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GOVERNMENT OF THE PEOPLE'S REPUBLIC OF BANGLADESH

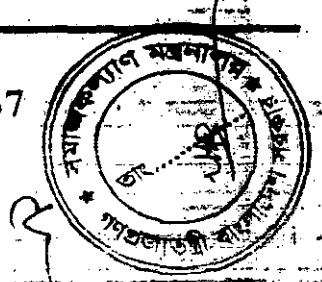
Standard Request for Proposal (National) For Selection of Consulting Firm

(Complex Lump Sum –For value above BDT 1 Crore)

**Central Procurement Technical Unit
Implementation Monitoring and Evaluation Division
Ministry of Planning**

July 2019

PS7





Terms of Reference (TOR) for Integrated Digital Service Delivery Platform for Ministry of Social Welfare

TERMS OF REFERENCE (TOR)

For

**Integrated Digital Service Delivery Platform for
Ministry of Social Welfare (MoSW)**

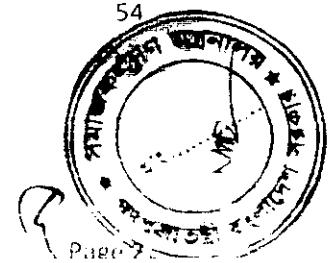
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1. Background

Digital Bangladesh is an integral part of the government's Vision 2021—which promises a prosperous and equitable middle-income Bangladesh by its golden jubilee of independence. The Honorable Prime Minister outlined the Digital Bangladesh having four key priorities – (a) developing efficient human resources for the 21st century; (b) connecting citizens in the ways most meaningful to them (c) taking services to citizens' doorsteps; and, (d) making the private sector and market more productive and competitive through the use of digital technology. In alignment with the goal of Digital Bangladesh, the services of the government should be designed to be more citizen centric and automated which will reduce the hassle and difficulties which service providers and service recipients are facing right now.

For accelerating the digitalization of its services, Ministry of Social Welfare (MoSW) organized a 6 days' Digital Service Design Lab from 21 June ,2019 to 26 June, 2019 at the Conference Hall, Bangladesh National Social Welfare Council and assistance from Digital Service Accelerator, Access to Information (a2i) Programme. The ultimate output of that Digital Service Design Lab was draft EOI and ToR for the lab designed e-Service of Ministry of Social Welfare which was completely prepared by the concerned officials of this Organization with the assistance of the Digital Service Analysts and experts of Digital Service Accelerator, a2i, ICT Division.

Ministry of Social Welfare (MoSW) is going to introduce delivery of following digital services to citizens of this service/project:

1. Grant, Allowance & Stipend Management System
2. Hospital & Disability Service Management System
3. Production, Promotion & Marketing Management System
4. Awareness, Event & Assistive Device Management System
5. Training & Accommodation Management System
6. Disability School & Education Management System
7. Child Services Management System
8. Social Welfare Service Delivery App

Note: Please note that the integrated service delivery platform of Ministry of Social Welfare (MoSW)'s scope will not cover only the above mentioned services but will also cover the relevant G2C, G2B and G2G services/functions/modules/component of the organizations under the ministry which will exactly be determined at the time of "system requirement analysis" phase after extensive requirement study with the concern organizations by the vendor. As MoSW Integrated Service Delivery Platform (MoSW ISDP) all the digital services under the scope of same Ministry will be incorporated and integrated in this one stop service delivery platform. therefore understanding all the service digitalization scope of this Ministry will be important.



2. Review of Existing Services (Present Condition)

2.1. About the Organization:

2.1.1. Ministry of Social Welfare (MoSW)

The Ministry of Social Welfare is one of the leading Ministries dealing with Social development and Social Security/Safety net program. This Ministry has multidimensional and intensive programs for the welfare of the bypassed, disadvantaged segment, unemployed, landless, orphans, homeless, socially, intellectually and physically disabled people, Neuro-developmental Challenged, poor, helpless patients, children at risk of both rural and urban areas of this country. In 1972 Ministry of Labor and Social Welfare started its activities. In 1974 Department of Social Welfare has raised from directorate of Social Welfare under Ministry of Labour and Social Welfare. On 9th November in 1989 Ministry of Social Welfare has started as a completely separate ministry. The vision of this ministry is "Better life and caring society". The mission is "Creating a better life by providing social protection, empowerment and development for the poor vulnerable group of people and persons with disabilities.

Ministry of Social Welfare has 6 subordinate offices such as 1. Department of Social-Welfare Services (DSS); 2. National Foundation for Disability Development (NFDD); 3. Bangladesh National Social Welfare Council (BNSWC); 4. Neuro-Developmental Disabled Protection Trust (NDD); 5. Physically Disabled Protection Trust (PDPT) (MoitriShilpo); and 6. Sheikh Zayed Bin Sultan Al-Nahyan Trust.

The list of organizations under the jurisdiction of Ministry of Social Welfare (MoSW) are mentioned below:

Sl.	Organization	Website Address
1	Department of Social-Welfare Services (DSS)	http://www.dss.gov.bd
2	National Foundation for Disability Development (JPUF)	http://www.jpuf.gov.bd
3	Bangladesh National Social Welfare Council (BNSWC)	http://www.bnswc.gov.bd
4	Neuro-Developmental Disability Protection Trust (NDD)	http://www.nddtrust.gov.bd
5	Physically Disabled Protection Trust (PDPT)	http://spst.gov.bd
6	Sheikh Zayed Bin Sultan al Nahyan Trust BD	http://alnahyantrust.com.bd





2.2. Existing Services Analysis (As-Is):

The existing services are analyzed to identify all the steps, actors, inputs, outputs, and challenges through in-depth interview of the service providers and service seekers as well.

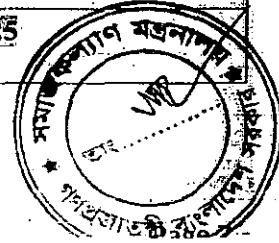
2.2.1. Existing Service Delivery & Beneficiary Information:

Service Name: Hospital & Disability Service Management System			
Organization Name: DSS/JPUE			
No. of Service Delivery Offices	No. of Service Delivery Users	No. of Beneficiaries	No. of Service Delivery (Monthly/Quarterly/Yearly)
52	1000	70,00,000	58,000 (Monthly)

Service Name: Production, Promotion & Marketing Management System			
Organization Name: Ministry of Social Welfare, Physically Disabled Protection Trust (PDP Trust)			
No. of Service Delivery Offices	No. of Service Delivery Users	No. of Beneficiaries	No. of Service Delivery (Monthly/Quarterly/Yearly)
5	111	500	260 (30/31/20)

Service Name: JPUE Awareness & Event Management System			
Organization Name: Jatiyo Protibondhi Unnayan Foundation			
No. of Service Delivery Offices	No. of Service Delivery Users	No. of Beneficiaries	No. of Service Delivery (Monthly/Quarterly/Yearly)
103	130	12000	12000

Service Name: Training & Accommodation Management System			
Organization Name: Bangladesh National Social Welfare Council			
No. of Service Delivery Offices	No. of Service Delivery Users	No. of Beneficiaries	No. of Service Delivery (Monthly/Quarterly/Yearly)
1	14	1225	1225



Service Name: Child Service Management**Organization Name: DSS**

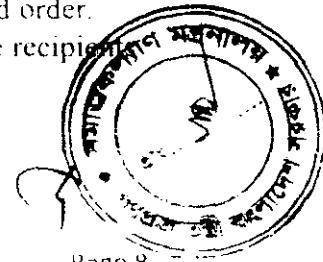
No. of Service Delivery Offices	No. of Service Delivery Users	No. of Beneficiaries	No. of Service Delivery (Monthly/Quarterly/Yearly)
176	2500	15,000	15,000 (Ready)

Service Name: Social Welfare Service Delivery Apps**Organization Name: Ministry of Social Welfare, ICR And Innovation**

No. of Service Delivery Offices	No. of Service Delivery Users	No. of Beneficiaries	No. of Service Delivery (Yearly)
650	1200	13020	13020

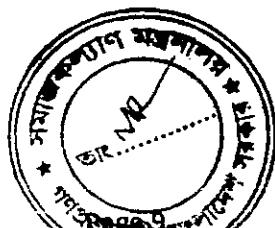
2.2.2 Problems and Challenges:**L1.1.1. Service Recipients:**

- Required enough time to get grants
- Required Unnecessary Cost
- Supporting documentation preparation
- Manual application system
- Frequent visit physically
- Delay of getting cheque
 - To collect information service recipient has to go from desk to desk in hospital center
 - To receive any service, Service Recipients have to visit physically
 - Service Recipients cannot provide feedback, queries, suggestions, opinion or complain easily
 - There is no option for service recipient to know the status of his/her application
 - There are 2 or 3 hours waiting period for service recipient for the grant to be approved
- Service recipient has to travel relevant office to collect the payment
 - Service Recipients have to visit office physically to get any information, /service.
 - Service Recipients cannot provide feedback, queries, suggestions, opinion or complain easily.
 - Service Recipients must come to visit office to submit demand order.
 - Lack of help desk or enough human resources to serve service recipients with information.





- To sell product service provider need to visit service recipient's door to door
 - It is difficult for service provider to receive application and sort them manually. The overall process is time consuming
 - It is difficult for service provider and high officials to monitor the number of application submitted, number of application approved, number of application pending and number of application rejected.
 - Due to busy schedule of high officials and Approver authority it is difficult to approve application on time
 - Service Providers cannot easily communicate with Service Recipients on approval of application
 - It is difficult to issue a lot of GO and cheque for making payment to beneficiary
- 1. There is no access to any kind of report such as dealer application, approved application, rejected application etc. All reports are prepared manually which is very time consuming**
- To collect information service recipient has to go from desk to desk of different offices and departments.
 - To receive any service, Service Recipients have to visit physically
 - Service Recipients cannot provide feedback, queries, suggestions, opinion or complain easily
 - There is no option for service recipient to know the status of his/her application
 - There is an along waiting period for service recipient for the grant to be approved
- 2. Service recipient has to travel relevant office to collect the payment**
- Lack of Information Dissemination
 - Admission form submission without necessary documents
 - Parent-College authority Communication
 - Delay in exam result processing
 - Physical visit for document and communication
- 3. Manual Record keeping**
- To collect information service recipient has to go from desk to desk of different offices and departments.
 - To receive any service, Service Recipients have to visit physically
 - Service Recipients cannot provide feedback, queries, suggestions, opinion or complain easily
 - There is no option for service recipient to know the status of his/her application
 - There is a long waiting period for service recipient for the grant to be approved
- 4. Service recipient has to travel relevant office to collect the payment**
- Time Consuming to search Related Gazette about related Services or Program (Such as Stipend, Allowance, Treatment Grant etc.)
 - Difficult to make Decision in complex Situation
 - Do not get exact Order or Gazette Copy to attach as necessary for the user.
 - Do not getting Update Information about different Policies





Do not have Organized Laws/Rules/ Order in one Snapshot

2.2.2.2.2. Service Providers

- Manual documentation checking
- Lack of co-ordination
- Multi stages of approval process
- Manual process of Approval

Manual cheque processing system

- Lack of help desk or man power to serve service recipients with information
- Service provider has to prepare all the letter, note, instruction and necessary documents manually
- Lack of integration among Ministry of Health and Ministry Welfare
- It is difficult for service provider to receive application and sort them manually. The overall process is time consuming
- Due to busy schedule of high officials and Approver authority it is difficult to approve application on time
- Service Providers cannot easily communicate with Service Recipients on approval of application
- It is difficult to manage cash payment to beneficiary

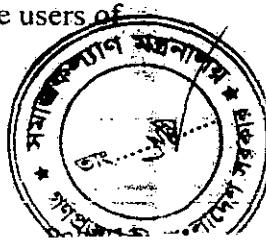
Lot of manual report needs to prepare, which takes too much time and human effort

- Lack of help desk or enough human resources to serve service recipients with information
- Service provider has to prepare all the letter, note, instruction and necessary documents manually
- Lack of integration among different organizations of GOB
- It is difficult for service provider to receive application and sort them manually. The overall process is time consuming
- It is difficult for service provider and high officials to monitor the number of application submitted, number of application approved, number of application pending and number of application rejected.
- Due to busy schedule of high officials and Approver authority it is difficult to approve application on time
- Service Providers cannot easily communicate with Service Recipients on approval of application
- It is difficult to issue a lot of GO and check for making payment to beneficiary
- There is not access to any kind of report such as application list, approved application list, rejected application list, remaining budget report, service performance report, etc. All reports are prepared manually which is very time consuming





- Shortage of Manpower
 - Request or Recommendation for Trainees outside from selected list
 - Letter not received in time
 - Receiver address changed
 - List not get in-time from District Office
 - To give reminder letter
 - Direct communication need through phone call
 - Unavailable of required papers of Trainees for registration
 - No Lack of help desk or enough human resources to serve service recipients with information
 - Service provider has to prepare all the letter, note, instruction and necessary documents manually
 - Lack of integration among different organizations of GOB
 - It is difficult for service provider to receive application and sort them manually. The overall process is time consuming
 - It is difficult for service provider and high officials to monitor the number of application submitted, number of application approved, number of application pending and number of application rejected.
 - Due to busy schedule of high officials and Approver authority it is difficult to approve application on time
 - Service Providers cannot easily communicate with Service Recipients on approval of application
 - It is difficult to visit multiple offices to deliver a single service.
 - There is not access to any kind of report such as application list, approved application list, rejected application list, remaining budget report, service performance report, etc. All reports are prepared manually which is very time consuming
 - Service Provider/social case worker cannot immediately meet with inmates due to manual system in case of child admission by court order that's why it is difficult to finish cases in time. As a result inmates are increased gradually which create accommodation, food , clothing problems
 - It is difficult for service provider to deliver any kind of data/information instantly as it is recorded manually
 - Lack of help desk or enough human resources to serve service recipients with information
- Service provider has to prepare all the letter, note, instruction and necessary documents manually implemented of evaluation recommendation report
- Difficult to handle Big Volume Manual
 - Reach updated Law/ Rules or other information and docs to the users of Remote Area



Make Always updated the Officers about Laws and Rules

~~Facilitate implementation of service providers to provide services to the service recipients through the service delivery platform~~

3. Proposed Integrated Service Delivery Platform

3.1 Objectives

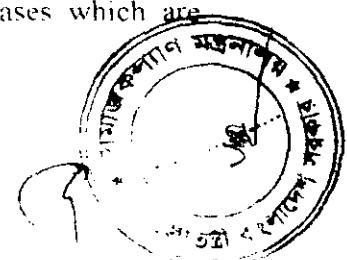
The overall objectives of this proposed integrated service delivery platform for this Ministry and its organization are mentioned below

1. All services of the concerned service provider organizations will be digitized in a uniformed standard and incorporated in a centralized platform.
2. The service recipients will access every service through a single one stop virtual access point in different platforms like Mobile apps or web or Call Center. There will be no hassle to search different addresses and multiple apps for this Ministry/Division digital services.
3. All concerned Organizations will get access into the same platform and will use the customized application as per their authorization and authentication.
4. This platform will provide full single sign on facility so switching to other concerned applications like Nothi will be easier.
5. The technologies and UI will be similar, consistent and maintain same standard for all the applications and digital services under the scope the same integrated service delivery platform.
6. Operational & technical management and maintenance will be managed centrally which will be easier, less complex.
7. Huge effort & cost will be saved while digitizing services for this ministry/divisions and it's organizations
8. Integration with the external and internal systems will be conducted only once which is easier and will save time and effort as well.
9. Training, knowledge transfer, capacity development and integration will be more organized, easier and efficient.

3.2 Scope

The vendor will be required to complete the development and deployment of an integrated digital service delivery platform for this ministry as an application following the SDLC methodology and perform the relevant activities accordingly within a proposed stipulated time.

This system's implementation project can be divided into 4 major phases which are described hereunder.





3.2.1. Phase-I: Requirement Analysis & Design

This is the starting phase, in this phase project plan, requirement fixation & high-level design will be completed for the entire project. The entire functional scope that will be finalized in the “System Requirement Analysis & Design” phase may be divided into separate independent multiple parts. Each part may contain a number of components, modules and features based on the implementation priority, dependency, and integration complexity. This entire system must be designed and developed following micro service architecture so that inter dependencies and integration functions among the modules and features of different components of multiple parts will be smooth but very organized

3.2.2. Phase-II: Development & Release:

Each part’s components/modules and features will be developed and released in an iterative methodology with predefined steps passed LLD, development, Integration and Testing. After successful completion of this part development as per predefined expected standard and result only this iteration cycle will be completed and will release the developed and tested application as Beta version of this part.

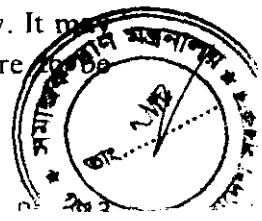
3.2.3. Phase-III: UAT and Deployment:

After releasing the parts developed and tested application as Beta Version, this will enter in the phase i.e. UAT and Deployment. In this phase, the actual user feedback and review will be taken and finally the application will be accepted by the User Authority after passing certain tests. Then the required training as per predefined training plan will be provided and also after taking necessary measures the deployment will be done successfully to make this application LIVE as per the plan that will be prepared in the Project Management plan at the inception phase.

3.2.4. Phase-IV: Pilot & Maintenance

After final deployment and going live with the acceptance of implementing organization, the piloting implementation and maintenance support service will be started At this phase pilot implementation will be conducted for a certain period with close intervention, caring & support of the vendor. After the expiration of piloting period, this maintenance support service will be continued as per agreement.

The ultimate scope of this eGovernment solution of this ministry is to design, develop, and implement an integrated digital service delivery platform where all the Government to Citizen (G2C), Government to Business (G2B) and Government to Government (G2G) services of this ministry and its organizations will be digitized with proper simplification and integration. As a holistic digital service delivery approach, all the existing digital service applications i.e. software/systems will be required to be integrated which is described in the “**Integration Requirement**” section and which will be identified at the time of requirement analysis phase. For detailed clarification and understanding the required high level functional scope of major services are described in the “**Functional Requirement**” part below. It may be noted that, the other remaining manual service delivery processes may require to be





digitalized under the scope of this service delivery platform based on the requirement that will be stated at the “**Requirement Analysis**” phase by the implementing authority regarding G2C, G2B, G2G services delivery of this ministry and its organization. Covering all the possible scopes, vendor may propose their best architecture and service delivery solution for this system in their technical proposal.

Apart from this, this system’s scope is described hereunder from the high level perspective of the major user groups.

Note: At the time of requirement analysis or in other phase if new features/Modules/Services are needed to add to the developing Integrated Digital Service Platform then the vendor will develop and add these features/Modules/Services to the Integrated service without demanding extra charge and also integrate the existing system of different departments under this ministry.

3.2.4. Service Recipient

1. From this Platform, Service Recipients will be able to view all types of available services as well as service wise prerequisite checklist.
2. Service Recipients will be able to apply online for all types of services without harassment and unnecessary delay.
3. 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.
4. Service Recipients will get notification on latest status of her application. They can also log in to the system to know about the next step, authority, expected delivery date etc.
5. Complaint management and MPO release issues will be managed online

3.2.5. Digital Service Operators (Service Provider)

1. The organizational time, operational cost, effort will be minimized immensely specially for officials and staffs who are involved directly with the service providing activities by this transformation of the manual service into digital form.
2. Information management regarding service delivery will be more organized faster, transparent, efficient and accountable.
3. When implemented & integrated with other GOB organizations, information will traverse among the organizations seamlessly which will increase efficiency & accuracy.
4. Through this online system, Service Providers will easily communicate with each other & be able to share & view calendar to set schedule efficiently.
5. Service providers can generate easily and efficiently any types of necessary reports instantly using this system.
6. Through this system, Service Providers will easily communicate with Service Recipients, which will ensure better, efficient & effective service.
7. Seamless integration with other systems will ensure to reduce significant time, effort and dependencies in service delivery process for the providers and recipients as well.





