



# STRATEGIC ACTION PLAN AND ROADMAP

## GHANA NATIONAL SINGLE WINDOW

Government of Ghana

6 June 2016



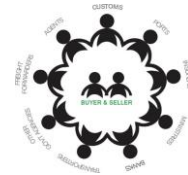
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## 1 EXECUTIVE SUMMARY

The Ghana National Single Window (GNSW) programme was initiated on 1 September 2015 by the Government to enhance the country's trade and economic development, secure, and increase government revenue. It was officially launched on 1 December 2015.

The Government contracted West Blue Consulting to undertake the programme, tasking it to:

- Provide National Single Window implementation and support activities to Ghana Revenue Authority (GRA) and related agencies for takeover of the functions of the Destination Inspection Companies (DICs) as of 1 September 2015
- Undertake a comprehensive feasibility study and prepare a Strategic Plan and Roadmap for implementing the GNSW
- Implement the agreed elements of the GNSW Strategic Plan and Roadmap.

This report contains the above-mentioned GNSW Strategic Plan and Roadmap. Based on the overall vision for the GNSW of a highly competitive Ghanaian trade sector and the key objective of enhancing the trade efficiency and competitiveness of the Ghanaian economy, the Strategic Plan presents a far-reaching set of proposals that have the potential to transform the regulatory and procedural dimensions of international trade in Ghana and considerably increase the country's competitiveness in global markets.

It is estimated that the implementation of the proposals in the Strategic Plan would save the Ghanaian economy over US\$ 120 million annually, would dramatically reduce the time and complexity for doing international trade, would increase government revenue, would enhance the potential for foreign direct investment in the country, and would strengthen the standing of Ghana in the international community in terms of its ranking in global economic performance indicators. Further, the programme will have a positive impact on the environment through the reduction in paper usage and travel of traders to and from government agencies.

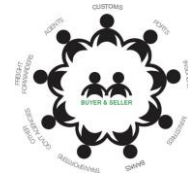
The analytical approach and framework used throughout the Strategic Plan and Roadmap follows global best practice, as recommended by the United Nations and the World Customs Organization. It includes a detailed analysis of the international trade processes and procedures of over 40 government agencies and business organizations critical to the international trade process in Ghana, an analysis of the underlying information and communications technology (ICT) infrastructure currently in place, and an assessment of the stakeholder and change-management requirements to support the implementation of the National Single Window. It also analyses the current legal framework.

### Analysis

The analysis of Ghana's trade processes, procedures and infrastructure indicated the following:

- Both front-end public services and the internal operations of most regulatory agencies rely on paper-based handling and transactions. Even though some front-end services allow business users to submit electronic applications, hard copies of this information are often required as well.





- Collaboration between different government authorities, especially those involved during the pre-arrival and arrival stage of the same product is not fully streamlined, with little integration of automatic information exchange among them.
- Interactions between different business actors, including traders and several logistics-related actors (e.g. traders, Customs House agents, freight forwarders and terminal operators) are carried out manually with several physical multiple-paper documents.
- The current paper-based operations make it difficult to validate the information contained therein, especially when handling paper documents from several government agencies and when working with different business actors along the supply chain.
- Compared with international best practice, where intrusive inspection rates are typically below 5% of total imports, the percentage of goods inspection in Ghana is very high, at over 90 per cent.
- Multiple registrations, where the trade is required to submit the same information for the same product to different authorities.
- Multiple declarations (e.g. import declaration form, Customs declaration, other government agencies declarations), where the trader is required to submit the same information to different authorities for the same consignment.
- Importer certificates with duplicate sets of application documents are required from the same business entity.
- Several regulatory authorities, making importing procedures costly and time-consuming, require multiple import documents. Most of these procedures depend on manual operations and physical documents.
- As the operations and transactions for internal procedures within most government agencies have not been fully supported with electronic information systems, most of the Government's internal procedures are not very efficient.
- The compliance and verification seats at the Customs "Long Room" constitute the main bottlenecks to the free flow of documents in the clearing system.
- The required information flow and procedures during exportation are heavily based on manual operations and paper documents. Even though the exporter can submit the Export Customs Declaration electronically through the Ghana Community Network Services Limited (GCNet)/Ghana Customs Management System (GCMS) platform, paper documents are needed for several further steps.
- The declaration, export permits, quality certificates, Exchange Control 4A paper form or Ghana Export paper form must be submitted to the Customs officers at the Long Room. The officers process these documents manually, with some electronic support from the GCMS.
- Freight forwarders need to re-enter any additional information through GCNet, print out the declaration and take it to the Long Room verification desk.
- During the entire cross-border trade transactions of a consignment, the trader is required to prepare and submit the same or a similar set of documents to different government agencies. This is also true for shipping lines/airlines, which are required to interact with government authorities with multiple sets of similar documents.<sup>1</sup>

From an ICT perspective, the study found the following:

- The level of ICT maturity among the stakeholders varies considerably. Some have a developed ICT application, infrastructure and organization deployed, while others are only at the initial stages of the ICT modernization phase.

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<sup>1</sup> For example, manifests are required to be submitted to different government agencies.



- Many of the current integrations and communications between traders and agencies are manual and paper-based.
- Existing electronic integration is based on processes that are in a need of further development. There is an urgent need for business process reengineering.
- The basic infrastructure for the network and power supply is not always reliable.
- Digital signature, which is a critical component in a Single Window solution, is not yet being used in the trade process in Ghana.
- Even though a number of positive Single Window initiatives and implementations have been introduced, there remains a lack of strategy, architecture and a roadmap, making the long-term objective and vision unclear.

Given the above, it is not surprising that Ghana's ranking in international trade business indicators is very low. For example, in the World Bank *Trading Across Borders* (TAB) report 2016, Ghana ranks 171 out of 189 countries globally. This compares with a ranking of 103 for Burkina Faso and 116 for Benin. Ghana ranks 37 out of 48 countries within Sub-Saharan Africa.

Such a poor ranking indicates the severe constraints facing Ghanaian traders. It also constitutes a major disincentive for international investors. It is noted that full implementation of the reforms proposed in this report would increase Ghana's international ranking in the above mentioned TAB from 171 to 99 over 5 years (and from 37 to 8 within Sub-Saharan Africa).

On the other hand, the study found that the key stakeholders in a future GNSW were very positive about the potential of the facility to enhance economic competitiveness in Ghana and had indicated their willingness to fully support the initiative. This, combined with the strong political will for the GNSW and the full support of Ghana Customs and leading government agencies and business organizations, augurs well for the success of the programme.

### Recommendations

Taking account of the GNSW objectives and the above analysis of the current situation, the Strategic Plan and Roadmap compiled the following key recommendations for the development and implementation of the GNSW programme over the next 10 years:

- **Internal Workflow Automation of Each Government Agency:** The efficiency of each government agency could be significantly improved by simplifying, streamlining and automating its internal processes and core operations. For example, procedures relating to receiving electronic applications with no papers or fewer physical interactions with the business entities should be established. Further, validation and verification procedures could be conducted automatically or semi-automatically with reasonable and consistent compliance.
- **Electronic Payments:** Electronic connectivity with banks (or non-bank payment entities) for online payment of fees and automatic payment acknowledge from the Bank should be provided to facilitate the payment process of government agencies or business services. The adopted electronic payment must be affordable, trusted and easy for use. For instance, it should offer the shippers (importers/exporters) easy and flexible payment options, e.g. credit card payment, mobile money powered by telecoms operators, various online payment methods of commercial banks. Receipts of payment should be acknowledged back to the beneficial organization electronically with reliability and ease.
- **Automation of the Customs Long Room:** The Customs Long Room's physical procedures are to be transformed into automatic and paperless procedures. After the electronic submission, the Customs Declaration along with necessary supporting information will be verified and



validated for compliance automatically or semi-automatically without submitting any duplicated paper documents nor face-to-face meeting.

- **Paperless exchange control form:** For traditional exports, the future scenario for the paperless exchange control form should eliminate the paperwork and replace the current situation in which a paper Exchange Control 4A form must be filled in by the exporter and then be submitted endorsed by the exporter's commercial bank at the bank's office. Similarly, for non-traditional exports, the Ghana Export Form could be filled in online through the GNSW platform. In this case, endorsement by banks is not needed. The information that the Ghana Export Form requires can be used for statistical and other promotional purposes.
- **Integrated Risk Management and Inter-Agency Coordinated Inspection:** To better balance security control and facilitation of legitimate trade, an integrated and scientific risk management system should be established. Based on the integrated requirements of multiple government agencies, analytics, event-based processing and rule-driven schemes must be developed to reduce risks, safeguard legitimate regulatory objectives, reduce associated cost burdens and maximize efficiency. This integrated risk management should be complemented by inter-agency coordinated and joint inspection, should physical inspection be needed. Representatives of different authorities should be provided with shared and reliable information for efficient one-time or less intrusive inspection.
- **Integrated Business Registrations:** A facility should be developed within the GNSW to provide one-stop services for business entities to register and obtain business licences to become legitimate exporters and importers. A business entity should be able to submit a single set of electronic data and electronic supporting documents to obtain an importer or exporter licence that is recognized by all the authorities. Once submitted, the electronic information on the application can be accessed by each agency for further internal operations, including premise inspection and approval. This could be validated against the Registrar General's Business Licence Database and the TIN Database.
- **Integrated Product Registrations:** Similarly, a new Single Window platform should be developed to provide one-stop services for product registrations. These registration services should support not just the single submission of data elements by the traders but also the internal operations within government agencies, e.g. support information for physical and/or testing operations of the products, or integrate with existing electronic database systems within the government authorities.
- **Integrated Permits/Certificates/Declarations<sup>2</sup> Workflow Automation:** A single set of electronic information should be submitted through a Single Window facility. This information could form the application for each individual authority to conduct their internal operations with some electronic workflow automation support system. The regulatory agencies should be able to issue corresponding permits, certificates or approved declarations in electronic forms with efficiency. These electronic permits/certificates/declarations or their statuses will be available on the Single Window platform to streamline and ease the next operations in the supply chain.
- **Port Community Integration:** Coordination should be improved among the various actors along the trade/transport chain of operations, especially among traders, Customs House agents, freight forwarders, terminal operators/ ground handling agents (GHAs), vessels/shipping lines/airlines and trucks, as well as with the authorities involved at the port of entry and exit.

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<sup>2</sup> This may be extended and called LPCO (licences, permits, certificates and other documents).



- **Paperless Manifests and BAPLIEs<sup>3</sup>:** A regulation should be enacted to mandate vessels to submit electronic import cargo manifests 24 hours before the vessel leaves the final port of departure for a Ghanaian port of entry (for sea cargo), and for air cargo, 6 hours before departure for long-haul flights and immediately upon departure for short-haul flights. Paper manifests must not be accepted, except for amendments with some certain conditions. For exportation, the vessels/airlines are also mandated to submit electronic cargo manifests. Electronic BAPLIE messages exchanging between terminal operators and shipping lines must be mandatory also.
- **Other Improvements:** In order to avoid congestion and to speed up the process, the option of conducting physical inspection outside the immediate geographic area of port of entry/exit should be allowed. However, specific criteria and standard operations for conducting inspection outside the port must be developed and clarified.

From an ICT perspective, it is recommended that the GNSW architecture should be designed based on the concept of the Single Entry Point, as defined in the Recommendation and guidelines on establishing a Single Window (Recommendation 33), drawn up by the United Nations Economic Commission for Europe (UNECE). A Single Entry Point should include:

- Single submission of data and information
- Single and synchronous processing of data and information
- Single decision-making for Customs release and clearance of cargo.

Within this context, the GNSW should adopt the model of a Single Automated System for integrating existing systems and creating new facilities where required and cost effective. This would include collecting, disseminating and integrating information and data relating to cross border trade. This would facilitate both an integrated and interfaced approach where a Partner Government Agency (PGA) could either process data through the central GNSW platform or directly with the systems inside the agency.

The GNSW should provide a unified interface for the traders to access back-end existing and new systems in all regulatory agencies. It could implement business procedures and systems whereby a trader (directly or through an agent) could interact on-line in real-time through a single entity (a Single Window), and use that window as the channel for subsequent intermediate transactions, when necessary, and for the final transaction to obtain the release of goods.

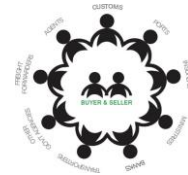
The proposed GNSW architecture can support the integration of government and business agencies through two possibilities: the integrated Electronic Data Interchange (EDI) model and the interfaced (client access/GUI) model of Single Window implementation. Depending on a PGA's ICT readiness, both the interfaced and the integrated model should be made available.

For PGAs that do not have ICT systems for internal processing, and will consequently need to access and perform their tasks in the process through a dedicated user interface, the interface model should be used. On the other hand, PGAs with internal ICT systems should be integrated with the GNSW through EDI, in an XML format.

It should also be possible for PGAs to use a combination of an integrated and interfaced approach depending on the specific GNSW services being used. The GNSW's flexibility should enable stakeholders to use both models—EDI for some processes, and client access (via a web interface) for others. As

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<sup>3</sup> Bayplan/stowage plan occupied and empty locations message (BAPLIE).



internal ICT systems at the PGAs are being introduced, migration from user interface to EDI integration could be performed, as long as there is a cost/benefit rationale.

Change management will be critical to the implementation of the GNSW, and the human and organizational changes necessary to support the introduction of the GNSW will need to be adequately addressed.

A full training programme for the GNSW is proposed, along with a comprehensive communications plan to keep stakeholders up to date on the programme. It is recommended that a fully functional Help Desk be set up to assist users in the initial phases of the programme.

Being a long-term programme, it is recommended that the GNSW engage in a continuous programme of engagement with stakeholders to fully include them in the ongoing decision-making and development process.

### Phased Implementation Approach

As the establishment of the GNSW is a long-term integrated programme, it is proposed that the above recommendations be implemented in a three-phased approach over the next 10 years:

- Phase 1: Short Term Phase (2016-2017)—This phase covers the development of all top priority outputs that can deliver a high impact and can be implemented within the first eighteen months following the approval of the GNSW blueprint.
- Phase 2: Medium Term Phase (2018-2020)—This is the implementation phase, where the key performance indicators will be achieved through the full operationalization of all the main projects within the scope of the GNSW programme.
- Phase 3: Long-Term Phase (2021 onwards)—The long-term phase includes actions that started in earlier phases and may have to be supported, maintained, strengthened and further enhanced.

The specific actions to achieve the goals of each of these phases are detailed within the report.

The implementation of the Strategic Plan and Roadmap must take into account the Risks and Assumptions detailed within this Plan. Chief amongst these is political will and every effort must be exerted to ensure that this is maintained through the programme.

At the end of Phase 2, a forward-looking strategic review should take place, taking into account the achievements of the GNSW implementation and making recommendations for any necessary adjustments of the system beyond August 2020.

In conclusion, it is emphasised that the GNSW programme has the potential to make a major, long-term and sustainable impact on the competitiveness of Ghanaian export, import and transit businesses and thus on the overall economic performance of the country. This is an urgent and pressing matter for the wellbeing of the country as a whole. It is hoped, therefore, that the proposals contained in this report receive a speedy approval from the Government and that the implementation phase can begin without delay.



## 2 INTRODUCTION AND BACKGROUND

### 2.1 Introduction

The Ghana National Single Window (GNSW) Strategic Plan and Roadmap presented in this document details the proposed approach for developing and implementing the GNSW over the 10-year period from 2016 to 2026. It proposes a comprehensive reform of Ghana’s international trade processes and procedures across all related government agencies and a fundamental change in the way government regulates international business. It aims to eliminate all unnecessary processes, simplify and harmonize the rest, and deliver a fully integrated and automated all-of-government service to the Ghanaian business community.

From the outset, the programme has been conceived as a partnership between business and government to strengthen Ghana’s trade competitiveness and enhance the participation of the business community in the global market. This is a clear win-win scenario with direct benefits to business, government and the public.

Section 2 of the report summarizes the Single Window concept and offers an overview of how it will be implemented in Ghana. Section three details the key objectives and deliverables of the programme, while section 4 presents an analysis of the current situation of Ghana’s trade processes and procedures. Recommendations regarding to future “to-be” scenario for such procedures are presented in Section 5. Sections 6 provide the expected benefits of the programme and the implementation structure, implementation phases and detailed action plans are presented in Section 7 and 8.

The GNSW should have a major impact on how business is done in Ghana, both within government and between government and business. It involves a fundamental change in mind-set and approach and could become a model for other sectors of the Ghanaian economy.

### 2.2 Single Window: Definition and History

The Single Window concept was developed in 2005 at the United Nations Economic Commission for Europe (UNECE) by the UN Centre for Trade Facilitation and Electronic Business (UN/CEFACT) to simplify, harmonize and standardize international trade procedures and associated information flows between trade and government and within government itself. UNECE defines the Single Window as follows:

“a facility that allows parties involved in trade and transport to lodge standardized information and documents with a single entry point to fulfil all import, export, and transit-related regulatory requirements. If information is electronic, then individual data elements should only be submitted once”.<sup>4</sup>

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<sup>4</sup> [www.unece.org/fileadmin/DAM/cefact/recommendations/rec33/rec33\\_trd352e.pdf](http://www.unece.org/fileadmin/DAM/cefact/recommendations/rec33/rec33_trd352e.pdf)



The UNECE Recommendation and Guidelines on Establishing a Single Window to enhance the efficient exchange of information between trade and government (UNECE Recommendation 33) - has become the global standard for Single Window implementation.

A Single Window is a *facility*. It is not an information technology (IT) system, as such, although IT plays a major role in its implementation. Rather, a Single Window is an organic concept focusing on how business is done, both within government and between government and business. It ensures the maximum integration, harmonization and standardization of the process, procedures and related information flows within the international trade environment. It is driven by the principle of partnership between trade and government for economic development and prosperity.

A second key concept in the definition of a Single Window is the *single entry point*, which facilitates the single submission and reuse of trade information for processing and receipt of the relevant response from government and private sector operators in a seamless and easy-to-use service. In a fully functional Single Window facility, the trader submits all the information required through the single entry point and the facility manages the distribution of this information to the relevant entities for assessment and response to the client. This considerably reduces the cost and time of doing business.

The Single Window has already been implemented in over 70 countries. It is seen by development agencies as a key tool for enhancing a country's trade and economic competitiveness.

### 2.2.1 Single Window in Ghana

The GNSW programme is a partnership between government and business for the benefit of all. The Government strongly supports the programme, and all key Ministries are actively engaged in the process.

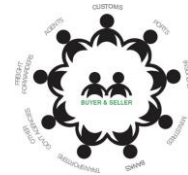
The initial programme on establishing a Single Window in Ghana began in 2002, focusing on automating Customs processes and procedures. The current programme—sometimes referred to as Single Window Phase II—takes this work much further through an all-of-government approach to establishing an automated and integrated National Single Window, including all government agencies and private-sector operators involved in international trade.

The programme will simplify, standardize and harmonize the underlying trade process within these agencies and integrate them within a National Single Window. It will also provide traders with a single entry point. It will be based on international standards and best practices, including the UN/CEFACT Buy-Ship-Pay model.<sup>5</sup> To ensure the interoperability of existing and new systems with the GNSW, the programme will develop a National Trade Data Set of key trade data elements aligned to the World Customs Organization (WCO) Data Model.<sup>6</sup>

To the maximum extent possible, the GNSW will reduce the human interface in trade transactions, allowing most processes to be undertaken automatically. This will greatly increase transparency and reduce the possibilities for irregular interventions and payments. It will also introduce a fully integrated risk management system that will allow Customs to focus inspections on higher risk consignments, thus

<sup>5</sup> UN/CEFACT Buy-Ship-Pay model: <http://tfig.unece.org/contents/buy-ship-pay-model.htm>

<sup>6</sup> WCO Data Model: [www.wcoomd.org/en/topics/facilitation/instrument-and-tools/tools/pf\\_tools\\_datamodel.aspx](http://www.wcoomd.org/en/topics/facilitation/instrument-and-tools/tools/pf_tools_datamodel.aspx)



facilitating the free flow of legitimate transactions. This approach also provides for the single coordinated inspection of containers, should such an intervention be necessary. This will greatly speed up the flow of goods along the value chain, reduce costs and increase predictability—all basic factors in trade competitiveness.

The GNSW programme utilizes existing systems and infrastructure whenever this helps achieve the primary goal of the programme—enhancing the trade efficiency and competitiveness of the Ghanaian economy. For example, the Pre-Arrival Assessment Reporting System (PAARS), a component of the GNSW, already uses the eMDA and GCMS facilities of the Ghana Community Network Services Limited (GCNet) for government permits and Customs declarations respectively. However, it should be clear that the GNSW objective of a fully integrated and automated facility, as described throughout this document, is much broader and more comprehensive than any services currently available.

For example, the GNSW Pre-Arrival Assessment Reporting System (PAARS) already uses the eMDA and GCMS facilities of the Ghana Community Network Services Limited (GCNet) for government permits and Customs declarations respectively. However, it should be clear that the GNSW objective of a fully integrated and automated facility, as described throughout this document, is much broader and more comprehensive than any services currently available.

The GNSW services will be delivered through the Ghana Trading Hub<sup>7</sup> and complemented by other service-delivery programmes, such as by the Customs Technical Services Bureau (CTSB), as well as by an import, export and transit process manual.

The Ghana Revenue Authority and the Ghana Customs have been particularly supportive in establishing the GNSW. West Blue would like to sincerely thank all of the above agencies and partner government agencies for their dedicated support over the past year.

Similarly, the business community has been a major partner in designing, developing and delivering the GNSW. Support from this group has been very forthcoming from the inception of the programme and is growing even stronger with the effective delivery of services such as PAARS. West Blue welcomes and appreciates the continuation of this support and looks forward to the active promotion of the programme by the business associations to their members, their full participation in the development processes and direct and frank feedback throughout the process regarding service delivery.

West Blue is committed to supporting the stakeholders throughout the implementation of the programme and has undertaken a full stakeholder and change-management assessment of all pertinent government agencies and business organizations. Based on these assessments, West Blue has developed a comprehensive training and communications programme that is detailed in section 5.12 and 5.13 of this document.

### 2.3 Current Mandate

The Ghana National Single Window programme was initiated on 1 September 2015 by the Government of Ghana to enhance the country's trade and economic development, secure, and increase government revenue. It was officially launched on 1 December 2015.

The Government contracted West Blue Consulting for an initial five-year period, renewable for an additional five years, to undertake the GNSW programme. Specifically, West Blue was tasked to:

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<sup>7</sup> [www.ghanatradinghub.gov.gh](http://www.ghanatradinghub.gov.gh)





- Assist Ghana Customs in taking over responsibility for Import Classification and Valuation
- Undertake a full feasibility study for the implementation of the GNSW
- Implement the GNSW facility based on the feasibility study and the decisions of government. Implementation may include:
  - Developing a Risk Management System for Ghana Customs and related agencies
  - Undertaking specific interventions to support the above areas, including developing a Container Scanning Strategy for Ghana Customs.

The GNSW programme builds on previous work undertaken over several years that focused on the automation of international trade processes in Customs. It expands upon this work by providing a fully automated and integrated all-of-government approach to Single Window based on international best practice.

### 2.3.1 Governance Structure

A critical feature of the GNSW programme is the high level of political support from the President's Office and the key Ministries involved in international trade. This is reflected in the three-layer management structure for the programme: Steering Committee, Technical Committee and working groups.

**Steering Committee:** The GNSW is governed by a high-level Steering Committee comprising the following members:

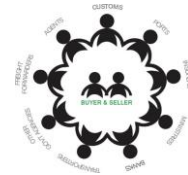
- Chief of Staff (Chairman)
- Minister of Finance
- Minister of Trade and Industry
- Minister of Transport
- Minister of Food and Agriculture
- Attorney General

The Steering Committee meets on an occasional basis and is responsible for:

1. Providing ongoing high-level support for the Roadmap
2. Ensuring changes in legislation, where required
3. Ensuring active collaboration of Ministries
4. Resolving high-level conflicts between Ministries, should such arise

**Technical Committee:** The operational direction and management of the GNSW is handled by the Technical Committee, which comprises Technical Officer Representatives from the following Ministries, organizations and agencies:

- Office of H. E. the Vice-President
- Attorney General
- Ministry of Finance



- Ministry of Trade and Industry
- Ministry of Transport
- Ministry of Food and Agriculture
- Association of Ghana Industries
- Ghana Chamber of Commerce
- Ghana Ports and Harbours Authority
- Ghana Revenue Authority
- Food and Drugs Authority
- Ghana Standards Authority
- Ghana Shippers Authority
- National Information and Technology Centre
- National Security
- Ghana Institute of Freight Forwarders
- Customs Brokers Association of Ghana
- Ghana Union of Traders Association (GUTA)
- Ghana Community Network Services Limited
- West Blue Consulting.

The main responsibilities of the Technical Committee are to:

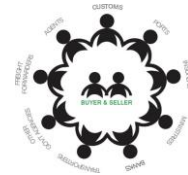
1. Ensure delivery of the Roadmap
2. Provide mandates for and supervise the working groups
3. Approve and control implementation of the activities contained in the Roadmap
4. Address and resolve conflicting objectives and priorities
5. Ensure inter-ministerial/interagency collaboration
6. Manage public relations and external communications
7. Report to the Steering Committee.

**Working Groups:** The following four Working Groups comprise process owners and representatives of the Technical Committee member organizations:

- Business Process and Data Harmonization
- Change Management and Stakeholder Engagement
- ICT and Infrastructure
- Legal.

The main responsibilities of the Working Groups are to:

1. Implement the different activities of the Roadmap
2. Draft specific project plans
3. Liaise with technical experts and consultants
4. Report on implementation progress.



## 2.4 Analytical Approach

Implementing a Single Window is a collaborative exercise, requiring close cooperation and engagement with all major stakeholders—including government agencies, business associations and traders. The feasibility study for the GNSW identified over 40 stakeholder agencies and associations, and in-depth meetings were held with each stakeholder over the three-month period from January to March 2016. The list of stakeholders is provided in ANNEX A.

The meetings assessed the current business processes and procedures for international trade, the related documents and information flows, the information and communications (ICT) infrastructure currently in place and the stakeholder and change-management requirements to support the implementation of the GNSW. A legal framework analysis will be conducted following the approval of the Roadmap.

A Business Process Analysis (BPA) approach was adopted for documenting the major processes for each of the stakeholders. In order to help focus this work, leading import and export products were chosen for a comprehensive trade-flow analysis—specifically, edible fruits and nuts (HS 08) exports to India; and parts and accessories of motor vehicles (HS 8708) imports from Belgium.



### 3 GNSW VISION, OBJECTIVES AND EXPECTED OUTCOMES

The following sections outline the vision, objectives and expected outcomes for the GNSW programme.

#### 3.1 Overall Vision for the Ghana National Single Window

The overall vision for the GNSW is a highly competitive Ghanaian trade sector, where Ghana's exports compete effectively in the global marketplace on the basis of cost, quality and dependable delivery times and where importers can secure their necessary materials in a secure, transparent, efficient and predictable manner. Such a scenario can lead to enhanced value-added employment, strengthened foreign direct investment and increased government revenues.

#### 3.2 Key Objectives

Over the 10-year period from 2016 to 2026, the GNSW will enhance the trade efficiency and competitiveness of the Ghanaian economy through a complete revamp, optimization, automation and integration of Ghana's international-trade processes and procedures.

Within the first five years, the GNSW will:

- Reduce export costs by 50 per cent
- Reduce export time by 50 per cent
- Raise Ghana's global Trading Across Borders<sup>8</sup> ranking from 171 to 99

#### 3.3 Expected Outcomes

Full implementation of the recommendations in this report is expected to result in a quantum improvement in the international trade environment in Ghana. Trade process and procedures will be greatly simplified and harmonised, the process of submitting trade information to government will be harmonised, and there will be a major improvement in transparency. Further, there will be a substantial reduction in the time and cost of doing international business.

The expected reduction of 50% in both the time and cost of trade procedures is estimated to result in annual savings to the Ghanaian economy of over US\$ 120 million annually (see section 6 for details). Additional indirect time cost savings would accrue from impacts such as a reduction in storage and dwell times and the reduction in the cost of capital from holding material stocks for shorter periods.

Other additional indirect benefits will also accrue from the reduction in trade transaction times. For example, it is estimated that a one-day reduction in time at the border can increase exports by 1 per cent.<sup>9</sup> Thus, in the case of Ghana, a 50 per cent reduction in the export transaction time of 197 hours—equivalent to 8.2 days<sup>10</sup> (Table 24 — could generate an increase in exports of 4 per cent.

Further, the impact of a reduction in trade transaction costs on investment is also well known. For example, a recent (2013) study "Reducing Transatlantic Barriers to Trade and Investment" estimated

<sup>8</sup> World Bank, *Doing Business 2016*: [www.doingbusiness.org/data/exploreeconomies/ghana/-trading-across-borders](http://www.doingbusiness.org/data/exploreeconomies/ghana/-trading-across-borders)

<sup>9</sup> Djankov, S., Freund, C., & Pham, C.S (2010). Trading on time - [www.doingbusiness.org/~media/FPDKM/Doing-Business/Documents/Methodology/Supporting-Papers/DB-Methodology-Trading-On-Time.pdf](http://www.doingbusiness.org/~media/FPDKM/Doing-Business/Documents/Methodology/Supporting-Papers/DB-Methodology-Trading-On-Time.pdf)

<sup>10</sup> Calculated on the basis of 24 hours per day as per the Trade Across Borders Report definitions



that a 10 per cent decrease in the non-tariff barrier index could result in a 5 per cent increase in income from foreign investment.<sup>11</sup>

### 3.3.1 Achievements so far

The first task of the GNSW programme was to provide technical, architectural and administrative support to Ghana Customs to take over the pre-arrival classification and valuation process for imports as of 1 September 2015. This work, which had previously been done by five document inspection companies, was discontinued in order to bring Ghana into line with global best practice as recommended by WCO and WTO.

West Blue developed the fully automated PAARS and the complementing suite of operational and capacity-building activities to provide this function. After going live in September 2015, already within its first months of operation the system reduced the time for import classification and valuation of compliant transactions from two weeks to the established 48-hour Service Level Agreement—and in some cases to just 2 hours.

The system is fully functional and has been well received by the business community. According to Kwabena Oforu-Appiah, President of the Ghana Institute of Freight Forwarders (GIFF), it is “an extremely important effort at re-engineering a major tool for trade facilitation; a wonderful experience so far!”. This major change in procedures was also associated with an actual increase in Customs revenues in 2015, demonstrating that it is possible to have enhanced trade facilitation while simultaneously securing (and even increasing) government revenues.

Another system introduced in 2016 is the electronic payment of the Import Declaration Form (IDF). Companies can now purchase these in bulk via credit card, mobile money or bank draft. This is a pilot concept and the same methodology will be applied to other payment areas.

Other achievements to date include the:

- National Scanning Policy
- Trade Information Portal
- Price/Valuation Tool
- Expert Tariff Classification Tool
- Development of a National Risk Management Strategy
- Institution of a National Risk Management Committee and Risk Management Team
- Ghana's Import, Export and Transit Process Manual

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<sup>11</sup> Reducing Trans-Atlantic Barriers to Trade and Investment:  
[http://trade.ec.europa.eu/doclib/docs/2013/march/tradoc\\_150737.pdf](http://trade.ec.europa.eu/doclib/docs/2013/march/tradoc_150737.pdf)



## 4 ANALYSIS OF THE CURRENT SITUATION

### 4.1 Methodology

The analysis for this feasibility study was carried out based on a framework that covered four dimensions: organization and stakeholders; legal and regulatory framework, Business Process Analysis (BPA), and ICT facilities along Ghana's cross-border trade value chain.

To ensure that the future Ghana National Single Window (GNSW) facility improves the country's cross-border trade environment, it is important that the design reflect the current situation and context of the country.

By examining and comparing existing conditions and operational processes related to Ghana's international trade transactions against international standards and best practices, including import, export and transit transactions, and the current environment depiction enables a gap analysis that in turn allows the drawing up of recommendations to move to an effective National Single Window.

The methodology for Single Window development, as well as for trade facilitation improvement in general, includes the following actions:

- Capturing the current cross-border trade environments
- Identifying bottlenecks, inefficiencies or any improvement opportunities within those situations by benchmarking with international best practices
- Proposing improvement measures and better future conditions
- Conducting gap analysis between the current and future situation
- Proposing migration plans
- Implementing those plans.

The current cross-border trade environments were captured by stakeholder analysis reports, business process analysis, ICT questionnaires, workshops, interviews, documents and desk research. More than 60 meetings and site visits with individual government agencies and business stakeholders were conducted during the course of the study. Those meetings discussed and assessed the current business processes for international trade, and the related documents and information flows, the current ICT infrastructure, and stakeholder and change-management requirements. A legal framework analysis was also conducted.

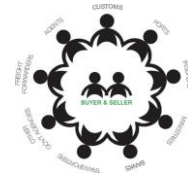
A business process analysis (BPA) methodology<sup>12</sup> was adopted for capturing and analysing the major processes related to trade facilitation for each of the stakeholders, and the whole supply chain processes for some key strategic export and import products of the country. Stakeholder analysis, BPA, ICT assessments, analysis of the current legal framework and international benchmarking will be discussed in more detail in the following sections.

### 4.2 Stakeholder Analysis and Expectations

In order to better understand the needs and expectations of potential GNSW stakeholders, West Blue undertook a review of over 40 government agencies and business associations in Ghana from

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<sup>12</sup> *Business Process Analysis Guide to Simplify Trade Procedures*, UNESCAP/UNECE, September 2012.



December 2015 through February 2016. A list of these agencies and associations is presented in ANNEX A.

Information was solicited in the following five key areas:

- Expected deliverables from the GNSW
- Potential contributions to the GNSW goals
- Main obstacles envisaged
- Training requirements related to deliverables
- Communications requirements.

The stakeholder consultations took place in parallel with the BPA and ICT assessment meetings at the key agencies. The resulting observations are presented separately in this report.

#### 4.2.1 Expected Deliverables

Stakeholders indicated that their primary need was for a completely automated, custom-made and efficient Single Window facility that would be easily accessible, reliable, secure, transparent and user friendly. They emphasized the need to significantly simplify and automate the trade process and procedures in Ghana and remove all bottlenecks to the smooth flow of trade. They also expected that the facility should allow them to generate reports on their activities for planning and statistical purposes.

Monitoring and regular audit of the system and the need for solicitation of feedback from users was also recommended. They also expected that the facility would reduce overlaps in the duties and responsibilities of some agencies. They further indicated that the system should be able to check the use of fictitious and fraudulent documentation. Emphasis was also placed on the need to have a secure facility, which would protect user information, increase productivity in the various agencies and the country as a whole, as well as facilitate trade.

Many institutions emphasized the need for the facility to significantly enhance the economic performance of the Ghanaian economy and to enhance government revenues, while at the same time facilitating trade.

The agencies expressed the strong need for adequate training, both technical and operational, to equip them to fully utilize and obtain maximum benefit from the facility. Further, they stressed the need for regular communications to keep the agencies, users and the public up to date on the progress of programme implementation and on its performance and impact. They also highlighted the need for ongoing liaison with the stakeholders to solicit their feedback and suggestions for the longer-term development and maintenance of the facility.

Specific expected deliverables identified include:

- Simplification and automation of specific procedures (covered in detail in the Section 5)
- Reduction in the time and cost of doing business
- Reduction in bureaucracy and better management of the import, export and transit business processes
- Streamlined business process activities at the ports



- Significant improvement in the “human factor” and transparency in trade processes. For example:
  - Enhanced professionalism and competence
  - Better attitude to client and service provision
  - Significant decrease in human interference
  - Reduction in unethical behaviour
  - Increased transparency
  - Increased confidentiality of information
- Increased trade competitiveness and global economic ranking for Ghana
- Enhanced credibility for the Ghanaian business environment
- Increased government revenues
- Accurate and reliable trade data for analysis
- Provision of common data among key stakeholder agencies (covered in detail by the Data Harmonization sub-team of the BPA team)
- Transaction processes visible throughout the system
- Introduction of mechanisms to minimize fraudulent documentation
- Establishment of a secure, robust and reliable national Single Window system
- User friendly system interfaces and processes
- Appropriate training in GNSW systems and procedures
- Timely receipt of alerts and other relevant information
- Adherence to international standards and best practices
- Ongoing monitoring and quality assurance of system deliverables
- Regular engagement with stakeholders at entry points.

#### 4.2.2 Stakeholder Contribution to the Achievement of the Ghana National Single Window goals

All of the stakeholder agencies and organizations expressed their strong willingness to support and contribute to the success of the GNSW programme. Specifically, they stated that they would:

- Collaborate with other key stakeholders for the success of the GNSW programme
- Promote awareness and sensitize members
- Play an advocacy role
- Participate in GNSW working groups
- Undertake all training provided by the GNSW on the new systems and approaches
- Provide education and training both within their organization and externally
- Provide the necessary human and support resources
- Ensure a high standard of system security, fault tolerance, disaster recovery and systems survivability
- Recommend improvements or changes if necessary
- Perform intelligence interrogation on the system for Data Analytics and Business Intelligence purposes, as required.

#### 4.2.3 Stakeholder Requirements for Operating in the GNSW Environment

Stakeholders indicated that the following requirements would be critical to their successful operation in the GNSW environment:





- Regular interagency communication and meetings
- Regular programme updates
- GNSW programme roadmap and timelines
- GNSW information literature, including an overall description of the proposed GNSW concept
- Related training and training materials
- An efficient and reliable help desk
- Qualified staff within their own organizations
- High-level strategic sessions with key officials, e.g. chief executive officers, parliamentary committees, Cabinet members
- Additional ICT equipment and infrastructure:
  - Hardware, software platforms, network infrastructure and Internet.

#### 4.2.4 Main Obstacles Envisaged by Stakeholders

Stakeholders feared that the following could constitute major obstacles to the successful implementation of the programme:

- Inadequate collaboration among key stakeholders
- Inadequate flow of information to and consultation with stakeholders
- Inadequate awareness and human-resource-related issues
- Inadequate consultation with stakeholders
- Vested interests and resistance to change
- Inadequate legislative and regulatory environment
- Loss or reduction of political will
- Potential redundancies
- Potential inability of the GNSW to meet user expectations
- Waning enthusiasm
- Inadequate effective monitoring and evaluation of system
- Potential system failures and security issues
- Inadequate human resources
- Weak ICT infrastructure
- Complacency on the part of the GNSW platform providers.

More details of the requirements of a subset of 10 institutions considered critical for the success of Phase 1 of the GNSW programme is presented for information in ANNEX B.

### 4.3 Current Procedures and Documentation Requirements in Ghana —Supply Chain perspective

To develop an innovative Single Window that truly enables efficient trade, improves safety and security, as well as increasing revenue, the Government should take a holistic supply-chain perspective, which includes regulatory, financial, transport/logistics and commercial procedures and documentation requirements.

In order to embrace the holistic supply-chain approach, this report adopts a well-recognized international reference model called the “UN/CEFACT Buy-Ship-Pay model”<sup>13</sup>. The model defines the

<sup>13</sup> UN/CEFACT International Supply Chain Model (UN/CEFACT Recommendation No. 18).

procedures and services used from the point where the commercial transaction begins to the point where goods are delivered and payment has been made. We therefore used this model as the guideline and reference for our analysis and design of the future GNSW.

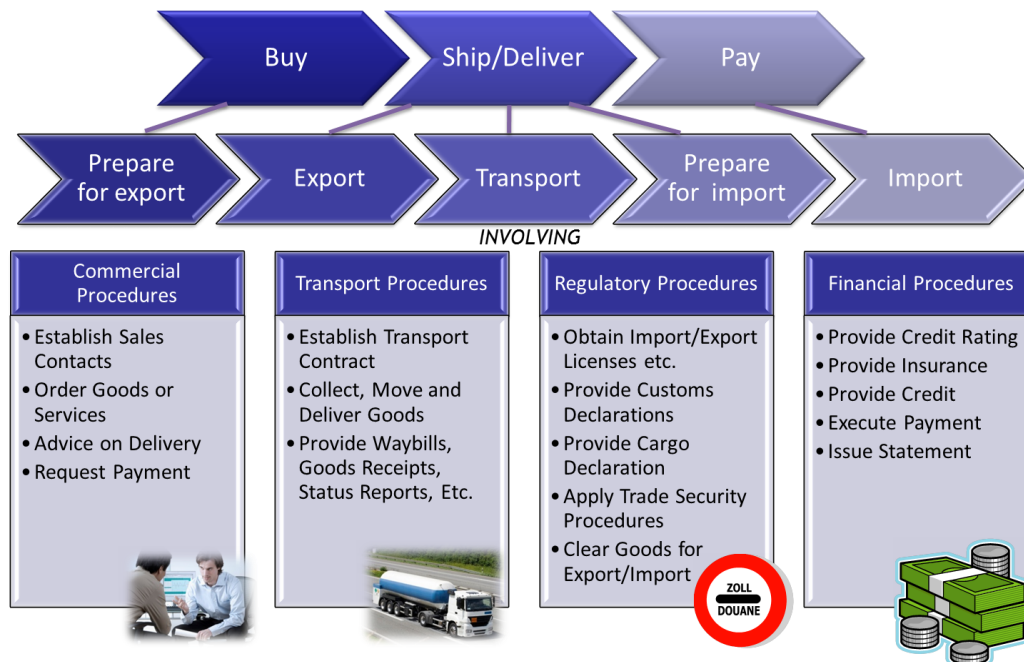


Figure 1: UN/CEFACT International Supply Chain Perspective: The Buy-Ship-Pay model

As the Figure 1 above shows, the GNSW provides services and facilitate procedures and information flow for better coordinating and managing commercial, transport, regulatory and financial procedures, and information flows.

### Commercial Procedures

Commercial services involve all the commercial procedures required for initiating an order. Typical services are publishing a products or services catalogue with information on prices and trade terms, establishing contact between sellers and buyers, initiating orders, settling on price and delivery terms and managing payment.

Very few Single Window environments include all of these services, but it is advisable to include the commercial part as much as possible, since much of the information required at a later stage is first created during these commercial procedures.

