



ROAD MAP

for the National Single Window in

MALDIVES

SEPTEMBER 2018

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FOREWORD

The Asian Development Bank (ADB) is committed to facilitating trade and supporting knowledge transfer across Asia and the Pacific. ADB's South Asia Subregional Economic Cooperation (SASEC) program aims to build prosperity and improve economic opportunities by mainstreaming trade practices that drive economic growth. In the context of increasingly global trade environments, streamlining import and export procedures is essential for private sector growth and building competitive economies.

Maldives is a geographically dispersed island nation with a blue economy. Establishing seamless communication between cross-border regulatory agencies, traders, and government ministries can reduce the time and cost of importing and exporting goods, and strengthen the business environment. ADB under the SASEC Program is supporting Maldives to implement a national single window environment for international trade, which will facilitate communication between the public and private sectors, and improve ease of doing business. This publication outlines key steps along the way to launching Maldives' national single window platform.

RONALD ANTONIO Q. BUTIONG

Director

Regional Cooperation and

Operations Coordination Division

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Asian Development Bank

MESSAGE

The Government of Maldives strives to increase the prosperity and quality of life of its people. In collaboration with the Asian Development Bank (ADB) under the South Asia Subregional Economic Cooperation program and other international partners, Maldives has been working to establish a national single window (NSW) to facilitate businesses to trade in an efficient international trading environment and improve the ease of doing business in the country. This *Road Map for the National Single Window in Maldives* outlines key steps for implementing the NSW, and describes how relevant government agencies, state-owned enterprises, and private sector stakeholders can participate in developing the NSW.

Implementing an NSW in Maldives is very timely—the Maldivian economy is going through a phase of rapid economic transformation, with several government initiatives underway to modernize trade facilitating infrastructures. Furthermore, the government has made concerted efforts to liberalize the trade and investment regimes, through bilateral free trade agreements and continuous modernization of the regulatory framework for doing business in Maldives. The NSW—a platform that will allow cross-border trade to be conducted entirely online, will certainly complement the government efforts for a conducive business environment and enhance the efficiency and speed of cross border trading, lowering trade costs, increasing transparency, while upholding national security and streamlining revenue collection.

The government appreciates the support of ADB in improving the country's trade and transport facilitation. We endorse this road map and offer our full support in implementing the steps needed to establish the NSW platform.

MOHAMED SAEED

Minister

Ministry of Economic Development

Government of Maldives

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* Administered by the Asian Development Bank.



ABBREVIATIONS

BPR	business process redesign
CBRA	cross-border regulatory agency
COO	certificate of origin
ICT	information and communication technology
LPCO	license, permit, certificate, and other control
MACL	Maldives Airport Company Limited
MCS	Maldives Customs Service
MDNS	Ministry of Defence and National Security
MED	Ministry of Economic Development
MFDA	Maldives Food and Drug Authority
MMA	Maldives Monetary Authority
MOFA	Ministry of Fisheries and Agriculture
MPL	Maldives Ports Limited
MRTGS	Maldives Real Time Gross Settlement
NSW	national single window
PIU	project implementation unit
SLA	service level agreement

INTRODUCTION

Maldives is a small island nation with a blue economy; it relies on sustainable use of ocean resources and coastal and maritime tourism for economic growth, jobs, and improved livelihoods. Its major exports are fish and fish products. It depends on imports for fuel, food, and capital goods.

Efficient trade procedures reduce the costs of imports, exports, and goods, and can help drive economic growth. However, current bottlenecks to trade in Maldives lead to some of the highest import and export costs in the South Asian subregion. The cost of documentary compliance per export transaction, for example, is \$300, against the South Asia average of \$180. Overcoming barriers to trade efficiency can significantly lower costs and processing times associated with international trade and, in turn, encourage private sector growth in Maldives. More efficient trade procedures can also lower costs and other resource demands on government agencies, and improve revenue streams associated with trade.

Maldives border control agencies are mindful of their mandate to facilitate trade, and have implemented several initiatives to simplify trade procedures despite constraints within the operating environment. Further opportunities for process improvements are possible from the following measures: (i) further leveraging the capabilities of automation from computerized environments, (ii) simplifying trade license requirements by reviewing legislation, (iii) adopting risk-based strategies and tools for cargo inspections, and (iv) coordinating border control by relevant agencies.

Maldives comprises 190 inhabited islands, spread across the Indian Ocean. Its geographic dispersion contributes to logistics and border control challenges. On land, extremely limited space and road networks constrain movement of cargo, as it can only be moved by small trucks. By sea, controlling leisure boats and the transport of restricted goods across vast ocean expanses and distributed islands presents considerable challenge for customs controls. Leveraging developments in information and communication technology (ICT), paired with procedural reforms, can help overcome physical and logistical barriers to trade, and significantly improve efficiency.

National single window (NSW) projects streamline international trade procedures, minimizing the time, effort, and resources needed to conduct trade, while maintaining all requisite government controls. An NSW is a digital platform that allows all trade stakeholders within a given country to submit and access information on importing and exporting goods, in a single place.

Establishing an NSW in Maldives can provide all trade-related parties—including government agencies, importers and exporters, logistics operators, and professional service providers—with an increasingly paperless environment to reduce processing costs, improve revenue collection, and boost compliance with regulations and laws. As such, the NSW is a win-win initiative that benefits both government and businesses stakeholders.

OVERVIEW OF THE NATIONAL SINGLE WINDOW ROAD MAP

This paper provides a road map for developing the NSW platform in Maldives. It outlines the major work components for establishing the NSW and recommends specific actions for each stakeholder group. The road map considers the context and practices of international trade in Maldives and makes corresponding recommendations based on guidelines and best practices developed by the United Nations, the World Customs Organization, and the World Bank. It also considers input provided during interviews with key trade stakeholders in Maldives, and is tailor-made to address specific barriers identified by government agencies and business leaders.

Structure of the Road Map

The road map is designed to guide collaboration between stakeholders in the public and private sectors to build an NSW ecosystem that enables government agencies and businesses to operate more efficiently. The road map is organized into the following 11 sections:

- (i) **Vision and objectives.** The vision statement and objectives should guide all implementation activities under the NSW project. This section highlights the key objectives and potential benefits of NSW implementation for public and private sector stakeholders and articulates a commitment to achieving them.
- (ii) **Implementation plan.** The implementation plan describes the relationship between policy and technical activities and provides a visual representation of how activities under the road map can be sequenced.
- (iii) **Governance structure.** Implementing a successful NSW project requires clear designation of responsibilities and an effective management structure. This section identifies parties and proposes a governance structure to oversee and streamline implementation of the NSW.
- (iv) **Business process redesign.** This section outlines how public and private sector stakeholders can collaborate to identify and overcome key bottlenecks to international trade. It also indicates how the outputs of a business process redesign (BPR) in Maldives can be used to drive NSW implementation, and progress to date.
- (v) **Data harmonization.** Redundancies in data collection increase costs for government agencies and traders alike. This section demonstrates how to reduce or eliminate redundancies by standardizing information requirements.

- (vi) **Service level agreements.** Transparency drives results. This section provides recommendations on how leading government agencies can use service level agreements (SLAs) to support a more transparent, responsive, and accountable trade ecosystem in Maldives.
- (vii) **Application architecture.** Robust functional aspects of the NSW software platform ensure that the NSW can deliver a wide range of benefits to stakeholders, improve overall trade efficiency, and, at the same time, maintain all necessary government controls. This section describes the software building blocks and interactions of system components to implement the NSW platform.
- (viii) **Legal framework.** Establishing a clear legal framework is essential for governing transactions in the NSW environment and, more broadly, in the digital space. This section provides an overview of domestic legislative structures and suggests focal areas for further consideration.
- (ix) **Business model selection.** Sustainable NSW programs require ongoing management. Internationally, there are three prevailing business models for the long-term operation of NSW initiatives. This section discusses the strengths and limitations of each model, addresses the topics of financial sustainability, and determines the organization that should operate the NSW system (NSW operator).
- (x) **Procurement specifications for the national single window.** Providing detailed system requirements helps attract appropriate bids. This section outlines how to prepare a detailed tender for procurement. It identifies key technical specifications and ties together the various work components outlined in the road map.
- (xi) **First step for national single window leadership.** This road map is intended to drive action. The final section of the road map indicates the immediate actions that stakeholders can take toward achieving the mission of the NSW in Maldives by supporting human capital development.

Intended Audience

Delivering the full range of potential NSW benefits to all intended stakeholders requires that each group participate in designing the platform. Diverse stakeholder engagement during design phases of the NSW ensures that government agencies, cross-border regulatory agencies (CBRAs), and private sector entities identify needs, and that subsequently they are integrated into the platform. As such, this document is intended for the following stakeholders in Maldives (Box 1):

Box 1: Intended Audience of the National Single Window Road Map

Government agencies	State-owned enterprises	Private sector stakeholders
<ul style="list-style-type: none"> • Maldives Customs Service • Ministry of Defence and National Security • Ministry of Economic Development • Maldives Food and Drug Authority • Ministry of Fisheries and Agriculture 	<ul style="list-style-type: none"> • Maldives Airport Company Limited • Maldives Ports Limited 	<ul style="list-style-type: none"> • customs brokers • shipping agents • importers and exporters • freight forwarders • consolidators

Source: Asian Development Bank.

