Bangladesh Land Port Authority
Ministry of Shipping
Accelerating Transport and Trade Connectivity in Eastern South Asia (ACCESS) –Bangladesh Phase 1: (BLPA Component) Project
Land Port Building,
Plot No. F-19/A, Sher-E-Bangla Nagar,
Agargaon, Dhaka-1207

Memo No. 18.15.0000.023.14.029.24.37 Dated: October 22, 2024.

Request for Expressions of Interest (REOI)
(Consulting Services – Firms Selection) (International)

Country: Bangladesh

Name of the Project: Accelerating Transport and Trade Connectivity in Eastern South Asia (ACCESS) – Bangladesh Phase 1: (BLPA Component) Project

Credit No.: IDA 7166-BD

Assignment Title: Architecture, Design, Development and Implementation of an Integrated Border Management System (IBMS)

Reference No.: BLPA-S2

1. The Government of the People's Republic of Bangladesh has received financing from the World Bank toward the cost of the "Accelerating Transport and Trade Connectivity in Eastern South Asia (ACCESS) – Bangladesh Phase 1: (BLPA Component) Project" and intends to apply part of the proceeds for consulting services.
2. The consulting services ("the Services") include "Architecture, Design, Development and Implementation of an Integrated Border Management System (IBMS)". The objective is to assist BLPA with professional border/logistics management and information technology expertise to improve conditions for trade and border logistics through the implementation of an Integrated Border Management System. The IBMS is to be piloted at three border sites in Bangladesh (Benapole, Bhomra and Burimari), and provided in a standardized, scalable and flexible architecture so as can be replicated at land ports throughout Bangladesh.
3. The duration of the assignment is for 24 months, expected start date is April 1, 2025. The total key professional staff-months for the assignment are 76 person-months (detailed position mentioned in the TOR).
4. The detailed Terms of Reference (TOR) for the assignment can be found in the web site www.blpa.gov.bd or can be obtained at the address of the undersigned.
5. Accelerating Transport and Trade Connectivity in Eastern South Asia (ACCESS) – Bangladesh Phase 1: (BLPA Component) Project now invites eligible consulting firms ("Consultants") to indicate their interest in providing the Services. Interested Consultants should provide information demonstrating that they have the required qualifications and relevant experience to perform the Services. The shortlisting criteria are:

   (i) General Experience of the Firm (core business and years in business),

(ii) Relevant Firm Experience: Experience in Architecture, Design, Development and Implementation of an Integrated Border Management System (IBMS) or any other integrated management system of similar nature and complexity of comparable size.

(iii) Team qualifications and experience: Technical and managerial capability and experience of the team in the private equity and venture capital industry and the technology industry.

(iv) Working experience in development partner funded projects will be an added advantage

6. The attention of interested Consultants is drawn to Section III, paragraphs, 3.14, 3.16, and 3.17 of the World Bank's "Procurement Regulations for IPF Borrowers" September 2023 ("Procurement Regulations"), setting forth the World Bank's policy on conflict of interest.

7. Consultants may associate with other firms to enhance their qualifications but should indicate clearly whether the association is in the form of a joint venture and/or a sub-consultancy. In the case of a joint venture, all the partners in the joint venture shall be jointly and severally liable for the entire contract, if selected.

8. A Consultant will be selected in accordance with the QCBS (Quality and Cost Based Selection) method set out in the Procurement Regulations.

9. Further information can be obtained at the address below from 9.00 a.m. to 5.00 p.m. during office day.

10. Expressions of interest must be delivered in a written form, one (1) hard copy and one (1) soft copy (MS Word/Pdf format- copy paste enabled, in CD or DVD or Flash Drive) by November 14, 2024 up to 03.00 p.m. to the address- Md. Ruhul Amin Miah, Project Director (Joint Secretary), Accelerating Transport and Trade Connectivity in Eastern South Asia (ACCESS) – Bangladesh Phase 1: (BLPA Component) Project, Land Port Building, Plot No. F-19/A, Sher-E-Bangla Nagar, Agargaon, Dhaka-1207, Bangladesh.

22.10.24

(Md. Ruhul Amin Miah)
(Service ID-15346)
Project Director (Joint Secretary)
Land Port Building
F-19/A, Sher-E-Bangla Nagar, Agargaon, Dhaka-1207
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Terms of Reference

Architecture, Design, Development and Implementation of an Integrated Border Management System (IBMS)
(BLPA-S2)

Abbreviations

ACCESS	Accelerating Transport and Trade Connectivity in Eastern South Asia
ASYCUDA	Automated System for Customs Data
BIN	Business Identification Number
BLM	Border and Logistics Management
BLPA	Bangladesh Land Ports Authority
BSTI	Bangladesh Standards & Testing Institution
BSW	Bangladesh Single Window
C&F	Clearing & Forwarding Agent
Consultant	Team to provide the services outlined in this ToR
CBRA	Cross-Border Regulatory Authority
CCTV	Closed Circuit Television
EGM	Export General Manifest
IBMS	Integrated Border Management System
IGM	Import General Manifest
LPAI	Land Port Authority India
NBR	National Bureau of Revenue (of Bangladesh)
NER	North-East Region (of India)
PQW	Plant & Quarantine Wing
RM	Risk Management
UAT	User Acceptance Testing
VTS	Vehicle Tracking System

1 Context

Bangladesh is well placed to play an important role in regional trade and logistics networks and as a transit country in South Asia. There are corridors and associated border crossing points that connect Bangladesh to neighboring countries involving all modes of transport. Some corridors connect West Bengal, India and Southwest Bangladesh to landlocked Bhutan, Nepal and the North-East Region (NER) of India. Bangladesh can also facilitate movements between South Asia and Myanmar and the rest of East Asia. Poor transportation and logistics infrastructure, however, along with inefficient trade facilitation, and policy and regulatory barriers have resulted in high trade and transport cost, constraining Bangladesh from playing a more active role in regional integration. Trade is paperwork-heavy, often requiring physical submission of paper documents to the various government agencies regulating trade. This adds complexity, frequently delays border clearance, and acts as a costly impediment to the private sector.

The deepening of relationships between Eastern South Asian regions, as reflected by an increasing number of sub-regional and bilateral agreements, suggests there is momentum to advance the regional connectivity and trade facilitation agenda in the sub-region. While intra-Eastern South Asian Regional trade has increased from US$3bn in 2005 to over US$14bn in 2017, which is roughly around 5-7% of total trade by this region, and therefore, opportunities for growth through regional trade remains largely untapped. These figures compare poorly with East Asian and Sub-Saharan African economies, where intraregional trade accounts for 50 percent and 22 percent of total trade, respectively.

Addressing trade facilitation barriers in the sub-region has assumed even greater importance with the COVID-19 pandemic. In Eastern South Asian Region, the outbreak of the pandemic led to uncoordinated border closures and restrictions on freight transport operations. Preserving cross-border connectivity is vital not only for post-pandemic recovery but also for building resilience to future pandemics and crises. Global evidence suggests that technology has increased resilience in the system and particularly those sectors with a higher degree of digitalization have adapted more effectively and responded quicker to social distancing and lockdown requirements. The pandemic has demonstrated the importance of digitization and may act as a catalyst to make trade more resilient by adopting increasingly automated trade, transport, and logistics solutions.

2 Project Context

The Government of The People's Republic of Bangladesh has received a USD US$753.45 million Credit from the International Development Association (IDA) – a member of the World Bank Group – for financing the cost of the *Accelerating Transport and Trade Connectivity in Eastern South Asia (ACCESS) Program*, being jointly implemented by the Bangladesh Land Port Authority (BLPA), National Board of Revenue (NBR) and Roads and Highways Division (RHD). The Project Development Objective is to increase the efficiency and resilience of trade and transport along selected regional corridors in Bangladesh. The Project consists of three (3) components, namely (i) Digital Systems for Trade; (ii) Green and Resilient Transport and Trade Infrastructure; and (iii) Institutional and Policy Strengthening for Transport and Trade.

The following activities will be implemented by BLPA:

1. Designing, supplying, developing, installing, configuring, and testing of an Integrated Border Management System (IBMS) for Benapole, Bhomra, and Burimari land ports;
2. Constructing efficient and resilient land ports at Benapole, Bhomra, and Burimari to meet

increasing trade and traffic demand; and

3. Providing technical assistance to the BLPA for conducting feasibility and detail design studies for land ports, associated environment and social standards studies and awareness programs, studies and capacity building in relations to land port modernization.