### Transport Procedures

When the order has been placed, transport has to be arranged. A carrier, freight forwarder or parcel service often performs this. Information on the goods is required to calculate insurance and prepare the required transport arrangements and documentation. Information from this area is also needed in other procedures such as the regulatory procedures. For large seaports and airports, information on transport procedures is typically coordinated and managed by

electronic Port Community Systems or Airport Community Systems, which normally integrate electronically with the transport companies and regulatory agencies.

## Regulatory Procedures

The most common Single Window implementations in many countries around the world are traditionally focused on the regulatory procedures. Licences, permits, certificates and other (LPCO) regulatory documents, Customs and cargo declarations, duty payment and clearance of goods are normally included as services within a regulatory Single Window.

## Financial Procedures

Financial procedures and services include providing insurance, credit rating, credits and payments. These are tightly linked to the financial and banking sector and, if designed and used properly, can be a huge benefit in enabling safe and secure monetary transactions. This would greatly contribute to facilitating and increasing a country's trade.

## Example of Rice Imports into Ghana

To illustrate the above concept of Bus Ship Pay Model, we have taken the example of rice imports into Ghana.

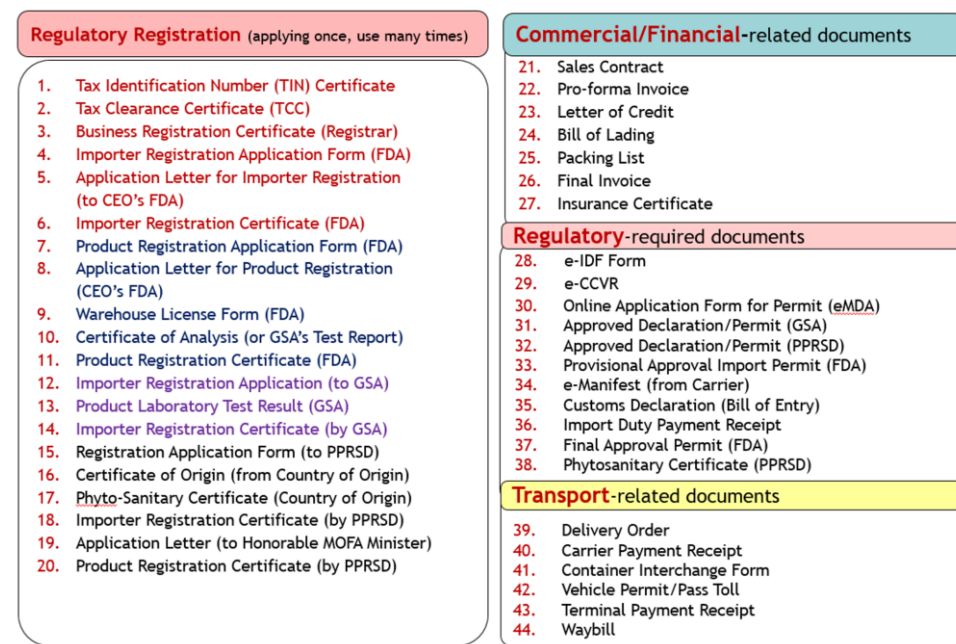


Figure 2: Importing rice into Ghana: documents required

The Figure 2 above shows a list of the documents involved during commercial/financial, regulatory and transport-related procedures for importing rice products to Ghana. A list of the main procedures categorized along the Buy-Ship-Pay model for rice importation can be shown in the Table 1 below.



Table 1: Importing rice into Ghana: procedures required

BUY-SHIP-PAY Procedures	
1.1 BUY - Pre-condition: Business Registration (20 days)	2.11 Manifest Submission(1 day)
1.2 BUY - Conclude Sales Contract (5 days)	2.12 Submit declaration(1hr)
2.1 IDF Submission(10 min)	2.13 Duty Payment (1hr)
2.2 FDA Importer Registration(40 days)	2.14 Customs Document Verification and compliance(4hr)
2.3 FDA Product Registration()	2.15 Cargo release by Shipping Line(2hr)
2.4 GSA Importer Registration(5 days)	2.16 Delivery of Container at the Terminal for examination(1hr)
2.5 PPRSD Importer Registration(5 days)	2.17 Goods Examination/Inspection(4hr 30mins)
2.6 FDA: Import Permit (1 day )	2.18 Vehicle Permit/Pass Toll (1hr)
2.7 PPRSD Permit Application (1 day)	2.19 Waybill Collection(2hrs)
2.8 GSA Lab Analysis (Optional)(20 days)	2.20 Release at Preventive gate(1hr)
2.9 GSA Declaration submission(1 day)	2.21 Terminal Audit at the Gate(1hr)
2.10 Obtain CCVR (2 days)	3.1 PAY- Goods Payment(5 days)

The current procedures and documentation requirements for importing rice products to Ghana are complicated and time-consuming. If we take the case of a new importer and a new rice import product in which the importer registration and the product registration will be required, all processes and documentation requirements during the Buy-Ship-Pay procedures could take up to 83 days effort.

From the above case and from other import/export cases studied, we see that the general characteristics of current procedures and required documents for Ghana’s international trade are as follows:

- Front-end public services and internal workflow within most regulatory agencies are carried out by paper-based processing and operations, even though some documents are processed in electronic forms, e.g. Customs declaration (Bill of Entry), but physical copies are also required
- Multiple documentation submission and duplication of the same data are needed for each shipment of goods
- The paper-based operations make it difficult to validate the information in the paper documents, especially when those documents are issued by different participating government agencies (PGAs)
- Work coordination among several regulatory agencies and business stakeholders during trade facilitation and supply-chain operations is tedious, costly and time-consuming
- High-percentage of physical intrusive inspection makes inspection very costly and time-consuming.

#### 4.3.1 Procedures in Specific Agencies

In the following sections, general observations about cross-border trade procedures and documentary requirements for key stakeholders, e.g. Ghana Revenue Authority Customs Division (GRA-Customs), PGAs and business stakeholders are further highlighted.



4.3.1.1 Ghana Revenue Authority (Customs Division)

According to the Ghana Revenue Authority Act 2009 (Act 791) and the Customs Act 2015 (ACT 891), GRA-Customs is the legal authority to act on behalf of Ghana in all Customs matters. The situation overview related to Customs procedures, inspection and risk management and integration with PGAs is highlighted in the next sub-sections.

4.3.1.1.1 Customs Procedures

This section describes the high-level overview of the current Customs procedures mandated by GRA-Customs. A more detailed report of the Customs procedures carried out by GRA-Customs is provided in a separate document.

The table below shows the list of Customs-related procedures of GRA-Customs and in collaboration with other relevant stakeholders. These procedures are categorized into import, export, transit, warehouse and free zones related processes.

Table 2: Core business processes of GRA-Customs related to cross-border trade

Levels of automation Core Business Process	Paper-based transactions with less electronic information	Electronic transactions, but paper documents still needed.	Fully paperless transactions
<b>1. Import Procedures</b>			
1.1 Manifest			
1.1.1 Sea port manifest		√	
1.1.2 Airport manifest		√	
1.2 Boarding seat clearance			
1.2.1 Ship inward clearance	√		
1.2.2 Ship outward clearance	√		
1.3 Landing seat process			
1.3.1 Goods tallying	√		
1.3.2 Pre-entry clearance	√		
1.4 Registration			
1.4.1 Manufacturer registration	√		



1.4.2 Customs House agent licensing registration	√		
1.4.3 Customs House agent renewal licensing registration	√		
1.5 Pre-clearance process			
1.5.1 Customs House agent registration on the PAARS system			√
1.5.2 Issuance of CCVR			√
1.6 Authorization/exemption			
1.6.1 Exemptions		√	
1.6.2 Authorization to operate oil depot	√		
1.7 Customs laboratory analysis	√		
1.8 Clearance			
1.8.1 Compliance		√	
1.8.2 Physical examination		√	
1.8.3 Non-intrusive (scanning)		√	
1.8.4 Preventive		√	
1.9 Premises examination		√	
1.10 Vehicle registration and clearance			
1.10.1 Vehicle clearance	√		
1.10.2 Vehicle DVLA		√	
1.10.3 Temporary vehicle importation (TVI)	√		
1.11 Bond	√		
1.12 Parcel post	√		
1.13 Courier seat (clearance of courier (KIA))	√		
1.14 Head load process	√		
1.15 Normal cargo process at frontier		√	
<b>2. Export Procedures</b>			
2.1 Direct export		√	
2.3 Parcel post	√		
<b>3. Transit Procedures</b>			
3.1 Application for transit clearance		√	



3.2 Transit cargo registration		√	
3.3 Transshipment clearance		√	
<b>4. Warehouse Procedures</b>			
4.1 Bonded warehouse registration		√	
4.2 Warehouse of imported goods		√	
4.3 Ex-warehousing process		√	
4.4 Re-export from warehouse		√	
4.5 State warehousing process	√		
4.6 Auction process		√	
<b>5. Free Zones Procedures</b>			
5.1 Registration of Free Zone	√		
5.2 Export goods from Free Zone		√	
5.3 Export for home consumption		√	

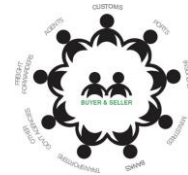
Procedures listed in the above table are also classified into different levels of automation. About half of these procedures are paper-based transactions, without or with only minimum support of electronic information. In some of the procedures, the required documents such as manifests and Bills of Entry (BoEs, or Customs declarations), can be submitted electronically to the Ghana Customs Management System (GCMS), but paper versions are still required for further actions. Only a few of these Customs-related procedures are fully end-to-end paperless transactions.

Customs declarations are submitted through an electronic front-end service provided by a company called Ghana Community Network Services Limited (GCNet), and the GCNet system later sends those declarations to the GRA-Customs GCMS platform. The GCNet system provides the front-end services covering several Customs regimes, including re-export, re-import, temporary importation, export, transit, and specific exemptions from duty and or tax payment. Some inland border posts that have only minor trade volumes are not yet equipped with GCMS and process BoEs manually.

Before the arrival of a vessel to the Ghana port of entry, shipping lines must submit the cargo manifest electronically to GCMS. However, Ghana Ports and Harbours Authority (GPHA) and Customs still request the paper manifest to be submitted 24 hours after arrival of the ship as a legal requirement and for verification and billing purposes.

Even though the Customs declarations (or Bill of Entry) are submitted in electronic forms, the follow-up Customs validation and clearance process is a paper-based operation, during which the BoE and all supporting documents have to be presented and submitted to several Customs officers in the Long Room.

Registrations, payment of Customs duties, taxes and fees and other service charges including amendments of manifest are mostly carried out with paper documentation.



An example of a full end-to-end paperless transaction is the pre-clearance process involving the Import Declaration Form (IDF) submission, verification, classification and valuation checking, and the issuance of a Customs Classification and Valuation Report (CCVR). This is all carried out online, with only some exceptional cases such as amendments, where papers are required in addition.

#### 4.3.1.1.2 Inspection and Risk Management Strategy

GRA-Customs plays an important role in revenue collection, security and trade facilitation. Its key strategy is to balance control and facilitation. Normally, risk management measures must be put in place in order to facilitate legitimate trade.

A risk selectivity scheme has been utilized in the current GCMS to balance the control and facilitation of Customs clearance procedures. The pre-arrival submission of declarations and manifests in electronic forms enables automatic analysis and selective targeting of consignments. Clearance procedures can be speeded up—that is, without physical examination—for low-risk consignments. Scanning or physical inspection is conducted for higher-risk consignments.

The GCMS system's risk selectivity features were configured by a range of parameters determined by a high-level Risk Management Committee headed by a Deputy Commissioner of GRA Customs Division. Several parameters used were intelligence from Customs administrations and security agencies, and risk profiles about importers/exporters, agents, vessels, country of shipment etc. This information was based on previous transactions and records.

A significant reduction in time for clearance of goods at the main seaport, the airport and the land border has been achieved thanks to this scheme. For example, the clearance of goods at the main port of Tema, which used to take an average of two weeks, now takes an average of only two to three days.<sup>14</sup>

However, the percentage of physical intrusive inspection is still high, in some cases up to 90 per cent, and needs to be reduced by applying several measures. Also, the clearance times could have been further improved with better integrated risk management scheme.

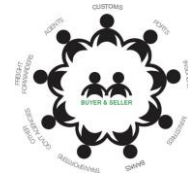
Current risk profiles can be enhanced by bringing in information and risk considerations from other participating government agencies in order to reduce the number of inspections, and also enable one-time inspection instead of multiple inspections by several authorities.

The clearance times could be further reduced if trade operators improved their relatively low level of compliance. Also the acquisition of additional cargo handling equipment and systems could have further enhanced the reduced clearance times that were achieved.

For the examination of goods entering, leaving or transiting Ghana, GRA-Customs currently uses scanners operated by a third party. Nick TC-Scan (NTS) Limited is the company under contract to the Government to provide scanning and analysis services to Customs. The scanners are able to capture images of loads that may be difficult or dangerous to inspect by other

<sup>14</sup> *Public-Private Partnership on Integrated Customs Services in Ghana*, International Trade Centre.





means. The scanners are used to provide a means of checking both homogenous and non-homogenous cargoes whenever possible. Current scanning equipment and facilities need to be improved and upgraded. More advanced scanners must be installed. GRA-Customs should deploy staff to take advantages of this facility by analysing and utilizing the produced scanner images.

Standard operating procedures could be improved for more systematically guiding the scanning operations. New scanners and facilities are required and there are plans to acquire these in the near future. These will be supplemented by more detailed standard operating procedures and sub-policies relating to specific areas as required—including policies relating to physical inspections, non-intrusive inspections and any related specialized equipment. The scanning acquisition and installation should be done in close cooperation with Customs and GPHA.

#### 4.3.1.1.3 Integration with Partner Government Agencies

In order to balance the roles of revenue collection, security and trade facilitation, a modern Customs administration must recognize the principle of partnerships and collaborations, especially between GRA-Customs and other PGAs.

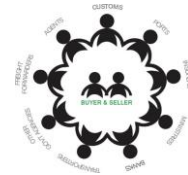
Each PGA has a proper and legitimate mandate at the border post, e.g. the Narcotics Control Board (NACOB) for drugs enforcement, GPHA for port authority, the Veterinary Service Directorate (VSD) for veterinary services and Ghana Standards Authority (GSA) for standards. In several cases, two or more government agencies, including GRA-Customs, need to perform some procedures collaboratively to balance the control and facilitation of goods leaving, entering or transiting through Ghana.

Currently, there is little integration between GRA-Customs and other PGAs in terms of electronic information exchange or collaborative electronic transactions. For example, cargo manifests submitted electronically from shipping lines are linked and shared with GRA-Customs and GPHA. The electronic submission and integration between these two agencies should reduce the burden of multiple submissions of the same data, but in the current reality, multiple paper manifests are still required.

In other cases, information about import/export-related permits, certificates, licences, and registrations of different agencies, and Customs declarations of GRA-Customs are not integrated or automatically shared among different agencies. Collaboration and coordination among different agencies and GRA-Customs would be greatly enhanced if electronic information exchange and integration among them is increased.

#### 4.3.1.2 *Partner Government Agencies*

To enforce compliance and facilitate cross-border trade in Ghana, there are up to 37 government and regulatory agencies (Ministries, Departments and Agencies (MDAs)) involved in different policy regimes, regulations and transactional operations, as shown in Table 3. All these agencies are partners that need to work collaboratively to make Ghana more competitive and safer for trading.



The efficiency and effectiveness of regulatory enforcement and facilitation of the whole trade supply chain definitely depends not only upon the internal operations of each agency, but also on the coordination and collaboration between and among government agencies.

Currently, for example, for each import shipment of plant-related food products, there are at least six government agencies involved in several transactional and documentation requirements:

- Plant Protection and Regulatory Services Directorate (PPRSD)
- Ghana Food and Drugs Authority (GFDA)
- Ghana Standards Authority (GSA)
- Ministry of Food and Agriculture (MFA)
- Ghana Ports and Harbours Authority (GPHA)
- GRA-Customs.

The target of improvement should be efficient front-end services to business stakeholders, efficient internal operations within each of these agencies, and also better coordination among the agencies.

Transactional processing and documentation handling are required by various governments at different stages of the international trade supply chain. Some operations occur during the early and preparation stage, e.g. business registration by the Registrar General's Department (RGD), importer registration and products registration mandated by GSA, FDA, VSD and PPRS. These operations can be carried out only once and the licences received can be used for several consignments for the whole year or more.

For each shipment, several operations can be divided into three phases: the pre-arrival phase<sup>15</sup>, the arrival phase<sup>16</sup> and the post clearance phase. Before the arrival of goods to the port of entry/exit, the application request submission, operations and issuing of licences, permits, certificates and other documents (so-called LPCO) must be carried out. On the arrival of the goods, the formalities include compliance, documentation validation, payment of duty and services, scanning or physical inspection (where needed), and other related operations. These operations engage different sets of government agencies and business entities.

Table 2 shows the approximate levels of automation in each government agency. Few of these agencies have developed their own information-management systems to streamline their internal procedures. For example, GRA-Customs has established the GCMS. The Food and Drugs Authority (FDA) has implemented several electronic subsystems to support various internal operations, e.g. internal operations for registration and issuing of import permits for medicines.

About 50 per cent of MDAs have used a front-end interface service (eMDA) provided by GCNet to receive electronic application forms submitted by the trading community. These agencies utilize these electronic applications for their internal operations and approval procedures. However, most still request paper documents from traders, and internal transactions are carried out on paper and in manual operations.

The GCNet electronic platform does not yet cover all internal procedures within each government agency. It is up to individual agencies to implement their own information-management system to support their internal operations, but few of them have done so. For example, the RGD has established

<sup>15</sup> Roughly equivalent to "document compliance", as defined by World Bank's *Trading Across Borders* report 2016.

<sup>16</sup> Called "border compliance" by the World Bank's *Trading Across Borders* report 2016.



a business registration database. Trader or company registration formalities are not managed by GCNet. The data are transferred via the information-exchange platform between the RGD and GCMS.

Furthermore, a seamless electronic process would best be fostered if all the agencies were to automate their internal operational processes. In this way, systems interoperability and interfaces between government agencies could be achieved. Better exchange of data across the agencies can expedite trade transactions in a secure manner for the benefit of all stakeholders.



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Table 3: List of partner government agencies and their levels of automation of related cross-border trade transactions

Agency	Acronym	Key processes related to cross-border trade transactions	Levels of automation		
			Paper-based transactions (little electronic information)	Electronic transaction but paper documents still needed	Fully or almost fully internal paperless transactions
Animal Production Directorate	APD	Issuing of approvals of animal production inputs, livestock feed and feed ingredients		√	
Bank of Ghana	BOG	Endorsing BOG Foreign Exchange Declaration Form 4A (now no endorsement from BOG is needed)		√	
Department of Game and Wildlife	DGW	Issuing export permits of wildlife animals	√		
Energy Commission	ECOM	Permits for charcoal exports	√		
Environmental Protection Authority	EPA	Permits for chemicals		√	
Food and Drugs Authority	FDA	Permits for importation, exportation, distribution, use and advertisements of food, drugs, cosmetics, medical devices and household chemicals			√
Ghana Atomic Energy Commission	GAEC	Issuing permits for radioactive materials	√		
Ghana Airport Company, Ltd.	GAC	Overseeing the Cargo operations at airport		√	
Ghana Chamber of Commerce and Industry	GCCI	Issuing the Certificate of Origin for exports	√		
Ghana Cocoa Board	COCOBOD	Issuing quality certificates of specific products	√		
Ghana Export Promotion Authority	GEPA	Registration of exporters	√		
Ghana Free Zones Board	GFZB	Exemptions of free zones imports (permit)	√		
Ghana Immigration Service	GIS	Regulating entry and exit of people at border, e.g. crews and passengers of vessels		√	
Ghana Investment Promotion Centre	GIPC	Exemptions (for specific investment activities)	√		
Ghana Maritime Authority	GMA	Regulating inward and outward ships	√		
Ghana Museums and Monuments Board	GMMB	Issuing export permits for antiques	√		
Ghana National Petroleum Corporation	GNPC	Exemptions for oil equipment for exploration and production purposes	√		
Ghana Ports and Harbours Authority	GPHA	Supporting port-related procedures		√	
Ghana Shippers' Authority	GSHA	Promoting interests of Ghanaian shippers	√		
Ghana Revenue Authority – Customs Division	GRA-Customs	Export, import and transit customs procedures, including		√	



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		compliance enforcement, duty collections, and facilitation.			
Ghana Standards Authority	GSA	Registration of importers, checking products for complying with standards and registering products		√	
Minerals Commission	MINCOM	Exemption for mining imports	√		
Ministry of Finance & Economic Planning.	MOFEP	Government exemptions	√		
Ministry of Foreign Affairs	MFARI	Diplomatic exemptions	√		
Ministry of Food and Agriculture	MFA	Regulating food and agriculture products being importing or exported	√		
Ministry of Interior	MOI	Ensuring internal national security	√		
Ministry of Trade & Industry	MOTI	Import Declaration Form			√
Ministry of Transport	MOT	Ensuring safe, efficient and secure transport system of the country	√		
Narcotics Control Board	NACOB	Preventing the use, import, and export of narcotics		√	
National Communication Authority	NCA	Permits for telecom and communication equipment	√		
National Petroleum Authority	NPA	Issuing licences to service providers	√		
National Security Council	NSC	Coordinating policy on national security issues	√		
Plant Protection and Regulatory Services Directorate	PPRSD	Permits for imports of plant and plant products; export permits for plants		√	
Registrar General's Department	RGD	Registering and issuing business licences (business registration)		√	
Timber Industry Development Division	TIDD	Export permits for wood and wood products	√		
Driver and Vehicle Licensing Authority	DVLA	Registering and issuing vehicle licences	√		
Veterinary Services Division	VSD	Permits for animal and animal products		√	

### 4.3.1.3 Private Sector Participants (Logistics, Freight Forwarders, Banking etc.)

Business stakeholders play several important roles in the whole international trade and transport chain of operations. An overview of these different roles is presented here.

#### Shipping lines/Airlines and Freight forwarders

A shipping line (or, for air transportation, an airline) refers to a company that represents or operates the ships that carry the containers (owned or leased) and cargo from load port to discharge port. A freight forwarder, forwarder, or forwarding agent, also known as a non-vessel operating common carrier (NVOCC), is a person or company that organizes shipments for individuals or corporations to get goods from the manufacturer or producer to a market, customer or final point of distribution.

The shipping lines/airlines and freight forwarders use an electronic platform offered by GCNet (a subsystem called GICSS) to submit the manifest, cargo and house, as well as for the creation of the



Delivery Order (DO) and Cargo Movement Request (CMR). It is noted that the manifest does not always come directly from source. Further, re-entry of data may cause errors.

The shipping lines also use the GCNet system to submit transshipment declarations for the port of Tema. They export the manifest data from their company's internal IT system to the GICSS or use a dataset sent by email as a basis to start the data entry first in Excel before importing it into GICSS in an XML format.

### Customs House Agents

The Customs Act 2015, in section 43, enjoins all importers with the exception of Self-Declarants to engage the services of licensed Customs House Agents for the clearance of cargo at any freight station in Ghana. It exclusively puts the business of Customs brokerage to indigenous Ghanaians. This directive translates to more jobs and more revenue for the country.

Customs brokerage is a profession that involves the clearing of goods through Customs barriers for importers and exporters. Anyone who wants to become a Customs broker has to belong to one of three institutions—Ghana Institute of Freight Forwarders (GIFF), Customs Brokers Association of Ghana (CUBAG), or the Freight-forwarders Association of Ghana (FFAG).

Customs House agents use the eMDA and GICCS portal services provided by GCNet to deliver the clearance-processing service to their clients and traders. They have to combine information from these different portals for lodging a Bill of Entry. Since the portals are not integrated, they have to switch between applications or user paper notes for data entry.

### Self-Declarants

Ghana business traders can act as self-declarants to interact with GRA-Customs for various Customs-related operations. In order to do this, the business traders must receive a certificate of approval from GRA Customs and then register their company on Ghana's Trading Hub Portal as a registered user of the portal. These companies can then access Ghana Pre-Arrival Assessment Reporting System (PAARS).

A registered company can declare their IDF and submit the application for CCVR. Similar, and can act as a self-declarant to submit the Bill of Entry.

### Banks

The processing of payment of Customs duties and taxes, as well as other fees and charges, is dealt with by commercial banks. Commercial banks can introduce any forms and methods of payment, including e-payment, according to their industry standards and national legislation.

Traders also have to pay service fees for the processing by MDAs and for individual certificates. Currently, some MDAs manage the collection of those fees internally, whereas others have delegated this task to commercial banks.

If the task is delegated to the commercial bank, the eMDA can be used to notify collection of the payment. Customs duties, taxes and services charges that automatically apply for the transaction can also be paid by commercial banks and the banks notify the collection in the GCMS. In general, however, the adoption or usage of online payment is still low.

#### 4.3.1.4 Service Providers (West Blue Consulting, GCNET, Nick TC Scan)

Service providers here refer to those who provide services related to business and IT consulting, strategy and policy recommendations, implementation and operational services of several trade



facilitation measures and innovative Single Window components. They play a critical role as enabling partners with the Government and with Ghana's trading community.

## **West Blue Consulting**

West Blue Consulting provides services to the Government of Ghana from the concept to strategy development, and detailed implementation of several key components related to Ghana's international trade. Ghana Trading Hub portal and Pre-Arrival Assessment Reporting System (PAARS) are two cases that will be discussed below.

Ghana Trading Hub Information and Investment Portal is the nationwide trade information portal providing information digitally and centrally for all the ministries, departments, agencies and stakeholders involved in international trade, using latest technologies and mobile applications for easy access.

This web portal is a resource provided to traders by the Government in order to obtain from one single source all the information that importers or exporters in Ghana may require in order to comply with their regulatory obligations. Several useful interactive tools are also provided within this portal: for example, import and export classification tools and procedural requirements, duty rate calculator, and used vehicle duty calculator. The classification tools can assist the traders in classifying their harmonized system (HS) code of products, and the traders can obtain details of regulating agencies, processing documents, time and cost for the particular products.

The Government adopted PAARS on 1 September 2015. The adoption of this system brought about the cessation of operations of the Destination Inspection Companies (DICs). Customs has now taken control of its two core functions of valuation of imports and exports and the proper classification of goods under the Harmonized Commodity Description and Coding System.

According to business stakeholders, PAARS is an electronic paperless transaction that has significantly improved clearance time for goods at the ports, and has brought some relief to the industry. It has already significantly reduced the time and cost of doing cross-border trade.

Previously, it took an average of two weeks for trade documents to be processed. After the introduction of PAARS, the processing time for complaint cases has been reduced to two days and in some cases two hours.<sup>17</sup> However, more formal assessments will be further conducted to objectively quantify its impacts on time, cost and other measures.

Another new service recently implemented by West Blue Consulting is the online payment solution, with the potential to expedite cargo clearance and lower operations cost. It offers shippers (importers/exporters) easy and flexible payment options—credit card payment, mobile money powered by telecoms operators and the online payment platforms of commercial banks. The new system comes with multiple advantages such as secure transactions, increased transparency, and financial inclusion. It frustrates the use of cloned or forged trade documents. The system has rendered paper invoices and bank confirmations obsolete, with the attendant delays and inconvenience to members of the trading community. West Blue Consulting has also delivered the integration of the commercial banks with the PAARS platform.

## **GCNet - Ghana Community Network Services Limited**

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<sup>17</sup> <http://www.ghanaweb.com/GhanaHomePage/business/Single-Window-Scheme-So-far-so-good-but-Agents-385207>



GCNet was established in 2000 to provide an electronic community network for the processing of trade and Customs-related transactions. Its current services cover pre-clearance and clearance procedures, including processes such as the submission of the cargo manifest to Customs, the request for and issuance of government approvals, the submission of the Customs declaration and the removal of goods from the terminals after Customs release.

Its services consist of several portals (web based and client server) to support various trade-related processes. GCNet originally provided a front-end system for all non-Customs users, called TradeNet. GRA-Customs is responsible for the operation of the back-end application, the GCMS.

GCNet developed and deployed the TradeNet and the GCMS and both started operations in 2002. In 2006, an additional module was added—the i-Transit module—which provides functionalities such as registration of transit vehicles and importers, issuance of the transit bond, sealing of loading units, and cargo tracking using global positioning systems. Other platforms added since 2002 are the eMDA,<sup>18</sup> deployed in 2009, and the GICCS in 2012 and 2014.<sup>19</sup>

The eMDA portal manages the front-end government approval process. It is used by the MDAs, traders, clearing house agents, and commercial banks.

The GICSS portal provides for the web-based electronic submission of Customs declarations and cargo manifests to Customs, and also for the electronic exchange of information for the removal of goods.

As of today, there is no requirement for the use of a certified electronic signature for transactions in GCNet. The registration of users with GCNet and the secure data transmission is considered sufficient to establish authenticity and traceability of the signatory to the data record.

#### **Nick TC Scan Company Limited**

Nick TC Scan is a company under contract to the Government to provide GRA with scanning and analysis services. It has installed and operates scanning machines at Tema port, Takoradi port, Kotoka International Airport, as well as Aflao port. It provides scanning services to facilitate the clearing of goods at the port, to augment the clearing procedure and to intercept the trafficking of banned goods or the import and export of restricted goods, banned drugs, narcotics, ammunitions, unaccustomed goods; and, more importantly, to help Customs in the area of revenue and in the determination of under-declared and low-quality goods.

#### *4.3.1.5 Traders (Informal Trade Community, SMEs and Multinational Enterprises)*

#### **Informal Trade Community, and Small and Medium-sized Enterprises (SMEs)**

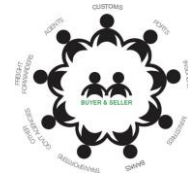
The informal trade community comprises self-employment in small, unregistered enterprises and wage employment in unregulated and unprotected jobs. According to the Ghana Statistical Service report (2005), informal employment in Ghana represented over 90 per cent of total employment.<sup>20</sup>

<sup>18</sup> Web-based platform for processing permits and exemptions by MDAs.

<sup>19</sup> Web-based platform (deployed in phases) for manifest and declaration processing.

<sup>20</sup> <http://wiego.org/wiego/informal-economy-ghana-comparative-perspective>





Statistics from the Registrar General's Department suggest that 92 per cent of companies registered are micro- and small and medium-sized enterprises (SMEs). SMEs in Ghana provide about 85 per cent of manufacturing employment and contribute about 70 per cent to Ghana's gross domestic product (GDP). They therefore have a major impact on economic growth, income and employment.<sup>21</sup>

The informal trade community is the largest trading sector in terms of the number of persons employed and the number of enterprises. For example, there are many imported products, especially from China, in the Makola Market, the biggest trading centre in Accra; and many of these products are imported by informal individual traders, or small businesses.

There are several specific needs and constraints faced by these informal trade community and SMEs when they engage in cross-border trade, lack of funding and technical staff being the main constraint.

The Government must take serious consideration of them and implement appropriate measures that can facilitate this sector effectively while balancing the control towards legitimate trade.

For example, individual and small traders/importers should be provided with consistent and transparent guidelines, supporting facilities and help-desk services with equipment and personnel. For instance, help-desk services can provide advisory services and support licensed Customs House agents or traders by filling in and submitting electronic declarations and applications for related permits and licences.

Smaller logistics and freight-forwarding companies should be supported by some appropriate scheme so that more of them can provide logistics services for small enterprises. Small logistics companies can send cargo in small shipments by air because smaller traders need to sell quickly to recoup their investments.

### **Multinational and Large Enterprises**

Foreign multinational corporations established in Ghana are to be found in several trading and manufacturing sectors such as mining and quarrying, wholesale trade, non-metallic mineral products, metal and metal products, chemicals and chemical products, automotive trade and repair, food products, beverages, tobacco, rubber and plastic products. These are the sectors that account for the majority of import and exporting transactions in Ghana.

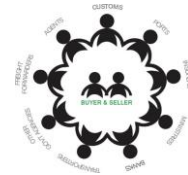
Industry in Ghana accounts for about 25.3 per cent of total GDP.<sup>22</sup> Ghana's most important manufacturing industries include electronics manufacturing, car manufacturing, electric car manufacturing, automotive manufacturing, light manufacturing, aluminium smelting, food processing, cement, and small commercial shipbuilding. Most of these products are for local consumption and exportation. However, raw materials, manufacturing machines and spare parts are also imported.

Multinational corporations, large manufacturers and trading enterprises involved with import and export transactions normally welcome consistent and transparent Customs procedures and formalities. They also have the capability to develop and improve their internal operations to comply with government regulations and new facilitation measures. Most of them are also doing their best to be transparent and legitimate.

The Government should develop special measures to facilitate the legitimate cross-border trade transactions geared towards this sector. For example, by applying proactive high qualification schema,

<sup>21</sup> [www.eservices.gov.gh/Pages/Empowering-SMEs-in-Ghana-for-Global-Competitiveness.aspx](http://www.eservices.gov.gh/Pages/Empowering-SMEs-in-Ghana-for-Global-Competitiveness.aspx)

<sup>22</sup> *CIA World Factbook* - Ghana. 2008.



combined with risk management and post-auditing, large sets of shipments of goods could be accelerated while still maintaining a high level of compliance.

Whenever any new innovations or pilot projects emerge, e.g. relating to electronic Single Window initiatives, the Government should call for participation from this group of large enterprises since they should have the capability to support them and could also derive benefit. Only a small number of enterprises can participate in the pilot projects; but more enterprises can follow later. Electronic integration—including automatic information exchange between the regulatory GNSW and the internal IT systems of these enterprises—should be established to further streamline the cross-border trade transactions.

#### 4.3.2 Fees and Related Costs in Trade Supply Chain

The four major cost components in the international trade supply chain, the so-called four T's, are as follows:

**Transaction costs.** The costs related to the transactional procedures and documentation requirements involved in cross-border trade. This includes the gathering of information, negotiating and enforcing contracts, letters of credit and transactions, including monetary exchange rates if a transaction takes place in another currency. Transactions taking place within a corporation are commonly lower than for transactions taking place between corporations.

**Tariff and non-tariff costs/fees.** Levies imposed by governments on a realized trade flow. These can involve a direct monetary cost according to the product being traded (e.g. agricultural goods, finished goods, petroleum) or standards to be adhered to for a product to be allowed entry into a foreign market. A variety of multilateral and bilateral arrangements have reduced tariffs, and internationally recognized standards such as ISO have marginalized non-tariffs barriers.

**Transport costs.** The full costs of shipping goods from the point of production to the point of consumption.

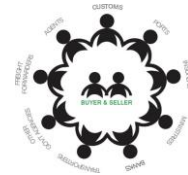
**Time costs.** The delays related to the lag between an order and the moment it is received by the purchaser. Long-distance international trade is often related with time delays, which can be compounded by Customs inspection delays.

All of the above costs have for several decades been the intense focus by many international and regional economic forums. Although the Government has attempted to establish several schemes to reduce traditional tariff and non-tariff barriers to trade, Ghana's international trade continues to involve higher costs in money and time than domestic trade. These include not only transport costs, which are determined by the modes of transportation, distance and commodity characteristics, but also at-the-border and behind-the-border costs.

#### Export Duty

In Ghana, the following export commodities are subject to duty: cocoa beans and hydrocarbon oils (e.g. aviation fuel, turbo and kerosene). For all other exports, the duty is 0 per cent.

#### Import Duty, Fees and Related Costs



ANNEX C summarizes information about fees and related costs involved in the supply chain.

Rates of import duty, as well as different types of taxes, may be applicable depending on the category of the item. In addition to tariffs, import value-added tax (import VAT) is a tax applied on the value added to goods imported into Ghana. Import VAT is 12.5 per cent of duty inclusive value (CIF + duty).<sup>23</sup>

The National Health Insurance Levy (NHIL) is a levy on goods and services supplied in or imported into Ghana. All goods and services are subject to this levy, unless for some reason they are exempt. The levy is charged at a rate of 2.5 per cent of the VAT-exclusive selling price of the goods supplied or services rendered.

An ECOWAS<sup>24</sup> levy of 0.5 per cent was introduced in 2002 and applies to imports from non-ECOWAS members. The Export Development and Investment Fund (EDIF) levy of 0.5 per cent, introduced in 2000, applies to all non-petroleum imports.

GCNet service charge is 0.40 per cent of FOB (Free on Board).

A Tax Clearance certificate from the Domestic Tax Revenue Division issued in the name of the importer costs 1 per cent of the CIF payment fee.

The fee charged by Ghana Shipper’s Authority is 9 Ghanaian cedis. The service fee for Customs Brokers Association-Ghana (CUBAG) is 5 cedis. For issuing the Customs Classification and Valuation Report (CCVR), the charge is 1 per cent of CIF.

There are other charges imposed by regulatory agencies such as GPHA, GSA and FDA, as well as by private operators at the ports, such as the shipping lines.

A table detailing the fees and related costs in the trade supply chain is presented in ANNEX C.

### Example of fees for car importation

For importing a vehicle, the following are the fees and taxes that Ghana levies on the vehicle:

- Import duty .....5, 10 or 20% of CIF value of a car
- Import VAT..... 12.5% of duty inclusive value (CIF + duty)
- NHIL (National health insurance levy) ... 5% of duty inclusive value
- Examination fee.....1% of CIF value
- ECOWAS development levy.....5% of CIF value
- Export development (EDIF) levy..... 0.5% of CIF value.

On several occasions, the trader community in Ghana has complained about these levels of taxes being excessive and requested the Government to re-consider and find ways to improve the situation.

<sup>23</sup> Cost, Insurance and Freight: a trade term requiring the seller to arrange for the carriage of goods by sea to a port of destination, and provide the buyer with the documents necessary to obtain the goods from the carrier.

<sup>24</sup> Economic Community of West African States.



#### 4.3.3 Trade Process and Procedures – Specifics (Transit Trade, Warehousing)

**Transit Trade** is a Customs regime by which goods destined for other countries enter the country through one entry point and leave the country by road or rail through another entry/exit point.

The goods are normally covered by a security/bond. The goods in transit may go through the following means: tracked by satellite, electronically monitored, or by human escort. For these services, a fee may be charged. The main transit routes in Ghana are: Tema-Kumasi-Tamale-Paga, Tema-Kumasi-Tamale-Hamile, Aflao-Accra-Takoradi-Elubo, and Takoradi-Kumasi-Tamale-Paga. Transit operators are advised to follow the assigned routes, as well to keep the Customs seals or tracking devices intact, to avoid tax evasion.

The GCNet i-Transit module is used for the tracking and processing of cargo in transit.

**Warehousing** is a Customs regime by which imported goods are stored in a bonded warehouse without the payment of import duty and other taxes on the goods at the entry point. This affords the importer the opportunity to defer the payment of duty and other taxes until the goods are delivered for home consumption or are re-exported.

The following goods may be warehoused in a bonded warehouse within the period indicated against them as shown in the table below.

*Table 4: Types of goods and allowable period for warehousing*

Type of goods	Allowable period
Perishables	3 months
General goods	12 months
Raw materials	Up to 2 years

Re-warehousing of general goods after the allowable period is not permitted. Perishable goods may, however, be re-warehoused for a limited period of only one month upon application and approval by the Commissioner of Customs.

More detailed procedures and documentary requirements for transit trade and warehousing are reported in a separate BPA report of GRA-Customs.



#### 4.4 Business Process Analysis for General Import and Export

According to the step-by-step approach toward a Single Window environment recommended by UN/CEFACT,<sup>25</sup> a BPA is recommended as the first step before trade facilitation measures related to simplifying, harmonizing and automating trade procedures and documents can be put in place.<sup>26</sup>

It is crucial that the existing conditions of business processes and information flows throughout the international supply chain be well understood before trade facilitation measures are selected. All attributes of the processes and information flows—such as activities required to complete the processes, relevant stakeholders, related laws, rules, regulations and documents, as well as the relationships between them—need to be well understood.

BPA serves as a baseline for implementing trade facilitation measures such as simplification of trade procedures (including commercial, transport, regulatory and financial procedures); simplification of documentary requirements and their alignment with international standards; and automation of international trade transaction and its associated electronic documents for Single Window and paperless trade systems.<sup>27</sup> Improvement in business process has a significant impact on the performance of the overall business. It can consequently enhance competitiveness both at the organizational and national levels.

##### **Business Process Analysis methodology**

BPA is a methodology to elicit, document, and analyse the existing business processes involved in international trade, as well as aid in developing recommendations for improvement. It is used to visualize the documentation requirements and the interactions between agencies which are necessary to facilitate a particular supply chain. It is also used to explain how to perform each step in the context of legal regulations, policies, and related trade and electronic commerce orders. In addition, these results will provide basic information that will lead to simplification and integration of trade procedures. For conducting the process analysis, documents and data items used in trade transactions have to be collected.

The BPA focuses on modelling business processes with two types of Unified Modelling Language (UML) diagrams: the Use Case Diagram and the Activity Diagram. The use case diagram illustrates the high-level business processes and actors associated with each of them. It serves as a frame of reference for further elaboration of business process modelling. The activity diagram, on the other hand, describes activities, inputs, and outputs associated with each business process listed in the use case diagram.

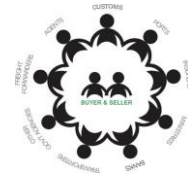
This modelling technique is used for documenting business processes where each element of the process is represented by UML graphical notations. The resulting graphical representation of a business process is known as a *business process model*, illustrating the following:

- Activities that come in a specific order, and decision points
- Actors who perform those activities
- Defined inputs and outputs of each activity
- Criteria for entering and exiting the business process
- How actors relate to one another

<sup>25</sup> United Nations Centre for Trade Facilitation and Electronic Business. [www.unece.org/cefact](http://www.unece.org/cefact)

<sup>26</sup> UNECE (2006) Background Paper for UN/CEFACT Symposium on Single Window Common Standards and Interoperability, Geneva.

<sup>27</sup> *Business Process Analysis Guide to Simplify Trade Procedures* (2009, 2012), UNESCAP/UNECE.



- How information flows throughout the business process
- Associated rules and regulations
- Quantitative indicators such as number of steps, as well as time and cost required to complete a particular business process.