Best Practices for Implementing the National Single Window

Lessons learned during implementation of NSW initiatives globally indicate that the following best practices are essential to the success of the NSW project in Maldives:

- (i) Political support and long-term commitment from top decision-makers are needed throughout the project life cycle.
- (ii) NSW projects need a reliable institutional platform to foster interagency collaboration.
- (iii) Stakeholder expectations and perceptions need to be managed effectively to ensure that goals are realistic, and that all participants understand potential benefits.
- (iv) Data, systems, and business processes need to be harmonized to maximize efficiency and value of the NSW.
- (v) A supporting legal framework is essential for governing the functions and transactions under the NSW.
- (vi) Experienced project management personnel are necessary to manage and execute the broad range of activities during setup and implementation.

VISION AND OBJECTIVES

The vision of Maldives NSW is to facilitate and establish an efficient international trade environment by reducing delays and lowering costs associated with clearance of goods at the Maldivian borders, while maintaining the requisite controls and collection of levies, fees, duties, and taxes on imports and exports. Establishing an NSW presents a range of benefits (Box 2).

Box 2: Benefits of Implementing a National Single Window in Maldives

For the Nation	For the Business Community	For Cross-Border Regulatory Agencies
<ul style="list-style-type: none"> • Reduced transaction time for international trade • Enhanced revenue collection by the government • Increased transparency and effectiveness of official controls • Reduced costs of doing business for both the government and the business community • Increased foreign investment resulting from a more trade-friendly environment • A more competitive national economy 	<ul style="list-style-type: none"> • Faster customs processing and clearance • Lower transaction costs and fewer delays • Increased transparency and consistent application of rules • Reduced time to market for goods • Efficient and more effective deployment of resources • More competitive businesses 	<ul style="list-style-type: none"> • Enhanced security and risk management • Improved coordination between regulatory agencies • Increased trader compliance • Improved business intelligence • Increased resource efficiency through targeted deployment • Greater transparency for transactions • Increased revenue collection • Harmonized data and streamlined access

Source: Asian Development Bank.

Key Performance Indicators

In addition to the overall vision of the NSW, setting specific goals is essential for mobilizing stakeholders and tracking success. Improving ease of doing business is a key policy objective for Maldives. Time to import and time to export are key metrics for assessing ease of doing business. As such, they can be used as key performance indicators to assess the NSW's contribution to supporting ease of doing business in Maldives.

The proposed target is a 25% reduction in processing time against the 2016 baseline indicators in each of the following categories:

🕒 Time to import

Documentary compliance: 61 hours
Border compliance: 100 hours

🕒 Time to export

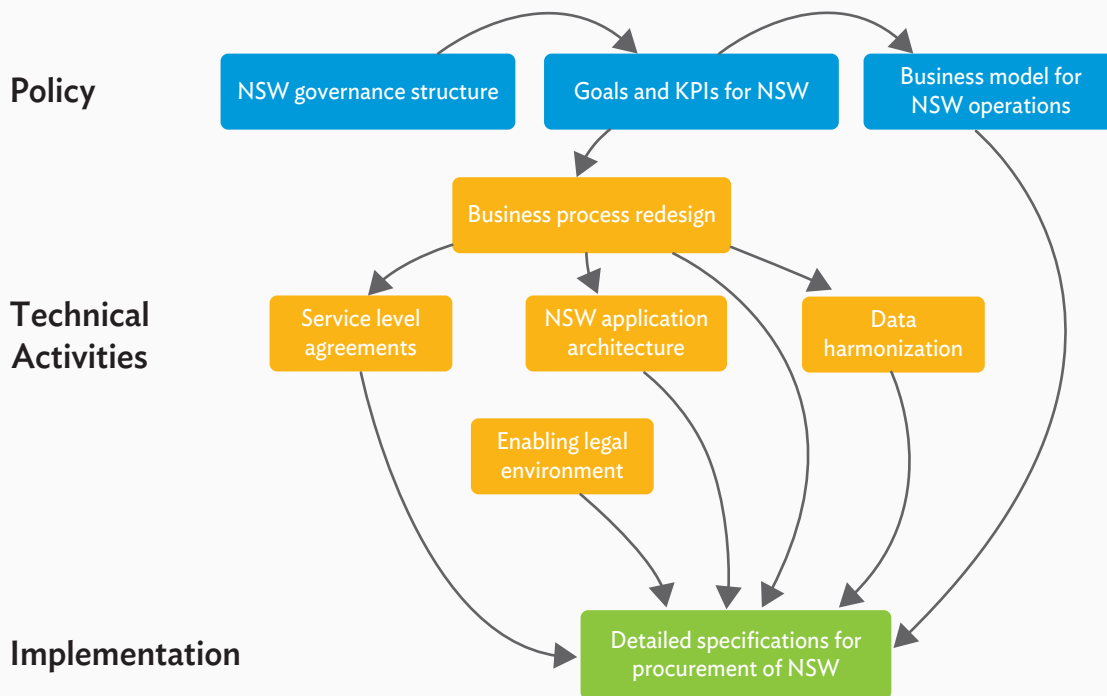
Documentary compliance: 48 hours
Border compliance: 42 hours

IMPLEMENTATION PLAN

Achieving the vision of the NSW in Maldives will involve two key phases: (i) undertaking all activities within the road map to establish the NSW ecosystem, and (ii) implementing and rolling out the NSW software system. Establishing an effective NSW ecosystem includes enacting institutional reform, reviewing national business and trade procedures, and streamlining activities across stakeholder groups. Road map activities comprise both policy and technical components. Implementing the NSW platform involves procuring the software system, integrating and testing functional aspects, and rolling out the system to end users.

Figure 1 illustrates the relationship between policy and technical activities under the road map and indicates how they feed into NSW implementation.

Figure 1: Road Map and National Single Window Implementation



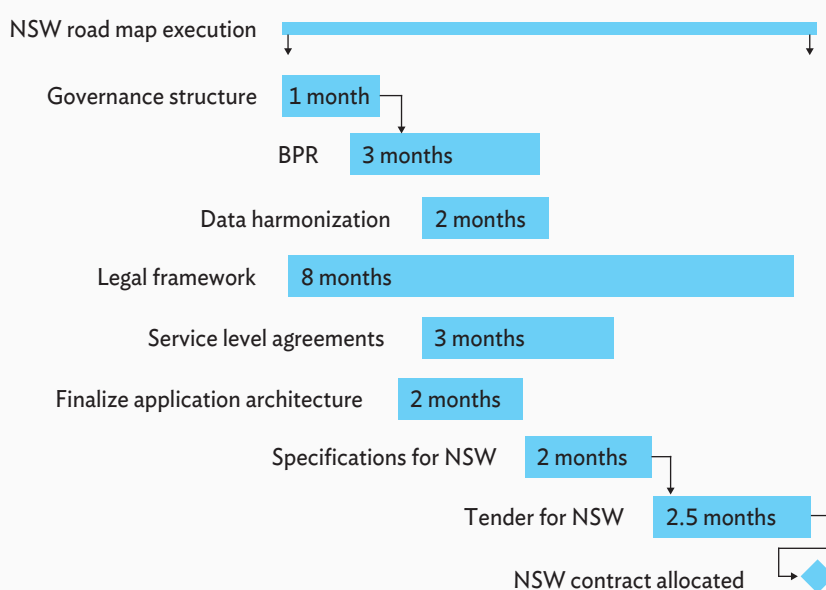
KPI = key performance indicator, NSW = national single window.

Source: Asian Development Bank.

Schedule of Activities

Establishing a governance structure is essential for overseeing all components of the road map, and therefore should be the first activity to take place. Once the governance structure is established, stakeholders should engage in a BPR. Following the BPR, remaining activities can take place in parallel, as resources permit. Figure 2 outlines the proposed sequencing of road map activities. The number of months listed for each stage of the road map provides estimated minimum time requirements. Achieving this compact sequencing is contingent on appropriate resource allocations and stakeholder participation.

Figure 2: Sequencing of National Single Window Road Map Activities



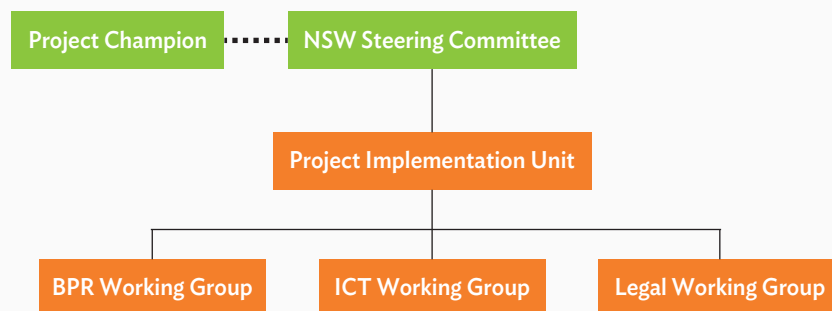
BPR = business process redesign, NSW = national single window.

Source: Asian Development Bank.

GOVERNANCE STRUCTURE

Clear designation of roles and responsibilities help ensure progress against scheduled activities. To this end, Maldives should consider establishing the following entities to serve oversight functions under the road map: (i) an NSW steering committee, (ii) a project implementation unit (PIU), (iii) a BPR working group, (iv) an ICT working group, and (v) a legal working group (Figure 3). Additional working groups may be added, as needed, to support further requirements that may arise during road map implementation. Assigning the role of “project champion” to a senior policy maker is essential for streamlining all activities and ensuring coordination among NSW governance bodies.¹

Figure 3: Proposed Governance Structure for the National Single Window Road Map



BPR = business process redesign, ICT = information and communication technology, NSW = national single window.
Source: Asian Development Bank.