The BLPA intends to apply part of the IDA Credit for procuring services of a reputed international professional consulting firm for "Architecture, Design, Preparation and Implementation Support for an Integrated Border Management System" (the subject of this Terms of Reference) – under component 1 of the BLPA project.

3 Objective

The objective is to assist BLPA with professional border/logistics management and information technology expertise to improve conditions for trade and border logistics through the implementation of an Integrated Border Management System (IBMS). The IBMS is to be piloted at three border sites in Bangladesh (beginning with Benapole), and provided in a standardized, scalable and flexible architecture so as can be replicated at land ports throughout Bangladesh.

Although many modern enhancements have been made at Benapole Land Port, there are still many manual and non-digitized processes that contribute to port inefficiencies. The Project will support the development of an Integrated Border Management System (IBMS) that links information systems and data from soon-to-be digitized processes with systems of other border/logistics relevant entities for use as an integrated land port community system, able to assist in the monitoring and management of border logistics and regulatory processing in the inland terminals as well as from border entry to border exit gate. In the case of the BLPA, the IBMS shall be designed to support:

(i) automation or digitization of functions of land ports (e.g. BLPA tariff calculation);
(ii) support cross-border processing of cargo irrespective of cargo type - containerized, break-bulk and bulk operations and mode of transport – road, and rail;
(iii) real-time visual and data-based monitoring of movement of vehicles, cargo, personnel and passengers through cargo and passenger terminal operations, border processing and warehousing operations, including from entry to exit gate;
(iv) reduction of redundant data entry for trade/entry documents, thereby expediting border throughput and improving data integrity and quality, and;
(v) command-centered monitoring of border operations to support expedient processing, security of operations, and the dynamic resource management required.

The work described in this Terms of Reference (ToR), for the **Architecture, Design, Development and Implementation of an Integrated Border Management System** component of the ACCESS project, will involve:

1) Validation/cataloging of completed process engineering work relevant to the border & logistics management (BLM) for BLPA;
2) Engineering of any outstanding BLM processes essential to the IBMS scope;
3) Preparation of a data-integration architecture, technical and functional requirements, design, procurement of supporting hardware, and integration of IBMS relevant systems, and development, testing, and implementation of an IBMS Dashboard system;
4) Project management, quality assurance (PMQA), and overall governance related to the project lifecycle;
5) Training and support for the deployment and operations phases of the IBMS and supporting

Dashboard to be implemented by the BLPA, in support of enhanced trade facilitation between Bangladesh and India at three vital land ports, Benapole, Bhomra, and Burimari.

A selected team, hereafter referred to as "Consultant" will be responsible for the above listed activities, to include providing support for all of the People, Process, Technology, and Collaboration/Governance activities described (see the activities described and "Figure 3 - Body of Work to Build an IBMS" in section 7 of this ToR).

4 Current State: Cross-Border Regulatory and Logistical Inefficiencies

A recent time release study (TRS), conducted by NBR[1] and the Cross Border Land Port Management assessment[2] conducted by the Ministry of Commerce has reconfirmed that there are trade-related delays that are caused by inefficient processes by port community partners. Many processes continue to be 'paper-based' and in some cases, highly inefficient.

To continue moving the BLPA and Cross Border Regulatory Authorities (CBRAs) toward a paperless environment, processes need to be reviewed, modernized, and reengineered. Once processes are reengineered as necessary, they should be digitized, automated as much as possible, and integrated to foster a collaborative approach.

Although there are significant IT systems in place or contemplated, such as NBRs ASYCUDA World and the proposed Bangladesh Single Window, there is a clear requirement for a port community-based system to integrate existing information with a view to supporting decision making in the logistics stream as well as adding greater visibility and executive performance oversight for BLPA land ports.

Although many modern enhancements have been made at Benapole and other Bangladesh Land Ports within the BLPA family, there are still many non-automated processes that contribute to port inefficiencies. When operational functions (e.g., weighing lorries) result in the creation of information, it is important to ensure that this data is collected, transferred, and shared efficiently so that it adds value and informs the people that rely upon it.

In a modern operational environment such as a large land port:

- People do not efficiently move information, but integrated automated systems do;
- Repetitive and predictable tasks should be automated where possible; and
- Strategic information linkages should be made to get the right information to the right person at the right time.
- When an operation becomes effectively automated, people provide decision making, discretion and other value-added contributions. This assumes that the human gets the right information to take proper actions. Thus, the integrated "intelligent" system must integrate data sources and have it available to support the decision making and management processes.

[1] National Board of Revenue https://nbr.gov.bd/uploads/publications/TRS_2022.pdf
[2] http://brcp-1.gov.bd/wp-content/uploads/2023/07/Study-2_-Final_Report_21.06.2023.pdf

5 Future Vision: Integrated Border Management System (IBMS)

An IBMS refers to a platform that links information systems for the benefit of strategically-aligned partners within a land port community. The IBMS integrates border/logistics data within the land port community and makes it available for personnel to make operational decisions within the border environment. Ultimately, an IBMS makes cross-border movements of goods, vehicles and travellers more efficient. The scope of the IBMS includes all appropriate cross-border cargo movement regimes, (i.e., import, export, in-transit, inward and outward processing, etc.), and encompasses vehicle (i.e. lorry), rail movements as well as cross-border passenger movements. At this time, cross-border movements by waterway will not be included.

In the case of the BLPA, the IBMS should lead to improvements in:

1. Integration of data sources and automation of functions
2. Movement of data
3. Linkage amongst stakeholders
4. Operational oversight through the use of Executive Dashboards

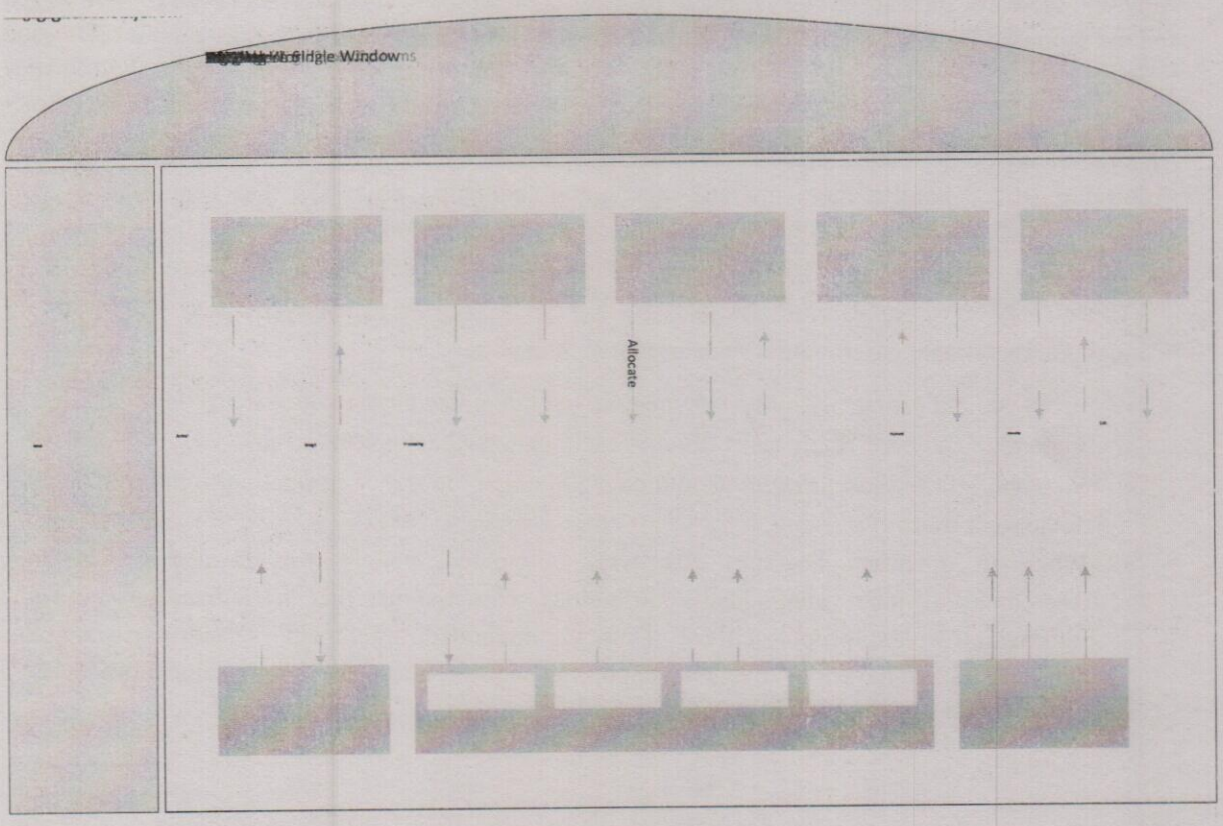

Figure 1 - Conceptual IBMS diagram – General import process shown

6 Integrated Data Sources / Automated Functions – An example

Calculations of BLPA tariffs can be complex and time consuming for the client. For example, charges for a cargo lorry arrival can include many fees. This processing of multiple fees can be modernized, consolidated, integrated, and to some extent, automated. Ultimately the modernization of these processes leads to a reduction in time-to-process, resources, and errors in calculation.