The main output of the BPA within the context of trade facilitation is a BPA report comprising the following components:

- Use case diagram showing the scope of the business process analysis project
- (e.g. registration processes, import processes, export processes, transit processes)
- Activity diagrams of those processes
- Process descriptions—including a list of trade forms and documents, as well as a list of trade-related laws, rules and regulations
- Integrated activity diagram
- Time-procedure chart
- List of identified bottlenecks
- Recommendations to improve the business process and/or future business process models.

### **BPA for Key Regulatory Agencies**

With the above methodology, detailed BPAs for key regulatory agencies are documented in separate reports, and some appeared in Section 4.3.

### **BPA for Commodities**

The scope of the BPA in this report also covers the trade supply chain perspective of some strategic import and export commodities. It includes registration processes, import processes for agricultural and non-agricultural products, and export processes for traditional products and non-traditional products.

The analysis covers activities in all the international trade transactions, which include commercial procedures (e.g. the establishment of commercial contracts), transport procedures (e.g. the arrangement of inland and cross-border transportation), regulatory procedures (e.g. the conduct of any necessary formalities to meet regulatory requirements of both export and import countries), and financial procedures (e.g. fee payment, payment of the purchased cargo).

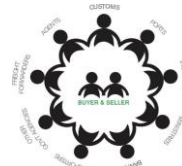
An overview of these processes is presented below for general export and import cases. A more detailed review of the import and export processes for some selected commodities is presented in section 4.5.

#### **4.4.1 Current Export Process and Bottlenecks**

##### *4.4.1.1 Overview*

Exports and imports in Ghana are controlled by the Exports and Imports Act, 1995 (503). There are two major types of export products of Ghana: “traditional” and “non-traditional”.

Traditional exports include cocoa, timber/lumber, mineral resources (e.g. gold, diamonds, bauxite, manganese), electricity, fresh fish and fresh yam. Non-traditional exports are all other products outside the above list. Currently, there are over 383 different non-traditional export products categorized into agricultural, processed /semi-processed, handicrafts and services. Non-traditional exports include



pineapples, handicrafts, cashew nuts, coffee, canned fish (tuna), shea butter, Kente cloth, cocoa butter, cocoa cake, aluminium products and textiles (AGOA).<sup>28</sup>

For exportation of goods to EU countries, the regulatory required documents and procedures for both traditional products and non-traditional products are as follows:

Table 5: Exporting traditional products: regulatory required documents (pre-arrival)

Steps	Levels of automation		
	Paper-based transactions (little electronic information)	Electronic transaction but paper documents still needed	Fully or almost fully internal paperless transactions
1. Trader must register as a business with Registrar-General's Department		√	
2. Trader must register as exporter with Ghana Export Promotion Authority (GEPA)	√		
3. Exporter of traditional commodities has to complete Bank of Ghana Exchange Control 4A Form, endorsed by exporter's banker <sup>29</sup>	√		
4. Exporter obtains permits/certificates from issuing authorized institutions (e.g. Ghana Standard Authority's quality assurance certificate for fresh or processed fish to EU countries, COCOBOD Quality Assurance Certificate <sup>30</sup> for fresh/processed fish to EU countries, COCOBOD's Quality Control Certificate in the case of coffee, shea nuts, cashew nuts, packing list in the case of personal effects etc.)		√	
5. Exporter obtains Customs Entry Form (form can be submitted electronically).		√	
6. Exporter obtains certificates of origin (EUR.1 Form, a CO accepted by EU countries) from CEPS <sup>31</sup> for goods that benefit from preferential tariff treatment in the EU and other preference-giving countries	√		

Table 6: Regulatory procedures (arrival of the goods at port)

Steps	Levels of automation		
	Paper-based transactions (little)	Electronic transaction but paper	Fully or almost fully internal

<sup>28</sup> AGOA - the African Growth and Opportunity Act (AGOA) is a United States Trade Act 2000 (been renewed to 2025).

<sup>29</sup> Until 2006, Ghana operated a strict foreign exchange control regime under the erstwhile Exchange Control Act, 1961 (Act 71). That Act has been repealed and replaced by the Foreign Exchange Act, 2006 (Act 723), which has introduced a more liberal regime. Exchange controls are now operated by authorized dealer banks, which are only required to report their foreign exchange dealings to the Bank of Ghana.

<sup>30</sup> COCOBOD is the Ghana Cocoa Board ([www.cocobod.gh](http://www.cocobod.gh)).

<sup>31</sup> Customs Excise and Preventive Service.



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	electronic information)	documents still needed	paperless transactions
1. Exporter/agent fills in information about products/produce on Exchange Control Form 4A.  Exporter/agent ensures that Form 4A has been endorsed by exporter's banker	√		
2. Exporter/agent fills in information on Customs Entry Form (Bill of Entry) electronically, and must ensure that Exchange Control Form 4A number has been quoted on Bill of Entry		√	
3. Exporter/agent presents the completed Customs Entry, permits/certificates and FXD Form 4A to CEPS officials in the Long Room	√		
4. Customs Entry Form numbered with FXD Form 4A and certificates/permits, and these are processed in the Long Room	√		
5. Exporter/agent presents product/produce to Customs officers for examination	√		
6. CEPS official releases goods for exportation	√		
7. Authorized officer of Customs completes and countersigns EUR.1 Form	√		





Table 7: Exporting non-traditional products: regulatory required documents (pre-arrival)

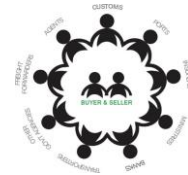
Steps	Levels of automation		
	Paper-based transactions (little electronic information)	Electronic transaction but paper documents still needed	Fully or almost fully internal paperless transactions
1. Exporter obtains a Non-Traditional Export Form (Ghana Export Form) from Customs Export shed at port/frontier.	√		
2. Exporter obtains certificates of origin (EUR.1) from Customs for goods to benefit from preferential treatment in the EU and other preference-giving countries.	√		

Table 8: Regulatory procedures (arrival of goods at port)

Steps	Levels of automation		
	Paper-based transactions (little electronic information)	Electronic transaction but paper documents still needed	Fully or almost fully internal paperless transactions
1. Exporter completes Customs Non-Traditional Export Form and submits produce/products to Export shed at port/frontier.	√		
2. Examination of goods by Customs officer.	√		
3. Arranges for vessel for shipment of goods.	√		
4. Submits copy of Bill of Lading to officer.	√		
5. Entry goes to computer for keying.		√	
6. Final endorsement of documents by officer in charge of export.	√		
7. Entries/documents detached and copies sent to Bank of Ghana, Ghana Export Promotion Council, Ministry of Trade and Industry, Statistical Service, Customs Headquarters, etc. at least by the 10th day of the following month.	√		

Export of some specific products—e.g. antiques, wildlife, live plants and pets—requires permits from Ghana Museums and Monuments Board (GMMB), the Department of Game and Wildlife (DGW) and the Plant Protection and Regulatory Service Directorate (PPRS) of the Ministry of Food and Agriculture, respectively.

The following subsection summarizes key characteristics of the current export process for selected strategic commodities: commercial procedures, regulatory procedures, transport procedures and financial procedures, according to the international Buy-Ship-Pay model.



#### 4.4.1.2 Summary and Conclusions—Export process

Exports are classified in two broad categories, traditional and non-traditional. Traditional exports are gold, diamonds, bauxite, manganese, cocoa beans, coffee, fresh fish, timber and electricity. Non-traditional export items include processed forms of the above products and all other products.

Exporters of traditional commodities have to complete the Foreign Exchange Control 4A forms, which need endorsement by the exporter's bankers and must be presented to the Customs examination officer at the time of shipment.

Exporters of non-traditional products have to complete Ghana Export Forms (from the banks or port of Exit) and present them to Customs at the time of export.

We have observed several bottlenecks and opportunities for improvement in the existing export chain of both traditional and non-traditional products.

**Some duplications and similarity in procedures and documentary requirements** during the course of exportation of a product can be identified. For example, the same business trader needs to register and obtain three to five types of business licences, e.g. a business licence with the RGD (for all business entities), an exporter registration with Ghana Export Promotion Authority (GEPA) (for all exporters), and an exporter registration with GCCI (for those who need a Certificate of Origin). Similarly, the same export product must be assessed and registered by two to three authorities. An agricultural product to be exported to ECOWAS countries needs to be registered with both GSA and the ECOWAS secretariat.

**Required information flow and procedures during exportation are heavily based on manual operations and paper documents.** Even though the exporter can submit the Export Customs Declaration electronically through the GCNet/GCMS platform, physical declaration and supporting documents are needed for several further steps.

The declaration, relevant export permits, quality certificates, Exchange Control 4A paper form or Ghana Export paper form must be submitted to the Customs officers at the so-called Long Room. The officers process these documents manually for compliance and other actions, with some electronic support from the GCMS system.

If the declaration is validated and accepted, the exporter is directed to present the goods to Customs to be examined physically against the paper documents. If Customs is satisfied with the examination, the goods are released for export.

For a non-traditional product, the shipper has the discretion to choose a shipping line. Based on this preference, relevant details of freight costs, transit times, etc. are provided by the shipping line, after which a shipping note is issued upon payment of freight charges.

Freight forwarders need to re-enter again additional information through GCNet, print out the declaration and go to the Long Room verification desk, where a compliance officer is assigned. The officer verifies the declaration and assigns an examination officer. Inspection is conducted at the loading bay by the examinations officer, narcotics board and national security, after which the container is sealed. A waybill from the loading point and a counter waybill is used for port entry, and GPHA/CEPS at the export shed is notified.



An invoice is raised for payment of handling charges and rent, where applicable, by a GPHA billing officer. The waybills, together with a photocopy of the declaration, are submitted to shipping line representatives to check whether the seal and container numbers are the same as those on the shipping note. If so, a shipping release is then issued. The shipping line raises a provisional bill of lading after certification by the forwarder or shipper. Some 72 hours after the vessel's departure, the original bill of lading is issued by the shipping line. The forwarder/shipper returns to Customs for post shipment.

The interaction between the exporters, shipper/freight forwarders and Customs officers during the Long Room procedures needs to be improved. Some of these operations and procedures should be eliminated or replaced by automatic transactions and supporting schemes, e.g. better risk analysis and management, reduction of duplicate information submission, and better information cross-validation among government authorities.

#### 4.4.2 Current Import Process and Bottlenecks

##### 4.4.2.1 Overview

Importation of cargo into Ghana involves dealing with a number of logistics service providers and governmental bodies in order to fulfil all contractual, tax and regulatory obligations associated with the import consignment. The agencies include Customs, the port, other receipt delivery service providers, shipping lines and agents.

The general import procedures and regulatory required documents along with their levels of automation are listed in the two tables below.

Table 9: Steps and regulatory required documents (pre-arrival of goods)

Steps and documents required	Levels of automation		
	Paper-based transactions (little electronic information)	Electronic transaction but paper documents still needed	Fully or almost fully internal paperless transactions
1. Original Bill of Lading/Airway Bill	√		
2. Invoice	√		
3. Packing list	√		
4. Customs Classification and Valuation Report (CCVR)			√
5. Import Declaration Form (IDF) by the Ministry of Trade and Industry (e-IDF now available online)			√
6. Tax Clearance certificate from the Domestic Tax Revenue Division issued in the name of the importer or 1% of CIF payment fee	√		
7. Tax Identification Number (TIN) from the Ghana Revenue Authority			√
8. Permit or licences from relevant Ministry/Department/Agency as applicable for restricted goods		√	



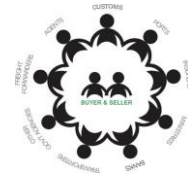
9. Appropriate letter of exemption from payment of duty and/or taxes, as applicable.		√	
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Table 10: Regulatory procedures (arrival of goods)

Steps	Levels of automation		
	Paper-based transactions (little electronic information)	Electronic transaction but paper documents still needed	Fully or almost fully internal paperless transactions
1. Exporter submits electronic Import Declaration Form (IDF) on PAARS, along with other electronic information and supporting scanned documents, i.e. Bill of Lading, invoices and packing list. Customs officers validate this information electronically and issue the Customs Classification and Valuation Report (CCVR) (pre-arrival of goods)			√
2. Submission of application to appropriate Ministry/ Department/Agency for the relevant licence/permit/exemption (pre-arrival of goods)		√	
3. Electronic submission of declaration (BoE) on GCNet platform, and submission of paper declaration and supporting documents (invoice, Bill of Lading, packing list, permits, certificates, exemptions, etc.) for validation, Customs compliance and other operations at the Long Room		√	
4. Payment of duties and taxes at designated banks located at the Long Room	√		
5. Customs documentary and physical verification	√		
6. After processing at the Long Room, document entry will be dispatched to the harbour to various locations, depending upon the Computerized Risk Management System (CRMS) level quoted on FCVR, e.g. for Customs physical examination or scanning of cargo	√		
7. After satisfactory processing, CEPS will release the Out-of-Charge document. Importer/agent then obtains a gate pass	√		
8. Importer/agent presents release Out-of-Charge document to GPHA to obtain a Waybill as proof of payment of all port charges, and can then obtain the goods	√		

Imports of different products require different permits and certificates from various government authorities. For example, importing foods and medicines, vehicles, and plant products require import permits from the FDA, GSA and PPRSD, respectively. In several cases, these products need multiple permits issued from different authorities.



#### 4.4.2.2 Summary and Conclusions

According to the World Bank's *Doing Business* report 2016, the importation of auto parts to Ghana costs approximately US\$ 1,027 and takes up to 24 days.<sup>32</sup> This cost and time are more than triple the cost and time for importing similar products in other developing countries.<sup>33</sup>

There are multiple different documents required by several regulatory authorities for importing, making the procedures costly and time consuming. Most of these procedures depend on manual operations and physical documents.

Currently, multiple registrations for business/importer certificates with duplicate set of application documents are required from the same business entity. Multiple registrations with different authorities are also needed for the same product. Multiple declarations (e.g. import declaration form, Customs declaration, GSA declaration) must be applied for the same consignment.

As the operations and transactions for internal procedures within most government agencies, e.g. the Customs Long Room, PPRSD, EPA and GSA, have not been fully supported with electronic information systems, most of the Government's internal procedures are not very efficient.

The compliance and verification seats at the Long Room should be automated. These constitute the main bottlenecks to the free flow of documents in the clearing system. Before the CCVR is issued, the importer submits all relevant documents to the GCMS for verification and processing; after which the risk profile of the goods is assessed. Customs officers at the port should not need to verify such physical documents again all the times.

When the correct duties and taxes have been assessed and paid, the banks should inform the GCMS of the payment and the importer or the importer's agent would immediately be informed of the officer who has been selected by the system to examine the goods. The importer would then proceed to the port for examination and release of the goods.

The Government, including GRA-Customs and PGAs, need to work collaboratively to further simplify and streamline import procedures and documentary requirements for their internal procedures, and also improve interconnectivity and interoperability among government agencies.

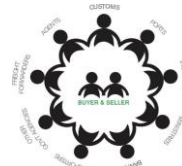
### 4.5 Business Process Analysis for Selected Commodities

This section undertook a BPA from a trade supply chain perspective for some strategic import and export commodities of Ghana. The scope of the analysis includes registration processes; import processes for agricultural and non-agricultural products; and export processes of traditional and non-traditional products.

The analysis covers activities in the whole international trade transactions, which include commercial procedures (e.g. the establishment of commercial contracts), transport procedures (e.g. the arrangement of inland and cross-border transportation), regulatory procedures (e.g. the conduct of any

<sup>32</sup> According to the World Bank *Doing Business* 2016 report, this is the cost and time related to documentary and border compliance.

<sup>33</sup> For example, the cost and time to import auto parts into Thailand is US\$ 320 and 62 hours.



necessary formalities to meet regulatory requirements of both exporting and importing countries), and financial procedures (e.g. fee payment, payment for the purchased cargo).

Selected import and export commodities are shown in the table below.

Import	Export
Rice	Cashew nuts
Medicine in doses	Cocoa beans
Auto spare parts	Fish
Vehicles	

#### 4.5.1 Export Processes for Selected Commodities

##### 4.5.1.1 Analysis for Cashew Nuts Export Process

The following table describes the key processes and steps involved in the exportation of cashew nuts (a non-traditional export product) via a seaport. Exportation to an ECOWAS<sup>34</sup> country is assumed.

Table 11: Key processes in the exportation of a non-traditional export product: cashew nuts

Process name	Process steps	Duration
<b>1 Buy</b>		
1.1 <b>Pre-condition: Business registration</b>	Exporter obtains Registration Certificate from the Registrar General's Department	5 days
1.2 <b>Conclude sales contract</b>	Exporter sources for buyer and concludes sales with importer/buyer	1-2 days
<b>2 Ship</b>		
2.1 <b>GEPC exporter registration</b>	Applicant fills in and submits application form to be registered as an exporter by GEPC	3 days
2.2 <b>ETLS<sup>35</sup> product registration</b>	Exporter downloads and fills ETLS application form, guided by GEPC, and submits to NAC <sup>36</sup> for recommendation for ECOWAS approval in order to obtain ETLS product registration number	3 months
2.3 <b>Obtain Quality Control Certificate from Ghana Cocoa Marketing Board (COCOBOD)</b>	Importer obtains Quality Control Certificate from Ghana Cocoa Marketing Board's Control Division	1 day

<sup>34</sup> Economic Community of West African States, a regional economic group of fifteen West African countries.

<sup>35</sup> ECOWAS Trade Liberalisation Scheme.

<sup>36</sup> National Approval Committee, responsible for examining applications for approval of products in the ECOWAS ETLS scheme.



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2.4	<b>Obtain standard Certificate from GSA</b>	Exporter submits intention to export to GSA, and GSA conducts premises inspection and tests samples of product to ensure it meets requirements of country of destination	5 working days
2.5	<b>Obtain Certificate of Origin</b>	Register as an exporter with GCCI (If New) and obtain Certificate of Origin from GCCI, with GRA-Customs endorsing the Certificate	1 day
2.6	<b>Obtain a Non-traditional Export Form (so-called Ghana Export Form)</b>	Exporter/agent fills and submits completed Non-traditional Export Form (Ghana Export Form). This form could be obtained from the banks or port of exit	10 mins
2.7	<b>Obtain Customs approval to fill container</b>	Exporter/agent seeks approval from Assistant Commissioner of GRA-Customs to load container, for which an officer is assigned for supervision	30 mins
2.8	<b>Submit Customs declaration (BoE)</b>	Exporter/agent electronically submits Customs Declaration (BoE) and attaches all relevant supporting documents	10 mins
2.9	<b>Customs document verification and compliance</b>	Exporter/agent prints and takes hard copy of Declaration and all other supporting documents to designated Officer at Export seat for verification and necessary actions at the Long Room	1 hr
2.10	<b>Arrange for transport</b>	Exporter arranges for shipment through a shipping agent with relevant supporting documents	24 hrs
2.11	<b>Collect empty container from ICD</b>	Exporter obtains container (and transports it to his/her premises for loading of consignment) from the Cargo Terminal via the shipping line agent	24 hrs
2.12	<b>Goods examination</b>	Examination of cargo is carried out by Customs, NSA and other regulating MDAs for onward loading onto vessel, if cargo meets standards; otherwise a query is raised	2-3 hrs
2.13	<b>Container filling</b>	Exporter fills container with cargo under the supervision of Customs, who also ensure that the container is sealed afterwards. Exporter transfers container back to the ICD	2-3 hrs
<b>3 Pay</b>			
3.1	<b>Goods payment</b>	Importer can pay exporter using any of the following payment methods: - direct payment	Cash payment: 1 day





	<ul style="list-style-type: none"> <li>- advance payment</li> <li>- Letter of Credit</li> <li>- open account</li> </ul>	
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4.5.1.2 Analysis for Cocoa Beans Export Process

The following table describes the key processes and steps involved in the exportation of cocoa beans (a traditional export product) via the seaport. The exportation to an ECOWAS country is assumed.

Table 12: Key processes in the exportation of a traditional export product: cocoa beans

Process name	Process steps	Duration
<b>1 Buy</b>		
1.1 Pre-condition: Business registration	Exporter obtains Registration Certificate from the Registrar General's Department	5 days
1.2 Conclude sales contract	Exporter sources for buyer and concludes sales with importer/buyer	1-2 days
<b>2 Ship</b>		
2.1 GEPC exporter registration	Applicant fills in and submits application form to be registered as an exporter by GEPC	3 days
2.2 ETLs <sup>37</sup> product registration	Exporter downloads and fills ETLs application form, guided by GEPC, and submits to NAC <sup>38</sup> for recommendation for ECOWAS approval in order to obtain ETLs product registration number	3 months
2.3 Obtain Quality Control Certificate from Ghana Cocoa Marketing Board (COCOBOD)	Importer obtains Quality Control Certificate from Ghana Cocoa Marketing Board's Control Division	1 day
2.4 Obtain standard Certificate from GSA	Exporter submits intention to export to GSA, and GSA conducts premises inspection and tests samples of product to ensure it meets requirements of country of destination	5 working days
2.5 Obtain Certificate of Origin	Register as an exporter with GCCI (If New) and obtain Certificate of Origin from GCCI, with GRA-Customs endorsing the Certificate	1 day
2.6 Obtain Exchange Control Form 4A	Exporter/agent submits the completed exchange control form with endorsement from exporter's commercial bank	10 mins

<sup>37</sup> ECOWAS Trade Liberalisation Scheme.

<sup>38</sup> National Approval Committee, responsible for examining applications for approval of products in the ECOWAS ETLs scheme.



2.7	<b>Obtain Customs approval to fill container</b>	Exporter/agent seeks approval from Assistant Commissioner of GRA-Customs to load the container, for which an officer is assigned for supervision	30 mins
2.8	<b>Submit Customs Declaration (BoE)</b>	Exporter/agent electronically submits Customs Declaration (BoE) and attaches all supporting documents	10 mins
2.9	<b>Export duty payment</b>	Declarant makes payment at authorized dealer's bank	10 mins
2.10	<b>Customs document verification and compliance</b>	Exporter/agent prints and takes hard copy of Declaration and all other relevant supporting documents to the designated Officer at Export seat for verification and necessary action at the Long Room	1 hr
2.11	<b>Arrange for transport</b>	Exporter arranges for shipment through shipping agent, with relevant supporting documents	24 hrs
2.12	<b>Collect empty container from ICD</b>	Exporter obtains container and transports it to his/her premises for loading of consignment, from the Cargo Terminal via the shipping line agent	24 hrs
2.13	<b>Goods examination</b>	Examination of cargo is carried out by Customs, NSA and other regulating MDAs for onward loading onto vessel, if cargo meets standards; otherwise a query is raised	2-3 hrs
2.14	<b>Container filling</b>	Exporter fills container with cargo under supervision of Customs, who also ensure that the container is sealed afterwards. Exporter transfers container back to ICD	2-3 hrs
2.15	<b>Shipping release</b>	Shipping agent sends loading advice to Terminal Operator, ensuring that agent has paid all charges	30 mins
2.16	<b>Transfer of container to loading bay</b>	Terminal Operator validates export declaration with loading advice from shipping line before transporting cargo to loading terminal	2 hrs
2.17	<b>Cargo loading</b>	Container is loaded on vessel, after which shipping line agent issues Bill of Lading	3-4 hrs
<b>3 Pay</b>			
3.1	<b>Goods payment</b>	Importer can pay exporter using any of the following payment methods: - direct payment	Cash payment: 1 day



	<ul style="list-style-type: none"> <li>- advance payment</li> <li>- Letter of Credit</li> <li>- open account</li> </ul>	
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4.5.1.3 Analysis for Canned Fish Export Process

The following table describes the key processes and steps involved in the exportation of canned fish (a non-traditional export product) via the Seaport. Exportation to an ECOWAS country is assumed.

Table 13: Key processes in the exportation of a non-traditional export product: canned fish

Process name	Process steps	Duration
<b>1 Buy</b>		
1.1 <b>Pre-condition: Business registration</b>	Exporter obtains Registration Certificate from the Registrar General's Department	5 days
1.2 <b>Conclude sales contract</b>	Exporter sources for buyer and concludes sales with importer/buyer	1-2 days
<b>2 Ship</b>		
2.1 <b>GEPC exporter registration</b>	Exporter/applicant fills in and submits an application form to be registered as exporter by GEPA	3 days
2.2 <b>ETLS<sup>39</sup> product registration</b>	Exporter downloads and fills ETLS application form, guided by GEPC, and submits to NAC <sup>40</sup> for recommendation for ECOWAS approval in order to obtain ETLS product registration number	3 months
2.3 <b>Obtain standard Certificate from GSA</b>	Exporter submits intention to export and GSA conduct premises inspection and tests sample of product to ensure it meets requirements of country of destination	1 day
2.4 <b>Obtain Certificate of Origin</b>	Register as exporter with GCCI (If new) and obtain Certificate of Origin from GCCI, with GRA-Customs endorsing it	1 day
2.5 <b>Obtain Non-traditional Export Form (Ghana Export Form)</b>	Exporter/agent submits completed Non-traditional Export Form (Ghana Export Form). This form could be obtained from the banks or port of exit	20 mins
2.6 <b>Obtain Customs approval for filling container</b>	Exporter/agent seeks approval from Assistant Commissioner of GRA-Customs to load container, for which an officer is assigned for supervision	30 mins

<sup>39</sup> ECOWAS Trade Liberalisation Scheme.

<sup>40</sup> National Approval Committee, responsible for examining applications for approval of products in the ECOWAS ETLS scheme.



# Ghana National Single Window Strategic Plan and Roadmap



2.7	<b>Submit Customs Declaration (BoE)</b>	Exporter/agent electronically submits Customs Declaration (BoE) and attaches all relevant supporting documents	10 mins
2.8	<b>Customs document verification and compliance</b>	Exporter/agent prints and takes hard copy of Declaration and all other relevant supporting documents to designated Officer at Export seat for verification and necessary action	1 hr
2.9	<b>Arrange for transport</b>	Exporter arranges for shipment through shipping agent, with relevant supporting documentation	24 hrs
2.10	<b>Collect empty container from ICD (optional)</b>	Exporter obtains container and transports it to his/her premises for loading of consignment, from the Cargo Terminal via shipping line agent.	24 hrs
2.11	<b>Goods examination</b>	Goods are examined by Customs, NACOB, NSA and other regulating MDAs. When all conditions are satisfied, goods are released for export	2-3 hrs
2.12	<b>Container filling</b>	Exporter/agent fills container with cargo under supervision of Customs, who also ensure that container is sealed afterwards. Exporter/agent transfers the container back to ICD	2-3 hrs
2.13	<b>Shipping release</b>	Shipping agent sends loading advice to Terminal Operator ensuring that Agent has paid all charges	30 mins
2.14	<b>Transfer of container to loading bay</b>	Terminal Operator validates export declaration with loading advice from shipping line before transporting cargo to loading terminal	2 hrs
2.15	<b>Cargo loading</b>	Container is loaded on vessel, after which shipping line agent issues Bill of Lading.	3-4 hrs
<b>3 Pay</b>			
3.1	<b>Goods payment</b>	Importer can pay exporter using any of the following payment methods: <ul style="list-style-type: none"> <li>- direct payment</li> <li>- advance payment</li> <li>- Letter of Credit</li> <li>- open account</li> </ul>	Cash payment: 1 day



## 4.5.2 Import Processes for Selected Commodities

### 4.5.2.1 Analysis for Rice Import Process

The table below describes the key processes and steps involved in the importation of rice via the seaport.

Table 14: Key processes in the importation of rice

Process name	Process steps	Duration
<b>1 Buy</b>		
1.1 Pre-condition: Business registration	Importer obtains Registration Certificate from Registrar General's Department	5 days
1.2 Conclude sales contract	Importer/buyer sources for the commodity (Rice) and concludes sales contract with exporter/seller	1-2 days
<b>2 Ship</b>		
2.1 IDF submission	Importer fills in and submits IDF electronically	10 mins
2.2 FDA importer registration 2.3 FDA product registration	Importer submits application to register as Importer and register product with FDA	30-35 days
2.4 GSA importer registration	Importer submits application to GSA to register as importer	1-3 weeks
2.5 PPRSD importer registration	Importer submits application to PPRSD to register as importer	2-3 days
2.6 FDA import permit for general product and non-controlled substance	Importer submits electronic application via the e-MDA platform to obtain import permit	10 mins
2.7 PPRSD permit application	Importer submits application to obtain PPRSD permit to import	10 mins
2.8 GSA declaration submission	Importer submits GSA declaration on e-MDA platform	10 mins
2.9 Obtain CCVR	Importer submits electronic application and attaches supporting documents via PAARS to obtain CCVR	1-2 days
2.10 Manifest submission	Shipping line submits manifest through GCNet platform to be sent to GCMS (GRA-Customs)	1-3 days
2.11 Submit declaration	Declarant submits Customs declaration/Bill of Entry via GCMS	10 mins
2.12 Duty payment	Declarant makes payment at authorized dealer ban	10 mins
2.13 Customs document verification and compliance	Customs Compliance Officer validates documents	30 mins – 2 hrs
2.14 Cargo release by shipping line	Shipping line releases cargo if all charges have been paid	2 hrs
2.15 Delivery of container for examination	Submission of documents at Freight Station/Terminal to position container for examination	Min: 24 hrs Max: 3-7 weeks



2.16 Goods examination/ inspection	Examination of the rice commodity is conducted by the following stakeholders: <ul style="list-style-type: none"> <li>- PPRSD</li> <li>- GSA</li> <li>- FDA</li> <li>- Customs Chemist analysis</li> <li>- Customs examination</li> </ul>	PPRSD Examination: 1 hr FDA Examination: 1 hr GSA Examination: 1 hr Customs Chemist: 15-30 min Customs examination: 1hr
2.17 Vehicle permit/pass toll	Declarant pays and obtains vehicle toll pass from GPHA	Min: 30mins-1 hr Max: 24hrs
2.18 Waybill collection	Declarant makes all fee payments and obtains the waybill at GPHA	1 -3 hrs
2.19 Release at Preventive gate	Customs Preventive Officers crosscheck documents and release the goods	1-3 hrs
2.20 Terminal audit at the gate	Security official conducts final checking on documentation to ensure that actual cargo is the one that exits the port	1 hr
<b>3 Pay</b>		
3.1 Goods payment	Importer can pay exporter using any of the following payment methods: <ul style="list-style-type: none"> <li>- direct payment</li> <li>- advance payment</li> <li>- Letter of Credit</li> <li>- open account</li> </ul>	For cash payment: 1 day

4.5.2.2 Analysis for Medicine in Doses Import Process

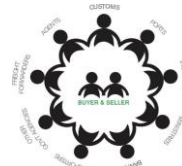
The table below describes the key processes and steps involved in the importation of medicines in doses via the airport.

Table 15: Key processes in the importation of medicines in doses

Process name	Process steps	Duration
<b>1 Buy</b>		
1.1 Pre-condition: Business registration	Importer obtains Registration Certificate from Registrar General's Department	5 days
1.2 Conclude sales contract	Importer/buyer sources for the commodity (Rice) and concludes sales contract with exporter/seller	1-2 days
<b>2 Ship</b>		
2.1 IDF submission	Importer fills in and submits IDF electronically	10 mins
2.2 FDA importer registration 2.3 FDA product registration	Importer submits application to register as Importer and register product with FDA	30-35 days
2.4 GSA importer registration	Importer submits application to GSA to register as importer	1-3 weeks



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2.5	<b>FDA Import Permit for General Product and Non-Controlled Substance</b>	Importer submits application on e-MDA platform to obtain FDA import permit	10 mins
2.6	<b>GSA declaration submission</b>	Importer submits GSA declaration via e-MDA platform	10 mins
2.7	<b>Obtain CCVR</b>	Importer submits electronic application and attaches supporting document via PAARS to obtain CCVR	1 – 2 days
2.8	<b>Manifest submission</b>	Airline/Ground Handling Agency (GHA) submits cargo manifest to GRA-Customs	1 day
2.9	<b>Cargo unloading</b>	GHA unloads cargo from airplane and takes it for scanning	1 hr
2.10	<b>Goods tallying</b>	Bulk breaking of cargo and tallying	4-6 hrs
2.11	<b>Submit Customs declaration (BoE)</b>	Declarant submits Customs Declaration/Bill of Entry electronically via GCNet/GCMS platform	10 mins
2.12	<b>Duty payment</b>	Declarant pays import duty fee at the authorized dealer bank	10 mins
2.13	<b>Customs document verification and compliance</b>	Customs Compliance Officer verifies documents for conformance	30 mins
2.14	<b>Cargo positioning</b>	GHA positions cargo for examination preparation	1 hr
2.15	<b>Goods examination/ Inspection</b>	Examination on the medicine in doses is conducted by the following stakeholders: <ul style="list-style-type: none"> <li>- GSA</li> <li>- FDA</li> <li>- Customs Chemist</li> <li>- Customs examination officer</li> </ul>	GSA examination: 1 hr FDA examination: 1 hr Customs Chemist: 15-30 min Customs examination: 1 hr
2.16	<b>Waybill collection</b>	Declarant pays all charges to the GHA and collects a waybill from GHA	1 -3 hrs
2.17	<b>Release at Enforcement Unit</b>	Customs Enforcement officer crosschecks and releases declarant for exit	1 hr
2.18	<b>Final checking at the main gate</b>	Security official conducts final checking on documentation to ensure that actual cargo is the one that exits the port	1 hr
<b>3 Pay</b>			
3.1	<b>Goods payment</b>	Importer can pay exporter using any of the following payment methods: <ul style="list-style-type: none"> <li>- direct payment</li> <li>- advance payment</li> <li>- Letter of Credit</li> <li>- open account</li> </ul>	For cash payment: 1 day



4.5.2.3 Analysis for Auto Spare Parts Import Process

The below table describes the key processes and steps involved in the importation of auto spare parts via the seaport.

Table 16: Key processes in the importation of auto spare parts

Process name	Process steps	Duration
<b>1 Buy</b>		
1.1 Pre-condition: Business registration	Importer obtains Registration Certificate from Registrar General's Department	5 days
1.2 Conclude sales contract	Importer/buyer sources for the commodity (Rice) and concludes sales contract with exporter/seller	1-2 days
<b>2 Ship</b>		
2.1 IDF submission	Importer fills in and submits IDF electronically	10 mins
2.2 GSA importer registration	Importer submits application to GSA to register as importer	1-3 weeks
2.3 Obtain CCVR	Importer submits electronic application and attaches supporting documents via PAARS to obtain CCVR	1 – 2 days
2.4 Manifest submission	Shipping line submits electronic manifest to GRA-Customs	1-3 days
2.5 Submit Customs declaration	Declarant submits customs declaration/bill of entry via the GCNet/GCMS platform	10 mins
2.6 Duty payment	Declarant makes payment at authorized dealer bank	10 mins
2.7 Customs document verification and compliance	Customs Compliance officer validates the documents	30 mins-2 hrs
2.8 Cargo release by shipping line	Shipping line releases cargo if all charges have been paid	2 hrs
2.9 Delivery of container for examination	Submission of documents at Freight Station/Terminal to position container for examination	2 days
2.10 Goods examination/ inspection	Examination of auto spare parts is conducted by the following stakeholders <ul style="list-style-type: none"> <li>- GSA</li> <li>- Customs</li> </ul>	1 hr (GSA) 1 hr (Customs)
2.11 Vehicle permit/pass toll at GPHA	Declarant pays and obtains vehicle toll pass from GPHA	Min: 30 mins-1 hr Max: 24 hrs
2.12 Waybill collection	Declarant pays all fees and obtains waybill at GPHA/Freight Station	1 -3 hrs
2.13 Release at Preventive gate	Customs Preventive officer crosschecks documents and releases goods	1-3 hrs





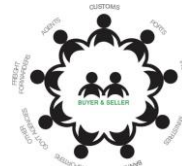
2.14 Terminal audit at gate	Security official conducts final checking of documentation to ensure that actual cargo is the one that exits the port	1 hr
<b>3 Pay</b>		
3.1 Goods payment	Importer can pay exporter using any of the following payment methods: <ul style="list-style-type: none"> <li>- direct payment</li> <li>- advance payment</li> <li>- Letter of Credit</li> <li>- open account</li> </ul>	For cash payment: 1 day

4.5.2.4 Analysis for Passenger Vehicles/Trucks Import Process

The table below describes the key processes and steps involved in the importation of passenger vehicles/trucks via the seaport.

Table 17: Key processes in the importation of passenger vehicles/trucks

Process name	Process steps	Duration
<b>1 Buy</b>		
1.1 Pre-condition: Business registration	Importer obtains Registration Certificate from Registrar General's Department	5 days
1.2 Conclude sales contract	Importer/buyer sources for the commodity (Rice) and concludes sales contract with exporter/seller	1-2 days
<b>2 Ship</b>		
2.1 IDF submission	Importer fills in and submits IDF electronically	10 mins
2.2 Application for NPA permit/exemption	<ul style="list-style-type: none"> <li>• Importer/agent requests permit from NPA if it is a tanker trailer</li> <li>• Importer can also submit an application for exemption and attaches supporting documents requesting exemption via the e-MDA platform</li> </ul>	30 mins
2.3 Obtain CCVR	Importer submits electronic application and attaches supporting documents via PAARS to obtain CCVR	1 – 2 days
2.4 Manifest submission	Shipping line submits cargo manifest to GRA-Customs	1 – 3 days
2.5 Takes vehicle delivery from port	Terminal operator takes delivery of vehicle to terminal	
2.6 Submit declaration	Declarant submits Customs declaration/Bill of Entry on GCMS platform	10 mins



2.7	<b>Duty payment</b>	Declarant makes payment at the authorized dealer bank	10 mins
2.8	<b>Customs Document verification and compliance</b>	Declarant submits documents for validation to Customs Compliance Officer	30 mins-2 hrs
2.9	<b>Vehicle release by shipping line</b>	Shipping line releases the vehicle if all charges have been paid	2 hrs
2.10	<b>Vehicle examination</b>	Officer in charge inspects vehicle	Customs examination: 1 hr
2.11	<b>DVLA vehicle registration</b>	Importer registers vehicle at DVLA Office	30 mins
2.12	<b>Vehicle permit/pass toll at GPHA</b>	Declarant pays and obtains vehicle toll pass from GPHA	Min: 30 mins-1 hr Max: 24 hrs
2.13	<b>Waybill collection</b>	Declarant pays all fees and obtains the waybill from GPHA /Freight Station	1-3 hrs
2.14	<b>Release at Preventive gate</b>	Customs Preventive officer crosschecks documents and releases the goods	1-3 hrs
2.15	<b>Terminal audit at the gate</b>	Security official conducts final checking on documentation to ensure that actual cargo is the one that exits the port	1 hr
<b>3 Pay</b>			
3.1	<b>Goods payment</b>	Importer can pay exporter using any of the following payment methods: <ul style="list-style-type: none"> <li>- direct payment</li> <li>- advance payment</li> <li>- Letter of Credit</li> <li>- open account</li> </ul>	For cash payment: 1 day

#### 4.6 ICT Environment

The main automated trade services in Ghana today are the Customs systems, namely GCMS and PAARS, the Ghana's Trading Hub (GTH), and the GCNET platform. These are shown graphically in the diagram below:

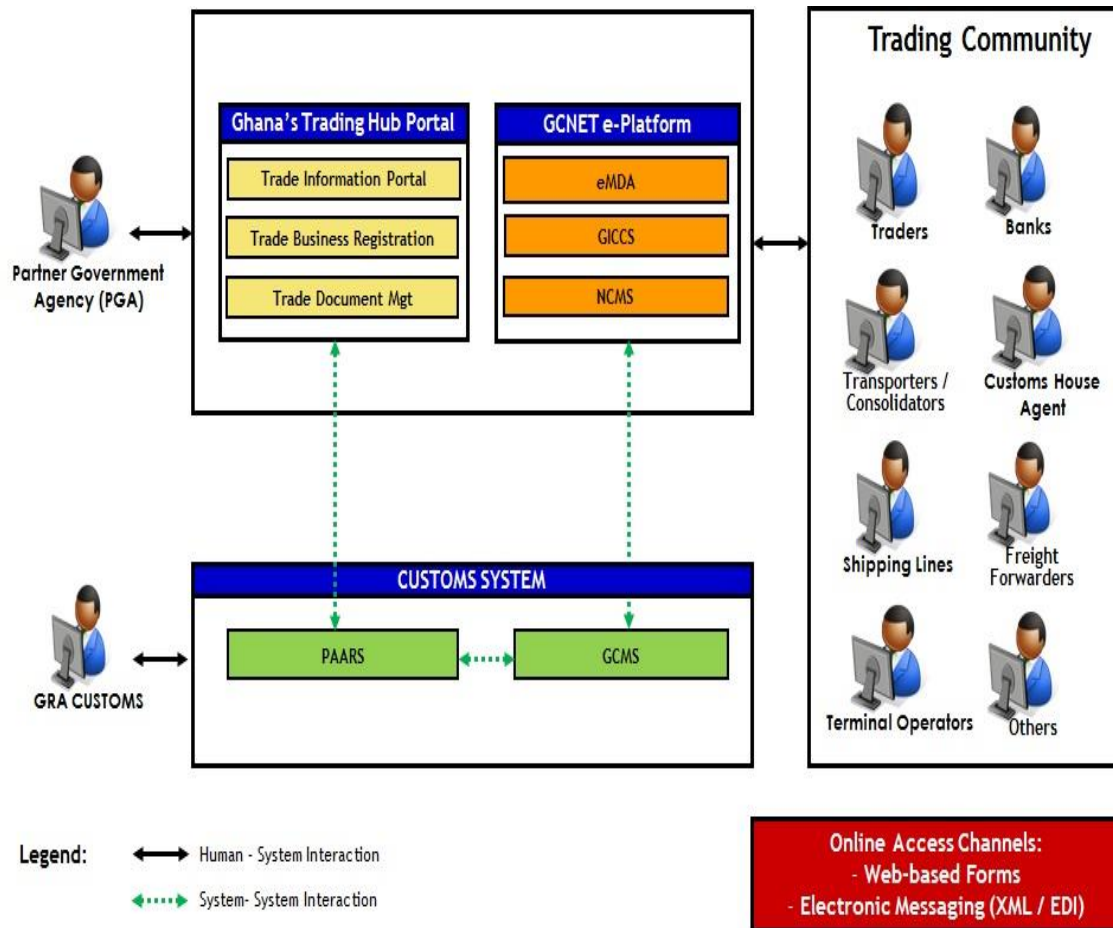


Figure 3: Interaction with existing trade facilitation systems

As each of these portals or systems supports different processes and services, therefore users often need to access more than one system and with multiple data submission to receive different services along the trade supply chain. Data among most of these portals or systems are not shared, which leads to instances of data entry duplication.

