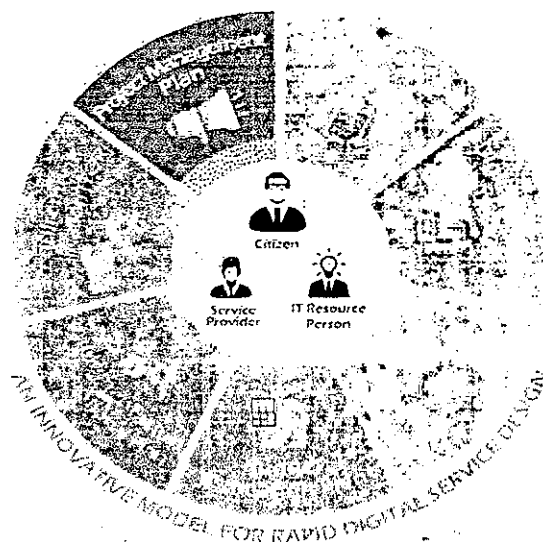


TERMS OF REFERENCE (TOR)

Integrated Digital Service Delivery Platform for
Ministry of Expatriates' Welfare and Overseas Employment

COMPONENT: TRAINING & E-LEARNING MANAGEMENT SYSTEM



Prepared By

Venue: Bangladesh Academy for Rural Development, BARD, Comilla

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Organized By: Ministry of Expatriates' Welfare and Overseas Employment
& a2i, ICT Division

Supported By

Access to Information (a2i) Programme, Information & Communication Technology Division (ICTD)

Terms of Reference (TOR) for Integrated Digital Service Delivery Platform of Ministry of Expatriates' Welfare and Overseas Employment



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1. Background

Technologically transforming the country into “Digital Bangladesh” by 2021 is the vision of Government of the Peoples' Republic of Bangladesh in the arena of Information and Communication Technology (ICT). The government has also put a special importance on ICT as an instrument for national development and sustainability.

As part of this vision, government is in the process of making available of all government services digitally at the doorsteps of all levels of citizen's in the form of Digital Service. It will add value to ensure transparency, accountability and human rights through extreme use of technology. In addition, it will improve the daily lifestyle of all classes of people.

Currently Citizens' access to government services has limitations in terms of quality services and emergency responses from the agencies involved. As the outcome of such projects, people will enjoy quick and speedy delivery of services including education, healthcare, infrastructure, utilities, law enforcement, etc. with minimal cost, time and hassle.

Ministry of Expatriates' Welfare and Overseas Employment is going to introduce delivery of following Digital Service s to citizens of this service/project:

- **Training & e-Learning Management System**

Identified Digital Service s will reduce the number of steps and levels involved and limit the options for corruption dramatically, making service delivery more transparent and accountable through 'one-stop' service delivery centers.

2. Review of Existing Services

2.1 About the Organization

BMET & it's History:

Bureau of Manpower Employment and Training (BMET) was established as an attached department of the then Ministry of Manpower Development and Social Welfare in 1976. Government of the People's Republic of Bangladesh established BMET with the purpose of recruiting and sending migrant workers overseas. BMET is engaged in overall planning and implementation of the strategies for regulating migration process, promoting migrant workers' rights and skill development proper utilization of migrant workers of the country as a government department under the Ministry of Expatriates' Welfare and Overseas Employment (MoEWOE). It is contributing immensely to the government services for migrant communities, job seekers, and other stakeholders

Vision and Mission of BMET:

- To ensure safe and regular migration by providing skill development training and welfare support to the migrant workers.
- Establishment of good governance in the recruitment of overseas employment. Creation of skilled manpower in line with demand of local and global labor market.
- Ensuring overall safe migration.

Activities at a glance

- ❖ Processing of foreign demands for recruitment of Bangladeshi workers.
- ❖ Controlling and regulating emigration clearance for recruited workers in overseas employment.
- ❖ Regulating and monitoring private recruiting agents who recruit Bangladeshi workers for foreign employers.
- ❖ Implementing self-employment programs.
- ❖ Collecting and disseminating labor market information through a computerized database.
- ❖ Conducting welfare activities for Bangladeshi workers abroad
- ❖ Registering unemployed persons and referral to the vacancy positions
- ❖ Providing institution based vocational and technical training in different employable trades.
- ❖ Planning and implementing development programs to conduct training activities.
- ❖ Conducting informal, formal and special training courses
- ❖ Coordinating apprenticeship training

2.2 Existing Services (As-Is)

2.2.1 Existing Service Delivery & Beneficiary Information

Existing Service Delivery & Beneficiary Information			
Service Name: Skill Development Training			
Organization Name: BMET			
No. of Service Delivery Offices	No. of Service Delivery Users	No. of Beneficiaries	No. of Service Delivery (Month/Quarterly/Yearly)
3	7000	800000	10000 Quarterly

2.2.2 Existing Service Process diagram (Service Recipient)

Ministry of Expatriates' Welfare and Overseas Employment

Bureau of Manpower Employment and Training

Training Management System

Group- B

Service Recipient

TCV Analysis Summary	
Time (D)	31/03/21
Cost (D)	19/03/21
Visit	12/03/21

SL NO	SERVICE TYPE	STEP	T	C	V	CHALLENGES	EXPECTATION
01	SKILL DEVELOPMENT TRAINING	Collect Admin Form	01D	220	1	Time Consuming	Online form Submission Collection
		Submit Admin Form	01D	200	1	Physical Stress & Time Consuming	Online form Submission
		Collect Admin Card	0	0	0	DO	Online
		Attend Admin Test	01D	300	1	—	—
		Check result	01D	200	1	Physical Stress & Time Consuming	Online
		Complete Registration	0	1200	0	DO	Online
		Attend Training & Exam	60D 120	4000 12000	60 120	Accommodation	—
02	PDT	Receive Certificate	15D	400	1	Physical Stress & Time Consuming	Online
		Submit Document	01D	50	1	Some Time RA provide unclear Document	—
		Make Payment	0	200	0	—	—
		Attend Training	02D	400	2	—	—
03	HOUSE KEEPING	Receive Certificate	0	0	0	Some Time Extra Time Required	Online
		Submit Document	01D	200	1	—	—
		Face selection Committee	01D	200	1	—	—
		Receive Confirmation	0	0	0	—	—
		Make Payment	0	300 600	0	—	—
		Attend Training	30D	6000	30	Accommodation & Transport	Dual Mode off & on line
		Receive Certificate	0	0	0	—	Online

Fig. No.: 011

2.2.3 Existing Service Process diagram (Service Provider)

Ministry of Expatriates' Welfare and Overseas Employment									
Service Provider									
Service Type	Step	Time	Cost	Resources	Challenges	Impact	Feedback	Monitoring	Reporting
SKILL DEVELOPMENT	1. Assessment	10m	100	Assessment Officer	None	Identify skill gaps	None	None	None
	2. Training	10m	100	Trainer	None	Acquire new skills	None	None	None
	3. Evaluation	05m	50	Evaluator	None	Assess skill level	None	None	None
	4. Certification	05m	50	Certification Officer	None	Issue certificate	None	None	None
	5. Placement	10m	50	Placement Officer	None	Find job for trainee	None	None	None
	6. Follow-up	10m	50	Follow-up Officer	None	Monitor job performance	None	None	None
	7. Feedback	10m	50	Feedback Officer	None	Collect feedback	None	None	None
	8. Reporting	10m	50	Reporting Officer	None	Report progress	None	None	None
	9. Review	10m	50	Review Officer	None	Review process	None	None	None
	10. Improvement	10m	50	Improvement Officer	None	Improve service	None	None	None
PDT	1. Assessment	10m	100	Assessment Officer	None	Identify skill gaps	None	None	None
	2. Training	10m	100	Trainer	None	Acquire new skills	None	None	None
	3. Evaluation	05m	50	Evaluator	None	Assess skill level	None	None	None
	4. Certification	05m	50	Certification Officer	None	Issue certificate	None	None	None
	5. Placement	10m	50	Placement Officer	None	Find job for trainee	None	None	None
	6. Follow-up	10m	50	Follow-up Officer	None	Monitor job performance	None	None	None
	7. Feedback	10m	50	Feedback Officer	None	Collect feedback	None	None	None
	8. Reporting	10m	50	Reporting Officer	None	Report progress	None	None	None
	9. Review	10m	50	Review Officer	None	Review process	None	None	None
	10. Improvement	10m	50	Improvement Officer	None	Improve service	None	None	None

Fig. No.2

2.2.4 Existing Services Process Analysis (ESPA)

Problems and Challenges:

Service Recipients:

- ❖ To collect training information, service recipient has to visit Training Institutes
- ❖ To apply for any training course, Service Recipients have to visit physically and collect the application form
- ❖ There is no option for service recipient to know the status of his/her application
- ❖ There is no facility for service recipients to learn and get training from home or through online
- ❖ Service Recipients are unable to provide feedback, suggestions, opinion, ask queries or complain easily
- ❖ There is a long waiting period for the trainees to receive the training certificate after completion of the training

Service Providers:

- ❖ The service provider experiences lack of help desk or enough human resources to serve service recipients with information and procedure
- ❖ Application form distribution, collection of filled form, sort application form, provides admit card these are time consuming and lengthy process
- ❖ Service provider has to prepare and send all certificates of trainees to Head Quarter for taking signature from High Official. The process is very time consuming and there is chance of certificate missing or physical damage
- ❖ It is difficult for service provider to check and verify required documents like NID, Passport, BCN or VISA in manual way.
- ❖ Due to busy schedule of high officials and approver authority it is difficult to approve or sign application and certificate on time.
- ❖ Service Providers cannot easily communicate with Service Recipients on approval of application or change of any scheduled training or convey any urgent message
- ❖ It is difficult and time consuming to collect and check admission fee, course fee or other related fees in manual way.