National Single Window Steering Committee

The central function of the steering committee is to oversee collaboration of government stakeholders. It monitors and guides implementation and directs the PIU and government agencies. It is responsible for setting corresponding goals and for providing high-level oversight toward accomplishing them. To ensure that the steering committee is able to meet these objectives, representatives should be high-level officials with the knowledge and experience to provide guidance.

¹ The project champion is typically an influential official who commands respect among his or her peers and senior officials across government ministries. The project champion’s role is to ensure ongoing support for the NSW and to intervene if there are major administrative bottlenecks that hamper the project’s progress. The project champion does not need to be a full-time position, and can be (but does not need to be) the chairperson of the steering committee.

Specific responsibilities for the steering committee include (i) ensuring that NSW features are in line with government policy, (ii) setting priorities for NSW implementation, (iii) allocating resources and ongoing high-level support for the execution of the NSW road map, (iv) ensuring active support and collaboration of government ministries and agencies, (v) resolving obstacles as they arise during execution, (vi) providing policy oversight for the NSW operator, and (vii) liaising with development partners and other associated entities.

The steering committee typically includes representatives from the project's implementing agencies, and should seek informal advice from the business community (Box 3). The steering committee should comprise senior decision-makers from the following entities in Maldives:²

- (i) Maldives Airport Company Limited (MACL),
- (ii) Maldives Customs Service (MCS),
- (iii) Ministry of Defence and National Security (MDNS),
- (iv) Ministry of Economic Development (MED),
- (v) Maldives Food and Drug Authority (MFDA),
- (vi) Ministry of Fisheries and Agriculture (MOFA), and
- (vii) Maldives Ports Limited (MPL).

Box 3: Incorporating Business Know-How into Steering Committee Oversight

Although the steering committee will comprise government stakeholders only, it must receive input from the business community. The steering committee should seek regular input from customs brokers, shipping agents, freight forwarders, and other private sector stakeholders. Their feedback is particularly valuable because they interact directly with trade procedures, and can therefore describe practical issues on the ground and provide insight on how to overcome bottlenecks.

One method to support dialogue between the steering committee and the business community is for the business process redesign working group to provide interim progress reports and financial reports to the steering committee. Doing so provides a channel for direct exchange between the steering committee and the private sector on key national single window issues.

Source: Asian Development Bank.

² Since ministries of finance and monetary authorities often play a central role in facilitating payment, the Maldives Monetary Authority (MMA) may also be a valuable addition to the NSW steering committee.

Project Implementation Unit

The PIU is responsible for the project's daily management and works closely with the implementing agencies to ensure activities are on schedule. It manages all major work components under the road map. Key responsibilities include (i) preparing a comprehensive project plan, (ii) executing and delivering outputs for all activities under the road map, (iii) coordinating with the project managers of CBRAs to ensure progress (Box 4), (iv) monitoring activities of all stakeholders and reporting on progress against the plan, (v) preparing and executing a communications plan for the NSW, (vi) addressing and resolving technical issues, (vii) referring high-level issues to the steering committee, and (viii) submitting regular progress reports to the steering committee.

The PIU will need to engage a full-time and experienced project manager who will hold overall responsibility for timely execution of the NSW road map. In addition to the project manager, the following positions should staff the PIU:

- (i) two business analysts who are knowledgeable of international trade procedures;
- (ii) two software engineers with experience in large software application systems and application interfaces;
- (iii) one administrative assistant; and
- (iv) one part-time system engineer to assist with preparing technical specifications for the NSW system, particularly during procurement activities.

The PIU should also engage an international expert who has experience in designing NSW ecosystems. The expert will intervene intermittently to provide oversight on all key stages of road map implementation and to provide assessments of progress to the steering committee.

Box 4: Incorporating Cross-Border Regulatory Agencies in Project Implementation

Cross-border regulatory agencies (CBRAs) will need to support multiple tasks during implementation of the national single window (NSW) road map, and be fully involved in its execution. Activities will include (i) reviewing business processes for each CBRA to identify opportunities for streamlining procedures, and (ii) collaborating to harmonize data flows to support an efficient NSW environment.

CBRAs need to provide input on the changes brought about through the business process redesign, assess implications of data harmonization, prepare service level agreements, and assess the impacts of NSW operation on their computer systems. To ensure that CBRAs complete each of these tasks effectively, it is important that each CBRA designate a project manager to coordinate with the manager of the project implementation unit. Doing so will help align the activities of each CBRA with major work components under the road map.

Source: Asian Development Bank.

Working Groups

The road map will require working groups to provide detailed incremental input from in-field experts on the topics of the BPR, ICT requirements, and legal processes to support various aspects of NSW implementation.

The BPR working group will comprise members who are knowledgeable of the different operations associated with international trade, including customs, ports, airports, and permits. The responsibilities of the BPR working group are to (i) document the business process steps for imports and exports; (ii) identify steps that are unnecessary, inefficient, or time-consuming; (iii) diagnose the root cause of these issues; and (iv) develop new streamlined steps that deliver the same end results, with less time and effort.

The ICT working group will comprise experts from government agencies that design or implement ICT policy, as well as representatives from customs, ports authorities, and other CBRAs that manage computerized systems. The responsibilities of the ICT working group include (i) reviewing the proposed technical means by which the NSW system will interface with stakeholder systems, (ii) ensuring that the proposed NSW system complies with government policy for ICT systems, and (iii) proposing efficient means for the NSW to interface with government ICT platforms.

The legal working group will consist of experts who are knowledgeable of the legislation that governs CBRAs. The responsibilities of the working group are to (i) understand and provide input on the legal implications and outcomes of NSW operations, and (ii) provide technical guidance to all stakeholders on the implications and requirements of enacting new laws for the NSW environment.

BUSINESS PROCESS REDESIGN

The objective of a BPR is to identify and overcome key barriers to business efficiency. The BPR should integrate the opinions of public and private sector entities to develop a new set of streamlined procedures across all government agencies and logistics operators to improve the ease of doing business.

The output of the BPR will be a set of proposed activities and steps to streamline imports and exports.³ It will describe (i) streamlined trade processes, (ii) information to be submitted by stakeholders at each step of the import and export process, (iii) inputs and outputs of trade processes, and (iv) how long each step of the process should take.

To support improved trade efficiency, the BPR should focus on how to meet all government control requirements in the shortest time possible, while reducing resource demands. The process will involve holding regular meetings to discuss bottlenecks; reviewing licenses, permits, certificates, and other controls (LPCOs) that are required by various CBRAs in Maldives; and collaborating to reduce or eliminate redundancies in procedures.

The key participants in the BPR include business experts who are intimately familiar with trade processes, and technical experts. Business stakeholders will contribute to the BPR by identifying procedural inefficiencies and providing feedback on how to overcome them. Technical experts, with keen knowledge of automation procedures, will subsequently assist in determining how to use technology to meet business requirements. As such, the methodological approach of the BPR centers around (i) how trade procedures can become more efficient, while meeting all government requirements; and (ii) how technology and the NSW can be used to support optimized trade procedures.

Trade Profile in Maldives

Import of goods into Maldives, in terms of value, is primarily via Malé Port, which accounts for approximately four times the value of goods imported by air (Table 1). However, in terms of trade transactions, the number of import declarations via air is double that of maritime declarations. This is the case because air transport is used for smaller shipments, while larger and heavier goods are imported by sea.

³ Some of the proposed activities can take place before the NSW is implemented, while others can only take place once the digital platform is established.

Fish and fish products are Maldives' main exports. Fresh tuna—typically packaged in small, time-sensitive consignments—is exported by air, while larger volumes of frozen tuna are exported by sea. The number of export transactions via air is much higher (25–30 times) than sea exports.