Currently, many PGAs use the eMDA portal for the government approval process, where they access the data and supporting documents for the requested approvals—permits, certificates and exemptions. At this stage, the PGA's internal processing depends on manual intervention to complete processing of LPCO applications. The specific services provided by these systems are summarized in the following Table 18:



Table 18: Systems in use for trade facilitation

Portal/system	Services delivered	Services/Clients
<b>Ghana's Trading Hub Portal</b>	Web-based portal disseminating trade-related information and trade tools to the trading community; Business registration and trade document management	public, trade community
<b>GCNET e-Platform</b>	eMDA: online submission, approval and distribution of a wide range of trade-related documentation by Ministries, Departments and Agencies (MDAs)	traders, MDAs, banks
	GICCS: data entry, submission, validation, amendments of BoE (declaration), cargo & house manifest, creation and exchange of DO, CMR, transit bond, and transit truck assignment	Terminal operators, GPHA, Customs, consolidators, SIC, freight forwarders, traders (in pilot)
	NCMS: management of clients (PGAs, traders)	GCNet
<b>Customs system</b>	PAARS: web-based system to enable trade parties/systems to submit importation documents including invoices; regulatory agency permits/licences; bank/Forex data; Bill of Lading; packing list; manifest for assessment and issuance of report to be used by Customs and other agencies for risk assessment and clearance at the port before arrival of cargo	traders, MDAs, banks, Customs
	GCMS: The Ghana Customs Management System is the Business Process Application for processing clearing and related documents and for calculating and paying all Customs duties. The application is used to process all imports, exports and transit goods to inland neighbouring countries	Ghana Customs

The persistence of paper-based processing in trade results in duplication of documents, delays in data submission and integrity issues. In the present ICT environment, it is still very difficult to ensure a trusting relationship among agencies. This leads to multiple inspections of documents and goods. Ideally, the agencies and their support systems should facilitate trust in the verification carried out by officers of the same agency or other agencies.

#### 4.6.1 Current systems integration environment for trade facilitation

GRA-Customs systems (PAARS, GCMS) provide integration to a few other stakeholders in various ways. Most of the other agencies have access to GRA systems through a VPN-channel or the Internet. The same applies to the traders. A few have system-to-system integration using XML. Services are also available for notifying other stakeholders on different events regarding applications, supporting documents or other updates. This scenario is presented pictorially below.

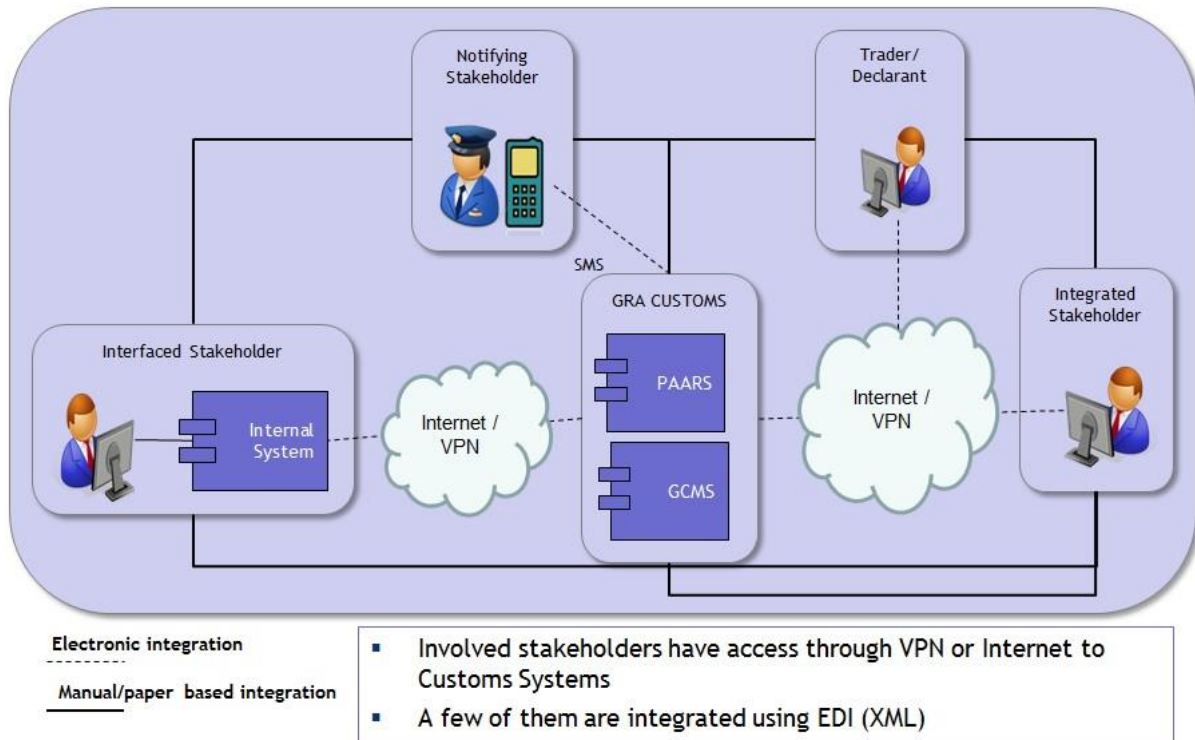


Figure 4: Current integration principles

The current Customs Technical Services Bureau (CTSB) environment can provide high availability and security of GRA Customs systems deployed internally. With the system in this state, users are not expected to experience any downtime, even in the event of any incident or disaster at the Bureau. However, in case of a major incident, a provision should be made for Internet access for the users working directly from the GRA offices who will then be able to have access to the data repository at the service provider data centre. The ultimate goal must be to achieve a real time replication.

The current security controls are very good from the perspective of a Single Window.

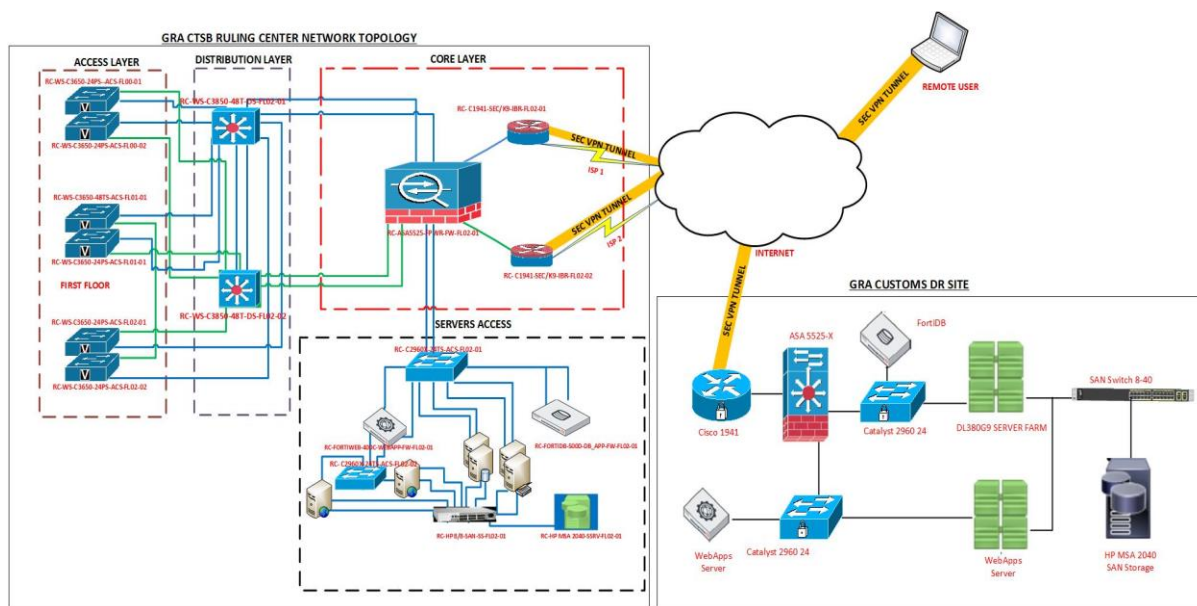


Figure 5: Existing Customs Technical Services Bureau ICT Infrastructure

## 4.6.2 Stakeholder ICT Readiness

The current ICT readiness for most of the stakeholders was assessed through site visits, an ICT questionnaire and participation in a workshop. The following conclusions were reached:

- The ICT readiness varies considerably from one stakeholder to another. Consequently, the Single Window platform must be flexible and able to be adjusted according to each stakeholder’s specific situation
- Many of the current integrations and communications between traders and agencies are manual and paper-based
- Existing electronic integration is based on processes that are in a need of further development. There is an urgent need for business process reengineering
- The level of ICT maturity among the stakeholders varies considerably. Some have a developed ICT application, infrastructure and organization deployed, while others are only at the initial stages of the ICT modernization phase
- The basic infrastructure regarding network and power supply is still somewhat unreliable
- Digital signature is a critical component in a Single Window solution but it is not yet being used in the border trade process in Ghana
- TIN number should be further developed and used to ensure a single identity for organizations
- Registrar General Database can be used to validate business entity registrations for other government agencies
- Even though many positive Single Window initiatives and implementations have been made there remains a lack of strategy, architecture and a roadmap, which makes the long-term objective and vision unclear.

A table summarizing the ICT readiness among the stakeholders is presented in ANNEX D.

The GNSW platform should offer interfaces for both EDI-integrations and interactive web interfaces to stakeholders. A detailed report on the proposed future ICT scenario is presented in Section 5.8.



## 4.7 Legal Analysis of Legislation relevant to the Ghana National Single Window

### 4.7.1 Introduction

The existence or establishment of a sound legal framework is essential to the implementation and operation of a national Single Window that supports and ensures transparency and security in trade data information exchange.

The purpose of this analysis is to provide a summary of the legal environment that exists in Ghana in relation to the operation of a national Single Window facility.

### 4.7.2 Review of Legislation

The legislation reviewed included laws on:

- Data protection and privacy
- Electronic transaction and e-commerce
- Computer and cybercrime related crime
- Electronic evidence
- Customs and import and export
- Dispute resolution.

Reference is made to Recommendation 35 of the United Nations Economic Commission for Europe (UNECE): Establishing a legal framework for international trade Single Window.

#### 4.7.2.1 *Data Protection and privacy*

Through the Ministry of Communication and the assistance of loans provided by the World Bank and the Government of China, the Government of Ghana has developed substantive new or revised key ICT-related legislation and subsidiary legislation since 2006, including the following:

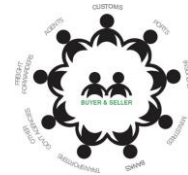
- Data Protection Act, 2012 (Act 843)
- Electronic Transactions Act, 2008 (Act 772)
- Electronic Communications Act, 2008 (Act 775).

The enactment of the Data Protection Act makes provision for the protection of the use and disclosure of personal data. The right to privacy where personal data is processed is also recognized in article (18) (2) of the 1992 Constitution.

Act 843 establishes the Data Protection Commission whose object, as stated in section 1 of the Act, is to:

“(a) protect the privacy of the individual and personal data by regulating the processing of personal information, and (b) provide the process to obtain, hold, use or disclose personal information.”

The Data Protection Commission is mandated to implement and monitor compliance with the provisions of Act 843, investigate complaints, and keep and maintain a Data Protection Register. The Act provides a regulatory framework for the protection of personal data.



The application of major data protection principles is provided for in sections 17 to 34 of the Act. These include the protection of the privacy of an individual and legislative requirement on the processing of personal data in Ghana and beyond in a lawful manner; the requirement for consent, opportunity to raise objections, and security measures to be taken to prevent leakages and theft of data collected by a legitimate person. The Act further requires data collectors to register with the Commission. The Commission may refuse an application or cancel a registration. The sale of personal data is expressly prohibited. The processing of data is an offence under section 56 and punishable with a fine or term of imprisonment or both.

The functions of the Commission to ensure compliance with the provisions of Act 843 and provide the regulatory structure for the use and sharing of data should provide assurance to investors transacting business through the national single window.

The right of an individual to access information held by a government agency is enshrined in the proposed Right to Information Bill, which is before Parliament. The Bill makes provision for the constitutional right to information held by a public institution, subject to the exemptions that are necessary and consistent with the protection of the public interest in a democratic society, to foster a culture of transparency and accountability in public affairs.

#### 4.7.2.2 *Electronic transactions and e-Commerce*

The Electronic Transactions Act makes provision for the regulation of electronic communications and related transactions. It specifically makes provision for the recognition of digital signatures and digital certificates. Note the exception, however to negotiable instruments defined in the Bill of Exchange Act, 1961 (Act 55). Section 25 of the Electronic Transactions Act mandates government institutions and bodies to accept documents electronically in line with current modern trends. The process for filing and submission of documents with a public agency is catered for in sections 25 and 26. Extensive provision is made for the protection of computer and databases and for the National Information Technology Agency to be the repository of digital signatures.

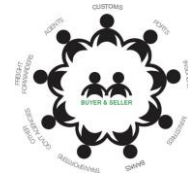
The Electronic Communications Act was enacted to provide for the regulation of electronic communications, including the use of electronic-magnetic spectrum.

#### 4.7.2.3 *Cybercrime*

Cybercrime is addressed by the following legislation:

- The Criminal Offences Act, 1960 (Act 29) designates what a crime is and provides for related sanctions
- The Courts Act, 1993 (Act 459) provides for the criminal jurisdiction of the courts
- The Anti-Money Laundering Act, 2008 (Act 749) establishes a Financial Intelligence Centre and provides for the security of computer systems and networks by prohibiting the unauthorized manipulation of financial records and financial transactions
- The Anti-Terrorism Act, 2008 (Act 762) criminalizes the use of a computer or computer network for purposes of terrorism and provides for the monitoring of electronic funds and digital documents





- The Economic and Organised Crime Act, 2010 (Act 804) gives officers of the Economic and Organised Crime Office powers to investigate any form of economic and organized crime, including cybercrime, and to prosecute offenders. Similar provision is made in Act 772
- The Mutual Legal Assistance Act, 2010 (Act 807) makes provision for the Republic of Ghana to enter into agreement with a foreign state or foreign entity in respect of criminal matters.

All of the above legislation, in one way or another, deals with cybercrime in Ghana, particularly the Electronic Transactions Act, which expressly criminalizes cybercrime activities in Ghana. The Act, though not a comprehensive law on cybercrime, consolidates the relevant cybercrime laws that hitherto were scattered in several conventional criminal laws in Ghana.

In the Electronic Transactions Act, sections 107 to 140 set out specific acts that constitute cyber offences. Sections 107 to 115 also incorporate the provisions of the Criminal Offences Act that pertain to the tackling of cybercrime. These provisions relate to stealing, appropriation, representation, charlatanic advertisement, attempt to commit crimes, aiding and abetting, felony, conspiracy, and forgery. They apply with the necessary modifications as cyber offences under the Act when an electronic medium or electronic agent is used.

The Act also creates room for the prosecution of offences such as unauthorized access to a protected computer system, obtaining electronic payment medium falsely, and electronic trafficking.

Section 123 of the Act makes a general provision for cyber offences. It provides that any offence under a law, which is committed in or in part by use of an electronic medium or in electronic form, is deemed to have been committed under that Act and its provisions.

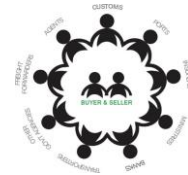
The provisions of sections 25 and 26 of the Anti-Money Laundering Act ensure that a computer is not hacked into or used for any unlawful purpose; while section 2 of the Anti-Terrorism Act prohibits the carrying out of terrorism or a terrorist related activity through the disruption of a computer system. Section 2(1) (h)(i) of the Anti-Terrorism Act defines a terrorist act as including “an act performed in furtherance of a political, ideological, religious, racial or ethnic cause which is designed or intended to disrupt a computer system or the provisions of services related to communications”.

To ensure the effective enforcement of the provisions of the Electronic Transactions Act, sections 98 and 99 of that Act gives law enforcement officers extensive powers in addition to the powers of arrest, search and seizure normally given to law enforcement agencies by law. Section 98 empowers a law enforcement officer to seize a computer, electronic record, program, information, document or object in executing a warrant under the Act if the officer has reasonable grounds to believe that an offence under the Act has been or is about to be committed.

Owing to the technical and complex nature of cybercrime activities, section 99 of the Act permits a law enforcement officer in executing a warrant, to be accompanied by an authorized person. The authorized person is required to provide the officer with the necessary assistance for the conduct of effective investigation and prosecution of cybercrime cases. This type of assistance includes:

- (a) having access to information, a code or technology which has the capability of retransforming or unscrambling an encrypted programme or electronic record held in or available to the computer into readable and comprehensible format;
- (b) using the computer to search for any programme or electronic record held in or available to the computer.

With respect to jurisdictional matters relating to cybercrime in Ghana, criminal law is generally limited



by its inherent territoriality. To successfully prosecute a criminal case under a country's domestic law, the crime in question in most instances should have been committed within the territorial borders of that country.

The issue of jurisdiction is central to the prosecution of cybercrime cases. This is primarily due to the location of both the victim and the perpetrator. More often than not, one of the parties is located in a different jurisdiction, making the prosecution of cybercrime cases very cumbersome. Consequently, the prosecution of cybercrime cases has to a large extent been unsuccessful due to the issues regarding the jurisdiction in respect of which the crime was committed.

This issue of jurisdiction has, however, been addressed by section 142 of the Electronic Transactions Act, which states that:

- “(2) This Act shall apply if, for the offence in question
- (a) the accused was in the country at the material time;
  - (b) the electronic payment medium, computer or electronic record was issued in or located or stored in the country at the material time;
  - (c) the electronic payment medium was issued by a financial institution in the country; or
  - (d) the offence occurred within the country, on board a Ghanaian registered ship or aircraft on a voyage or flight to or from this country at the time that the offence was committed, whether paragraph (a), (b), or (c) applies.”

The import of this provision is that it lays to rest the issue of territoriality, which hitherto limited the successful prosecution of cybercrime cases in Ghana.

Section 56(4) of the Courts Act provides that a person, irrespective of nationality, is liable to be tried and punished in Ghana if that person does an act which if done within the jurisdiction of the courts of Ghana would have constituted an offence, and which is authorized or required by a Convention or Treaty to which Ghana is a signatory to be prosecuted and punished in Ghana wherever the offence was committed.

In 2010, Ghana passed the Mutual Legal Assistance Act, with the object of establishing a comprehensive legal framework for the implementation of agreements on mutual legal assistance to facilitate the prosecution of transnational crimes. The Act addresses issues of international cooperation in the fight against transnational crimes such as requests for investigative measures, requests by foreign states for confiscation of proceeds of crime, admissibility in Ghana of evidence obtained outside Ghana, and other miscellaneous provisions.

The law enforcement agencies in Ghana, including the Ghana Police Service—particularly the Criminal Investigation Division and the Economic and Organised Crime Office—frequently collaborate with international organizations such as the International Crime Police Organization (Interpol) to curb the activities of “cyber criminals”.

#### 4.7.2.4 *Electronic evidence*

Having regard to the novel nature of electronic evidence and its attendant complexities in relation to Ghana's law on evidence, primarily the Evidence Act, 1975 (N.R.C.D. 323), **the** Electronic Transactions



Act seeks to fill any lacunae that may exist in the admissibility of electronic records as well as in the evidential weight to be attached to these electronic records.

Section 7(1) of the Electronic Transactions Act provides that an electronic record shall not be denied admissibility as evidence in legal proceedings except as provided in the Act. The import of this provision is that the Act has created a separate dispensation for the admissibility of electronic records as distinct from the general evidentiary rules under the Evidence Act.

Section 7(2) of the Electronic Transactions Act also specifies the criteria to be used by a court in assessing the evidential weight of an electronic record. The section mandates the court to have regard to the following:

- (a) the reliability of the manner in which the electronic record was generated, displayed, stored or communicated,
- (b) the reliability of the manner in which the integrity of the information was maintained,
- (c) the manner in which its originator was identified, and
- (d) any other facts that the court may consider relevant.

The continuous advancement in ICT and the widespread use of the Internet have paved the way for cybercrime activities to gain grounds in Ghana. This has further compounded the problems faced by law enforcement officers in their attempt to monitor cyberspace for possible culprits.

In Ghana's attempt to curtail the menace of cybercrime through the massive efforts by the country's law enforcement agencies, various issues have been brought to the fore from which lessons may be learnt. These lessons serve as a roadmap to chart the way forward in the fight against cybercrime in Ghana and include:

- (a) the need for the State to continually cooperate with other countries and international organizations poised to combat cybercrime due to the transnational nature of cybercrime;
- (b) the vital need for the State to invest in the training and equipping of the law enforcement officers to keep them up-to-date on the advances in, sophistication and complexities of cybercrime activities to ensure that they have the expertise necessary for the effective investigation and prosecution of cybercrime cases;

#### 4.7.2.5 *Dispute Resolution*

The Electronic Transactions Act establishes an Information Technology Communication Tribunal. In addition, there is an Alternative Dispute Resolution Act, (Act 798).

#### 4.7.3 Recommendations

The GNSW Programme should undertake a complete review of existing mandates and laws to identify areas of overlap and conflict. In addition, it is recommended that the AG's office works closely on the review and adoption of incoming mandates and laws with the NTFC and the GNSW Committees.

Regarding the organizational structure for the operation of the Single Window, it is proposed that the Customs Act, 2015 (Act 891) be amended before section 3 to make provision for the establishment of a lead agency trading hub to manage and supervise the operation of the Single Window. This will provide the agency with the legal authority and backing to manage and supervise the operation of the Single Window and may include powers of enforcement to curb fraud and other criminal offences as well as ensure collaboration with related agencies and public institutions.



Alternatively, section 150 of the Customs Act could be amended to include providing the Minister with the power to make regulations, on the recommendation of the Board, to prescribe the conduct, manner of operation of the Single Window, the responsibilities of the agency and generally, the provisions indicated in the proposed draft regulations and the fees to be paid.

The proposal to include the processing fee of one per cent in the proposed amendments will require a further amendment to the Act if the fee is to be increased or decreased at a later date.

There is a need for effective collaboration between government agencies and possibly an agreement between relevant agencies for the dissemination and sharing of information.

Data-sharing standards and mechanisms will have to be put in place. Provision may be made by way of an amendment to the Customs Act or the regulations.

The legislation provides a legal basis for the implementation of the Single Window facility. The organizational structure will require further consideration and action. Clearer procedures will need to be established with legal authority or backing to provide well-defined lines of authority, particularly with respect to demands for data from and through the Single Window.

The Electronic Transactions Act addresses the functional and legal equivalence of electronic and paper documents, and the equivalence of electronic to handwritten signature. It also addresses the authenticity and integrity of electronic signatures. The requirements for applying this Act to the GNSW environment should be assessed, and appropriate action taken where required.

## 4.8 International Benchmarks—How Ghana Compares with Other Countries

Several measures of trade facilitation performance are used internationally, the most popular being the World Bank's *Trading Across Borders* (TAB) report and Logistics Performance Index (LPI). Each of these, and the current rankings of Ghana within these measures, are explained below.

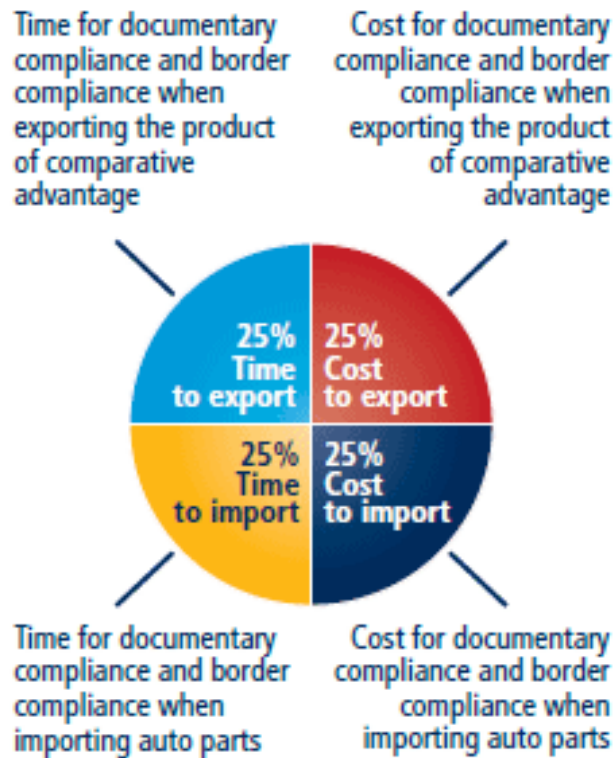
### 4.8.1 Trading Across Borders report:

The TAB report is part of the more extensive Ease of Doing Business report from the World Bank.<sup>41</sup> As illustrated below, the TAB measures the time and cost (excluding tariffs) associated with documentary and border compliance, within the overall process of exporting or importing a shipment of goods.

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<sup>41</sup> [www.doingbusiness.org/data/exploretopics/trading-across-borders](http://www.doingbusiness.org/data/exploretopics/trading-across-borders)

Rankings are based on distance to frontier scores for eight indicators



Note: The time and cost for domestic transport and the number of documents to export and import are measured but do not count for the rankings.

The TAB report also collects information on the cost of domestic transport to the border and the number of documents required to clear goods through the various regulatory process for import, export, but these are not used in the calculation of the TAB rankings.

The data on trading across borders are gathered through a questionnaire administered to *local* freight forwarders, customs brokers and traders (as opposed to foreign operators, as is the case for the LPI – see below). Questionnaire responses are verified through several rounds of follow-up communication with respondents, and by contacting third parties and consulting public sources.

#### 4.8.1.1 Ghana’s Performance as Reported in the Trading Across Borders Report

Ghana currently ranks 171 out of 189 globally in the TAB.<sup>42</sup> This compares to a ranking of 103 for Burkina Faso, 116 for Benin, and 142 for Côte d’Ivoire. Within the Sub-Saharan Africa region, Ghana ranks 37 out of 48. Rankings for Burkina Faso, Benin and Côte d’Ivoire are 9, 14 and 23, respectively.

<sup>42</sup> [www.doingbusiness.org/data/exploreconomies/ghana/trading-across-borders/](http://www.doingbusiness.org/data/exploreconomies/ghana/trading-across-borders/)



As can be seen from the table below, the time required for border formalities and export documentation compliance in Ghana is 108 and 89 hours per consignment, respectively. This compares to 75 and 108 hours, respectively, for Burkina Faso and 72 and 52 hours respectively for Benin. Similarly, the cost of border formalities and export documentation compliance in Ghana is US\$ 490 and 155 respectively, compared with US\$ 111 and 86 for Burkina Faso.

Comparisons regarding importing figures for Ghana compared to its neighbours are even more striking, with the time and cost for border and documentary compliance being approximately twice as high in Ghana compared to Burkina Faso. Figures for Benin, Côte d’Ivoire, South Africa and Swaziland (the best performing country in Sub-Saharan Africa) are also presented in the table below for information. Costs are given in United States dollars.

Table 19: Time and cost for border and documentary compliance

Country	TAB Ranking	Time to Export: Border Compliance (hours)	Cost to Export: Border Compliance	Time to Export: Documentary Compliance (hours)	Cost to Export: Documentary Compliance	Time to Import: Border Compliance (hours)	Cost to Import: Border Compliance	Time to Import: Documentary Compliance (hours)	Cost to Import: Documentary Compliance
<b>Ghana</b>	<b>171</b>	<b>108</b>	<b>490</b>	<b>89</b>	<b>155</b>	<b>282</b>	<b>725</b>	<b>282</b>	<b>302</b>
Burkina Faso	103	75	111	108	86	102	265	120	197
Benin	116	72	387	57	80	72	579	59	529
Côte d’Ivoire	142	110	364	120	136	125	456	89	267
Swaziland	30	3	134	4	76	5	134	4	76
South Africa	130	100	428	68	170	144	657	36	213

Source: World Bank *Trading Across Borders* report 2016 - [www.doingbusiness.org/rankings](http://www.doingbusiness.org/rankings)

Clearly, these figures indicate that there is much need for improvement, and reducing the time and cost of border documentation and procedures is exactly what the GNSW programme is designed to address. Based on the experience of Single Window implementations in other countries, West Blue estimates that the GNSW programme will reduce the cost and time of international trade (import, export and transit) in Ghana by 50 per cent over the next five years. This could, other things being equal, increase the global ranking of Ghana in the TAB from the current 171 to 99 by 2021. Similarly, the ranking within the Sub-Saharan Africa (SSA) regions could increase from 37 to 8 (out of 48 counties) over the same period.

#### 4.8.2 Logistics Performance Index<sup>43</sup>

The LPI is another important measure of logistics performance. It is based on a *worldwide survey of operators* (global freight forwarders and express carriers) and provides user feedback on the logistics “friendliness” of the countries in which they operate and of those with which they trade. Feedback from operators is supplemented by quantitative data on the performance of key components of the logistics

<sup>43</sup> <http://lpi.worldbank.org/>



chain in the country of work. It measures performance along the logistics supply chain within a country and offers two different perspectives: international and domestic.

The international LPI<sup>44</sup> provides qualitative evaluations of a country in six areas by its trading partners—logistics professionals working outside the country. These are:

- Efficiency of customs and border management clearance (“Customs”)
- Quality of trade and transport infrastructure (Infrastructure”)
- Ease of arranging competitively priced shipments (Ease of arranging shipments”)
- Competence and quality of logistics services—trucking, forwarding, and Customs brokerage (“Quality of logistics services”)
- Ability to track and trace consignments (“Tracking and tracing”)
- Frequency with which shipments reach consignees within scheduled or expected delivery times (“Timeliness”)

The domestic LPI<sup>45</sup> provides both qualitative and quantitative assessments of a country by logistics professionals *working inside the country*. It includes detailed information on the logistics environment, core logistics processes, institutions, and performance time and cost.

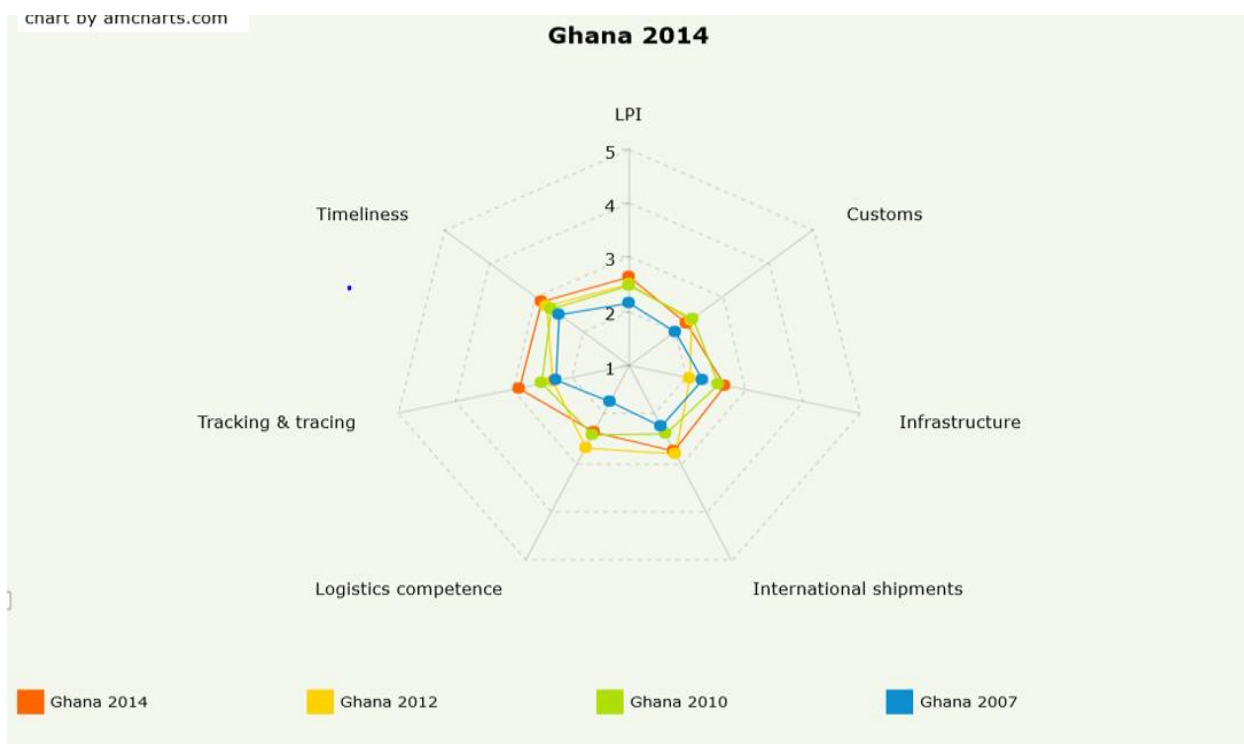
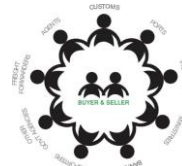
The Index ranges from 1 to 5, with a higher score representing better performance. Respondents evaluate eight markets on the six core dimensions outlined above on a scale from 1 (worst) to 5 (best). The markets are chosen based on the most important export and import markets of the respondent's country. Scores for the six areas are averaged across all respondents and aggregated to a single score using principal components analysis.

#### 4.8.2.1 *Ghana's LPI ranking*

In the 2014 LPI, Ghana ranked 100 out of 160 countries. As can be seen from the graph below, Ghana made steady progress on the LPI within 7 years, improving from the rank of 125 in 2007.

<sup>44</sup> <http://lpi.worldbank.org/international>

<sup>45</sup> <http://lpi.worldbank.org/domestic>



Source: World Bank Logistics Performance Index 2014

<http://lpi.worldbank.org/international/scorecard/radar/254/C/GHA/2014 - chartarea>

The 2014 scores for Ghana on the six measurement criteria compared with its neighbours (Burkina Faso, Benin, Côte d’Ivoire), South Africa (best performer in Sub-Saharan Africa) and Germany (number one performer globally) as presented in the table and graph below illustrate the work required to continue this improvement in Ghana’s logistics performance.

Country Score Card: Ghana 2014 | Logistics Performance Index

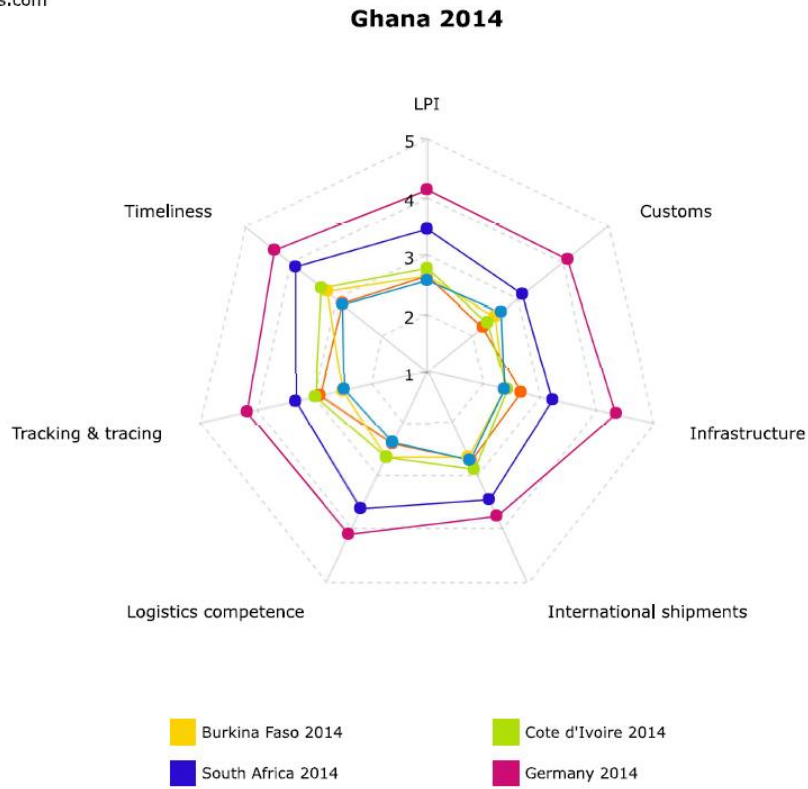
(Toggle Rank and Score for Subindicators)

Country	Year	LPI Rank	LPI Score	Customs ?	Infrastructure ?	International shipments ?	Logistics competence ?	Tracking & tracing ?	Timeliness ?
Germany	2014	1	4.12	4.10	4.32	3.74	4.12	4.17	4.36
South Africa	2014	34	3.43	3.11	3.20	3.45	3.62	3.30	3.88
Cote d'Ivoire	2014	79	2.76	2.33	2.41	2.87	2.62	2.97	3.31
Burkina Faso	2014	98	2.64	2.50	2.35	2.63	2.63	2.49	3.21
Ghana	2014	100	2.63	2.22	2.67	2.73	2.37	2.90	2.86
Benin	2014	109	2.56	2.64	2.35	2.69	2.35	2.45	2.85



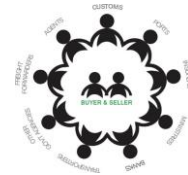


chart by amcharts.com



Source: World Bank Logistics Performance Index 2014

<http://lpi.worldbank.org/international/scorecard/radar/254/C/GHA/2014> - chartarea



## 5 RECOMMENDED FUTURE SCENARIO

### 5.1 Overview

The future scenario has been designed on the basis of the results of the assessment and analysis of the current conditions of Ghana's international trade procedures, ICT infrastructure, legal environment, organizations, human capacity and change requirements.

Some general principles, conceptual frameworks and recommendations from international best practices are utilized as references. These include, among others, the *Business Process Analysis Guide to Simplify Trade Procedures* (2009), *Electronic Single Window Legal Issues: Capacity Building Guide* (2012), *Single Window Planning and Implementation Guide* (2012),<sup>46</sup> and the UN/CEFACT Recommendation 18: Facilitation measures related to international trade procedures. All of these provide good guidance for identifying possible improvements and proposing solutions for a better future scenario.

Business process improvement for efficient cross-border trade can take various forms. Options include policy reforms, organizational structure change, elimination and merging of redundant procedures, simplification of documentation requirements, improvement of relevant laws and regulations in a way that better balances controlling and facilitating business operations, transformation of physical papers into electronic documents, automation of internal operations of the government agencies, and automatic electronic information exchange between government agencies for data cross-validation and speeding up the international trade process.

The proposed future trade transactions, procedures and information flow are about simplification, streamlining and automation, but they must be enabled by other supporting measures also. Therefore, recommendations related to future electronic transactions, ICT applications, their functionalities and services, ICT infrastructure, supporting laws and regulation, and change management measures are also proposed.

### 5.2 Realigning Existing Process into a Seamless Integrated National Single Window

From the analysis of the current situation, we can observe several bottlenecks and improvement opportunities, including non-value-added operations, redundancy and inefficiency in the existing procedural and documentary requirements of Ghana's international trade. Some of the main bottlenecks and some general areas for improvement of the country's cross-border regulatory, transport, financial and commercial procedures can be summarized again as follows:

During the entire cross-border trade transactions of a consignment, the trader is required to prepare and submit the same or a similar set of documents to different government agencies. This is also true for shipping lines/airlines and other logistics service providers, which are required to interact with government authorities with multiple sets of similar documents.<sup>47</sup>

Both front-end public services and the internal operations of most regulatory agencies rely on paper-based handling and transactions. Even though some front-end services allow business users to submit electronic applications, hard copies of this information are still required in addition.

<sup>46</sup> United Nations publications.

<sup>47</sup> For example, manifests are required to be submitted to different government agencies.



Collaboration between different government authorities, especially those involved during the pre-arrival and arrival stage of the same product, is not fully streamlined, with little integration of automatic information exchange among them.

Similarly, the interactions between different business actors, including traders and several logistics-related actors (e.g. traders, Customs House agents, freight forwarder, and terminal operators), are carried out manually with several physical multiple-paper documents.

The current paper-based operations make it difficult to validate the information within that paperwork, especially when handling paper documents from several PGAs and when working between different business actors along the supply chain.

The above difficulty creates cost and consumes time in the coordination of work with and among regulatory agencies and business stakeholders during each consignment.

The percentage of physical intrusive inspection of goods is high. This makes inspections costly and time-consuming.

Several measures must be developed to improve the current situations of Ghana's trade supply chain operations. The existing processes can be simplified, automated and realigned into a seamless integrated National Single Window platform, in the following recommended scenario:

- **Integrated Business Registrations**

Electronic Single Window services should be developed to provide one-stop services for business entities to register and obtain business licences to become legitimate exporters and importers. These registration services include new importers/exporters licences, as well as the renewal of licences.

A business entity should be able to submit a single set of electronic data and electronic supporting documents to obtain an importer and/or exporter licence that is recognized by all the relevant authorities. Once submitted, the electronic information on the application can be accessed by each agency for further internal operations, including premise inspection and approval. Data elements captured should be enough for all agencies' requirements and concerns. The submitted information about the business entities must be electronically checked with the Business Registration Database of the Registrar General's Department through the integration with this electronic Single Window platform.

To be successful, this Integrated Business Registration system needs strong collaboration among relevant government authorities, and also the consolidation and integration among existing electronic registration systems.

As illustrated in Figure 6, a business entity intending to become an importer for rice is required to register as an importer with three government agencies, namely, FDA, GSA and PPRSD. This business entity must make three to five physical visits to different government locations to submit about 10 similar documents, and must go through 14 main steps. Figure 7 illustrates a proposed future scenario supported with an integrated business registration system within the GNSW. Through these electronic Single Window services, the business entity could make at the most just one physical visit and submit all the necessary information online. Several validation and verification steps can be carried out automatically online, e.g. electronic data validation

with the Registrar General’s Department. Both the new registration and the renewal process can be more effective with this integrated system. The electronic information about these importer/exporter licences could also be very useful for other operations along the trade supply chain.

