

Terms of Reference

Establishment of digital MIS to track programme progress in output delivery and beneficiary generation

Background

Plan International Bangladesh, an independent development and humanitarian organisation, strives for a just world that advances children's rights and equality for girls, has been operating in Bangladesh since 1994. Currently Plan is implementing about 23 projects across the country covering six thematic areas, i.e. Right to Health, Right to Quality Education, Right to Safe Water and Improved Sanitation, Right to Youth and Economic Empowerment, Right to Protection and Participation and Right to Prevention and Protection from Disasters & Climate change.

In order to track progress in projects in terms of output delivery and beneficiary generation Plan International Bangladesh intends to develop and implement a digital management information system (MIS). The system will generate real time data which will help managers to take prompt and informed decision for programme improvement.

Currently, in Plan International Bangladesh, a few projects are using web based MIS to capture project progress in output delivery and beneficiary generation but the rests are rely on excel based MIS for this purpose. In those projects, frontline staff collect data by using a hand-written form. Then data are compiled and reported to Country Office. The process involves heavy paper work and contains the following challenges.

- Human error at entry point, calculation etc.
- Tardiness in reporting
- Huge manual calculation involves during upstream reporting
- High chances of data duplication
- Lack of uniformity in reporting format in different projects
- Inconsistency in data submitted
- Difficulties in validating submitted data/reports
- Time consuming compilation
- Increased degree of engagement of different staff members at different layers

In order to mitigate the challenges and obtain real-time data for prompt management decision we propose to establish a digital MIS. For this purpose, a service provider will be hired to design and establish the system.

Purpose and Scope of this Document

The purpose of this document is to specify the amount and type of work to be accomplished by the software service provider. This governance document serves as a basis of high-level mutual understanding between Plan International Bangladesh and the software service provider. It also provides the basis for determining the required areas and elements of the expected system to meet the requirements of Plan International Bangladesh effectively and estimating the cost for assignment. The TOR covers high level descriptions of the modules and functionalities that the MIS will have. The TOR

will mainly describe the desired features and therefore will not go into detail on any specific programming languages or development tools.

Scope of the Assignment

The scope of the assignment includes the design, development and deployment of the digital MIS. The detailed scope of the assignment is illustrated in [Annex 1](#).

Objective of the System

- To develop and introduce web and mobile phone based data collection/reporting tool
- To create a platform that will assist the project staff (both at Plan and partner level) to ensure uniformity in reporting
- To generate real-time and consistent data
- To ensure minimum effort for data compilation to create report
- To make the information available to the information-users/decision makers as and when required
- Integration with global M&E system and data backup

Ownership of Source Code

The service provider is required to hand over the final product by January 31, 2020. The final product (the server-side application deployed in production server and the Android app published in google play store), source code, intellectual property, documentation and all items specific to this product will be under the Plan International Bangladesh's exclusive ownership.

Warranty and Maintenance and Support

The service provider will render all support activities related to the followings until the warranty period expires:

- Troubleshooting at the application/database level
- Query resolution to assist focal official in day-to-day operation
- Fixation of bugs, incorporation of minor changes, performance optimization etc.

Warranty period will be one year starting from the final acceptance of the MIS by Plan International Bangladesh. After the warranty period, there will be SLA (Service Level Agreement) signed by Plan International Bangladesh with the service provider.

The specific SLA covering maintenance support activities, query resolution time, and proposed penalties for noncompliance will be designed by the service provider and submitted along with proposal.

Qualification and Competency of the service provider

The service provider should have the following competencies at the minimum:

- At least 5 years' demonstrated experiences working in programme monitoring systems involving server-side application and Android based apps together in limited resources setup preferably in Bangladesh
- Experience to develop at least two such computer systems.
- Experienced to work with NGO/iNGO
- Must have valid Trade License, TIN, VAT certificate

Training and Capacity building

Training on the functional as well as technical aspects of the application developed is an integral component of the MIS. The software service provider will train all the aspects of the application to selected persons of Plan International Bangladesh. A training manual has to be delivered by the service provider for the later use in the cascading training for frontline users. The manual will help standardize the training sessions.

Time Frame and Deliverables/Output required

Duration of the assignment is about 3 and half months. By the end of January 2020, the system should be in place and ready to roll out across the projects. Expected deliverables of the assignments are given in the following.