3. Proposed Digital Service (To-Be)

3.1 Digital Service Objectives

Objective of this digital service initiative is to analyze, design, develop and implement a citizen centric and national impacted Training Management and e-Learning Platform for mass people to ensure smooth & excellent training service

3.1.1 Service Recipient

- ❖ Avail online information
- ❖ Get prerequisite checklist from home
- ❖ Reduced Time, Cost and Visit.
- ❖ Track own applications.
- ❖ Make payment through online
- ❖ Learn and earn from home

3.1.2 Digital Service Operators (Service Provider)

- ❖ Increase efficiency in service delivery and ensure excellence
- ❖ Provide tools and technique for managing all Process in an organized manner.
- ❖ To ensure timely services in a transparent manner.
- ❖ Implement digital certificate and signature
- ❖ Eliminate Clerical activities in the process
- ❖ Ensure customer satisfaction and increase government revenue

3.1.3 Digital Service Observer (Service Performance Monitoring Authorities)

- ❖ To monitor all of the TTCs and institutes of BMET as well as all Service Recipients and Providers also.
- ❖ Supply and demand analysis of Service Recipients of a specific service to select suitable training program for minimizing skill gap
- ❖

3.2 Digital Service Scope

3.2.1 Service Recipient

- ❖ The proposed system will have detailed information of all the services as well as service wise prerequisite checklist.
- ❖ There will be provision in the new proposed system, where service recipients will be able to apply online for all types of services without harassment and unnecessary delay through web and mobile application
- ❖ e-Learning module will be implemented through the proposed system which will provide learning/training facilities through web application or mobile app
- ❖ Through this system, Service Recipients will be able to submit Appeals, queries, suggestions, opinions or complains easily & system will notify of mitigation status & actions taken.
- ❖ Service Recipients will get notification on latest status of her application. they can also log in to the system to know of next step, authority, expected delivery date etc.
- ❖ The proposed system will enable service recipients to complete all necessary payment through digital payment service which will reduce the risk of carrying cash and other related hassles

3.2.2 Digital Service Operators (Service Provider)

- ❖ The proposed system will eliminate all these manual processes. Service recipients will be able to apply online, receive admit card online and get all necessary guideline notification..
- ❖ The proposed System will have option to prepare and generate all required documents in defined format and help implementing necessary plan in effective way which will reduce significant clerical job hour of Service
- ❖ Through this online system, Service Providers will easily communicate with each other & be able to share & view calendar to set schedule efficiently
- ❖ Digital signature will be implemented through the proposed system which will eliminate the process of collecting signature manually in certificate or other necessary document from high official resulting significant
- ❖ Through this system, Service Providers will easily communicate with Service Recipients, which will ensure better, efficient & effective service

- ❖ Seamless integration with payment gateway will eliminate all hassles of lengthy banking channels.

3.2.3 Digital Service Observer (Service Performance Monitoring Authorities)

- ❖ With Service monitoring dashboards, Service providers' Monitoring authority will be able to make decisions efficiently
- ❖ Approver authority can act of application with mobile app from anywhere, without attending office.
- ❖ High level decision will be taken within very short time by online data analysis
- ❖ Transparency will be ensured to donors and recruiting countries as well as top level management.

4. Digital Service Functional Requirements

4.1 Solution Architecture

Solution architecture is expected to define and describe an architecture of the proposed Digital Service Solution in the context of the mentioned prevailing service delivery process i.e. Integrated Digital Service Delivery Platform of Ministry of Expatriates' Welfare and Overseas Employment. The solution architecture should assist in the translation of the service to Digital Service transformation requirements into a solution vision, high-level operations and/or ICT application specifications and a portfolio of implementation scope. The expected architecture of a solution, where the solution is a Digital Service system that should offers a coherent set of functionalities to its environment. As such, it should concerns those properties of a solution that are necessary and should be sufficient to meet its essential requirements. The vendor shall propose comprehensive solution architecture on Integrated Digital Service Delivery Platform of Ministry of Expatriates' Welfare and Overseas Employment which may cover the following items in their descriptive and diagrammatic presentation

- Goals/Results
- Service Recipients
- Digital Service Operators/User (Service Providers)
- Digital Service Observers (Service Administration and Performance Monitor)
- Database application components:
- Entity application component:
- Utility component
- System federation (Systems to be integrated)
- Process application component
- Interaction application component
- Application
- Accessible Points
- Networks
- Types or Layers of Service Delivery Points
- Hosting Site

4.2 Digital Service Functions and Features

To reach the ultimate objective of this Digital Service development and implementation of the system may have the following Components with necessary Modules, features and functionalities. However, the selected vendor must perform a detailed requirement study and system analysis and prepare the necessary deliverable.

4.2.1 Module and Digital Feature List

✦ Training Information and Admission Management

- ✓ Information Management
- ✓ Trainee Registration & Profile Management ✓
- ✓ Trainer Registration & Profile Management } External Em
- ✓ Course Selection Management
- ✓ Course Schedule and Plan Management]
- ✓ Training Application management
- ✓ Selection Committee Management
- ✓ Application Sorting Management
- ✓ Trainee/Trainer Selection management
- ✓ Approval Management
- ✓ FAQ & Chatbot
- ✓ Compliance Management
- ✓ Notification
- ✓ Payment

✦ Course Management & Configuration

- ✓ Budgeting ✓
- ✓ Attendance & Drop-out management
- ✓ Venue Management ✓
- ✓ Exam Management
- ✓ Certification
- ✓ Payment
- ✓ Notification
- ✓ Service Configuration
- ✓ User Configuration
- ✓ Course Guideline Management ✓
- ✓ Course and Module management ✓
- ✓ Course Enrollment management
- ✓ Course Evaluation & Result Management
- ✓ Archive Management
- ✓ Trainer evaluation & Rating
- ✓ Course Content Sharing

✦ **E-Learning Management**

- ✓ Content Management
- ✓ Mobile Apps based learning
- ✓ Virtual Conferencing
- ✓ Trainee/Trainer Portal
- ✓ Assessment Management
- ✓ Reporting and Data Analysis
- ✓ Online Communities
- ✓ Feedback & Rating

✦ **Job Placement and Reporting**

- ✓ Dashboard
- ✓ Application Report
- ✓ Course Payment Report
- ✓ Successfully Training Completion Report
- ✓ Course wise trainee/trainer Report
- ✓ Drop-out Report
- ✓ Service Wise Training Report
- ✓ Job Placement Report
- ✓ CV Management
- ✓ Employer Management
- ✓ Placement Monitoring