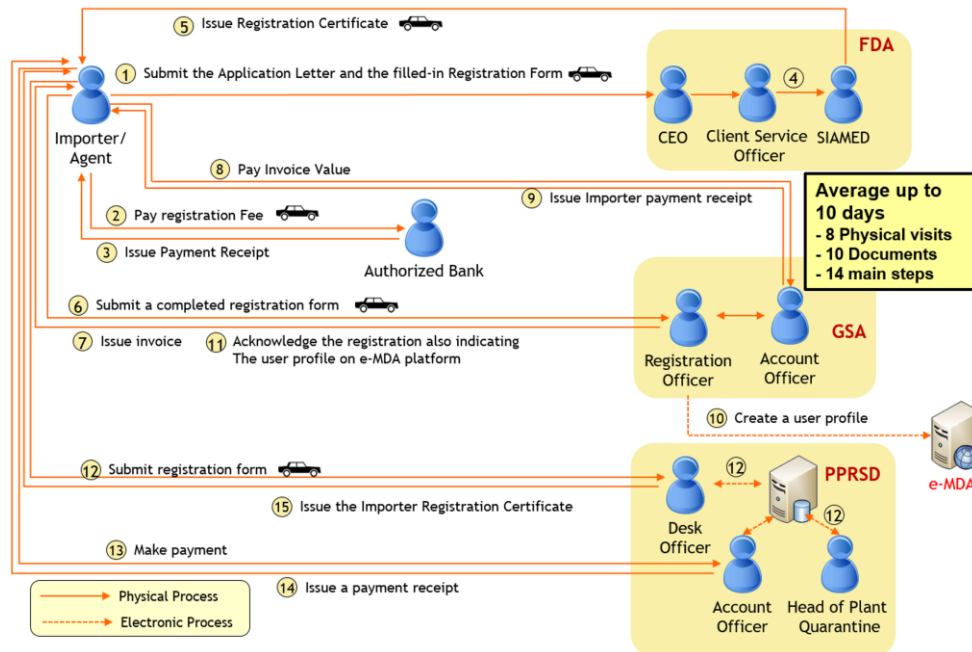
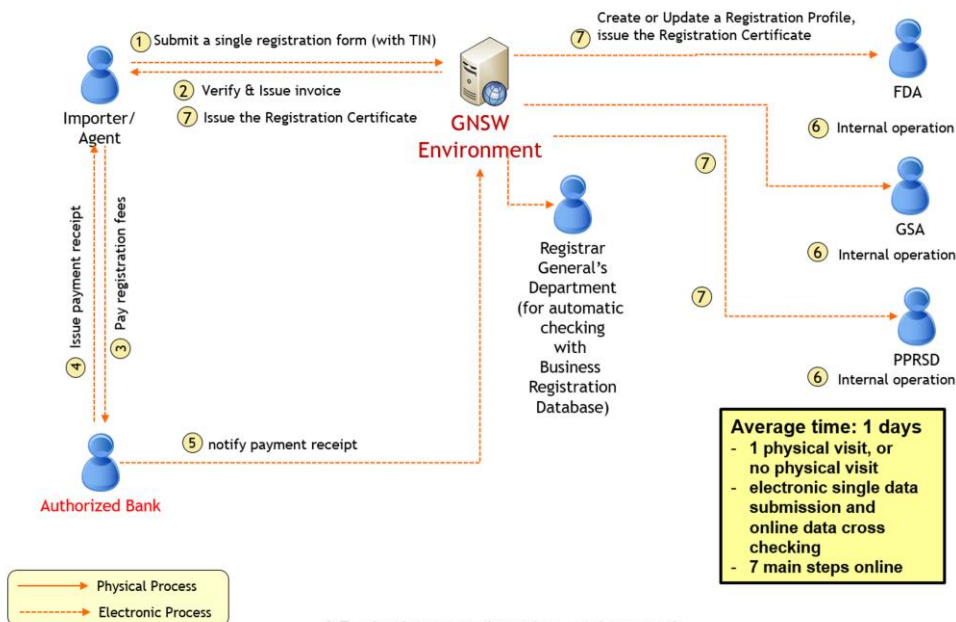


Figure 6: Current scenario and procedures for rice importer registrations



\* For both new registration, and renewal.

Figure 7: Proposed future scenario and procedures for rice importer registrations

- Integrated Product Registrations



Similarly, a new import or export product normally requires registrations with more than one government agency. Electronic Single Window services can be developed to provide one-stop services for product registrations as well. For example, a new rice product must be registered with both FDA and PPRSD.

These registration services should not just support the single submission of data elements by the traders but should also support or integrate with internal operations within government agencies, e.g. support information for physical and/or testing operations of the products, or integrate with existing electronic database systems of the authorities.

The integrated importer/exporter registration system and the integrated product registration system should also be closely interconnected, since each registered product is normally associated with a specific importer/exporter. A scenario can occur when a business actor would like to register as a new importer and at the same time to register a new import product, and then may register more other import products. The proposed Single Window services should facilitate these different requirements.

- **Integrated Permits/Certificates/Declarations<sup>48</sup> Workflow Automation**

For each consignment of a particular product being imported or exported, one or more permits/certificates and declarations are normally required to be issued and approved by different government authorities. A single set of electronic information should be submitted through a Single Window facility, and this information could form the application for each individual authority to conduct their internal operations with some electronic workflow automation support system.

For example, during the importation of rice products, three import permits are required: one from PPRSD, one from FDA, and another one from GSA. Before the arrival of the goods, the importer should be able to submit a single set of documents electronically through a Single Window facility. This information should then be available to PPRSD, FDA and GSA. These electronic import permits should be available online to authorized officers for supporting the next operations in the chain.

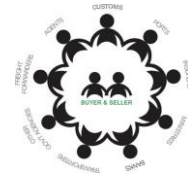
The same shipment of goods requires not only applications for different permits but also, in the case of import, IDF, Customs Bill of Entry, and information submission for CCVR. Therefore, we envision that the same set of information that has already been submitted can be reused for those subsequent operations also.

In the case of rice imports, for example, the same set of data elements and attached documents, e.g. invoice and packing list, already submitted to an integrated Single Window and would then be available for internal operations by FDA, GSA, PPRSD, MOTI and GRA-Customs, for issuing an FDA import permit, a PPRSD import permit, a GSA permit, an e-IDF, an e-CCVR and an e-BoE. The information about these different permits, valuation reports, and bill of entry and also their statuses, e.g. approval, green/yellow/red, or clearance status, should also be available for several other procedures in the trade supply chain for better coordination, compliance and security assurance.

- **Internal Workflow Automation of Each Government Agency**

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<sup>48</sup> This may be extended and called LPCO (Licences, permits, certificates and other documents).



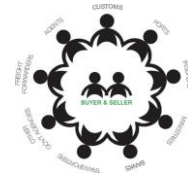
Each government agency should be further improved by simplifying, streamlining and automating its internal processes and core operations as much as possible:

- Agencies should publish their procedures and expected service time delivery
- Procedures related to receiving electronic applications with no papers or less physical interactions with the business entities should be established.
- Validation and verification procedures could be conducted automatically or semi automatically with reasonable and consistent compliance.
- Integration for information exchange, e.g. with the Registrar General's Department's business database, could be developed to improve their validation process.
- For relevant agencies, test or evaluation results from the laboratory or inspection section could be submitted online, and then linked electronically with the approval official(s). Those related procedures can be efficiently streamlined.
- Electronic connectivity with banks or other online payment options for e-payment of fees, and automatic payment acknowledge can tremendously ease the payment process. However, the payment receipt or evidence of payment should be accessible or printable out from the NSW platform.
- Online validation and approval of Customs Declaration without physical papers or face-to-face meeting should be implemented to automate the Customs Long Room procedures, and further streamline and digitize Customs operations.
- **Integrated Risk Management and Inter-Agency Inspection**  
To better balance security control and facilitation of legitimate trade, an integrated and scientific risk management system must be established. Analytics, event-based processing and rule-driven schemes should be developed to reduce risks, safeguard legitimate regulatory objectives, reduce associated cost burdens and maximize efficiency.

For cross-border trade, regulatory objectives to be managed include several concerns: fiscal, safety and security, environment and health, consumer protection, and specific trade policy. The perspectives of those authorities involved should be included in the integrated risk profiles and analysis. Based on these integrated profiles along with the analysis, risks should be classified at least as low, medium or high.

Appropriate mitigation and management of those risks should be conducted accordingly, e.g. conducting physical inspection based on the scientific high-risk analysis results, and green/fast clearance for low-risk ones. The aim is to reduce the number of scanning and intrusive inspections to a minimum.

This integrated risk management should be complemented with inter-agency coordinated and joint inspection, if physical inspection is needed. Representatives of different authorities, e.g. Customs, NACOB, National Security, FDA, should be provided with shared and reliable information for efficient one time or less intrusive inspection.



- **Port Community Integration**

Coordination should be improved among the various actors along the trade/transport chain of operations, especially among traders, customs house agents, freight forwarders, terminal operators/GHAs, vessels/shipping lines/airlines and trucks, as well as with the authorities involved at the port of entry and exit.

The activities conducted by one actor normal generate some documents or information that could be available electronically, on the need-to-know and legitimate-to-know basis, to other business or government actors on the next steps of the chain. The physical movement of papers and of actors who need to carry them can be reduced if the electronic information can be shared through an integrated port community exchange hub.<sup>49</sup>

For example, electronic ship manifests should be available to Customs, but also to other regulatory agencies and business actors, e.g. for coordinating the work of customs house agents, freight forwarders and terminal operators. The electronic deliver orders issued by shipping lines should be readily accessible by Customs and terminal operators. The paid status of payment for vessel transport services, the paid status of payment for terminal operator services, and also Customs' final clearance status of the consignment should be available electronically online and in real time to the final gate-exit officer.

Procedures related to Air Waybill could be streamlined, and electronic Air Waybills should be electronically exchanged among freight forwarders, ground handing agents and airlines through the airport community system.

- **Online payment**

Online payment must be affordable, trusted and easy for use. It should, for example, offer the shippers (importers/exporters) easy and flexible payment options—credit card payment, mobile money powered by telecoms operators and the various online payment platforms of commercial banks. The evidence or receipt of payment should be electronically acknowledged back to the beneficial organization and also the payers with reliability and ease.

- **Paperless Manifests and BAPLIE**

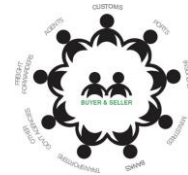
A regulation should be enacted to mandate vessels to submit electronic import cargo manifests 24 hours before the vessel leaves the final port of departure for a Ghanaian port of entry (for sea cargo), and for air cargo, 6 hours before departure for long-haul flights and immediately upon departure for short-haul flights. Paper manifests must not be accepted, except for amendments with some certain conditions. For exportation, the vessels/airlines are also mandated to submit electronic cargo manifests. Electronic BAPLIE<sup>50</sup> messages exchanging between terminal operators and shipping lines must be mandatory also.

- **Other improvements**

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<sup>49</sup> So called, Port Community System (PCS).

<sup>50</sup> The BAPLIE message is a widely used EDIFACT message in the shipping industry. The message is created by the container Terminal responsible for loading and discharging the ocean vessel.



The possibility of and specific criteria for inspection outside the immediate geographic area of the port of entry – to avoid congestion - must also be considered. Improved criteria and standard operations for conducting this special case of inspection shall be developed.

### 5.3 Export Process and Procedures

Several bottlenecks and improvement opportunities exist in the current chain of both traditional and non-traditional exports:

- **Registration**  
Again, the same business trader needs to register and obtain three to five types of business licences to become a new legitimate exporter. A business licence with the RGD is needed for every business entity. Exporter licences/certificates must be issued by GEPA for all exporters. Any exporter requests to have a Certificate of Origin from GCCI must register as an exporter with GCCI. Similarly, for the same product to be exported, it must be registered by two to three authorities. For example, an agricultural product to be exported to ECOWAS countries needs to be registered with GSA and ECOWAS. **An integrated exporter registration system** and also **an integrated export product registration system** are, therefore, recommended for Ghana's future export procedures.
- **Paperless Export Customs Declaration and Automatic Compliance**<sup>51</sup>  
Currently, an exporter can submit the Export Customs Declaration (Bill of Entry) electronically through the GCNet/GCMS platform, but the physical declaration and supporting documents are still required for Customs compliance and verification check. In the proposed GNSW platform, any export declaration submissions should be conducted without paper submissions to Customs officials in the later stage, and all electronic information shall be automatically verified by the system. The Customs Long Room's physical procedures should be eliminated.

To further improve the authenticity of traders/users in the cyberspace, some authentication scheme, e.g. digital certificates, two factors authentication and other affordable and reliable solutions should be developed.

The export duty payment, e.g. for cocoa beans and hydrocarbon oils, should be carried out online.

A possible future scenario of paperless Customs declaration, automatic compliance verification, classification and valuation, online payment, and risk management is illustrated in Figure 8.

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<sup>51</sup> This scenario with extended features could be called Paperless Customs Single Window.



**Preferred Features/Functions for Paperless Customs Single Window –  
Electronic Customs Declaration Submission with electronic signature +  
Automatic Customs Valuation/Classification & Compliance Validation online +  
e-Payment for Customs Duty +  
e-Manifest + and electronic Risk Analysis  
for speeding up customs clearance and reducing # of physical inspections**

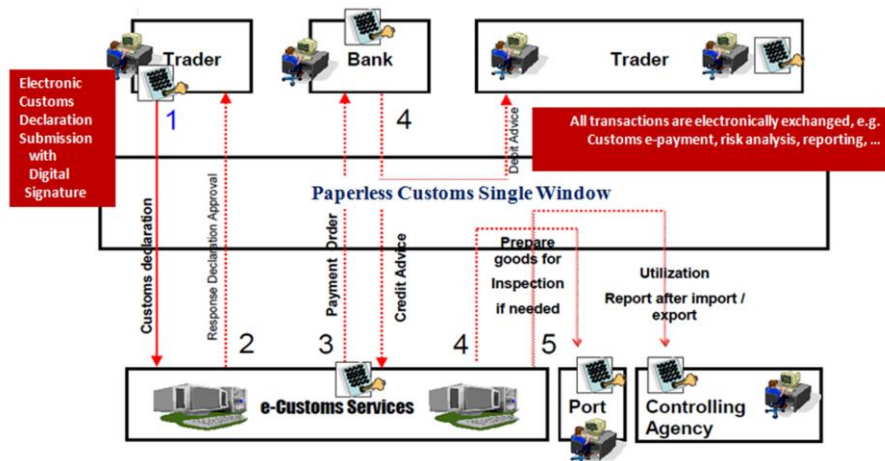


Figure 8: Possible future scenario of paperless Customs Single Window

- **Paperless Exchange Control 4A Form, and Paperless Ghana Export Paper Form**

For traditional exports, the future scenario for the paperless exchange control form should eliminate the paperwork and replace the current situation in which a paper Exchange Control 4A form must be filled in by the exporter and then be submitted endorsed by the exporter’s commercial bank at the bank’s office.

The future GNSW facility should allow the exporter to fill in and submit the 4A online, and this electronic information should reach the bank’s authorized representative to verify and approve it. This approved 4A will then be available to Customs for the next operation in the chain.

Similarly, for non-traditional exports, the Ghana Export Form could be filled in online through the GNSW platform. In this case, endorsement by banks is not needed. The information within that the Ghana Export Form can be used for statistical and other promotional purposes.

- **Electronic Port Community Integration**

In the current situation, the freight forwarder has to re-enter any additional information through GCNet, print out the declaration and go to the verification desk at the Long Room, where a compliance officer again re-checks. In the future scenario, the duplication of the Customs declarations and supporting paper documents should no longer be required. Freight forwarders could submit only additional information related to the manifests. This electronic document should be created on top of the information available already on the system. If an inspection is required, it can be conducted at the loading bay by the examination officer, Narcotics board and national security, after which the container is sealed. The interaction between freight forwarders, terminal operators and the vessels should be further improved with electronic information accessible through the Port Community System.



## 5.4 Import Process and Procedures

Much duplication and several bottlenecks in the current import procedures can be simplified through electronic transactions and electronic information exchange.

- Multiple business registrations to different authorities by an importer can be improved and conducted through *the integrated business registration Single Window facility*. For instance, an importer who wishes to import medicines in doses, is required to register with both FDA and GSA. The importer can benefit from this integrated importer registration platform.
- Also, multiple registrations for a product are also mandated and they can be carried out online on the *integrated product registration facility*. For instance, for importing medicines in doses, the importer can register this product with both FDA and GSA through this Single Window facility.
- The vessel/airline must be mandated to submit a *paperless electronic import cargo manifest* and BAPLIE to the GNSW facility. When this information is verified and validated online, it could be shared and accessible by GRA-Customs, GPHA, terminal operators/GHA and freight forwarders.
- Multiple permits are required to import some certain product. For example, FDA Import Permit and GSA Import Permit are needed to import medicines in doses. Multiple declarations for a particular import product must be applied also for the same shipment, e.g. IDF, Customs Declaration (BoE) and the application for CCVR. For this scenario, *Integrated Permits/Certificates/Declarations Workflow Automation* should be developed to provide front-end electronic services for the importer to submit the required information and attached documents online such that an FDA permit, GSA permit, IDF, BoE, and CCVR can be requested and issued accordingly.
- Operations and transactions for internal procedures within government agencies, e.g. PPRSD and GSA, should be fully supported with electronic information systems. The compliance and verification seats at the Long Room shall be automated. The importer submits all relevant documents to GCMS for verification and processing, and also for classification/valuation and issuing of CCVR; and then the risk profile of the goods is assessed. When the correct duties and taxes have been assessed and paid online, the banks should inform GCMS of the payment.

Figure 9 illustrates a future scenario and two key goals for a *regulatory Single Window*. This scenario embraces the functionalities of the integrated permits/certificates/declaration services, and integrated paperless Customs operations covering the cases of export, import and transit regimes.

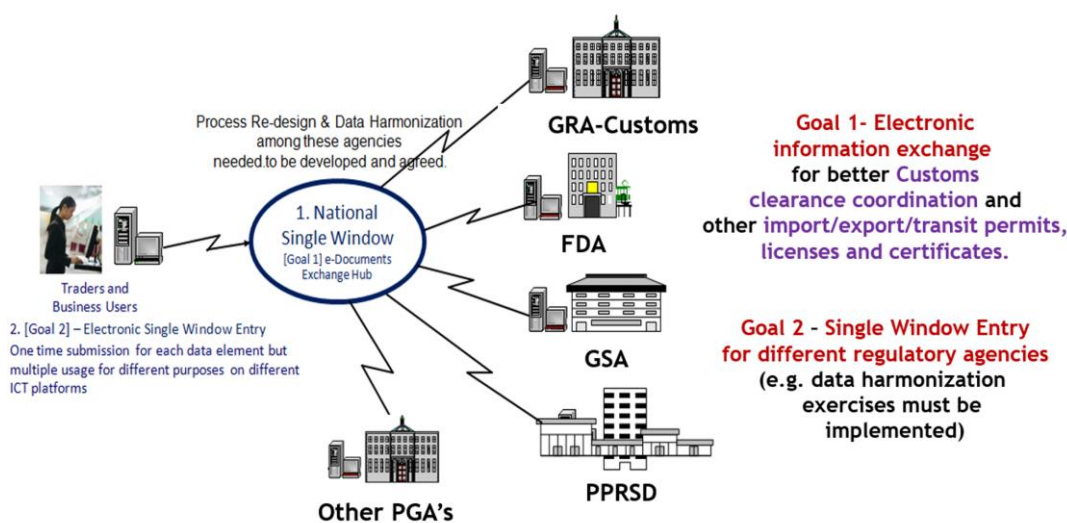


Figure 9: Future scenario for a regulatory Single Window

## 5.5 Transit Process and Procedures

The proposed future scenario for transit goods is as follows.

- All transit trucks must be registered on the Transit Cargo Module in the GCMS/GNSW platform.
- The Agent/Declarant creates the UCR (Unique Consignment Reference) online which is made available to the GNSW platform from the eMDA.
- The Agent/Declarant submits electronic Transit Declaration (BoE) along with the scanned supporting documents (e.g. commercial invoice) on the GCMS/GNSW.
- The transit fee and e-Bond are calculated automatically on the GNSW, and are informed to the Declarant.
- The Declarant conducts online payment accordingly to the designated commercial bank, the payment is acknowledged back from the bank to the GNSW.
- The risk analysis is conducted electronically to classify the shipment into low risk, medium risk or high risk.
- For the low risk, the shipment enters a green lane, where it is automatically cleared.
- For the medium risk, the cargo goes through the non-intrusive scanning check.
- For the high risk, a physical examination is required.
- Goods are released and escorted to transit terminal.
- At the transit yard, goods are broken down into sub-consignments.
- At the transit yard, Customs refers to service provider to provide tracker for vehicle in transit.
- Customs preventive supervises installation of tracker, seals and attaches insurance sticker and endorses hard copy of declaration.
- Officer in charge of transit yard verifies documents, endorses hard copy and assigns officer to perform the en route.
- Details of sub-consignment captured and printed for the driver. The printout indicates nature of goods: e.g. Type 1 (containerized), Type 2 (un-stuffing) and Type 3 (vehicle). Issuance of gate pass.
- Preventive officer must check gate pass before allowing consignment to leave transit yard.
- There are intervention points along the way. At each of these points, the Customs officer makes input in system to update and confirm status of transaction.



- At exiting point, officer examines seal, and inputs statuses into the system for exit.

## 5.6 Dangerous Goods (or other specialized areas)

The Government has categorized dangerous goods into two groups. Group I consists of goods classified under the following IMDG<sup>52</sup> classes: 1 – 2 – 5 – 7. Group II consists of goods classified under the following IMDG classes: 3 – 4 – 6 – 8 – 9.

All goods under group I, whether containerized or not, will be subject to immediate direct delivery. All goods under group II, where items are containerized, will be received and stored in the port for five days only, and will then be subject to direct delivery.

The importation of IMDG class 7 (group I), e.g. radioactive material, into Ghana requires special permits issued by the Ghana Atomic Energy Commission (GAEC) and the Environmental Protection Agency (EPA).

All dangerous goods arriving in the port must be properly manifested. Carriers/shippers must provide advance notification of all dangerous goods arriving at the port using the proper form, which must be delivered to the Fire and Safety Department at least 72 hours ahead of the arrival of the vessel at the port.

All dangerous goods delivered to or from the port must be packaged, marked, labelled and placarded in accordance with the IMDG Code. All packages should be in sound and safe condition, without any risk of leakage or spillage.

The electronic Single Window should support information flow and coordination among business stakeholder and all relevant authorities. Electronic manifests relating to dangerous goods could be utilized for better handling of the dangerous goods. This information, along with the application form, will be submitted electronically requesting specific permits and reporting with relevant government authorities, e.g. GAEC, EPA and the Fire and Safety Department.

## 5.7 Documents and Data Harmonization

Simplification and harmonization of trade data and documentary requirements is another necessary step that can contribute to the reduction of the time and costs of international trade transactions. Harmonizing data used in trade documents and aligning them with international standards can ensure data interoperability among the various parties engaged in the international supply chain.

Data harmonization is the analysis of information in a set of trade documents to identify those information objects which are shared between Government and trade agencies. It leads to the use of common semantic definitions for the information objects which are recorded in a data dictionary.

These document simplification and data harmonization exercises are the necessary inputs for developing IT solutions. They are also a precondition for creating common understanding on the exact

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<sup>52</sup> International Maritime Dangerous Goods Code.



types of information that need to be exchanged between the different private sector parties and government agencies participating in the cross border trade.

### 5.7.1 Data Harmonisation Methodology

In concurrency to the business process analysis exercises, all related documents and data element requirements related to import, export and transit of goods have been studied. Data elements from all collected documents are captured and analysed. A data worksheet has been created with the following attributes for each data element.

- Data element name - The name of the data element being defined. The naming of the data element reflects the common business terminology used by the agency.
- Data element description - A description of the data element with as much detail as possible.
- Representation - The data type can be either N (Numeric), A (Alpha) or AN (Alphanumeric) and the number of positions as well as whether a delimiter, floating or non-floating, is needed.
- Data domain - If the data element has a discrete list of values or a range of values, providing the list, range or a reference to the list of range. For example, the data element, *country*, could be restricted to the values in the ISO country code table.
- Process - Indicating if the data element is required for import, export, transit processes or conveyance.
- Category of use - Indicating if required for conveyance, crew, cargo, goods, or equipment.

The project team carried out the data harmonization steps as recommended in the WCO Data Model 3.5 and the UN Recommendation 34 Data Standardization and Simplification for International Trade. The steps are:

- Data Capturing
  - Data Capturing means making an inventory of identified regulatory agencies' requirements. This can be accomplished in a number of ways such as the reviewing of agencies' forms, automated systems data requirements, regulations, etc. This includes the data element name, data element definition, representation (format or code), when the information is required (declaration, release, clearance) and citation of the relevant authority to collect, validate and view the information. This information can be aggregated in an Excel spreadsheet or worksheets from any other software tool.
- Defining
  - Defining the information requirement is critical. While information is identified by name, the data element definition – what information is conveyed by using that data element is more important.
- Analysing
  - The process of analysing the information consists of gathering similar data element names and having a full understanding of the definition and the information required.
- Reconciling
  - This is the final step in which there is an agreement to use one data element name, a common definition, common code, and standard messaging reconciled with the WCO Data Model standard.

To ensure conformity to the WCO Data Model Version 3.5, the development of GNSW Data Model Version 1.0 adopts the WCO Data Model Data Set Version 3.5 Excel spreadsheet as the basis for the administrative and commercial data model mapping.



### 5.7.2 Data Harmonisation Results and Usage Scenario

During the course of this data harmonization exercise, 118 different types of documents required by 17 government agencies have been collected and analysed. The total number of data elements captured from all of these documents is 5,182, and they are semantically mapped and harmonized into a set of 1,241 common data elements. This set of data elements, in which each one contains its definition and other attributes as mentioned above, can be called the “Ghana National SW Data Set” for Ghana cross-border trade. The list of agencies, names of documents and forms, and summary of the analysed data elements are described in more details in the following section.

This national data set of harmonized data elements is a very important step to enable automatic interoperability among different government agencies and business stakeholders. This data set is used to create data models for electronic documents and online forms of different types, i.e. creating an XML schema or syntactic structure for each specific document. Automatic information exchange between different ICT platforms is possible and meaningful because these semantic data standards are agreed and utilized among government agencies and business users.

The single submission of each data element, as the key characteristic of Single Window, can only be possible when the common data set among different forms is harmonized and adopted among all relevant authorities.

The figure below illustrates a Single Window scenario as a case example and it is to show the benefit of data harmonization. This is a scenario for a future/to-be Single Window entry service for importation of rice into Ghana (a pre-arrival stage).

Comparing to the current condition, a rice importer needs to go through at least six (6) different regulatory procedures, currently most of these steps are paper-based operations and involve 6 physical movements just for application submitting, even though some of these procedures are electronic transactions. The importer must submit the similar set of data and supporting documents to different authorities or to different ICT systems.

In the proposed to-be scenario as shown in the figure below, the importer should be able to submit electronically about 198 data elements to the National Single Window platform (but not necessary all 198 data at the same time). As required by MOTI, about 107 out of these 198 will be needed for the IDF operation. Then, 53 of 198 will be used to fill in the application to PAARS for issuing CCVR. And simultaneously, applications for PPRSD, FDA and GSA import permits will need 14, 101 and 101 data elements (again out of the same 198) respectively. As illustrated in this figure, the last step is the submission of Bill of Entry (Import Customs Declaration) which requires about 95 data elements by GRA-Customs. Note that, though not showing in this figure, each required supporting document, e.g. invoice, can be attached electronically once and used many times by all these different agencies without multiple submissions.

The harmonization of data elements is captured from among all of these 6 different forms, namely IDF (107), Application Form for CCVR (53), Application Form for PPRSD Permit (14), Application Form for FDA (101), Application Form for GSA (101), and BoE (95). In this particular case, the summation of all data elements is  $107+53+95+101+101+14 = 471$  data elements, but after the data harmonization, all these 6 different forms have the common data elements of 198. The Single Window Entry services can be implemented based on these harmonized data elements in such a way that the single submission of each of these 198 data elements will be possible, and then several electronic application forms will be automatically generated and sent electronically to several relevant authorities for subsequent actions.

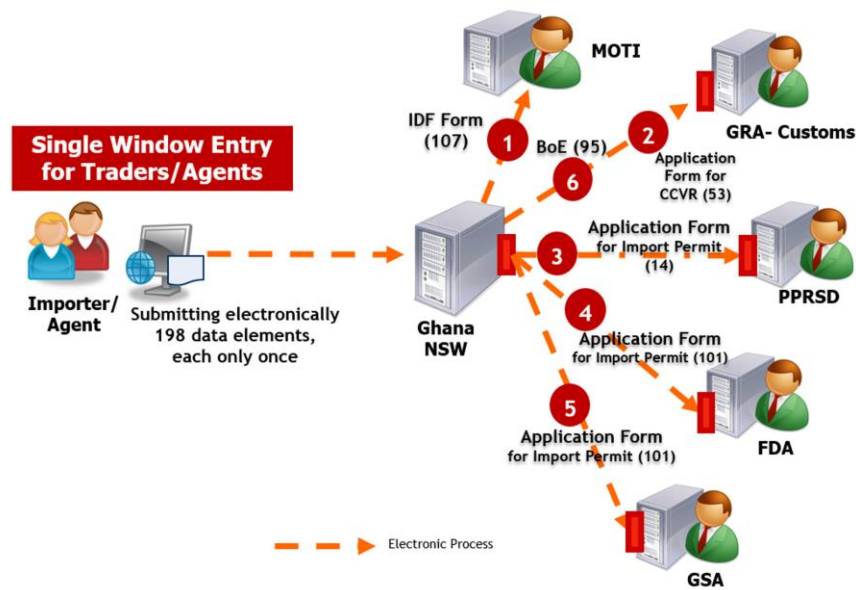


Figure 10: Electronic Single Window Scenario for Rice Importation

### 5.7.3 Detailed Data Harmonization and Analysis

The data harmonization for the Ghana Single Window Programme was carried out based on the collected documents that are mandated and used by the relevant stakeholders related to cross-border trade regulations. It is aimed to harmonize the definitions of data elements, their attributes and formats related to various trade processes along the supply chain.

The following listing outlines the 118 documents collected from 17 respective stakeholders:

S/NO	GRA
1	Bond for Transit Goods
2	Import and Export Overland Routes
3	Import of Second Hand Vehicle-Assessment Form
4	Detention Receipt
5	Seizure Notice
6	Seizure Report
7	State Warehouse Receive Note
8	State Warehouse Dispatch Note
9	Application for Premises to Be Used as A Private Bonded Warehouse
10	Application for Transfer of Ownership Warehoused Goods
11	Certificate of Warehousing
12	Certificate of Destruction
13	License to Operate a Private Warehouse

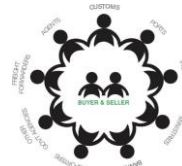


14	License to Manufacture Excisable Goods
15	Application for Permission to Import Vehicle for Temporary Use
16	Application for Refund of Duty and Certification of Over Payment
17	Auction Allocation Slip
18	Certificate of Agreement to Settle Customs Offence Out of Court
19	Certificate of Registration of Manufacturer
20	Certificate of Warehousing
21	Damaged Package Record
22	Delegation of Authority to Sign Bond
23	Excise Duty or Sales Tax Clearance Certificate
24	Ship's Report Outward
25	Ships Report Inward
26	Goods Temporality Exported for Use, Process or Repairs
27	Import Official Receipt
28	Importation of Personal Effects
29	International Transit Fee Receipt
30	Statement of Composition
31	Offence Report
32	Request to Repack Warehoused Goods C25
33	Passenger's Baggage Duty Receipt
	<b>GPHA</b>
1	Business Registration Renewal Application Form
2	Business Registration Application Form
3	Operating License
	<b>FDA</b>
1	Application for Registration as Food Importer
2	Application for A License as an Importer of Cosmetics and Household Chemical Substance
3	Application for Licensing of Food Manufacturing Establishment
4	Application for Registration Form for Vaccines
5	Application for The Registration of Food Product (Import /Local Manufacturer)
6	Application for Dry Food Storage Facility License
7	Application for Registration as an Importer of Tobacco Product
8	Application Form for A License to Manufacture Drugs, Cosmetics, Household Chemical Substances and Medical Devices





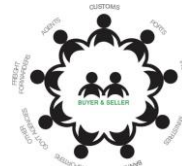
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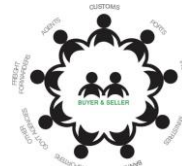
9	Renewal of License for The Manufacture of Drugs, Cosmetics, Household Chemical Substances and Medical Devices
10	Application Form for The Registration of a Tobacco Product
11	Application Form for The Registration of Cosmetics
12	Application Form for The Registration of Household Chemical Substance
13	Application for License as an Importer of Medical Devices
14	Application Form for Registration of Medical Devices
15	Registration Application Form for Bio Similar Products
16	Registration Renewal Application Form for Bio Similar Products
17	Registration Application Form for Innovator Biological Products
18	Application Form for The Registration of Herbal Medicinal Products
19	Application for Registration of an Allopathic Drug
20	Registration Application Form for Biological Products
	<b>EPA</b>
1	Application for Bio Efficacy Trail of Pesticide Product
2	Industrial & Consumer Chemicals Clearance Permit Application Form
3	Meat Product Clearance Permit Application Form
4	Application Form for Pesticide License
5	Application Form for Licensing Pesticide Storage Premise
6	Pesticide License Application Renewal Form
7	Application Form for Pesticide Registration
8	Application form for Renewal of Pesticide Registration
	<b>PPRSD</b>
1	Report on Phytosanitary Inspection
2	Phytosanitary Certificate
3	Phytosanitary Certificate attachment
4	Permit to import plant
5	Quarantine Declaration Form for Exporters of Plant
6	Registration Form
7	Ship Inspection Report
8	Application Form for Company Registration (Form A)
9	Application Form for License to Retail/Distribute Fertilizers (Form C)
10	Application Form for Fertilizer Product Registration
11	Certificate of Registration of Fertilizer Product



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12	Certificate of Registration as a Fertilizer Manufacturer/Importer
13	License to Distribute Fertilizer
14	License To Retail Fertilizer
	<b>GSA</b>
1	Quality Export Certificate
2	Consignment Inspection Form Fish(smoked/Salted)
3	Export Certificate
4	Registration of Importers Registration Form
5	Registration of Exporters Registration Form
6	Basic Information On Establishment (FMEIC 5 )
7	Certificate for Import of Fishery Product intended for Human Consumption
8	Dispatch Consignment Certificate.
	<b>GEPA</b>
1	CEPS Non Traditional Export Form
2	Ghana Export Promotion Authority Company Profile Form
3	ECOWAS Trade Liberalization Scheme(ETLS) Product Registration Form
	<b>VSD</b>
1	Consignment Document
2	Certificate for Clearing
	<b>NACOB</b>
1	Re-Exportation Permit/Authorization
2	Registration Form for Forwarder/Exporter
3	Export Declaration Form (EDF)
4	Import Permit for Precursor Chemical
5	Registration Form
6	Import Authorization
	<b>APD</b>
1	Consignment Document
2	Certificate of Clearing
	<b>BANKERS ASSOCIATION</b>
1	Bank of Ghana Foreign Exchange Form 4A (FEX 4A)
2	Application for Establishment of Documentary Letter of Credit
	<b>NATIONAL PETROLEUM AUTHORITY</b>
1	NPA Master Document

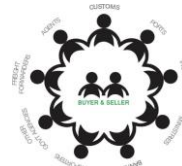


	<b>MINISTRY OF TRADE AND INDUSTRY</b>
1	Application for Mercury License
2	Mercury License
	<b>GHANA SHIPPER'S AUTHORITY</b>
1	Shipper Registration Form
2	Shipping Service Provider Registration Form 25
	<b>CHAMBER OF COMMERCE AND INDUSTRY</b>
1	Certificate of Origin
2	Imperial Preference -Certificate of Origin
3	Exporter Registration Form
4	Cost Statement for the Exporter of Product
5	Generalized System of Preferences-Certificate of Origin
6	Goods Movement Certificate
	<b>REGISTRAR GENERAL'S DEPARTMENT</b>
1	Returns of Particulars of the Company Limited by Shares Registration Form
2	Returns of Particulars of the Company Limited by Shares Re- Registration Form
3	Registration of Business Names Sole Proprietorship
4	Re-Registration of Business Names Sole Proprietorship
5	Returns on Particulars of the Company Limited by Guarantee, Registration
6	Returns on Particulars of the Company Limited by Guarantee Re-registration
7	Registration of Subsidiary business names
8	Re-registration of Subsidiary business names
9	Annual Renewal Notice of a Subsidiary Business Name.
	<b>DVLA</b>
1	Application form to register a Motor Vehicle (Form A)
2	Application form to transfer ownership of a Motor Vehicle (Form C)

In order to align with the GRA's direction for adoption of WCO recommendations and best practices, the creation of Ghana National SW Data Set (GNSW-DS) adopted the WCO Data Model as the main reference model for the data harmonization exercise. The adopted version is the WCO Data Model Version 3.5 (Dated April 2016). The main component used in this version is the Data Set Version 3.5 (including the recommended WCO ID, definition, Code List, data format, TDED UID and Customs Procedure indicators) and the super classes namely Document, Government Agency, Location, Party, and Transport Means. The super classes are merged into the WCO Data Set for better visibility during the data mapping.



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The data elements not mapped to the WCO Data Model Version 3.5 will be added to the GNSW-DS with reference to the United Nations Trade Data Elements Directory (UNTDDED) whenever possible. The recommended UNTDDED's UID, description, representative/data format and Code List are adopted for the mapped data elements.

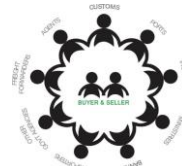
Due to the large number of stakeholders and documents involved, the team has first mapped and harmonized the documents in different worksheets for each stakeholder. Then, these worksheets were merged into a single worksheet that forms the Ghana National Single Window Data Set by combining all the data elements from each respective stakeholder's worksheet.

The following table outlines the results of the Ghana National Single Window Data Set.

Agency	Total Data Elements	Mapped to WCO DM	Not Mapped to WCO DM	% Mapped to WCO DM
<b>GRA</b>				
Bond for Transit Goods	138	92	46	67%
Import and Export Overland Routes	124	86	38	69%
Import of Second Hand Vehicle-Assessment Form	348	75	273	22%
Detention Receipt	49	26	23	53%
Seizure Notice	51	38	13	75%
Seizure Report	54	21	33	39%
State Warehouse Receive Note	32	23	9	72%
State Warehouse Despatch Note	20	15	5	75%
Application for Premises to Be Used as A Private Bonded Warehouse	30	19	11	63%
Application for Transfer of Ownership Warehoused Goods	123	50	73	41%
Certificate of Warehousing	46	29	17	63%
Certificate of Destruction	9	5	4	56%
License to Operate a Private Warehouse	7	1	6	14%
License to Manufacture Excisable Goods	8	5	3	63%
Application for Permission to Import Vehicle for Temporary Use	20	10	10	50%
Application for Refund of Duty and Certification of Over Payment	12	9	3	75%
Auction Allocation Slip	23	21	2	91%
Certificate of Agreement to Settle Customs Offence Out of Court	23	17	6	74%
Certificate of Registration of Manufacturer	18	14	4	78%
Certificate of Warehousing	13	9	4	69%
Damaged Package Record	8	5	3	63%
Delegation of Authority to Sign Bond	8	5	3	63%
Excise Duty or Sales Tax Clearance Certificate	18	10	8	56%
Ship's Report Outward	37	28	9	76%



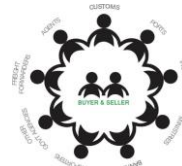
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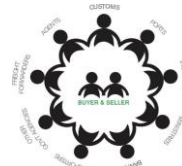
Ships Report Inward	37	28	9	76%
Goods Temporality Exported for Use, Process or Repairs	28	13	15	46%
Import Official Receipt	18	8	10	44%
Importation of Personal Effects	11	11	0	100%
International Transit Fee Receipt	8	5	3	63%
Statement of Composition	23	22	1	96%
Offence Report	30	10	20	33%
Request to Repack Warehoused Goods C25	24	14	10	58%
Passenger's Baggage Duty Receipt	13	12	1	92%
<b>Total number of data elements for GRA : 1411</b>	<b>1411</b>	<b>736</b>	<b>675</b>	<b>52%</b>
<b>Total number of elements for GRA mapped to WCO Data Set: 736</b>	<b>736</b>		<b>52%</b>	
<b>Total number of elements for GRA NOT mapped to WCO Data Set: 675</b>	<b>675</b>		<b>48%</b>	
<b>GPHA</b>				
Business Registration Renewal Application Form	12	11	1	92%
Business Registration Application Form	11	10	1	91%
Operating Licence	6	6	0	100%
<b>Total number of data elements for GPHA: 29</b>	<b>29</b>	<b>27</b>	<b>2</b>	<b>93%</b>
<b>Total number of elements for GPHA mapped to WCO Data Set: 27</b>	<b>27</b>		<b>93%</b>	
<b>Total number of elements for GPHA NOT mapped to WCO Data Set: 2</b>	<b>2</b>		<b>7%</b>	
<b>FDA</b>				
Application for Registration as Food Importer	20	19	1	95%
Application for A License as an Importer of Cosmetics and Household Chemical Substance	14	14	0	100%
Application for Licensing of Food Manufacturing Establishment	32	18	14	56%
Application for Registration Form for Vaccines	116	79	37	68%
Application for The Registration of Food Product (Import /Local Manufacturer)	27	24	3	89%
Application for Dry Food Storage Facility License	26	19	7	73%
Application for Registration as an Importer of Tobacco Product	20	19	1	95%
Application Form for A Licence to Manufacture Drugs, Cosmetics, Household Chemical Substances and Medical Devices	65	29	36	45%



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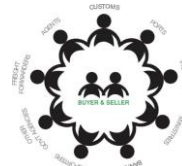
Renewal of Licence for The Manufacture of Drugs, Cosmetics, Household Chemical Substances and Medical Devices	14	10	4	71%
Application Form for The Registration of a Tobacco Product	60	49	11	82%
Application Form for The Registration of Cosmetics	87	65	22	75%
Application Form for The Registration of Household Chemical Substance	85	66	19	78%
Application for License as an Importer of Medical Devices	14	13	1	93%
Application Form for Registration of Medical Devices	54	31	23	57%
Registration Application Form for Bio similar Products	109	61	48	56%
Registration Renewal Application Form for Bio Similar Products	59	32	27	54%
Registration Application Form for Innovator Biological Products	64	54	10	84%
Application Form for The Registration of Herbal Medicinal Products	48	41	7	85%
Application for Registration of an Allopathic Drug	12	8	4	67%
Registration Application Form for Biological Products	112	75	37	67%
<b>Total number of data elements for FDA: 1038</b>	<b>1038</b>	<b>726</b>	<b>312</b>	<b>70%</b>
<b>Total number of elements FDA mapped to WCO Data Set: 726</b>	<b>726</b>		<b>70%</b>	
<b>Total number of elements for FDA NOT mapped to WCO Data Set: 312</b>	<b>312</b>		<b>30%</b>	
<b>EPA</b>				
Application for Bio Efficacy Trail of Pesticide Product	17	14	3	82%
Industrial & Consumer Chemicals Clearance Permit Application Form	17	11	6	65%
Meat Product Clearance Permit Application Form	16	11	5	69%
Application Form for Pesticide License	39	16	23	41%
Application Form for Licensing Pesticide Storage Premise	25	12	13	48%
Pesticide License Application Renewal Form	28	15	13	54%
Application Form for Pesticide Registration	148	69	79	47%
Application form for Renewal of Pesticide Registration	55	17	38	31%



<b>Total number of data elements for EPA: 345</b>	<b>345</b>	<b>165</b>	<b>180</b>	<b>48%</b>
<b>Total number of elements for EPA mapped to WCO Data Set: 165</b>	<b>165</b>		<b>48%</b>	
<b>Total number of elements for EPA NOT mapped to WCO Data Set: 180</b>	<b>180</b>		<b>52%</b>	
<b>PPRSD</b>				
Report on Phytosanitary Inspection	19	17	2	89%
Phytosanitary Certificate	23	23	0	100%
Phytosanitary Certificate attachment	16	14	2	88%
Permit to import plant	14	12	2	86%
Quarantine Declaration Form for Exporters of Plant	9	8	1	89%
Registration Form	24	18	6	75%
Ship Inspection Report	29	24	5	83%
Application Form for Company Registration (Form A)	23	17	6	74%
Application Form for License to Retail/Distribute Fertilizers (Form C)	24	18	6	75%
Application Form for Fertilizer Product Registration	11	7	4	64%
Certificate of Registration of Fertilizer Product	19	10	9	53%
Certificate of Registration as A Fertilizer Manufacturer/Importer	15	10	5	67%
License to Distribute Fertilizer	10	8	2	80%
License to Retail Fertilizer	9	8	1	89%
<b>Total number of data elements for PPRSD</b>	<b>245</b>	<b>194</b>	<b>51</b>	<b>79%</b>
<b>Total number of elements for PPRSD mapped to WCO Data Set: 194</b>	<b>194</b>		<b>79%</b>	
<b>Total number of elements for PPRSD NOT mapped to WCO Data Set: 51</b>	<b>51</b>		<b>21%</b>	
<b>GSA</b>				
Quality Export Certificate	15	15	0	100%
Consignment Inspection Form Fish(smoked/Salted)	34	28	6	82%
Export Certificate	14	11	3	79%
Registration of Importers Registration Form	24	24	0	100%
Registration of Exporters Registration Form	17	17	0	100%
Basic Information On Establishment FMEIC 5	85	47	38	55%
Certificate for Import of Fishery Product intended for Human Consumption	52	31	21	60%
Dispatch Consignment Certificate.				