There are many other processes that can be modernized, with process engineering and digitization of information. At a border site, the BLPA begins the calculation of fees for services rendered *after* all of the Regulatory Authorities have cleared the shipment. With greater visibility into the cross-border segment of the trade chain, the business function of fee calculation could be completed – or at least started, much sooner. An IBMS receiving specific data automatically from NBR would also enable efficient payment processes, leading to quicker release times for the Trader community.

How will an IBMS lead to faster release times?

Collection, Consolidation, and Routing of Data

Once information is digitized, and systems integrated, unified data can flow between information systems faster and with fewer errors with what is often redundant data. Humans are not adept at moving information from point to point – but integrated systems are. Currently, there are processes that involve the printing of digitized information and the passing of these "hard copies" to Clearing & Forwarding Agents (C&F) to physically move along to the next processing station. An automated transfer of the existing data from NBR to BLPA would enhance efficiency as it saves considerable time moving information, limits the ability of the information to be fraudulently manipulated (i.e., deceptions) and reduces the potential for errors or omissions (i.e. honest mistakes) and other nefarious activities.

Linking Stakeholders

For example, once a client (e.g., C&F Agent) has received the digital assessment of the appropriate BLPA tariffs owed, payment can be provided online to a bank. Once an automated banking transaction is registered, it can be linked with the Customs ASYCUDA World system - release / clearance information, so that the BLPA Exit Gate Keeper can access a file and understand immediately that all Regulatory (i.e., Customs and other government departments) and BLPA obligations have been met and all taxes, levies and tariffs have been duly collected. The exit note can be prepared based on this. This would save considerable time for the C&F Agent to travel to and from the bank and would ensure that the key stakeholders maintain situational awareness over the shipment so that they all agree as to when the shipment can be released for delivery.

There are numerous key port community partners involved with cross-border trade. They can generally be divided into Regulatory Authorities and non-Regulatory organizations. Many of these partners have – or are planning information systems to support their work. However, there has been very little contemplation of strategic integration of these systems to support the land port clearance processes in a holistic manner.

Many of the Land Port Community Partners have IT systems and possess data that may be of value to other stakeholders, if for no other reason than to standardize and unify data such as company names, driver names, cargo manifest information, etc. The key is to identify and integrate essential sources of data towards faster processing at the border:

- What information is being collected? What systems are in place or contemplated?
- Who owns the data? How can it be shared?
- What trade facilitation or operational benefits could be achieved by sharing the data? What are the processes used and what are the decision points made that require information?

Operational Oversight – Executive Dashboards

An IBMS would benefit all port community partners in their joint goal of providing an effective and efficient port experience for the Trader community. In addition to these operational benefits, an IBMS also provides an opportunity for near-real-time management of border operations, resources, and performance. An IBMS and command center-style dashboard supports the establishment and monitoring of key performance indicators that will ensure that the Land Port operates within expected guidelines and will allow for timely interventions when necessary.

As the IBMS can ultimately be scaled to all land ports under the purview of BLPA, the system can provide oversight and executive monitoring services for all of them. Best practices can be observed in one port and applied to another. Other key comparisons can be performed continuously, allowing for an environment of accountability, proactive management and continual improvement.

7 Structure of Activities to Create and Implement an IBMS

To summarize an understanding of the current state of border/logistic operations relevant to an IBMS for Bangladesh, a People-Process-Technology-Governance matrix is used. This matrix is commonly used to organize analysis and work tasks and products/deliverables involved in large-scale projects based on four pillars of a project or organization:

People – Refers to the organizational aspects required for implementation, i.e., Is the right local staff in place to support the operation once operational? Does the current organization structure support desired outcomes? What are the key staff positions? What are the required and desired qualifications of the staff? Are candidates currently available within the operation, or do they need to be recruited/onboarded?

Process – Assists the team in understanding which processes are involved, which need to be further assessed, which require engineering or re-engineering to meet best practices. Further questions to be addressed might include: What current processes are redundant? Which processes are manual? Which are supported and/or produce key data?

Technology – The scope of analysis and design here includes: What information systems are in place? Do they cover the processes and/or functionality desired, or are lacking? Are their designs/architectures ready to integrate with other systems? What supporting systems/components are in place, e.g., data servers, web servers? Is the existing telecommunications infrastructure in place sufficient, or requires upgrade?

Governance & Collaboration – Sometimes mistaken for "management", governance refers to the activities required to achieve a desired outcome within a project or an organization: Is the project getting the support from necessary key stakeholders? Are the correct agreements, policies, procedures, and protocols in place? How shall we guide this project to a successful conclusion?

The matrix has been modified slightly to emphasize the collaboration-related governance activities envisioned as of high importance to the achievement of this project. The table below contains a

summary, based on this matrix of the "Current State" of operations relevant to integrated border/logistics management (BLM), with an ideal "Future Vision" state of operations. The gap between these two states represents the work which needs to be completed.

	People	Process	Technology	Governance & Collaboration
Current	Control over staff/resources and border logistics/operational activities is **decentralized.** BLPA staff are bright, diligent, and **sufficiently tech-savvy**, although often lacking adequate tech to support integrated operations. Official **personnel structure** for BLPA can be modified to support a centralized, integrated operation.	Existing border/logistics management processes are **varying in maturity** from labor-intensive manual ledgers and paper chit submission to support through basic ad-hoc information systems. Key **data gathering/input processes** feature multiple redundancies. **Best practice** border/logistic management processes are missing in some cases.	Existing information systems are also **varying in capability and maturity**: from basic Asycuda World to ad-hoc warehouse management to a newly planned Single Window system. Supporting **telecom infrastructure** varies and is undergoing enhancement. Modern port-wide **CCTV system** and control room near completion.	**Key stakeholders** understand the concept of integrated border management & see the value of having an integrated system. **Information technology staff** at relevant sites also see the value in an IBMS but are under-resourced to support development Collaboration towards integration has been promised but **not legally formalized.**
Vision	Integrated Border Management System staffed by: **Experienced border/logistics experts** ready to manage the dynamics of complex border operations **Experienced information technology specialists,** ready to modify or work-through border system challenges **Organized, available HR pipeline of staff** to support changing staff dynamics.	Integrated Border Management System reflecting best practices: **Redundant processes minimized** **Outdated processes reengineered** to highest available levels of time and process efficiency **Modern processes supported by useful, shareable data** **Organized continuous-improvement review cycle,** looking to improve operations through process tuning.	Integrated Border Management System, technology to support: **Integration of relevant data** from disparate systems and operations, including entry/exit gates, weigh bridges, regulatory stops and warehouse operations. Real-time data available in an **executive-level dashboard and centralized border point CCTV-integrated control room** **Standardized architecture** for implementation at all sites, but flexible for advancements in technology	Integrated Border Management System supported: Across relevant agencies through solid, formalized **collaboration agreements** At **agency/executive levels** with authority to provide sufficient funding and resources to ensure modern, sustained, and continuously improving operations At **technology/operational** levels by tech-savvy, forward-thinking staff

Figure 2 - Summary of Current Situation vs Vision for an IBMS

With the Current State and Future Vision states known and qualified, we can summarize the "gap" between the two as the perceived work of this project using a similar structure. The table which follows includes the understood "Body of Work" to successfully achieve implementation of an Integrated Border Management System. The work is separated conceptually among the same People-Process-Technology-Collaboration/Governance pillars, by project phase (along the left side), and with

project deliverables listed in blue. The sections of this ToR which follow explain the work and deliverables in greater detail.