8. Online dashboard for different levels of service providers will assist them in faster decision making and evaluate their performance in realtime.
9. Document archiving, data analysis and searching will be faster, organized, easier using this digital system.

4.7.6. Digital Service Observer (Service Performance Monitoring Authorities)

1. Who will be monitoring dashboards, Service providers? Monitoring authority will take all critical decisions efficiently.
2. Who will be able to generate available and required decision related to services delivery through any ticket writing using any devices (mobile application).

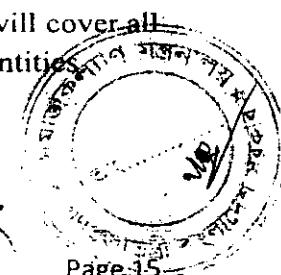
4. Functional Requirements

4.1. Functions and Features

The below modules/functions/features are described under which are part of the functional requirement of the integrated service delivery platform. At the end of the study and analysis phase, a component wise organization wise list can be generated.

SL.	Service Name	Organization
1	Grant, Fellowship, Scholarship, Apprentice/Internship Management System	DSS, JPUF, NDDPT, BNSWC
2	Hospital & Disability Service Management System	DSS, JPUF
3	Production, Promotion & Marketing Management System	MoSW, PDPT
4	Awareness, Event and Assistive Device Management System	JPUF
5	Training & Accommodation Management System	BNSWC
6	Disability School and Education Management System	MoSW, DSS
7	Child Management System	MoSW, DSS
8	Social Welfare Service Delivery App	MoSW, DSS

Please note that, the above mentioned component wise organization list may be varied at the time of requirement study and analysis before preparing the final SRS. In this case, the scope of services to be digitalized for developing the integrated service delivery will cover all the 10 (ten) organizations (including ministry/division itself) as service delivery entities.





4.1.1. Component-1: Grant, Allowance & Stipend Management System

Module I: Budget Management			
Sr.	e-Feature	e-Feature Description	Integration
1	Service Type Management (Grant, Allowance, Stipend etc.)	This feature will have configurable options and mechanism to create and manage different types of Grant, Allowance, Stipend for different category (i.e., Organization, Madrasa, Distressed Person, Poor People, Senior Citizen, Patients, Bede, Hijra etc.) through the system	
2	Budget Preparation	Using budget allocation feature, service provider/section officer/users will be able to allocate budget to different type of benefits (i.e., Grant, Allowance, and Stipend) to different type of beneficiaries through web application. This feature will allow the benefit allocation request to be revised and updated several time.	iBAS++
3	Budget Approval and Authorization	Through this feature proposed budget allocation request will be forwarded for approval. Approval authority user will be notified via system alert/email/push notification/e-Nothi. Approval authority user will be able to review/ authorize/send back for correction of the budget allocation request via the system. This feature of the system will be integrated with e-Nothi and iBAS++ for smooth and easy approval and authorization.	E-Nothi,iBAS++

Module II: Registration Management		
4	Notice & Advertisement Preparation	Through this feature, service provider user/section officer will be able to prepare Grant Notice & Advertisement through the system and will be able to forward for approval. The user of this feature will be able to set eligibility criteria for individual grant notice & advertisements.
5	Notice & Advertisement Approval & Circulation	This feature will allow approval authority users to review/make note/approve notice. Once a notice is approved, system will automatically circulate Notice & publish advertisement through all service recipient outlets available online.
6	Online Registration (Org.)	This feature will enable Service Recipients/beneficiary individual/organization users to register themselves via web and mobile application. Registered and eligible users will be able to access services.

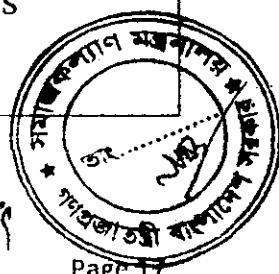




		to apply for any Grant/Allowance/Stipend advertised by MoSW. If a user identifies as disabled, then DIS system will be used for verification	
7	Review & Verification Management	Authorized users of DSS, JPUF, BNSWC, and NDDP will be able to review & verify registration information of all individual/organization identity, details and documents submitted through the system as the system will have integration with all the required systems/databases. If any registration application is not reviewed within system defined time interval, relevant high ranking officials will be automatically notified via SMS/ e-mail /System alert.	NID, Passport, BRIS, DIS, SMS gateway and e-mail
8	Registration Approval	Authorized users will be able to approve/reject user registration to the system. This feature will allow users to approve registration applications individually or in batch. Users of this feature should be able to sort/filter applications based on verification status and other criteria.	SMS gateway and e-mail
9	Notification	Once a user registration is approved/declined, system will notify applicant users about the status of registration via SMS/e-mail/System alert.	SMS gateway and e-mail
10	Registration Archive	System will archive declined registration applications for future reference. System will have the ability to match new user registration data with archived data and smartly suggest the reviewer of any potential match with previously archived data. Users should be able to request users for additional documents for further verification through the system.	

Module III: Allowance, Stipend & Grant Application Management

11	Online Application (Org & Ind.)	Using 'Apply Online' feature, eligible Service Recipients/Beneficiaries will be able to apply for Allowance/Stipend/Grant through website and mobile application.	NID, Passport, BRIS, DIS, payment gateway
12	Committee Formation	Authorized users will be able to form a committee through the system by selecting officials from Ministry or relevant organization. All the proposed committee members will be notified via SMS/email/push notification/system alert.	MIS, SMS gateway, e-mail, push notification
13	Meeting Invitation and Meeting Resolution	This feature will allow authorized users to call for meeting of committee members. Meeting venue, schedule, agenda, minutes and resolutions will be managed through the integration of proposed GRP's meeting module.	GRP
14	Sort Application	Using Sort Application feature, Service Provider will be able to review/sort applications through the system. Authorized users will be able to set/configure criteria/policies of MoSW, DSS, JPUF, BNSWC, and NDDP which will auto sort the application as per organization policy and forward a recommended list of applications for review and verification.	MIS





15	Verify & Recommendation of Application	This feature will enable service provider to view each application individually; users will be able to verify and recommend applications for approval through the system. Users will also be able to write recommendation note/justification for each application.	e-Nothi,MIS
16	Recommended Application List	Once committee members complete the application review and finalize their recommendations, authorized user(s) will be able to forward the recommended list for approval. The system will be integrated with e-Nothi; therefore, the forwarded list will be sent to e-Nothi in proper format.	e-Nothi
17	Approve Application	Once the list is forwarded for approval, the approval authority user will be notified via SMS/email/push notification/System Alert. Approval authority user will be able to review/approve/decline the recommended list from the system. Integration with e-Nothi will ensure that all the necessary formalities are carried out ensuring proper e-Nothi format, without the user requiring to log in to the e-Nothi system.	e-Nothi, SMS gateway, e-Mail
18	Notify to Applicant	Using this feature, Service Provider will be able to broadcast a notification to the approved applicants. Applicants will be notified of the approval through SMS/email/push notification/System Alert in a predefined format. Authorized users should be able to edit the text format of all the above mentioned notification method.	e-Nothi,SMS gateway
19	Forward GO For Approval	Forward GO for Approval feature will enable Service Provider to forward GO for approval through Web Application. This feature will be integrated with e-Nothi in a manner that service provider will not require to login to e-Nothi for approval.	e-Nothi
20	Issue GO	Issue GO feature will enable Service Provider to issue GO through the system. Whenever a GO is issued, backend integration will ensure that the GO is issued in e-Nothi as well for maintaining filing process.	e-Nothi





Module IV: Payment Management			
22	Beneficiary Account Management	Service recipient users will be able to manage their user account with the system once their application is approved.	ekPay
23	Advice Letter for Payment	Using Send Approved GO for Payment feature, service provider will be able to send approved GO for payment through the system.	Bank/NEPS
24	Online Payment	Using Make Online Payment feature, service provider will be able to make payment through online by using standard online Payment Gateway/ekPay	Payment Gateway/ekPay
25	Notify to Beneficiary	Using Notify to Beneficiary feature, service provider will be able to send notifications to applicant through SMS/email/push notification/System Alert.	SMS gateway and e-mail

Module V: Service Performance Monitoring			
26	Dynamic FAQ	Using Dynamic FAQ feature, Service Recipients will be able to view FAQ and get answer instantly through website and mobile app.	333 (call Center)
27	Service Tracker	Using Service Tracker, Service Recipient and Service Provider will be able to track the status of their application/service	
28	Online Dashboard	This dashboard will display all summery status of Application, approval, Pending and payment information as per user privilege	MIS, E-nothi
29	Expenditure Report	Submit Expenditure Report feature will enable service recipient to submit estimated expenditure report through web and mobile application after receiving grant approval message. There should be option to submit actual expenditure report after receiving the grant.	MIS
30	Service Recipient Report	Service Recipient Report feature will enable service provider to show the total disbursement report in the system through web application.	MIS
31	Application Status Report	Application Status Report feature will enable authorized users to generate application status (Approved/Canceled/Pending) report through the system.	MIS



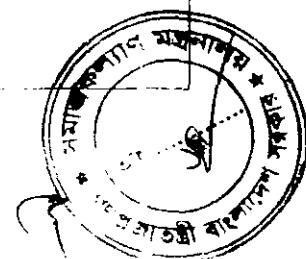


32	Approved GO Report	Using Approved GO report feature, service provider will be able to generate approved GO report through online.	MIS
33	Pending GO Report	Using Pending GO report feature, service provider will be able to generate pending GO report through the system.	MIS
34	Pending Payment Report	Pending payment report feature will enable service provider to generate pending payment report through the system.	MIS
35	Other On-Demand Report	Other on-demand report feature will enable service provider to generate other on-demand report through the system.	MIS

4.1.2. Component-2 Hospital & Disability Service Management System

Module I: Information & Registration Management			
SI	e-Feature	e-Feature Description	Integration
1	Manage Service Information	Authorized User will be able to manage all service related information/configuration from this feature. - Manage Types of service - Set Eligibility parameters to avail the service - Setup/configure process to avail the service - Setup/configure check list for the service - Dynamically configurable service form	
2	Patient Registration	Using this feature authorized users will be able to register a patient into the system. This feature should be integrated to National Health Service Management System. User will collect patient and hospital information by his / her patient ID provided by NHSMS. Users will be able to assign eligible parameters - Poor, Handicap, Freedom Fighter, Blind, Disabled etc.	NHSMS / Existing Hospital System
3	Service Dashboard	User will be able to view graphical or chart wise information of DSS. Various report with relevant filters can be generated/viewed by authorized usersthrough the system.	

Module II: Hospital/Social Service Management		
4	Hospital Information Management	DSS enlisted all hospital information will be available in the system. Authorized users will be able to manage hospital information from here. Hospital basic information, Hospital setup information will be stored here.





5	Patient History Management	<p>This would be a patient information page. From here authorized users will be able to view all the patient related information. User will be able to filter specific user information searching by patient ID/name/mobile number etc.</p> <p>Authorized users will be able to add/remove/update new/existing patient information if needed.</p> <p>All diagnosis, investigation, follow up and service related information will be stored/viewed from here.</p>	
6	Medicine or Equipment Delivery Management	<p>After receiving medicine or instrument patient will acknowledge acceptance by app.</p> <p>System will update purchase order status as delivered.</p>	
7	Hospital Billing Information	<p>Private hospitals those are established funded 80% by DSS</p> <p>User will be able to collect admitted patient information.</p> <p>Will be able to get free service patient information.</p> <p>System will be able to calculate percentage of free service ration.</p>	NHSMS / Existing Billing System
8	Generate Report	<p>User will be able to generate report utilizing the collected information.</p> <p>User will be able to provide his / her observation in the report.</p> <p>The report can be sent to concerned section for further action.</p>	e-Nothi
9	Hospital Setup Data	<p>There will be setup data feature in the system through which admin user will be able to setup all configuration related data.</p>	

Module III: Store Management

10	Donation Management	<p>Donation Process Information will be managed through this feature by authorized users.</p> <p>User will be able to provide donation through the system.</p> <p>Users will be able to donate - Money, Instruments, Food, and Cloth etc.</p> <p>User will provide donation information and collection process and SSO or Staff will collect accordingly.</p> <p>If donor wants to donate money, there should be online based money collection process</p>	MFS/Payment Gateway
11	Manage Monthly Budget	<p>User will be able to create monthly budget through this feature.</p> <p>There will be predefined section for the budget preparation e.g. Medicine, Cloth, Equipment, Food, Ambulance Fare etc.</p> <p>User will mention the ratio for each section and system will calculate the value and will prepare the budget accordingly.</p>	





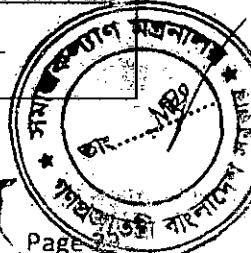
12	Manage Store Information	<p>User will be able to view donation information from here.</p> <p>User will be able to add new donation information. Different types of donation will be listed here - Money, Medicine, Crutch, Wheel Chair, Cloth etc.</p> <p>User will be able to add purchased medicine or instruments here.</p> <p>There will be category entry - Donation and Purchase.</p> <p>User will be able to update stock</p>	
13	Manage Purchase Order	<p>User will be able to create purchase order from this feature.</p> <p>User will be able to view the prescribed medicine or instrument list from this feature.</p> <p>User will be able to select list of services from the service list.</p> <p>User will be able to provide medicine or instrument quantity based on stock available and budget.</p> <p>System will be able to generate alert if the quantity is exceeding the monthly budget.</p> <p>System will send notification to enlisted medicine or instrument store/supplier about the purchase order</p>	
14	Manage Stock In	<p>User will be able to add items in the system through this feature. System will increase number of items in inventory.</p>	
15	Manage Stock Out	<p>User will be able to deduct items from the system. System will reduce number of item from the inventory</p>	
16	External Store Management	<p>User will be able to manage external store (e.g. medicine store, equipment store, clothing store etc.) information through the system.</p> <p>The user will be able to assign store while creating purchase order. Corresponding store manager/keeper will be able to get the purchase notification accordingly.</p>	
17	Manage Payment Information	<p>User will be able to manage all financial transactions from here.</p> <p>Payment voucher can be generated and disbursed to recipient from here.</p> <p>Payment can be done through online to bank account / mobile banking account.</p> <p>Payment register can be managed from here.</p>	MFS, Online Payment Gateway, Ekpay,iBas++
18	Payment Disbursement	Based on budget and eligibility payment will be disbursed to patient's MFS account	MFS
19	Generate Store Report	<p>User will be able to generate various types of report from this feature.</p> <p>Report can be generated any date valid date range.</p>	



Module IV: Consultancy and Therapy Center			
20	Manage Patient Registration & Information	<p>User will be able to register patient here.</p> <p>Based on problem type, authorized user will be able to assign consultant for a patient.</p> <p>Patient ID will be generated and will be provided to patient.</p> <p>Patient service history will be stored and managed through this feature.</p>	
21	Manage Consultancy and Therapy	<p>Authorized user will be able to view patient history from here.</p> <p>User will be able to generate prescription or guide line for the patient through the system.</p> <p>User will be able to recommend exercise or therapy center.</p> <p>Therapy and consultancy schedule along with SMS notification alert will be managed through this feature.</p>	SMS Gateway
22	Service Information & Locator	<p>User will be able to get service information from this section.</p> <p>There will be a service locator from where a user will be able to find his / her nearest service center and the types of service provided by the service center.</p> <p>User will be able to contact to nearest service center through phone or SMS or Instant Messaging service.</p> <p>Authorized users will be able to manage all the information of this feature through the system.</p>	SMS
23	Hospital Social Activity Section	<p>There will be a section in dashboard module where all social activity information will be displayed. All the relevant information (i.e., Number of patients benefited, total amount of money disbursed, number of equipment provided and any other data) will be represented in Graph, Chart or any other manner of statistical representation.</p>	
24	Free Service Information	<p>There will be a section in dashboard where List of hospitals providing 30% free services. Number of patients availed free service, total amount of free service provided, total amount of instrument given to patients etc.</p> <p>The information will be provided in graph, chart and any other manner of statistical representation</p>	

4.1.3. Component-3: Production, Promotion & Marketing Management System

SL	e-Feature	e-Feature Description	Integration
Module I: Production & Store Management			
1	Raw materials dashboard	Generate visual report to display available raw materials count, stock availability weekly/monthly/quarterly.	





Supplier Information	User can add/edit/delete/view supplier information	-
Raw Materials Manage	Raw materials add/edit/delete/view, add raw materials mapped to produce each product	-
Raw Materials Stock Manage	User can update raw materials stock.	-
Raw Materials Requisition	User can requisition for new raw material if required.	-
Raw Materials Requisition Approval	User can approve raw materials requisition. Send e-Notification.	e-Nothi
Production dashboard	Generate visual report to display available product count, stock availability weekly/monthly/quarterly.	-
Production Target	Generates production targets for production team during a customizable time span.	-
Product Manage	User can add/edit/delete/view product information and details	-
Product Stock Manage	User can update single product stock and bulk product stock, Related marketing team will get e-Notification	-
Demand Order Manage	User can submit, assign, change status of demand order Assigned user can check status of particular demand order. Send e-Notification.	-

Module II: Retailer/Dealer Management

2	Online Registration	Retailer/Dealer can check prerequisite to continue registration process. Retailer/Dealer can register online. Retailer/Dealer will get e-Notification. Dealer can submit required document and verify their NID and ETIN account via online.	NID, NBR, Trade License
	Profile Manage	Retailer/Dealer can check/update profile information	-
	Demand Order Manage	Retailer/Dealer can submit new demand order and check demand order status.	-
	Quotation Manage	Retailer/Dealer can view check quotation and sign on the quotation.	-
	Quotation Approval	User can approve quotations.	e-Nothi
	Order Manage	Retailer/Dealer can view product list, add product item into cart, place order, payment via online. All order can check in order list page and can check order status.	ekpay
	Payment Manage	Retailer/Dealer can view all payment method and can check which payment spent how much amount.	-





Order Tracking	Retailer/Dealer can track order status and each order steps, if shipped where is located.	
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Module III: Sales & Distribution Management

3	Sales Dashboard	User can check Retailer count, Dealer count, place order today, total sales etc.	-
	Sales Target	Generates sales targets for sales representatives during a customizable time span.	-
	Retailer Manage	User can view retailer list, due amount, total order, and update information.	-
	Dealer Manage	User can view retailer list, due amount, total order, and update information.	-
	Quotation Manage	User can check all quotation and search quotation and send quotation to specific or group of retailer/dealer.	-
	Demand Order Manage	User can check all demand order from retailer and dealer, user can process demand order. Retailer/dealer will get e-Notification.	-
	Online Order Manage	User can view all online order and process for delivery. User can check all online order status.	-
	Delivery Tracking Manage	User can view all delivery on progress/complete item here and can change delivery status when it required.	-
	Payment Manage	User can check all payment get from retailer/dealer.	-

Module IV: Promotion Management

4	Promotion Dashboard	User can view TVC, Print media, Fair, Campaign upcoming/ongoing/completed data in visual.	-
	TVC Manage	Users can add/edit/delete/view TVC	-
	Print Media Manage	Users can add/edit/delete/view print media.	-
	Fair Manage	Users can add/edit/delete/view Fair	-
	Campaign Manage	Users can add/edit/delete/view Campaign.	-