4.2.2 Digital Features functional flow diagram

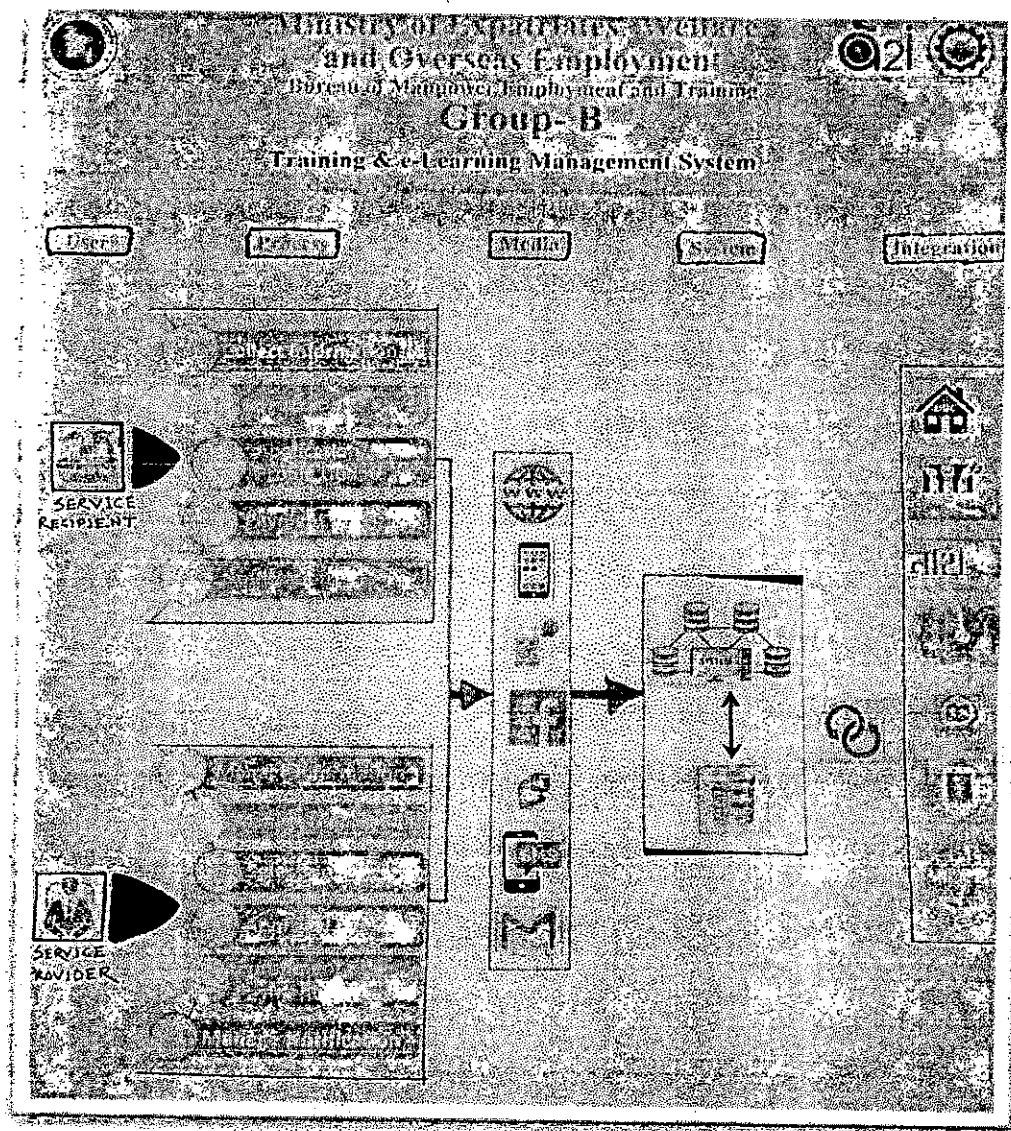


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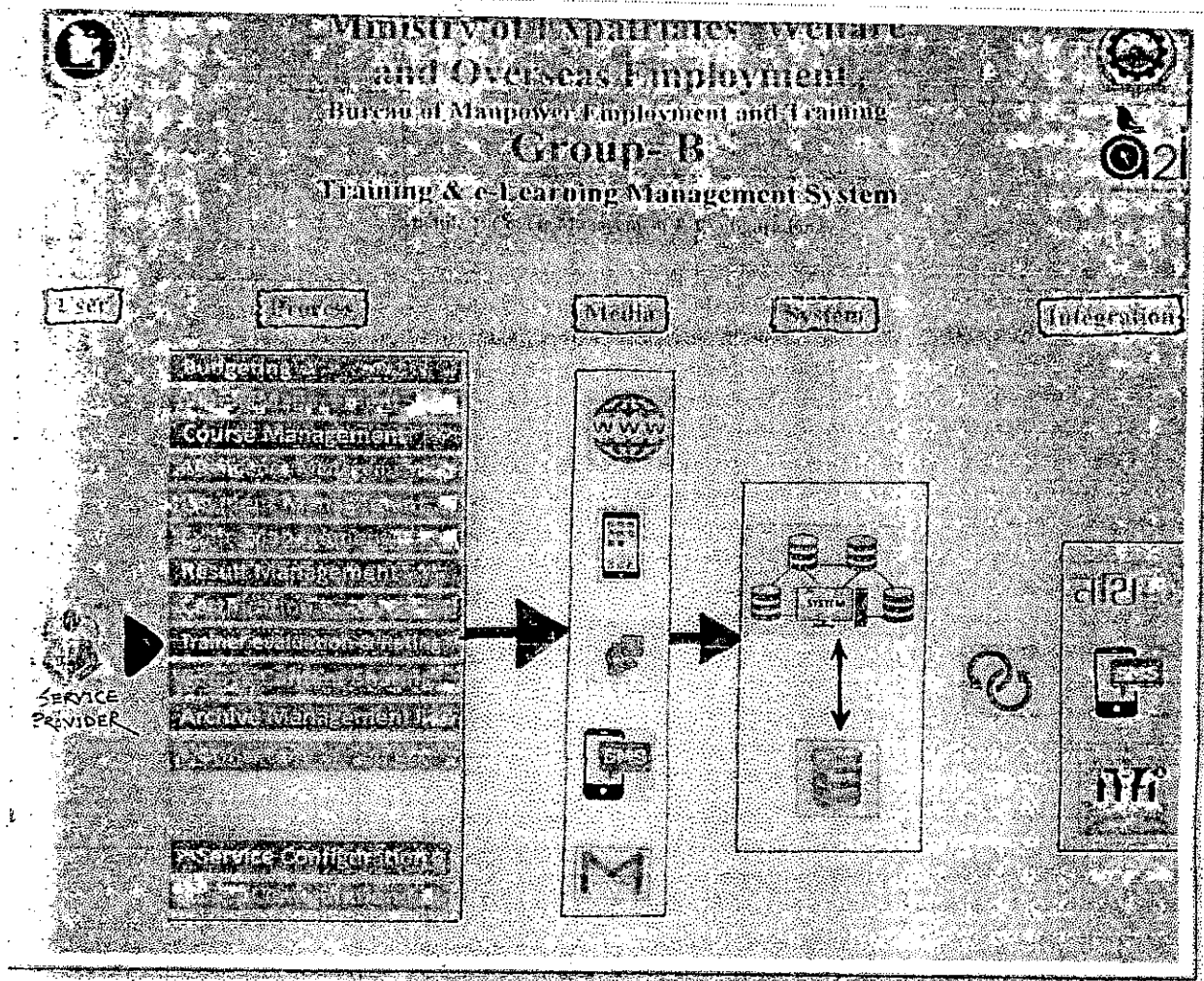


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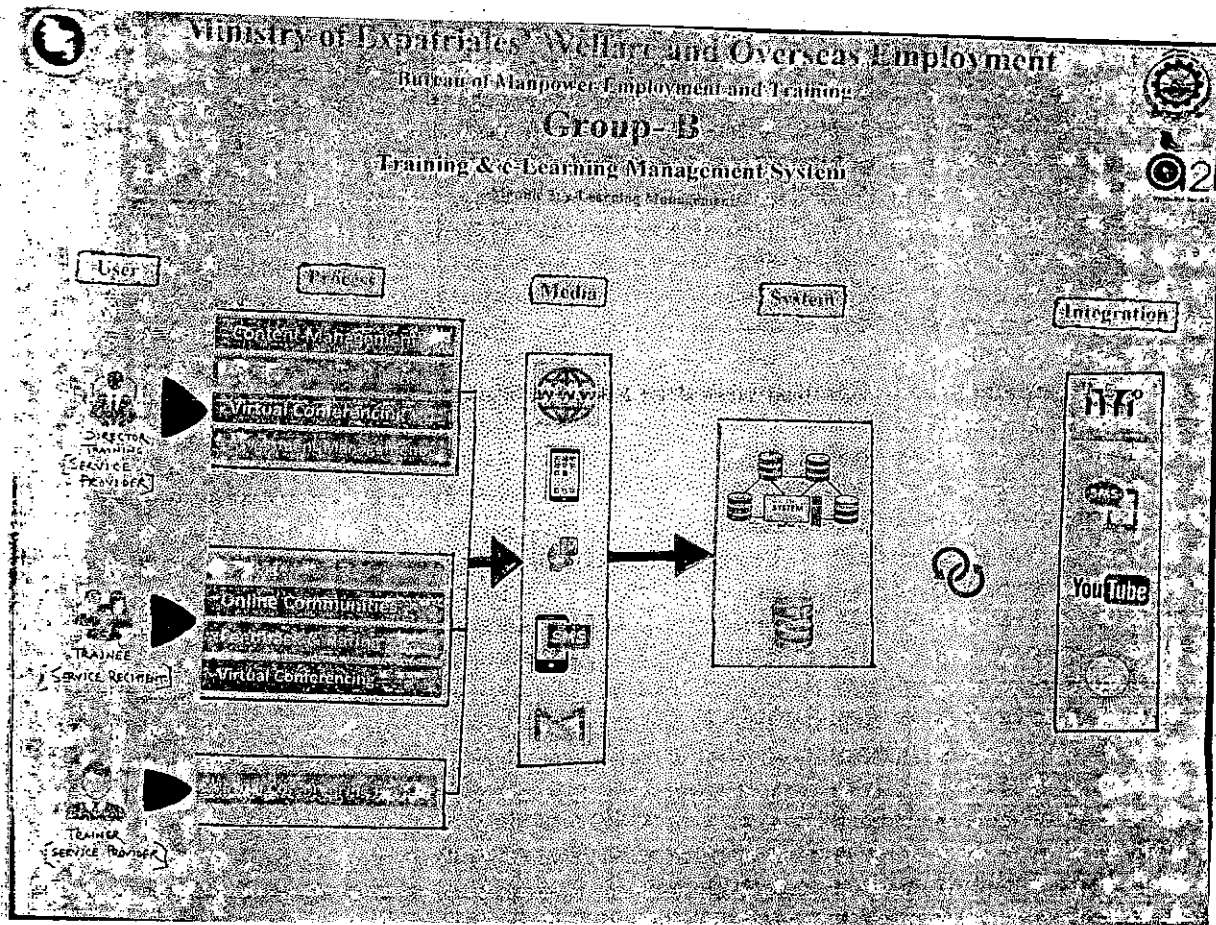