	People	Process	Technology	Governance & Collaboration
Concept Phase 2 months	Consensus among relevant stakeholders of why and how an IBMS is to be constructed.	Relevant scope of existing processes and what processes require reengineering is understood.	Scope of relevant existing and planned systems, data and infrastructure is understood.	Key stakeholders agree who and how relevant entities will champion the IBMS.
	- Staffing Concept	- As-is Processes	- Concept Architecture	- Memorandum of Understanding
Regs Phase 3 months	Staffing and organizational positioning aspects are gathered	Processes are evaluated: candidates for redesign prioritized; areas requiring formalized process listed.	IBMS architectural, data and infrastructure requirements are gathered.	Governance requirements for the IBMS development program are gathered.
	- Staffing Requirements	- Process Engineering Requirements	- IBMS Architecture and Dashboard Requirements	- IBMS Program Governance Requirements
Design Phase 4 months	Organizational aspects of the IBMS are designed: staffing & location needs, how organized/managed.	Processes are designed/redesigned to meet best practice/efficiency.	Existing/planned systems evaluated. Architectures for an integrated border management system created. IBMS Dashboard designed.	IBMS steering committee is designed/chartered and technology working group is designed/organized.
	- Staffing Resource Plan - Training Plan	- Reengineered Processes	- Enterprise Architecture - Data Architecture	- IBMS Org Design incl: - Steering Committee - Tech Working Group
Develop Phase 3 months	IBMS and supporting IT staff are sourced, on-boarded and trained.	Reengineered processes are prepared for implementation.	IBMS relevant systems and data are integrated. Dashboard & hosting environment developed.	IBMS Steering Committee is prepared/trained and technology working groups is prepared/trained.
	- Onboarding Report - Training Report	- Process Implementation Plan	- IBMS Dashboard - Integrated Systems	- Steering Committee Protocol - Working Group Protocol
Test Phase 3 months	Staff participate in IBMS testing.	New processes are tested/evaluated.	Integrated systems & dashboard of the IBMS are tested.	Steering Committee and Working Group participate in testing.
	- Staff Test Report	- Process Test Report	- System Test Reports	- Governance Evaluation
Deploy Phase 3 months	Staff participate in deployment of IBMS and new processes.	Deployment of new processes is evaluated.	IBMS and dashboard are formally switched-on.	Steering Committee and Working Group are now fully engaged.
	- Deployment Report	- Deployment Report	- Deployment Report	- Deployment Report
Operate Phase 3 months	IBMS relevant staff operate as part of BLPA Human Resources.	Processes monitored and evaluated.	IBMS and dashboard operation monitored.	Steering Committee and Working Group regularly function.
	- Operation Report	- Operation Report	- Operation Report	- Operation Report
Sustain	Staff contribute to (and are evaluated with respect to) governance activities.	Processes are continuously monitored for fine-tuning or further reengineering.	IBMS and dashboard are monitored for fine-tuning and incorporation of new/better technologies.	Steering Committee and Working Group Continuous Improvement.

Figure 3 - Body of Work to Build an IBMS – Project deliverables for each phase are indicated in blue; phase duration in months.

8 Scope of Work

The Government of Bangladesh is looking for a Consultant to provide a team of experts experienced in border/logistics management and in information systems and data integration architecture to assist in the full project life-cycle, as structured in the previously described Body of Work, to complete the tasks outlined, and see that all issues are addressed in a timely manner, risks are overcome effectively and uncertainties are reduced in a proactive manner, resulting in successful and timely completion of all project tasksal lthe while enhancing local capacity through knowledge transfer and retention. The complete package of work and deliverables for this project is represented by a total of five components:

1. People – Organization and Staffing
2. Process – Assessment, Engineering and Re-engineering
3. Technology –Architecture, Design, Development, Testing, Implementation and Training of an IBMS
4. Governance/Collaboration – Professional Support
5. Project Management & Quality Assurance

8.1 Component 1 – People – IBMS Organization and Staffing

This first Component is to ensure that BLPA is prepared with experienced staff to use, administer and manage the IBMS. For the "People" component, The Consultant is therefore expected to:

- Assess the current staffing availability/capability for integrated border/logistics management;
- Understand and detail requirements to staff a site-based IBMS operation;
- Work with key stakeholders and the project team to develop a plan to source, onboard and train key staff involved in administering, monitoring, maintaining and using the IBMS, and;
- Work with BLPA Human Resources department to ensure that a pipeline of staff is designed or in-place to support ongoing staffing requirements.

Information technology resources at BLPA are currently understaffed, and while relevant positions may be included in government organization charts, the positions have yet to be filled.

To meet the Future Vision of IBMS: operations are to be staffed with experienced and knowledgeable BLM (Border and Logistics Management) and IT resources, available to support border site operations across working shifts. Existing staff are to be assessed and trained to meet requirement gaps. Required new staff recruited, onboarded, and trained to meet the site staffing requirements. Relevant government human resources departments should be prepared to backfill positions, when necessary, with a dependable pipeline of near-ready candidates.

Deliverables for Component 1 - People

1. **Staffing Approach Presentation** – Outlining the approach the Consultant will take in gathering requirements from stakeholders, understanding current relevant government/organizational staffing processes and regulations, assessing the capability levels

of existing staff, and developing a strategy for sourcing, onboarding, and training key IBMS support staff.

2. **Staffing Requirements** – Explanation of staffing numbers required to support IBMS operation during border hours; staff competencies/qualifications (required and desired); anticipated turnover; etc.
3. **Staffing Assessment** – Assessment of existing staffing situation: sufficient number and quality of candidates, sufficient pipeline of candidates to fill or backfill, when necessary, technology and BLM competency levels; etc.
4. **Staff Sourcing-Onboarding-Training Plan** – Development of a plan to meet the staffing requirements of the IBMS Operation at a BLPA site with respect to BLM and IT expertise; how are staff to be sourced, onboarded, trained, and backfilled when necessary.
5. **Report Inputs – Staff Testing** of IBMS System – General evaluation, recommendations for improvement, of staff performance as they participate in system testing
6. **Report Inputs – Staff Handling** of IBMS Deployment – General evaluation of staff performance with respect to deployment of IBMS at site
7. **Report Inputs – Assessment of Staff Competency** in IBMS Operation Phase – Professional recommendations towards continuous improvement of IBMS staffing.

8.2 Component 2 – Process – Review, Engineering & Re-engineering

To contribute to improved cargo release times and increased transparency for the trader community, it is essential for the BLPA to ensure that their processes are effective and efficient. BLPA, Bangladesh Customs, and others also need to ensure that accountability structures are in place and sufficient priority is given by all relevant Cross Border Regulatory Authorities (CBRA)'s for efficient cross-border management. It is therefore integral that information about cargo is strategically collected across properly engineered tasks, and shared with border management partners to improve facilitation for traders. Increased trade facilitation for legitimate and law-abiding traders is considered a major over-arching goal.

In addition to BLPA, Bangladesh Customs and CBRAs, other organizations have an important role in ensuring that the dwell-time for cross-border cargo movements are reduced. These other organizations include freight forwarders, shipping agents, clearance agents / brokers, banks, and other entities that provide critical support for the physical handling and documentary assistance required for cross-border trade movements.

With such an array of organizations involved with the cross-border movement of cargo, it is critical to ensure that processes are synchronized where practical and that inefficient or redundant practices are revised or eliminated. As a first step, it is important to understand the role of BLPA, Customs and CBRAs in relation to these other various organizations and their required involvement in cross border trade. The processes utilized by BLPA, Bangladesh Customs and other CBRAs need to be well understood and accurately mapped. Processes need to be periodically challenged to validate their value and to ensure that they are effective and efficient and satisfy the needs of the trading community.

With the goal of ensuring process optimization with respect to activities within the IBMS scope of management, contract tasks in this Process component will include:

- Inventory and evaluation of processes already mapped in a recent project[3] (2021), and covered

[3] "Bangladesh Border Management Modernization BPA Draft Report" KGH, 2021

in a recent Bangladesh-conducted Time-Release Study [4];

- Mapping and re-engineering (for those processes not in inventory) of redundant, inefficient, or 'no-value' processes;
- Re-engineered processes will then be taken to implementation, i.e., test and deployment phases in close collaboration with other project elements.

Deliverables for Component 2 – Process:

1. **Inventory of As-Is Processes** – An assessment and record of many BLM relevant processes has already been conducted. The Consultant shall conduct an inventory of mapped/assessed processes and determine which require further examination.
2. **Process Engineering Requirements** – Based on the inventory of As-Is processes, and examination of processes required to support Integrated Border Management operations, engineering requirements for outstanding or under-developed processes will be recorded.
3. **Engineering/Reengineering of Processes** – The Consultant will, in consultation with consultant-provided BLM experts, engineer the processes required to support Integrated Border Management operations.
4. **Process Implementation, Test, and Deployment Plan** – The Consultant will develop a plan to implement new processes, perhaps at first in a pilot setting, test, and then deploy new or revised processes in close coordination with relevant other efforts of the project teams.
5. **Process Implementation Report** – Evaluation of the process testing and deployment into the IBMS-related border environment.
6. **Inputs to Sustainment Plan** – Provide a strategy for regular review and updating of processes based on changes in technology, BLM techniques/practices and BLPA needs.