4.1.4. Component-4: Awareness, Event and Assistive Device Management System

SI.	e-Feature	e-Feature Description	Integration
Module I: Information Management System (awareness, Event, Assistive Device)			
1	Information Management	<p>User will be able to view all service related information from this feature.</p> <ul style="list-style-type: none"> - Types of service - Eligibility to get the service - Process to avail the service - Check list for the service - Service Form 	N/A
2	User Registration	<p>From this features user will be able to register a patient. This feature should be part of National Health Service Management System. User will collect patient and hospital information by his / her patient ID provided by NHSMS. Add eligible parameters - Poor, Handicap, Freedom Fighter, Blind, Disabled etc.</p>	DIS
3	NID Verification	<p>Using this feature, Service Recipient will be able to apply through JPUF application and mobile apposing NID Number. This system will be integrated Nation Election Commissions for verification.</p>	National Election Commissions
4	DIS Verification	<p>Using this feature, Service Recipient will be able to apply through JPUF application and mobile app Using Protibondi ID Number DIS . This system will be integrated Disability Information System (DIS) of DSS for verification.</p>	DIS
5	Profile Management	Patient Attendee And DAO after Registration create their demographic profile filling up a detail information, e.g. Name, Address, Educational status with image uploading etc.	N/A
	e-notification	According to predefined rules & schedules, System will notify & remind registered users, on their various activities through Application, SMS & Email.	N/A
	PWDs Wish list	Citizen will get a wish list box where he/she can mark for getting related updated information time to time.	N/A
	Online Search By Category	Citizen in any location can collect various informationthrough this features like Assistive device ,upcoming seminar etc.	N/A
	Dynamic FAQ	System will be integrated with a Chabot so that when a client requires to get any information, he/she can get it easily by asking question in Chabot.	N/A
	awareness Management	System will be integrated with Social media platform and others for promote contest news so that a Service recipient will aware about the contest.	N/A
	Content Upload	System have the facility to upload different type of content like video, audio, image, any documentationUpload facilities	N/A
6	Activity Monitoring Dashboard	User will be able to view graphical or chart wise information of JPUF. Various report can be viewed by the user from here.	N/A



**Module II: Event Management**

7	Online Application	The Service recipient will be able to submit application for taking any services using web and mobile apps.	N/A
8	Online Approval	System will allow authorized users to Act on an application through web, App, e-Nothi. Along with approval & rejection there will be option of reverting to any previous steps, delegate to any other user of the system, put remark etc. On approval at any activity step system will traverse the application to next designated step automatically according to predefined Configuration Rule set in the system.	N/A
9	Schedule Management	The Service recipients will be able to submit application for taking any services using web and mobile apps. System official will have options to give his approval online.	N/A
10	e-Notification	According to predefined rules & schedules, System will notify & remind registered users, on their various activities through Application, SMS & Email.	N/A
11	Online Payment	System will inform fees necessary for applied service. System will integrate with National Payment Gateway for payment receipt & notify Service Recipient.	N/A
12	e-certificate	System can generate e-certificate in a predefined template. Service recipient will receive Online certificate by email and also in their account with download option.	N/A

Module III: Job Fair Management

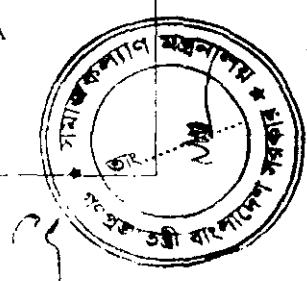
13	Fair Information	This would be a patient information page. From here user will be able to view all the patient information. User will be able to filter specific user information searching by patient Id or name or mobile number etc. User will be able to add new patient information or remove information or update existing information if needed.	N/A
14	Online Job Fair Proposal Management	User will be able to select eligible patient from the list. System should be able to guide user to select eligible candidates by matching predefined criteria.	N/A
15	Employers' Management	Employers instrument patient will acknowledge acceptance by App. System will update purchase order status as delivered	N/A
16	Online Job Application Submission	Private hospitals those are established funded 80% by DSS User will able to collect admitted patient information. Will be able to get free service patient information. System will be able to calculate percentage of free service ration.	DIS,NID,
17	CV Bank	In this system all PWDS will manage and authority side with their different access they can handle it.	N/A





18	Feedback By Ranking	User will be able to generate report utilizing the collected information. User will be able to provide his / her observation in the report. The report can be send to concerned section for further action	e-Nothi
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Module IV: Assistive Device Application and Inventory Management			
19	User Registration	User will be able to provide demands through the system User will be able to demand- While Chair, Instruments, Try Cycle, Toilet Chair, Standing Frame, White Cane etc. User will provide Demands information and collection process and Staff will receive accordingly.	National Election Commission
20	User Profile Management	Patient Attendee or after Registration create their demographic profile filling up a detail information, e.g. Name, Address, Educational status with image uploading etc.	N/A
21	Online Application	The Service recipient will be able to submit online application for taking any services using web and mobile apps.	N/A
22	Activity Status Monitoring	From this feature, centrally anyone can monitor updated activities of 103 IDSC.	N/A
23	Manage Yearly Budget	User will be able to create monthly budget through this feature. There will be predefined section for the budget While Chair, Instruments, Try Cycle, Toilet Chair, Standing Frame, White Cane etc. User will mention the ratio for each section and system will calculate the value and will prepare the budget accordingly.	MFS, iBas++
24	Manage Inventory Information	User will be able to view donation information from here. User will be able to add new donation information. Different types of donation will be listed here - While Chair, Instruments, Try Cycle, Toilet Chair, Standing Frame, White Cane etc. User will be able to add purchased medicine or instruments here. There will be category entry - Donation and Purchase. User will be able to update stock	N/A
25	Manage Purchase Order	User will create purchase order from here. User will be able to view the prescribed medicine or instrument list from this feature. User will be able to select list of service from the service list. User will be able to provide instrument quantity based on stock availability and budget. System will be able to generate alert if the quantity is exceeding the monthly budget. System will send notification to enlisted instrument store about the purchase order	N/A





26	Manage Inventory In	User will be able to add items in the system through this feature. System will increase number of items in inventory.	N/A
27	Manage Inventory Out	User will be able to deduct items from the system. System will reduce number of items from the inventory	N/A
28	External Stoke Management	User will be able to manage external store (e.g. White Chair, Instruments, Try Cycle, Toilet Chair, Standing Frame, White Cane etc). The user will be able to assign store while creating purchase order. Corresponding store manager/keeper will be able to get the purchase notification accordingly.	N/A
29	Manage Payment Information	User will be able to manage all financial transaction from here. Payment voucher can be generated and disburse to recipient from here. Payment can be done through online to bank account / mobile banking account. Payment register can be managed from here.	MFS, iBas++
30	Payment Disbursement	Based on budget and eligibility payment will be disbursed on MFS account.	MFS, iBas++
31	Generate Store Report	User will be able to generate various types of report from this feature. Report can be generated any date valid date range.	N/A

Module V: Assistive Device Delivery and Distribution Management

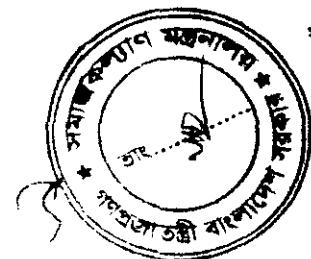
32	Manage Vendor Registration & Delivery Information	User will be able to register patient here. Based on problem type, user will be able to assign consultant. Patient Id will be generated and will provided to patient. Patient service history will be stored here	N/A
33	Inventory Auto Update	From the 103 IDSC (Integrate Disability service center) assistive device will be distributed . When Any device distributed, Then it will deduct from the store. For that all the time system have the updated inventory information.	N/A
34	e-Notification	According to predefined rules & schedules, System will notify & remind registered users, on their various activities through Application, SMS & e-Mail.	N/A
35	Manage Distribution	User will be able to manage distribution from here. User will be able to create user or guide line for the user. User will be able to distribute assistive device for the PWDs from the center.	N/A
36	Service Information & Location	User will be able to get service information from this section. There will be a service locator from where a user will be able to find his / her nearest service center and the types of service provided by the service center. User will be able to contact to nearest service center through phone or SMS or Instant Messaging service	N/A
37	JPUF Activity Report	There will be a section in dashboard module where social activity information will be displayed. The information will be presented in Graph, Chart or Statistically. Number of patients benefited, total amount of money disbursed, number of equipment's provided etc.	N/A





4.1.5. Component-5: Training & Accommodation Management System

SL.	e-Feature	e-Feature Description	Integration
Module 1: Information, Application and Booking Management			
1	Information Management	List of all Process (Training, Accommodation) or Advertisements that are currently in Web or national Paper. System providing Training & Accommodation booking guideline details.	
2	User Registration (Trainers, Trainee)	The participant (Trainers, Trainee) will have options from common module to register online with concern official's approval and confirmation notification. Trainer profile with details of one's academic, experience and other curricular activities will be filled up.	EKH-SEBA
3	Application Submission	The register user can apply for training/as Resource person through this feature.	NID, EKH-SEBA
4	Application status	The user/actor can get application status using tracking number through this system. System will providing application status.	
5	Requesting Form	The user can fill-up the requesting form for course completion letter / Testimonial/ Mark sheet/ Certificate through this system. Also edit the requesting information. Then the user get a notification from the system.	
6	Complain/Recommendation Management	Any user can submit Complain/Recommendation, raise Issue, and provide Feedback, Suggestion on any services that provided.	
7	Training Institution Management	User can define all institution details information (Name, Location, capacity, accommodation facility etc.), edit and also finalize the information.	
8	FAQ Management	There will be a Frequently Asking Question and answering options to manage FAQ.	





Module II : Training Management			
9	Committee Management	The concern authority form a committee through this feature, get approval from higher authority, and inform the committee members. Also add or replace new member for this committee.	e-Nothi
10	Training Calendar Management	The user will be able to create, edit and maintain Training and other events calendar using this feature.	e-Nothi
11	Training Budget Management	The concern will be able to create draft budget, edit the budget according to recommendation of higher authority. Also maintain and realize budget and other cost schedule using this feature.	e-Nothi, iBASS
12	Course Management	This feature will have options to design and modify training module, training schedule, venue, flooding or any other issues related to the training. In this system respective department can select trainers for respective courses. Trainer will get notification.	e-Nothi
13	Trainers' Selection Management	User can initially sorting the trainers those are already applied for, then selected trainers, then will be notified for viva, then final Selection and confirmation notification will be sent to trainers.	e-nothi
14	Trainers' Profile Management	The trainer profile with details of one's academic, experience and other curricular activities will be maintained here. System will generate ID card for Trainer.	
15	Venue Management	The requisition and information of logistics and venue with facilities can be submitted and approve online by the concern. The notification and circulation will be made by the system accordingly.	e-nothi
16	Course Module Management	User can draft a module, module content and all other related issues. Also edit and submitted for final approval.	e-nothi
17	Course Routine Management	The user will be able to create, edit and maintain course routine using this feature.	





18	Notification	On approval/confirmation/payment the concerned user will be notify online through SMS, e-Mail etc.	
19	Trainee Selection Management	Committee sorting the trainees list provided by District office or Committee also consider the all application submitted by the trainee. Initial selected trainee will be notified for viva. Final Selection and confirmation notification will be sent to trainee. Trainee also give confirmation to attain the training program.	
20	Trainee Profile Management (Pre & Post Service)	Applied trainee fulfilling requirements and eligibility criteria will be enrolled for the training.	
21	Trainee ID Card Print	System will provide print version of trainee information for ID Card print.	
22	Notification	On approval, confirmation the concern will be notify online through SMS, email etc.	
23	Attendance Management	Trainee and Trainer attendance, timing, Class hour, this feature will have integration with device and HR management system. System will print ID card for Trainee.	GHR
24	Evaluation Management	The trainee/trainer will have options to submit their feedback about course/trainer online using web and mobile apps and the system will rate the course/trainer accordingly.	
25	Transcript / Mark-sheet Management	This feature will allow authorized users to manage/generate transcript / mark sheet.	
26	Course Completion Letter Management	This feature will be able to generate a course completion letter with option to customization.	
27	Training Certificate Issue	This feature will have to manage all the process for certificate issuance.	
28	Events & Award Ceremony	The events and ceremony can be created, view and the relevant information can be maintained with this features.	





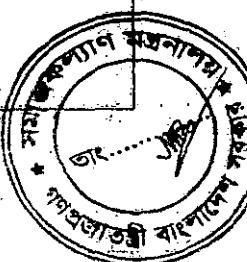
29	Bill Calculator	Through the system user will be able to calculate Trainer/Trainee total course wise bill, accommodation expenses and any other expenses related to the training. User will be able to edit bill and finally approve the bill or expenses.	
30	Payment Management	User will inform approved bill to the concern Trainers/Trainee/person. System will integrate with National Payment Gateway for payment receipt	Payment Gateway,MFS, ekPay

Module III: Accommodation Management

31	Accommodation Information	Authorized user will be able to enter information regarding all accommodation facilities like hostels, rooms and other related facilities. Users will also be able to edit and print.	e-Nothi
32	Room Allocation	Authorized user will be able to allocate rooms and others facilities to the trainer/trainees. This feature user will also be able to edit all information. The Superintendent user will be able to approve the accommodation facilities.	e-Nothi
33	Food supply Management	The system will be able to manage requirements for food packages, food category. The Superintendent user will be able to approve the food facilities through the system.	e-Nothi
34	Procurement Management	Through this feature, authorized users will be able to manage the procurement process of all training and accommodation related materials/logistics. The DC will be able to approve the total procurement amount through the system in integration with e-Nothi.	eGP, e-Nothi
35	Manpower Management	The System manages manpower details information, manpower duty schedule/roster and available manpower.	

Module IV: Training Survey & Dashboard Management

36	Questionnaire Management	This feature will allow authorized users to create/edit/delete questionnaires dynamically in prescribed format. User can fill-up/answer the questionnaire and also can edit the answers. The trainee submit on the system.	
37	Evaluation report	User can analyze the raw data through the system. Based on analyzed information (Tables, graph, and chart etc.) an evaluation report with recommendations will be published through the system. The evaluation report will be automatically generated from this system. User can modify the report format as per requirements.	





38	Workshop/ Seminar Management	Through the system, the concern office will be able to arrange a workshop or seminar. The participants will be registered by organization person (trainee), trainer, concern office staff or selected guests. Attendees will also be able to register for the workshop/seminar through the system.	e-Nothi
39	Dashboard	There will be a dashboard (user role-wise) on summarized and important information for management decision making which, can be detail drill down as needed.	eksheba
40	Course Summary Report	System will facilitate yearly/quarterly/monthly Training Course Summary reports for Service Providers especially for decision makers.	
41	Training Couse Name of top 10 Trainee Report	System will facilitate training Course based on top 10 trainee reports for Service Providers especially for decision takers.	
42	Training Course wise Attendance Report	System will facilitate training/course wise attendance reports for Service Providers especially for decision takers.	
43	Course wise Tabulation sheet	System will facilitate training/course-wise tabulation sheet/reports preparation for Service Providers especially for decision takers.	
44	Result Report	System will facilitate result reports for Service Providers especially for decision takers.	

4.1.6. Component-6: Disability School and Education Management System

SI	e-Feature	e-Feature Description	Integration
Module I: Institute Management			
1	Institute Information Management	Authorized users will be able to store and manage (Updated) Institute information from this feature. Summarized institute information will be send to institute authority for verification.	Email
2	Employee Management	It this all information regarding employees will be managed; the dashboard will contain all the standard reporting mechanism. Employee summary information will be sent to respective employee for validation and final approval	GRP, NID
3	Course Management	Detail course and class schedule will be designed, approved and course teacher/instructor will be assigned through the system.	

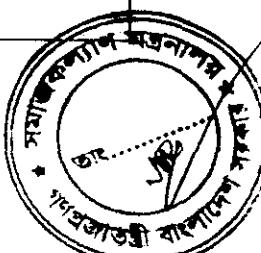




4	Event Management	Event information, Event Calendar, Event Participant details will be managed from this feature. Event Committee will be attached with different events, if required.	
5	Committee Management	Committee information, Committee Formation, Committee Role and Activities will be defined through the system. Selected Committee members will be notified through email/SMS/System Alert/Push Notification	Email, SMS Gateway
6	Budget Management	Budget Proposal, Approved Budget Information, Expenditure Statement, Revised Budget, Surrender Report will be managed through this feature.	e-Nothi
7	Transportation Management	Transportation Resource, Transportation Schedule (On demand and yearly), Transport Route, Driver List will be managed and stored into the system by this feature.	
8	Request Form	Different citizen/employee request to the institution submitted by this form	
9	Vendor Management	Authorized users will be able to manage and store vendor information through this feature. This feature will be integrated with eGP system for ease of vendor management.	eGP
10	Resource Management	System will manage all resources of an institute through this feature.	
11	Library book Information Management	Book detail information, book receiving information, return record, lost/damage information and all standard library management features will be available in this feature.	

Module II: Admission Management

12	Admission Circulation	Authorized users will be able to create/draft/approve/publish admission circular through this feature. Approval authority users will be notified via system alert/SMS/email notification. Approval authority users will be able to provide decision through the system and system integration with e-Nothi will ensure seamless filing management.	National University, eNothi
13	Online Admission	Students will be able to submit online application along with relevant information and documents. Residency requests will also be collected by this admission form.	NID, Disability Information System (DIS), National University, BRJS
14	Disability Assessment Tool	Student/Guardian will provide required information in defined format through this system. Evaluation committee members will be able to evaluate the applicants in prescribed format and based on submitted information/documents through the system	

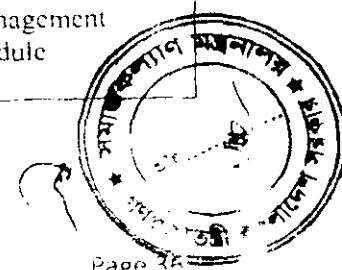




15	Applicant Assessment	Collect assessment information for all applicants and store the information along with applicant's information. As per assessment, applicant will get a mark through the system.	Applicants have to visit to school to attend interview
16	Eligible Student List	Students will be ranked as per assessment marks.	
17	Final Student Approval	Short list (Final + Waiting) will be managed by authorized users and approved by management through the e-Nothi integration to the system.	e-Nothi
18	Admission Fee Management	Student can submit admission fee and other fees through this system. This feature will also retain all past payment histories.	MFS, EkPay, Payment Gateway
19	Student Registration	Admitted student list will be published by registration process	

Module III: Student Management

20	Student Dashboard	This dashboard will display all student information of the institute in a group. User can retrieve individual information of a student/institution by navigating through the dashboard	Other component of system
21	Student Profile Management	Student information will be captured, managed and updated by this feature of the system. Student's Training, Therapy, Attendance information will be display in student profile Students can request for predefined certificates and testimonial from this system.	
22	Student Attendance Management	Class wise student attendance will be captured. Weekly and monthly report of student attendance will be maintained through the system. Absent student parents/guardians will be notified via SMS/email/push notification. Student's attendance information will reflect in Student profile.	SMS/email/push notification
23	Individual Student Assessment - Formula Setting and Assessment	Individual disabled student assessment criteria will be setup and assessment result will be capture through this system	
24	Individual Lesson Plan Management	Disable students individual lesson plan will be managed, updated	
25	Student Therapy Management	Individual student therapy requirement will be captured and therapy taken information will be captured daily basis, monthly basis	
26	Student Hostel Seat Management	Resident student's accommodation/hostel seat allocation information will be managed by this feature in integration with accommodation management module of the system.	Accommodation Management Module



27	Student Training Management	Individual student training plan and training execution information will be managed through this feature. This feature will be integrated with the training management module of this system.	Training Management Module
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Module IV: Exam and Result Management			
28	Exam Information	Examination detail information will be managed. Inputted information will be approved. Modification of result information will go under change control process.	National University, Education Board
29	Exam Evaluation Criteria Setting	Exam base mark and pass-fail criteria will be setup. Inputted information will be approved. Any change to existing criteria change will go under change control process.	National University, Education Board
30	Result Structure & Criteria Setting	Individual exam result and final result structure will be designed. Evaluation criteria will be setup. Any change to existing data will go under change control process.	
31	Result Preparation	Result will be managed. Final result will be prepared as per class wise, exam wise Summary of result will be shown based on Exam Item, Class, Student	
32	Result Publish	Final result will be published. Result summary will be send to mobile of the student parent. System should have facility to publish result send by any third party like National University There should be a progress report based on individual student after result publish.	National University, Education Board

4.1.7. Component-7: Child Service Management System

SI	e-Feature	e-Feature Description	Integration
Module I: Institute Management			
1	Information Management	Citizen will be able to visit and query for collecting information via web and call center.	IVR
2	Institution Profile Management	All types of institutions such as Institutions for regular child registration, Institutions for legal child registration, etc. will be add/edit from this feature. GEO-Locations, capacity of institutions	



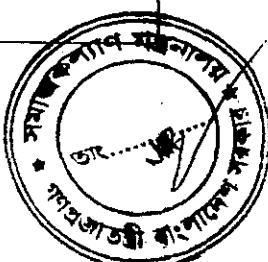
3	Committee Management	Different types of committees (Admission Review Committee, Procurement Committee, Evaluation Committee, Checklist Management Committee, Rehabilitation Committee, etc.) will be managed from here.	TELCO, eNothi, GRP
4	Attendance Management	Through this feature, the system will have an attendance system for all staffs and Training Instructors. Absent people will get a notification.	TELCO
5	ID Card Management	System will provide an option to print ID Cards for staffs, training instructors and children.	
6	Evaluation & Rating Settings	Checklist of monitoring & evaluation criteria (educational, mental growth, punctuality, training, performance, manner, health card, etc.) will be generated from here. Higher authorities will approve each of the changes.	eNothi
7	Rating Management	Based on the above checklist monitoring persons will rate weekly/monthly to each of the children.	
8	Evaluation Management	An average result based on above Ratings will be generated from here along with Super's comments. A summary report will be sent to higher authorities to approve and verify.	TELCO, eNothi
9	Institutional Certificate Management	Children will be able to apply for a certificate when they will be on their age of 18+. Authorized persons will approve and then the certificates will be printed.	eNothi
10	Complain & Feedback Management	Citizen will be able to make complain & feedback. Service providers will reply.	
11	Online Approval	Appropriate actions will get approval through e-Nothi by the authorized persons.	eNothi
12	Report Management	The system will provide several kinds of customized reporting systems such as total number of institutions, GEO-Locations, capacity of institutions, children evaluation report, etc.	
13	e-Notification	A notification will be sent out to the relevant persons.	TELCO
14	User & Dashboard Management	Disseminate information regarding all features. Users creation, Login, ACL, etc. will be controlled. The system will be integrated with the Single Sign On mechanism (EkSheba). Users will get access/links to the permitted features and reports on the Dashboard.	