Ghana National Single Window  
Strategic Plan and Roadmap

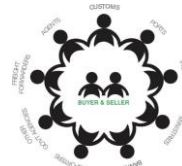


Total number of data elements for GSA: 241	241	173	68	72%
Total number of elements for GSA mapped to WCO Data Set: 173			72%	
Total number of elements for GSA NOT mapped to WCO Data Set: 68			28%	
<b>GEPA</b>				
CEPS Non Traditional Export Form	39	39	0	100%
Ghana Export Promotion Authority Company Profile Form	39	19	20	49%
ECOWAS Trade Liberalization Scheme(ELTS) Product Registration Form	42	27	15	64%
Total number of data elements for GEPA: 120	120	85	35	71%
Total number of elements for GEPA mapped to WCO Data Set: 85	85		71%	
Total number of elements for GEPA NOT mapped to WCO Data Set: 35	35		29%	
<b>VSD</b>				
Consignment Document	130	116	14	89%
Certificate for Clearing	13	10	3	77%
Total number of data elements for VSD: 143	143	126	17	88%
Total number of elements for VSD mapped to WCO Data Set: 126			88%	
Total number of elements for VSD NOT mapped to WCO Data Set: 17			12%	
<b>NACOB</b>				
Re-Exportation Permit/Authorisation	34	34	0	100%
Registration Form for Forwarder/Exporter	26	14	12	54%
Export Declaration Form (EDF)	21	20	1	95%
Import Permit for Precursor Chemical	15	15	0	100%
Registration Form	47	29	18	62%
Import Authorisation	16	16	0	100%
Total number of data elements for NACOB: 159	159	128	31	81%
Total number of elements for NACOB mapped to WCO Data Set: 128			81%	
Total number of elements for NACOB NOT mapped to WCO Data Set: 31			19%	
<b>APD</b>				
Consignment Document	112	99	13	88%
Certificate of Clearing	13	13	0	100%

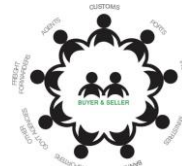




Ghana National Single Window  
Strategic Plan and Roadmap



Total number of data elements for APD: 125	125	112	13	90%
Total number of elements for APD mapped to WCO Data Set: 112			90%	
Total number of elements for APD NOT mapped to WCO Data Set: 13			10%	
<b>BANKERS ASSOCIATION</b>				
Bank of Ghana Foreign Exchange Form 4A (FEX 4A)	24	17	7	71%
Application for Establishment of Documentary Letter of Credit	35	20	15	57%
Total number of data elements for ASS.BANKER: 59	59	37	22	63%
Total number of elements for ASS.BANKERS mapped to WCO Data Set: 37			63%	
Total number of elements for ASS.BANKERS NOT mapped to WCO Data Set: 22			37%	
<b>National Petroleum Authority</b>				
NPA Master Document	83	69	14	83%
Total number of data elements for NPA 83				
Total number of elements for NPA mapped to WCO Data Set: 69			83%	
Total number of elements for NPA NOT mapped to WCO Data Set: 14			17%	
<b>Ministry of Trade and Industry</b>				
Application for Mercury Licence	33	33	0	100%
Mercury Licence	15	11	4	73%
Total number of data elements for Min. of Trade 48	48	44	4	92%
Total number of elements for Min. of Trade mapped to WCO Data Set: 44			92%	
Total number of elements for Min. Trade NOT mapped to WCO Data Set: 4			8%	
<b>Ghana Shipper's Authority</b>				
Shipper Registration Form	26	13	13	50%
Shipping Service Provider Registration Form 25	25	21	4	84%
Total number of data elements for Shipper Authority 51	51	34	17	67%
Total number of elements for Shipper Authority mapped to WCO Data Set: 28			67%	



Total number of elements for Shipper Authority NOT mapped to WCO Data Set: 23			33%	
<b>CHAMBER OF COMMERCE</b>				
Certificate of Origin	34	25	9	74%
Imperial Preference -Certificate of Origin	31	28	3	90%
Exporter Registration Form	16	11	5	69%
Cost Statement for the Exporter of Product	54	9	45	17%
Generalized System of Preferences-Certificate of Origin	24	19	5	79%
Goods Movement Certificate	25	23	2	92%
<b>Total number of data elements for Chamber of Commerce: 184</b>	<b>184</b>	<b>115</b>	<b>69</b>	<b>63%</b>
<b>Total number of elements for Chamber of Commerce mapped to WCO Data Set: 115</b>			<b>62.5%</b>	
<b>Total number of elements for Chamber of Commerce NOT mapped to WCO Data Set: 69</b>			<b>37.5%</b>	
<b>Registrar General Department</b>				
Returns of Particulars of the Company Limited by Shares Registration Form	141	71	70	50%
Returns of Particulars of the Company Limited by Shares Re- Registration Form	143	72	71	50%
Registration of Business Names Sole Proprietorship	64	29	35	45%
Re-Registration of Business Names Sole Proprietorship	68	31	37	46%
Returns on Particulars of the Company Limited by Guarantee, Registration	135	65	70	48%
Returns on Particulars of the Company Limited by Guarantee Re-registration	140	72	68	51%
Registration of Subsidiary business names	50	23	27	46%
Re-registration of Subsidiary business names	56	23	33	41%
Annual Renewal Notice of a Subsidiary Business Name.	13	2	11	15%
<b>Total number of data elements for Registered General Department:</b>	<b>810</b>	<b>388</b>	<b>422</b>	<b>48%</b>
<b>Total number of elements for Registered General Department mapped to WCO Data Set:</b>	<b>388</b>		<b>47.9%</b>	
<b>Total number of elements for Registered General Department NOT mapped to WCO Data Set:</b>	<b>422</b>		<b>52.1%</b>	



<b>DVLA</b>				
Application form to register a Motor Vehicle (Form A)	51	24	27	47%
Application form to transfer ownership of a Motor Vehicle (Form C)	52	31	21	60%
<b>Total number of data elements for DVLA</b>	<b>103</b>	<b>55</b>	<b>48</b>	<b>53%</b>
<b>Total number of elements for DVLA mapped to WCO Data Set:</b>	<b>55</b>		<b>53%</b>	
<b>Total number of elements for DVLA NOT mapped to WCO Data Set: 23</b>	<b>48</b>		<b>47%</b>	

Summary of the Ghana National Single Window Data Set

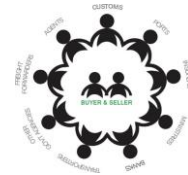
STAKEHOLDER	17
NUMBER OF DOCUMENT	118
TOTAL ELEMENT	5182
TOTAL ELEMENT REDUCED TO	1789
ELEMENT MAPPED WCO	3205
NOT MAPPED TO WCO	1977
% ELEMENT MAPPED TO WCO	61.85%
% ELEMENT NOT MAPPED TO WCO	38.15%
NATIONAL DATA SET TOTAL DATA ELEMENT	1241
ELEMENT MAPPED WCO	399
NOT MAPPED TO WCO	842
% ELEMENT MAPPED TO WCO	32%
% ELEMENT NOT MAPPED TO WCO	68%

**Data gap analysis**

There are several gaps in the GNSW Data Set as follows:

*1. Gaps with WCO DM Version 3.5 LCPO SUPER CLASS*

The Single Window programme’s scope covers Ghana’s international trade processes. However, the Ghana National Single Window Data Set is developed based on the WCO DM Version 3.5 that currently catered for Import, Export, Transit, Conveyance, Import/Export Manifest and LCPO (Licenses, Certificates, Permits and Other) information. There are about 45% of the data elements that are not found in the LCPO Super Class and so they are mapped to WCO Data Set Version 3.5 Declaration super Class.



Currently, the data elements not found in WCO DM are added to the GNSW Data Set based on the definitions from UNTDED, if any. Statistically, there are about 45% of data elements not mapped to the WCO DM Version 3.5.

## 2. *Evolving Business Processes*

There are on-going enhancements and current automation of customs and related regulatory processes, such as IDF implementation, CCVR as processed by GRA Customs Division, and ongoing integration of GCMS and some participating government agencies (PGAs). Some stakeholders are also currently working on automating their processes.

Due to variation of timing of such projects/implementations, some requirements and materials are not made available to the DH team. As such, the new requirements are not reflected in the current version of GNSW Data Set.

## 3. *Use of International Standards*

Based on the documents collected, it was observed that many documents are still letter based and/or do not adopt the UN Layout Key and UN Code List format. In addition to that, many documents are issued in memo/letter formats namely Registration of Products, Certificate for Clearing and etc. Such documents increase the level of difficulties for business community to comply. The business community has the difficulty also in providing the required information to the Authority. It is also a potential problem for automatic data exchange among PGAs during the Single Window implementation.

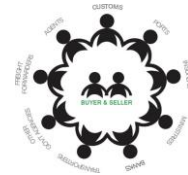
### **Data Model for SW Implementation**

The GNSW Data Set comprises of listing of data requirements grouped by stakeholders, documents, and related processes, i.e. import, export, transit, conveyance, import/export manifest and others. As such, it is ready and flexible for the generation of a Data Model. However, the creation of GNSW Data Model is highly dependent on the processing model of Ghana Single Window implementation. The three typical SW processing models as follows:

- Document based – where the trader submits data/information as per the existing/new document defined by all stakeholders. The SW system allows the user to reuse the data/information for the subsequent document in the related business process.
- Process based – where the trader submits data/information based on the international trade processes such as import, export, transit (including LPCO) and conveyance/manifest. The SW system will route the relevant data/information to the respective PGAs/Customs.
- Stakeholder based – where the trader submits data/information based on a group of data required by the specific stakeholder.

The design of the SW processing model will determine and dictate the viable GNSW Data Model that could be created from the GNSW Data Set for the implementation.

### **NSW Reference Data Set**



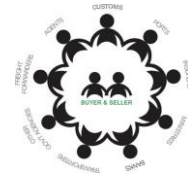
The followings are the outputs of Data Harmonization activities:

- Documents
  - Listing of documents that used as the source for data harmonization activities.
- Stakeholder's Data Harmonization Worksheet
  - DH Worksheet for each stakeholder. It comprises of the based WCO Data Set mapped to sample documents related to the respective stakeholder.
  - The DH and Code List Worksheets are residing in the SharePoint: West Blue Consultants/Feasibility Study Project/Data Harmonization/DH Worksheet folder.
- Ghana National Single Window Data Set
  - The GNSW Data Set comprises of compilation of all data elements from Stakeholder's DH Worksheets with mapping to WCO DM and UNTDED. It is categorised by Stakeholder and its related processes.
  - The GNSW Data Set is residing in the SharePoint: West Blue Consultants/Feasibility Study Project/Data Harmonization/NSW Data Set folder
- Reference Materials
  - The followings are the listing of reference materials used for data harmonization activities:
    - WCO Data Model Version 3.5
    - UNTDED 2005
    - UN Recommendation 34 – Simplification and Standardization of International Trade Data
  - The reference materials are residing in the SharePoint: West Blue Consultants/Feasibility Study Project/Data Harmonization/Reference Material

### Observations and Challenges

The following outlines the observation, findings and challenges encountered during the data harmonization activities.

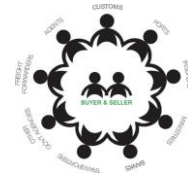
- There are some constraints in the WCO DM Version 3.5 LCPO Super Class. This data model can cater only for some data elements but not all as required in the GNSW Data Set. This constraint limits the benefit of adopting the WCO DM. Specific data elements not covered in the WCO DM include the information required in the application forms for permit/certificate/license and registration documents, and the renewal application forms of permit/ license/ Certificate/ registration.
- Some data fields are being used by different agencies to store different data/information example.
- There are some memo/letter based documents used in several regulatory agencies.
- The Use of HS Code is yet to be accepted as Key Product description for PGAs not just GRA Customs.
- Difficulties in obtaining sample documents due to confidentiality, formality, and accessibility to operation offices that store the sample documents.
- Difficulties in obtaining new/updated data requirements from ongoing development and implementation projects.
- Limited documentations on the forms with filled-in data examples.
- Availability of domain experts to explain the data definitions and how they are being used and stored in the document. Understanding of actual data contents varies between personnel/officers.
- Difficulties in defining data formats as most of the data are extracted from paper documents. Example the data length is mainly based on the handwriting (if handwritten), font size (if typing



or printing) and space available on the paper document. There is no specific data length and data formats in most of the data elements.

## Recommendations

- Raising DMRs (Data Maintenance Requests) to unlock/make available data elements used in Declaration Super Class to be re-used in LCPO Super Class.
- Adoption of international standards such as UN & ISO Code List, UN Layout Key for standardizing blocks within paper documents, and standardization of data format/attributes.
- Enhancement of the GNSW Data Set with the new and updated data requirements from the latest development and implementation, namely the online IDF, CCVR and SW Proof-of-Concept (POC) implementation.
- Elimination of some documents in SW through responses and documents/data repository concept such as Assessment Notice, Exit Notes, Import Permit and etc.
- Working towards compliance and conformance of international standards by submitting the new data requirements (Data Maintenance Request [DMR]) to WCO. However, this is only advisable after alignment of GNSW Data Set to the WCO DM Version 3.5 as some requirements already incorporated in the new release.
- Development of GNSW Data Model based on the design of the NSW processing models.
- Formation of GNSW Data Set/Model Maintenance team and establishment of Data Maintenance Procedure (DMR) for the ongoing update and maintenance of GNSW Data Set/Model to support the SW implementation.



## 5.8 Future ICT Architecture

The future state ICT blueprint architecture is designed from a business-level perspective and is broken down to the ICT level. Based on the GNSW vision and objectives, the current ICT situation and international best practices available in this area, this section defines the recommended ICT architecture for the GNSW.

The following ICT principles have been adopted for the development of the GNSW:

1. Information is a critical asset and must be complete, accurate, timely and secure.
2. Duplication of information should be avoided as far as possible.
3. GNSW shall use a service-oriented architecture (SOA) to increase flexibility and cost efficiency. The business processes are always the starting point for all ICT-investments.
4. Technology will be selected based on architecture fit, capability and vendor support.
5. The architecture shall be service oriented to support the adaption of components from different vendors and components developed for a specific purpose. The architecture shall also support a phased implementation and prevent silos of information systems.
6. User interface must be unified and intuitive so that the ICT applications are easy to use.
7. The ICT solutions should be centralized whenever possible to facilitate a smoother adoption of other stakeholders and procedures and to contribute to a more efficient use of resources.
8. The GNSW shall provide integration services and offer both EDI-integration (message based) and web-based access to the GNSW services.
9. All stakeholders' considerations and requirements must be addressed.
10. The ICT used within Ghana GNSW or by suppliers should be optimized for minimum environmental impact.
11. National standards and laws published by the National Information Technology Agency should be adopted for the implementation of the GNSW.
12. ICT Policies and a common ICT governance framework should guide all the stakeholders involved in the GNSW.

### 5.8.1 Single Entry Point Concept

Fundamental to the design of the GNSW ICT Architecture is the concept of the Single Entry Point as defined in UNECE's Recommendation and guidelines on establishing a Single Window (Recommendation 33). The definition can be summarized as follows:

- Single submission of data and information
- Single and synchronous processing of data and information
- Single decision-making for customs release and clearance of cargo.

Within the context of that Recommendation, the GNSW will adopt the model of a Single Automated System for collecting, disseminating and integrating information and data related to trade that crosses the border. This will facilitate both an integrated and interfaced approach where the PGA can either process data through the system or directly.

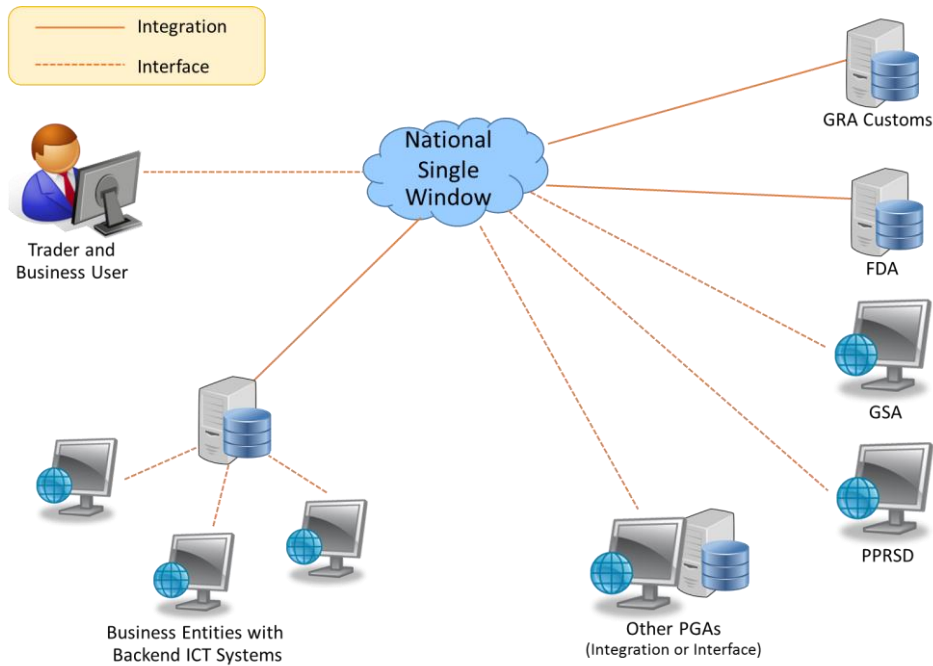


Figure 11: GNSW Single Entry Point Concept

The GNSW will provide a simplified relationship with each trader through a unified interface to the regulatory agencies. Through this programme, Ghana aims to implement business procedures and systems whereby a trader (directly or through an agent) would interact on-line in real-time through a single entity (a Single Window), use that window as the conduit for subsequent intermediate transactions, when necessary, and for the final transaction that obtains the release of goods.

### 5.8.2 High-level Architecture

The holistic and high-level view of the GNSW ICT architecture is based on the vision and objectives of the GNSW and uses the UN/CEFACT Buy-Ship-Pay model as a reference, where the whole supply chain process is included. This covers the processes shown in the diagram below. It also defines the ICT services needed to support efficient and highly automated processes. Each of these processes is an integral component of the overall GNSW facility.



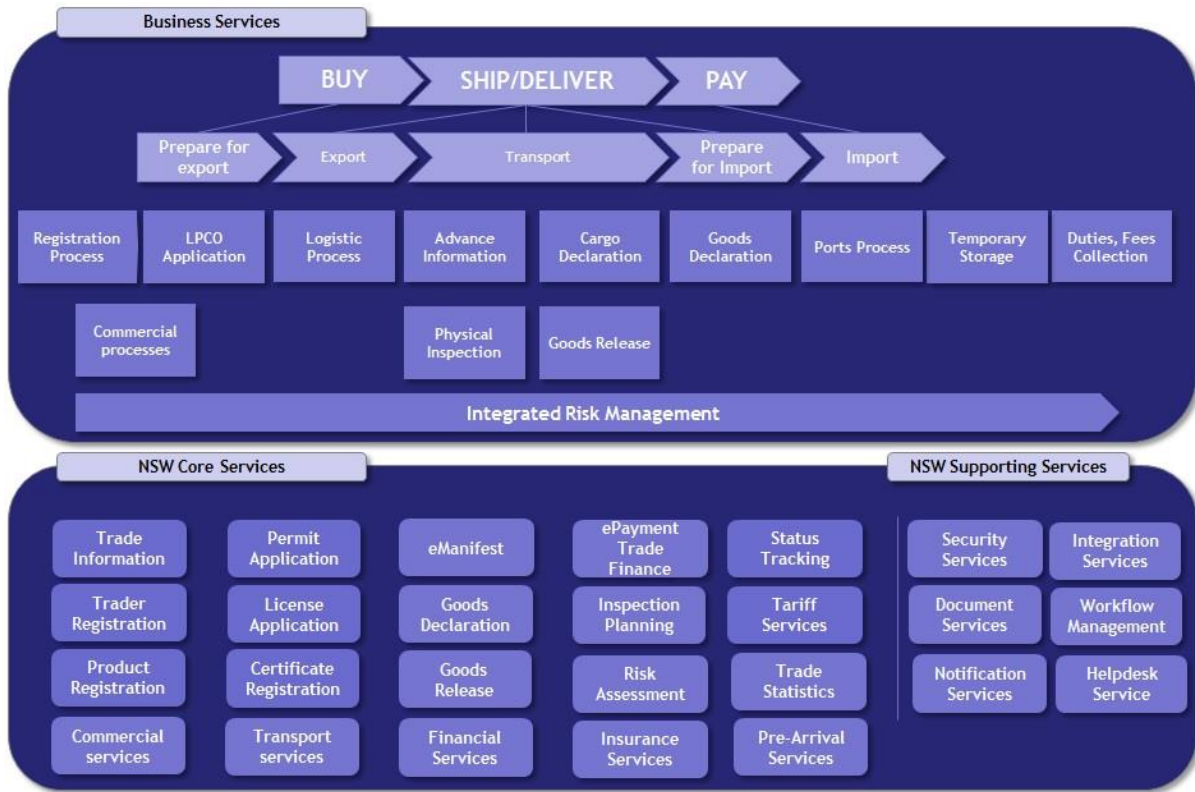


Figure 12: GNSW high-level architecture

### 5.8.3 NSW Application Architecture

The services described above will be delivered by IT components or ICT applications. These ICT applications can be either commercial off-the-shelf (COTS) products or a developed system for its particular purpose. The strategy is to use standard products as a base for the GNSW solutions regarding portal, content management and customer management. For Single Window implementation, some COTS solutions available can be used according to the principle of service-oriented architecture and integration mechanisms.

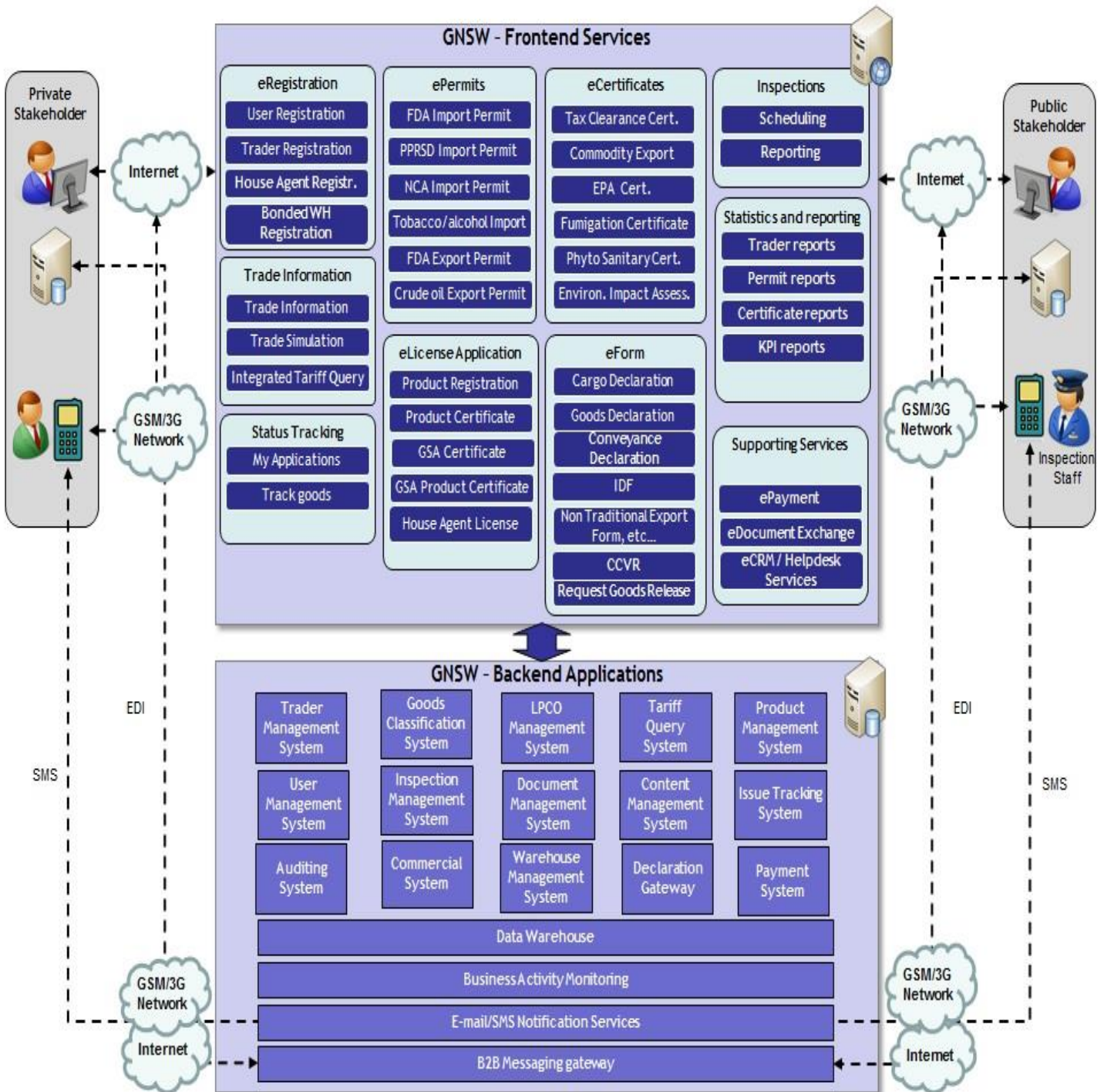


Figure 13: GNSW application architecture

The overall application architecture gives an overview of the services, applications and possible interactions and integrations.

Powered by the trade portal, the frontend services offer a variety of regulatory services for information, registrations, applications and submission of different forms and documents. The portal and its services can be accessed using a web browser, and the user interface is also adapted for accessing through mobile devices such as smartphones.

In the backend applications, the processing, transactions, storage and integrations are performed. Each of these applications is described in detail below.

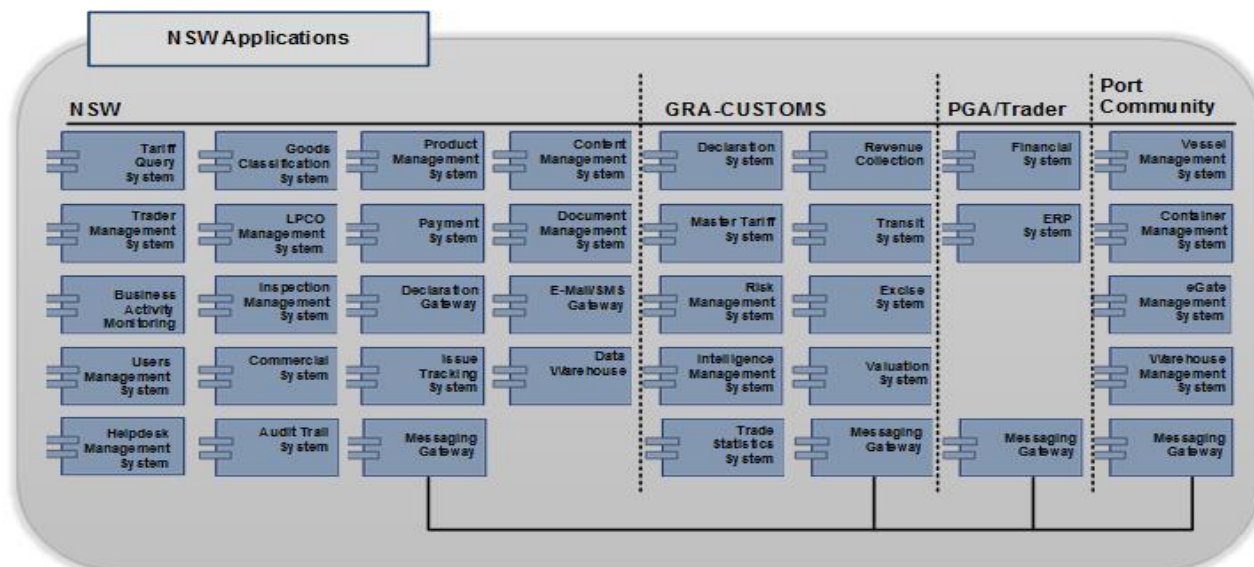


Figure 14: GNSW application components diagram

The proposed ICT systems in the GNSW architecture are neither silos nor black boxes; instead they are service providers, providing services that can be used by several consumers.

A detailed description of the individual GNSW Application Components is presented in ANNEX E.

### 5.8.4 Integration Architecture

The GNSW architecture will support integration through two possibilities: the integrated (EDI) model and the interfaced (client access/GUI) model of Single Window implementation.

Depending on the PGAs' ICT readiness, both models (interfaced and integrated) will be made available. For PGAs that do not have ICT systems for internal processing, and will consequently access and perform their tasks in the process through a dedicated user interface, the interface model will be used.

On the other hand, PGAs with internal ICT systems will be integrated into the GNSW through EDI, in an XML format. It will also be possible for PGAs to use a combination of an integrated and interfaced approach depending on the specific GNSW service being used. The diagram below illustrates this principle with sample PGAs.

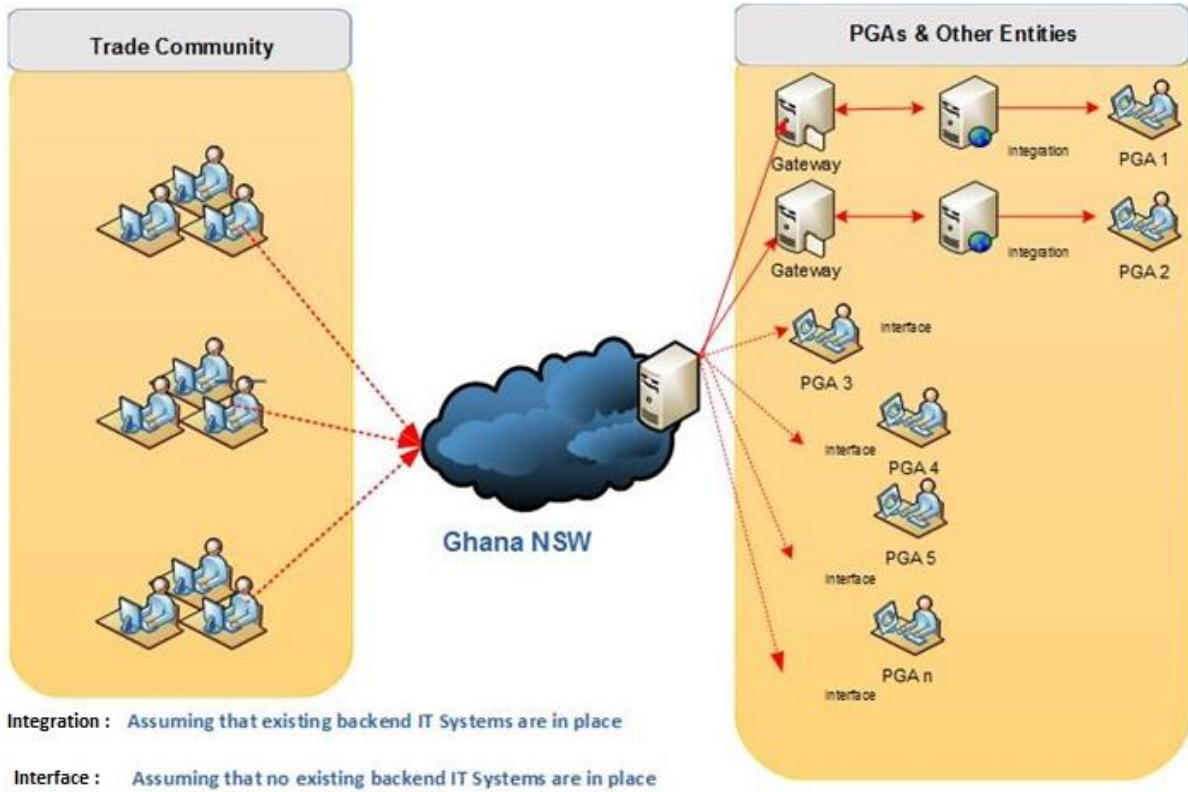


Figure 15: Integration principle

The GNSW’s flexibility enables stakeholders to use both models—EDI for some processes and client access (via a web interface) for others. The diagram below shows this scenario. As internal ICT systems at the PGAs are being introduced, migration from user interfaces to EDI integration can be performed, as long as there is a cost/benefit rationale.

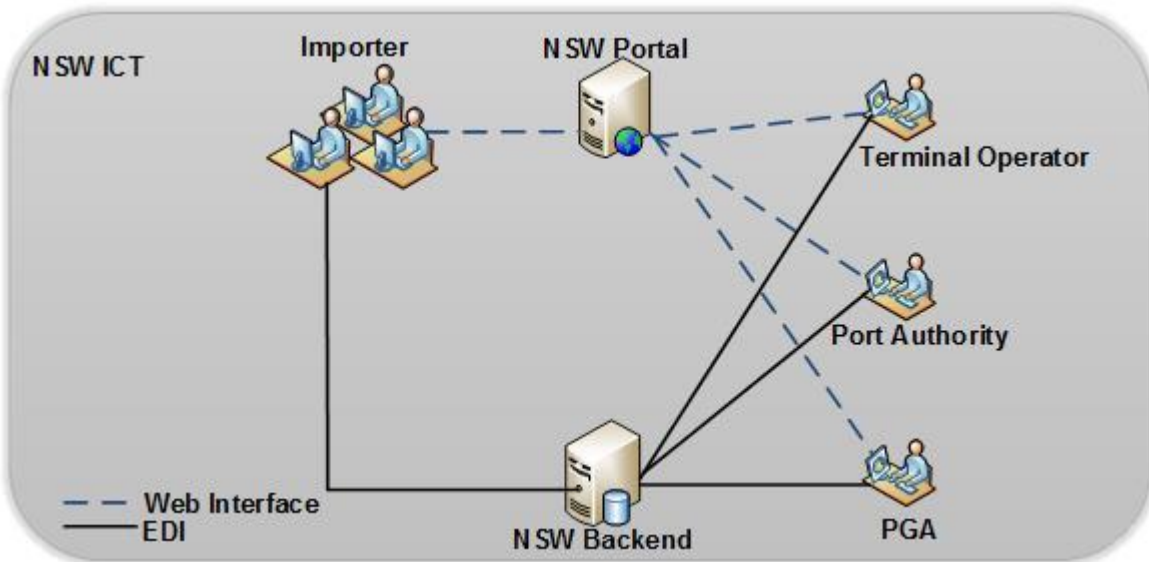


Figure 16: Integration scenarios

## 5.8.5 GNSW Data Architecture

Data architecture is used to illustrate the data model or object model used in a particular context. At this stage, high-level data architecture is defined, derived from and managed by the applications specified earlier in this section.

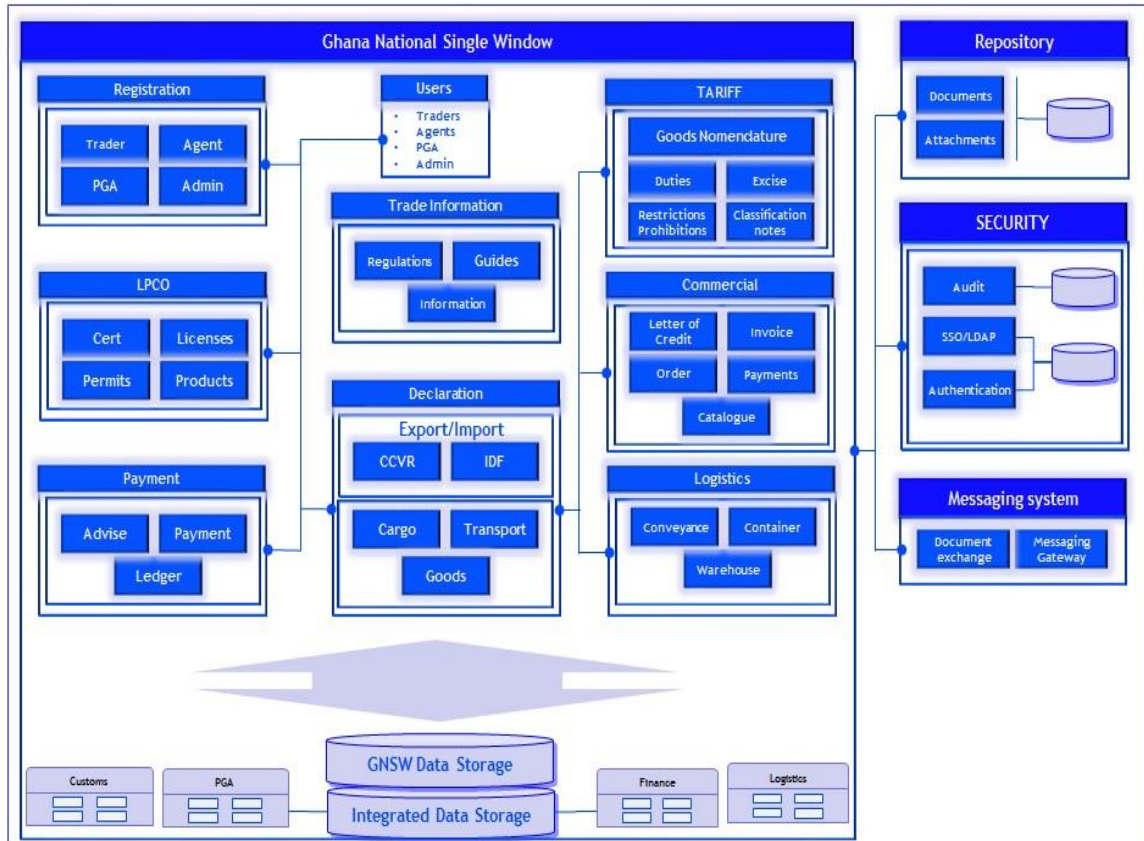


Figure 17: High-level GNSW data architecture

The main object groups in the model are:

- Registration
- LPCO
- User
- Trade information
- Declaration
- Payment
- Tariff
- Commercial
- Logistics.

Supporting object groups are:

- Repository
- Security
- Messaging.



Each group has a number of high-level data objects that contain data structures.

### 5.8.6 NSW Security Architecture

For such an important and central facility as a National Single Window, managing sensitive trade information and being required to be accessible 24/7, security is a top priority that needs special attention in all areas. Security solutions, information security policies and other measures are needed to ensure a high level of service availability.

#### 5.8.6.1 Information Security Policy

The GNSW Information Security Policy, together with several other underlying policies, includes:

- Information classification policy
- Multi-level security management policy
- Identification and authentication policy
- Encryption policy
- Information usage policy
- Certificate Authority policy
- Trusted path policy
- Digital signing policy
- System audit policy.