8.3 Component 3 – Technology – Architecture and Design of an IBMS

The Consultant will be required to carry out all activities associated with the key phases of integrating systems for, and building and deploying a dashboard system for an IBMS, including:

- Validation of Contributing Systems and Concept Architecture
- Functional and Technical Requirements for an IBMS
- Architecture for IBMS to include a flexible Data Integration Architecture
- Design of the IBMS Dashboard Application
- Development & Implementation of the designed, integrated solution with dashboard application
- Professional Support & Collaboration in Testing, Deployment, Training and Operation of the IBMS

Subcomponent 3.1 - Concept Architecture/Validation of Contributing Systems

A concept architecture, based on knowledge of existing systems, existing data, and existing processes has been assembled. In addition, an "As-Is" activity has performed an initial assessment of existing systems for suitability/contribution towards an IBMS.

[4] National Board of Revenue https://nbr.gov.bd/uploads/publications/TRS_2022.pdf

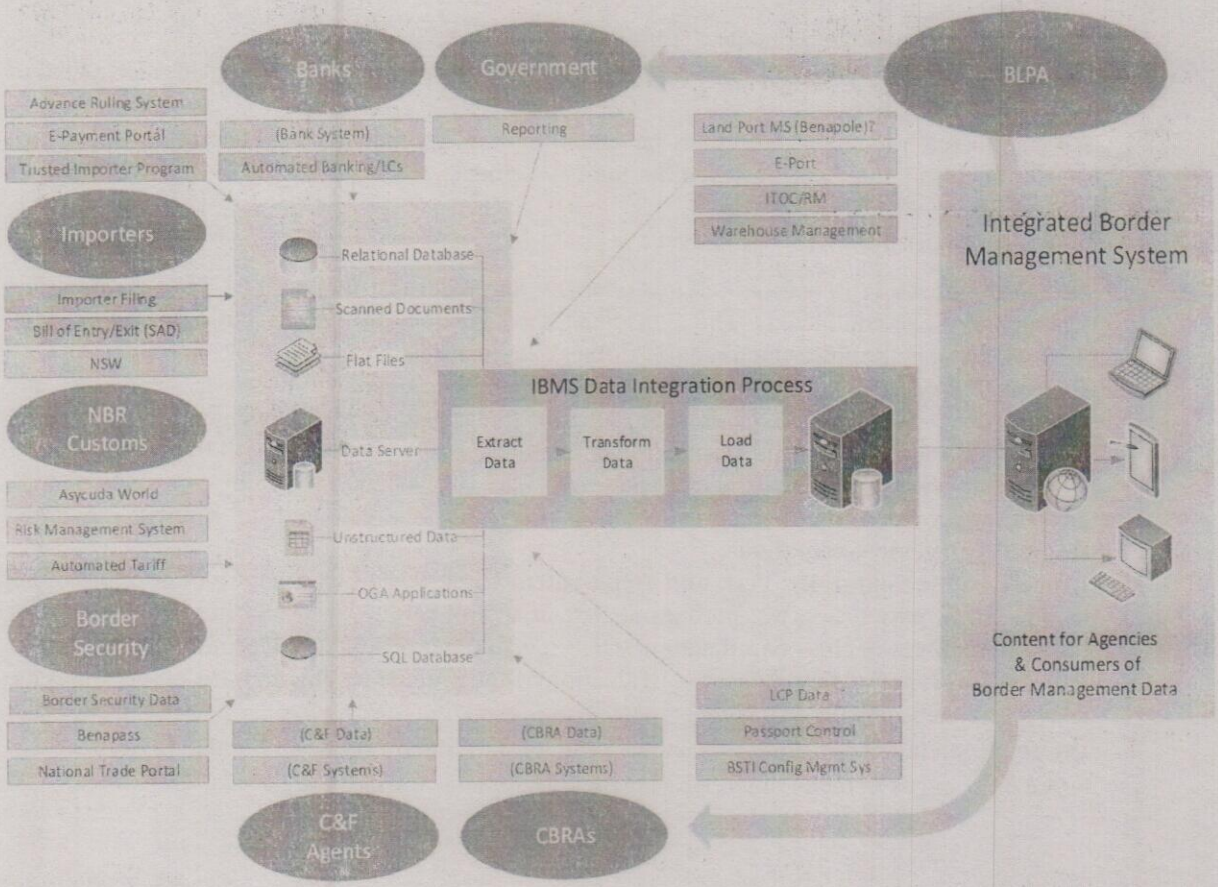

Figure 5 - Conceptual IBMS Architecture (Illustrative)

The Consultant shall quickly validate the current understanding with respect to IT infrastructure, data and supporting systems, refine the concept architecture, and move forward towards the Requirements and Architecture/Design phases. Expected tasks within this subcomponent include:

- Complete audit of existing and proposed systems to be integrated in the IBMS, including understanding of data and supporting infrastructure. This may include non-automated or non-digital but instead manual systems or processes which contain or use key data, e.g. use of manual ledgers to generate manifest numbers which are then used as the key identifier for subsequent border processes;
- Determine stakeholder requirements (including those of other future users of the IBMS) to include:
    - Data integration requirements, i.e. formats, times, database specifics
    - Data sought from integration;
- Number of clients and access permissions required.
- Assess data standards used in existing systems and provide recommendations on the use of international data standards.
- Understand any legal requirements with respect to sharing of data.
- Advance the IBMS Concept Architecture with infrastructure, system and database details

Subcomponent 3.2 - Functional & Technical Requirements

Using the outputs from Subcomponent 3.1, The Consultant will then delineate the functional and technical requirements for the IBMS. This will include:

- Functional & Technical Requirements for inter-system data integration
- Functional & Technical Requirements for the proposed IBMS Dashboard application.

Phase		Item	Description	Functional Requirements
	Pre-Load	Driver	PL driver info obtainable?	- System shall have the ability to capture and process pre-load trade & logistics data (driver, vehicle, cargo) - System shall have the ability to capture and process payment data and documentation relevant to this phase.
		Vehicle	PL vehicle info obtainable?	
		Cargo	PL cargo info available	
		Payment	PL payment/bank info available	
		Pvt Vehicles	PL vehicle info better for security	
		Passengers	PL passenger info allows secure facilitation	
	Pre-Arrival	Driver	PA driver info required	- System shall have the ability to capture and process pre-arrival trade & logistics data (driver, vehicle, cargo) - System shall have the ability to capture and process payment data and documentation relevant to this phase.
		Vehicle	PA vehicle info required	
		Cargo	PA cargo info required	
		Payment	PA payment/bank info required	
		Pvt Vehicles	PA vehicle info better for security	
		Passengers	PA passenger info allows secure facilitation	
	Upon Arrival (Tracking)	Driver	Track driver through border	- System shall have the ability to track vehicles as they enter the border area; -System shall be able to auto-assign vehicles to Customs lane based on cargo declared
		Vehicle	Track vehicle through border	
		Cargo	Track cargo through border	
		Payment	Track any assessed payment needs	
		Pvt Vehicles	Track private vehicles through border	
		Passengers	Track passengers through border	
	Border Processing (Regulatory)	Driver	Track and arrange driver through regulatory processes	- System shall have the ability to track vehicles through Customs/regulatory areas; -System shall be able to auto-assign vehicles to Customs lane based on cargo declared;
		Vehicle	Track and arrange vehicle through regulatory processes	
		Cargo	Track cargo and arrange regulatory processes	
		Payment	Track assessed tariff/payment needs	
		Pvt Vehicles	Track private vehicles through border customs/inspection	
		Passengers	Track passengers through border customs/inspection	
	Border Processing (Logistical)	Driver	Track driver through logistical, warehouse, transhipment	- System shall have the ability to track vehicles and cargo through transshipment, warehousing, demurrage, through to final port when applicable; -System shall be able to track and handle dangerous goods through border processing, warehousing, transhipment, etc.
		Vehicle	Track vehicle through logistical, warehouse, transhipment	
		Cargo	Track cargo through logistical, warehouse, transhipment	
		Payment	Track any assessed logistical related payments	
		Pvt Vehicles	Track private vehicles through border logistics	
		Passengers	Track passengers through border	
	Out Processing	Driver	Out process drivers from border	- System shall have the ability to track vehicles, cargo, drivers through exist areas and, in case of cargo, through to final destination. -System shall be able to assess, verify payments
		Vehicle	Out process vehicles from border	
		Cargo	Out process cargo from border	
		Payment	Ensure payments received prior to out-processing	
		Pvt Vehicles	Out process private vehicles	
		Passengers	Out process passengers	
	Command & Control	Driver	Tracking, visibility of resources, and monitoring/control of all border operations.	- System shall be able to provide real-time or near real time monitoring of all lanes, warehouses and transhipment areas; - System shall be able to provide dashboard analytics indicating areas where bottlenecks or other throughput warnings are detected.
		Vehicle		
		Cargo		
		Payment		
		Pvt Vehicles		
		Passengers		

Figure 6 - IBMS Functional Requirements (Illustrative)

Subcomponent 3.3 – Architecture of IBMS

Under this subcomponent, the architecture of the IBMS shall be constructed. The Architecture should include all of the elements required to meet the vision of an IBMS:

- Data elements and relevant integration details of existing systems, i.e., what functional data shall be extracted and how
- Elements of planned systems, i.e., what functional data shall be used, extracted and how
- Elements to be constructed and the purpose of each function in the vision of IBMS. This will involve close coordination with the BLM SMEs in their review and engineering of BLM processes necessary to complete the vision of the IBMS.