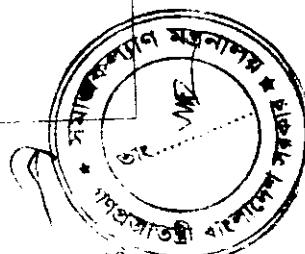
Module-II: Legal Institutional Management

15	Seizer List Management	While receiving a child (first time or after court attending) from police with court order, he/she will be physically searched by a security personnel to find for any illegal materials and those will be listed in the system and deposited in the custody. Those deposited items will be returned when they will get released from the institution (obviously after getting bail or release letter from court).	
16	Tagging Social Case Worker, Probation Officer & Child	All social case workers, probation officers will be enlisted here & will be connected to each registered children for their legal supports & ensuring all rights. Each of the tagged officers will get notifications just after tagging.	TELCO
17	Case File Management	A history file will be opened for each child where social workers and probation officers will keep all legal steps/records.	
18	Court Calendar Management	In the system, there will be a management to store next court attendance date by which the system will notify/remind the House-Parent at least 2 days before, so he can take further steps.	TELCO
19	Court Attendance Management	After getting a notification/reminder from the system, authorities will be able to request for Police HELP to attend the child in court. And just before the day of attendance Police will come to the institution & a gate-pass will be issued for the child to be allowed to leave the institution perimeter. The system will have a track to leave or come-back status of the child.	
20	Release Order Management	After getting court-release paper from police, a gate-pass/release-letter will be issued for the child to be allowed to leave the institution perimeter.	eNoti
21	e-Notification Management	A notification will be sent out to the relevant persons.	TELCO
22	User & Dashboard Management	Disseminate information regarding all features. Users creation, Login, ACL, etc. will be controlled. The system will be integrated with the Single Sign On mechanism (EkSheba). Users will get access/links to the permitted features and reports on the Dashboard.	





Module III: Child Admission Management			
23	e-Checklist Management	Preparing list of criterions as per rules/policies. Any modification of the checklist will be approved by the authorities. Only the latest checklist will be active.	eNothi
24	Circular Publication Management	Based on current/active checklist an admission circular will be generated and send to newspaper office to publish. Also admission related information will be published to NPF.	NPF
25	Admission Form Template Management	Configurable forms can be generated through this feature. Some fields will be mandatory while others will be optional. An existing template can be copied and continue to modify it further.	eNothi
26	Online Admission Application	Guardians will apply for their children from UDC. They will take necessary documents before applying.	TELCO, UDC, NID, Birth Certificate
27	Meeting Management	A meeting will be called where both parties (Admission Committee members and applicants) will join. Committee members will make eligible list of applicants taking VIVA of them together with their guardians. Applicants' physical condition & other prerequisites will be verified in the meeting by a Civil Surgeon/THA, SSO & Councilor so that applicants will have less hassle.	GRP
28	Child Profile Management	Children profiles can be created/modified here. The profile form fields can be different based on Child-Types such as Regular Registration (enrolled from online application) and Legal Registration (enrolled directly after receiving from police with court order). One of the profile fields will be there to select school with a dropdown incase of in house education, but the child studies in an external school, then there will a text field to enter the school name.	
29	Approval Management	A list of applicants will be sent to the higher authorities for approval for admission.	eNothi
30	e-Notification	A notification will be sent out to the relevant persons.	TELCO
31	User & Dashboard Management	Disseminate information regarding all features. Users creation, Login, ACL, etc. will be controlled. The system will be integrated with the Single Sign On mechanism (EkSheba). Users will get access/links to the permitted features and reports on the Dashboard.	



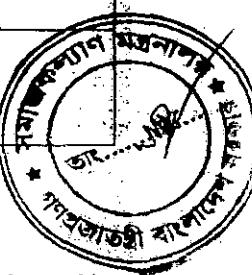


Module IV: Rehabilitation Management

32	Initial Listing Management	An initial list of eligible candidates will be managed by the authorities from this system.	NPF
33	Meeting Management	To held a meeting, the initial list of the eligible candidates will be finalized from here.	GRP
34	Approval Management	Authorized persons will visit in persons physically and verify everything as per checklist. All verified items will be checked in a tab interface, so that, verifications can be done easily at the inspection time.	eNothi
35	Tracking Management	Security personnel will ensure house security and update security statuses.	
36	e-Notification	A notification will be sent out to the relevant persons.	TELCO
37	User & Dashboard Management	Disseminate information regarding all features. Users creation, Login, ACL, etc. will be controlled. The system will be integrated with the Single Sign On mechanism (EkSheba). Users will get access/links to the permitted features and reports on the Dashboard.	

Module V: Educational Management

38	Training Instructors' Profile Management	The trainer profile with details of one's academic, experience and other curricular activities will be maintained here.	NPF
39	Course Management	The concern will be able to create and maintain courses using this feature.	eNothi
40	Class Routine Management	The concern will be able to create and maintain class routine using this feature.	NPF
41	Class Attendance Management	Trainee and Trainer attendance, timing, Class hour, this feature will have integration with device and HR management system. System will print ID card for Trainee.	
42	Exam Management	This feature will have options to create & schedule exams of different types together with number distributions of each subjects related to exams.	NPF
43	Transcript/Marksheet & Certificate Management	This feature will have to manage transcript / mark sheet & certificate.	eNothi

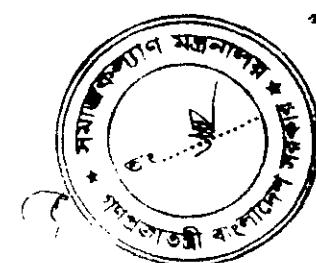




44	Co-curricular Activities Scheduler	System will have an option to create schedules for various types of curricular activities.	eNothi, NPF
45	e-Notification	A notification will be sent out to the relevant persons.	TELCO
56	User & Dashboard Management	Disseminate information regarding all features. Users creation, Login, ACL, etc. will be controlled. The system will be integrated with the Single Sign On mechanism (EkSheba). Users will get access/links to the permitted features and reports on the Dashboard.	

4.1.8. Component-8: Social Welfare Service Delivery Apps

Sl. No.	e-Feature	e-Feature Description	Integration
Module I : Social Welfare Manual Information			
1	Advanced Filtering/Dynamic Searching	<p>System will have a robust Search Engine that will retrieve desired information of the user quickly based on following criteria / conditions.</p> <ol style="list-style-type: none"> It will take the search parameter as usually takes in Google or other Search Engines like alphabet, numeric, punctuation marks etc. It will show the full text as a user puts the criteria in the search box. It will present the heading and a few lines of the specific law or policy along with an option to see its details if the user wishes. Display searching report in a clustered way. 	
2	Downloading/Archiving	User will be able to download a part or full of a specific law/policy/orders and be able to store/archive the downloaded content	
3	Manual Sharing	User can share the part/full of a specific law/policy/orders through e-mail, Social Media like Facebook, LinkedIn, integral etc.	
4	Service Point Finder	System will provide interface for finding out a specific Service Point of MoSW. Listing/Drop down list will be in the system to easily locate a Service Point by the User. To enable the intelligence in the system, option will be available to integrate with Google Map.	Google Map





5	Service Application	<ul style="list-style-type: none"> 1. A user can fill up or download a form from the respective source going through hyperlink <ul style="list-style-type: none"> 1.1. Old age Allowance Form 1.2. PWD person's Allowance Form 1.3. PWD student Stipend Form 1.4. Capitation Grant Form 2. A user can download following forms/templates from the system as he/she requires. <ul style="list-style-type: none"> 2.1. Admission Form to Children Safe Homes / Children Families 2.2. Health Card the Resident of Children Safe Homes / Children Family 2.3. Information of the Boys and Girls Residing at Children Safe Homes / Children Family 2.4. Case Work / Study Form of the Resident at Children Safe Homes / Children Family 2.5. Evaluation Form of the Resident at Children Safe Homes / Children Family 2.6. Good Issue Card of the Resident at Children Safe Homes / Children Family 	
6	Allowance Eligibility Checker	<ul style="list-style-type: none"> 1. One can check Eligibility of Different Allowance, Grant, Stipend and others programmers. 2. Officers get suggestions for any complex matter related to different social development program (Like Allowance, Disabled assisted device, Training by UCD etc.) 	
7	Query and Complaint Submission	<ul style="list-style-type: none"> 1. System will have a facility to be integrated with Call Centre 333 and provide relevant information in response of FAQs. 2. System will provide the facility to capture the complaint from a General User. 3. There will be a list of the category of services to help a user to put a complaint specifically. 4. System will have interfaces to capture the basic information of the user (raising complaint) 5. System generates various reports on complaints 6. System will generate tracking ID 7. User can view the status of his/her complaint 	333
8	Committee Information	<p>System will have the provision for a user to view the information about different committees and their functions</p>	



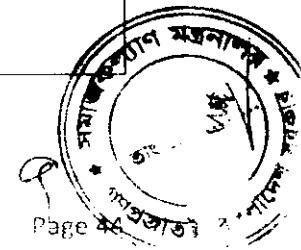


Module II: Manual Content Management

9	Dashboard	System will provide a dashboard containing information on various subjects for example, total number of service point, total complaints, total complaint resolved etc	
10	Category/Sub-category set up	User can set up category/subcategories of laws, rules, ordinance, policies, orders etc.	
11	Manual information entry	User can put entry of the information on following laws, rules, ordinance, orders etc. based on categories.	
12	Manual information update	User can modify/update the information on following laws, rules, ordinance, orders etc. based on categories.	
13	Intelligent Search parameter setup	1. User can entry/update the parameters (like content meta data) for advanced searching 2. User can create/update an INDEX (Table of Contents) of the contents	
14	Filter parameter setup	User can enter/modify/update the parameters (like content meta data) for filtering	
15	Service point management	1. User can enter/modify/update the information on service point as required. 2. System must have the option to be integrated with Google Map for service point information	Google Map
16	Allowance Eligibility Criteria Setup	User can enter/modify/update the criteria for allowance eligibility	
17	Complaint Management	1. Admin User can create the template of the interface for taking complaint 2. Admin user can reply to a complaint 3. System will have the option to redirect to any complaints to GRS	GRS
18	Committee Management	User can enter/modify/update the any information on different committee of Social Welfare Ministry.	

4.1.9. Component-9: Common Services Configuration

Module 1: Information service management			
SL.	Feature	Features description	Integration
1	Content management	Manage digital content dynamically Using system's control panel.	NPF
2	Smart Search	Text content searching option having intelligent search suggestion.	
3	Service Eligibility Checker	There should have an eligibility checker for information and service consumer to access or	





		avail the information and services.	
4	Dynamic FAQ Management	There should have instruction/requirement/FAQ manager To manage and display necessary instruction/requirement and FAQs.	
5	Live Chat/Chatbot	Need to integrate live chat or intelligent chatbot to ensure interactive communication between service consumers and providers to ensure Better service delivery.	

Module 2: Complain management

SL.	Features	Feature description	Integration
1	Add complain	Any user or service consumer can add complain as an registered user or anonymously	
2	Add complaint Types	There can be different types of complain. It can be service specific or any other issue specific. The system will have option to add complain types. Complainier will select complain type to lodge the complaint. For service specific complain, the complaint should put service application ID for tracking the service status to manage the complaint.	
3	Configuration Management	There will have options to add, update Complain Management Officer (CMO), Appeal Officer (AO) and other settings to manage complain management module. (Add, update Complain Management Officer(CMO), Appeal Officer(AO), other settings)	
4	Assignment Management	Assign CMO, AO with specific jurisdiction like assign CMO, AO for any organization, department, section or complain types	GRS
5	Complain Movement Management	According to complain life-cycle every office should have a complain Management Officer (CMO) and Appcal Officer (AO). After lodging a complaint, it should be dispatched to CMO's dashboard. CMO will suggest the accused officer to deliver the service or ask for response and explanation. The accused officer will respond and the compline will receive service or response. If the complainer doesn't satisfied with the reply, s/he will then have option to appeal for the complaint. After appeal, the complaint will be forwarded to AO and AO will take care of the complaint.	
6	Appeal management	After having answer from AO or accused officer for the complaint, if the complainer doesn't satisfied	

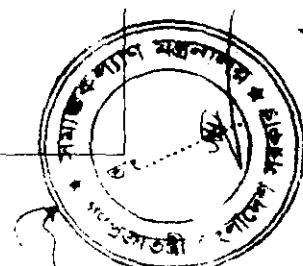




		with the reply, s/he will then have option to appeal for the complaint. After appeal, the complaint will be forwarded to AO and AO will take care of the complaint.	
7	Inspection committee management	The CMO or AO can form an inspection committee to access insights of a complaint. The committee can set meeting and run inspection on the complaint and submit report to CMO or AO.	
8	Complain tracking	The complainer will have a tracking ID after lodging a complaint. S/he will be able to check the status of the complaint any time.	
9	Notification	There will have a settings to send notification from different steps of complain life-cycle. The notification will be in 3 medium: Email, SMS and System generated.	
10	Complain feedback management	After resolving a complaint, the complainer will share his/her feedback with rating. This is very crucial to enrich the service process and ensure better complain management.	
11	Complain history management	Management will be able to track and check the detailed life-cycle of a complaint.	
12	Report management	The system needs extensive report management of the complaints. Management will have option to generate reports with all possible parameter combination like geo-location, date range, organization, department, section, users etc.	

Module 3: Committee Management

SL.	Features	Features description	Integration
1	New Committee formation	The system should have following option to create and manage new committee: - Insert, update, delete committee information(name, date, purpose, role, duration, etc.) - Attach supporting and legal documents of committee formation	e-Nothi
2	Committee approval	Committee will be approved through proper channel via e-Nothi system.	e-Nothi
3	Committee agenda management	The committee will have meeting agenda to be discussed and to take decision on the agenda. There will have agenda and decisions log and follow-up mechanism so that the management can track and follow-up any agenda and decision any time.	





4	Minutes generation and circulation	There will have option to prepare a meeting minutes with attendees, agenda, decisions/discussion points and circulate the minutes to the participants and to higher authorities.	
5	Expense Management	Expense management feature should have the following options: - Insert, update meeting expenses with expense heading, cause, description etc. - Calculate expense - Generate expense report	
6	Committee Member Management	Following options are needed to manage committee member's profile: - Insert, update, delete member's profile - Insert, update, delete role - Assign and update member's role - Role's history tracking	
7	Document Management	Here are the options needed to manage document: - Insert, update, delete meeting documents - Store meta document's information - Search documents - View Document - Document indexing - Classify document and encryption of sensitive documents	
8	Notification Management	The system should notify members and other relevant users regarding meeting decisions, agenda, invitations etc. Notification medium should be email and SMS.	

Module 4: Dynamic Form Builder

SL.	Features	Feature Description	Integration
1	Dynamic Form Builder	Create and manage different service forms dynamically from the form builder. The builder will support all the parameters, validations, terms & conditions and other settings required to build and publish the forms to deliver services to the consumers efficiently. Here are the main features of the dynamic form builder: - Create service form by drag and drop facilities with all types of form elements like text field, paragraph, validation etc. - There will have configuration regarding service	





		<p>steps and process mapping with service users and desks.</p> <ul style="list-style-type: none"> - There will have notification settings to send notifications at different service steps. - The system will expose API for the service to integrate the service with external system as well as for mobile app development. - The form can be updated and form elements can be add or remove any time even if the service is in live having live user data associated with that. 	
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Module 5: Organizational Profile Management

SL.	Features	Feature description	Integration
1	Organizational profile information management	Insert, update, delete organization's basic information including name, about organization, hierarchy, mission, vision etc.	
2	Services and service related information management	Insert, update, and delete organization's service list, instructions, and procedures.	
3	Mission, vision management	Insert, update mission & vision information of the organization	

Module 6: Organogram Management

SL.	Features	Feature description	Integration
1	Create and update organogram	The system should have option to manage (insert/update/delete) organogram based on organizational hierarchy.	
2	Map users to the organogram	Add designations to the organogram	
3	Merging organogram	Merge two or more branches of organogram, or two full organogram even if the organograms have live data.	





Module 7: User Management

SL.	Features	Feature description	Integration
1	User Account Management	<p>User account management should have the following options:</p> <ul style="list-style-type: none"> - Insert, update, block, delete users - Users can register in the system - System admin can assign users to their designations with designated roles - System admin can release user from his/her designation 	
2	User Role Management	Insert, update user roles	
3	User Account verification	There will have option to verify users based on email and/or sms.	
4	User Account Recovery	Easy implementation of a "Forgot your password?" feature in this Platform can choose between three methods: using email or using a secret question or using sms based secret code.	
5	Change Password	Any user can change his/her password any time to address security challenges	
6	Profile Management	System will have provision to add and update user account information such as the password, email, phone number, photo, signature etc.	

Module 8: Access Control Management

SL.	Features	Feature description	Integration
1	Multi-Layer Access Control Mechanism	<p>The system will have system access control panel. Every system user will be assigned to one or multiple roles. Every role should be assigned to a set of actions or activities. The system admin will have provision to assign roles to users and to assign set of actions/activities to roles. There should have provision to assign layer, section, department, office based access management system.</p>	
2	Factor Authentication(need to write in role/access)	In case of sensitive account, a second step needed to log into the accounts to ensure required security measurements. First, the password. And, second: either a code sent to your cellphone via text message, or created by a special app on your phone. Even better, the second step can be inserting a physical token such	

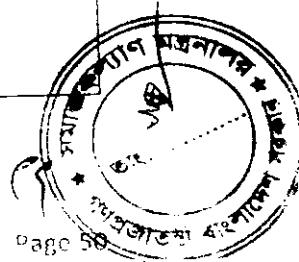


		as a security key.	
3	SSO	This should provide options to users to access all of his/her assigned systems with single user and password. No multiple access credentials needed to access multiple systems.	