Table 1: International Trade Volumes

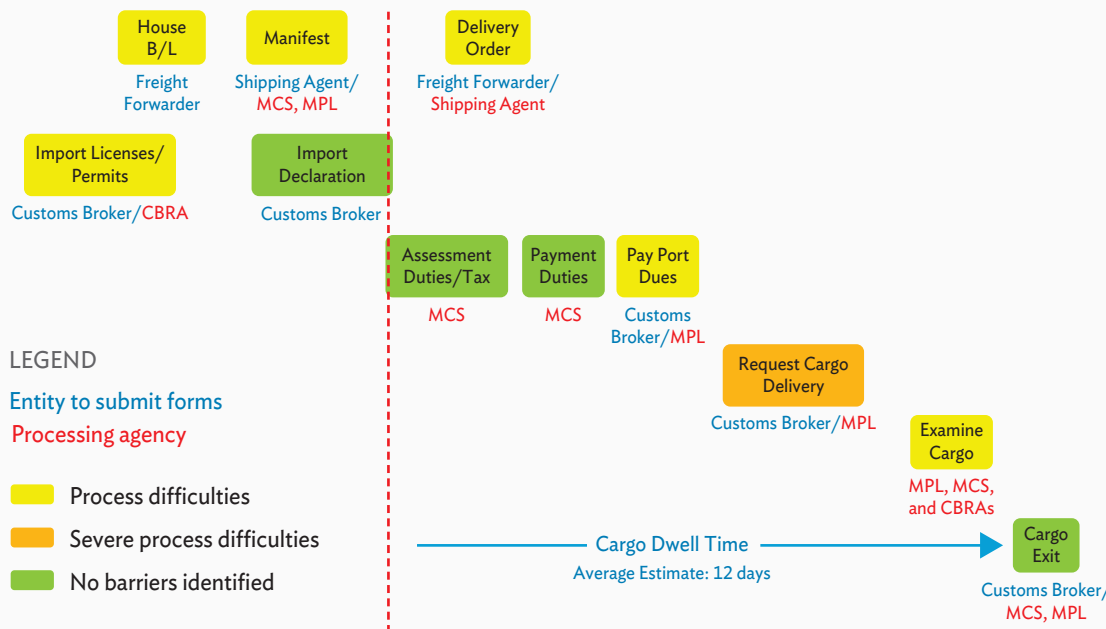
Loading Station	IMPORT					
	Declarations			CIF (Rf million)		
	2014	2015	% increase	2014	2015	% increase
Malé Port	42,565	47,765	12.22	23,906	21,516	-10.00
Airport	89,195	93,884	5.26	6,545	7,448	13.80
Bonded Warehouse	24,428	24,750	1.32			
Total	157,355	167,720	6.59	32,465	30,979	-4.58
Loading Station	EXPORT					
	Declarations			CIF (Rf million)		
	2014	2015	% increase	2014	2015	% increase
Malé Port	431	386	-10.44	1,172	975	-16.81
Airport	10,771	12,238	13.62	1,055	1,240	17.54
Total	11,202	12,624	12.22	4,241	4,230	-0.26

CIF = cost including freight, Rf = Maldivian rufiyaa.

Source: Maldives Customs Service.

Strengthening the Maldivian trade profile will require addressing inefficiencies in both maritime and air transport by focusing on import procedures at seaports and export procedures at the airport. Given the economic importance of exporting fish products, the Maldives Airport Company Limited (MACL) and government agencies have already begun aligning procedures to facilitate the processes. The main issues to address in terms of exports by air are (i) delays in issuing catch certificates for large consignments, and (ii) congestion at MACL during afternoon and evening peak hours. The fisheries department of the Ministry of Fisheries and Agriculture (MOFA) is testing a new software system to enable prompt issuance of catch certificates for large consignments, while MACL is selecting a new information system to facilitate the electronic receipt of air manifests. Aligning these processes is essential to improving export processes and should be addressed during BPR meetings.

Import procedures at ports in Maldives involve a wider network of stakeholders, and the obstacles to efficiency are more complex. The cargo dwell time at Malé Port is estimated to be 12 days, which is relatively long compared with acceptable international average of 5 days. The yellow and orange boxes in Figure 4, and the descriptions in Table 2 outline key barriers to maritime trade efficiency.

Figure 4: Malé Commercial Harbor Import Process

B/L = bill of lading, CBRA = cross-border regulatory agency, MCS = Maldives Customs Service, MPL = Maldives Ports Limited.

Source: Asian Development Bank.

Streamlining Administrative Procedures

International trade procedures in Maldives, like in many other countries, were originally paper-based. As ICT tools and devices become increasingly available and less expensive, some government agencies in Maldives have adopted digital platforms to assist them in collecting and aggregating information. However, many agencies continue to use paper-based systems, and since national adoption of digital platforms has taken place ad hoc, there are some redundancies in data collection processes. Strengthening information-sharing procedures between ministries and other trade stakeholders can improve resource efficiency and deliver better outcomes for end users.

Current trade procedures involve multiple government agencies, and information needs to flow regularly among them. However, paper-based processes are limited in their ability to transfer information between agencies, and do not interface seamlessly with digital platforms. This leads to recapture of information and duplication of tasks between agencies. These sources of inefficiency lead to delays in processing time and redundant expenditures of financial and human resources. A fundamental issue to address during the BPR is how to increase collaboration across ministries and agencies, and to eliminate duplication of processes, data submission, and data capture.

In addition to reviewing trade procedures in Maldives, MCS, MED, and MPL have taken proactive steps to increase trade efficiency and collaboration. The government has already begun remedying some of the bottlenecks listed below, and since further improvements are underway at the time of writing, not all progress, to date, is reflected in the present table. Some achievements are listed in the notes below and in Box 4.

Table 2: Bottlenecks to Import at Malé Harbor

Process/Document	Description of Current Barrier
Licenses and permits	Many of the processes for licenses and permits are manual and paper-based, and therefore take significant time and resources to complete. Export licenses are primarily for revenue collection, and the process could be simplified by reducing the number of licenses.
Manifest	Ship agents submit electronic manifest to MCS. However, MPL requires three hard copies of the manifest information. Once MPL receives the hard copies, its staff must capture data into MPL's digital system. The process results in duplication of effort for ship agents as well as MPL staff. ^a
Courier processes	Customs brokers cannot submit online declarations for courier packages.
Delivery order	Freight forwarders report delays of up to 4 days in obtaining delivery orders from shipping agents. Cargo delivery process cannot be initiated without the delivery orders.
Payment of port dues	Payment of port dues is a manual process, and queues for payment can take up to 2 hours.
Request for cargo delivery	MPL requires that importers and customs brokers make an online request for container shifting for delivery 2 days in advance. MPL can only service 130 containers for delivery per day due to space constraints within the port area. If all 130 slots are taken, applications must wait till next day.
Examination of cargo	CBRAs inspect selected items within each consignment. Since several containers are LCL, ^b the contents of a container may need to be unstuffed and stuffed several times as all consignees of a container's content will not take delivery of cargo on the same day.

CBRA = cross-border regulatory agency, LCL = less than container load, MCS = Maldives Customs Service, MED = Ministry of Economic Development, MPL = Maldives Ports Limited.

^a The NSW road map has already begun delivering improved efficiency, and further reforms are ongoing. One early-stage improvement is deeper collaboration between domestic stakeholders. MPL now retrieves manifests from the MCS digital system, which has eliminated the inefficiencies of paper-based document submission—saving shipping agents an average 1,500 person-days per year. Ongoing reforms are expected to save an additional 5,600 working days per year, across public and private sector entities (Box 4). One early-stage improvement can be noted in the improved collaboration between MCS and MPL. MPL now retrieves manifests from the MCS system, which has eliminated the inefficiencies of paper-based document submission.

^b LCL indicates circumstances in which an importer's or exporter's shipments do not fill an entire container unit. In these cases, the goods of multiple importers are consolidated into one container to maximize use of available space.

Source: Asian Development Bank.

Proposed Focus of the Business Process Redesign

The BPR should focus on overcoming barriers to trade efficiency. In addition to removing the bottlenecks identified above, the BPR working group should consider adopting the Coordinated Border Management Guidelines of the World Customs Organization, which provide options for increasing trade efficiency through greater coordination among domestic and international border control agencies.⁴ The NSW can act as a powerful tool to support efficient coordination of border

⁴ S. Aniszewski. 2009. Coordinated Border Management – A Concept Paper. WCO Research Paper. No. 2. Brussels: World Customs Organization.

management by enabling seamless information sharing. Private sector stakeholders have frequently raised concerns surrounding bottlenecks at MPL, so the working group should pay special attention to streamlining document processing at MPL. Although there are plans to move the port to Thilafushi, an interim solution is required to decongest the Malé Port.⁵

Licenses, Permits, Certificates, and Other Controls

LPCOs play a key role in border security and trade facilitation. Currently, CBRA's issue LPCOs as part of their regulatory process. BPRs often identify redundancies in LPCO requirements and, in turn, eliminate duplication. The BPR in Maldives should conduct a comprehensive review of all LPCOs and eliminate duplication of efforts, where possible. For the LPCOs that remain relevant and necessary in the Maldives operational context, the BPR working group should assess the most efficient methods of applying for, processing, and issuing LPCOs. Since certificates of origin (COOs) form part of the broader national LPCO framework, the process for submitting and processing COOs should also form part of the LPCO review. The BPR will need to factor in international guidelines on issuing COOs to ensure that external parties will recognize domestically issued COOs.

Logistical Arrangements for the Business Process Redesign

In order for the BPR to be successful, the exercise should be carried out with representative staff from trade and business organizations, who are conversant with the operational processes and objectives of their respective firms. If the BPR working group comprises high-level delegates from contributing organizations, each delegate will be able to address the relevance of proposed changes and flag potential issues with accepting them. The involvement of high-level staff also creates favorable conditions to support organizational buy-in for proposed changes.

In Maldives, the BPR should set up a multidisciplinary team with (i) a business analyst from the PIU; (ii) delegates from key private sector firms, representing importers, exporters, customs brokers, freight forwarders, and ship agents; and (iii) at least two staff members from the MACL, MCS, MDNS, MED, MFDA, MOFA, and MPL.

Given the complex nature of trade procedures in Maldives and the requirements for broad stakeholder involvement in the BPR, participants will likely need to provide input on a full-time basis for 2 weeks. Conducting the BPR through intensive session over a concentrated period maximizes stakeholder participation. Since not all participants have experience in BPRs prior to the exercise, it would be helpful to engage a consultant to hold a 2-day training session on BPRs prior to the review. This training session could review best practices and address objectives (Box 5).