1. An project inception report
2. A fully functional server-side MIS application along with architectural design document
3. API specification and documentation of the server-side MIS application
4. A fully functional Android based mobile app (data collection tool) to perform as client of web-system
5. An HTML user manual integrated with the server-side MIS application
6. A pdf user manual for the users of mobile app
7. A training manual for cascade down training for frontline users
8. Full source code with database ER diagram of the server-side application as well as Android mobile app with adequate inline documentation
9. Assistance in piloting and adjustment in system based on findings in piloting.

Mode of payment

The payment will be made in three instalments:

Payments	Amount	Timeline
First payment	30%	After submission of technical report of Needs Assessment and MIS design with modules
Second payment	30%	After MIS development, field testing and orientation
Third payment	40%	After installation, submission of all necessary documents/systems as mentioned in "Time Frame & Deliverables"

Proposal Preparation

The proposal will be divided into two parts and should be submitted in two separate folders i.e. technical and financial. The technical part of the proposal should not exceed 15 pages and will contain the following:

Technical proposal should include the followings at minimum

- Statement of work
- Proposed technologies/platforms
- Development approach and methodologies

- Associated risks management
- Detailed timeframe (including dates for design completion, development, piloting, adjustment and final submission).
- Account of experience of designing, developing and establishing a digital MIS at INGO/NGO.
- Name and address of two organisations and name of the contact person to be used as reference (if required).
- CVs of the team leader and key members of the team, which reflect relevant experience.

The financial proposal should clearly identify, item wise summary of cost for the assignment with detail breakdown. The budget should not contain income tax as a separate head; it can be blended with the other expenditure, as it will be deducted from the source. However, VAT can be mentioned in the budget as per government regulation. The organisation will deduct VAT and Tax at source according to the GoB rules and deposit the said amount to government treasury. The bidders is expected to provide justified budget, which is consistent with technical proposal. Financial proposal should include the followings:

- Copy of VAT registration certificate (for firm).
- Copy of valid TIN certificate and bank account detail.

Technical Briefing

Plan International Bangladesh Team will have the technical briefing session with all interested software service provider prior to the proposal submission. Briefing date is October 2nd at Plan International Bangladesh country office.

Submission of Proposal

The technical and financial proposals should be submitted electronically to the email address: Planbd.consultant.hiring@plan-international.org with subject line – Digital MIS – Plan International Bangladesh.

Proposal submitted to any other email account except this and in hard copy will be treated as disqualified. Submissions after the deadline 5th October, 2019 will be treated as disqualified. Two different folders i.e. technical and financial should be submitted into one zip folder with a covering letter. The proposals should be submitted in pdf format.

Selection Criteria

#	Selection Criteria	Weighted Score
1	The bidder's track record, general reliability including experience and capacity on technical analysis and financial capability	20
2	Qualifications and competence in the combination of personnel proposed are suitable to develop the MIS	20
3	Experience in development and implementation of MIS involving web application and Android based mobile app for NGO/iNGO in Bangladesh	30
4	Detailed methodology, installation and execution plan	10
5	Budget and its justification	20

Penalty Clause

The service provider is expected to complete the assignment within stipulated period and the system should contain all the criteria as mentioned in the TOR. If the criteria are not met up to the satisfactory level Plan International Bangladesh will deduct 5% of the total agreement amount. If for any reason, the service provider fails to complete the assignment within stipulated time, they need to inform Plan International Bangladesh well ahead of time with valid and acceptable explanations. Failing to this may evoke penalty clause at the rate of 1% for each day of delay.

Contact Person

For any technical issue related to the assignment, please communicate to Rahat Bashir, M&E System Specialist through following email address:

Rahat.Bashir@plan-international.org

Child Protection and Ethical Consideration

Plan International is committed to actively safeguarding children and youth from harm and ensuring children's rights to protection are fully realized. Plan takes seriously the commitment to promote child safe practices and protect children from harm, abuse, neglect and any form of exploitation as they come into contact with Plan International supported interventions. In addition, we will take positive action to prevent child abusers from becoming involved with Plan International in any way and take stringent measures against any Plan International Staff and/or Associate who abuses a child. Decisions and actions in response to child protection concerns will be guided by the principle of 'the best interests of the child.'

