel from the field internationally and locally including members of the GC. The workshop may potentially include traders and clearing agents as well.

⁴⁰ Full score not assigned because all OGAs are still not on board and the shift from paper to digital systems is creating more cognitive load for some OGA

⁴¹ Full score not assigned as some confusion within OGAs regarding payments' reconciliation process existed at the time of assessment, which was later resolved. The survey also identified some issues with banks.

⁴² The system still needs more clarity as users of WeBOC shift to PSW. GD types have been confusing to those who rely on customs/clearing agents mostly

⁴³ Some traders mentioned that PSW has reduced the incidence of misdeclaration in imports GDs

⁴⁴ Survey data supports this.

⁴⁵ FGDs with traders had insights contrary to this. Some said cost has increased now that PSW fee also must be paid which is minimal but a fee, nonetheless. Also, I feel there is lack of clarity on what people are defining as administrative costs

⁴⁶ This was brought up in FGDs with traders, OGAs and the sentiment on transparency is strong.



| Objective Based Assessment ³⁹ | | |
|--|-------------------------|-------------------------|
| No | Government expectations | Grade (Max score 75) |
| Score for PSW= (11x 5) +(3x3)+ 4x1)= (68/75)= 0.906, in percentage terms this is 90.6% | | |

Table 10: Objective Based Assessment



6.4 Coverage of Total trade by PSW

The analysis of the functioning of the single window gives insights into the breadth of scope or quantum of trade a SW handled. Section 1 of this report gives an overview of the trade dynamics of the country, examining the quantum of trade cleared at different locations at seaports, airports, dry ports or collectively called custom collectorate. The assessment team found that Customs collectorates in Karachi, Lahore and Sialkot handle about 86% of all of Pakistan's trade, while Karachi collectorates alone handle about 76%.

The theoretical basis for this figure refers to the GDs/SDs cleared that require an LPCO from at least one OGA, other than Customs. Currently, PSW is handling declarations type of "Home Consumption" (HC) for imports whereas all export declarations are covered. Any LPCOs required from the integrated OGAs for these declarations are processed through PSW.

PSW can enhance its coverage by expanding its scope to other types of declarations, especially for import, which appears to be a low-hanging fruit whereas enhancing the scope of PSW through integrating More OGAs is a time-consuming exercise and can be made part of its medium to long term strategy.

The table below shows the breakdown of the number of GDs/SDs that feed into the calculations on coverage.

| Overall Trade Coverage (PSW & WeBOC) | | | | | |
|---|--|--|---------------------|------------------------------|--|
| No of Single Declarations processed by WeBOC | No of Single Declarations processed by PSW | Total No of Declarations WeBOC + PSW (SD) | WeBOC Share Total % | PSW Share Total % | |
| 1,662,813 | 466,255 | 2,129,068 | 78.1% | 21.9% | |
| Regulatory (LPCOs) Overall Trade Coverage (PSW & WeBOC) | | | | | |
| No of Single Declarations requiring at least one LPCO from an OGA (WeBOC) | Single Declaration requiring at least one LPCO from an OGA (PSW) | Total No of Declarations requiring at least one LPCO from an OGA (WeBOC + PSW (SD)) | WeBOC Share Total % | Regulatory PSW Share Total % | |
| 139,919 | 349,939 | 489,858 | 28.5% | 71.43% | |

Table 11: PSW coverage: Overall total trade + Regulatory trade coverage

Further breakdown of those SDs/GDs that require an LPCO is given in table below. The breakdown is for imports and exports.

The analysis of the data of clearances shared by PSW shows that it is currently handling 65% of all regulated HS codes in the Pakistan Customs Tariff for imports, whereas the same percentage for exports is 79%. exports code coverage of regulated HS codes for import and export comes to 71% .

| Regulatory (LPCOs) Overall Trade Coverage (PSW & WeBOC) - Import | | | | |
|--|---|---|--------------------------------|------------------------------|
| Regulatory No of Single Declaration WeBOC | Regulatory No of Single Declaration (PSW) | Regulatory Total No of Declaration WeBOC + PSW (SD) | Regulatory WeBOC Share Total % | Regulatory PSW Share Total % |
| 93,878 | 139,673 | 233,551 | 35.93 | 64.07 |
| Regulatory (LPCOs) Overall Trade Coverage (PSW & WeBOC) - Export | | | | |