These policies are the basis of all information security solutions in the GNSW architecture that ensure the secure management of sensitive information.

#### 5.8.6.2 Single Sign-On

Implementation of Single Sign-on will assist Customs and partner agencies in their authentication and access to different services on the Single Window system.

Single Sign-On is the ability for a user to use the same user ID and password to access multiple GNSW services. The process authenticates the user for all the services that they have subscribed to with no further login needed in between services.

#### 5.8.6.3 Digital Signatures and Certificate Authority

Digital signature is a key function in most of the Single Window implementations around the world today. It is also common in other e-Government areas. Digital signatures can be used in the following scenarios:

- Authentication—to ensure the identity of a person or organisation
- Integrity—ensuring that the messages or documents have not been exposed to unauthorized changes
- Non-repudiation—a party that has signed a document or message cannot later deny having signing it.

When managing trade and regulatory information, these functionalities ensure efficient and secure electronic information exchange.

Digital signatures are based on the Public Key Infrastructure (PKI) and require a couple of keys— one public and one private key—which are matched. The private key is secret and used for authentication

and digitally signing of documents. The public key is public and used by the receiver to verify the identity and validity.

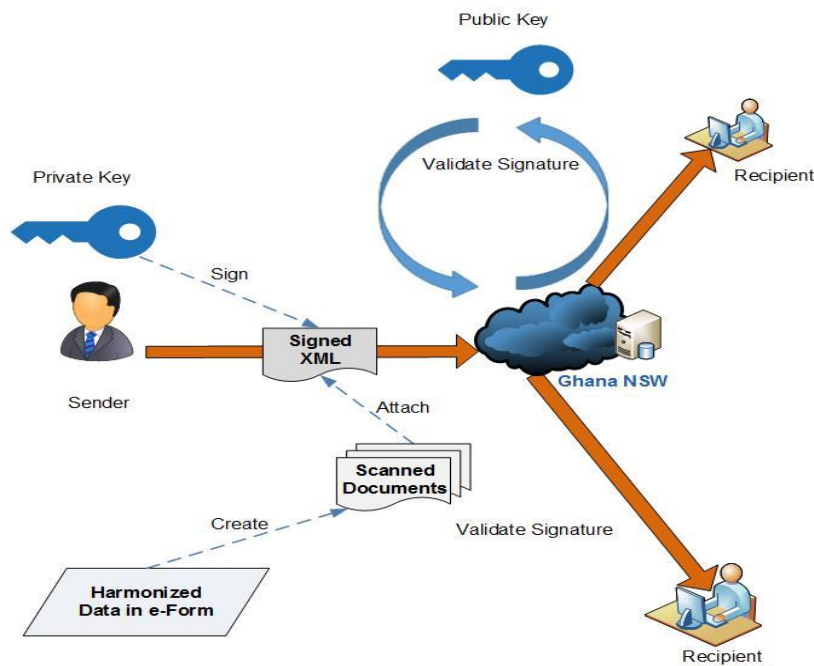


Figure 18: Digital signatures and PKI

To avoid fraud, before generation of the private and public key, the GNSW user needs to be identified and verified. For this purpose, a Certifying Authority (CA) needs to be established. This is a third party that both the sender and receiver trust and that is responsible for verifying the identity of the user and organization before the keys are generated and transmitted to the parties.

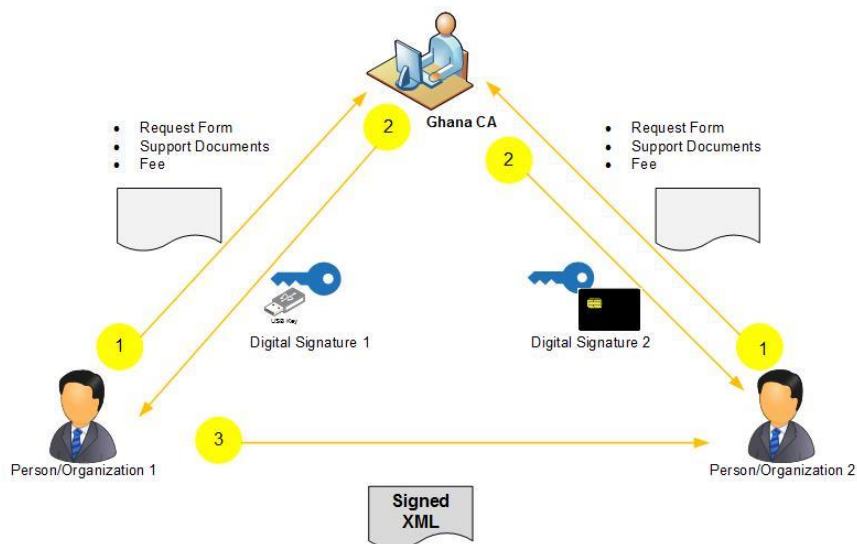


Figure 19: Digital signing process

This means that a CA needs to be established in Ghana in the context of the GNSW. It can be the GNSW organization or any other government organization (such as NITA).



#### 5.8.6.4 Network Security

Controlling how and where data are stored and shared is critical to the GNSW deployment. Strict network security standards help protect data and replication between the data centres. Each agency gets a dedicated, reliable, secure connection allowing better control of the traffic on the local or wide area networks, and helping protect data from disaster.

With the Network Security solution, we can:

- Control the traffic on the local or wide area networks to better manage and protect data
- Secure remote access for your mobile workforce
- Protect against a range of network security threats to critical financial, customer, and employee data
- Develop a comprehensive Network Intrusion System to guard against any malicious activity.

#### 5.8.7 Contingency and Disaster Recovery

It is critical that services provided by the GNSW platform operate effectively without excessive interruption. An appropriate information system disaster recovery plan (IS DRP) for GNSW should be developed in conjunction with the business continuity plan (BCP). Priorities and recovery time objectives for information technology must be developed during the business impact analysis. Technology recovery strategies should be developed to restore hardware, applications and data in time to meet the needs of the business recovery.

A disaster recovery site (DR site) must be installed as an alternative backup facility, that is used when a primary location of the GNSW, especially the main central platform, becomes unusable due to failure or disaster. The DR site contains equipment and infrastructure that can be temporarily used to manage business processes until the main site's functionality is fully restored. This is an integral part of the disaster recovery plan and wider business continuity planning of the GNSW environment.

#### 5.8.8 GNSW Infrastructure Architecture

##### 5.8.8.1 High-level ICT Infrastructure Design

The ICT infrastructure design is based on the application architecture, estimated volumes and the information security policy. Four zones have been defined where different services are deployed, based on their sensitivity:



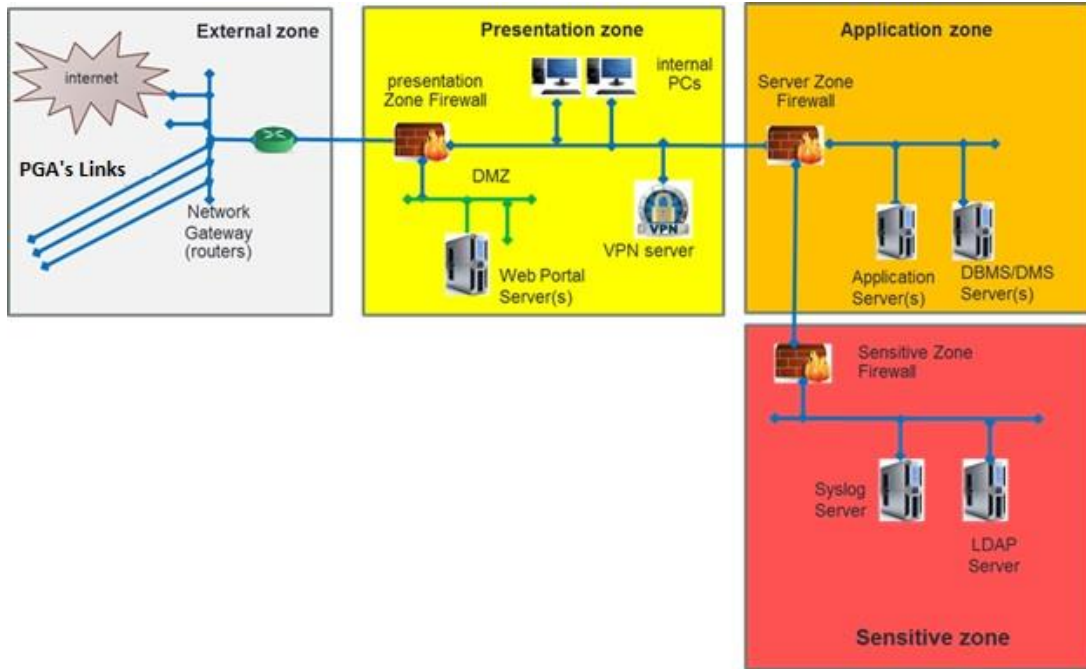


Figure 20: High-level ICT infrastructure design

The zones are:

- External zone (white) —accessible for everyone, where services such as Internet access through guest LAN and wireless connection are offered
- Presentation zone (yellow)—this zone is behind the first protection layer and hosts the web servers and other presentation services
- Application zone (orange)—where the application servers and non-sensitive databases are hosted
- Data zone (red) —containing sensitive data, such as syslog data.

PGAs and traders can be integrated in two ways:

- Type 1 – using web/mobile interface
- Type 2 – using XML messaging integration

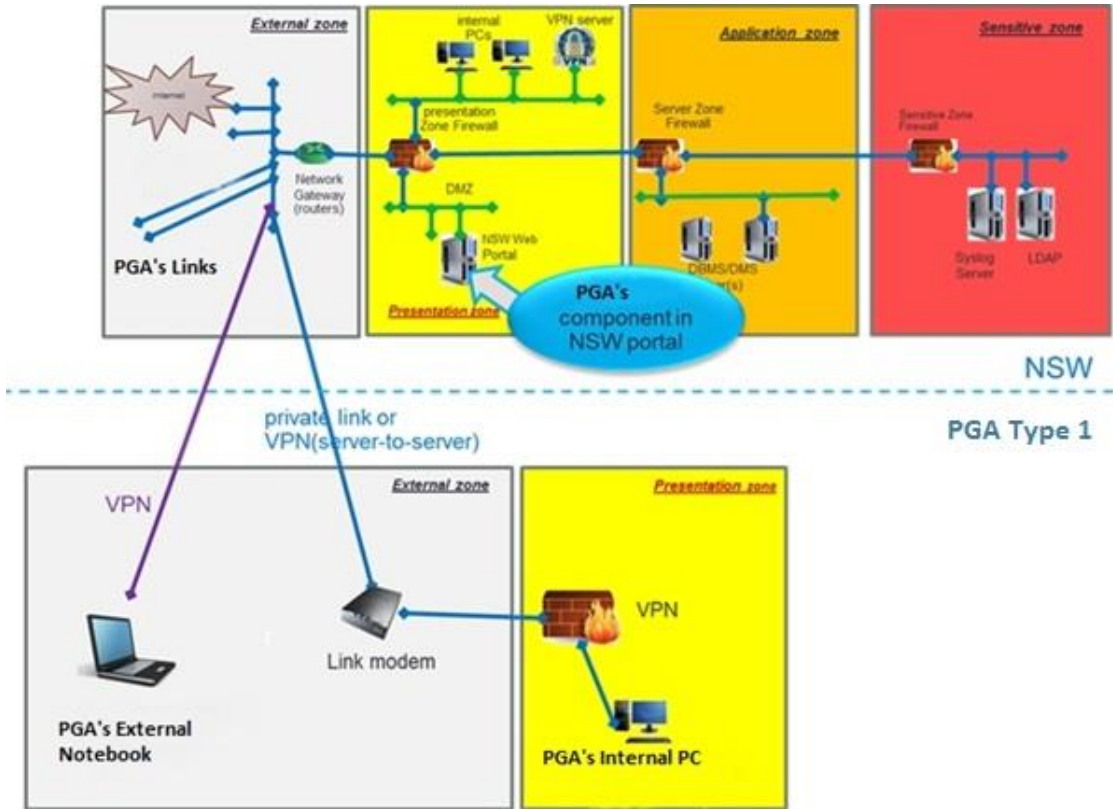


Figure 21: PGA integration using web interface

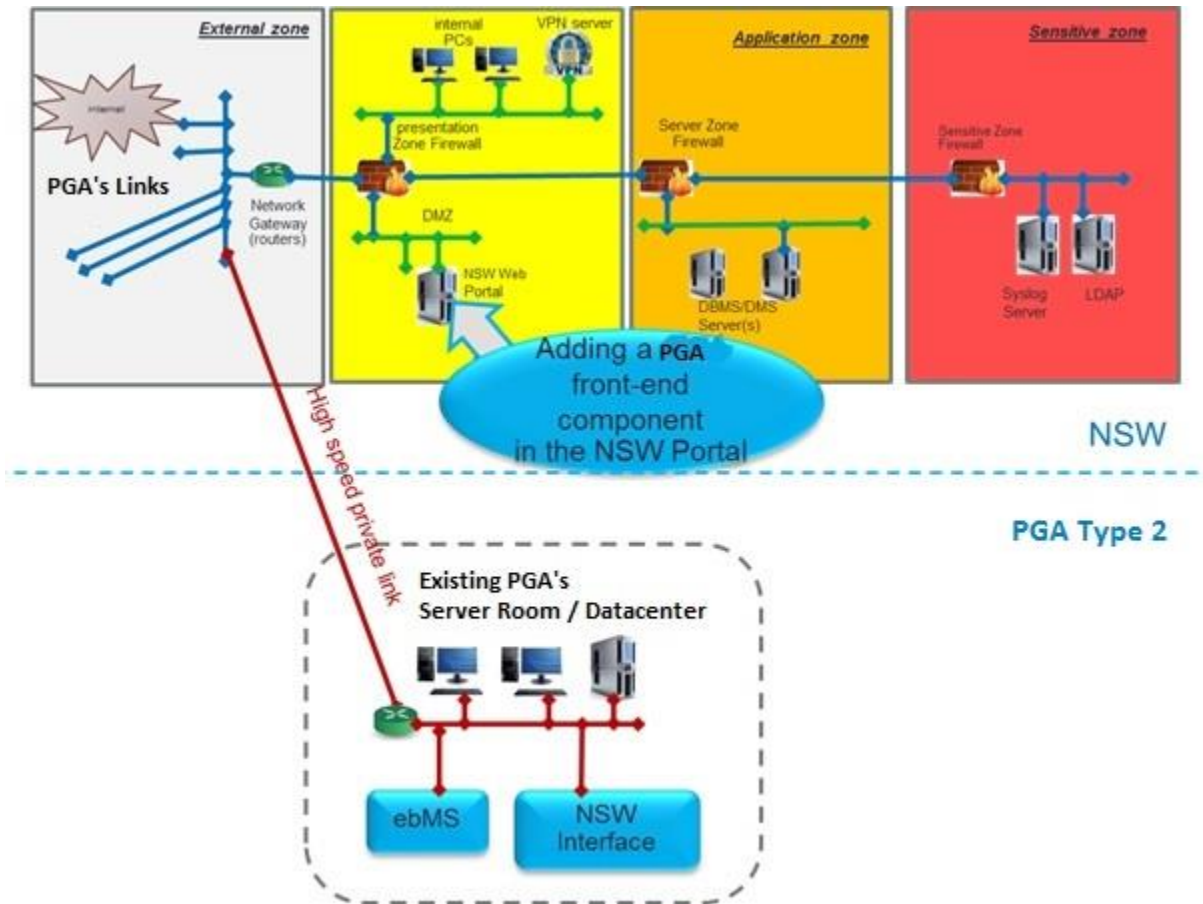


Figure 22: PGA integration using XML messaging

Other key components of the GNSW infrastructure architecture are presented in ANNEX F.

Additional notes on the ICT Architecture Framework and Principles are presented in ANNEX G.

### 5.9 GNSW Risk Management Implementation Strategy

To better manage the growing volume of trade and travelers, a significant number of leading customs administrations have adopted risk management as the guiding principle for border management. Systematically Implementing risk management at strategic, operational, and tactical levels ensures that customs administrations best deploy resources to protect their citizens from threats to health, safety, and security, while simultaneously supporting economic growth by maintaining efficient and predictable cross border transit times.

Ghana Customs currently uses risk averse approaches requiring a full inspection of a significant number of shipments and cargo trucks at the land borders. This “gatekeeper” approach has many shortcomings including:

- Costly in resources as it applies the same degree of intensity to all threats



- Constrained in that it forces a lower degree of inspection intensity overall due to a uniform treatment of all cargo and passengers
- Creates a high incidence of officer errors due to higher workloads
- Realizes fewer enforcement results
- Encourages normally law-adhering entities to circumvent the system to hasten the cross-border transit of their goods
- Creates opportunities for criminals to circumvent and avoid interdiction by making customs reactions predictable
- Fails ultimately to achieve efficient, secure border management

In moving away from such a risk averse approach, many large customs administrations have demonstrated that technology is a key efficiency enabler. The WCO SAFE Framework of Standards to Secure and Facilitate Global Trade specifically mentions that customs administrations should develop or procure automated risk management systems. Based on international best practices, risk assessment systems use standard data sets and strategic intelligence to support identification of high-risk shipments and travellers.

Adopting a National Integrated Risk Management System (NIRMS) is a significant step towards successfully adopting risk management practices strategically, operationally, and tactically. Frontier/Border control processes that use risk assessment systems help ensure that customs resources are always focused on the highest risk shipments and people in real time.

Successful implementation of risk assessment systems requires the mandated use of electronically submitted pre-arrival data. Many customs administrations use pre-arrival data for a variety of purposes, including:

- Increasing cargo control
- Recouping lost or evaded revenue
- Gathering intelligence
- Profiling risks
- Setting lookouts
- Identifying potential security threats
- Enhancing end-to-end supply chain or travel visibility in order to identify anomalous behaviour in relation to people, entities, commodities, and routings

Pre-arrival data provides customs administrations with the ability to “push the border out” virtually and decide whether to facilitate or intercept cargo or people before they reach the physical border.

The proposed strategy informing the GNSW National Risk Management framework is focused on achieving the following key performance deliverables:

- a. Separation of duties to enhance integrity
- b. Collection of pre-arrival data
- c. Implementation of trusted trader such as the Authorised Economic Operators Scheme (AEOS) and registered traveller programs



- d. Expansion of available inspection types to allow for varying intensities of inspections (inspection policy)
- e. Establishment of control processes throughout the pre-arrival, arrival and post-clearance stages of the customs process
- f. Capture of all outcomes in automated systems
- g. Establishment of a post-clearance audit and analysis unit to continually validate, monitor and review the above
- h. Integration of VAT and domestic tax office and tax code to mirror comprehensive entity tax compliance profile
- i. Establishing a National Integrated Risk Management System (NIRMS) platform that enables partner organisations or regulatory departments the flexibility to mirror all relevant risks identifications and experiences relevant to the agency in respect, through thread links made visible in the integrated risk module built within the system.
- j. Establishment of integration with the Central Bank (Bank of Ghana) to mirror profile of all financial transaction processed through banks associated with transactions.
- k. Integrating and implementing an Economic Planner Module (EPM) to enable decision makers to simulate and visualize economic impact of the policy decisions relating to customs tariffs and excise, concessions, prohibition and fiscal policy that have direct impact on imports and export commerce before implementation.

The business transformation activities considered under this strategy include the following components:

- **A Stakeholder Team:**
  - Endorse a risk management framework and sets policy for organizational implementation and compliance.
  - Identifies and acquires “buy-in” from additional stakeholders (both within and without the organization) throughout the process.
  
- **A Transition Team** with the authority to drive needed change:
  - Aligns incentives for personnel and stakeholders with the program
  - Ensures infrastructure and organizations needed for the new program exists
  - Responsible for developing standard operating procedures (SOPs) to enhance existing risk management practices and support business transformation
  - Produces training and communication materials
  
- **A Risk Management Committee** to oversee the risk management development and changes to and configurations in the risk assessment system to ensure its selectivity is aligned to the country’s most significant threats.

### **The National Integrated Risk Management System (NIRMS)**

The National Integrated Risk Management System (NIRMS) as shown in the figure below provides the necessary tools, platform, seamless connectivity and risk management decision system that supports the respective government agencies within the NSW system with dynamic and robust integrative risk management system. This system shall enable the Government departments such

as the Customs, BoG, NACOB, Income Tax Departments and other regulatory agencies the flexibility to incorporate their risk related requirements and experience.

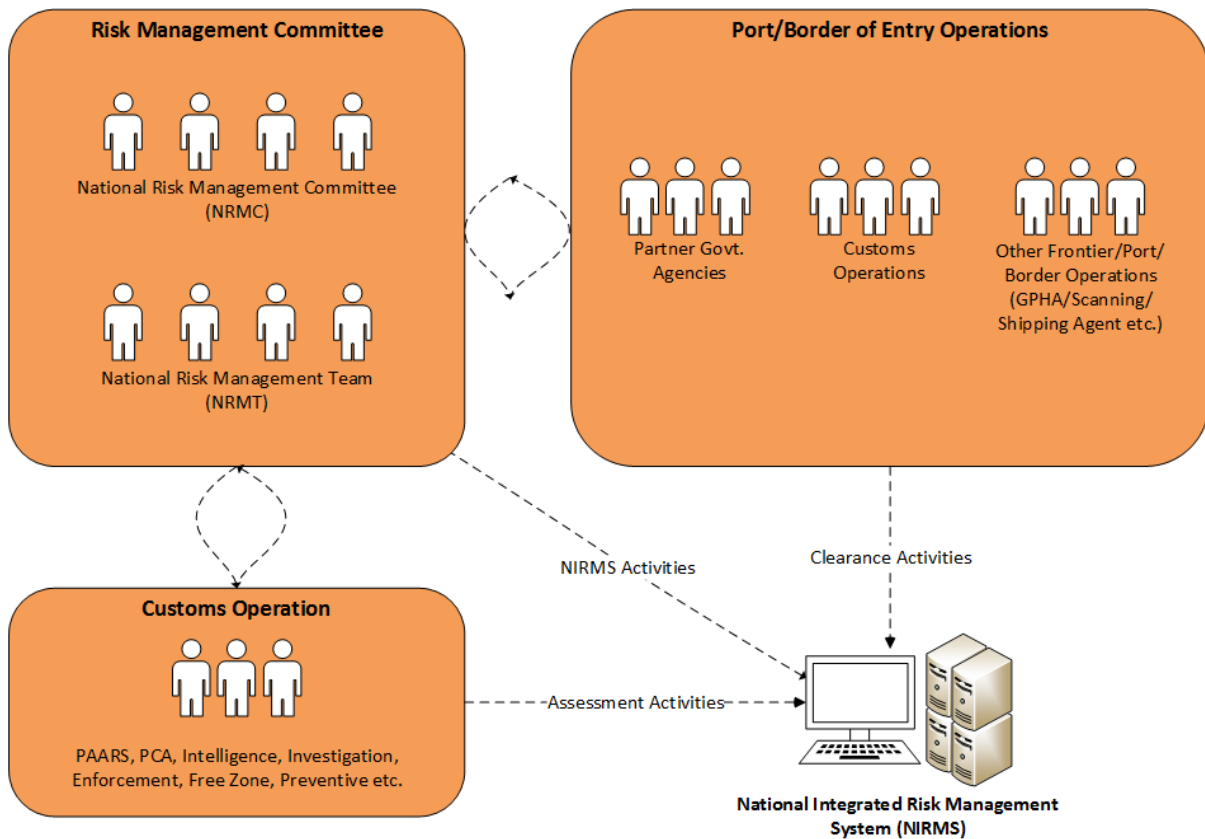


Figure 23: National Integrated Risk Management System (NIRMS)

Full details of the GNSW Risk Management Implementation Strategy are presented in Annex H.

### 5.10 Proposed Ghana National Inspection Policy

The GNSW Programme has developed a proposed high-level Ghana National Inspection Policy, incorporating a scanner usage policy, for the examination of goods entering, leaving or transiting Ghana. It is primarily aimed at the lead border control agency which is Ghana Revenue Authority (Customs Division) although many aspects of it will be equally valid for Customs Partner Government Agencies (PGAs) with whom it shares certain aspects of border control responsibilities. It will be supplemented by more detailed Standard Operating Procedures and sub policies relating to specific areas as required. It includes policy relating to physical inspections, non-intrusive inspections and any related specialised equipment.

The Policy intends to support Government agencies in the effective and efficient inspection of cargo and facilitate legitimate trade in line with the objective of creating a First Class border control system in Ghana.

The policy is formulated taking into account the following elements:



- National legislation covering Ghana Revenue Authority;
- International agreements such as the Revised Kyoto Convention and the application of best practice as recommended by World Customs Organisation and the SAFE Framework of Standards;
- The health and safety of GRA, other port staff and the public are of paramount importance at all times;
- Facilitation of legitimate trade both for import and export whilst providing high levels of revenue security and stringent control of prohibited and restricted goods;
- Harmonised methodology that can be applied nationally across the scanning/inspection operations;
- Wherever possible, scanning will be used on commercial goods, private goods, means of transport (vehicles and shipping containers) being imported, exported or transited through Ghana through any officially recognised entry or exit point, or other place;
- GRA will use risk management, scanning and audit-based controls in preference to physical examination whenever possible;
- A coordinated approach to interventions with partner Government border agencies and a reduction of physical inspections to a minimum in line with WCO recommendations;

Full details of the proposed Ghana National Inspection Policy are provided in ANNEX I.

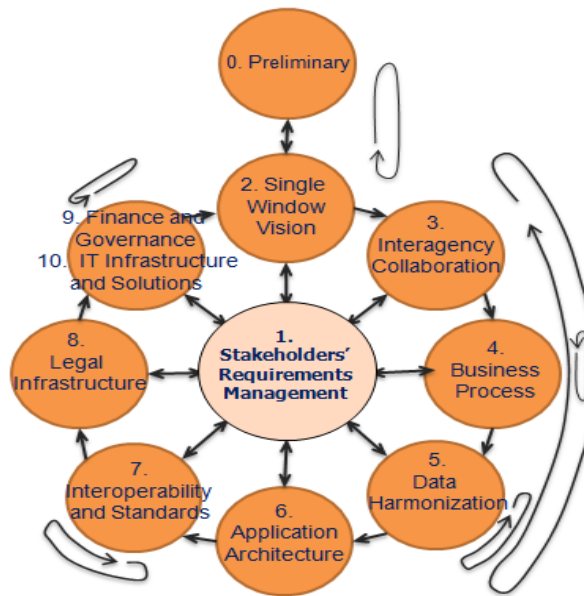
## 5.11 Change Management

It is widely recognized that the majority of projects that fail do so because the human and organizational changes necessary to support the introduction of the new approaches and technology have not been adequately addressed. This is why Change Management is *critical* to the implementation of the GNSW programme.

The GNSW programme team has taken on board the needs and aspirations expressed by the stakeholders in this regard. A full training programme for the GNSW has been developed and is presented in section 5.12. Similarly, a communications plan has been developed to keep stakeholders up to date on the programme – see section 5.13. The first edition of the GNSW *Newsletter* was released in March, and the brochure in April 2016. West Blue is developing a series of GNSW user guides and process manuals and will establish a technical and operational help desk to assist users.

Following the review and finalization of the proposed “to-be” scenarios with key stakeholders, the Change Management Group will immediately meet to consider the best way forward to address the concerns of 2<sup>nd</sup> level officers, officials, operators and also end-users, to consider issues related to the implementation of the reforms. This will include identification of potential areas of concern and or resistance and also additional needs for training and support. The Change Management Group will also receive training in communications techniques to ensure that they can solicit inputs from the users and operators within their own organizations and create an open environment for discussion of all related issues.

Being a long-term programme, the GNSW will require a continuous programme of engagement with stakeholders to fully include them in the ongoing decision-making and development process, as illustrated below.



West Blue has fully embraced this iterative approach within the GNSW programme and, where necessary, will continuously review, evaluate, discuss, consult and redesign all the core processes and steps within the implementation plan. This will require the continuous engagement of all key stakeholders—which is the essential ingredient for the programme to achieve its ultimate objective of enhancing the competitiveness of the Ghanaian economy. West Blue deeply appreciates the support of all stakeholders in achieving this objective.

A stakeholder update workshop was already held at Akosombro in March 2016 to provide an update on current process and to obtain feedback on planned developments. It is intended to hold similar such events throughout the duration of the programme. West Blue will also establish a project monitoring and evaluation unit to continuously review programme implementation and performance, and feed this information back to the stakeholders.

## 5.12 Training Plan

As part of the Change Management Plan, West Blue will offer a series of training programmes for the personnel of all key stakeholders and agencies in the GNSW community.

A detailed training plan has already been developed, based on the specific needs of the stakeholders identified through key agency meetings and interviews, a training-needs-assessment questionnaire, a task and skill gap analysis, and a review and validation of stakeholder requirements through workgroup discussions.

The main learning objectives of the training plan are as follows:

- Enhance stakeholders' understanding of the GNSW and build confidence in its value
- Remove unfounded anxieties and fears about the GNSW
- Empower all stakeholders to utilize and benefit from the GNSW
- Develop the skill levels of all stakeholders to operate the GNSW
- Accelerate the adoption of new processes and procedures.





- Enhance the skill set of the GNSW community so that they can support the GNSW programme effectively.

The initial training programme is presented in ANNEX J.

#### 5.12.1 Training Delivery Approach

West Blue has adopted a blended training approach that will include regular in-class instruction sessions; eLearning courses available through a web-based learning-management system; guided discussions and brainstorming sessions; and case studies. All training will be subject to a quarterly review, including training evaluations and assessment of learning outcomes.

West Blue will distribute the training calendar to all key stakeholders and will send invitations to target participants, stakeholders and agencies for specific training sessions. The training programme will be managed and delivered by West Blue.

### 5.13 Communication Plan

Stakeholders continuously identify communications as a pressing need to ensure the success of the GNSW programme. Specifically, they want to receive detailed information about the following:

- Expected deliverables
- Timeline and phasing for implementation
- Technical and procedural modalities of the facility
- Roles and responsibilities of specific agencies.

As well as to the *internal* stakeholders in Ghana, the Plan will also need to be communicated *externally* to Ghana's trading partners, potential investors, international development organizations and international organizations such as the United Nations, the World Bank and WCO.

To address these needs, West Blue has drawn up a Communications Plan that details the specific communications material and strategies that will be developed and delivered, the target audiences and the frequency of delivery. West Blue will deliver it in collaboration with the key stakeholders, who have expressed their willingness to actively engage in the GNSW communications programme.

Several elements of the Communications Plan have already been delivered, including the GNSW newsletter and brochure, and the Ghana Trade Hub Portal [www.ghanatradinghub.gov.gh](http://www.ghanatradinghub.gov.gh) is already operational. All presentations from the GNSW workshops in December and March are available on the website. West Blue is also using Facebook, Twitter and YouTube to keep stakeholders informed about programme developments.

Full details of the Communications Plan are presented in ANNEX K.

### 5.14 Programme Management Structure

A Project Management Office will be established. The PMO will operate under the direction of and report to the Technical Committee.



The PMO will be responsible for overall programme management and implementation. This will include:

- Managing the day-to-day programme activities to deliver outputs agreed in the GNSW Roadmap
- Human resource management
- Accounting and audit
- Purchasing
- Facilities management.
- Risk management

It will also be responsible for programme evaluation and monitoring. This will include:

- Evaluating the impact of new GNSW services against agreed objectives and benchmarks
- Ongoing assessments of the time and cost of trading across borders for Ghana
- Assessing user satisfaction levels with the service
- Evaluating the impact of the services on the Ghanaian economy.

Evaluation tools will include user surveys, process diagnostics, measurement against agreed benchmarks, and assessment tools such as the WCO Time Release Study.

The PMO will also maintain an ongoing review of external measurements such as the TAB, the LPI and the World Economic Forum's Corruption Index, in order to assess the external perception of the changes introduced by the GNSW.

**Under the PMO, there will be two support units**, the Technical Services Unit and Change Management Unit.

**The Technical Services Unit (TSU)** will be responsible for the ongoing development and delivery of the technical modules, tools, services and ICT infrastructure required to deliver the GNSW. It will also be responsible for managing any outsourced technical services, such as Internet service provision, hardware maintenance and sub-contracted software development.

**The Change Management Unit (CMU)** will be responsible for the human factor in the GNSW programme. Specifically, it will ensure the ongoing engagement with and support for the programme by all stakeholders. It will be tasked with anticipating and responding to human-factor-related issues, obstacles and roadblocks that might affect the smooth implementation of the programme. It will also ensure the active participation of stakeholders in future iterations of the GNSW programme development.

The primary tools at the disposal of the CMU will be communications and training and two sub-units will be established for this purpose.

**The Training Sub-Unit** will be required to develop and deliver a full training programme to equip end-users and stakeholders with the required skills to fully utilize the services developed under the programme. An initial training plan has already been developed and is presented in ANNEX K. Training will be multifaceted and will include classroom training, onsite training, online seminars and tutorials, and user guides and manuals. A dedicated training centre will be established at the Customs Technical Services Bureau.

The **Communications Sub-Unit** will focus on keeping stakeholders and users up to date on all issues related the GNSW. This will include:

- Providing advance information on the introduction of new features into the GNSW
- Publishing the results of service-level improvements
- Providing information on upcoming training events
- Presenting case stories and examples of specific successes
- Presenting the results of monitoring and evaluation surveys.

Communications tools will include the GNSW website, the bimonthly newsletter, GNSW information pamphlets and brochures, and tools such as Facebook and Twitter.

The Sub-Unit will also be responsible for an operation end-user non-technical help desk.

The Governance Structure is presented graphically below.

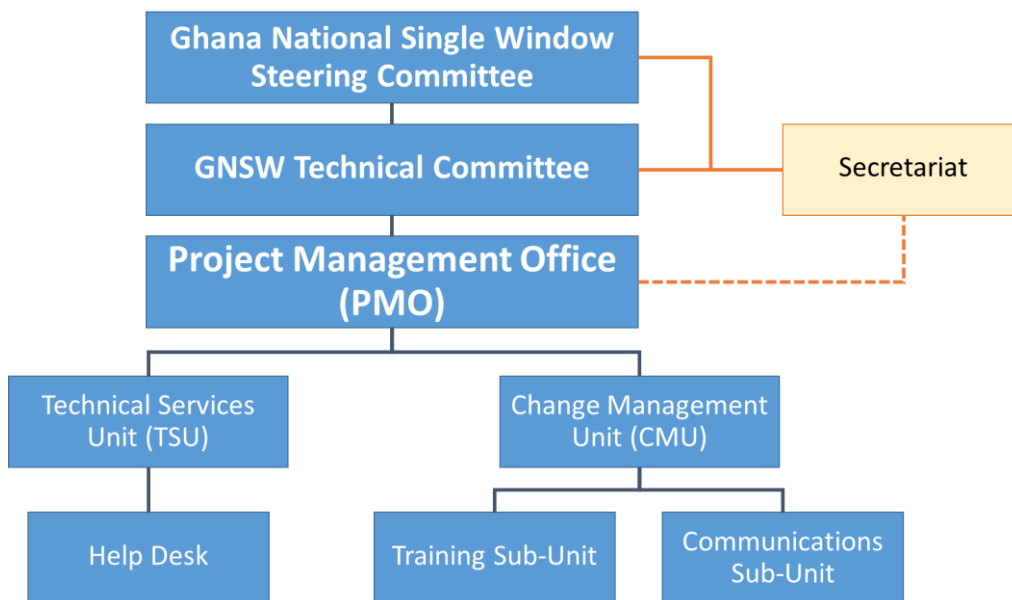


Figure 24: GNSW Internal Governance Structure

### 5.15 Risks and Assumptions

The major risks and assumptions associated with the GNSW programme are detailed in the table below. Provided that the political will and the necessary human and financial resources are maintained throughout the programme, all of these risks can be managed.

Table 20 Risks associated with the GNSW programme

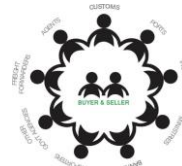
Risk	Probability (l/m/h)	Potential impact	Risk management strategy
Unreliable internet connectivity	M	Poor performance of system, system malfunction and/or unavailability of the services.	A full backup system will be established with a second Internet service provider, including



			redundant external Internet connections.
Possible attacks because of Internet security/vulnerability	M	Disruption and loss of business, loss of information, un-authorized access and un-authorized modification of data.	A complete security protection system will be established for all GNSW systems. The system will have a capability to protect data and information from unauthorized access while still providing access to people and systems that are authorized.
Failure of national power grid	M	System failure	A full power backup system will be established for all critical systems.
Existence of certain legal instruments which may cause some agencies not to cooperate with the change	M	Non-participation of key agencies	A legal group that has been established will address all legal issues relating to the successful operation of the GNSW
Delay in enacting the requisite domestic legislative framework	M	Introduction of core services would be delayed	A legal group that has been established will address all legal issues relating to the successful operation of the GNSW
Change in government could derail the implementation process of the GNSW programme	M	Failure to implement the programme	The GNSW Steering Committee is in close contact with all political parties to ensure they understand the importance of the programme and to ensure their support
Lack of government ratification of implementation plan	L	Failure to implement the programme	Continuous communications with the government to ensure they understand the importance of the programme and to ensure their support
Absence of buy-in from the executive, legislature and the judiciary arms of government	L	Delays in implementing the programme	The GNSW Steering Committee is in close contact with all political parties to ensure they understand the importance of the programme and to ensure their support



Absence of the buy-in from the management of the various key stakeholder agencies	L	Delays in implementing the programme	The GNSW Steering Committee is in close contact with all key stakeholders to ensure they understand the importance of the programme and to ensure their support
Resistance to change because of perceived potential job loss, or perceived potential loss of significance.	M	Delays in implementing the programme	The Change Management Group is in close contact with all key stakeholders to ensure they understand how the programme will be implemented and how staffing and training issues will be addressed.
Resistance to change because the new system would jeopardize some individuals' financial benefits, and possibly expose their misconduct.	H	Failure in adopting the new system	Some compensation scheme, alternative benefits or special measures need to be developed.
Resistance to change because the stakeholders are not satisfied with electronic documents, and their skill set and traditional way of working is based on the approval of physical documents.	M	Delays in implementing the programme	Awareness and correct understanding, and training, need to be gradually and widely provided.
Resistance to change because some organizations may not be willing to exchange information through e-GNSW or to share with other agencies, e.g. because of the jurisdiction scope of data usage and data privacy, or fear of related court cases.	M	Delays in inter-agency collaboration and programme implementation	Some legal issues need to be clearly resolved, e.g. data privacy and liability, concerning the usage and responsibility of data sharing across different agencies.
Resistance to change because traders have concerns about commercially/financially sensitive information, or trade-information secrets.	M	Low adoption rate of the GNSW	Measures to ensure security and commercially sensitive data protection should be embedded in the system. Public awareness and clear understanding should be created among



			traders and business communities.
Refusal to utilize the system	L	Delays in implementing the programme	The Change Management Group is in close contact with all key stakeholders to ensure they are fully trained in the use of the system, both from a technical and operational perspective. Key stakeholders will also be kept informed as to how the programme will be implemented and how staffing and training issues will be addressed.
Illegal trade increases	M	Loss of government revenues	The low cost and ease of use of the GNSW should discourage illegal trade.
Global economic downturn	M	Downturn in Ghanaian trade flows	Outside the scope of the programme
Security threats regional and global	M	Disruption in trade and economic activity in Ghana	Outside the scope of the programme
Natural disasters such as drought	L	Disruption in trade and economic activity in Ghana	Outside the scope of the programme
Social instability	L	Disruption in trade and economic activity in Ghana	Outside the scope of the programme
Inadequate coordination among stakeholders	M	Misunderstanding and resistance to change	Adequate resource persons, effort and budgets need to be allocated to continuously and actively engage government and business stakeholders.
Budget constraints	M	Failure to implement some programmes	Conveying the benefits, cost and tremendous return-on-investment rationale clearly to the highest-level decision makers. Implementing the programmes in a financially permissible phasing fashion.
Human resource constraints	M	Delay in programme implementation and system utilization.	Training and upgrading knowledge and skills for the existing staff from



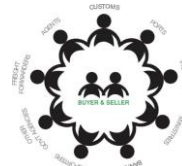
			the beginning of the roadmap. Knowledge transfer activities should be encouraged and conducted continuously.
Complicated procedures and document requirements	M	Delay in the agreement of common data elements, and in the new simplified/automated procedures.	Working groups on business process analysis, document simplification and harmonization should continue their active engagement during the programme's implementation.

Key to table: H=high; M=medium; L=low.

### Assumptions

The following assumptions are key to the success of the GNSW programme:

- There will be a continuation of strong political will for the programme
- Key stakeholder support will be maintained throughout the programme
- The stability of the economy will be maintained
- There will be a healthy competitive environment to ensure efficient service delivery
- West Blue will maintain its strategic focus.



## 6 ESTIMATION OF BENEFITS FROM THE GHANA NATIONAL SINGLE WINDOW

Estimates of potential time and cost savings from enhanced trade facilitation in Ghana can be gleaned from the World Bank Trading Across Borders report for 2016. As set out in the table below, the TAB report estimates that the border and documentary compliance cost per consignment in Ghana for importing the selected representative product (HS 8708, parts and accessories for motor vehicles imported from Belgium) is US\$ 1,027 per consignment. The corresponding figure for exports is US\$ 645 per consignment (for the representative product of HS 08 Edible Fruits and Nuts exported to India).

Table 21: Estimated costs (US\$) for Ghana import and export border and documentary compliance

Cost to import: border compliance US \$	Cost to import: documentary compliance US \$	Total cost to import US \$	Cost to export: border compliance US \$	Cost to export: documentary compliance US \$	Total cost to export US \$
725	302	1 027	490	155	645

Source: World Bank *Trading Across Borders* report 2016 – Ghana Estimates

Assuming that the average cost of border and documentary costs for import and export consignments is the same as for the representative products in the *Trading Across Borders* report, we can estimate that the total import and export border and documentary costs per year in Ghana are approximately US\$ 167 million per year (see Table 22).

Thus, a reduction in these costs by 50%, as expected under the implementation of the GNSW, would result in savings of US\$ 84 million annually to the Ghanaian economy.