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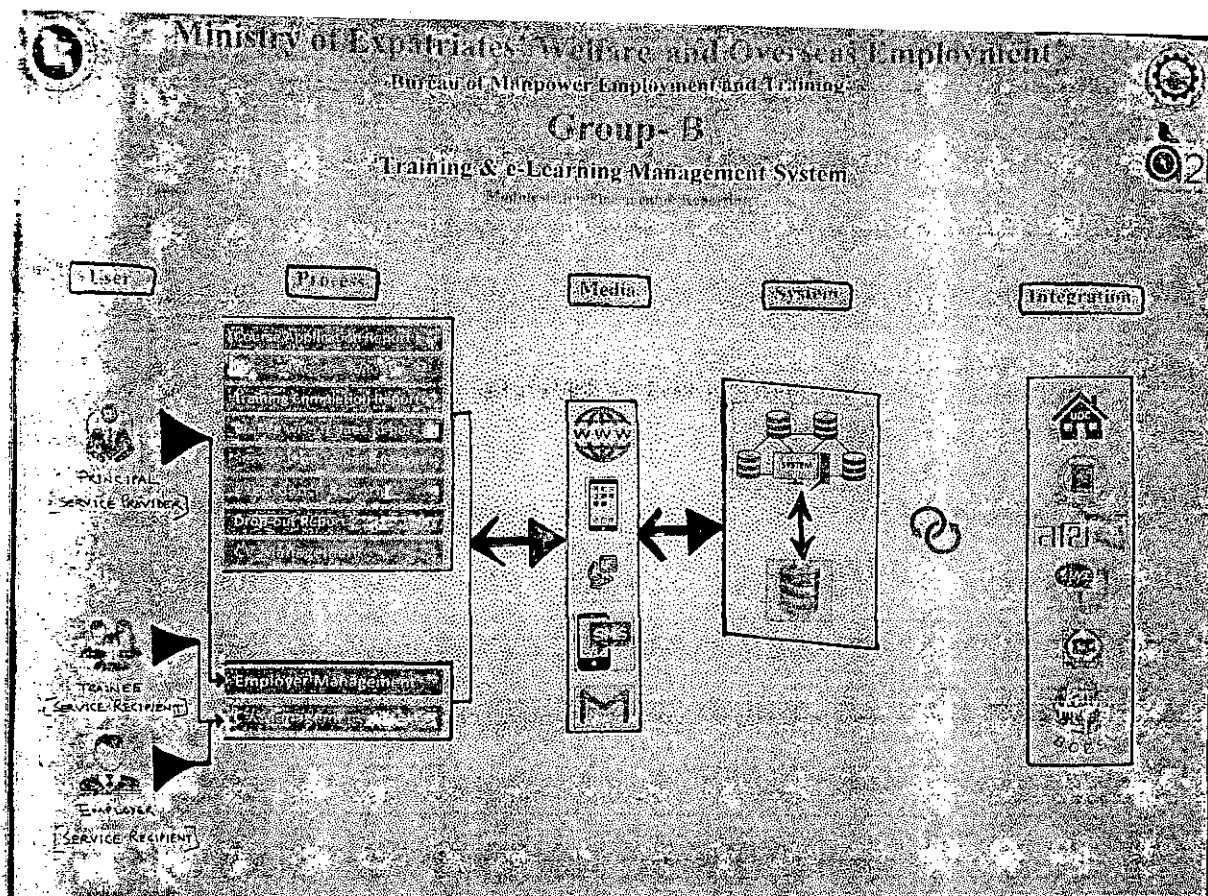


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4.2.3 Component-1: Training and e-Learning Management System

Organization Name: Bureau of Manpower Employment and Training					
Module	e-Feature	e-Feature Description	User	Media	Integration
Training Information and Admission Management	Information Management	Information management feature will enable service provider to provide all necessary training related information to service recipient by using web application and mobile app	Training In charge	Web, Mobile App	NID, Birth Certificate, Passport, e-nothi, SMS Gateway, Payment Gateway, e-mail,
	Trainee Registration & Profile	By using this feature, service recipient will be able to register and update his/her profile through Web	Service Recipient	Web, Mobile App	

	Management	and Mobile Application			BOESL
	Trainer Registration & Profile Management	By using this feature, course trainers will be able to register and update his/her profile through Web and Mobile Application	Admin	Web	
	Course Selection Management	Course selection management feature will have tools and techniques which will enable service recipient to select suitable course through Web and Mobile Application	Service Recipient	Web	
	Course Schedule and Plan Management	Course schedule and plan management feature will consist of tools and techniques which will enable Training In-charge to schedule and plan course using web application	Training In charge	Web	
	Training Application management	Training application management feature will enable course in-charge to manage received application using web application.	Course In charge	Web	
	Selection Committee Management	By using selection committee management feature, admin users will be able to manage selection committee for evaluation and assessment purpose through online.	Admin	Web	
	Application Sorting Management	By using application sorting management feature, course in charge will be able to sort and manage received application through the proposed system.	Course In charge	Web	
	Trainee/Trainer Selection management	Trainee/Trainer Selection management feature will consist of tools and techniques which will assist course in charge to select trainee or trainer for particular course through the proposed system.	Admin	Web	
	Approval Management	Approval Management feature will enable admin users to ensure process compliance by configuring	Admin	Web	

		and managing approval jurisdiction through online			
	FAQ & Chatbot	By using FAQ and Chatbot feature, admin users will be able to provide FAQ and dynamic system generated feedback to service recipients through web and mobile application	Admin	Web, Chatbot	
	Compliance Management	By using compliance management feature, admin users will be able to ensure internal control and process compliance through the proposed system	Admin	Web	
	Notification	Notification feature will consist of integration tools and predefined notification templates which will send system generated notification to service recipient through web, mobile app, sms gateway and e-mail gateway.	Course In charge	Web, Mobile App, e-mail, SMS	
	Payment	Payment feature will consist of payment gateway integration tools which will ensure online payment transaction between service recipient and accounts through the proposed system.	Service Recipient, Accounts	Web	
Management & Configuration	Budgeting	Budgeting feature will enable accounts user to prepare training and other necessary budget through web application	Accounts	Web	
	Attendance & Drop-out management	By using attendance & drop-out management, course in charge will be able to record attendance and manage drop-out trainees for particular course through online.	Course In charge	Web	
	Venue Management	By using venue management, course in charge will be able to select and manage training venue for particular course through online.	Course In charge	Web	

Exam Management	Exam management feature will consist of tools and techniques which will enable course in charge to schedule and manage exam through web application.	Course In charge	Web	SMS Gateway, e-nothi, Payment Gateway, BTEB
Certification	Certification feature will be implemented by	Admin, Course In charge, Director_TRG, DG	Web	
Payment	Payment feature will consist of payment gateway integration tools which will ensure online payment transaction between service recipient and accounts through the proposed system.	Service Recipient, Accounts	Web	
Notification	By using Notification feature, course in charge will be able to manage required notification services through web, SMS and mobile applications	Course In charge	Web, Mobile App, SMS	
Service Configuration	Service configuration feature will assist admin users to configure different type of services or trainings through the proposed system	Admin	Web	
User Configuration	User configuration feature will enable Director_TRG to configure different type of system users through the proposed system	Director_TRG	Web	
Course Guideline Management	Course guideline management feature will enable Director TRG to plan or initiate different type of course guideline through web application	Director_TRG	Web	
Course and Module management	Course and module management feature will enable Director_TRG to configure and manage different type of courses and modules through the proposed system	Director_TRG	Web	

	Course Enrollment management	By using course enrollment management feature, admin users will be able to manage enrollment services of different courses web application	Admin	Web	
	Course Evaluation & Result Management	By using course evaluation and result manage feature, admin and course in charge will be able to evaluate different courses and prepare result sheet accordingly through web application	Admin, Course In charge	Web	
	Archive Management	Archive management feature will have options and tools to archive different type of documents, certificates, contents through the proposed system.	Training In charge	Web	
	Trainer evaluation & Rating	Trainer evaluation and rating feature will enable service recipient and admin users to evaluate and rate performance of related trainers through the proposed system.	Service Recipient, Admin	Web	
	Course Content Sharing	Course content sharing feature will enable course in charge to share and make available different course related materials and suggestions through the proposed system	Course In charge	Web	
Learning Management	Content Management	By using content management feature, course in charge will be able to manage and share different type of content in PDF, Image, Audio and Video format through online	Course In charge	Web	Youtube, E-mail, BTEB, Content Provider (3rd Party)
	Mobile Apps based learning	Mobile Apps based learning will have tools and techniques which will enable service recipient and course in charge to conduct learning through mobile apps	Course In charge, Service Recipient	Web	
	Virtual Conferencing	Virtual conferencing feature will assist service recipient and training in charge to conduct online conference through the proposed	Service Recipient, Course In charge	Web	

		system.			
	Trainee/Trainer Portal	Trainee/Trainer portal feature will enable trainee or trainers to login the system, create profile and perform different activities like content sharing, urgent notification, provide suggestions through the proposed system.	Service Recipient, Training In charge	Web	
	Assessment Management	By using assessment management feature, course in charge will be able assess trainees and trainers for particular courses through online.	Course In charge	Web	
	Reporting and Data Analysis	By using reporting and data analysis feature, Director_TRG and Training Incharge will be able to generate and analyze different comparative data and take action accordingly through the proposed system	Director_TRG, Training In charge	Web	
	Online Communities	Online communities feature will enable service recipient to build communities or forums and conduct interaction among themselves through web and mobile apps	Service Recipient	Web, Mobile App	
	Feedback & Rating	Feedback and rating feature will enable service recipients to provide their feedback and rate different courses or trainers through web and mobile apps	Service Recipient	Web, Mobile App	
Placement & Monitoring	Dashboard	Dashboard feature will be available in the proposed system by which top level management or high officials will be able to view and analyze different type of summary reports through online and take necessary action accordingly.	Service Provider	Web	E-mail, SMS Gateway
	Application Report	By using Application Report feature, service provider will be able to view system generated application status through the	Service Provider	Web	

	proposed system			
Course Payment Report	Course payment feature will enable accounts user to view system generated course payment report through web application	Accounts	Web	
Successfully Training Completion Report	By using successfully training completion report feature, service provider will be able to view system generated training completion status through the proposed system	Service Provider	Web	
Course wise trainee/trainer Report	By using course wise trainee/trainer Report feature, service provider will be able to view system generated trainee or trainer status through the proposed system	Service Provider	Web	
Drop-out Report	Drop-out report feature will enable service provider to view and analyze drop-out status of trainees through the proposed system	Service Provider	Web	
Service Wise Training Report	Service wise training report feature will enable service provider to view and analyze service wise training status of trainees through the web application	Service Provider	Web	
Job Placement Report	Job placement report feature will enable service provider to view system generated job placement status through web application	Service Provider	Web	
CV Management	CV management feature will have option of creating CV bank. Placement officer will be able to view and manage CV of Successful trainees and forward to employers through online	Placement Officer	Web	
Employer Management	By using employer management feature, placement officer will be able to manage employers who hire potential trainees through the	Placement Officer	Web	

		proposed system			
	Job Placement Management	Through this feature, job placement information can be added	Service Provider	Web	
	Placement Monitoring	Placement monitoring feature will enable service provider to track and monitor placement status of successful trainees through web, SMS and mobile apps	Service Provider	Web, Mobile App, SMS	