Final Report - Pakistan Single Window Assessment (PSWA)

| Regulatory No of Single Declaration WeBOC | Regulatory No of Single Declaration (PSW) | Regulatory Total No of Declaration WeBOC + PSW (SD) | Regulatory WeBOC Share Total % | Regulatory PSW Share Total % |
|---|---|---|--------------------------------|------------------------------|
| 8,670 | 173,972 | 182,642 | 21.15 | 78.85 |

Table 12: Regulatory (LPCOs) Overall Trade Coverage (PSW & WeBOC) Imports and Exports



7. ASSESSMENT OF PSW AND RECOMMENDATIONS FOR IMPROVEMENT

This final assessment section contains a summary of key areas that the team has observed to be significant for PSW'Ss growth and improvement. Section 7.1 and 7.2 covers assessment observations for Pillar 1- Institutional Corporate Governance and Legal Framework. Section 7.3 covers assessment observations for Pillar 2- Information technology Framework and Section 7.4 covers the Single Window Performance as experienced by OGA users. Each section also includes recommendations pertinent to each pillar.

7.1 Assessment of the Corporate Governance

Based on the information provided and analyzed, the PSW has an appropriate corporate governance structure under which to implement, operate, and evolve the PSW-S.

7.1.1 Accountability flows are adequate and well structured

The overall PSW oversight by the GoP through a very powerful Governing Council (GC) to whom the Pakistan Customs (the LA), and the PSW-OE is also accountable is good practice as it not only establishes a chain of accountability but also devolves responsibility for PSW implementation appropriately to the PSW-OE.

7.1.2 The Governing Council's role is paramount and well crafted

The three key roles for the GC i.e., to take the PSW forward (as a system), to support collaboration between the various public and private cross-border trade stakeholders, and to hold PSW (as a system) accountable to the agreed KPIs for the GoP, are simple yet essential. The role of an empowered GC to facilitate collaboration amongst all trade stakeholders is well crafted.

7.1.3 Allowing the PSW-OE to decide the systems environment to implement the PSW

The PSW-OE decides whether it is the developer or acquirer of both of requisite software, hardware, system code, data, infrastructure, or anything ancillary required to implement the PSW. This along with specific GC oversight implies that PSW not immediately running the danger of developing hard to upgrade legacy systems,

7.1.4 Allowing both secondments from relevant government agencies and the ability to recruit freely from the private sector

With this approach and ability, PSW can thus formulate a very effective and efficient HR policy and onboard the required human resources to implement a successful NSW implementation which requires (a) domain knowledge often best found in the government's regulatory agencies.

7.1.5 Enshrining the core governance of PSW in the PSW Act—Political Commitment

By enshrining the core institutional corporate governance for the PSW in the PSW Act, the GoP has by and large shown its political commitment to the PSW as well as ensure safeguards against political and administrative interference.

7.1.6 Recommendations for improving the Institutional Corporate Governance

The assessment team has found the corporate governance structure to be robust and appropriate for the context in which it operates. The role of GC and LA work in tandem with PSW to support PSW. The GC's oversight includes establishing a monitoring and evaluation mechanism for the PSW and setting up an M&E committee. As discussed in the section on Governance Structure, an MOU governs the role of GC with respect to M&F functions. The MOU includes a detailed list of KPIs which categorized as business, technology, legal, international integrations and information security contain further specific targets which pertain to aspects of implementation such as roll out of integration module, port community system, airport community system, trade information portal. These are all aligned with UNECE guidelines in terms. However, for KPIs to be truly SMART as specified in UNECE Recommendation No.33, they also need to be flexible, allowing room for pivoting as organization grows and circumstances change. The assessment team recommends a revisit of these KPIs to evaluate how they can become SMART-er.

7.2 Assessment of the Legal Framework enabling PSW implementation

The PSW is not a small project and nor is the PSW an ordinary corporate entity, rather this is very large and complex undertaking considering which, the design, the start and rollout (which is continuing and will continue for a while) have been well executed with clearly defined policy-law, institutional requirements, as well as rules and regulations. Still, the evaluation does not for a moment consider this to be an easy task going forward and sees many challenges as well as next steps required to continue the excellent momentum, and results achieved till now.