Subcomponent 3.4 – Design IBMS Dashboard

The elements of the IBMS Dashboard will feature in the Design constructed as part of this subcomponent. BLM subject matter experts will need to collaborate with BLPA management to understand what indicators BLPA will expect to see in the IBMS Dashboard view/application. This will likely include Dashboard elements relevant to key areas of border control and logistics functionality at a Command & Control or executive decision-support level:

- Performance Indicators which point to:
  - Reduced processing times – efficiencies gained through elimination of manual and redundant processes
  - Increased throughput – reduced backlog; making the border operations more commercially attractive/competitive
  - Availability of data for comparison – performance measurements essential step for comparison and applying lessons learned from other border operations
  - Increased ease/standardization of reports
- Revenue Indicators, which might include:
  - Visibility into revenue flows as cargo, passengers and resources move through border operations
  - Compare the benefits of increased throughput against additional storage/warehousing
  - Gauge effectiveness of risk management system – see costs for additional inspections versus effective targeting
  - See benefits of enhanced payment and exit processing
- Resource Indicators, which might include:
  - Ease of location of lorries & stored goods
  - Support joint regulatory inspection in an organized & expedient manner
  - Safe storage of dangerous goods
  - Shed/warehouse assignment flows
  - Team/staffing in-use and available
  - Opportunities to move towards greater levels of automation
- Control & Security Indicators, which might include:
  - Integrated visibility into full border operations: number, throughput, real-time and potential bottlenecks
  - Traffic management – enhanced availability of information leads to less confusion/waste in movement of resources
  - Improved security – see that cargo, vehicles and personnel are where they should be
  - Increased transparency to manage expectations and flow

Subcomponent 3.5 - IBMS development/implementation

The Consultant shall work with BLPA in the procurement and delivery of any necessary hardware and materials, , work with the relevant entities to integrate systems, and install the IBMS in such a manner as to ensure that the final product is compatible and interfaced with ASYCUDA World, BSW, CCTV, Vehicle Tracking, and other systems required for integration as part of the IBMS. .

-
- Integration of systems necessary to complete the designed architecture and functions of the IBMS;
- Development of the IBMS Dashboard system with supporting infrastructure.

To ensure a successful implementation of the IBMS, The Consultant will be required to work in positive association and close collaboration with BLPA and other relevant agency teams involved in completing the designed architecture of the IBMS.

Subcomponent 3.6 –IBMS Testing

The Consultant will collaborate with BLPA and other relevant agency staff to ensure that IBMS functions nominally in a 'real world' setting prior to complete operational use of system. The Consultant will, in addition to the other tasks outlined in this ToR, provide expertise throughout Testing Activities:

- Test Staffing Preparation - In collaboration with relevant IBMS Personnel, IT Support personnel, and relevant stakeholders, The Consultant will prepare a suitably representative group to successfully complete a detailed and comprehensive acceptance test of the IBMS-relevant integrated systems and IBMS Dashboard. This preparation is covered by Component 1 of this ToR.
- Develop Test Plans – The Consultant will, utilizing team BLM and IT expertise, develop appropriate test plans and test artifacts, test scripts, etc, and work with BLPA staff to conduct testing to meet reasonable system integration and system functional testing standards.
    - Preparation of module, system, data integration, and user acceptance test (UAT) plans that will ensure highest level of reliability of installed and/or implemented infrastructure and solution(s)
    - Ensure suitable security controls are effectively tested and are working as expected
    - All data integration activities have been completed successfully and all data cleansing/formatting matters have been addressed suitably to the satisfaction of stakeholders
    - Reports generated are accurate and reliable
    - Testing activities take place in good coordination with training activities, to ensure that expected new users of the system are properly trained in time to participate in UAT.
    - Any bugs or deficiencies prohibiting the effective designed use of the IBMS are corrected and re-tested to the satisfaction of a designated user group.

Subcomponent 3.7 –IBMS Training and Deployment

The Consultant will collaborate with BLPA to ensure that designated staff are training and the IBMS is deployed to the designated operational environment to greatest effectiveness and least disruption to operations possible. The Consultant will, in addition to the other tasks outlined in this ToR, provide expertise throughout Deployment Activities:

- Deployment Staffing Preparation - In collaboration with relevant selected BLPA IBMS Personnel, IT Support personnel, and relevant stakeholders, the Consultant will prepare/train a suitably representative group to successfully assist in the deployment of the IBMS-relevant integrated systems and IBMS Dashboard. This preparation is covered by Component 1 of this ToR.
- Deployment Plans – The Consultant will, utilizing team BLM and IT expertise, develop and present plans for a timely (focusing on minimal disruption to operations) and effectiveof IBMS.

- Deploy the IBMS – The Consultant will deploy the solution, actualizing the integration of designated systems, and their feed into the tested IBMS Dashboard.

The Consultant will provide Project Management and Quality Assurance oversight of deployment activities, and provide BLM expertise in collaboration with the Steering Committee, Technology Working Group and relevant Stakeholders while the Consultant team:

- Prepares a Deployment Plan
- Ensures selected pilot sites are properly outfitted and prepared for deployment;
- Ensure issues (technical, procedural and training) are collected and resolved; and assess the serviceability and acceptability of the outcomes.
- Deploys IBMS in the operational domain
- Prepares deployment reports in collaboration with IBMS Steering Committee and IBMS Technology Working Group
- Meets with IBMS Users to monitor and gauge success of deployment activities.

Subcomponent 3.8 – PM/QA/SME Support – IBMS Operations Phase

The Consultant will provide PM/QA/SME during the Operations Phase, conducting post-implementation, "Operations" phase assessment in collaboration with Steering Committee, Technology Working Group and relevant Stakeholders. Throughout the project duration and in parallel with the above phases of implementation, the Consultant must also apply resources and effort to develop IT capability and maturity within the BLPA as may be required for implementation and operation of the IBMS. Support provided by the Consultant will include the below pre-Operations phase activities:

- Adherence to IT procedures and standards
- Selection/development/adherence to user engagement procedures and standards
- Help Desk operations and integration of these with IBMS solutions
- IT Governance and service level agreements
- Structured methodologies and associated procedures
- IT issue management

The Consultant will also provide a limited amount of BLM SME support, to be proposed by the bidder, for over-the-shoulder training support as BLPA users engage in the day-to-day operations at the beginning of this Phase.

Deliverables for Component 3 – Technology

Deliverables for Component 3, across all eight subcomponents:

Subcomponent 3.1 - Concept Architecture/Validation of Contributing Systems

1. **Advanced IBMS Concept Architecture** – The Consultant shall prepare an advanced, detailed concept architecture of the IBMS as it might exist within the scheduled time period of the project. This Concept Architecture will be used by the project team to communicate and collaborate with stakeholders to drive the project forward until a more detailed and agreed-upon data-integration architecture can be finalized.
2. **Validation Report of Existing/Planned Systems** to include data which will be available and fit within the desired functionality of the IBMS.

Subcomponent 3.2 - Functional & Technical Requirements

3. **Data Integration Architecture & IBMS Dashboard Requirements** – Detailed functional and technical requirements for the IBMS data integration and IBMS Dashboard activities to follow.