Module 9: API Management

SL.	Features	Feature description	Integration
1	Secure API Manager	<p>The process of designing, publishing, documenting and analyzing APIs in a secure environment. Through an API management solution, an organization can</p> <ul style="list-style-type: none"> - Guarantee that both the public and internal APIs they create are consumable and secure. - The API manager will have access control to APIs for internal and external systems. - The API Manager should have API management dashboard. <p>So need to develop an API Manager to ensure and establish secured channel of API communication.</p>	

Module 10: Notification Management			
SL.	Features	Feature description	Integration
1	Notification settings management	There should have provision to create, configure and manage notification rules for different service delivery process.	
2	Notification medium	<p>There are two mediums of notifications- SMS, e-Email. SMS: Sending SMS to service consumer and provider's mobile phone in real time is an important concern to process and deliver services efficiently.</p> <p>Email: Proper and timely notification is a vital concern at required point of each service's life cycle. Email notification is very usual among 3 types of notifications like Email, SMS and System notification.</p> <p>There should have template with specific format for these notifications. The systems can access's Queue manager and Enterprise Bus for these notifications.</p>	
3	Notification types	System generated notification is another important concern and should be ensured along with Email/SMS notification in service life cycle. Notification can be 3 types: configurable, call to action, alert and medium can be via e-Mail, SMS and application systems.	





4	Notification template management	There should have notification templates for 3 notification mediums to convey the message properly to the recipients.	
5	Notification scheduler management	There will have settings to set schedules to send notifications at specific stage or timeframe	
6	Notification history management	There should have notification history log for the notification to analyze and manage the notification process efficiently.	

Module 11: Document Management

SL.	Features	Feature description	Integration
1	1. Document store and management	User will upload documents, system will categorize, index and store those. System user will have provision to add, update and delete documents.	
2	2. Document optimization	The system will have mechanism to automatically optimize raw documents special image or video files uploaded from different devices. Usually the sizes of files are excessive than system really needs to process services. So an automated and configured optimization mechanism is needed to optimize and make the system efficient.	
3	3. Document processor and management	The system will need to have generate special types of documents like certificates, approval letters, testimonials etc. The system should options to store, share, circulate and use the document as reference to another system.	
4	4. Document template management	The system will have templates to generate documents maintain defined formats	
5	5. Document verification management	There will have option to verify a document once delivered from the system	
6	6. Document meta data management	There needs to have options to store meta data associated with the documents for better searching, sorting, indexing and archiving	
7	7. Document upload and download	There should have options to upload and download documents. There will be access control to documents download options depending on the sensitivity and security of the documents.	
8	8. Document archiving	There will be large amount of documents stored in the system over the time. So, need to archive documents with proper indexing and mapping to faster and to ensure efficient document management	



**Module 12: Dashboard management**

SL.	Features	Feature description	Integration
1	Institute wise individual dashboard	There will have multi-layer dashboard for different types of senior officials to monitor overall activities under his/her jurisdictions so that s/he has overview of the whole scenario to take informed decision to ensure smooth and efficient service delivery. The access of the dashboard will be configurable by super admin user's access.	
2	Dashboard template management	There can be different types of dashboard templates based on user layers and types and systems. There will be a template repository and system will use the repository to develop dashboards.	
3	Multi-layer access mechanism	There will have different levels of users in the dashboard. So need proper access control for those users to assign access of relevant data/contents to relevant users.	
4	Dashboard Sharing	There will have provision to share or circulate dashboard information to other systems when necessary	
5	Intelligent insights and directives	The dashboard will generate intelligent insights and directives to assist higher official to take action to boost up and enrich quality service delivery.	

Module 13: Report Management

SL.	Features	Feature description	Integration
1	Generate and Manage Report	<p>The institutions need different types of reports periodically or in instant need basis. Here are some of examples:</p> <ul style="list-style-type: none"> - Report on Annual Performance Agreement (APA) - Report on Prime Minister Commitment and Implementation - Report on Progress - Report on Pending Response - Report on Audit and Law - Report on Monthly Coordination Meeting - Investigation Reports 	
2	Report template	There should have pre designed report templates for report generation. System users will be able to choose a template and prepare report to serve purpose.	
3	Report sharing and circulation	System user will be able to export and share the reports to others.	
4	Report scheduler	There will have a scheduler to generate reports and	





		even to circulate those to respective authorities/users as per configuration.	
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Module 14: Payment Management

SL.	Features	Feature description	Integration
1	Payment gateway integration	<p>1. The Service Recipients will pay and get their payment through a Payment Gateway integrated with this Platform. System user can manage payments to users and track/monitor payment status. Here are some of options needed in the payment system:</p> <ul style="list-style-type: none"> - Ensure at least one MFS(Mobile Finance System) for payment process - Payment system should be accessible from mobile - Need transaction log and audit trails - Dispute management - Maintain standard security measurement to ensure secured payment process. 	ekPay/Payment Gateway

Module 15: Service/ Application Tracking

SL.	Features	Feature description	Integration
1	Real-time service tracking	Every service will have a service tracking ID. Service Recipients will be able to track their application status in real-time using the service/application ID. The system should display the status via system message, email or SMS as per configuration.	

SL.	Features	Feature description	Comment
1	Archive scheduler	There will have a scheduler to achieve data and content as per the schedule	This is a mandatory concern to archive and index data efficiently following standard
2	Archive configuration	There will have a configuration settings to set different parameters needed for regarding the overall archiving process management.	
3	Archive log management	System will store logs for the archiving process	methodology. This is certain that data size will be increased based on the usage of services over the time. So, it'll certainly create a disaster if proper data archiving plan not implemented to





			handle data.
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Module 17: System Monitoring

SL.	Features	Feature description	Integration
1	System, network and infrastructure Monitoring	There will have a live server monitoring application to monitor host server's hardware, processor usage, VM or physical machines status etc. This is an essential requirement for large system management to check and fix the server issues efficiently in minimal time duration. There are many open source application like Nagios, Cacti etc. Vendor can chose any of those that fit best considering the nature of the system.	

Note: The interested vendor must comply with all the above mentioned modules and features but do not have to be limited with this list only. It should be precisely noted here that at the time of system requirement analysis phase, the implementation organization/agency will have full right to include other features and functionalities those are completely relevant to this assignment.

Vendor is requested to submit a "**System Functional Requirements Description /Ref Doc-13**" covering detailed functional scope to be covered in this project. In the proposal the vendor may add other relevant functionally described feature if they find it relevant.

Apart from this, the interested vendor should analyze the other scopes which are relevant to the areas covered above and should propose the best possible and comprehensive ICT solution in their technical proposal. The ultimate modules and features 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.

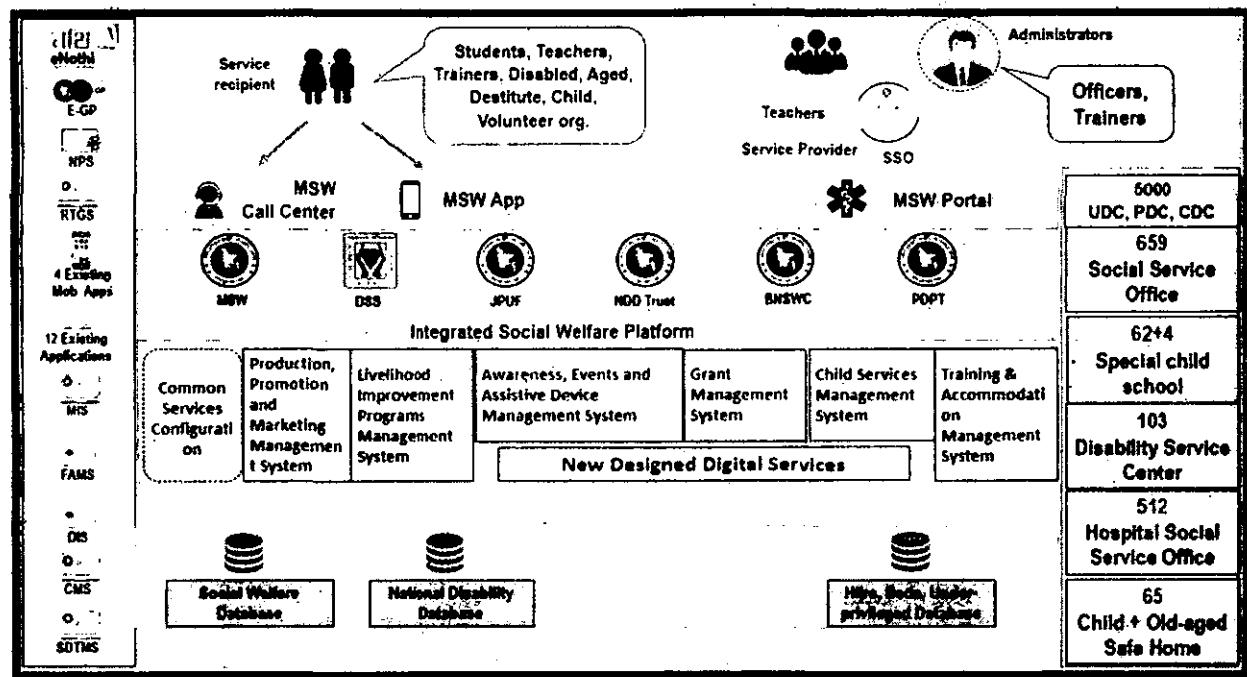
4.2. Solution Architecture

Solution architecture plays a useful role at the initial stage of understanding of the solution ideation, solution design, and solution implementation plan. Here the solution architecture is expected to establish the complete understanding of the business context i.e Service delivery and receiving process in digital form, the vision, objectives and ultimate requirements of this solution for proposed application. The overall scope of solution architecture may be designed based on the proposed business architecture which describes below the holistic, multidimensional business views, high-level service delivery scopes and access points, major stakeholders involvement and relationship (Organizations are acting as service provider).





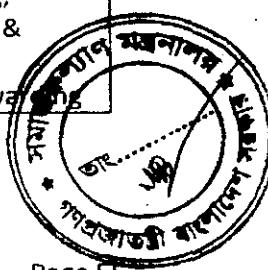
including ministry/division itself.), major integration scopes and high-level information management etc.



This architecture should define the process of developing and documenting covering the context of the proposed e-Service solution including all impactful and applicable architecture domains such as Micro-Service approach, accessibility, business, data, application, technology, integration, cross cutting issues like security, management operation etc. The solution architecture will elaborate and further decompose the target architecture into architecture deliverables for each architecture domain. The vendor shall submit a **“Comprehensive Solution Architecture (Ref. Doc- 2)”** in their technical proposal which may include business architecture, information architecture, application architecture, and technology architecture focusing on the scope mentioned in this TOR.

4.3. Users and User Roles

Component-1: Grant, Allowance & Stipend Management System				
Sl.	Type of Users	No. of Users	Title	User Role
1	e-Service Operator	100	<ul style="list-style-type: none"> SSO, DD, AD, UDC, UNO Research Office IT Officer Assistant Engineer Accounts Officer Executive Officer Admin Officer 	<ul style="list-style-type: none"> Budget Preparation, Approval and authorization Notice & Advertisement Preparation, Approval & Circulation Application tracking, sorting, shortlisting & approval GO application forwarding

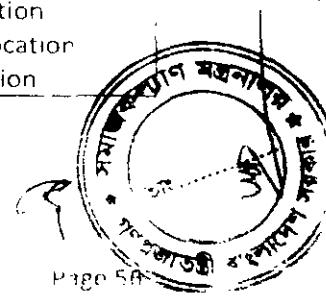




				& Issue GO <ul style="list-style-type: none"> ● Meeting Invitation and Resolution ● Registration Monitoring ● Payment Monitoring
2	e-Service Administrator	647	<ul style="list-style-type: none"> ● System Admin ● System Analyst/Programmer 	<ul style="list-style-type: none"> ● Real-time monitoring & control ● Progress Monitoring ● Service Recipients Monitoring. ● User Access Control ● Payment Gateway, Report & Database Management
3	e-Service Recipients	15,000,000	<ul style="list-style-type: none"> ● Grant, Allowance & Stipend Applicants ● Users of DSS, JPUF, BNSWC, NDDP ● Citizen 	<ul style="list-style-type: none"> ● Application submission ● View Application status ● Make Payment ● GO application

Component-2: Hospital & Disability Service Management System

Sl.	Type of Users	No. of Users	User Title	User Role
1	e-Service Operator	20,000	<ul style="list-style-type: none"> ● SSO ● Doctor ● Nurse ● Staff 	<ul style="list-style-type: none"> ● Service Checklist ● Service Process ● Service Schedule ● E-Prescription ● Hospital Social Activity ● Manage Store Information ● Manage Patient Registration & Information ● External Store Management ● Manage Consultancy and Therapy ● Service Information & Locator
2	e-Service Administrator	100	<ul style="list-style-type: none"> ● DG ● Director ● System Administrator ● Accounts & Finance Officer 	<ul style="list-style-type: none"> ● Service Dashboard ● Manage Donation ● Manage Monthly Budget ● Hospital Set-up Data ● Manage Purchase Order ● Manage Payment Information ● Payment Disbursement ● Generate Store Report
3	e-Service Recipients	10,000,000	<ul style="list-style-type: none"> ● Patients ● Attendee ● Citizen 	<ul style="list-style-type: none"> ● Free Service Information ● Hospital Information ● Doctor's Information ● Service Center Location ● Contact Information





Component-3: Production, Promotion & Marketing Management System

Sl.	Type of Users	No. of Users	Title	User Role
1	e-Service Operator	500	<ul style="list-style-type: none"> ● IT Executive ● Staff 	<ul style="list-style-type: none"> ● Supplier Information ● Raw Material Manage ● Raw Material Stock Manage ● Raw Material Requisition ● Demand Order ● Online Order ● Delivery Tracking ● Payment Manage ● TVC, Print Media Manage ● Fair Manage ● Campaign Manage
2	e-Service Administrator	111	<ul style="list-style-type: none"> ● ED ● Marketing Supervisor ● System Administrator 	<ul style="list-style-type: none"> ● Raw Material Dashboard ● Raw Material Requisition Approval ● Production Dashboard ● Production Target ● Retailer/Dealer Manager ● Promotion Dashboard ● Sales Target
3	e-Service Recipients	1000	<ul style="list-style-type: none"> ● Retailer ● Dealer 	<ul style="list-style-type: none"> ● Online Registration ● Profile Manage ● Demand Order ● Quotation ● Payment ● Order Tracking ● Sales Target ● Online Order ● Delivery Tracking

Component-4: Awareness, Event & Assistive Device Management System

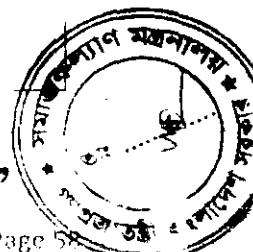
Sl.	Type of Users	No. of Users	Title	User Role
1	e-Service Operator	130	<ul style="list-style-type: none"> ● DAO ● AD ● DD ● Director ● MD 	<ul style="list-style-type: none"> ● Digital Awareness Management ● Event Management ● Online Requisition for Assistive Device ● Centralized Data/CV Bank
2	e-Service Administrator	1	<ul style="list-style-type: none"> ● System Admin 	<ul style="list-style-type: none"> ● System Administration & Monitoring ● User Management ● System Monitoring ● Create, Update, Delete Information
3	e-Service Recipients	1,700,000	<ul style="list-style-type: none"> ● User 	<ul style="list-style-type: none"> ● Online Application ● View Application status ● E-Notification



				<ul style="list-style-type: none"> ● User Profile and Dashboard ● Online Search ● Dynamic FAQ ● Wish List ● Digital Service Record
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Component-5: Training & Accommodation Management System

Sl.	Type of Users	Title	User Role
1.	e-service operator	<ul style="list-style-type: none"> ● Executive Secretary ● Training Coordinator ● Assistant Director ● Training Officer ● Data Entry Operator ● Superintendent ● Deputy Commissioner 	<ul style="list-style-type: none"> ● Committee Management ● Training Calendar & Budget Management ● Course Management ● Trainer Selection & Trainer Profile Management ● Course & Course Module Management ● Venue Management ● Trainee Selection Management ● Trainee ID Card Print ● Attendance Management ● Evaluation Management ● Transcript/Mark sheet Management ● Training Certificate Issue ● Events & Award Ceremony ● Bill Calculator & Payment Management ● Room Allocation ● Food Supply Management ● Manpower Management
			<ul style="list-style-type: none"> ● Questionnaire Management ● Evaluation Report ● Workshop/Seminar based on evaluation report ● Dashboard ● Course Summary Report ● Trainee Performance Report ● Training/Course wise Attendance Report ● Course wise Attendance Sheet ● Result Report
2	e-Service Administrator	<ul style="list-style-type: none"> ● System Admin 	<ul style="list-style-type: none"> ● System admin ● User Monitoring ● Approval ● Administration ● Information Management ● Complain/Recommendation Management





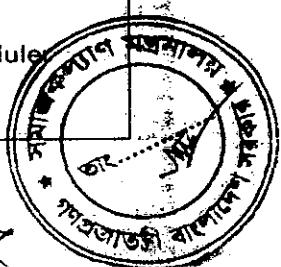
			<ul style="list-style-type: none"> ● Training Institute Management
3	e-Service Recipients	<ul style="list-style-type: none"> ● Registered Organization ● Trainer ● Trainee 	<ul style="list-style-type: none"> ● User Registration (Trainee, Trainer) ● Application submission ● View Application status ● Accommodation Information ● User Profile/Dashboard

Component-6: Disability School & Education Management System

Sl.	Type of Users	No. Of Users	Title	User Role
1	e-Service Operator	1	<ul style="list-style-type: none"> ● System Analyst ● Admin ● Data Entry Operator 	<ul style="list-style-type: none"> ● User Creation ● User Access Control ● System Data Input ● Approval
2	e-Service Administrator	1	<ul style="list-style-type: none"> ● System Analyst ● Super Admin 	<ul style="list-style-type: none"> ● System administration & monitoring ● User Monitoring ● System Setup & Backup ● Server setup and maintenance
3	e-Service Recipients	10,000	<ul style="list-style-type: none"> ● Principal ● Teacher ● Authority ● Students ● Student's Parent ● Supporting Team ● Vendor 	<ul style="list-style-type: none"> ● Create Course ● Create Exam ● Admission Management ● Result Management ● Hostel Seat Allocation ● Student Information Management ● Approval

Component-7: Child Services Management System

Sl.	Type of Users	No of Users	Title	User Role
1	e-Service Operator	2	<ul style="list-style-type: none"> ● Director General ● Director ● Deputy Director ● Superintendent ● Probation Office ● Deputy Superintendent ● Social Case Worker ● Assistant Superintendent ● Office Assistant ● House Parent 	<ul style="list-style-type: none"> ● Information update ● Application sorting & verification ● Application Approval ● Generate e-notification ● Profile management ● Monitoring Dashboard ● Draft circular preparation ● View and respond to complain ● Court Calendar Management ● Court Attendance Management ● Complain Management ● Co-Curricular Activity Schedule ● Attendance Management ● ID Card Management





				<ul style="list-style-type: none"> ● Evaluation & Rating configuration ● Evaluation, Rating, Certificate, and Report Management ● Seizer List Management ● Tagging Social Case Worker, Probation Officer and Child ● Case File Management ● Release Order Management ● E-Checklist Management ● Information & Circular Publication Management ● Admission form template management ● Meeting Management ● Child Profile Management ● Initial Listing Management ● Tracking Management ● Training Instructor's Profile Management ● Course Management ● Class routine management ● Class attendance Management ● Exam Management ● Transcript/Mark Sheet & Certificate Management ● Co-Curricular activity Scheduler ● E-Notification ● Dashboard/Report
	2		<ul style="list-style-type: none"> ● Secretary ● Additional/Joint Secretary ● Deputy Secretary ● IT Personnel 	<ul style="list-style-type: none"> ● Institution Information & Profile Management ● Committee Management ● Approval Management ● E-Notification ● Dashboard/Report
2	e-Service Administrator	2	<ul style="list-style-type: none"> ● Admin ● Super Admin 	<ul style="list-style-type: none"> ● User Management & Monitoring ● System Management ● Update ● Delete ● Entry
3	e-Service Recipients	3,000	<ul style="list-style-type: none"> ● Children ● Guardian ● Citizen 	<ul style="list-style-type: none"> ● Online Application ● Profile Update ● Transcript/Mark Sheet & Certificate ● Court Calendar ● Feedback ● Review/Rating ● E-Notification ● Dashboard/Report



Component-8: Social Welfare Service Delivery App				
Sl.	Type of Users	No. of User	Title	User Role
1	e-Service Operator	100	<ul style="list-style-type: none"> ● MoSW Official ● Data Entry Operator 	<ul style="list-style-type: none"> ● Dashboard/ Reporting ● Complaint Management ● Committee Management ● Manual Information Entry/Update ● Downloading/Archiving
2	e-Service Administrator	2	<ul style="list-style-type: none"> ● System Admin ● Programmer ● System Analyst 	<ul style="list-style-type: none"> ● System admin ● User Management and Monitoring ● Category/Sub Category Setup ● Intelligent Search Parameter Setup ● Filter Parameter Setup ● Service point management ● Allowance eligibility criteria setup
3	e-Service Recipients	505,000	<ul style="list-style-type: none"> ● Citizen 	<ul style="list-style-type: none"> ● Service Point Finder ● Manual Sharing ● Filter/Dynamic Search ● Service Application ● Allowance eligibility checker ● Query and Complaint Submission ● Committee Information

Understanding the context, objective and the functional scope of this proposed system, vendor is expected to submit a comprehensive "System User Management Plan (Ref. Doc-3)" in the technical proposal which should include or cover categorization of major users, accessibility, authentication, authorization and overall management for the solution.