7.2.1 Enabling international data integration

International Data integration always requires a G2G agreement which will have clauses on data protection as well as data exchange protocols. SRO 406.(1) 2023 on data dissemination and trade rules provides robust legal basis for existing integration with e-Phyto hub and single windows in Tajikistan, Uzbekistan and permits PSW to exchange trade data with other national and international organizations, including single window operators, foreign governments, and international organizations. In section 3, a detailed analysis is presented. All cross border data exchange if governed by legislation following the UNICTRAL model as stated earlier in the report.

7.2.2 Admissibility of e-documents in court creating transparency and trust

Appropriate legal basis in Section 3.2.8 of Act allows PSW generated documents to have the same legal status as the paper documents in the existing system, where a culture of considering paper more credible than digital documentation prevails. Secure and fast ways of data exchange, not only reduces the time and cost of trade within a Single Window, but also creates trust in the system due to greater transparency.

7.2.3 Safe and reliable data storage

PSW has dedicated data centers where archives of applications are stored on tapes for at least five years, important to build trust in the system as well as draw some parameters for record keeping.

7.2.4 Recommendations for improving Legal Framework enabling PSW implementation

After a thorough analysis of the PSW Act 2021, the SROs and MOUs, the assessment team has determined that the legal basis for automating, digitizing and making electronic data exchange

safe and credible within PSW is robust. They provide an enabling environment for users to experience a completely transformative experience of the international trade process. A comparison with other countries is also presented in section 3 of this report. Section 12 of the PSW Act covers the legal foundation of enabling electronic signatures within PSW and accepting it from other SWs in cross border trade.

Section 12 of the PSW along with Sec. 23 of the PSW Act provide the overarching legislation under which all issues around cross-border paperless trade can be dealt with, creating conditions for the recognition of electronic documents and data received from other countries, and establishing exchanges and agreements with other countries for information exchange on documents issued in Pakistan. Given the present state of the PSW Act, the assessment does not foresee the need for further elaboration in the main act further recommendations for the development and adaptation of mechanisms for mutual recognition of electronic documents and information, after the assessment of how these foreign documents and data can be recognized in Pakistani courts as legally significant. In fact, this assessment deems this can be covered through specific rules to carry out the powers of the present Act as provided under Sec. 21.

However, as UNECE recommends and SWAM affirms, PSW is missing the legal basis of institutionalizing a feedback mechanism from its users. Nonetheless, the LA has the power to make new regulations according to Section 22 of the Act, which could be used to strengthen the legal basis for a proper feedback mechanism for users.

Currently, PSW gathers frequently gathers feedback from OGAs through the change management program, conducts assessments internal and external such as this one (PSWA) to actively hear from the users of the system on how PSW can improve the operations of the system.

However, as SWAM recommends, effective assessments are those that are conducted regularly or periodically structured to maintain an inflow of feedback from end users. The assessment team understands that an assessment such as PSWA is the first of its kind as PSW is still a new organization, however, it is recommended that a system of feedback and assessments is set up with a strong legal basis through a separate SRO.

7.3 Assessment of the Information Technology Framework

Engaging stakeholders, including government agencies and international partners, often proves complex. Challenges in business process engineering implementation include resistance to automation due to limited computer skills in OGAs and internal communication delays, and extended onboarding times for 'computer operators' as well as [in certain cases] prolonged response times from external stakeholders through diplomatic channels further hinder progress.

Additionally, integrating systems from government agencies, the private sector, and international partners presents a significant challenge, as each entity may use different data formats, complicating smooth communication and data exchange. Some of the Legacy systems often lack APIs or standard interfaces, necessitating integration solutions that are both time-consuming and resource intensive.

Despite facing challenges in harmonizing data, PSW has effectively addressed these obstacles through the adoption of the WCO data model. This standardized approach not only streamlines integration processes but also facilitates smoother collaboration between various entities.

With ongoing advancements, PSW is well-positioned to bolster its interoperability and strengthen connections with diverse stakeholders, paving the way for seamless data exchange and enhanced efficiency in international trade operations.

In summary, PSW holds a significant potential for further enhancing its technical capabilities to integrate with other OGAs and external systems both within and beyond the country's borders.