N.B.: The interested vendor must comply all above mentioned modules and features but not require to limit in this list. Apart from this, the interested vendor should analyzed the other scopes which are relevant to the areas covered above and should propose the best possible and comprehensive ICT solutions in there technical proposal. The ultimate modules and futures of the proposed system will be finalized at the requirement study and analysis phase of SDLC based on client's actual requirement, acceptance and vendor's best proposal/solutions relevant to the above mentioned area and scope.

4.3 Users and User Roles

The following table gives a general idea / overview of user types and roles. The vendor shall conduct a more detail analysis of types of user and user roles during System Requirements Specification (SRS).

Training and e-Learning Management System					
Sl	Type of Users	No. of Users	No. Of Office/Location	User Title	User Major Role
	Digital Service Operator	210	70	<ul style="list-style-type: none"> Upper Division Clerk Training In-Charge Instructor Accounts Officer Principal Trainer 	<ul style="list-style-type: none"> Information update Application sorting & verification Application Management and Approval Online Payment Certificate Generation Content Update Generate e-notification Profile management Monitoring Dashboard Plan and Design Course View and respond to complain

Digital Service Administrator	3		<ul style="list-style-type: none"> Director Training Director ICT Principal, TTC 	<ul style="list-style-type: none"> System admin User Monitoring Approval Administration
System Administrator			SA SSA	<ul style="list-style-type: none"> Check data security. Data accumulation & Processing. Data backup
Digital Service Recipients	800000	•	<ul style="list-style-type: none"> License & NOC seekers 	<ul style="list-style-type: none"> Application submission View Application status
Digital Service Observer		•	<ul style="list-style-type: none"> DG, BMET 	<ul style="list-style-type: none"> Give the final approval/comments Monitoring all activities Research & policy formulation Feedback to the government

Vendor should submit a comprehensive plan and approach covering different types of users and their roles providing accessibility, privacy, confidentiality and transparency based on the given statics. Also have to mention the user friendliness login system.

Special note: Who has the e-Filing integration option:

If the proposed Digital Service application needs to integrate and interoperable with government prescribed e-Filing system (a2i e-Filing) then vendor should have design the seamless, smooth and user friendly single login system.

4.4 Security and Privacy Requirements

The vendor should submit an extensive and complete security and privacy plan for this Digital Service application considering the following issues

- Project technical scope
- Functional and nonfunctional requirements and ultimate objectives
- Concerned service provider organization's operational environments and capacity
- User roles - Accessibility, Authorization and Accountability
- Importance of data management
- Technologies to be used for development & run
- Hosting
- Client and service side
- Overall standard application security requirements.

Apart from these, the vendor should keep in account the following considerations also as well as vendor should provide a checklist based on system and hosting security plan (i.e. fraud, hacking, money laundering etc.) & have to provide the test report of that checklist.

4.5 Integration Requirements

As a government system or Digital Service application, integration with the required and other existing national system is very important, and essential. Only by proper integration making interoperable, a Digital Service application can drive the ultimate citizen benefits with the optimum use of technology from service to Digital Service transformation. Here vendor should come up with an integration plan in their technical proposal considering and understanding the scope of the Digital Service application as per this TOR. The possible integration scopes of this Digital Service application are mentioned below as reference for the vendor.

System Name	Purpose	Dependent Organization
1. SMS Gateway	Send and Receive SMS	Telecom Operators
2. NID	Verify Service Recipients' Identity	Election Commission
3. e-Nothi	Document Approval	a2i
4. Payment Gateway	Payment Collection & disbursement	MFS
5. BTEB	Data Sharing and Internal Communication	BTEB
6. BOESL	Collect Pre-départure trainee data	BOESL
7. 3 rd Party Content Provider	Collect learning materials for online training	NGOs
8. Passport	Confirm Service Recipients' Passport	Passport Office

4.6 Hosting Requirements

Bangladesh Government is providing an extensive and standard hosting facility for all types of government organization applications and software that is named as National Data Center under Bangladesh computer council (BCC). It may be mentioned here that the vendor developed application will be hosted in government provided data center i.e. National data center (NDC) or Ministry of Expatriates' Welfare and Overseas Employment). Therefore, at this stage, vendor is requested to submit a preliminary hosting plan for this Digital Service application considering the issues mentioned below:-

- Hosting requirement /environment (hardware, servers, network, security, storage, traffic, firewall, bandwidth etc.)
- Hosting architecture
- Data growth and scalability plan
- User handling/load balancing mechanism
- Licensing issues
- Scheduled backup & restore requirements
- Disaster recovery requirements
- Monitoring tools requirements



5. Digital Service Non-Functional Requirements

5.1 Application Compliance Requirements

5.1.1 Web Application

- The application which is a web based solution, has to be hosted in a centralized Web-server
- The application should be developed following Service Oriented Architecture (SOA)
- Application should support MVC framework.
- Considering the operating/client environment at different level of this application, it should be developed in such a way so that it requires low bandwidth to run.
- The web-based application should support cross browser platforms (popular web-browsers such Mozilla Firefox, Opera, Chrome, Internet Explorer, Safari etc.)
- Should have ability to seamless integration with future module / components / applications
- Application should be lightweight and rich client-side scripting
- UI should be developed based on the analysis of UX.
- Any web interface of this application should be fully responsive

5.1.2 Mobile Application Requirements

- The mobile application version of the system should be developed for Android and iOS.
- The mobile app should have capability of displaying system notifications
- Functionality for registration options for service recipients
- App should enable compact view of services for service recipients.
- There should be an option to auto synchronization with the central database with apps local database on the availability of the Internet connectivity.

5.2 Sizing, Performance and Scalability Requirements

- The system shall be capable of handling online functionalities for a database of at least 800000 service recipients and in terms of service provide 3 and 210 System Users.
- The system processing shall be scalable to support the volume estimates for a period of 10 years at a 20% annual growth rate.
- The system shall be designed to handle estimated 5000/3000 simultaneous connection (online users) when it is ultimately rolled out.
- The vendor must conduct an extensive load testing task taking above factors into consideration and submit a load testing results.
- The database architecture should be such that the system is available to user 24x7x365 days a year without any unapproved downtime.
- Page load time, login response-time, on-click load time for the web application should be less than 3 seconds while this is accessed over the intranet.
- Average transaction response time, on-submit response-time, or any other database access/search time should be less than 5 seconds when the system solution is accessed over the intranet.
- Considering the network infrastructure challenges in Bangladesh, the solution must support low bandwidth conditions for the services defined in the functional requirements.
- In case of mobile application also, this should support very low bandwidth even in 2G network provided internet bandwidth.
- The proposed solution should be highly scalable to accommodate current and future requirements within the scope of the scope mentioned in the TOR
- Analyze the requirements whether both horizontal scaling (scale-up) and vertical scaling



- (scale-up) will be required for this Digital Service application or not?
- The Digital Service application should be provided with appropriate caching mechanism to handle very high-traffic scalability
- The vendor may propose here other relevant measures for the Digital Service application scalability.

5.3 Business Continuity

Business Continuity plan will play a very important role by creating the systems of prevention and recovery to deal with potential threats and risk of the Digital Service operation. Vendor is requested to propose a Business Continuity Plan for this Digital Service application. Regarding business continuity you may take in account the followings issues if applicable or suitable for this Digital Service Application

- All standard backup facilities should be supported by the system which can be started with disk-based backup facility, gradually moving to Storage Area Network (SAN) based backup system.
- Data and the Operating system core component will be separated. A ghost image of the Operating system will always be available in case of rebuilding the server. All data can be restored in the data drive once the Operating System is restored.
- System can also have an automated Backup mechanism by which users can schedule the backups and the system will take the backups without manual intervention.
- System must check for the media and generate a report on backup with date time and details of backup.
- If a restoration fails for any reason, the system should prompt with proper error messages and suggest what has to be done to rectify the situation via on-screen, logs, email and text messages.
- System should maintain an automated recovery system and all versions of backup will be maintained. At any given point in time, the versions and incremental backup details can be retrieved from the system.
- The system may be hosted in virtual servers or containers. A restore of a virtual server/container is much easier and faster compared to a single host server.