Note: In case of requirement for integration with e-filing system (Nothi) the vendor must include their Single Sign On solution in their proposed User Management Plan.

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.

If the proposed system is integrated and interoperable with government prescribed e-Filing system (e-Nothi) then vendor will design the seamless, smooth and user friendly single login system (Single Sign On).



5. SDLC Approaches & Methodology

Considering the current context of digital government implementation of Bangladesh, we've proposed hereunder a tailored SDLC methodology for the development of this integrated service delivery platform. Under the scope of this SDLC methodology, for effective, efficient, timely and fruitful development of this system and achieving early release as a tangible result, the scope of this project can be divided into 2 parts (components & modules) based on priority and dependency of the modules and features to be developed and released. At the project inception phase, the two parts components/modules will be defined by the concerned authority (implementing agency) discussing with the vendor.

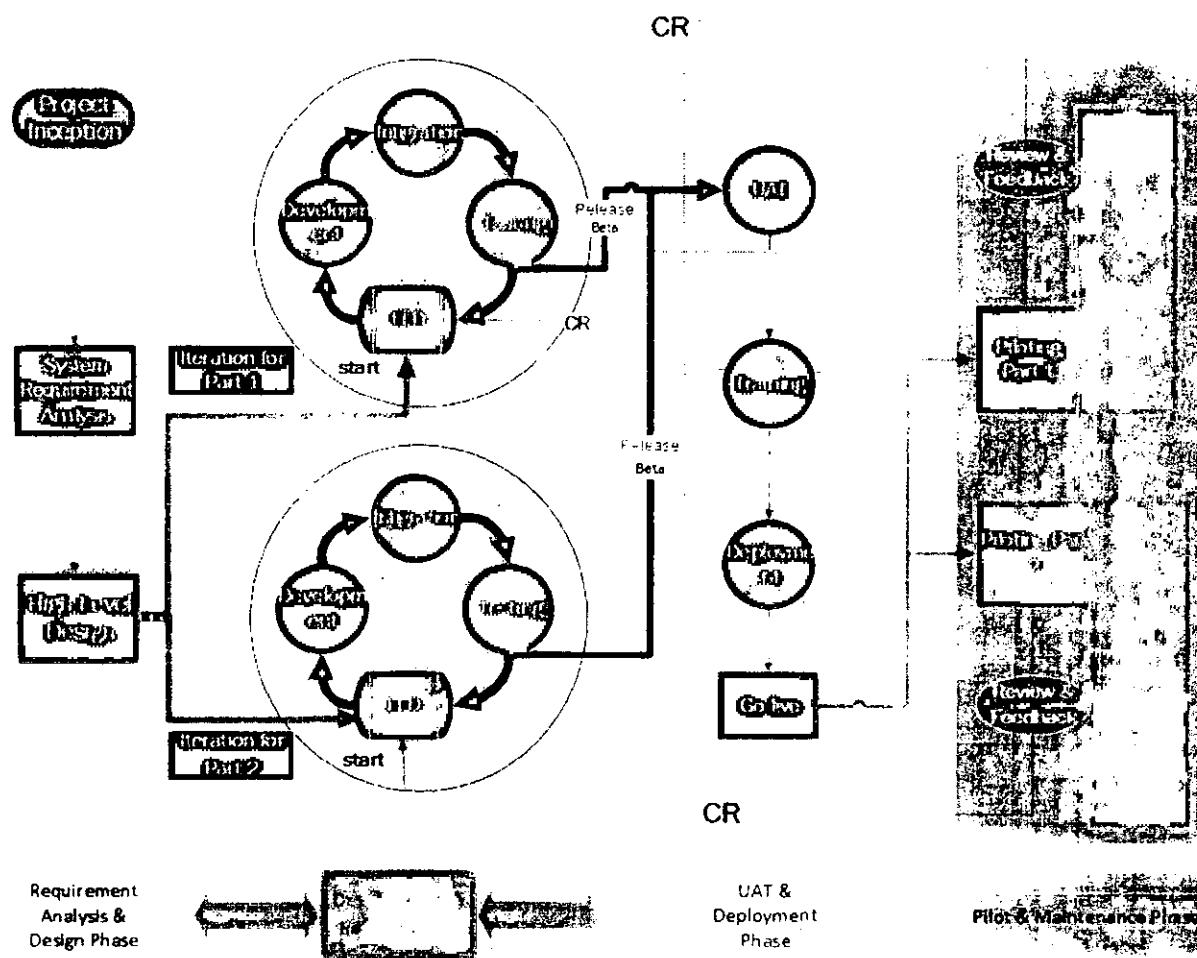
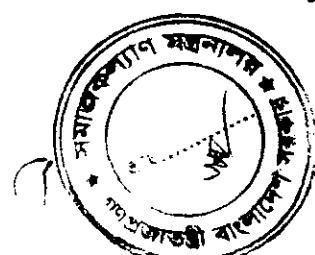


Figure: Hybrid SDLC Methodology

The methodology covers the following phases:





5.1. Phase-1: System Analysis & Design

5.1.1. Project Inception:

The SDLC process will be started from this phase. Project will be initiated with a kick off meeting between vendor, implementing agency & relevant stakeholders. At this phase, the entire project scope mentioned in TOR will be briefed and discussed extensively, the part boundaries will be defined, preliminary project implementation timeline, project management plan format & content structure will be discussed. At the end of this phase, vendor will submit a comprehensive and detailed project management plan for client's approval with a power point presentation and submit hardcopy of documents. On receipt of approval of the project management plan, only the phase will move to **Phase 2**.

Deliverables: Approved Project Management Plan

5.1.2. System Requirement Analysis:

The vendor will initiate the project with this phase which includes requirement finalization for the entire (Part 1 and Part 2) project scope from functional aspect.

Proposed e-Services requirement study, analysis and finalization is a very important phase in the entire SDLC. It is expected that, the selected vendor will carry out detailed requirement study and analysis on each and every scope of e-Service that mentioned in the TOR. Under this scope of work, the selected vendor has to analyze the detailed functions, processes, documents, actors, service delivery sites and infrastructure of the relevant services precisely of the concerned organization. At this phase, vendor's ultimate objective will be finalization of the e-Service requirements in details under the scope of TOR and receiving approval of the concern organizational authority. Here vendor is requested to propose and submit a software requirement analysis plan which should cover the relevant activities to be performed, required timeline, specific deliverables to be produced, determine dependencies and resources to be used.

Deliverables: Software Requirement Specification (SRS) and UI based non-functional prototype/Mock.

5.1.3. High-level System Design (HLD):

The phase-2 is entirely dependent on phase-1 deliverables which will only be initiated after the completion of phase 1.





The scope of the high level design phase will be based on the entire project's (Part-1 and Part-2) approved SRS. However the HLD document (if required) can be updated based on the changes of SRS i.e. version changed of SRS on received CR.

Here, high-level design will ensure the architecture that would be used for developing this e-Service solution. The architecture diagram will provide an overview of an entire system, identifying the main components that would be developed for the e-Service and their interfaces.

The ultimate deliverables of this design will be high-level design document or HLDD which adds the necessary details to the current project description to represent a standard model for coding. This document includes a high-level architecture diagram depicting the structure of the system, such as the database architecture, application architecture (layers), application flow (navigation), security architecture, technology architecture and integration blueprint.

Deliverables: High-level design document or HLDD.

5.2. Phase 2: Development & Release:

Based on the priority, importance and dependency, the project scope will be divided into two or multiple Parts as per organizational consideration and decision. Each Part will be completed through an iteration. The iteration process may follow the scrum process with several sprints of Agile Methodology. The iteration includes several steps such as LLD (Low Level Design), Development, Integration, Testing, Review and Release. For detail clarification the "Iteration 1" steps for Part 1 are described below:

5.2.1. Iteration 1 for Part 1:

Low-level design (LLD) is a component-level design process in which the actual software components, modules and functional requirements are designed. This process can be used for designing data structures, required software architecture, source code and ultimately performance algorithms. Vendor will have to submit a report on LLD based on which development will be started.

Deliverables: Part 1 LLDD version 1.0

5.2.2. Development:

At the development stage based on the LLDD, a development team will be mobilized who will start the coding process following the standard code convention, code level documentations, header of each file, algorithms, interfaces, code compression and APIs should be supplied with proper description within the given schedule as per the plan. The team will strictly follow the standard procedure of version control of codebase, database and





related files using stable version control tools. The vendor will use standard project management tools to manage and track issues as well as monitor development progress. The client (Govt.) or client nominated representative/product owners need to have access and control to the version control system and in project management tools to manage and monitor the development process.

Deliverables: Developed features/modules/components/applications, code documentation, algorithm & interface related documents, development & versioning report, Test driven development (TDD) approach should be included at this stage to ensure smooth development etc.

5.2.3. Integration

Considering the Integration requirements and scopes defined in the SRS, HLDD & LLDD for this e-Service application, the vendor must perform the planned integration activities. At this stage, the vendor will perform all necessary above mentioned tasks & follow guidelines regarding integration to make the e-Service application interoperable.

Deliverables: Integration testing reports, Integration activity report

5.2.4. Testing

Software testing process is one of the most vital phases through which it will be expected to evaluate each and every functionality of the proposed software application with an intent to find whether the developed application's functional features meet the specified requirements or not.

The vendor should prepare an extensive testing plan so that any functional failure can be detected and corrected timely and properly. The scope of the software testing should include the examination of code as well as the execution of the code in various environments and conditions as well as examining the aspects of the code; does it do what is required.

The vendor must propose a comprehensive testing plan in their technical proposal for this e-Service application starting from development to deployment that is covered in the full test life cycle. This testing plan should cover all the standard testing approaches applicable for this e-Service solution 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. The vendor should submit testing plan which may include standard test approaches. Some are mentioned below as examples for reference.

1. Unit Test
2. Installation testing
3. Compatibility testing
4. Smoke and sanity testing
5. Regression testing
6. Stress Testing



7. Acceptance testing
8. Alpha testing
9. Beta testing
10. Functional vs. non-functional testing
11. Continuous testing
12. Destructive testing
13. Software performance testing
14. Usability testing
15. Accessibility testing
16. Security testing
17. Concurrent testing
18. System testing
19. Integration testing
20. Performance testing.

Deliverables: Test Plan, Test Scripts, Test Logs, Test Reports, Feedback.

Note: Based on the Test reports and received feedback (Change Request) the LLD, version, developed application may be changed accordingly.

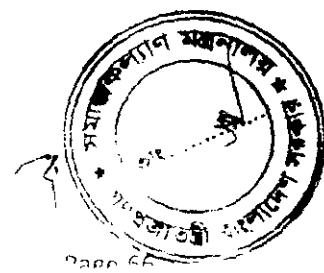
5.2.5. Release:

After successful completion of “iteration 1” that is predefined, successive steps will be executed properly with expected quality, the developed application will be released as a Beta version considered to be deliverable of this iteration. In case of unsatisfactory testing reports, the iteration will be continued accordingly without any release.

Deliverables: Released application (Part 1) with Versioning

5.2.6. Iteration 2 for Part 2:

For another part i.e. another same iteration may be started based on the mobilized team's availability and mobilization plan. Like for iteration 1, the engaged team for LLD will be released almost just after entering into the development step, so that team could be assigned for the LLD of iteration 2. In the same way, the development team of iteration 1 will be engaged mostly till integration, therefore a part of this team can be mobilized for the development phase of iteration -2. Therefore, based on the availability of adequate resources, engagement and mobilization plan, vendor may run both parts i.e. 1 and 2 almost simultaneously at different development iteration plan. In this case, iteration -2 will follow the same steps like Iteration -1 to deliver the part and release as a BETA version for UAT and deployment.





5.3. Phase-3: UAT & System Deployment

As soon as one iteration releases any developed application after completing the predefined steps and processes, this released version will be entered into this immediate phase i.e. UAT and system Deployment. The basic objective of this phase is to receive user feedback, adjust them, take final consent or acceptance of user, and ensure system testing for deployment, training and taking final deployment actions to GO LIVE. There may be basically 3 major steps are involved in this phased which are described hereunder:

5.3.1. User Acceptance Test (UAT):

Just after the release from an iteration as BETA version, developed application will enter into this UAT Process. At this step, the system will be tested by the users of different levels extensively to receive their precise feedback and review. Based on the received feedback and review, the process may lead to the previous state i.e. may enter into the previous iteration again with defined CR to adjust. Finally when user's valuable feedback and review will be addressed, this application will be ready for User Acceptance. This step will end with the user acceptance for the BETA version to move forward.

Deliverable: Accepted application (With version) and UAT Report

5.3.2. User Training:

After completion of the UAT, at this step, User training will be required to be provided as per predefined project management plan and timeline. User training has to be very extensive and detailed so that users of each level will receive this training and will be capable to operate and run this system without any major technical dependencies.

Deliverables: Training Manual, Training Plan, Training Feedback, Training Report

5.3.3. Deployment

Deployment is a very important step in the SDLC before going LIVE where different types of necessary and standardized activities should to be performed as per predefined plan. The deployment plan should be prepared in a comprehensive manner choosing the appropriate deployment method and right deployment checklist. Automating deployment process as much as possible is a wise decision at this step. Obviously adopting continuous delivery and using integration server is necessary. Deployment preparation also may include another code deploying entering version release notes, checking that the required server is running smoothly and configuring staging environment properly. At this step, there are various testing processes that should be performed as a part of the obvious process deployment test plan and method should be chosen well ahead. This may include deploying



the update to test environment, running each and every test code/scripts and reviewing results. Finally this deployment process may continue with copying the updates to the production environment, running any necessary scripts, setting changes for live and testing on the live server before going LIVE.

5.3.4. Go Live:

Successful deployment of any developed and tested application will lead finally to the "GO LIVE" state. The inauguration of the application may take place immediately when it enters into this stage. As inauguration is the formal session to expose or open the application to the end users/citizen, therefore proper consent of the concerned implementation Organization/Agency is required before going LIVE.

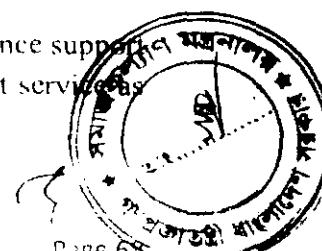
5.4. Phase 4: Piloting & Maintenance

It may be stated that the pilot phase will be started immediately with the starting of "GO LIVE" which should last a maximum of 3-6 months based on the decision of the implementing Agency/Organization and predefined accepted pilot implementation plan. The vendor will provide all necessary support to ensure smooth operation in the pilot phase. It may be mentioned here that, some change requests (CR) based on the end users review and feedback at this piloting stage may be required to be accepted and CRs will be adjusted through predefined development cycle. Obviously at this stage, those CRs must be considered aligned to the Terms of Reference (ToR) of the assignment avoiding major functional changes that may create alteration on architecture, database structure and development complexity. In this case, CRs related to UI and UX, frontend scripting and content presentation level may be accepted. In this piloting phase, technical support, continuous training, timely reporting, receiving end user's feedback and measuring the overall performance of the application are the important factors that should be taken care of by the vendor at this stage.

5.4.1. Maintenance & Support:

Maintenance phase will be started in this SDLC methodology. This phase is very important because the actual maintenance support service will be started by the vendor and the implementing organization will also take measure for scale up implementation of this software based on the result of the pilot. Those two important issues of this methodology are described hereunder:

In case of software implementation, especially for the e-government, maintenance support service plays a very vital role. Vendor needs to provide this maintenance support services as





per the predefined plan and action which will be approved by the implementing organization at the inception phase under the project management plan. At this maintenance phase, the main objective will be ensuring this e-government or digital service application operation is running smoothly, uninterruptedly and without any hassle or complexity. Some factors mentioned below are very important at the time of maintenance support service by the vendor.

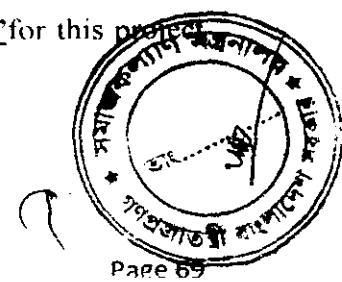
1. The developed and deployed digital eservice application should run smoothly and bug freely.
2. In case of any technical problem or support requirement, vendor's response for solution has to be very prompt.
3. Based on the type of technical complexity and support requirement, the response and problem solution plan has to be predefined and precise through a signed SLA.
4. Vendor must consider contingency plan to manage and solve sudden complexity, technical problems arose and support request.
5. The help desk remote support should be comprehensive, strong, standard and adequate.
6. Improving user engagement, user training and receiving user review & feedback should be considered in the maintenance support plan.
7. Communication, software performance evaluation, continuous improvement for user satisfaction and right time reporting to the concern authority should be planned well ahead and execute the same timely as standard service.

Based on the analysis of the impact of piloting phases and adjusting the plan, scale up implementation has to be done. In this case, the vendor will provide proper guidelines and different kinds of planning support to the organization so that the implementing organization can complete the scale up successfully

Deliverables: Support and Maintenance Plan, SLA, Running Digital Service

Note : The above mentioned hybrid methodology is proposed based on the e-Government Application/Digital Service implementation context, priorities, dependencies and challenges. This hybrid methodology has been proposed here customizing few popular SDLC methodologies like Agile Scrum, etc. Understanding the scope of the project and other important context and factors, vendor may follow this proposed hybrid methodology, or may customize it as per necessity or may propose any other different SDLC methodology with proper justifications in their technical proposal. The project implementation time plan /schedule should be proposed in the technical proposal completely based on the chosen SDLC methodology by the vendor.

But vendor is requested to describe the "**SDLC Methodology (Ref. Doc- 4)**" for this project in details in their technical proposal covering the following





1. Diagrammatic representation of the proposed SDLC showing the phases, methods, processes, flow, steps, deliverables etc.
2. Proper justification/rationality for choosing the SDLC and context/factors considered in choosing the same. The advantages of this SDLC should be stated very clearly and precisely in respective of this project scope/context.
3. Detailed activities/tasks and description of each and every phase /step which will be performed under the scope of this SDLC for this project like Inception , Requirement analysis, Design , Testing, Development , Deployment etc. This description of each phase/step should also include the purpose, deliverables/documentation, dependencies of this SDLC.
4. The probable risk , challenges , threats of this SDLC that vendor is assuming

6. Non-Functional Requirements

6.1 Application Compliance Requirements

6.1.1 Web Application

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

6.1.2 Mobile Application Requirements

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





6.1.3. Coding Conventions

The vendor must follow the standard coding styles to produce high-quality code for further usage 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.