7.3.1 Recommendations

- Implementing a fault-tolerant architecture is important, to minimize reliance on human intervention during recovery processes.
- The system should be equipped with automated mechanisms to swiftly restore functionality independently, ensuring minimal downtime and maximizing resilience.
- The fault-tolerant architecture should proactively monitor tools that detect issues in real-time and trigger automated responses to mitigate potential downtime.
- Scaling processes should be automated to dynamically adjust resources based on demand. For disaster recovery, in-depth mechanisms for automated failover and failback should be enabled for seamless transitions between primary and backup environments, reducing dependency on manual intervention and ensuring continuous availability of critical services.
- Users should be promptly notified of any downtime occurrences, ensuring transparency. Likewise, notifications should be issued when the system is back online, keeping them informed of service availability.
- Recalling that PSW is to deliver on enabling secure and smooth operation of all cross-border trade operational processes, it is important for the PSW IT architecture to be progressing to deliver on reliability, design simplicity, satisfactory user experience, scalability-interoperability, high/uninterrupted availability, and security (of data).

7.3.2 PSW to multiple PCSs – Taking the Trade and Industry Along

Port Community Systems (PCS) reduce the paperwork and administrative red tape often associated with intra-port logistics, leading to quicker decisions and streamlined operations, using digital collaborative platforms.

PSW is presently operating a single front-end architecture where it provides value added services directly to users, e.g., by integrating banks, providing a trade information portal, and more. At the same time PSWC is reaching out both backward (with OGAs) and forward (value added user services). An example of the backward reach is providing OGAs the choice between PSWC providing (a) a LPCO portal, (b) complete reengineered application embedding in the OGA, and (c) simple IP based integration. At the front-end it has provided IP integration with Banks, functions such as a Trade Information Portal, and other value-added services such as duty calculations.

Currently PSW is utilizing certain off-the-shelf software and hardware and customizing it to their needs and applications. PSW has chosen to not use a complete off-the-shelf NSW system based on detailed assessments done prior to PSW implementation.

This, however, does not bar it from encouraging and supporting the development of localized Port Community Systems and integrating the same with the NSW. PSW has already taken the first such step in soliciting bids for development of an Airport Community System—a practice that will require rolling to most ports and allowing private sector to undertake this themselves.

It is important to develop cross-border information interaction and integration with other Single Windows. Since there is already experience and progress in this direction, it is essential to highlight the importance of this work, as well as the need to implement interoperability and an open interface for interaction.

Additionally, if businesses develop their own Value-Added Services (VAS) systems, these should be easily adaptable and integrated with the platform in use. Furthermore, it would be beneficial to apply open data so service providers can develop their services based on the open data available in the Pakistan Single Window and offer their additional services to traders. Overall, a modern model should be adopted where a platform like the Pakistan Single Window can also have an open interaction interface with other Value-Added Services and facilitate information interaction between traders' information systems, ensuring B2B interaction with national Single Window mechanisms.

7.4 Assessment of Performance of Single Window OGA experience

7.4.1 Challenges in system use

Overall, the sentiment pertains to users is positive. There are 'teething problems' in integration. For example, PSQCA faced issues in API integration, MNC and AQD users found it difficult to use the system because of lack of proficiency in using digital products. AQD users such as leather importers struggle with using the system due to low literacy.

7.4.2 Cognitive load and behavioral shifts required within the system

As for OGA, the present shift from manual to digital processes presents a cognitive load. The transition is also a behavioral shift requiring a change in habits, which presents cognitive challenges as well.

For example, the AQD team reported confusion in the reconciliation processes of fees that arise through alternative delivery channels and commercial banks. They showed concern for potential audit observation. Upon investigation, it became evident that the system is automating the reconciliation processes, saving the effort and time for department and State Bank. However, any change in traditional ways of doing things sparks some fear and apprehension.

7.4.3 Complex underlying trade related processes

The underlying problem in Pakistan's trade processes are brought to light as PSW reach and usage expands. For example, DPP raised the problem of PSW not allowing filing for dummy containers as Customs' WeBOC allowed. In WeBOC, clearing agents could file a GD/SD using container numbers that might not be the actual containers for the goods' being transported but were still allowed to be processed with other product related details provided in the system. PSW's non-allowance of dummy variables has redirected traders to looking for alternative solutions such as filing a new GD/SD when the actual container is filed. Similarly, a whole application for air freight is also processed but at the last moment, consignment may not find space in the aircraft which causes delay in transporting consignment. When the space is finally obtained, a new GD/SD must be filed because changes in aircraft details make the old application redundant.