Subcomponent 3.3 – Architecture of IBMS

4. **Complete Enterprise Data-Integration Architecture** – This comprehensive Complete Architecture should include:
    a. All agencies, systems, and functional-level data types required to meet the IBMS vision.
    b. Clearly indicate where planned processes, data, and systems are to fit within the architecture, and should be available within the planned time frame.
    c. Clearly indicate necessary supporting infrastructure deficiencies.
    d. Work with the BLPA team to finalize a list of required hardware or materials.

Subcomponent 3.4 – Design IBMS Dashboard

5. **IBMS Dashboard Design** – The designed IBMS Dashboard will be created with input by The Consultant's BLM SME and with the collaboration of BLPA management to provide visibility into the activities and statistics throughout the border process as scoped. Dashboard indicators will likely include those of performance, revenue, resources, control and security.

Subcomponent 3.5 - Develop, and Implement the IBMS

6. **Integrate Relevant Systems** – Support the procurement and delivery of any required hardware, software or other materials necessary to achieve the designed integration architecture; integrate systems as designed; develop the IBMS Dashboard system as designed.

Subcomponent 3.6 –IBMS Testing

7. **Develop an IBMS Test Plan** – Detailed test plan to include module/system, data/system integration, and user acceptance testing activities, tracking of errors and remediation steps. The Plan is to include the training and preparation of BLPA personnel who will participate in the user acceptance testing.

8. **Testing** – Professionally conduct and record testing appropriate for a large integrated system with dashboard capabilities. This is expected to include an appropriate range of system interface/integration testing, dashboard/software testing, load/stress and user acceptance testing.

9. **System Test Report** – Results of professionally performed and comprehensive module/system, data integration, and user acceptance testing activities. The Report must naturally include: any errors or inconsistencies found, mitigation steps taken, retesting activities, etc, towards a successful conclusion.

Subcomponent 3.7 –IBMS Deployment

10. **Deployment Plan** – Prepare a comprehensive deployment plan which includes all of the people, process, technology, and governance tasks/preparation to be in place for successful deployment of the IBMS and IBMS Dashboard. As with all the Reports and Components involved in this project, any risks to the planned project activities are best communicated and

mitigated as far in advance as possible, with the Plan/Report listing included as a log of all the risks that have been dealt with or are being mitigated by the project team.

11. **Deploy as Planned** – Conduct deployment activities in a professional, experienced manner, with minimal disruption to operations.
12. **Deployment Report** – Steps taken for deployment, matched agains the Deployment Plan, and any issues resolved or outstanding.

Subcomponent 3.8 –IBMS Operations Phase

13. **IBMS Operation** Reports – Professional assessment and report of the in-place IBMS-relevant people, processes, technology and governance pieces in operation. The focus at this stage should be on identification and mitigation of any minor issues, and a greater emphasis on BLM subject matter identification of areas for continuous improvement consideration by the Steering Committee and Technology Working Group.

8.4 Component 4 – Governance & Collaboration – Program Support

Development of a large-scale IBMS involves the collaboration of key agencies within the border area, some with digital information systems, some currently using paper-based processes, but with IT systems planned. For Bangladesh, and relevant to this project, this may include, but is not limited to:

Agency/Entity	System
BLPA – Bangladesh Land Port Authority	CCTV, Warehouse Mgmt, E-Payment, Vehicle Tracking
NBR – National Bureau of Revenue	Asycuda World, Bangladesh Single Window
PQW – Plant & Quarantine Wing	e-Phyto data
BSTI – Bangladesh Standards and Testing Institute	(Manual, paper-based)
DLS – Department of Livestock	(Manual, paper-based)
DoF – Department of Fisheries	(Manual, paper-based)
BAEC - Bangladesh Atomic Energy Commission	(Manual, paper-based)
Immigration, Bangladesh and or Border Guards	Data providing visibility of passenger flows through port terminal

While the agencies involved have agreed to work together in the development of a border community IBMS, executive level and working-group level collaboration will be of primary importance to IBMS development. In addition, once a multi-agency dependent system like the IBMS project gets underway, formalized governance agreements, protocols and activities are required to make sure that the IBMS vision is achieved. This includes:

- Cooperation & Data Sharing Agreements– Between the relevant agencies
- Steering Committee – Formation, Charter, and Protocols
- Technology Working Group – Formation, Charter and Protocols

Subcomponent 4.1 - Cooperation & Data Sharing Agreements

The Consultant will review all relevant acts, legislation, and Standing Regulatory Orders and make recommendations in respect of the current legal and regulatory provisions to ensure support of an IBMS system, including the sharing of data is supported.

Assistance will include the drafting of specifications for the contract or model for inter-agency agreements (e.g., Service Level Agreement (SLA), Data Sharing Agreement (DSA), etc.) between BLPA and other potential IBMS system users or data providers.

Subcomponent 4.2 – Steering Committee

A Steering Committee should be formed to guide and monitor current and future IBMS-related activities to ensure that IBMS receives adequate "decision maker" level support. This committee should include middle and senior managers from BLPA, NBR, and other stakeholders as determined necessary.

The Steering Committee will provide guidance, have operational and organizational expertise and be primary decision makers for pre-operational activities, make decisions throughout the entire project lifecycle in support of the Consultant.

Finally, this committee will be involved with IBMS performance assessment based on established success criterion.

Subcomponent 4.3 – Technology Working Group

An IBMS Technology Working Group (TWG) will be formed to provide expertise and guidance with regard to existing and proposed information technology systems within the BLPA, NBR or other CBRA's and stakeholder organizations. This TWG shall be staffed by interested, "can-do" IT and business staff who appreciate the value of system and data integration proposed by the the IBMS vision, and who will support The Consultant as required throughout the entire project life-cycle, and beyond –continuing to adjust and improve the IBMS systems for the benefit of current and future border logistic community users.

Deliverables for Component 4 – Governance & Collaboration Support

1. **Draft Cooperation & Data-Sharing Agreements** - While the border relevant agencies have agreed to the IBMS vision, the technical level of cooperation and data-sharing shall be finalized into straight-forward Agreements.
2. **Draft Steering Committee Charter and Protocols** – A Charter shall be used to structure the expected contribution of the various BLM-related agencies and CBRAs in their contribution to the IBMS governance program activities. The Charter and Protocols should explain who shall meet, with what frequency, how meetings will proceed, with what basic agenda, how issues shall be registered and resolved by the Committee.
3. **Draft Technology Working Group Charter and Protocols** – Similar to, and in close relationship to, the Steering Committee charter and protocols, the TWG charter and protocols shall suggest who should meet, with what suggested frequency (which may be adjusted based on need), suggested agenda perhaps similar to a Change Control Board, and proposing how issues/program needs are to be resolved at the TWG level and/or raised to the Steering Committee level.

8.5 Component 5 – Project Management & Quality Assurance

The implementation of the IBMS will be involve complex IT implementations, multi-agency process engineering, and organizational collaboration, thereby requiring the BLPA to exercise a strong methodology-based project supervision approach to ensure the successful and timely delivery of the IT solutions. The Consultant must demonstrate and provide professional industry "best practice" level project management and quality assurance throughout this project. The Consultant will support BLPA's fiduciary, monitoring and evaluation roles, together with governance, change management

and communication. It will also deliver a number of capacity building requirements described herein.

The objective of this assignment is to assist BLPA with all aspects of the execution and implementation of the IBMS Project, as outlined in component 1, including sub-component descriptions above.

Assistance is to include, but not be limited to managerial and technical assistance and guidance through the various phases of implementation to ensure projects are procured (in line with procurement standards and processes of World Bank), structured, managed and executed following international standards of project management and supervision and quality assurance.

In addition, assistance will include support for the organizational development aspects of the project and to strengthen the BLPA's capacity to manage its enhanced IT capabilities in a sustainable manner. This will include support of the implementation of pre-engineered processes and other capacity building required throughout the project life-cycle.

Communication, Plans and Reports

The Consultant shall work in in close collaboration with and report to the project management team lead as may be assigned by the BLPA. It will also report independently to the IBMS Working Group and/or the Project Steering Committee and monitor the work and outputs of the supplier for the IBMS solution (i.e., dashboard implementation, hardware, software and services) and any other suppliers that maybe appointed as relevant.

Close collaboration and good communication with the larger project team is paramount:

- The Consultant is required to proactively raise any issues, risks or requirements affecting project success.
- Issues or risks raised should be accompanied by proposed steps towards mitigation.
- Plans and Reports for the project are expected to be concisely and professionally written, with minimum "fluff" or useless "filler". Plans should focus on actionable steps and include clear expectations of the different inputs required from the larger project team. Reports should be considered almost as a statement of record, with any issues already having been identified, communicated and mitigated in an appropriate, proactive manner.
- The Consultant will be responsible for building and managing the knowledge base of all outputs and objects of the project.