⁵ The port in Malé has reached its maximum capacity, which limits the efficiency of port operations and results in delays of cargo. The Thilafushi port will have a larger storage yard and improved infrastructure and equipment, and will therefore enable more efficient port operations and faster delivery of cargo.

Box 5: Building on Existing Business Process Redesign Initiatives in Maldives

The United Nations Economic and Social Commission for Asia and the Pacific, with the support of the United Nations Network of Experts for Paperless Trade in Asia and the Pacific, provided training on business process analysis (BPA) for Single Window Environment in Maldives, in March 2014. The training on BPA methodology covered analytical methods used for systematically identifying trade bottlenecks and designing recommended measures for improving trade competitiveness. Participants comprised around 25 governmental officials, as well as trade service providers. A consultant was subsequently mobilized to conduct a review of the status of the national single window initiative in Maldives.

Achievements to Date

Following the training, key ministries and cross-border regulatory agencies (CBRAs) in Maldives undertook business process redesign (BPR) activities. The Maldives Customs Service (MCS), Ministry of Economic Development (MED), and Maldives Ports Limited (MPL) were particularly responsive and have taken proactive steps to drive increased trade efficiency.

- MPL now uses electronic manifests from MCS, thereby eliminating the need for ship agents to submit three copies of paper manifests. This saves ship agents an estimated 1,500 person-days and 1.8 million pages of paper per year. In addition, six staff from MPL have been reallocated from data capture tasks to positions that add higher value to the agency.
- MED has agreed to repeal the process of applying for import and export licenses. Corresponding changes to law and regulations will eliminate around 31,000 annual visits to government offices, saving businesses an estimated 4,500 person-days and government agencies (including MCS and MED) an additional 1,100 person-days per year.

Driving Progress

BPR for trade facilitation requires a unified national perspective and the involvement of all CBRAs to simplify and streamline procedures. Defining and actualizing further efficiencies to trade will require deeper collaboration between trade stakeholders and regulatory agencies, and a more integrated approach to identifying and implementing BPR reforms.

Source: D. L. Fat. 2016. *Draft Report: Review of Status Towards Development of National Single Window in Maldives*. Manila. Financed by the Asian Development Bank, under the regional technical assistance for trade facilitation in South Asia (TA-8435 REG).

The output of the session will be a set of suggested modifications to import and export procedures. These documents will outline necessary activities for each respective organization, and should be presented to senior management immediately following the review. Proposals for the BPR will be properly justified so as to clarify the benefits to trade while maintaining control requirements. Since proposed changes may have complex implications for different stakeholders, formal approval of the BPR (by the heads of each CBRA) may take up to 3 months.

The output of the BPR will include suggested changes to procedures and methods of exchanging information. Meaningful exchange of information requires that there be a common understanding and definition of the terms used to categorize data, and that data is transferred in a format that all stakeholders can process. As such, the data harmonization process ensures that the BPR produces results that are useful and intelligible to stakeholders.

DATA HARMONIZATION

The single window concept is premised on efficient data exchange among businesses, CBRAs, and other government entities. The interoperability of systems and input data is essential for supporting efficient exchange of information.⁶ Data harmonization is the process by which similar (or identical) data fields in different information systems are standardized or titled consistently to enable interoperability. The objective of data harmonization in the context of the NSW road map is to eliminate redundancies in data requirements and duplication during the submission of trade data to government authorities.

For business data to be exchanged between two or more CBRAs, their systems need to be interoperable. CBRAs in Maldives have either recently developed information systems—as is the case with MCS, MED, and MDNS—or are implementing and rolling out new systems (Appendix 1). Newer tools and technology platforms are typically designed to support interoperability, and since most information systems in Maldives are relatively new, the process of data harmonization may be less difficult than in countries with mature data systems.

Although the data that CBRAs collect often overlaps (as it generally focuses on topics such as products, locations, facilities, and means of transport), semantic differences prevent a given CBRA from using data collected by a different one. Eliminating semantic differences allows all entities to share information.

Simplifying trade documents involves (i) analyzing which documents are necessary for performing a given business process and (ii) considering whether there are several distinct trade documents with similar functions that can be combined into a single document. Simplifying and collating trade documents and data reduces time and costs for traders.

Procedure for Harmonizing Data

Data harmonization involves the following four steps:

- (i) **Capturing existing data.** The first step is to create an inventory of the data requirements of each regulatory agency. This can involve reviewing agency forms, automated system data requirements, regulations, and other documents. The information that should be collected at this stage includes the data element name; data element definition; representation

⁶ The term “interoperability” indicates the ability of ICT systems and software platforms to communicate, exchange data, and use the information being exchanged.

(format or code); point in time at which the information is required (such as declaration, release, or clearance); and the authority that will collect, validate, and view the information. This can be aggregated in a spreadsheet or worksheets from any other software tool.

- (ii) **Defining terms.** The second step is to define the semantic information conveyed by the term used to describe it. This step is critical as it indicates required information, as opposed to the titles used to describe it. Understanding semantic meaning enables stakeholders to uncover duplication.
- (iii) **Analyzing unique terms.** The third step is to identify overlap between terms used in different systems, based on the semantic understanding of terms developed during the definition of terms.
- (iv) **Reconciling terms.** The fourth step produces harmonized data, which can be used consistently by all stakeholders. This process involves selecting a single data element name, a common definition, a common code, and a standard message or definition (Box 6).

Box 6: Aligning Data Terms in Maldives with International Standards

Various organizations have developed different standardized sets of data terminology to enable data harmonization for trade procedures. The most recent and commonly used set of standard terms among customs organizations and other authorities is the data model produced by the World Customs Organization (WCO).

The WCO data model is a subset of trade elements based on the United Nations Trade Data Element Directory 2005, which is specifically aimed at supporting cross-border business from the perspective of customs agents and other regulatory bodies. Maldives Customs Service is implementing ASYCUDA World (an automated customs system), which is compliant with the latest WCO Data Model (Version 3). Given broad international adoption and use of WCO's data model, and the fact that ASYCUDA World is compatible with it, Maldives should consider adopting this set of terminologies to support data harmonization.

Source: United Nations Trade Data Element Directory. 2005. *Trade Facilitation: Trade Data Elements Directory*. ISO 7372:2005. New York and Geneva.

SERVICE LEVEL AGREEMENTS

Predictable services and transparent regulatory environments are essential to supporting ease of doing business. Service level agreements (SLAs) state the commitments of regulatory agencies and other stakeholders to provide specific services, within a given time frame.⁷ SLAs enable businesses to make calculated decisions based on commitments that support predictability. They also benefit the issuing agency by collecting commitments in a unified document, which can help manage service delivery.

The BPR will produce a set of agreed upon performance targets concerning durations of import and export trade flows. Since each process chain will involve contribution from multiple CBRAs, it is essential that each CBRA deliver its expected services within a given time frame (in compliance with commitments under the BPR) to support predictable trade processes. SLAs help ensure that each CBRA is accountable for its commitments.

Each CBRA in Maldives has already established some form of service level target for responding to applications, inspections, and other functions. However, the BPR will likely encourage revising specific targets to support improved trade practices. As such, each CBRA in Maldives—including MACL, MCS, MDNS, MED, MFDA, MOFA, and MPL—should consider documenting and publishing an SLA, to state its objectives and commitments to the trader community. This is an international best practice and can help Maldives increase transparency and predictability.

SLAs should specify the obligations of each agency, the expected service level, support procedures, and contact details. Each SLA should also incorporate an end user usage agreement to clarify the rights and obligations of registered traders. In addition to domestic CBRAs, the NSW operator should also commit to an SLA. The NSW steering committee will provide policy guidelines that set commitments and obligations of the NSW operator to providing and meeting agreed upon service levels, including specified functions of the NSW—these need to be documented in a corresponding SLA.

⁷ In the context of the NSW, SLAs are public documents whereby a CBRA will state that, for example, the time taken to process a permit will be a maximum of 2 days, assuming that all information in the application form is complete. A CBRA may issue different permits and will thus state its commitment to the client (trader) regarding the time it takes to process each different permit.