7.4.4 Recommendations



7.4.4.1 Enhance the content of learning materials

Through a feedback mechanism system established as recommended above, PSW will be able to understand user needs much better and enhance the content of learning materials. For example, leather industry users need more accessible tutorials and education, For example, Urdu videos and step-by-step manuals on PSA website. Users who are relatively better educated are still not literate in IT systems and struggle to understand the transfer of manual processes.

7.4.4.2 Allow evolution of Change management systems

The significance of effective change management has been highlighted as the assessment team triangulated the study of PSW-System through legal, institutional and user experience lens. Since PSW is bringing about a transformation in business as usual when it comes to cross border trade, resistance to change from internal and external users is inevitable.

Although, PSW is administering an effective change management program, and have helped OGAs streamline their processes for integration into the digital platform, the problem of hesitation to shift and resistance to change cannot be resolved through automation alone. These will require investment in hard and soft infrastructure, political commitment and allowance for evolution in the change management program, responding to user needs as the ecosystem changes.

7.4.4.3 Establish a notifications or message prompt/alert mechanism within the system

In the existing all communication regarding updates on GD/SD applications filed is conducted within the system. If the user is logged onto the system, they can receive and respond to system generated messages and track their consignments. However, if a user is logged off, they will not learn of any new messages unless they are logged in. Allowing for human error and for negligence on the part of user, it is advisable to create a system of prompts that alerts the users of any messages or changes to application. This could be through creating SMS alerts or emails.

7.5 Assessment of User Perception Survey

7.5.1.PSW- More than just a digital platform, but a catalyst of cultural change

The Pakistan Single Window (PSW) is more than a digital platform; it represents a significant cultural shift in Pakistan's trade landscape. The system relies heavily on traders, many of whom are still becoming acquainted with its functionalities. The pace of change is gradual, but business owners are increasingly confident in using the PSW, aided by the availability of tutorial content, FAQs, and a 24/7 helpline. Feedback from Focus Group Discussions (FGDs) indicates that since the PSW's launch and the introduction of these resources, business owners and their teams feel more capable of independently filing their Goods Declaration (GD) applications.

7.5.2 Use of online payments and transfer jump from 41% to 91% after PSW going live

The transition to online payments and transfers has seen a dramatic increase, from 41% prior to the PSW's implementation to 91% afterward. This data supports the notion of a cultural shift towards digital payment platforms. The shift to digital transactions not only saves fuel and time previously spent on physical bank visits but also contributes to reducing greenhouse gas emissions in Pakistan. Additionally, the reduction in paper use is environmentally beneficial.



7.5.3 Paper based and e-documentation functional in parallel

Despite these advances, paper-based and e-documentation systems continue to function in parallel. While 90% of respondents reported that the PSW has made the GD filing process easier, 27% indicated that the requirement for paper documentation still exists. FGDs reveal that the Ministry of Narcotics Control (MNC) still processes applications on paper before submitting them on the PSW system.

7.5.4 Likelihood of promoting PSW connected to city and type of industry

The likelihood of promoting PSW varies by city. Larger cities with more diversified trade report lower Net Promoter Scores (NPS). For example, Karachi has an NPS of 51, while Faisalabad scores 78, Peshawar 70, and Sialkot 69. Cities with industries that have more technologically savvy users tend to report higher NPS.

7.5.5 Reduced time and cost- Implications for trade?

The PSW has significantly reduced both time and cost in trade processes, as reported by 86% and 75% of respondents, respectively. However, 62% of respondents reported no change in trade volume, and 72% reported no change in profitability. While reduced time and cost are expected to lead to increased trade, it may be too early for users to fully realize these benefits, given that the PSW is only 2-3 years old. To accurately assess its long-term impact, evaluations should be conducted every 3-5 years.