5.4 Interoperability and Data Exchange

The selected vendor must develop this Digital Service system following all the standards and protocols of interoperability, integration and data exchange with other systems. It is expected that the system will be based on open architecture and will be fully interoperable with the current and future systems.

The following are the key expectations on interoperability requirements:

1. The system should be designed for interoperability using industry standard protocols.
2. System must expose data by Advanced Message Queuing Protocol and REST via TLS
3. All imported data must undergo data validation to ensure full integrity.
4. Data exchange within the system at different levels via the internet shall be encrypted.
5. The system should have functionality to exchange data with other own systems or external institute systems.
6. The system shall have functionality to export/import files based on the standard template defined through web services and/or API

Full API documentation must be provided so that third party integrators can integrate their system with this system.



5.5 System Audit

This Digital Service system will maintain an audit trail of any changes or updates made in any information that are considered as vital and should maintain the audit log with information such as

- Log the users who are accessing the system
- Log the parts of the application that are being accessed
- Log the fields that are being modified
- Log the results of these modifications
- Log attempted breaches of access
- Log attempted breaches of modification rights
- Timestamp.

Ensure an audit trail is kept for all transactions and all audit transactions logged are kept on the trail file or trail database from where system can generate different audit reports as and when required.

5.6 UI/UX.

The vendor must propose a UI/ UX plan containing UI designing method and tools, prototype or Mockup design (if applicable) , UI review method , process for study and analyze UX , collaboration of basic web and mobile UX issues and expected result and outcome of UX, finalizing the UI/UX design. Apart from this, the vendor should consider the following issues as requirement at the time of UI/UX plan.

- The system interfaces should be highly user friendly, easy to navigate and ensure fast loading.
- The UI shall design by using well-established, supported and lightweight UI framework so that it follows widely used industry flow patterns
- UI shall be easily configurable if any changes are needed
- Menu, content and navigation shall be based on the user entitlements, roles and permissions.

5.7 Language Support

The Digital Service system should support multilingual option i.e. Bangla and English for both the Web version and Mobile Apps. All the user interfaces will be able to display and input controls can take input both in Bangla and English. System/App users can choose and set his/her preferred language in profile setting for the system interfaces. The system should support Unicode for the Bangla Language.

5.8 Accessibility

Vendor must develop this Digital Service application ensuring access for the citizen (Service Recipients) with disabilities in different standard accessible formats. Digital Service application should be developed in “universal design” and “assistive technologies”. Accepting and facilitating the use of sign languages, augmentative and alternative inputs and all other accessible means, modes and formats for inputs and outputs as per their choice by “Service Recipients” with disabilities; all Digital Service features (Web application or Mobile Application) should be usable with the help of screen reading software by the service recipients with disability

5.9 Coding Conventions

The vendor must follow the standard coding styles to produce high-quality code for further uses of the code in terms of reusability, refactoring, task automation, language factors etc. The vendor

should submit a standard coding convention approach, which may include different conventions like commenting, indent style, naming etc. following the best coding practices.

5.10 Documentation

Detail and proper documentation of such ICT based project like Digital Service application development and implementation for Government is very vital and essential. Documentation is required for any such project as reference, knowledge transfer, analysis of development and implementation history, baseline information for any modification or change, guidance etc. In this issue, Vendor should show highest-level of professionalism for delivering the standard documentation approach at each phase of Digital Service development and implementation project. Vendor should include an extensive documentation plan of this project in their technical proposal, which may cover the followings

- Documents titles phase or activity wise
- Purpose of document
- About the format of documents (if possible only index or fields)
- Type of expert and skilled resource will be used for documentation
- Document priority and dependency
- Time requirement for preparation (If applicable)

5.11 Tools and Technologies to be used

- Vendor is recommended to choose the appropriate tools and technologies to be used for the development and implementation of the Digital Service application. The selected vendor has to consult with a2i and Ministry of Expatriates' Welfare and Overseas Employment to finalize the tools, technologies, framework and platform with the approval of same authorities consent.
- The main components of the software will be web based application. It should be run in Windows/Linux/OSx operating system at user end and should be compatible to all major browsers such as – Internet Explorer, Firefox, Google Chrome, Opera etc.
- The System UI should be compatible with Tab & Smart Phone browsers and in case of Mobile Apps should be support both Android and IOS

Understanding the details scope of this project, vendor is requested to submit a comprehensive plan in their technical proposal following the table format mentioned below

Issues/Phases/Purpose	Used Technology/ Tools	Justification for use	Alternative Tool/ Technology
Project Management			
Version Control			
System Requirement Analysis			
System Design			
Development (Client end)			
Development (Server end)			
API/Web services			



Issues/Phases/Purpose	Used Technology/ Tools	Justification for use	Alternative Tool/ Technology
Apps			
Testing			
Integration			
Hosting & Deployment			
Documentation			
QA			
Helpdesk/Support			
Reporting			
Communication			

5.12 Quality Attributes and Assurance

- The Quality attributes and Assurance plan will describe the standards, processes and procedures in this Digital Service application development life cycle which will be used to support the consistent delivery of high-quality, professional standard Digital Service application and services provided in the support of an automated environment. The quality assurance process will be concerned with establishing the authority of the QA function, quality assurance standards, procedures, policies, and monitoring, and evaluation processes to determine quality in relation to established standards. Quality assurance activities will concentrate on the prevention of problems through the continuous improvement of processes.
- In order to provide high quality products and services, each support team will adhere to processes, procedures and standards. Quality Assurance (QA) is a process used to monitor and evaluate the adherence to processes, procedures, and standards to determine potential product and service quality. It will involve reviewing and auditing the products and activities to verify that they comply with the applicable procedures and standards, and will assure the appropriate visibility for the results of the reviews and audits.
- The vendor is requested to provide an extensive Quality Assurance plan with measurable attributes for each phases of this Digital Service development life cycle in their technical proposal.

5.13 Copyright

- Ministry of Expatriates' Welfare and Employment Overseas shall be entitled to all proprietary rights including but not limited to patents, copyrights and trademarks, with regard to many Vendor.
- All kinds of source code including code documentation and other approved documents (all versions trail, products , developed applications, documents and all kinds of deliverables which bear a direct relation to or is made in consequence of the services provided by the vendor under this scope of this TOR.
- At the request of the Ministry of Expatriates' Welfare and Overseas Employment, the vendor shall assist in securing such property rights and transferring them in compliance with the requirement of the applicable law. After the completion of the project such rights will be handed over to the Ministry of Expatriates' Welfare and Overseas Employment that will be produced at the time of entire system development and implementation life cycle under the scope of this TOR will be owned by Ministry of Expatriates' Welfare and Overseas Employment.



- The vendor should properly deliver all the entire approved source codes and other deliverables to the Ministry of Expatriates' Welfare and Overseas Employment. The vendor cannot claim any royalty or authority of any sort in case of replicating the source code or database or any other deliverables under this TOR for any future use that Ministry of Expatriates' Welfare and Overseas Employment and the Government of Bangladesh may see fit.
- Any studies, documents, reports, graphics or other material prepared by the vendor for this project under this TOR shall belong to and remain the property of Ministry of Expatriates' Welfare and Overseas Employment.

6. Scope of Work

6.1 Development and Implementation Methodology

Development methodology i.e. SDLC plays a very important role to clear the ultimate project objectives precisely, to stable the project requirements, to monitor the progress with measurable deliverables and managing the entire project efficiently. Here the vendor is requested to propose and submit a best possible suited SDLC approach for this project considering the project scopes, requirements of e-Service, objectives, organizational environmental factors and behavior, project timeline, ultimate deliverables and various resources to be used.

6.2 System Requirement Analysis

Requirements finalization will be a very important milestone of vendor's proposed development methodology. It is expected that, the selected vendor will carry out detailed requirement study and analysis on the each and every scope of Digital Service that mentioned in the TOR. Under this scope of work, the selected vendor has to analyze the detail functions, processes, documents, actors, sites and infrastructure of the relevant prevailing system precisely of the concerned organization. At this phase, vendor's ultimate objective will be finalization of the Digital Service requirements in details under the scope of TOR and approval of the concern organizational authority. Here vendor is requested to propose and submit a system requirement analysis plan which should cover the scope of work at this phase, relevant activities to be performed, timeline, deliverables to be produced, dependencies and resources to be used.

6.3 System Design

At this phase, the detail functional scope defining and designing as per the standard of software engineering approach for the proposed Digital Service system tasks are being performed. This is very vital and important phase of any SDLC. Considering the ultimate development and implementation scope, the proposed system design should be robust, scalable, user friendly and interoperable enough.

At this system-designing phase, vendor may performs following designing related task and will produce various standard System Designing Documents (SDD):

- Identifying module, components, tasks, I/O and functional features
- Specifying technical and functional requirements
- User Interface design
- Description of UI and requirements
- Preparing the use cases
- Defining Integration and interoperability scope
- Designing system architecture



- Determine process and data flow
- Database design
- API design
- Finalizing tools, technologies and frameworks to be used etc.

Here vendor is requested to cover details system designing plan in their technical proposal, which may include relevant activities, approaches, methods, documentations and deliverables.

6.4 Development

At this stage, vendor must take prior acceptance or approval from the concerned authority on tools, technologies and framework that will be used for the development of the Digital Service application. Based on approved SRS and SDD, vendor will prepare a comprehensive development plan for the Digital Service Application which should include a schedule consisting development item wise start date, test date, review date, completion date etc. At the development stage, vendor must follow the standard code convention, code level documentations, header of each file, algorithms, interfaces, code compression and APIs should be supplied with proper description and documentations. All kinds of standard testing tasks that are required to be performed at the development phase, should be mentioned in the plan. Considering the scope mentioned in the TOR for this Digital Service application, vendor is requested to include a preliminary development plan (standard approach) in their technical proposal.