Design and Monitoring Considerations for Service Level Agreements

SLAs quantify minimum levels and quality of service to meet the specific needs of end users. An SLA is typically agreed upon between a service provider (in this case, either the CBRA or NSW operator) and its users (traders or the NSW steering committee). An SLA can be specific to a particular user or to a subset of users. Each SLA should be as concise and plain-speaking as possible, and should include the following elements:

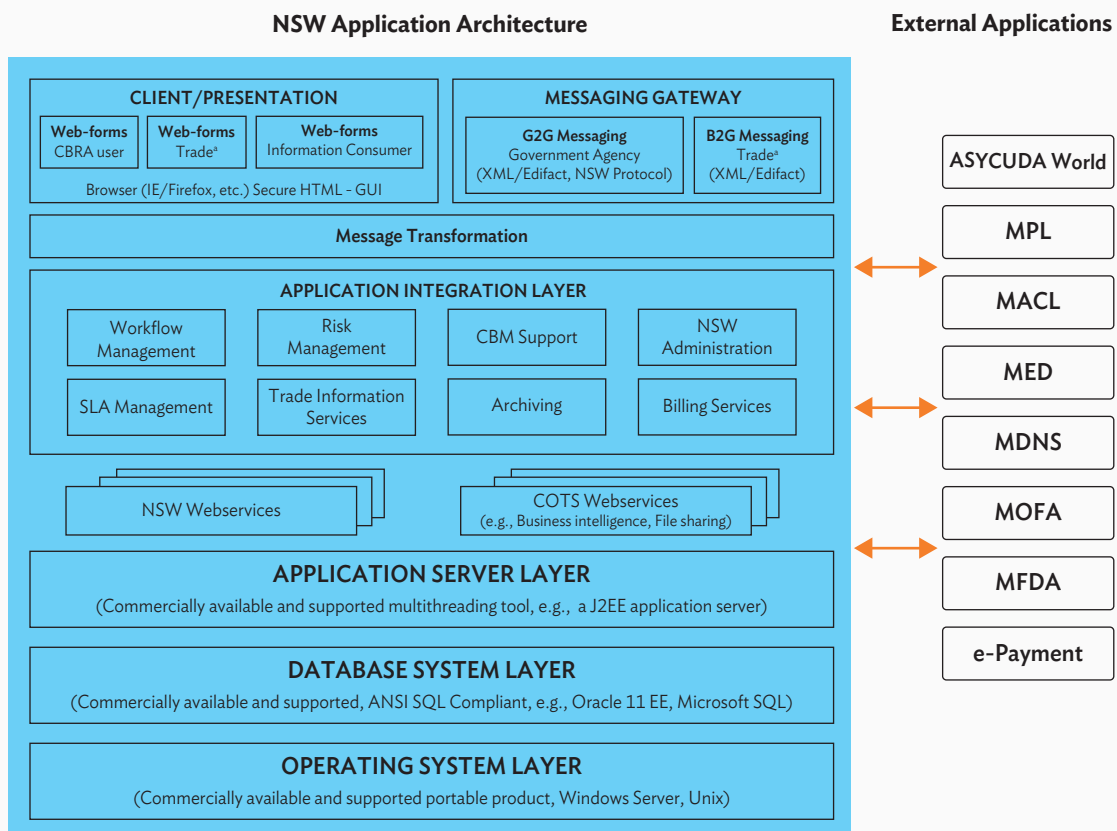
- (i) identification of parties (service provider and service users);
- (ii) designated representatives and modes of communication between parties;
- (iii) commencement date of the SLA;
- (iv) context and purpose of the SLA;
- (v) roles and responsibilities (including services, functions, and features offered by the service provider, and the terms—often detailed in a usage agreement—under which they are available to a user);
- (vi) service level specifications;
- (vii) fees, where applicable;
- (viii) procedures under which the SLA may be amended;
- (ix) conditions under which SLAs can be terminated, and methods for doing so;
- (x) monitoring and reporting arrangements, including requirements and rights, as well as the responsibilities of the monitoring authority under the SLA; and
- (xi) authorized signatures.

To achieve their intended outcomes, SLAs need to be monitored. The NSW platform should incorporate a monitoring framework that permits service providers to define their SLAs, and that supports identification and recording data to measure and substantiate services. As the NSW platform develops over time, it can be expanded to include tracking, monitoring, and reporting features that support accountability for SLAs. The NSW's monitoring function should enable prompt identification of bottlenecks and support management in determining appropriate corrective measures.

APPLICATION ARCHITECTURE

The services that are typically supported by an NSW platform and the external applications that interface with the platform are depicted in Figure 5. Application features that are of particular importance for NSW stakeholders in Maldives are described in further detail throughout the section.

Figure 5: National Single Window Application Architecture



ANSI = American National Standards Institute, B2G = business-to-government, CBM = cross-border management, CBRA = cross-border regulatory agency, COTS = commercial off the shelf software, G2G = government-to-government, J2EE = Java 2 Platform Enterprise Edition, MACL = Maldives Airport Company Limited, MCS = Maldives Customs Service, MDNS = Ministry of Defence and National Security, MED = Ministry of Economic Development, MFDA = Maldives Food and Drug Authority, MOFA = Ministry of Fisheries and Agriculture, MPL = Maldives Ports Limited, SQL = Structured Query Language, XML = eXtensible Markup Language.
Source: Asian Development Bank.

Risk management is a systematic approach that determines which goods CBRA should examine in detail. It allows CBRA to improve trade facilitation by focusing the agency's scarce resources and interventions on high-risk items, and, in turn, streamlining processing and inspection of lower risk consignments. CBRA can apply risk management at three stages: (i) when they receive an application for a license or permit, (ii) when a customs declaration is processed, and (iii) when a consignment arrives in or is about to leave the country.

MCS has developed a trader-profiling tool internally, which can be used by other CBRA. When extending the tool, each CBRA will need to evaluate applicability of the tool and identify changes that may be necessary to tailor it to the agency's respective needs. In doing so, CBRA in Maldives may consider the general risk management mode of the ISO as a starting point.⁸ MCS' experience in implementing its risk management tool also provides a useful set of best practices for CBRA in Maldives and across the region.

Coordinated border management enables CBRA to share information by defining terms and criteria for sharing information in the NSW platform. Information typically comprises data concerning incoming declarations or applications for permits or certificates. The tool enables close coordination among CBRA and improves efficiency of procedures when two or more CBRA are involved in controlling a consignment.⁹ Depending on the specific item being imported or exported, the NSW can trigger notifications to CBRA for coordinated inspection and collect inspection outcomes. Coordinated border management facilitates release of consignment and collaboration between agencies.

SLA management automatically reports delays of delivery of services in the NSW. As trader requests progress through specific milestones, each CBRA notifies progress in the NSW until the final stage, at which the request is accepted or rejected. This enables the NSW to automatically track the amount of time each step of the process takes, and so enables constant reformation of process efficiency when SLAs are not being met. SLA management platforms within the NSW platform provide data to senior management and policy makers, allowing them to improve CBRA services and continue streamlining trade processes.

Trade information services collate statistics and identify trends in the vast database within the NSW. Data is extracted and presented in formats that simplify data review and enable different government agencies to analyze unique datasets.

Archiving functions allow storage of electronic records that are exchanged within the NSW. Retaining records is an important aspect of administration and enforcement. Technical and legal aspects of data protection and information security need to be addressed during NSW

⁸ ISO. 2009. *Standards 31000:2009 Risk Management – Principles and Guidelines*.

⁹ An additional integrative function to consider is the system's ability to interface with other NSW platforms. It is useful for the system's architecture to have the ability to connect with the NSW platforms of key trade partners, such as India, to further coordinate cross-border management.

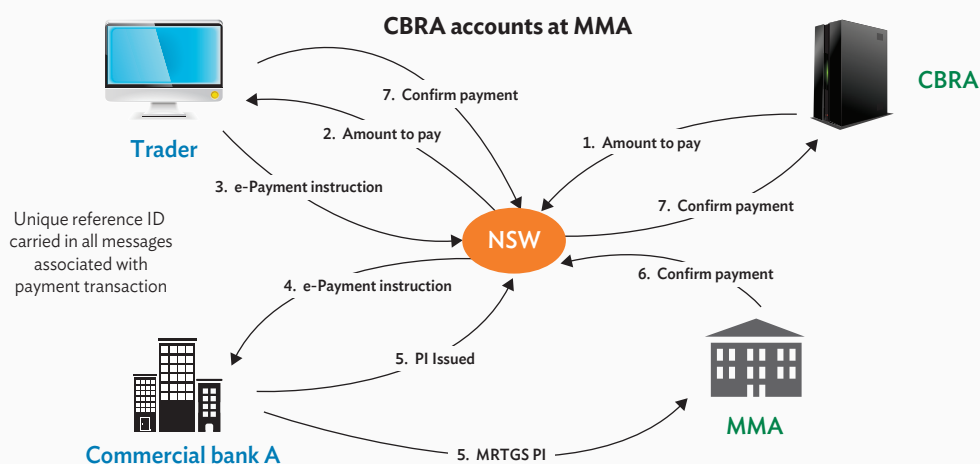
implementation to ensure that archived data is secure and maintained in a way that is legally enforceable at a later date. The NSW system must also comply with national rules on archiving electronic records.

Billing services enable collection of revenue associated with using NSW services. It is required to invoice NSW users. Billing can incorporate complex billing criteria, to be determined by policy makers. Criteria may include type of transaction (such as imports, exports, and transit), as well as the volume of data being transmitted and the number of documents being submitted.

e-Payment services allow traders to pay fees electronically. The Maldives Monetary Authority (MMA) has discussed options for integrating the NSW into the Maldives Real Time Gross Settlement (MRTGS) payment platform and has determined that it is feasible. The proposal for e-Payment leverages the MRTGS to channel payment instructions from the NSW to any commercial bank in Maldives. Under this scheme, payment instructions would be initiated by the MRTGS to effect payment to CBRA bank accounts at MMA or to commercial banks for state-owned enterprises. The key component of the payment process consists of confirmation of receipt of payment from MMA or state-owned enterprise banks. The proposed process flow for payments to CBRA accounts is illustrated in Figure 6.

Workflow management automates the internal processes to review, authorize, or reject applications for those CBRA that do not have back-end systems to control the processing of incoming applications. Given the relatively small number of CBRA in Maldives, the justification for this feature needs to be assessed closely during the phase of detailed requirements specifications.