7.5.6 Recommendations

7.5.6.1 Enhance the Learning Material

Users are experiencing difficulties in navigating the PSW system, indicating a significant need to improve the learning materials provided. Both businesses and Other Government Agencies (OGAs) have emphasized the necessity of offering these materials in both English and Urdu to cater to a broader audience. Comprehensive tutorials, step-by-step guides, and educational videos should be made available in multiple languages to ensure that all users, regardless of their language preference, can effectively utilize the PSW system.

7.5.6.2 Create Institutionalized Feedback Mechanisms

To improve the user experience and address issues promptly, it is crucial to establish institutionalized feedback mechanisms. These mechanisms should allow users to easily track their complaints, queries, or feedback through a transparent system. Implementing a robust tracking system will help ensure that user concerns are addressed in a timely manner, fostering a more user-friendly and responsive environment. This could include online portals, hotlines, and regular feedback surveys to continually assess and improve the system.

7.5.6.3 Focus on Women's Training and Facilitation

Women traders have shown a higher likelihood of recommending the PSW system, highlighting the need for focused training and facilitation for this group. Dedicated training programs and support services should be developed to empower women traders, providing them with the necessary skills and confidence to use the PSW effectively. Tailored workshops, mentorship

programs, and accessible resources can significantly enhance their experience and engagement with the system.

7.5.6.4 Incorporate Going Paper-Free as a Performance Benchmark

Transitioning to a paper-free system should be established as a key performance benchmark for the PSW. This shift not only improves efficiency but also has significant environmental benefits, such as reducing paper waste and greenhouse gas emissions. Setting specific targets and monitoring progress towards a paper-free operation will encourage OGAs and users to fully embrace digital documentation, streamlining processes and further enhancing the system's effectiveness. A more sophisticated approach to data exchanges may be utilized, including other elements including paperless trade, emissions' reduction because of going paperless among others.

7.5.6.5 Use Change in Business Volume as a Benchmark for PSW Success

The ultimate success of the PSW should be measured by its impact on business volumes. Reduced time and cost for trade processes must translate into increased trade activities. By using changes in business volume as a key benchmark, the PSW can ensure that its objectives are being met. Regular assessments and evaluations should be conducted to track the correlation between the efficiencies gained through the PSW and actual increases in trade volumes. This data-driven approach will provide clear insights into the system's effectiveness and areas needing improvement.

Implementing these recommendations will not only enhance the functionality and user experience of PSW but also ensure that it effectively meets its goals of streamlining trade processes and promoting economic growth.

8. PSW- NUDGING THE SYSTEM INTO A BEHAVIORAL CHANGE?

The UNICEFACT SWAM has facilitated the assessment team to make an objective assessment of the PSW system under the three broad areas:

1. Institutional and Legal Framework
2. Information technology Framework
3. Single Window Performance assessment

Additionally, the assessment has an objective/ quantitative aspect to it which involves scoring the user satisfaction across 15 dimensions/questions. This global methodology has been adapted to the context of Pakistan i.e., standardized Questions have been revisited, revised and changed according to the governing bodies in Pakistan and the level of development of PSW. Since this methodology is generic for all types of single window globally and at different levels of implementation. Some questions. In certain questionnaires were not relevant to PSW or just not applicable.

The legal and institutional framework assessment shows that PSW has the right laws, rules and regulations to empower PSW team to integrate other government agencies into the system and demand cooperation in this regard. Given the structure of Pakistani bureaucracy and trade facilitation organizational dynamics, Pakistan Customs is the appropriate agency to take the lead on this process. No significant issues. related to legal environment were identified during the process. Other Government Agencies and users highlighted operational issues or problems

in understanding the system or the adaptation process. The focus group discussions with OGAs and traders and clearing agents also highlighted problems along the same vein.

The Ministry of Narcotics Control focal person suggested additional features of allowing departments to track the quotas against importers authorized to bring in chemicals and substances into the country so there is greater transparency. The AQD focal person helped identify the confusion or difficulty in understanding the reconciliation process for payments and fees between departments, State Bank, and commercial banks because departments are used to a manual process even though the system requires more effort and time. This is a classic example of emotion-driven behavioral shifts creating cognitive load for the user, resulting in reluctance or apprehension towards change. Pakistan custom officers also had similar concern for the personnel within the system, especially at junior levels. There are fears pertaining to a potential power struggle between the Customs Department and PSW. These are all natural human responses which need to be managed for shifts such as that PSW is creating. The officers shared how change management sessions led by PSW had created a massive difference in the attitude of senior management and the consequent uptake of the system.