6.5 Integration

Considering the above mentioned Integration requirements and scopes for this Digital Service application, vendor must include a phase in their proposed development and implementation methodology approach. At this stage, the vendor will perform all necessary tasks regarding integration to make the Digital Service application interoperable.

6.6 Testing

The vendor must propose a testing plan for this Digital Service application starting from development to deployment. This testing plan should cover all the standard suitable testing approaches for this Digital Service application which may include phase wise testing activities like test scripting, test cases, testing tools, testing process, test log, result and report formats i.e. expected test deliverables based on the application development requirements. The vendor should submit testing plan which may include standard test approaches. Some are mentioned below as examples for reference

- Unit Test
- Functional Test
- Installation testing
- Compatibility testing
- Smoke and sanity testing
- Regression testing
- Stress Testing
- Acceptance testing
- Alpha testing
- Beta testing

- Functional vs non-functional testing
- Continuous testing
- Destructive testing
- Software performance testing
- Usability testing
- Accessibility testing
- Security testing

6.7 Hosting

Vendor should submit primary hosting requirements for this application related to hardware, servers, network, security, storage, traffic, firewall, bandwidth etc. i.e. complete hosting infrastructure that will be required for their developed application hosting considering the implementation scope. Based on their submitted requirements, regarding hosting Ministry of Expatriates' Welfare and Overseas Employment will provide detail hosting infrastructure, facility and environment.

6.8 User Acceptance Test (UAT)

User Acceptance Test (UAT) is a very vital and essential phase in the Digital Service development lifecycle. At this phase, all types of users must test the developed Digital Service application by themselves and have to provide a details feedback/ test report. Based on the UAT report, vendor has to update the application accordingly to ensure user satisfaction by making it more user friendly. Here, it is expected that, considering the type of users and their role in the Digital Service application, the vendor must propose a comprehensive UAT plan in their technical proposal which may cover the followings:

- UAT activities to be performed (planning, designing test cases, selection of testing team, Executing test cases and documenting, Bug fixing, sign-off etc.)
- Types of user wise roles and test items distribution
- resource requirement,
- activity wise time requirement
- activity wise test case , test results/ deliverables
- detail user feedback / test reports
- System update plan

6.9 Management and Migration of Legacy Data

Under the process of service to Digital Service transformation, during Digital Service activation or deployment, it may be necessary to move the legacy data of prevailing services. In this case, vendor may require to perform different relevant activities that may include data collection, softcopy conversion, data filter, data cleansing, data verification, data process, data entry, data migration and overall data management. Here, it is expected that, the vendor will propose their detail data management and data migration plan for this Digital Service application considering the estimation of legacy data mentioned below which will be required to migrate into the developed application.

[Hint: A table titled " Estimation of Legacy Data to be migrated" may place here with the column names like Data About, Description , number of pages/fields , current status, amount of data, dependency]



The plan may cover amount of data to be migrated, activities to be performed, amount of resources to be used, required time for different data migration phases for different activities (data collection, hardcopy to softcopy conversion, data entry, data transformation from soft copy, data filtration, data cleaning, data verification) etc.

6.10 Deployment and Implementation

This is the phase of SDLC, when the consent is being given to “GO LIVE” of the developed system after completed all kinds of development integration, testing and hosting. This is very crucial and sensitive stage for a Government application because at this stage the system becomes public and expose to access towards all levels of users. The Pilot or full scale implementation period starts formally in this stage only. Vendor is requested to propose their deployment and implementation plan covering the major activities to be performed, the deliverables to be provided etc.

6.11 Training and Knowledge Transfer

- The vendor must propose a detail training plan for the users of the Digital Service application.
- The vendor should include necessary training methodology, documentation and training materials support in their training plan
- The training materials may include user manual, administration manual, quick start tutorial, online help, and frequently asked questions
- The training plan must describe the sequencing, time, duration and resources involved in implementation of each of the consultant's proposed training activities.
- The training plan should contain full course descriptions for all courses that to be carried out for respective users.
- The vendor should develop multimedia training materials for all users. These materials shall be available for viewing and reviewing for all users through a web portal.
- The training instructions should support both English and Bengali language.
- The training activities should cover the training feedback, evaluation and report also.
- The vendor also requested to submit propose their smooth, efficient and effective **Training Plan and knowledge transfer plan** here in this technical proposal.

6.12 Duration of the Project and Work Station

The selected vendor will need to work for the above-mentioned scope as per approved project management schedule. The selected vendor must complete Digital Service application development and deployment i.e. development life cycle as per their proposed development methodology within [Number of Days/Months/Years] excluding the maintenance and support service period. .

Now here in their technical proposal vendor is requested to propose detailed timeframe plan which may include:

- Total duration of the Digital Service application development i.e. Digital Service development
- Total duration of the Maintenance and support service at implementation phase
- Proposed SDLC Phase wise and deliverable wise time distribution and duration
- The schedule may cover Activity, Deliverables, Time in Days, Dependencies etc.
- Can be present as table or Gantt chart

6.13 Maintenance and Support Service

The selected vendor has to provide a period of 3 Years maintenance and support service. After the development and deployment phase when the implementation period starts the vendor has to provide maintenance and support service for the 3 Years. Here it is expected that, the vendor must provide a detail maintenance and support service plan in the technical proposal, which may include the followings:

- Support service types and mode of services
- Service desk functionalities
- Configuration management
- Change management
- Service layers for support
- Tools will be used for Support service management
- Communication management and modality
- Release management
- Incident management
- Problem management
- SLA (Service Level Agreement)
- Maintenance and support service related reporting
- Support service types
- Service Log Management

Apart from the above mentioned issues, if vendor thinks any other issue to be included in their plan, it would be considered as added value addition.

6.14 Work Distribution and Team Composition

The vendor is expected to provide work distribution and team composition plan as deemed suited based on this project requirements and milestones and as per their proposed development and implementation methodology approach. The interested applicant (Vendor) should provide a team composition plan in their proposal describing the position, roles, tasks to be assigned, expected man-days of involvement, expected deliverables and required skill and expertise.

However, the vendor shall propose at least the following personnel as minimum requirement:

Sl. No.	Position	No. of Person
1.	Project Manager	1
2.	Sr. Developer/Programmer	2
3.	Developer/Programmer	3
4.	Sr. Mobile Apps Developer /Programmer	2
5.	Mobile Apps Developer	2
6.	System Analyst	1
7.	Software Architect	1
8.	Database Administrator/Designer	1
9.	Technical Document Writer	1
10.	UI Designer	1
11.	UX Expert	1



12.	QA Expert	1
13.	Technical Assistant	1
	Totals	18

For Maintenance Service & Support:

Sl.	Key IT Personnel	No.
14.	Helpdesk Support Executive (On Demand)	2
15.	Software Maintenance Expert (On Demand)	1
16.	Developer/Programmer (On Demand)	1
	Totals	4

6.15 Expected Deliverables

Considering the scope of service and scope of work of this project and based on the proposed project development & implementation methodology, the vendor has to submit here a complete list of all types of deliverables will be produced throughout the entire project timeline whether those are materials, services, applications, source codes, documents, plans, reports etc. in a table format mentioning the stages, activities and timelines. Some examples of the deliverables are mentioned here under for your reference.

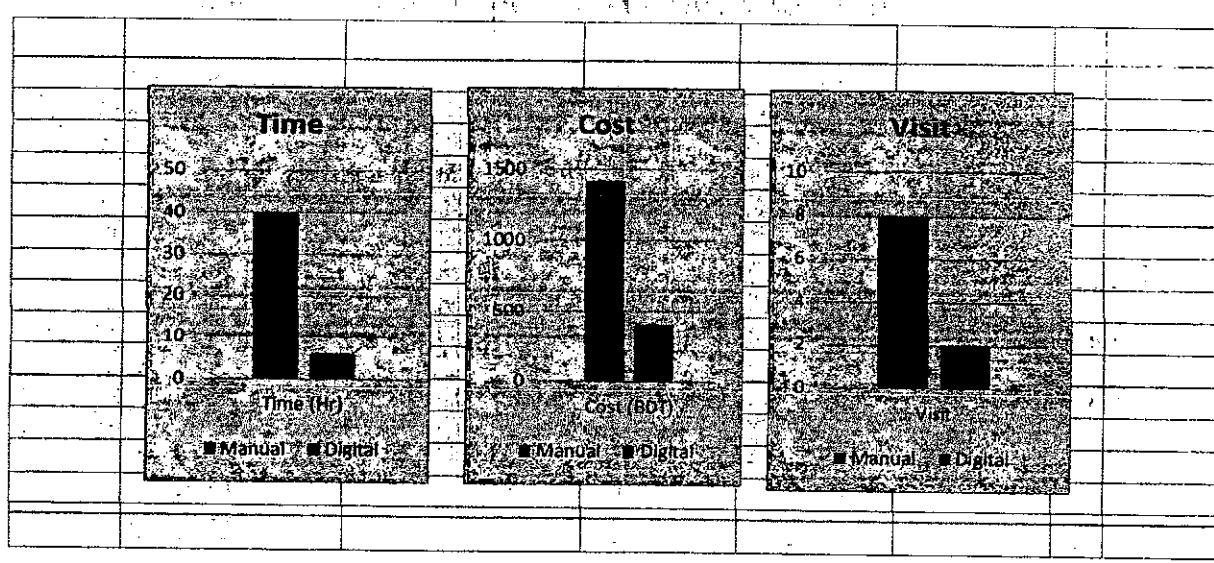
- Project inception and management report
- System requirement specification (SRS)
- System design document (SDD)
- Complete source code
- Detail source code documentation
- Test plan with test scripts and testing reports
- Technical documentation (system architecture, module integration points, workflow engine, data dictionary, user manual etc.)
- Training plan and reports
- Training materials and user manuals
- Integration plan and reports
- Audit log
- Mobile Application
- Web application
- UAT Report
- Maintenance, agreement & SLA
- Maintenance and support log
- Hosting requirement specification, plan and report
- Implementation plan and report
- HR activity plan and report
- Progress and review reports