Figure 6: Proposed Payment Process Flow



CBRA = cross-border regulatory agency, MMA = Maldives Monetary Authority, MRTGS = Maldives Real Time Gross Settlement, NSW = national single window, PI = participant interface.

Source: Asian Development Bank.

LEGAL FRAMEWORK

Establishing an NSW ecosystem changes the way in which trade stakeholders interact with each other. The NSW software system also streamlines payment processes and changes the ways in which data and information are collected and transferred between parties. As such, the established legislative framework that supports and regulates trade in Maldives needs to be updated to keep pace with the developing NSW ecosystem. More broadly, as data and information processes become increasingly digitized, it is essential to design legislation to support privacy, dispute resolution, and intellectual property.

In reviewing policies to support implementation of the NSW, the legal working group should consider the following topics: (i) legal issues related to identification, authorization, and authentication of electronic transactions; (ii) the admissibility of electronic evidence (documents and messages) in judicial and enforcement proceedings; (iii) the need to develop legislation dealing with electronic transactions, particularly the NSW platform; (iv) data protection and information security; (v) accessing and sharing information and data between government agencies; (vi) confidentiality and privacy; (vii) liability issues related to operating the NSW; (viii) data retention and electronic archiving; (ix) dispute resolution mechanisms; (x) intellectual property rights and ownership issues, including ownership of data stored or archived in the NSW; and (xi) electronic banking and payment regulations.

SELECTING THE BUSINESS AND OPERATING MODELS

To ensure that the NSW platform is managed sustainably, the steering committee needs to either appoint or contract a firm to manage ongoing operations. The legally enabled entity will become the Maldives NSW operator and will hold overall responsibility for providing NSW services to all government and private sector stakeholders. In addition to appointing an operator, the steering committee will also need to select a business model for financing ongoing NWS services.

Selecting the Appropriate Operating Model

The role of the NSW operator can either be assigned a newly formed government agency or served by forming a government joint venture with a private company. The appropriate arrangement is contingent on existing government policies, the assessed capacity of organizations, as well as the availability of investments, financing options, and projected operation costs. These factors will also play a role in determining which business model is most appropriate to support sustainable operations. In selecting one of the operator models, the steering committee should consider the following key questions:

- (i) How effective will the operator model be in supporting government policy and strategy?
- (ii) How credible will the operator model be to the traders?
- (iii) Will the operator model strengthen international competitiveness?
- (iv) Can the operator deliver a high standard of performance and reliability of services?
- (v) Will the model support access to appropriate skills and technology, and ensure that the operator has the ability to hire and fire people, and acquire and retire technology?
- (vi) How agile will the operator be under the model, and can it respond to domestic and international shocks and opportunities?
- (vii) To what degree will the operator model support access to finance required for establishing, operating, and maintaining the NSW?
- (viii) Will the operator have the capacity to innovate?
- (ix) What will be the cost of establishing this operator model?

Integrating the national single window operator into an existing government agency. This option is often selected in cases where the country implementing an NSW platform already has a well-established regulatory body with a wide range of oversight functions to support trade. The key considerations for selecting this option are (i) whether government entities have sufficient in-house capacity and technical knowledge to build and implement the platform; and (ii) the impact of adding a new set of responsibilities to the agency, including its human and financial resources. If the steering committee selects this option, the agency may still need to engage private sector firms and international stakeholders to support specific functions, such as building ICT capacity, skills, and commercial management capacities.

Establishing a new specialized government agency. Another option is to build a new government agency, with the specified function of establishing the NSW platform and providing continued oversight and management to deliver all NSW services. The rationale behind this approach is to establish an entity that is focused on delivering NSW services. In some cases, countries that establish effective PIUs may retain key personnel and use them to form the core staff of the new entity. Similar to the option of imbedding the NSW operator into an existing government agency, the approach of building a new government agency may also require the involvement of private sector firms or personnel to support specialized functions in ICT and capacity building.

Using a public–private partnership or joint government venture to operate the national single window. Under this approach, the NSW operator functions as a private company. The company can be a joint venture or public–private partnership between a local stakeholder and the Government of Maldives. Key characteristics of this approach typically include the following: (i) The government controls the company through a shareholding agreement. (ii) As a private company, the operator is flexible and proceeds rapidly with acquiring technology, expertise, and solutions to deliver on pre-agreed government expectations. (iii) The company provides competitive employment conditions to attract and retain qualified staff. The driving rationale behind this approach is to ensure that the NSW has the flexibility and mandate to rapidly undertake implementation and achieve specified outcomes.

Sustainable Business Models for the National Single Window

Implementing and maintaining an NSW platform involves upfront investments and ongoing operational costs. Capital costs include computers and equipment, implementation services (technical specialists and training), vehicles and facilities, and the NSW software. Ongoing costs typically include salaries, office costs, data service, and other operational expenses (Appendix 2).

Selecting an appropriate business model at the outset is essential for securing long-term benefits and sustainability of the NSW platform (Box 7). The steering committee will need to determine whether services will be provided to traders free of charge, or whether the NSW will charge fees to its users. If the NSW operator will charge fees, it will need to design an appropriate fee structure

to meet repayment and profit objectives. Fee schedules can be designed to either cover operating costs for the first 5 years and subsequently to operate at a profit, or to recover capital investments in addition to covering operating costs over the first 5 years and subsequently to generate profit. In both scenarios, fees are levied during import and exports, and export fees are typically half those of import fees.¹⁰

Box 7: Economic Benefits of Efficient Trade in Maldives

National single window (NSW) initiatives have far-reaching impacts on trade efficiency. In Maldives, the NSW and resulting improvements to trade efficiency are projected to save upward of \$10 million annually.

Research on the economic impacts of trade facilitation—conducted by the Organisation for Economic Co-operation and Development (OECD)—indicates that trade transaction costs (TTC) range anywhere from 2% to 15% of the value of goods traded in a given country. Based on its current trade across borders ranking, Maldives' current TTC is estimated to be 8%–10% of the value of goods. In 2014, the value of import and export in Maldives was \$2,137 million, with an estimated TTC of \$170 million–\$213 million. Modest projections indicate that the NSW can contribute approximately 10% reduction in TTC, leading to annual savings upward of \$17 million.

Sources: ADB, based on OECD. 2009. *Overcoming Border Bottlenecks: The Costs and Benefits of Trade Facilitation*; and World Bank. 2015. *Doing Business 2016: Measuring Regulatory Quality and Efficiency*. Washington, DC.

¹⁰ Appendix 2 provides cost estimates for capital investments as well operating costs for the first 5 years. It also provides estimated project financing needs and corresponding projected fee schedules for the two scenarios. Estimates are intended to illustrate broad financial considerations, and do not recommend a specific financing structure.

PROCUREMENT SPECIFICATIONS FOR THE NATIONAL SINGLE WINDOW

Specifying technical requirements for the NSW software is essential to procuring the appropriate system. Preparing system specifications for the NSW will incorporate work components from all other activities conducted under the road map and will culminate in issuance of a tender for procurement.

Preparing appropriate technical specifications will take approximately 6–8 weeks and will require inputs from the two business analysts, two software engineers, and the system engineer from the PIU. To ensure that system specifications are aligned with international best practices, the PIU should also consider engaging an international expert with experience in developing NSW specifications to provide technical support during this process. The technical specifications will provide further details concerning necessary aspects of the system architecture.

Specifications will integrate processes recommended by the BPR, and should identify the appropriate set of terminology to be used in the NSW based on revisions carried out during data harmonization. In addition to directly supporting trade practices, the NSW will also store a wealth of trade data and should therefore be designed to incorporate administrative and reporting functions that can support management and inform policy design. As such, system specifications need to address (i) functional aspects relating to trade; (ii) administrative services that will enable reporting and analysis of data; and (iii) nonfunctional specifications such as performance, security, and maintenance standards.¹¹ It is also essential that procurement specifications request the source code from the developer to facilitate system upgrades over time.

¹¹ Appendix 1 identifies key considerations for integrating existing digital platforms across key government agencies in Maldives and provides an overview of how the NSW operator may consider enhancing the system in the future.

Rolling Out the Software

Once the tender has been issued, the NSW operator will roll out the NSW software to end users. Best practices indicate that the most effective way to roll out an NWS platform is to integrate functions for end users in phases. This allows the operator to work with end users, identify and respond to system bugs, and integrate all key functions sequentially. The proposed sequencing is presented in Table 3.

Table 3: Proposed Sequencing for National Single Window Rollout

Phase	Features	Duration
Phase I	<ul style="list-style-type: none"> ■ Permits for (i) Maldives Food and Drug Authority, (ii) Ministry of Defence and National Security, (iii) Ministry of Economic Development, and (iv) Ministry of Fisheries and Agriculture ■ Manifest, customs release to Maldives Airport Company Limited and Maldives Ports Limited ■ Certificates of origin ■ Service level agreements ■ Management functions and reports 	10 months
Phase II	Permits for food and agriculture control, customs declarations, risk management, and coordinated border management	12 months, to commence at the conclusion of Phase I

Source: Asian Development Bank.

FIRST STEPS ON THE ROAD MAP: SUPPORTING THE NATIONAL SINGLE WINDOW WITH HUMAN RESOURCE DEVELOPMENT

Providing training and capacity building alongside implementation of the road map and NSW platform is essential to overall project success. As a first step toward initiating the road map's activities, the Government of Maldives should consider providing the following opportunities for key staff, particularly as it establishes the steering committee and PIU.