Therefore the service provider should abide by our safeguarding policy and during assignment must take into consideration that their work are not doing any harm to children, adolescents and youth.

Disclosure and Ownership of Information

It is understood and agreed that the service provider shall, during and after the effective period of the contract, treat as confidential and not divulge, unless authorized in writing by Plan International Bangladesh, any information obtained in the course of the performance of the Contract. Information will be made available for them on a need-to-know basis. All required field visits will be facilitated by Plan International Bangladesh staff.

Negotiation

Once the proposals are evaluated, Plan International Bangladesh may enter into negotiation with one or more than one service providers for final selection. If negotiations fail, Plan International Bangladesh will invite service provider whose proposal received and was the next highest score to negotiate a contract. If none of the invited proposals led to an agreement fresh, Requests for Proposals (bidding document) will be called.

Disclaimer

Plan International Bangladesh reserves the right to accept or reject any or all proposals / application without assigning any reason whatsoever.

Annex 1

Detailed Scope of the Assignment

The assignment is to design, develop and deploy an MIS that focuses on adherence to the Plan International Bangladesh's project monitoring and evaluation policy and procedures. The system have to be easily accessible to the users from Plan International and its implementing partner organizations. The details of the assignment includes the followings:

Context of the System

The figure below represents the context of MIS system of Plan International. The MIS system works with 3 thematic working areas along with 4 shared modules on the server-side. Shared modules shares different functionalities across the system including access control, maintenance of supporting information, maintenance of output indicators, reporting etc. The android app provides the frontline staffs with the functionalities for making day-to-day data entry while performing project activities.

The frontline project staff makes the data entry on their mobile device according to their project activities on regular basis and view relevant reports on their device. The role belongs to partner level.

The data-verifier, a role above the frontline staffs belongs to partner level, verifies the data entered and submitted by the frontline staffs.

The data-approver, a role above the data-verifiers belongs to partner level, approves the data verified by the data-verifiers.

The monitoring specialist, a role at Plan Bangladesh Country Office level, monitors the project progresses by viewing reports, analysing data.

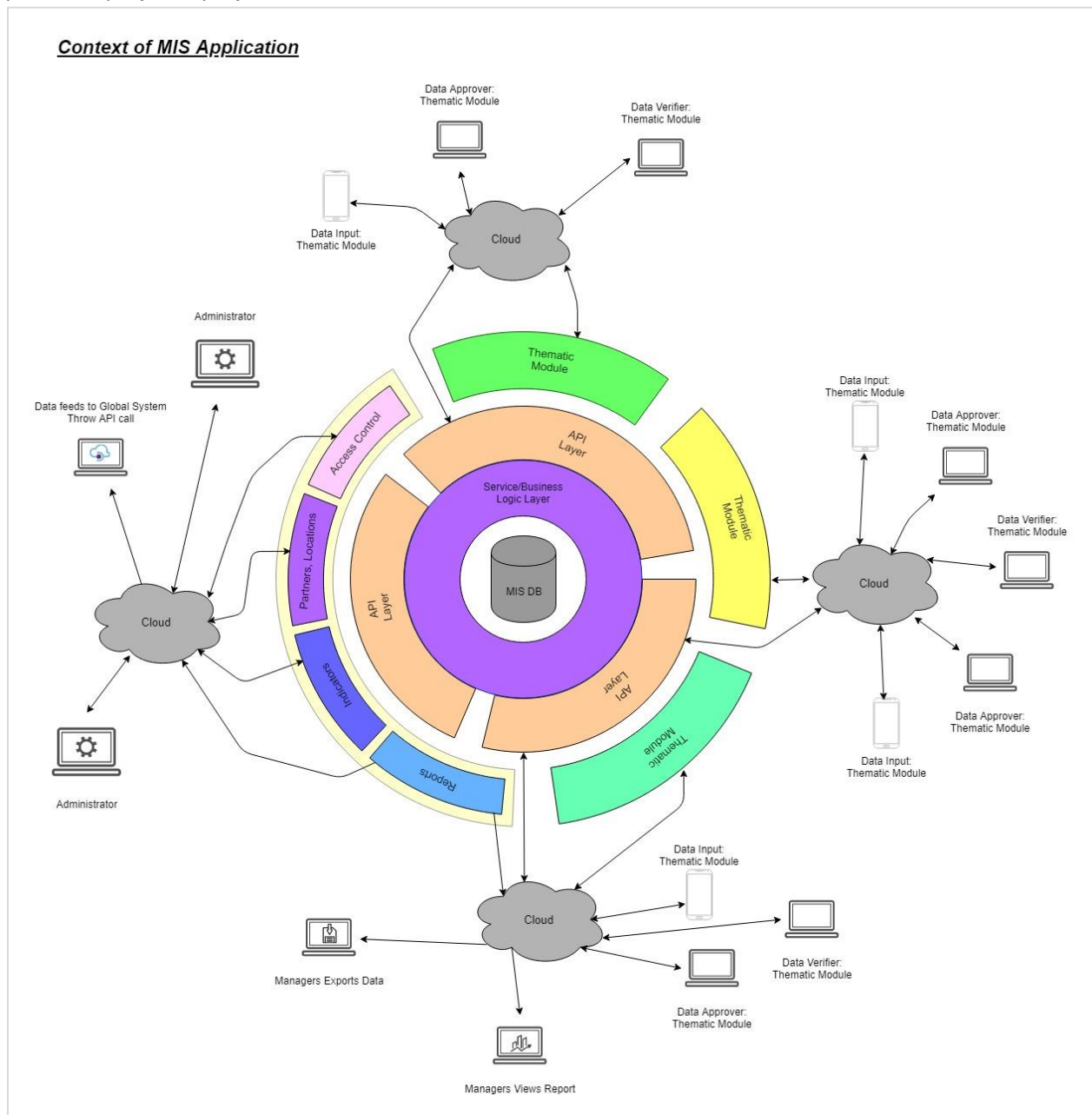
The project manager, a role at Plan Bangladesh Country Office level, manages and monitors the project activities by viewing reports.