Note:

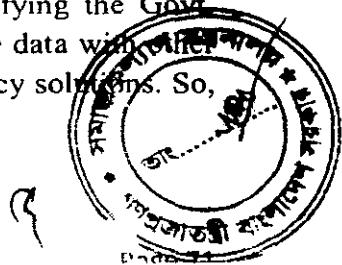
- a) A comprehensive "List of Standards (RFP Doc- Criteria (ii) ;Sub Criteria: d-1" based on the latest technology to be complied for web and mobile platform and coding convention regarding this integrated service delivery platform development and operation will be preferred in the vendor's technical proposal.
- b) Vendor must handover all the raw and unencrypted source code of this whole application with database and all the related technical documents to the client/ministry.

6.2. Integration Requirements

As a government system or e-Service application, integration with the required and other prescribed national systems is very important and essential. Only by proper integration and interoperability, an e-Service application can drive the ultimate citizen benefits with the optimum use of technology from manual to digital transformation. Here, vendor should come up with an integration plan in their technical proposal considering and understanding the scope of the e-Service application as per this TOR. The vendor will incorporate the integrations of all the existing systems under this Ministry as well as all the subordinate organizations with this integrated service delivery platform. If integration is not possible (i.e., compatibility issue), in that case existing system data needs to be migrated by vendor to the proposed integrated service delivery platform to ensure smooth service execution process. The possible integration scopes of this e-Service application are mentioned below as a reference for the vendor.

To establish an integrated digital government and ensuring the interoperability among the e-government/eServices of Bangladesh, integration is one of the key factors which should be considered as a topmost priority. The proposed eService solution must comply with all national e-Government standards which are prescribed by the BNDA (Bangladesh National Digital Architecture) or any relevant and authorized government authority. Only an integrated and interoperable e-government/integrated service delivery platform can fulfill the ultimate objectives of digitalization with the optimum use of latest and standards ICT.

The vendor can follow standard integration mechanism such as exposing standard Restful APIs for the service process in different components so that any component or service can exchange data and related resources whenever it is required by satisfying the Govt. Agency's business purposes. The digital services should be able to exchange data with other digital systems within the particular Govt. agency as well as with inter-agency solutions. So,



the vendor will develop a standard API manager following international standard so that the data sharing can happen efficiently and standard securities will be maintained smoothly. The digital solution must address the stated interoperability and integration issues of the agency ~~for system's sustainability and end-to-end digitalization issues which is the ultimate goal of digital transformation.~~

No	System Name	Description	Department/Office
1	[REDACTED]	Document approval and take relevant decisions in different segment of service's life-cycle	a2i
2	Election Key	Verify service recipient's identity	Election Commission, ICT Division
3	[REDACTED]	Send and receive SMS	Telecom Operators
4	[REDACTED]	Send and receive email, Professional email address management for the organization	National Data Center
5	Bill Payment	Collection & disbursement Bill Collection	a2i/Third Party Provider
6	[REDACTED]	Verify Service Recipients Identity	Birth-Death Register General Office
7	[REDACTED]	This national call center service can be easily integrated as an effective information service for this digital platform.	a2i
8	Google Map	Google Maps is a web mapping service offers satellite imagery, street maps, real-time traffic conditions and route planning for traveling by foot, car, bicycle and air or public transportation using VPS (Visual Positioning System) to locate any place.	Google

The vendor may also follow the standard integration mechanism of Office Information and Service Framework (OISF), developed by a2i, ICT Division, which works as a mediator.

Based on the consent/instruction of the concern authority(implementing organization) vendor may select any integration guidelines from option 1 or option 2 which are described hereunder.





6.2.1. Option 1: Integration Guideline (Prescribed by a2i):

The Center may follow the standard integration mechanism of ekSheba Sarkar. It's Information and Service Framework developed by a2i (CCDS) standard which provides e-governance solutions for various government services. It's a common interface provided by different solutionists.

If system is integrated with ekSheba Sarkar then following information can be invoked:

- Office Information
- Employee Information
- GEO Information
- Users Information
- Organogram

And following shared services can be accessed (not limited to)

- E-Nothi
- GRS (Grievance Redressal System)
- SSO (Single Sign On)
- Digital Signature

Apart from these, there are some predefined standards described under ekSheba Sarkar. Standards are defined as an established norm or requirement about systems. ekSheba Sarkar works as a mediator of different systems. It connects multiple systems and manages coordination among them. So to communicate properly and fruitfully, some predefined standards need to be followed. Otherwise system to system communication will be in jeopardy. Because of this, ekSheba Sarkar is introducing some standards that every e-governance system must follow to Integrate with other systems. To develop any e-governance solution which can be communicated with other e-government solutions, vendor must follow the same standards which are defined under ekSheba Sarkar standard documentation provided by a2i in ekSheba Sarkar portal: doptor.gov.bd/standard. Those standards are

- Data Standard
- Integration Standard
- Security Standard
- Deployment Standard
- Technology Standard
- Application Standard
- Biometric Standard
- Payment Standard
- Citizen Core Data Standards (CCDS)





6.2.2. Option 2: Integration Guidelines (general):

Based on the consent and approval of implementing organization (concerned authority) at system requirement analysis phase of software development, vendor may follow customized integration framework complying BNDA guidelines, published e-government policies & acts and international standards/conventions for minimizing system's operational dependencies and strengthening sustainability.

The vendor is requested to submit an "**Integration Plan (Ref. Doc- 06)**" in their technical proposal for this integrated service delivery platform covering the functional, technological, business, strategic, implementation, dependencies and activity related aspects.

6.3. Hosting Requirements

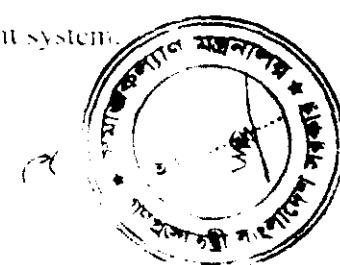
Bangladesh Government is providing an extensive and standard hosting facility for all types of government organization applications and software that is named as National Data Center under Bangladesh Computer Council (BCC). It may be mentioned here that the vendor developed application will be hosted in government provided data center i.e. National data center (NDC). Therefore, at this stage, vendor is requested to submit a "**Hosting Architecture & Requirements (Ref. Doc- 07)**" in their technical proposal for this e-Service application.

Note: If any implementing organization decides to host this e-government/integrated service delivery platform in their own or any nominated data center, understanding the strength and capacity of this data center and hosting requirements, vendor must guide implementing organization well ahead of the time of system design phase. So, implementing organization can take necessary measures to ensure hosting facilities which will be required at the time of hosting the developed system.

6.4. Security and Privacy Requirements

The vendor should submit an extensive "**Security and Privacy Plan (Ref. Doc- 08)**" including comprehensive security architectures in their technical proposal for this proposed e-Service application considering the following issues:

1. Project technical scopes
2. Functional and nonfunctional requirements and ultimate objectives
3. Concerned service provider organization's operational environments and capacity
4. User roles - Accessibility, Authentication, Authorization and Accountability
5. Importance of data management & data privacy
6. Strength of technologies to be used for development, operate & maintenance
7. Deployment & hosting
8. Service recipients and providers security, confidentiality and privacy
9. A checklist of security measures to be taken for this solution
10. Overall security standards which should be applicable for an e-government system.





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

6.4.1. System Security Requirements (But not limited to)

1. The vendor should follow any of the industry standard secured development methodology such as (but not limited to) Comprehensive Lightweight Application Security Process (CLASP) by OWASP etc.
2. The vendor should consider (but not limited to) common vulnerabilities such as SQL Injection, Cross Site Scripting (XSS) etc.
3. Vendor will undertake responsibility for Input Validation Controls, Authorization/Authentication Control and other security controls in place in both testing and production environment of application.
4. The following vulnerabilities must be checked and ensured security from the beginning:
 - a. Cross Site Request Forgery (CRSF)
 - b. Cross Site Scripting (XSS)
 - c. Session hi-jacking
 - d. Session Fixation
 - e. SQL Injection and Code Injection
 - f. Input Validation/Filtering
 - g. Output Escaping
 - h. Secure File Access
5. The vendor shall minimally provide Access control, Authentication and accountability security mechanisms for backend operations of the System.
6. The proposed security solution shall be scalable and should not affect the performance by creating a bottleneck or single point of failure to the overall system.
7. The system should provide tamper-proof audit trails and logs for administrator or auditor to check for the actions committed by users. The audit trails shall consist of following details but not limited to:
 - a. Login and logout
 - b. Attempts to access unauthorized resources
 - c. User profile changes
 - d. Past audit events.
 - e. Track all actions performed on documents attached/uploaded.
 - f. The system should have provision to assign the access rights of other resources on need basis to authorized users.
 - g. Information in the System that is deemed to be sensitive shall be encrypted and protected from accidental and/or unauthorized modification.
 - h. The System shall provide automatic session disconnection for inactive user after session time [Proposed best practice session time] is over.
 - i. The system shall protect the audit trails from being modified by unauthorized personnel or privileged users.





6.4.2 Security requirements for electronic payments & transactions (But not limited to):

1. Solution should be PCI DSS compliant.
2. Solutions should comply with all standardized security features, message protocols and encryption.
3. Payment gateway should have PG and DR as per international standard compliance.
4. Payment gateway should comply with international monetary security standards and must be certified by internationally recognized security authority and payment related auditors.

1. The system processing shall be scalable to support the volume estimates for a period of 10 years at a 20% annual growth rate.
2. The system shall be designed to handle estimated 5000 simultaneous connection (online users) when it is ultimately rolled out.
3. The vendor must conduct an extensive load testing task taking above factors into consideration and submit a load testing results.
4. The database architecture should be such that the system is available to user 24x7x365 days a year without any unapproved downtime.
5. 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.
6. 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.
7. Considering the network infrastructure challenges in Bangladesh, the solution must support low bandwidth conditions for the services defined in the functional requirements.
8. In case of mobile application also, this should support very low bandwidth even in 2G network provided internet bandwidth.
9. The proposed solution should be highly scalable to accommodate current and future requirements within the scope of the scope mentioned in the TOR
10. Analyze the requirements whether both horizontal scaling (scale-up) and vertical scaling (scale-up) will be required for this e-Service application or not?
11. The e-Service application should be provided with appropriate caching mechanism to handle very high-traffic scalability
12. The vendor may propose here other relevant measures for the e-Service application scalability.

Note: The vendor should submit a Strategic & Action Plan for System Growth (RAPE-19) including the methods of sizing, mechanism and measures that will be taken for ensuring the standard of performance mentioning proposed system's functional requirements.





~~process and completion of standard time and scalability of this integrated service delivery platform~~

6.6. Interoperability and Data Exchange

The selected vendor must develop this e-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 current and future systems.

The following are the key expectations on interoperability requirements:

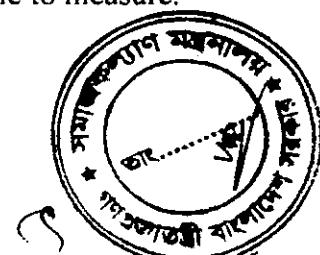
1. The system should be designed for interoperability using industry standard protocols.
2. System must expose data by Advanced Message Queuing Protocol and REST via TLS
3. All imported data must undergo data validation to ensure full integrity.
4. Data exchange within the system at different levels 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.

6.7. UI/UX.

The vendor must propose a "UI/ UX Plan (Ref.Doc-10)" containing UI designing method and tools, UI design Activity plan, prototype or Mock Up design for both web & mobile, expected result & their finalizing process of that UI/UX design. Apart from this, the vendor should consider the following issues as requirement at the time of UI/UX plan.

1. The system interfaces should be highly user friendly, easy to navigate and ensure fast loading.
2. The UI shall be designed by using well-established, supported and lightweight UI framework so that it follows widely used industry flow patterns
3. UI shall be easily configurable if any changes are needed
4. Menu, content and navigation shall be based on the user entitlements, roles and permissions.
5. Vendor is requested to include five important features considering service recipient five UI for each platform i.e. mobile, web. Those UI should be design professionally & hardcopy color page so that UI design capacity & standard will be able to measure.





6.8. Digital Service Toolkit and Guide

A 360 degree guide of service using updated technologies will create a significant impact in case of using the implemented digital service by the system user (service providers & recipient). This toolkit & guide service may be implemented in different modalities as mentioned below:

6.8.1. Digital service receiving guide:

Digital service receiving guide: In both of the platform of web & mobile applications, the service recipient who are not even tech literate should be able to find an easy way to make them easily oriented for the digital service they would like to receive from application. Both the platform (Web & mobile) with few clicks should have easy content read & multimedia/ animated/video which is easy to view & understand receiving process, guideline & examples. The content can be focused on service receiving eligibility, requirements & step by step service receiving process for each & every service.

6.8.2. Smart guide for Digital features:

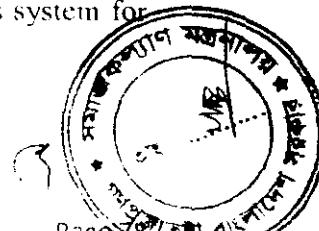
Smart guide for Digital features. In both the platform mobile apps & web in case of receiving any digital service in each interface of digital feature, the service recipient will find a default "guide/help link" by clicking on this meaning. Instance guide service can be availed like step by step pictorial action flow or video/multimedia content to use this feature & other relevant smart or interactive contents to receive instant support.

6.8.3. Digital user manual:

For all types of usage, vendor must prepare easy accessible & focused training manual which will also be available in mobile apps & web application also. The user manual should be smart enough so that the target users can receive the training by himself or herself without a trainer intervention also. The content should not be prepared only based on text but also the info graphic, pictures, animation, diagrammatic presentation, multimedia should be used smartly. The digital training guide or manual may be hosted into the e-learning platform of a2i, ICT division named Muktopath for larger promotion, advertisement, accessibility & cost effectiveness. The digital training can be provided by using Muktopath e-learning features easily in this regard

Vendor is requested to provide a comprehensive "**Digital Service Toolkit & Guideplan (Ref.doc-11)**" for all the service to be digitalized.

1. User (service recipient/ provider) will use this system in a very simple, fast and interactive way.
2. Vendor should plan properly during content designing & development so that it will be easier for non-technical & non tech savvy users.
3. This digital guide has to be implemented for each & every service of this system for each platform i.e. web, mobile.



4. All the digital content guidelines must be interactive so user can navigate the system by hearing, listening & reading.
5. Content creation methodology, activity & standard should be included in the plan.
6. Vendor's innovative & future context plan of this digital toolkit & guideline considering all the users will be appreciated.

6.9. Language Support

System's default language will be Bangla. The e-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.

6.10. Accessibility

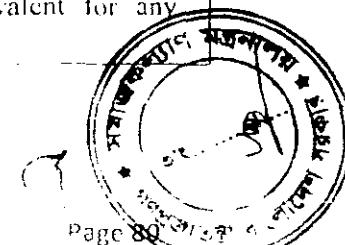
Vendor must develop this e-Service application ensuring access for the citizens (Service Recipients) with disabilities in different standardized accessible formats. E-Service application should be developed in "universal design" and "assistive technologies". Accepting and facilitating the use of sign 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 e-service features (Web application or Mobile Application) should be usable with the help of screen reading software by the service recipients with disability.





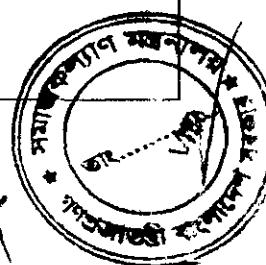
6.10.1 Internet and Web-based Content Accessibility Checklist

Accessibility Checklist		
SE	Item to Check	Details
1.	<p>For anything on a web page that is not text, is there a text equivalent for that item?</p>	<ul style="list-style-type: none"> Anything that is not text on a web page usually includes, but is not limited to, an image, graphic, audio clip, applets (small application running within a web browser, i.e. text chat window, etc.), tickers, or other feature that conveys meaning through a picture or sound. Examples include buttons, check boxes, pictures and embedded or streaming audio or video. Providing a text equivalent means that words are being used to describe what an item (that does not physically consist of text) actually is, why it is there, and any information being communicated by the use of that item or the item itself. Check that all images have accurate and meaningful text equivalents. Images mostly use an “alt-tag” or “longdesc” attribute as part of the object. To check, mouse users can roll their cursor over an image. If a text label or window pops up, then it has a text equivalent. Screen reader users can listen to see if an image is identified and described. It is also acceptable to simply include a text description above or below the image. For example, “The picture below shows...” Ascertain that images of text, graphical text (pictures of text), or text that is part of an image have a text equivalent. Be sure that the text equivalent correctly describes the image or communicates any information as part of the image. For example, if the image itself contains words, be sure the exact wording from the image is used within the text equivalent. Ensure any audio has a text equivalent, such as a text transcript.
2.	<p>Is captioning, audio descriptions, or other equivalent provided for presentations that involve both audio and video at the same time?</p> <p>Is captioning, descriptions, or other alternate synchronized with the presentation?</p>	<ul style="list-style-type: none"> Determine that all audios have been captioned for the deaf and hard of hearing, and all videos have audio descriptions for blind and visually impaired. Ascertain that captions and audio descriptions are synchronized correctly with the audio and video. For example, synchronized captions allow someone to read captions and also watch the speaker's relevant body language. Remember that this only applies to multimedia presentations, i.e., those presentations utilizing both audio and video at the same time. For example, the audio and video web cast of a program would need to be synchronized. An audio web cast would require a text transcript. A silent (no audio) web slide show would require a text equivalent for any images.