Table 22: Estimated annual value (US\$) for a 50% reduction in Ghana import and export border and documentary compliance costs

Type of consignment (import/export)	Total consignments: 1 Jan. 2015- 31 March 2016	Average consignments per month	Average cost per consignment <sup>53</sup>	Total cost all consignments for 12 months	Potential annual savings from a 50% reduction in costs
Import	183 719	12 248	1 027	150 943 530	75 471 765
Export	31 797	2 120	645	16 407 252	8 203 626
Total	215 516	14 368		167 350 782	83 675 391

Source: World Bank *Trading Across Borders* report 2016 – Ghana Estimates and Ghana Revenue Authority, Customs Division

<sup>53</sup> World Bank *Trading Across Borders* report 2016.





And these are only the *direct* costs. As we can see from Table 23 and Table 24, the estimated additional savings to the Ghanaian economy through a 50 per cent reduction in border and documentary compliance times per consignment after five years would be US\$ 44 million per year.

Table 23: Estimated time (hours) for Ghana import and export border and documentary compliance

Time to import: border compliance	Time to import: documentary compliance	Total import time	Time to export: border compliance	Time to export: documentary compliance	Total export time
282	282	564	108	89	197

Source: World Bank *Trading Across Borders* report 2016 – Ghana estimates

Table 24: Estimated annual value (US\$) for a 50% reduction in time for Ghana import and export border and documentary compliance

Type of consignment	Total consignments: 1 Jan. 2015- 31 March 2016	Average consignments per month	Average time per consignment (hours)	Total time all consignments for 12 months	Potential annual time savings from a 50% reduction in time (hours)	Total value in US\$ of time saved, assuming a value of US\$ 1 per hour
Import	183 719	12 248	564	82 894 013	41 447 006	41 447 006
Export	31 797	2 120	197	5 011 207	2 505 604	2 505 604
Total	215 516	14 368		87 905 220	43 952 610	43 952,610

Source: World Bank *Trading Across Borders* report 2016 – Ghana Estimates and Ghana Revenue Authority, Customs Division

Combining both the direct cost (US\$ 84 million) and indirect time (US\$ 44 million) savings, we get an estimated annual total savings after five years of US\$ 128 million from the projected impact of the GNSW.



It is noted that additional indirect time cost savings would accrue from impacts such as a reduction in storage and dwell times, reduction in the cost of capital from holding material stocks for shorter periods, etc. These are not included in the above estimates.

Other additional indirect benefits will also accrue from the reduction in trade transaction times. For example, it is estimated that a one-day reduction in time at the border can increase exports by 1 per cent.<sup>54</sup> Thus, in the case of Ghana, a 50 per cent reduction in the export transaction time of 197 hours—equivalent to 8.2 days<sup>55</sup> (Table 1 above) —could generate an increase in exports of 4 per cent.

Further, the impact of a reduction in trade transaction costs on investment is also well known. For example, a recent (2013) study “Reducing Transatlantic Barriers to Trade and Investment” estimated that a 10 per cent decrease in the non-tariff barrier index could result in a 5 per cent increase in income from foreign investment.<sup>56</sup>

### Environmental Benefits

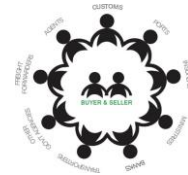
It is expected that the GNSW Programme will have a positive impact on the trade environment in terms of a reduction in paper usage through the introduction of paperless trade processes. In addition, it will reduce carbon emissions through the reduction of traffic from traders travelling to and from Customs and other government agencies for the submission and clearance of documents.

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<sup>54</sup> Djankov, S., Freund, C., & Pham, C.S (2010). Trading on time - [www.doingbusiness.org/~media/FDPKM/Doing-Business/Documents/Methodology/Supporting-Papers/DB-Methodology-Trading-On-Time.pdf](http://www.doingbusiness.org/~media/FDPKM/Doing-Business/Documents/Methodology/Supporting-Papers/DB-Methodology-Trading-On-Time.pdf)

<sup>55</sup> Calculated on the basis of 24 hours per day as per the Trade Across Borders Report definitions

<sup>56</sup> Reducing Trans-Atlantic Barriers to Trade and Investment:  
[http://trade.ec.europa.eu/doclib/docs/2013/march/tradoc\\_150737.pdf](http://trade.ec.europa.eu/doclib/docs/2013/march/tradoc_150737.pdf)



## 7 IMPLEMENTATION STRUCTURE

The vision of Ghana National Single Window is to enhance the trade efficiency and competitiveness of the Ghana economy by establishing an environment that facilitates end-to-end paperless trade transactions. This is a long-term vision that should be fully realized over the 10-year period 2016 to 2026.

Within the first five years of the programme, it is expected that the GNSW will achieve a:

- 50% reduction in time and cost of trade across borders<sup>57</sup>, and also at the same time achieving better regulatory compliance in Ghana
- Reduction of the average cargo dwell time at the major sea port from 20 days to 10 days<sup>58</sup>
- Reduction of intrusive inspection from 90% to less than 10%
- Enhanced implementation of the WTO Trade Facilitation Agreement.

There are strategic action agendas that must be achieved such that the vision and goals of Ghana National Single Window can be realized.

The specific actions that must be taken to achieve these objectives are illustrated in Figure 23 within the overall structure of a House, where the GNSW environment will be designed and built based upon 6 action pillars (A-F) and 4 support foundations (G, H, I, J). They are:

- A. Simplify or eliminate** some unnecessary documents or procedures related to import, export & transit transactions
- B. Implement fully digitized Customs Operations** (or establish an environment called **Paperless Customs Single Window** to automating all core processes related to export, import, transit and warehouse of GRA Customs)
- C. Streamline and automate internal operations**, and implement **paperless front-end services** of each Partner Government Agency
- D. Establish the fully automated regulatory Single Window** with inter-agency electronic connectivity and paperless transactions, and also provide integrated electronic front-end services to business communities (or, establish an environment called **Regulatory NSW**)
- E. Establish electronic Sea Port and Air Port Community Systems (PCSs)** to support efficient coordination among logistics service providers at the major seaport and the major airport, and also establish integration between PCSs and the regulatory NSW (or establish an environment called **Port Community Systems** for sea freight and air freight)
- F. Implement paperless cross-border information exchange** with partner countries
- G. Enhance National and PGA's ICT Infrastructure**
- H. Improve Laws and Regulations** for legally supporting electronic and paperless operations with trust and confidence.
- I. Support Stakeholders, Manage Change and Enhance Awareness**
- J. Implement a Governance and Project Management Office (PMO)**, Manage and Monitor the Implementation plans, monitor progress and impacts.

<sup>57</sup> As defined by the World Bank's Trading Across Border indicators (with the baseline data of Ghana from the World Bank Doing Business Report 2016)

<sup>58</sup> As defined by the World Bank Report.

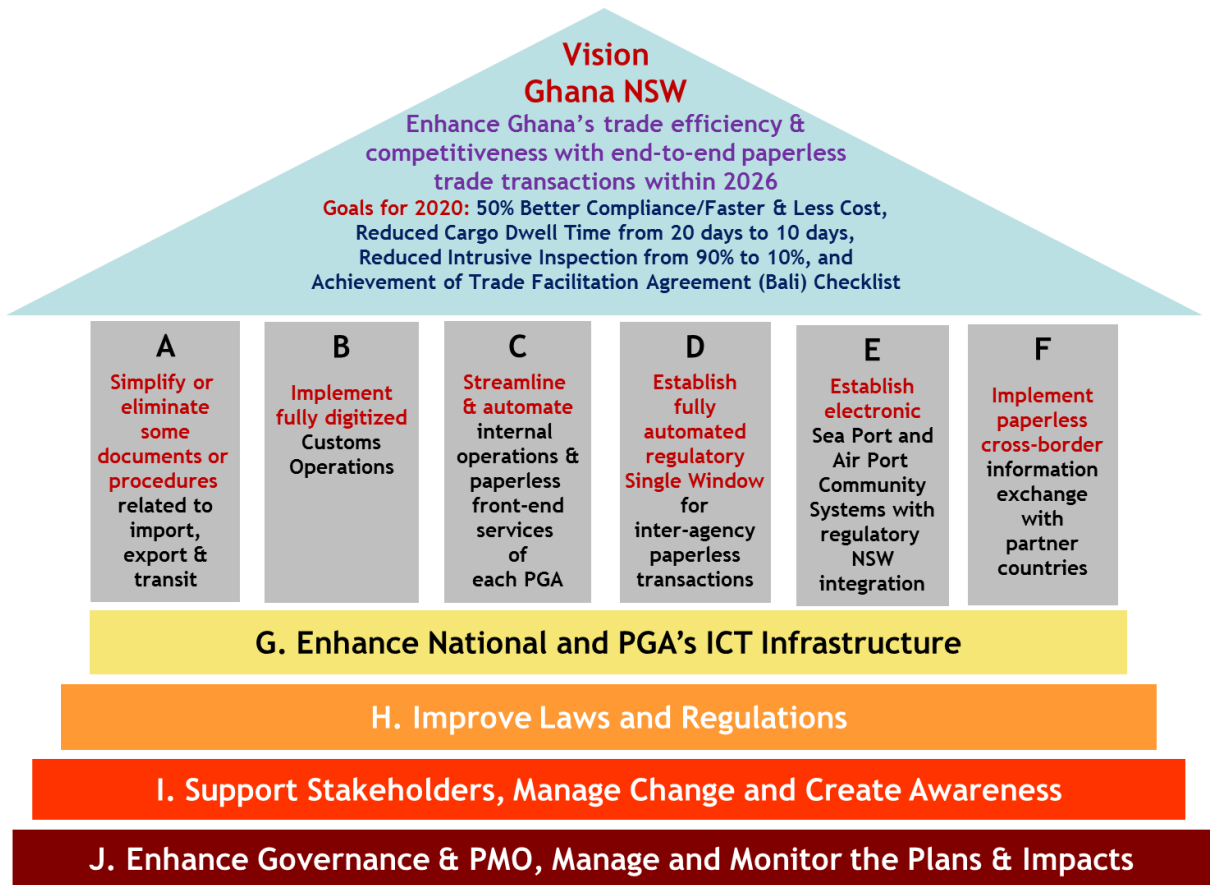


Figure 25: GNSW Vision & Goals, and Strategic Actions

Specific activities will be undertaken to achieve each of the above strategic components. These have been formulated based on a comprehensive analysis of the current situation and the future to-be architecture of Ghana National Single Window. A detailed list of these implementation activities is presented in section 8.4 below.



## 8 IMPLEMENTATION PHASES AND SPECIFIC ACTION PLAN

The strategic actions outlined in Section 8 above will be implemented through a series of projects and activities in three phases over a 10-year period, as follows:

- Short-term phase (2016-2017)
- Medium-term phase (2018-2020)
- Long-term phase (2021 onwards)

These phases are described below.

### 8.1 Short Term Phase (2016-2017)

The short-term phase covers the development of all top priority “quick win” projects that can deliver a high impact and can be implemented within the first eighteen months following the approval of the GNSW blueprint. These include:

High Impact/Short term - “Quick Wins” Projects

- A1: Eliminate specific documents or procedures
- A2: Reduce the number of intrusive inspection
- A3: Conducting inspection process outside the geographic area of the port of entry
- B1: Implement paperless import e-Manifest for sea and air freight
- B3: Processing Form 4A electronically
- B4: Electronic payment of Customs duty and fees
- B5: Improving Scanning & Non-intrusive Inspection System
- D3: Implement the National Integrated Risk Management System
- D4: Joint Inspection MIS
- G4: ICT Installation for each PGA
- H1: Amend a regulation mandate for electronic Sea/Ari manifest
- I4: GNSW Help Desk

Medium-Impact/ Short Term Projects

- H2: Mandate a lead agency to manage and supervise Single Window
- H3: Assess and revise laws, regulations and administrative instructions to support the proposed paperless GNSW environment
- I5: Study Tours

The expected outputs of these immediate-phase action items should achieve at least 40 per cent of the trade facilitation key performance indicators (KPIs)



## 8.2 Medium Term Phase (2018-2020)

The medium term phase covers all projects scheduled for 2018 to 2020. The key objectives of this phase are:

### High-Impact/ Medium Term Projects

- B2: Paperless Customs system
- C1: Internal workflow automation for PGAs
- C2: Electronic payment for PGAs' fee
- D1: Automatic electronic information exchange among PGAs
- D2: Electronic Single Window/ Single Submission
- E1: Integrate with Sea Port Community System
- E2: Integrate with Air Cargo Management System
- E3: Implement e-Air Waybill (e-AWB) for paperless operations
- E4: Implement Air Port Community System
- F3: Implement pilot projects for information exchange with a neighbouring country
- G3: Improve GNSW Infrastructure
- G5: Single Sign-On System

### Medium-Impact/ Medium Term Projects

- D5: Shared Online Product Registration System
- F1: multi-lateral and bi-lateral economic cooperation System
- G1: High-Speed/ High-Availability Inter-Government Network Connectivity System
- G2: Govt. Certification Authority (CA) Services

The expected outputs of these medium-term action items should achieve 100 per cent of the trade facilitation KPIs.

## 8.3 Long-term Phase (2021 onwards)

The long-term phase, from 2021 includes actions that started in earlier phases and have to be supported, maintained, strengthened and further enhanced as appropriate. This phase will, therefore, include continuation or initiations of the following projects:

### High-Impact/ Long Term Projects

- A1: Eliminate specific documents or procedures
- C1: Internal workflow automation for PGAs
- C2: Electronic payment for PGAs' fee



- D1: Automatic electronic information exchange among PGAs
- D2: Electronic Single Window/ Single Submission
- E1: Integrate with Sea Port Community System
- F2: Joint Inspection with a neighbouring country
- G3: Improve GNSW Infrastructure
- G4: ICT Installation for each PGA

Medium-Impact/ Long Term Projects

- D5: Shared Online Product Registration System

Figure 26 below graphically presents the proposed projects and activities in all three phases. To fully achieve the proposed GNSW vision and goals, all these strategic agendas must be implemented through the activities detailed in Section 8.4.



# Ghana National Single Window Strategic Plan and Roadmap

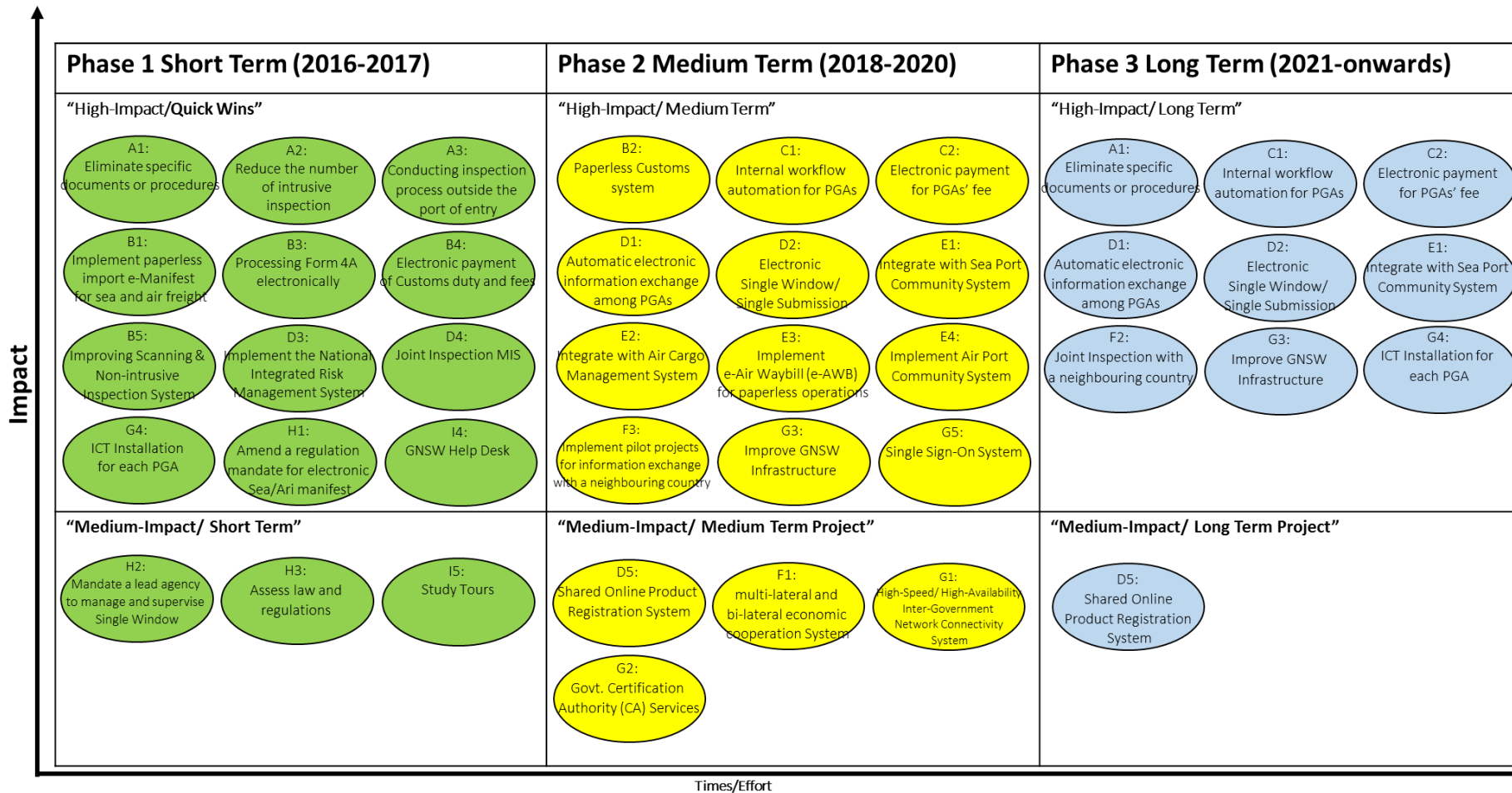


Figure 26: Analysis of programmes' impacts, efforts and prioritization





8.4 Detailed Action Plans

Green: Phase 1 Yellow: Phase 2 Blue: Phase 3

#	Objective	Actions	Activities	Lead (responsible)	Dependencies	'16		2017				2018				2019				2020				Beyond 2020	Objectively Verifiable Indicator OVI		
						Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
1.	A. Process Simplification of Import, Export & Transit Transactions	A1: Eliminate specific documents or procedures in selected PGAs	Eliminate LPCO paper documents, and replacing each with LPCO identification number	Each PGA	Implementation of a Single Submission System and availability of a referential database for LPCO																				Replacement of LPCO papers with LPCO ID number		
			Eliminate non-traditional export form and replace with statistical report	GRA-Customs, GEPA	Implementation of an Export Declaration System																						Elimination of non-traditional export form
			Eliminate application letters in PGAs' processes	Each PGA	Implementation of Single Submission and Common Registration System																						
2.		A2: Simplify Risk Assessment Process	Develop criteria and process for automatic release of low risk commodities	GRA Customs	Implementation of a National Risk Management System; streamlining the "High Risk Goods" list; and Automating Post Clearance Audit																				Intrusive inspection reduced to under 50%		



## Ghana National Single Window Strategic Plan and Roadmap



#	Objective	Actions	Activities	Lead (responsible)	Dependencies	'16		2017				2018				2019				2020				Beyond 2020	Objectively Verifiable Indicator OVI
						Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
3.		A3: Conduct inspection process outside the port of entry	Develop better criteria for conducting inspection process outside port of entry, e.g. for well-defined and low-risk cases, and develop efficient inspection procedures	GRA-Customs	Implementation of a National Risk Management System and having in place a Joint Inspection Team																			Inspection outside the port of entry has been conducted	
4.		A4: Publish the to be process manual for each agency and establish service level agreement for all re-engineered processes	Publish the to be process manual and establish service level agreement for all re-engineered processes	Each PGA	Agreement on the to be processes by each PGA																			<ul style="list-style-type: none"> <li>The process manual published</li> <li>SLA established</li> </ul>	
5.	B. Paperless Digital Customs Operations	B1: Implement paperless import e-Manifest for sea and air freight	Implement electronic submission and amendments of paperless/electronic manifests for sea, air and land-border cargoes, in such a way that physical copies of manifests are not needed	GRA-Customs, GPHA, GACL	<ul style="list-style-type: none"> <li>Regulatory Agencies (Customs. GPHA and GACL) enforcing the rules and regulation regarding submission of manifest by carriers.</li> <li>Actions: I1</li> </ul>																		<ul style="list-style-type: none"> <li>Sea manifest processed paperless (100%)</li> <li>Air manifest processed paperless (100%)</li> </ul>		



## Ghana National Single Window Strategic Plan and Roadmap



#	Objective	Actions	Activities	Lead (responsible)	Dependencies	'16		2017				2018				2019				2020				Beyond 2020	Objectively Verifiable Indicator OVI
						Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
6.		B2: Implement paperless Export/Import/ Transit Customs declaration and automatic compliance approval	Implement Paperless Export Customs Declaration and Compliance Approval	GRA-Customs	<ul style="list-style-type: none"> <li>Adoption and implementation of the blueprint for GRA Customs</li> <li>Actions: B1 (for Import and Transit/Transshipment), I2</li> </ul>																		Paperless Customs system		
			Implement Paperless Import Customs Declaration and Compliance Approval			Implement Paperless Transit/Transshipment Customs Declaration and Compliance Approval																			
			Automate Post Clearance audit processes and integrate with Risk Management System		National Risk Management System																		Automated Post Clearance Audit Processes and Integration with Risk Management System		
7.		B3: Implement paperless Foreign Exchange Control Form 4A between Banks and GCMS	Automate the Application and Approval Process of the 4A Form	GRA-Customs, Bank of Ghana and Commercial Banks	<ul style="list-style-type: none"> <li>Enforcement of Form 4A System by Bank of Ghana</li> <li>Action: I2</li> </ul>																	Form 4A processed electronically (100%)			



# Ghana National Single Window Strategic Plan and Roadmap



#	Objective	Actions	Activities	Lead (responsible)	Dependencies	'16		2017				2018				2019				2020				Beyond 2020	Objectively Verifiable Indicator OVI
						Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
8.		B4: Implement electronic payment and receipt of Customs duty and fees	Enhance the Paperless Customs Declaration and Compliance Approval system with electronic payment and receipt of Customs duty and fees  Electronic collection of all manual Customs Fees	GRA-Customs and banks	Action: B2			█															Customs duty/fees transactions processed electronically		
9.		B5: Improve Scanning & Non-intrusive Inspection System	Implement Ghana National inspection policy  Improve scanning facility, and develop an information support system for non-intrusive inspection of cargoes and cargo containers  Design and implement a centralized scanning image system	GRA-Customs	Approval of the Ghana National Policy  • Actions: I2 • Scanning Unit organization to support centralized scanning image system			█															<ul style="list-style-type: none"> <li>Scanning procedures and guidelines</li> <li>More Scanning equipment</li> <li>Time reduction in scanning</li> <li>Reduction in non-intrusive inspection</li> </ul>		
10.	C. Agency Workflow Automation within	C1: Implement workflow automation for PGAs internal	Selected PGAs to redesign and automate their internal processes	Each PGA	none		█		█														<ul style="list-style-type: none"> <li>Internal workflow automation system for each</li> </ul>		



## Ghana National Single Window Strategic Plan and Roadmap



#	Objective	Actions	Activities	Lead (responsible)	Dependencies	'16		2017				2018				2019				2020				Beyond 2020	Objectively Verifiable Indicator OVI	
						Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
	selected PGA	operations, and ease of issuing e-registration, laboratory result reporting, and approval of e-permits, e-licenses, and e-certificates	Implement a National Automotive Repository Portal for DVLA  Automate future target process description for benchmark commodities	DVLA, GRA Customs	Integration with Pre-Arrival Assessment System (PAARS) and GCMS																				PGA	<ul style="list-style-type: none"> <li>LPCO procedures (of each PGA) carried out paperless</li> </ul>
11.		C2: Implement electronic payment for PGAs' fee	Enhance the system of internal workflow automation within each PGA (Project C1), with electronic payment of PGAs' fees	Each PGA identified and banks	<ul style="list-style-type: none"> <li>Action: C1</li> <li>Procedures set by Ghana Controller and Accountant General's Department</li> </ul>																				<ul style="list-style-type: none"> <li>PGA fee transactions processed electronically (100%)</li> </ul>	
12.	D. Regulatory National Single Window for Inter-Agency Paperless Transactions	D1: Implement automatic electronic information exchange among PGAs and GRA-Customs where non-existent for statistics,	Exchange electronic information- mainly <b>output forms</b> (products & importers/exporters registration, compliant customs declarations, e-permits, e-licences, e-certificates, etc.)	GRA Customs, PGAs	<ul style="list-style-type: none"> <li>Actions: B2, C1</li> <li>Interface between the GNSW System and existing proprietary systems</li> </ul>																			<ul style="list-style-type: none"> <li>Electronic Information exchange between selected PGAs</li> </ul>		



# Ghana National Single Window Strategic Plan and Roadmap



#	Objective	Actions	Activities	Lead (responsible)	Dependencies	'16		2017				2018				2019				2020				Beyond 2020	Objectively Verifiable Indicator OVI
						Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
		reporting, tracking and monitoring, validation and processing of e-LPCO.	Share CCTV camera footage of scanning sites between GPHA and Customs Integrate Customs Management System with Vessel Tracking System	GRA Customs, GPHA GRA Customs, Ghana Maritime Authority																					
13.		D2: Implement Electronic Single Window/ Single Submission for Customs & PGA Declarations, and Applications for Licenses/ Permits/ Certificates	Establish Electronic Single Window allowing exporter/importer to lodge in a single electronic form for submitting Customs & PGA declarations, and also, at the same time, applications for different licenses/ permits/certificates	GRA-Customs and PGAs	<ul style="list-style-type: none"> <li>Actions: B2, C1, I5</li> </ul>																				



# Ghana National Single Window Strategic Plan and Roadmap



#	Objective	Actions	Activities	Lead (responsible)	Dependencies	'16		2017				2018				2019				2020				Beyond 2020	Objectively Verifiable Indicator OVI
						Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
14.		D3: Implement the National Integrated Risk Management System	Establish an electronic information management system that possess a nationally integrated risk analysis and profiles that are jointly developed and applicable for multiple PGAs and also Customs requirements Feedback Scanning results into Risk Management System Feedback Physical examination results into Risk Management System	GRA-Customs and PGAs	•																		<ul style="list-style-type: none"> <li>An Integrated Risk Management System</li> <li>Integrated Risk Analysis Criteria for multiple PGAs/GRA-Customs</li> </ul>		



# Ghana National Single Window Strategic Plan and Roadmap



#	Objective	Actions	Activities	Lead (responsible)	Dependencies	'16		2017				2018				2019				2020				Beyond 2020	Objectively Verifiable Indicator OVI
						Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
15.		D4: Implement Joint Inspection Management Information System	Establish a management-information system that coordinates Terminal Operators, several government agencies including GRA-Customs and related authorities for joint inspection, reporting, approval and issue handlings Implement mobile application to support physical inspection	GRA-Customs and PGAs	Projects B2, D3 and D4 can be developed together since they are interconnected and complementary.																			<ul style="list-style-type: none"> <li>Joint Inspection Management System</li> <li>Joint Inspection Team</li> </ul>	
16.		D5: Implement a Single and Shared Importer/Exporter/Product online Registration System for GRA-Customs, PGAs/Authorities and relevant business associations	Establish an electronic Single Window system that supports a single sign-on (referring to the I5 project) and single submission of applications for importer/exporter/product registration	GRA-Customs and PGAs	<ul style="list-style-type: none"> <li>Action: C1, I5</li> </ul>																			<ul style="list-style-type: none"> <li>Integrated Business and Product Registration System</li> </ul>	





## Ghana National Single Window Strategic Plan and Roadmap



#	Objective	Actions	Activities	Lead (responsible)	Dependencies	'16		2017				2018				2019				2020				Beyond 2020	Objectively Verifiable Indicator OVI
						Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
17.	E. Sea and Air Port Community Systems for paperless freight/transport operations	E1: Implement Sea Port Community System (Sea PCS) (for electronic information exchange, paperless operations, and efficient coordination among Port Authority, Terminal Operators, Shipping Lines/Vessels, Trucks, Customs & relevant PGAs)	Establish an electronic platform that enables secure exchange of information among freight forwarders, terminal operators, shipping lines, vessels, truckers, importers/exporters, customs brokers, and port-related authorities for efficient sea freight visibility and coordination. This platform optimizes, manages and automates port and logistics processes through single submission of data and connecting transport and logistics chains.	GPHA and GRA Customs	<ul style="list-style-type: none"> <li>Action: B2</li> <li>Container Management System must be operational</li> </ul>																		<ul style="list-style-type: none"> <li>A Sea PCS</li> <li>Average cargo dwell time reduced</li> <li>Number of document types carried out paperless</li> </ul>		
18.		E2: Implement Air Cargo Management System for Ground Handling Agency (GHA)'s internal operations	Put in place an electronic information management system to support the internal core operations of the Air Cargo Ground Handling Agent	Ghana Airports Company Limited (working with GHA)	none																		<ul style="list-style-type: none"> <li>Air Cargo Management System</li> <li>Time reduction and efficiency in cargo handling within GHA</li> </ul>		



## Ghana National Single Window Strategic Plan and Roadmap



#	Objective	Actions	Activities	Lead (responsible)	Dependencies	'16		2017				2018				2019				2020				Beyond 2020	Objectively Verifiable Indicator OVI
						Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
19.		E3: Implement e-Air Waybill (e-AWB) for paperless operations among freight forwarders, GHA and airlines	Establish an electronic exchange platform to support paperless e-Air Waybill related operations among freight forwarders, ground handling agencies, and airlines	Ghana Airports Company Limited (working with GHA and airlines)	<ul style="list-style-type: none"> <li>Action: E2</li> <li>Airlines with Electronic Systems</li> </ul>																			<ul style="list-style-type: none"> <li>-AWB information exchange system</li> <li>Percentage of (number of) Air Waybill carried out electronically</li> <li>Number of airlines participate</li> <li>Number of freight forwarders submitting e-AWB</li> </ul>	
20.		E4: Implement Air Port Community System (Air PCS) (for electronic information exchange & paperless operations with Air Port Authority, GHA, freight forwarders, airlines, customs agents, trucks, importers and exporters)	Implement an Air Port Community System, which is an electronic exchange platform to coordinate freight forwarders, ground handling agencies, airlines, importers/exporters, customs agents, truckers and airport-related authorities for efficient air freight visibility and coordination	Ghana Airports Company Limited and GRA-Customs	Actions: B2, E2, E3																			<ul style="list-style-type: none"> <li>Air PCS</li> <li>Average cargo dwell time reduced</li> <li>Number of document types carried out paperless</li> <li>Number of physical movements reduced</li> </ul>	



# Ghana National Single Window Strategic Plan and Roadmap



#	Objective	Actions	Activities	Lead (responsible)	Dependencies	'16		2017				2018				2019				2020				Beyond 2020	Objectively Verifiable Indicator OVI
						Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
21.	F. Paperless Cross-Border Information Exchange with Partner Countries	F1: Engage with some strategic multi-lateral and bi-lateral economic cooperation at the political and working groups levels for trade facilitation, and cross-border paperless trade initiative	Work towards an agreement on mutual benefits, business requirements, message exchange standards, cross-border business processes and legal framework between the countries	GRA-Customs (working with inter-country task force)	none																		Agreement by the multi-lateral/ bi-lateral member countries on inter-agency future procedures, electronic message exchange, and legal issues		
22.		F2: Implement pilot projects for Customs Joint Inspection including scanning information exchange at the land-border posts with a neighbouring country	Implement a joint Customs inspection between the two countries with some information-exchange platform, e.g. exchanging scanning information and Customs-related data	GRA-Customs (to work also with Customs Dept. of the partner country)	Action: B2																		<ul style="list-style-type: none"> <li>Pilot project been conducted or not</li> <li>Number of shipments carried out with the Joint Customs inspection</li> </ul>		



# Ghana National Single Window Strategic Plan and Roadmap



#	Objective	Actions	Activities	Lead (responsible)	Dependencies	'16		2017				2018				2019				2020				Beyond 2020	Objectively Verifiable Indicator OVI	
						Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
23.		F3: Implement pilot projects for Customs and certificates electronic information exchange with a strategic partner country, e.g. e-Certificate of Origin, and e-Health certificate	Implement a system to electronically exchange information, e.g. e-Customs Declaration, e-Certificate of Origin, and/or e-Health Certificate, with the electronic system of the partner country	GRA-Customs and relevant PGAs of Ghana (to work also with the agency of the partner country)	Actions: B2, C1 (of relevant PGAs)																					<ul style="list-style-type: none"> <li>Pilot project been conducted or not</li> <li>Number of document types implemented in the project</li> <li>Number of e-documents/transactions been electronically exchanged with the partner country or countries</li> </ul>
24.	G. ICT Infrastructure Enhancement	G1: High-Speed/High-Availability Inter-Government Network Connectivity	Establish dedicated, secure and reliable Internet networks linking different PGAs and GRA-Customs (especially those having back-end information systems and integration requirements)	Ghana NITA	None																					<ul style="list-style-type: none"> <li>Network installed</li> <li>Number of PGAs connected</li> <li>Bandwidth available</li> </ul>



# Ghana National Single Window Strategic Plan and Roadmap



#	Objective	Actions	Activities	Lead (responsible)	Dependencies	'16		2017				2018				2019				2020				Beyond 2020	Objectively Verifiable Indicator OVI
						Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
25.		G2: Government Certification Authority (CA) Services	Work with NITA to Establish the capability to authenticate individuals, and issue digital certificates. Those individuals include high-level government officials, government staff, business entities, business people and civilians	Ghana NITA	None			█																<ul style="list-style-type: none"> <li>CA entity established or mandated</li> <li>Number of users issued with digital certificates</li> </ul>	
26.		G3: GNSW Infrastructure Improvement (Data centres, network equipment, technical/system administrative help desk, supporting high availability and security)	Implement and expand in three phases, and design to support scalability	GRA-Customs	•			█				█												<ul style="list-style-type: none"> <li>System installed</li> <li>Percentage of system utilization</li> <li>Rate of System Availability</li> </ul>	
27.		G4: ICT Installation for each PGA	Advise PGAs on establishing small/medium/ large-scale ICT Systems	Each PGA	None			█				█												Systems installed accordingly in each PGA	



## Ghana National Single Window Strategic Plan and Roadmap



#	Objective	Actions	Activities	Lead (responsible)	Dependencies	'16				2017				2018				2019				2020				Beyond 2020	Objectively Verifiable Indicator OVI
						Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
28.		G5: Single Sign-On System	Implement a Single Sign-On system that supports single sign-on session/user authentication process, permitting user to enter one name and password in order to access multiple applications within several agencies	GRA-Customs and all PGAs having their internal relevant information systems	•																						<ul style="list-style-type: none"> <li>• Number of user accounts created</li> <li>• Number of PGAs implemented with the Single Sign-On capability</li> <li>• Number of separate applications been implemented with the Single Sign-On</li> </ul>
29.	H. Law and Regulations Improvement	H1: Amend and enact a Law or Regulation to mandate the submission of electronic sea/air manifest	Amend and enact a Law or Regulation to mandate the submission of electronic sea/air manifest (without hard copies) 24 hours before the vessel leaves the final port of departure for a Ghanaian port of entry (for sea cargo), and for Ghana for air cargo, 6 hours before departure for long-haul flights and immediately upon departure for short-haul flights.	GRA Customs	None																						<ul style="list-style-type: none"> <li>• Related Law and Regulation is amended and enacted.</li> </ul>



# Ghana National Single Window Strategic Plan and Roadmap



#	Objective	Actions	Activities	Lead (responsible)	Dependencies	'16		2017				2018				2019				2020				Beyond 2020	Objectively Verifiable Indicator OVI		
						Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
30.		H2: Mandate a lead agency to manage and supervise the Single Window	Amend a law/regulation (e.g. Customs Act, 2015 (Act 891) section 3) to make a provision for the establishment of a lead agency to manage and supervise the operation of the Single Window, or alternatively (e.g. section 150 of the Customs Act) to include the Minister with power to make regulations, on the recommendation of the Board, to prescribe the conduct, manner of operation of the Single Window.	GRA Customs	None																						<ul style="list-style-type: none"> <li>The appropriate regulations have been enacted</li> </ul>
31.		H3: Assess and revise laws, regulations and administrative instructions to support the proposed paperless GNSW environment	Assess the legal implication of all proposed to be processes, information requirements, and other GNSW-related features; and revise laws, regulations and administrative instructions as appropriate.	Steering Committee	None																						<ul style="list-style-type: none"> <li>Law and Regulations have been amended accordingly</li> </ul>



# Ghana National Single Window Strategic Plan and Roadmap



#	Objective	Actions	Activities	Lead (responsible)	Dependencies	'16		2017				2018				2019				2020				Beyond 2020	Objectively Verifiable Indicator OVI
						Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
			Review the mandate of PGAs to identify and addresses potential overlaps.																		<ul style="list-style-type: none"> <li>Report delivered</li> </ul>				
			Undertake a comprehensive review of all fees and charges in all relevant agencies																<ul style="list-style-type: none"> <li>Report delivered</li> </ul>						
32.	I. Stakeholders and Change Management	I1: Communications (Media)	Produce Newsletter/information leaflets, Brochures Post news and latest updates on Ghana's Trading Hub Portal Email Campaigns Prepare articles for Newspapers, TV and Radio broadcast	PMO	None												<ul style="list-style-type: none"> <li>Number of articles published</li> <li>Number of stakeholder meetings held</li> </ul>								
33.		I2: Awareness Creation (Events)	Organize workshops, seminars and sensitization programmes	PMO	None																				





# Ghana National Single Window Strategic Plan and Roadmap



#	Objective	Actions	Activities	Lead (responsible)	Dependencies	'16				2017				2018				2019				2020				Beyond 2020	Objectively Verifiable Indicator OVI
						Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2		
34.		I3: Training/ Capacity Building	<ul style="list-style-type: none"> <li>Provide User training</li> <li>Provide Technical training</li> </ul>	PMO	None	Green				Yellow				Yellow				Yellow				Blue	<ul style="list-style-type: none"> <li>Number of trainings conducted</li> <li>Training outcome</li> </ul>				
35.		I4: Change management and support	Work with the change management group to identify potential areas of concern and or resistance and additional needs for training and support.	PMO	None	Green				Yellow				Yellow				Yellow				Blue	<ul style="list-style-type: none"> <li>Evaluation of Stakeholder Satisfaction</li> </ul>				
36.		I5: NSW Help Desk	Provide information and support to the international trade community	GRA- Customs, and special unit should be assigned with adequate resources	None	Green				Yellow				Yellow				Yellow				Blue	Setup of NSW Help with adequate resources				
			Setup physical help desk stations at strategic locations across the country. e.g. GRA Customs HQ, Tema Port, KIA etc.	GRA Customs	Building and Location		Green																	Setup physical help desk stations			
37.		I6: Study Tours	Organize field visit to sister countries' airport, seaport, land frontiers or regulatory agencies to observe and learn from their mode of operation	PMO	Travel visas from destination country were required	Green																	Study Tour Report				



# Ghana National Single Window Strategic Plan and Roadmap



#	Objective	Actions	Activities	Lead (responsible)	Dependencies	'16		2017				2018				2019				2020				Beyond 2020	Objectively Verifiable Indicator OVI
						Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
38.	J. Governance, PMO, Change Management & Monitoring Mechanism	J1: Institutionalizing/ Continuously Engaging Governance in all three layers: <ul style="list-style-type: none"> <li>Steering Committee</li> <li>Technical Committee</li> <li>Working Groups (BPA, ICT and Change Management)</li> </ul>	Provide governance and support for the implementation of the Ghana National Single Window programme	NSW Secretariat	None														Conflict Resolution and Issue Management						
39.		J2: Project Management Office (West Blue)	Manage and drive the implementation of GNSW plans/projects	Overseen by Steering Committee	None														<ul style="list-style-type: none"> <li>Milestone Achievement</li> <li>Activity Compliance Indicators (ACI) / KPI /</li> <li>Quantitative Goals</li> </ul>						



# Ghana National Single Window Strategic Plan and Roadmap



#	Objective	Actions	Activities	Lead (responsible)	Dependencies	'16		2017				2018				2019				2020				Beyond 2020	Objectively Verifiable Indicator OVI
						Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
40.		J3: Monitoring Mechanisms	Monitor the progress & KPIs of each project periodically, e.g. monthly/quarterly, where possible with service-level reports and project performance statistics generated automatically	Technical Committee, with supervision by Steering Committee	None	Green				Yellow				Yellow				Blue				<ul style="list-style-type: none"> <li>Milestone Achievement</li> <li>Activity Compliance Indicators (ACI) / KPI /</li> <li>Quantitative Goals</li> </ul>			
			Conduct Time-Release Study (TRS)* biennially to capture and analyse the efficiency (related to time & cost) of the operations at the major sea port (Tema) and the major airport (KIA)	GRA-Customs	None	Green	White				Yellow	White				Yellow	White				Blue	Feedback and recommendations have been utilized to improve the plans/projects			
			Conduct Time/Cost-Distance Method (TCD) ** biennially to capture and analyse the efficiency (related to time, cost, and distance factors) of at least two strategic trade corridors (strategic transport routes between at least two Ghana's major cities and two major land borders)	GRA-Customs and GPHA	None	Green	White				Yellow	White				Yellow	White				Blue	Feedback and recommendations have been utilized to improve the plans/projects			



## 8.5 Review and Monitoring

The achievement of all outputs under the three phases of the programme will be reviewed and monitored on an ongoing basis by the Project Management Office (PMO). At the end of Phase 2 in 2010, a forward-looking strategic review on the GNSW Programme should take place, taking into account the achievements of the GNSW implementation to date and making recommendations for any necessary future adjustments of the GNSW system beyond August 2020. The results of such reviews will be presented to the Technical Committee on a regular basis.



## 9 CONCLUDING COMMENTS

The GNSW programme has the potential to make a major, long-term and sustainable impact on the competitiveness of Ghanaian export and import businesses and consequently on Ghana's overall economic performance. This is an urgent and pressing matter for the wellbeing of the country as a whole. It is hoped, therefore, that the proposals contained in this report are implemented fully and without delay.