Manager, a role at Plan Bangladesh Country Office level, monitors the project progresses by viewing the reports.

Guests, a role belongs to Plan Bangladesh country office level or at external stakeholders, surfs the system around and views only the reports.

Administrator, a role at Plan Bangladesh Country Office level, administrates the application. This role controls the access of users, creates and maintains different master data like user permission, location,

partners, projects, project-indicators etc.



System Requirement Specification

Functional Requirements

The MIS application will be an interactive web-based application with an Android app based client system. The purpose of the system is

- To capture the data generated from the day-to-day activities at the project intervention areas of Plan International Bangladesh.
- To aggregate the numeric progress reports according to the output level indicators defined in the monitoring and evaluation framework of the organization.

- To sum-up the numeric progresses reports according to the area of global distinctiveness (AoGD) of Plan International
- To prepare the dataset to feed the global M&E system to report the country level performance

Server-side application –

To fulfil the purposes of the desired system, it is required to have the following functionalities:

- Dynamic Access Control
 - Create new/view/update an existing role
 - Activate/de-activate a role
 - Grant/revoke permissions
 - Create new/view/update and existing user
 - Activating/de-activate an user
 - Assign/retain a role to/from an user
 - Reset password of a user (for administrator role only)
 - Reset own password
 - Reset lost/forgotten own password
- Management of Thematic work areas
 - Create new/view/update an existing thematic area
 - Search existing thematic areas with relevant criteria
 - Activate/de-activate a thematic area
- Management of Projects
 - Create new/view/update an existing project
 - Search projects with relevant criteria
 - Activate/de-activate a project
- Management of location units
 - Create new/view/update an existing division, district, upazila, union
 - Search location units with relevant criteria
 - Activate/de-activate a location unit
- Management of output indicators
 - Create new/view/update and existing indicator
 - Search indicators with relevant criteria
 - Activate/de-activate an indicator
- Management of project beneficiaries
 - Create new/view/update and existing beneficiary profile
 - Search beneficiaries with relevant criteria
 - Activate/de-activate a beneficiary
 - Register existing beneficiary/beneficiaries with a project
- Management of reportable project activities
 - Create new/view/update an existing activity
 - Activate/de-activate an activity
 - Search activities with relevant criteria
 - Manage relationship with indicator
- Management of implementing partner organizations
 - Create new/view/update an existing partner organization
 - Search partners with relevant criteria