3.	If color was removed, would it inhibit use of the web site?	To check, view the page using a monochrome monitor (ex. black and white monitor, etc.) or by printing a page to a black and white printer.
4.	Is color being used to Emphasize text or indicate an action?	If so, an alternate method needs to be included so users can identify what is being emphasized by the use of the colored text or action. For example, if all links on a web page are blue, than underlining the links is an acceptable method for identifying blue colored links. Another example, if users are prompted to press a green start button, than a text label above the green button saying "press green start button" is an acceptable method.
5.	Do web pages ignore user-defined style sheets?	Style sheets are formatting instructions on how a page should be displayed (can also include how it is printed and presented). For example, a user specifies that they want their browser to view pages with extra-large font with white characters on a black background. These preferences are set up for all pages viewed.
6.	Does a web page override or ignore user settings?	To check, disable style sheets within the browser (Check browser's help menu for instructions) or try changing the font size or background colors through the browser's settings.
7.	If a link is embedded in an image, is there an equivalent text link?	<ul style="list-style-type: none"> Frequently, a web designer will use an image map which contains a link or set of links. Check to see if the image has any text links or labels. In some cases, you may have to move the mouse around the image to see if different text labels appear over different portions of the image. Screen readers will announce "image map link..." when a link is detected. These text labels alert users that by clicking or selecting the link in this particular region of the image, it will retrieve a specific web page. This is an example of a client-side image map which can be quite accommodating to people with disabilities and those using assistive technology. On the other hand, there are image maps that do not indicate to the user which specific web page will be retrieved when a particular region of the image is selected. These are called server-side image maps, because the computer or server hosting the web page determines which page is sent based on portion of the image selected. These are not accessible image maps, requiring a redundant text link on the same page retrieving the same pages as those links used in the image map.
8.	If information is displayed using a table(s), can columns and rows be identified	Using a screen reader, listen to how the table is read aloud.





	by screen readers?	
9.	If frames are used, are they accurately text labeled?	Frames are used to visually separate information on a web page.
10.	Does anything on the page blink or flicker?	Ask if the web designers can prove whether any blinking or flashing elements have a frequency greater than 2 Hz and lower than 55 Hz. This requirement is necessary because some individuals with photosensitive epilepsy can have a seizure triggered by displays that flicker or flash, particularly if the flash has a high intensity and is within certain frequency ranges.
11.	Do websites not conforming to acceptable and approved accessibility standards offer a text only equivalent of their web site?	<ul style="list-style-type: none"> The World Wide Web Consortium's (W3C) Web Accessibility Initiative Guidelines and Section 508 are the two widely accepted authorities on Web accessibility and design. Web sites that cannot adhere to the accessibility guidelines set forth by W3C and Section 508 can offer a text only equivalent for all the information displayed and all functions available.
12.	If scripting is used, such as JAVA etc., is there a text equivalent so assistive technology, like screen readers, can read the information?	An example of scripting could be a stock ticker on a web page that is animated, refreshing, and displaying information. Another example is using an image, that when a mouse cursor rolls over the image, additional information pops open on the screen, and then disappears when the mouse cursor rolls off.
13.	If online forms are used, can people using adaptive technology fill up and submit all the required information?	<ul style="list-style-type: none"> Can a keyboard be used to access all the form fields? Are text labels used either inside or near form fields to identify what information users should be entering? Can a screen reader identify the form(s)? Do the forms follow a logical order? For example, if a user hears "Last Name" is the corresponding form the area where they would enter their last name?
14.	Is there a way for users, especially those using screen readers to skip repetitive navigational links?	Navigational links are a set of routine navigation links frequently used to move users to pages within a web site, usually located on the top or side of each web page. For example, "Help," "Contact Us," etc. links that all appear on the same page within a web site in exactly the same way and location.
15.	If users are given a certain amount of time for an action or response, is there any indication how much time they have left or an option to request	Some web pages may expire or time out after a certain amount of time, and refresh the entire page, for example those requesting personal information.





	more time?	
16.	Unicode character set for Bangla	Use of Unicode character set for Bangla - Interspersing Bangla and English in the same page should be avoided until such time that there is a screen reader which can handle multiple languages.
17.	Accessible documents on web pages	Where it is not possible to make a document accessible, then an alternative, accessible format should be downloadable along with the original image file.
18.	Navigation mark-up	Use of heading level 1-6, in addition to navigation links like 'skip to main content'.
19.	HTML validation	HTML is the simplest programming language used for website development and is accessible on all browsers — desktop browser or a mobile browser. All web pages should have HTML validation.
20.	CSS validation	Content presented with CSS errors may lead to serious problems such as overlapping of content, making it almost impossible to read. CSS errors may also prevent some users from successfully carrying out custom CSS processing to set the preference of color and size of text and object to suit their vision requirement.
21.	Color adjustment option	High contrast and font customization options should be available.
22.	Labeling of Links	<p>Labeling links correctly rather than just 'click here'- i.e., descriptions should be accurate.</p> <ol style="list-style-type: none"> 1. The web page has a descriptive and informative page title. 2. A sign language video is provided for all media content that contains audio. 3. The page is readable and functional when the text size is doubled. 4. All page functionality is available using the keyboard

6.11. Tools and Technologies to be used

Vendors is recommended to choose the appropriate tools and technologies (Open Source is preferable) to be used for the development and implementation of the e-Service application. The selected vendor has to consult with a2i, ICT and implementing organization (client) to finalise the tools, technologies, framework and platform with the approval of same authorities, consent.

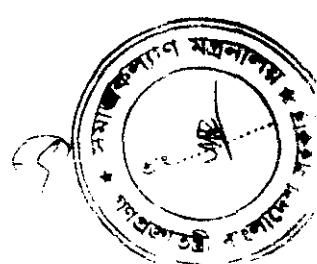
The main components of the software will be web based applications. It should be run in Windows/Linux/OSX operating system at user's end and should be compatible with all major browsers such as - Internet Explorer, Firefox, Google Chrome, Opera etc.

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 detail
“Tools & Technology plan (RFP.Doc. Criteria (ii) Sub - Criteria d2”)

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			
Apps			
Testing			
Integration			
Hosting & Deployment			
Documentation			
QA			
Helpdesk/Support			
Reporting			
Communication			





7. Project Management

7.1. Implementation Timeline

Vendor must complete the project within a stipulated timeline based on the proposed SDLC methodology. The project timeline can be divided in three below phases that is – Requirement Analysis, Development & Piloting, Maintenance & Support. As the entire project's functional scope will be divided into 2 parts, therefore the release and deployment of the part for going live will be based on the completion of the iteration.

Project Implementation Timeline/Schedule (REF Doc Gita II (V), STD. 1)

GEN

The project is divided into 4 phases. The entire assignment is divided as follows:

PHASE-I: Requirement Analysis & Design

For both parts

Phase	Duration
I	3 (Three) Months

PHASE-II: Development & Release - For Part I

Phase	Duration
I	12 (Twelve) Months

For Part II

Phase	Duration
I	12 (Twelve) Months

PHASE-III: Pilot & Deployment - For Part I

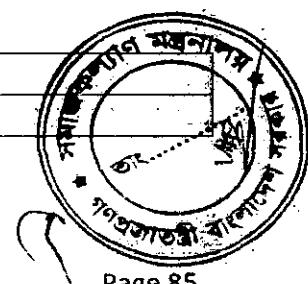
Phase	Duration
I	2 (Two) Months

For Part II

Phase	Duration
I	2 (Two) Months

PHASE-IV: Piloting & Maintenance - For Part I

Phase	Duration
I	2 (Two) Years



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7.2 Pilot Implementation Requirements

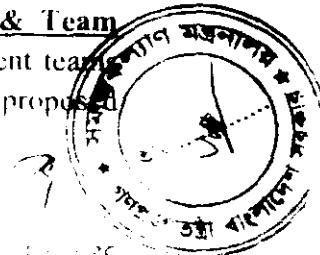
The selected vendor has to conduct part wise (as per priority and readiness) pilot implementation of the e-Service software solution in pilot areas which will be decided by implementing agency. Vendor will submit the detailed "**Pilot Implementation Plan (RFP.Doc. Criteria(iii), Sub Criteria a)**" in the technical proposal in which the following may be considered to incorporate:

1. Vendor will be required to provide on-site support in pilot phase to ensure smooth operation.
2. Vendor must provide extensive, premium and time-bound support at the pilot phase. The detailed support modality, methods, standard and relevant activities should be mentioned in the proposed plan.
3. Vendor will submit a performance assessment report at the end of the pilot phase covering pilot result/output, impact/outcome, scalability, stability and sustainability for full-scale implementation.
4. The criteria/key factors based on which the pilot evaluation will be conducted should be mentioned in the proposed plan.

7.3 Documentation

Detailed and proper documentation of such ICT based project like e-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, Vender should show highest-level of professionalism for delivering the standardized documentation approach at each phase of e-Service development and implementation project. Vendor should include an extensive "**Documentation Plan (Ref.Doc-15)**" of this project in their technical proposal.

The vendor is expected to provide work distribution and team composition plan based on the project scope, their proposed SDLC methodology and work and project implementation plan. The interested applicant (Vendor) should provide a "**Work Distribution & Team Composition Plan (Ref.Doc-16)**" in their technical proposal describing the different teams with required HR positions that will be allocated at various phases or steps of proposed



SDLC and project implementation. In the case of running multiple phases or steps or activities, the team allocation plan mentioning the number of HR positions should be planned and described precisely. In the team allocation plan, each HR position should also be described with the roles, amount of involvement (man-day/man-month), expected deliverables and required skill and expertise. However, for proper execution of the project i.e. e-Service application development, the vendor shall include at least the following HR positions as minimum project team requirements:

SL	Position	Number Person
1.	Project Manager	1
2.	Deputy Project Manager/Technical team Leader	1
3.	Software Architect	1
4.	Business Analyst	2
5.	System Analyst	2
6.	Security Expert	1
7.	Communication Expert	1
8.	Database Administrator (DBA)	1
9.	SE Developer/Programmer	2
10.	Developer/Programmer	2
11.	Mobile Application Developer/Programmer	2
12.	QA Expert (Quality Manager)	2
13.	Interoperability Expert	1
14.	System Administrator	1
15.	Deployment Expert	1
16.	Technical Document Expert	1
17.	UI Designer	1





13.	UX Expert	1
19.	Digital Content Expert	2
10.	Project Lead/Coordinator	2
11.	Graphics Expert	1
12.	Training Expert	2
18.	Implementation Engineer	2
	Totals	10

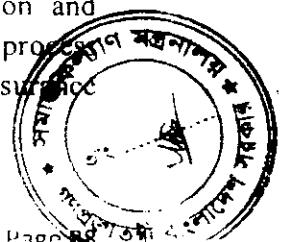
Core Maintenance Services & Support:

	Key Personnel	No.
1.	Service Manager	1
2.	Helpdesk/Support Executive	2
3.	Software Maintenance & Support Executive (One per State)	3
4.	Developer/Programmer (One per State)	2
	Totals	10

Note: Please consider, the above mentioned project team composition has been proposed here mentioning minimum size of team with required HR positions for evaluation only. Vendor may propose any additional HR positions as per their SDLC methodology and work plan in the technical proposal as their plan.

7.5 Quality Attributes and Assurance

The Quality attributes and Assurance plan will describe the standards, processes and procedures in this e-Service application development life cycle which will be used to support the consistent delivery of high-quality, professional standard e-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 “RFP.Doc. Criteria (ii) Sub-Criteria e3”** with measurable attributes for each phases of this e-Services development life cycle in their technical proposal.

7.6. Data Management and Migration of Legacy Data

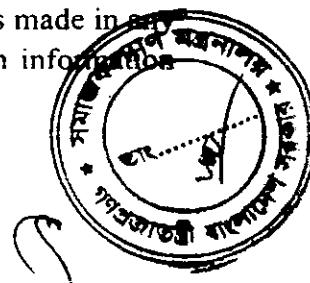
Under the process of service to e-Service transformation, during e-Service activation or deployment, it might be necessary to move the legacy data of prevailing services. In that case, the vendor may require to perform different relevant activities that may include data collection, softcopy conversion, data filter, data cleansing, data verification, data processing, data entry, data migration and overall data management. Here, it is expected that, the vendor will propose their detailed**“Data Management and Data Migration Plan (RFP.Doc. Criteria (iii) Sub-Criteria f)”** for this e-Service application considering the estimation of legacy data mentioned below which will be required to migrate into the developed application!

E-Service	Description	No. of Pages	Current Status	Amount of Data	Time

The plan may cover amount of data to be migrated, activities to be performed, the 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.

7.7. System Audit

This e-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





1. Log the users who are accessing the system
2. Log the parts of the application that are being accessed
3. Log the fields that are being modified
4. Log the results of these modifications
5. Log the attempted breaches of access
6. Log the attempted breaches of modification rights
7. Timestamp.

It should be ensured that 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.

Vendor is requested to submit their proposed "Audit Plan(RFP Doc Criteria -2, subcriteria e-5)" including strategy & standard measures in their technical proposal.

7.8. Training Plan

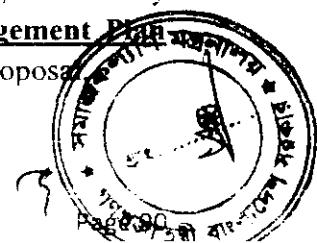
In case of eGovernment/digital service's successful implementation, user training plays one of the most vital roles in the entire implementation cycle. Vendor must consider government culture, convenience of government officials & staff and ICT literacy & expertise at the time of designing user training plan for the eGovernment/digital service implementation. Based on the requirements, target prospective participants and implementation scope, vendor may plan for user training in 4 different modality i.e. 1) Direct User Training, 2) TOT, 3) Refresher Training, 4) e-Learning Platform (Muktopaath) based training. The vendor is requested here to submit a detailed "**Training Plan (RFP Doc Criteria b-3)**" in their technical proposal considering the following:

1. Training Schedule & program details
2. Methods & modalities of user training
3. No. of targeted user groups and participants
4. Strategy of ensuring training standards
5. Methodology for evaluating performance
6. Ensuring smart training with latest tools & technologies
7. Innovative, user friendly, & multimedia training materials
8. Team composition, skill and expertise as training provider

Please note that, the training infrastructure like venue will be provided by the ~~implementation organization~~.

7.9. End User Engagement

End user engagement is very important for e-government implementation especially for the citizen centric digital service delivery. Vendor should measure involvement of end users during development and the constant incorporation of feedback to provide high-quality end-user experience satisfying usability test. Based on different types end-user group, vendor may require to consider the following at the time of preparing "End-User Engagement Plan (RFP.Doc Criteria 3-g)" which is required to be submitted with the technical proposal.





1. Purpose of end-user engagement.
2. For ensuring end-user behavior, proposed method & activity.
3. Define indicators & factors of the outcome for end-user engagement.
4. Determining area & boundary of end-user's Engagement & there degree of involvement.
5. Mentioning vendors & implementing organization's roles in engaging end-users for large scale implementation.

7.10 Risk Management

Software development is an activity that uses a variety of technological advancements and requires high levels of knowledge because every software development project contains elements of uncertainty. This is known as project risk. The success of a software development project depends quite heavily on the amount of risk that corresponds to each project activity. As a project manager, it's not enough to merely be aware of the risks. To achieve a successful outcome, they must identify, assess, prioritize, and manage all of the major risks. A standard risk management process includes the following steps:

1. Identify risks and their triggers
2. Classify and prioritize all risks
3. Craft a plan that links each risk to a mitigation
4. Monitor for risk triggered during the project
5. Implement the mitigating action if any risk materializes
6. Communicate risk status throughout project

The vendor should submit a "Risk Management Plan (RFP.Doc. Criteria (ii) Sub-Criteria e4)" addressing all types of risks including above mentioned steps following standard risk management principles and their mitigation plan

7.11 Expected Deliverables

Considering the scope of services and work of this project and based on the proposed project development & implementation methodology (SDLC), the vendor is requested to submit a comprehensive "**Project Deliverables Plan (RFP.Doc. Criteria -(iii), Sub Criteria-e)**" in their technical proposal describing the SDLC phase/steps/action wise timeline based deliverables mentioning different formats and types.

For better clarification, some of the deliverables examples are mentioned below:

1. Project inception report
2. Project management plan
3. System requirement specification (SRS)
4. System design document (HLD and LLD as SDD)



5. Complete source code with documentation
6. Test plan with testing reports
7. Integration plan and reports
8. Mobile Application (Android and iOS)
9. Web application
10. SLA
11. Raw and unencrypted Source Code

7.12. Copyright

Ministry of Social Welfare (MoSW) 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 codes 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 are made in consequence of the services provided by the vendor under this scope of this TOR will be owned by Ministry of Social Welfare (MoSW).

At the request of the Ministry of Social Welfare (MoSW), 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 Social Welfare (MoSW)) that will be produced at the time of entire system development and implementation life cycle under the scope of this TOR and will be owned by Ministry of Social Welfare (MoSW).

The vendor should properly deliver the entire approved source codes and other deliverables to the Ministry of Social Welfare (MoSW). 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 Social Welfare (MoSW) and the Government of Bangladesh may see fit.

Any studies, documents, reports, graphics or other materials prepared by the vendor for this project under this TOR shall belong to and remain the property of Ministry of Social Welfare (MoSW).

7.13. Maintenance and Support Service

The selected vendor will require to provide maintenance and support service for this developed, deployed, piloted eGovernment/digital service application. After the development and deployment phase as soon as the application goes Live, having consent and acceptance from the implementing organization, immediately the pilot implementation phase will be started including the maintenance and support service. Vendor will require to provide maintenance and support services plan for next **2 (Two) years**. If this project is divided into multiple parts (as planned), then maintenance phase will be started from the piloting independently for each part. Here it is expected that, the vendor must provide a detailed "**Maintenance and Support Service Plan (Ref.no-24)**" including proposed SLA.





the technical proposal. The proposed SLA should include time bound service delivery layers, modality & compensation plan, which may also include the following:

1. A Proposed SLA plans
2. Support service types and mode of services
3. Help desk functionalities & facilities and capacity
4. Configuration management and Change management
5. Service layers for different types of support
6. Tools & technologies will be used for Support service management
7. Communication & report management
8. Incident & Problem management
9. Support Service Log Management
10. Support feedback & service evaluation methodology

Support & maintenance plan should be comprehensive and well elaborated to ensure proper support to the end users. Apart from above mentioned issues, if vendor thinks any other issue/method should be included in their plan which assures proper standard support & maintenance of this eGovernment/digital service application which is suitable for implementing organization, it would be considered as added value addition.

Out of this two year of maintenance period; after one year, vendor will require to submit a comprehensive managed service plan to implementing organization exploring each & every scope of switching operational modality from AMC to Managed service for ensuring easy manageable, hassle-free service delivery & minimized operational costing operation. The proposed managed service plan will not only be cost effective & efficient in operation for quality service delivery for the implementing organization, should be also viable for the vendor i.e. more sustainable & win-win for both parties. The managed service plan will be a guideline & support for the implementing organization for important & crucial decision making regarding switching modality to AMC to Managed Service just after the expiration of two years maintenance & support period. For effective collaboration & proper decision making, the implementing may consult with Access to Information Programme(a2i), ICT division in this regard. In this case the organization will require to take measures by maintaining the necessary legal formalities before the expiration of two years maintenance period for smooth switching towards managed service modality with proper knowledge transfer. At the time of preparing managed service plan after one year maintenance & support service period the vendor should consider the followings:

1. Business feasibility study.
2. Determining the cost of operation.
3. Infrastructure requirements.
4. HR requirements.
5. Service simplification & SOP.
6. Breakeven & ROI analysis
7. Risk & dependencies.



8. Stakeholders' roles & responsibilities.
9. Sustainability & business continuity
10. Technical operation & service delivery standard
11. Continuous improvement scope
- 12. Performance evaluation**

Note: Please note that submitting the "The Managed Service" plan by the vendor will be one of the major deliverables of the 1st year maintenance plan before the expiration to the organization including extensive feasibility study. Here vendor is requested to add this as a deliverable in the "**Project Deliverables Plan (RFP.Doc. Criteria (iii) Sub-Criteria e")**" Plan that is going to be submitted by the vendor with the technical proposal.

7.14. Performance Review

As per the predefined performance review plan of different stages of SDLC, the vendor will take necessary actions so that it will be possible to evaluate the performance at different levels of their activities and the deliverables based on indicators/factors precisely. Those indicators, standards and factors for performance evaluation have to be defined earlier at the time of project management plan. Here vendor is requested to submit a proposed "**Performance Review Plan(RFP.Doc. Criteria (iv) Sub-Criteria b")**" for the entire design, development, and implementation cycle mentioning the indicators, measuring strategy and expected review scopes.

7.15. Knowledge Transfer

The Knowledge Transfer Plan should provide a comprehensive approach to transfer the responsibility for maintenance and operations from the vendor to implementing organization or their nominated agency. While designing a smooth, efficient and effective "**Knowledge Transfer Plan(Ref.doc-26)**" vendor should consider the following:

- Strategies, methods, milestones, schedules & their duration of accomplishing target.
- Vendor will propose required technical capacity, number of resources mentioning their roles & responsibilities from implementing agency to carry forward this plan.
- Vendor will need to identify the risks, craft a mitigation & contingency plan.
- Vendor needs to propose a method of evaluating & verification of the standard of knowledge transfer plan.

8. Conclusion

Ministry of Social Welfare has the mission to deliver their best service with the use of information technology in the service delivery process. Here the vendor has to design, develop and implement a web and mobile based end to end solutions for Ministry of Social Welfare, where a comprehensive technical proposal will play a very important role.





understand that, the vendor has to fully visualize the system requirement, development requirement with tools and technologies, constraints and challenges of implementation and thus present the best solutions in their proposal.

In view of the above, Vendor has to design, develop, implement, maintain a Single Sign-on web & mobile Apps based solution for Digital Services for Ministry of Social Welfare (MoSW). 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:

MoSW	Ministry of Social Welfare
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
MoSW	Ministry of Social Welfare
DSS	Department of Social Services
IFB	Islamic Foundation of Bangladesh
ICT	Information and Communication Technology
ID	Identification
IVR	Interactive Voice Response
NID/Porichoy	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
FD	Front Desk