Traders also highlighted that PSW tutorials and learning materials such as videos are enabling a mental shift among business owners as they begin to feel more confident and less dependent on customs agents. Traders reported that even though time, cost and complexity may not result in changes in revenue at this time, but the comfort of being able to track where the consignment is and to complete the processes in the comfort of their own office or at most Chambers of Commerce office makes the experience enjoyable.

Is PSW slowly nudging the system towards a behavioral change? Potentially changing the culture of how cross-border trade has been conducted over many past decades? 'Nudge' is a concept popularized by economists Richard Taylor and Cass Sunstein in their influential book "Nudge: Improving decisions about health, wealth, and happiness. A 'Nudge' is described as any aspect of the choice architecture that alters people's behavior in a predictable way, without forbidding any options or significantly changing their economic incentives. This form of choice architecture is designed to influence decisions. Subtly steering individuals towards more beneficial behaviors without restricting freedom of choice. To qualify as a nudge, the intervention must be easy and cheap to avoid. Nudges are not mandates.

The Merits and Demerits of Nudging in Policy Making Nudging has been lauded for its cost-effectiveness and non-intrusive nature, offering a means to influence citizens' behavior without imposing mandatory obligations or introducing new taxations³. It is seen to promote better choices in health, wealth, and personal well-being, leveraging insights from behavioral economics.

However, the approach is not without its critics. Some argue that nudging can be paternalistic, as it involves policymakers guiding citizens towards what they deem as better outcomes⁴. Concerns about the effectiveness and ethical implications of nudges also persist, with debates on whether nudges may undermine the autonomy of individuals.

The application of behavioral nudges in public policy has sparked extensive debate in academic and policy circles. Proponents argue that nudges can effectively steer people toward better decisions without coercion. A 2019 study published in the Journal of Behavioral Economics highlighted the cost-effectiveness of nudges, noting that they often achieve significant behavioral changes at a fraction of the cost of traditional policies like taxes and subsidies.

For instance, nudges have been successfully used to increase organ donation rates by changing the default option on donation forms from opt-in to opt-out. Similarly, automatic enrolment in

retirement savings plans has significantly increased participation rates, as noted in a comprehensive review by the National Bureau of Economic Research (NBER) in the United States of America.

However, critics of the nudge approach raise several concerns. One major argument, as discussed in the Public Administration Review, is that nudges may undermine individual autonomy by manipulating choices, even if subtly. There is also a risk that nudges might be overused or misapplied, leading to unintended consequences. For example, if not carefully designed, nudges could disproportionately benefit certain groups over others, exacerbating existing inequalities. Moreover, some critics argue that nudges do not address underlying systemic issues and that more substantive policy changes are often necessary.

8.1 Pakistan Single Window: A Case Study in Behavioral Nudging

The Pakistan Single Window (PSW) initiative serves as a prime example of institutional design that embodies the principles of nudging. By digitizing cross-border trade processes, PSW aims to reduce the time and cost of doing business, thereby encouraging compliance and transparency⁶. The system's design nudges users towards a more streamlined and corruption-free trading environment by minimizing human contact and potential discretion in decision-making.

The PSW's integrated digital platform allows for standardized information and document submission through a single-entry point, simplifying regulatory requirements and reducing the bureaucratic hurdles that often lead to corrupt practices⁸. This systemic change is a behavioral nudge at the national level, promoting a culture of integrity and efficiency in trade.

As PSW aims to automate the trade process, to introduce efficiency and transparency into the system, reduce human interaction and potential for corruption, it may also unintentionally end up creating changes in the behavior of its users for the better. It is an example of how government can design and plan institutional architecture in a way that encourages a certain type of behavior rather than another. It is too soon to start seeing the results of their behavioral shift yet, but there is the user experience that is other government agencies, traders and agents seemed to suggest that the direction has been set.



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PSW
PAKISTAN SINGLE WINDOW



+92 21 111 111 779
+92 51 9245605



support@psw.gov.pk
info@psw.gov.pk



www.psw.gov.pk



PSW - Head Office, Islamabad:
2nd Floor, NTC headquarters, Sector G-5/2, Islamabad.