- Activate/de-activate an existing partner entity
- Project performance planning (performance target setting) according to monitoring indicators by months/quarters/years/partners/locations/ programs/projects
- Dashboard for summary tabular as well as graphical report at a glance (data and graphs have be downloadable for further use)
- Layered report approval
- Pre-defined aggregated reporting according to output level indicators segregated by months/quarters/years/partners/locations/ programs/projects etc.
- Adjustable parameter based query tool to enable program managers/users to extract data according to ad-hoc requirement
- Data aggregation according to the area of global distinctiveness (AoGD) with exporting facility
- Geographic representation of the beneficiaries
- Integration with global M&E system
 - Data export in spreadsheet and csv (in compatible format accepted by global system)
 - Data transfer directly to the global system by calling it's APIs
- And html user-manual has to be integrated within the application
- Full API set to integrate android based client app

Android based application –

The android app will be used as a client of the server-side application. The sole responsibility of this app will be making data entries at the front-level in the intervention areas. Considering the nature of the reporting, infrastructure of the intervention areas, and level of frontline staffs, the app is required to have the following features:

- User authentication is required. This is going to be a close door app. Meaning that only valid users only allowed to login and enter the system
- Online as well as offline data handling capability is required. Some places in the intervention area may suffer from week/absent network of mobile operator which may lead to inconsistent/no data-connection. To address this situation, the app, while the records are submitted, should check if the data connectivity is available; if not, it will store the records within the device for later submission when the connection is available, otherwise the records will be submitted at once; The app should be able to store any number of records in the device memory.
- Only the relevant projects has to be visible to the user; meaning that the frontline staff will see only the data entry options which are assigned to him/her
- All the supporting data required to prepare and submit a record have to be pulled from server-side
- Each achievement record submitted by the frontline staff has to be approved by the appropriate approver to be able to count it during reporting
- The front staff have to be able to register the new beneficiaries
- The frontline staffs have to be able to edit, rectify, and resubmit the record if the approver declines
- The sync que has to be visible to the frontline staff, to avoid any confusion and to give the user a way to be confirm on what is happening to the submitted records. Once the sync is success, the records should not be visible anymore in the que
- The app has to have the ability to capture the geo-coordinates of the location of event/activities under reporting

- The app has to have the ability to capture the image of the event/activities under reporting
- The frontline staffs have to be able to save the half-done record for later completion and submission
- On logout from the app, all data have to be cleared from the device; it is noteworthy that if there is any record in the sync-queue, the user have to be strongly notified that the records will be lost from the device if logged out before data sync
- Appropriate validation checks has to be implemented in the app to prevent the spurious data to be entered
- A pdf user manual has to be available to the frontline staff. The app has to pull the user-manual file from the server-side and keep it in the device for later reading/reference. The file has to be accessible from within the app.

Non-functional Requirements

Server-side application-

- The application has to be deployable both in Linux or Windows platform
- The application must support the major browsers like IE 10, Firefox, Chrome
- The application will be available to the users 24/7. The data can be synced by the client-app at any time of the day and the client-app should get a confirmation if the record synced successfully
- The beneficiary registration or activity reporting has to be rolled back if any transaction failed to commit the full record
- In case of rolling back any record writing process, the client-app has to be notified with relevant message
- The application has to be easy to use. The interfaces has to be consistent, self-explanatory and intuitive
- All error and warning messages has to be relevant and understandable
- All the icons that would be used in the application has to be standard and familiar to the users; no surprise is expected
- The application must keep the log of user login, record writing, report generation so that it can be retrieved at later point of time if requires
- The application coding must be maintainable for later upgradation and improvement

Android based application

- The app has to be a native one and must not be hybrid
- The look and feel of the app has to be eye catching and inspiring allowing the users to be able to connect with the interface elements (icons, buttons...) easily and quickly
- The app is expected to be developed according to Google's material design guideline
- The app has to be responsive meaning that if interrupted by a call or a change in orientation, it has to be able to return back to the same state
- All app data should be secured and be encrypted with minimum needs so that its protected from outside environment and also from internal attack
- The app has to be published to google play store
- The app should be able to render its layouts in different screen sizes along with automatic adjustments of font size and image rendering