Firsthand experience of national single window operations. Study tours are an effective means of sharing firsthand experience and providing government officials with a practical understanding of how other countries have set up NSWs. The Government of Maldives should assemble a delegation comprising members of the NSW steering committee; the PIU project manager; and officials from MACL, MCS, MED, MPL, and other CBRAs. The delegation should visit at least two countries with operational NSWs and have the opportunity to converse with counterpart staff in government agencies.

Training to support execution of the road map. A number of staff from CBRAs in Maldives have attended capacity-building workshops to support them in conducting the BPR and data harmonization activities. To promote ongoing staff development, the international NSW expert in the PIU should provide continued training opportunities for staff from the CBRAs, MACL, MPL, the PIU, and other CBRA representatives. Developing robust project management skills is essential for supporting timely implementation of the NSW, and thus should be a focal point of ongoing trainings.

Specialized training for software and national single window functionality. The majority of software development activities to support government agencies in Maldives have been outsourced. One noteworthy exception is that the information technology department of MCS has taken on significant responsibility in developing and enhancing the ASYCUDA World platform and has lent support to other CBRAs as they develop complementary platforms. Capacity development for MCS staff and particularly the information technology department will continue providing support to an increasingly complex ICT environment. As the NSW platform is developed and rolled out, the NSW operator and service providers will need to provide ongoing training opportunities for stakeholders. These arrangements should be built directly into procurement contracts.

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STATUS OF INFORMATION AND COMMUNICATION TECHNOLOGY DEVELOPMENTS IN MALDIVES

Table A1.1: Status of Information and Communication Technology Developments in Maldives

Agency	Recent Developments in Information and Communication Technology
Maldives Customs Service (MCS)	<ul style="list-style-type: none"> ■ MCS is currently using the “e-Customs Portal,” which interfaces with ASYCUDA ++. ■ e-Customs Portal enables online submission of sea cargo manifest, as well as submission of customs declarations and supporting documents. ■ Portable tablets facilitate examination of goods by allowing multiple officers to record verification results. ■ MCS also operates a system to control stock management and the receipt and delivery of bonded warehouse goods. ■ The system integrates with the e-Customs Portal and ASYCUDA ++, but it involves some manual processing.
Ministry of Fisheries and Agriculture (MOFA)	<ul style="list-style-type: none"> ■ The fisheries department of MOFA is testing software that will facilitate the issuance of catch certificates. ■ The system will be of significant assistance to exporters since the catch certificate for export of large consignments, such as canned tuna, currently takes several weeks. ■ The agriculture department of MOFA is not yet computerized and requires support to develop an administrative system that will assist in processing trader applications.
Ministry of Economic Development (MED)	<ul style="list-style-type: none"> ■ The MED has developed a comprehensive software application to support its administrative processes, and is making the services available online, pending clearance of security features.
Ministry of Defence and National Security (MDNS)	<ul style="list-style-type: none"> ■ MDNS has initiated development of a system for processing applications. The system will be linked to MFDA, fisheries department and the Ministry of Environment and Energy since these agencies may be involved for approval of some of the applications. MDNS requires five additional personal computers to provide adequate access for internal users.
Maldives Food and Drug Authority (MFDA)	<ul style="list-style-type: none"> ■ MFDA has developed a system to administer its drug database and to process applications. ■ The system is for internal use and does not provide online access to traders. ■ The food department at MFDA requires support for developing an administrative system as well as computer equipment.
Maldives Airport Company Limited (MACL)	<ul style="list-style-type: none"> ■ MACL has identified two potential suppliers to provide a comprehensive system that will assist in administering and managing operations. ■ Although MACL has the necessary financial resources to acquire the system, there have been repeated delays in selecting and procuring the system.
Maldives Ports Limited (MPL)	<ul style="list-style-type: none"> ■ MPL previously used the “iPort” system to manage operations. ■ iPort is a ready-made system and required frequent modifications. Due to frequent supplier delays in providing assistance, MPL currently uses a software developed in-house by a team of five staff. ■ Importers, customs brokers, ship agents, and freight forwarders have consistently voiced concern regarding the need to improve the level of service at Malé Harbor. ■ The delays are viewed to arise from multiple sources: shortage of equipment, space constraints, operational procedures, and the need for more capable computer systems.

Source: Asian Development Bank.

ESTIMATED COSTS AND FEE STRUCTURES FOR THE NATIONAL SINGLE WINDOW IN MALDIVES

The following estimates are intended to provide insight to policy makers on the financial implications of running the NSW. As such, they are intended to be indicative of costs and potential fee structures but are not exhaustive. Further financial projections will be needed closer to the time of procurement to provide more detailed and accurate figures and to establish fee schedules. It is also important to note that setting up a more efficient environment for international trade in Maldives can result in substantial economic benefits through increased ease of doing business. These gains are not factored into the estimates shown in Table A2.1.

Table A2.1: Cost Estimates for the National Single Window Software, Hardware, and Professional Services (\$)

Item	Year 0 (Setting Up)	Year 1 of Operation
Property, Plant, and Equipment		
Computer equipment	321,196	
Network equipment	91,352	
Disaster recovery site	0	394,831
Subtotal	412,548	394,831
Implementation Services		
Technical specialists	156,047	
Project consulting/quality assurance	149,545	
Training	45,514	
Subtotal	351,106	
Software		
Base software	269,181	
NSW software	4,500,000	
Subtotal	4,769,181	
Total	5,532,835	394,831
Total NSW Equipment and Services for Year 0 and Year 1		5,927,666

NSW = national single window.

Source: ADB estimates.

Table A2.2: Additional Project Setup Costs (\$)

Project Cost	Amount
NSW equipment and implementation services	3,963,427
Office setup	29,259
Motor vehicles and other transport	16,905
Preoperational expenses	356,242
Total Project Cost	4,365,833
Project Funding Estimate	4,500,000

NSW = national single window.

Source: ADB estimates.

Table A2.3: Estimated Annual Operating Costs (\$)

	Year 1	Year 2	Year 3	Year 4	Year 5
Operating expenses	1,122,168	1,641,821	1,538,869	1,553,607	1,569,083

Source: ADB estimates.

Scenarios A and B below describe two potential fee structures that can be used to meet setup and operating costs for the national single window platform. Scenario A describes the option to set fees to recover initial investments and cover operating costs to generate profit by year 5. Scenario B describes options to cover operating costs only to generate profit by year 5. The 2015 volumes of declarations are used as a base value, and yearly increases in volumes are assumed. Staff costs and office costs are based on prevailing rates in Maldives.

SCENARIO A:

Fees Charged to Recover Initial Investments and Cover Operating Costs

Parameters:

- Fees are charged for import and export declaration only.
- Permits are free of charge.
- Fee per import declaration is Rf110.
- Fee per export declaration is Rf60.
- In the first year of operation, only half of transactions are chargeable to allow for system stabilization.

Operating profit as of year 5 is shown in Table A2.4.

Table A2.4: Annual Profit/Loss Estimates for Scenario A (\$)

Item	Year 1	Year 2	Year 3	Year 4	Year 5
Turnover	631,339	1,351,534	1,446,647	1,548,459	1,657,441
Operating expenses	1,122,168	1,641,821	1,538,869	1,553,607	1,569,083
Operating Profit	-490,829	-290,287	-92,222	-5,148	88,358
Applicable Taxes	0	0	0	0	13,254
Annual Profit/Loss	-490,829	-290,287	-92,222	-5,148	75,104

Source: ADB estimates.

SCENARIO B: Fees Charged to Recover Initial Investments Only

Parameters:

- Fees are charged per import and export declaration only.
- Permits are free of charge.
- Fee per import declaration is Rf65.
- Fee per export declaration is Rf33.
- In the first year of operation, only half of transactions are chargeable to allow for system stabilization.
- Depreciation is not considered, and revenue is charged to offset operating costs
- Maintenance of software and equipment is included in operating costs only.

Operating profit as of year 5 is provided in Table A2.5.

Table A2.5: Annual Profit/Loss Estimates for Scenario B (\$)

Item	Year 1	Year 2	Year 3	Year 4	Year 5
Turnover	372,107	796,566	852,603	912,586	976,791
Operating expenses	585,419	1,026,105	923,153	937,892	953,368
Operating Profit	-213,312	-229,539	-70,550	-25,306	23,423
Applicable Taxes	0	0	0	0	3,514
Annual Profit/Loss	-213,312	-229,539	-70,550	-25,306	19,909

Source: ADB estimates.

Road Map for the National Single Window in Maldives

This publication outlines key steps to launching the national single window platform in Maldives. The Asian Development Bank, as part of the South Asia Subregional Economic Cooperation program, is helping Maldives implement a national single window environment for international trade, which will facilitate communication between the public and private sectors, and improve ease of doing business. Maldives is a geographically dispersed island nation with a blue economy. Establishing seamless communication between cross-border regulatory agencies, traders, and government ministries can reduce the time and cost of importing and exporting goods, and strengthen the business environment.

About the Asian Development Bank

ADB is committed to achieving a prosperous, inclusive, resilient, and sustainable Asia and the Pacific, while sustaining its efforts to eradicate extreme poverty. Established in 1966, it is owned by 67 members—48 from the region. Its main instruments for helping its developing member countries are policy dialogue, loans, equity investments, guarantees, grants, and technical assistance.