7. TCV Analysis, Pilot Implementation and Budget

7.1 TCV analysis

Manual Service TCV Study & Analysis				
Service Name: Training and e-Learning Management System				
Organization Name: BMET				
	Beneficiary Size (Yearly)	Time (Hr)	Cost (BDT)	Visit
Manual	20000	40	1420	8
Digital	20000	6	400	2
Estimated Efficiency		34	1020	6
Efficiency in %		85%	72%	75%



[illegible]

7.3 Software Development Budget

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Terms of Reference (TOR) for Integrated Digital Service Delivery Platform of Ministry of Expatriates' Welfare and Overseas Employment



		System Analyst	1	12	5500	64,167
		Technical Document Writer	1	23	3000	70,000
		Technical Assistant	1	12	2000	23,333
	Sub-Total					355,833
2	System Analysis & Design			35		
		Project Manager	1	12	7000	81,667
		Business Analyst	1	18	5000	87,500
		System Analyst	1	23	5500	128,333
		Software Architect	1	9	7500	65,625
		Database Administrator/Designer	1	12	5000	58,333
		Technical Document Writer	1	23	3000	70,000
		UI Designer	1	12	3500	40,833
		UX Expert	1	12	4500	52,500
		Technical Assistant	1	18	2000	35,000
	Sub-Total					619,792
3	System Development			120		
		Project Manager	1	40	7000	280,000
		Sr. Developer/Programmer	2	80	5000	800,000
		Developer/Programmer	3	120	4500	1,620,000
		Sr. Mobile Apps Developer /Programmer	2	80	4500	720,000
		Mobile Apps Developer	2	120	3500	840,000
		System Analyst	1	40	5500	220,000
		Software Architect	1	12	7500	90,000
		Database Administrator/Designer	1	30	5000	150,000
		Technical Document Writer	1	60	3000	180,000
		UI Designer	1	40	2500	100,000
		UX Expert	1	30	3500	



Terms of Reference (TOR) for Integrated Digital Service Delivery Platform of Ministry of Expatriates' Welfare and Overseas Employment



						105,000
		QA Expert	1	60	4500	270,000
		Technical Assistant	1	40	2000	80,000
	Sub-Total					5,455,000
4	Integration			20		
		Project Manager	1	7	7000	46,667
		Sr. Developer/Programmer	1	7	5000	33,333
		Developer/Programmer	1	10	4500	45,000
		Mobile Apps. Developer /Programmer	1	7	4500	30,000
		System Analyst	1	5	5500	27,500
		Database Administrator	1	5	5000	25,000
		Technical Document Writer	1	10	3000	30,000
		Interoperability Expert	1	20	5500	110,000
		Security Expert	1	20	5500	110,000
		QA Expert	1	7	4500	30,000
	Sub-Total					487,500
5	Hosting			20		
		Project Manager	1	5	7000	35,000
		Developer/Programmer	1	5	5000	25,000
		Mobile Apps Developer/Programmer	1	5	4500	22,500
		System Analyst	1	4	5500	22,000
		System Administrator	1	20	5000	100,000
		Security Expert	1	20	5500	110,000
		Technical Document Writer	1	4	3000	12,000
		QA Expert	1	10	4500	45,000
		Technical Assistant	0	7	2000	-
	Sub-Total					371,500
6	User Acceptance Testing			25		

Terms of Reference (TOR) for Integrated Digital Service Delivery Platform of Ministry of
Expatriates' Welfare and Overseas Employment



(UAT)					
	Project Manager	1	6	7000	43,750
	Sr. Developer/Programmer	1	8	5000	41,667
	Developer/Programmer	0	8	4500	-
	Mobile Apps. Developer/Programmer	1	8	4500	37,500
	System Analyst	1	6	5500	34,375
	System Administrator	1	5	7500	37,500
	Technical Document Writer	1	13	3000	37,500
	QA Expert	1	17	4500	75,000
	Technical Assistant	0	13	2000	-
	Sub-Total				307,292
7	User Training & Deployment		25		
	Project Manager	1	6	7000	43,750
	Technical Document Writer	1	8	3000	25,000
	Training Expert	1	25	4000	100,000
	Technical Assistant	1	8	2000	16,667
					185,417
	Sub-Total		Total Development Cost		7,782,333
8	Maintenance support	3	Year		3,502,050.00
9	Re-inversable Cost				778,233
9	Sub-Total				12,062,617
10	Add: VAT& Taxes				603,131
11	Grand Total				12,665,748

7.4 Pilot Implementation Budget

Piloting Budget for Ministry of Ministry of Expatriates' Welfare and Overseas Employment					
Organization Name: BMET					
Service Name: Training and e-Learning Management System					
Group: B					
S L	Cost Center	Cost Item	UNIT	Unit Cost	Total Cost
1	Infrastructure				
		Desktop Computer/PC	1	60000	60,000.00
		Laptop	1	75000	75,000.00
		Mobile	2	30000	60,000.00
		Printer (Network)	1	30000	30,000.00
		UPS	1	5000	5,000.00
		LCD Display for Dashboard	1	40000	40,000.00
	Sub-Total				270,000.00
2	HR Outsource for Piloting				
		Data Entry Operator	1	10000	10,000.00
		Data Validation	1	15000	15,000.00
		IT Executive for System Admin	1	20000	20,000.00
	Sub-Total				45,000.00
3	Sensitization & Training				
		Orientation workshop	1	15000	15,000.00
		User Training	1	30000	30,000.00
		Inauguration Event	1	20000	20,000.00
		Service recipient Sensitization workshop	1	20000	20,000.00
		FLW (Field Level Sensitization meeting)	3	20000	60,000.00
	Sub-Total				145,000.00
4	Promotion & Advertisement				
		TV AD	1	100000	100,000.00
		Local TV AD	1	50000	50,000.00
		Leaflet	2000	5	10,000.00
		Banner	5	2000	10,000.00
		Paper AD	2	20000	40,000.00



	SMS	1000 0	0.5	5,000.00
	Facebook	10	2000	20,000.00
	Sub-Total			235,000.00
5.	Operation			
	System Generated SMS or Bulk SMS	1000 00	0.25	25,000.00
	Stationaries (Monthly)	3	5000	15,000.00
	Hardware maintenance (Monthly)	3	5000	15,000.00
	Others	1	5000	5,000.00
	Sub-Total			60,000.00
	Grand Total			7,55,000.00

8. Conclusion

Bureau of Manpower Employment and Training has the mission of ensuring the best Government online Digital Service s to make the life of trainees & Migrant workers comfortable. Planned digitalization implies the broad use of computers, and embodies the modern philosophy of effective and useful use of Information & Communication Technology in terms of implementing the promises in Skill Development and Overseas employment for increasing remittances under "Digital Bangladesh" initiative.

In view of the above. Vendor has to design, develop, implement, maintain a Single Sign-on web & mobile Apps based solution for Digital Service s for Bureau of Manpower Employment and Training Obviously, the proposed technical proposal has to reflect the visualization, deep level understanding of the processes, system requirement/sizing, development platform, Quality Assurance (QA) plan including capability of adopting future technologies.

Abbreviations:

MOEW&OE	:	Ministry of Expatriates' Welfare and Overseas Employment
BMET	:	Bureau of Manpower Employment and Training
DEMO	:	District Employment and Manpower Office
TTC	:	Technical Training Center



Terms of Reference (TOR) for Integrated Digital Service Delivery Platform of Ministry of
Expatriates' Welfare and Overseas Employment

TRG	:	Training
IMT	:	Institute of Marine Technology
PDT	:	Pre-Departure Training
DG	:	Director General
DD	:	Deputy Director
AD	:	Assistant Director
SSA	:	Senior Systems Analyst
SA	:	Systems Analyst/ Systems Administrator
SME	:	Senior Maintenance Engineer
AP	:	Assistant Programmer
DBA	:	Database Administrator
IFB	:	Islamic Foundation of Bangladesh
ICT	:	Information and Communication Technology
ID	:	Identification
IVR	:	Interactive Voice Response
NID	:	National Identification
PD	:	Project Director
SMS	:	Short Message Service
TCV	:	Time, Cost & Visit
UDC	:	Union Digital Center
999	:	National Emergency Service
333	:	National Information Call Center
CC	:	Call Center
NDC	:	National Data Center
BCC	:	Bangladesh Computer Council
UAT	:	User Acceptance Test
TOR	:	Terms of Reference
SRS	:	System Requirement Specification
SDD	:	System Design Document
SLA	:	Service Level Agreement
USSD	:	Unstructured Supplementary Service Data
MFS	:	Mobile Financial Service