Facilities and Support Services

The Client (Government of Bangladesh) will provide the following inputs and facilities:

- Orientation will be provided to key professionals regarding working approach of BLPA;
- Provide all relevant Reports, Studies and information pertaining to Land Port Modernization;
- Initial coordination and liaison with all appropriate government agencies, the community, and other stakeholders; and
- Participation with all relevant Governance Committees and Working Groups, including attendance, guidance, decision making, and some administrative responsibilities.

The Consultant is expected to provide (and cost in their financial proposal as appropriate) the following:

- Cost of providing and maintaining a collaboration environment to be used by all suppliers and project team members working on the Land Port Modernization project
- Cost for other office equipment to be used by the Consultant on site e.g., projectors, printers, photocopiers, scanners etc., and any other equipment as may be required by the Consultant
- Cost of any secretarial and/or administrative support services to be used by the Consultant on site
- International Flights including the cost of necessary travel and transportation of the Personnel by the most appropriate means of transport and the most direct practicable route, including any visa fees (Nb., All international staff working on this engagement must be in possession of suitable work permits at all times when on site);
- Furnished in-country office space for a sufficient period of time as the contract supplier is mobilized;
- Applicable international or local communications such as the use of internet, telephone and facsimile required for the purpose of the Services;
- Printing and dispatching of the reports to be produced for the Services;
- Usage of any and all professional services like Cloud-services, Hosted services, Wide Area Networks etc.
- Translators and Translation Services in Bangladeshi;
- Local transportation within Bangladesh;
- Administrative Support;
- Workshops and other Participatory services in support of project activities including reference materials and refreshments as appropriate;
- Laptops, PC's and Printers as appropriate for the the Consultant team staff needs;
- Fax and Copy machines as needed;
- Tax Responsibilities;
- Insurance Responsibilities; and,
- Any other inputs necessary to complete the assignment.

9 Staff Qualifications

The Consultant is free to propose team and skill compositions appropriate to their proposed work plan. However, to ensure a high level of competence, at a minimum, staff will be required for the positions as noted in table 1 below. The consultants are encouraged to engage an editor to ensure all outputs are of high quality in terms of writing, structure, presentation, etc. Key qualifications of staff:

Enterprise Architecture & Data Integration Expertise:

- An international consulting firm having at least 10 years' experience in border management/logistics-related IT projects. It must possess modern enterprise and data architecture experience, quality assurance experience with technology projects to include at least one complex nation-wide data integration implementation.
- The consultants should be skilled in presenting complex technical and other issues to senior managers;
- The consultants should be skilled in the use of standard methodologies for data integration architectures, and adopt such a methodology for this project;
- The consultants should have experience in the development and implementation of data integration and enterprise architectures in a complex country environment and have a proven track record in the transfer of know-how to similar government organizations;

- The consultants must have proven experience developing, testing, and implementing complex automated systems involving regulatory and non-regulatory organizations;

Border Logistics/Management Process Engineering Expertise

- Team experience working with the Public Sector is highly desirable;

Complex Stakeholder Relations Expertise

- This role ensures that regular oversight is maintained over all change management and communications activities including all tasks pertaining to change/capacity building. It monitors the plans and progress of all change management and communications activities and ensures that appropriate methods and disciplines are being followed. It also periodically confirms the extent of readiness of target environments to ensure that these are truly ready to take on planned improvements in business procedures and/or automated systems.

International/Regional Expertise

- The Consultant should have significant experience in the implementation of automated systems, including testing, revisions and human resource capacity building necessary to provide organizational autonomy with respect to carrying out all functions associated with the automated system.

Table 1- Qualification and Experiences for Required Project Staff

Key Professionals	Preferred Experience & Qualifications
Project Lead 17 months	• Master's degree in Management / Computer engineering / IT related discipline or relevant experience that demonstrates an acceptable level of skills and expertise to engage in a BLM project with a heavy data-integration focus; • At least 10 years of international professional experience as Project Manager/Team Leader in projects of similar nature; • Knowledge of issues facing Bangladesh or other developing countries related to trade facilitation and cross-border management; • Experience with the working procedures and policies of the Cross-Border Regulatory organizations, and other primary and ancillary organizations related to cross border trade in Bangladesh and the South Asian Region is preferable; • Knowledge of customs systems and automated systems of other trade related agencies is a plus; • Excellent written and spoken English.
Deputy Project Lead Bangladesh 15 months	• Bachelor's (minimum) degree in Management / Computer engineering / IT related discipline or relevant experience that demonstrates acceptable level of skills and expertise; • At least 5 years of international professional experience as Project Manager/Team Leader in projects of similar nature; • Knowledge of issues facing Bangladesh or other developing countries related to trade facilitation and cross-border management; • Experience with the working procedures and policies of the Cross-Border Regulatory organizations, and other primary and ancillary organizations related to cross border trade in Bangladesh and the South Asian Region is a plus;

	• Knowledge of customs systems and automated systems of other trade related agencies is a plus; • Excellent written and spoken English.
IT Systems Architect (Trade/BLM related) 13 months	• Bachelor's (minimum) degree in Engineering, Computer Science, public management, business administration, or a related field; • Extensive enterprise architecture and data integration architecture expertise to support border management systems, including ASYCUDA; • Experience working on enterprise IT solutions with government organizations in the South Asia Region would be a plus; • Experience working with senior officials within government, inter-governmental, and non-governmental organizations; • Excellent written and spoken English.
IT Systems Design Specialist 14 months	• Bachelor's (minimum) degree in Engineering, Computer Science, public management, business administration, or a related field; • Systems architecture and data integration architecture experience; • Experience working on enterprise IT solutions with government organizations in Bangladesh would be a plus; • Excellent written and spoken English.
Border Logistics / Trade Facilitation Process Engineer 17 months	• Bachelor's (minimum) degree in International Relations, public management, business administration or a related field, or equivalent education and work experience (i.e. working in a Customs operational environment); • Proven Business Process Reform (BPR) expertise; • Extensive knowledge of border management, freight logistics, trade facilitation, risk management, customs, or other relevant areas; • Extensive knowledge of border infrastructure, equipment, and systems; • Experience in drafting international recommendations in cross border management; • Proven working experience consisting of substantial involvement in assessments evaluations, and/or reviews in related areas; • Experience working on cross border issues in Bangladesh, South Asia Region would be a plus; • Excellent written and spoken English.
Non-Key Professionals	**Preferred Experience & Qualifications**
Legal and Regulatory Specialist 9 months	• Bachelor's (minimum) degree in Law and 5 years of consultancy in Trade Facility related projects; • Extensive prior international experience in trade related legal and regulatory issues; • Knowledge of legal and regulatory impacts on IT systems for trade and trade facilitation required; • Prior experience in dealing with national legislation on electronic transactions, electronic records, privacy and data protection law is essential.
Change Management and	• Master's degree in a relevant discipline and/or relevant experience that demonstrates acceptable level of skills and expertise; • At least 10 years of Experience of Change Management and Communications on •

Communications Expert 14 months	large scale complex Government systems implementation projects; • Working experience in Bangladesh is desirable.

10 Duration of Services and Level of Effort

The expected timeline for all activities within the overall scope of this project is expected to commence in early-2025 and be fully completed before the end of June, 2027, unless extended further with various full-time and part-time consultancy inputs provided as and when needed throughout the duration of the contract period.

	National or International	Phase 1 - Concept (2 Months)	Phase 2 - Requirements (3 Months)	Phase 3 - Design (4 Months)	Phase 4 - Develop (3 Months)	Phase 5 - Test (3 Months)	Phase 6 - Deploy (3 Months)	Phase 7 - Operate (3 Months)	Phase 8 - Sustain (0 months)	Total anticipated staff months*
Key Professionals										
Project Leader (International)	International	2	3	2	2	2	3	3	0	17
Deputy Team Leader	National or International	2	2	2	2	2	2	3	0	15
IT Systems Master Architect	International	2	3	4	4	0	0	0	0	13
IT Systems Design Specialist	National	1	2	4	2	2	3	0	0	14
Border Logistics Process Engineer	International	2	3	4	1	1	3	3	0	17
Non-Key Professionals										
Legal and Regulatory Specialist	National or International	2	3	4	0	0	0	0	0	9
Change Management & Communications Expert	National or International**	2	1	2	2	1	3	3	0	14
Total Months		**13**	**17**	**22**	**13**	**8**	**14**	**12**	**0**	**99**