

Request for Offers

Introduction

The Geneva International Centre for Humanitarian Demining (GICHD) is pleased to invite organisations and companies to submit a quotation for the provision of the description of the goods or the services described below as per requirements set out in this request for offers.

Reference number: RFO/2020/MARS/005

Project number: 92009

Posting date: 17 November 2020

Deadline for submission of the Request for Quotation form: 30 November 2020, 17.00, Geneva Time.

Countries of deployment: Global Deployment

Currency: The quotation shall be presented in Swiss Francs (CHF)

Language: The quotation shall be submitted in English

Submit to: consultants@gichd.org

Scope of work

1. Background

First developed in 2015, the Mine Action Reporting System (MARS) has represented an important data collection tool of GICHD's supporting the Mine Action community ever since. This software tool was tailored to fill a gap in available technical solutions for mobile data collection tools that can accommodate advance geo capabilities. MARS is being used in mine affected countries to report accidents and victim data, new contaminated areas, new hazard, clearance activities and quality management data. MARS can migrate all reports collecting using the MARS mobile applications to the IMSMA Systems using its web platform.

The overall objective is to develop the new MARS high-quality cross-platform mobile application. The new mobile application will able to accommodate advance geo capabilities, work in online and offline conditions, and operate with full efficiency on different mobile platform.

2. Deliverables' quality: Outputs vs. Outcomes

Given the visibility of the MARS system and Mine action large scale audience, particular importance should be given to the optimal quality of all *Outputs*, which should lead to appropriate *Outcomes* for GICHD. We therefore expect deliverables to be of high quality and meet in full GICHD's expectations.

An Output is just the result of a process (e.g. software development produces a deliverable). An Outcome is an achievement of a certain level of quality, fulfilling the

expectations of the client (e.g. software development produces a high-quality deliverable, or a user interface is “simple”, “fast”, “pretty”, according to customer perception).

3. Mandate

See [Software Requirements Specification for MARS Mobile Application](#) document attached with this tender document.

GICHD will expect the consultant to:

- (1) Develop and design efficient, user friendly mobile application based on the system requirement specifications for MARS mobile.
- (2) Design a user-friendly format for reports generated by the system.
- (3) Liaise directly with the MARS Project Manager Group.
- (4) Ensure that the application provides for longevity of the solution, and that GICHD is not necessarily tied to the original supplier to change or extend the system.

3.1. The following contract assignment procedure will apply:

- (1) A request for quotation is sent by GICHD to the Contractor, with the task description and the related technical specifications;
- (2) If necessary, clarifications may be requested by the selected Contractor through phone conferences or emails. GICHD will provide clarifications accordingly;
- (3) The Contractor shall provide an estimate of the work hours the task will require, and the delivery date; quotes should take into account testing, documentation, and follow-up (quality control of the deliverable);
- (4) If necessary, GICHD will discuss the offer with the Contractor until an agreement for the undertaking of the task or part of the task is reached;
- (5) GICHD will prepare a specific contract and sent to the selected Contractor for signature;
- (6) Upon signature by both sides, the contract enters into force and the selected Contractor starts executing to provide the agreed deliverable (s).

Delivery dates of the services

	DATE	TIME
Deadline for submission of tenders (email delivered)	30 November 2020	23:59
Validity of the tenders	31 December 2020	17:00
Tender opening session	01 December 2020	17:00
Contract Validity Period		
Start Date	15 December 2020	08:00
End Date	14 April 2021	23:59

Estimated workdays to deliver the services

To be proposed by the bidder Mandate: 120 working day.

The company shall provide a coherent, organized and clear proposal in response to the request.

Project resources

Name of the company: ADD NAME

Name of individual: ADD NAME OF INDIVIDUAL

Address: ADD ADDRESS

Proposals

Company: ADD QUALITATIVE NARRATIVE ON HOW TO UNDERTAKE THE WORK OR DELIVER THE SPECIFIED GOODS OR SERVICES

Availability

Company: ADD TEXT TO CONFIRM CAPACITY TO DELIVER THE SPECIFIC GOODS AND SERVICES WITHIN THE REQUIRED TIME LINE

Pricing

Equipment such as laptops with word processing software are not covered by the GICHD and should be included in the consultant services at no extra cost.

Services	Days/Units	Rate in CHF	Total
Fees			
Daily fees			
Professional costs (estimates)			
Transportation costs			
Accommodation			
Other costs (estimates)			
Purchase of equipment, VAT, etc.			
Total			

MARS tender – Pre-qualification questionnaire

General information about the organisation

Organisation compiling the questionnaire

Name:

Address:

Main contact persons (the contact persons are required to be fluent in written and spoken English):

Name	Tel	Email

Please provide a short description of the main activities of the organisation:

Address of the organisation's closest office to Geneva having a technical/development team:

Do you have relevant parts of your technical support and/or development services outsourced to other countries, and would you typically do that for such a project?

Yes

No

If yes, please specify what parts are outsourced and where:

Competence and experience

Do you have proven experience in the following fields?

1) Conducting and implementing mobile software development projects:

Yes

No

1a) If yes, please specify the approximate volume in CHF or EUR of the smallest and the largest custom software development project you have carried out over the last three years (please do not include short-term consultancies, but projects for which you have the overall management and development responsibility):

1b) Please specify the technologies and tools for which you have strong in-house capacity in the following areas:

2) Project management of software development projects:

Yes

No

2a) Please specify which project management and software development methods you commonly use:

3) Providing software maintenance over several years:

Yes

No

4) Please specify the main sectors/industries in which you have implemented software development projects within the last three to five years:

5) Based on the brief project description and system requirements attached, do you feel confident having the technical and managerial skills to fulfil the requirements with in-house capacity?

Yes

No

5a) If no, please specify how you would cover those requirements for which you do not have in-house capacity:

References

Please provide at least two references of relevant projects. References should be related to recent contracts and represent the range of software projects. Please describe those projects in terms of the mandate, the project organisation, technologies used, and key factors that were relevant, such as change management, methods for communication and testing.

Program Name	
Project Organisation	
Period of Performance	
Program Scope	
Technologies Used	
Key Relevant Factors	

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Project Organisation	
Period of Performance	
Program Scope	
Technologies Used	
Key Relevant Factors	

Size

Number of employees

	2018	2019	2020
Number of employees in all activities			
Number of employees in the field of software development			
Number of employees in the field of project management			

Annual financial turnover

	2018	2019	2020
Annual financial turnover in all activities			
Annual financial turnover in the field of software development			

Quality Management

Are you ISO 9001 certified?

Yes

No

If yes, please attach a copy of the relevant certificate.

If not, please elaborate on your internal quality management system and how you apply it to software development projects. Use a separate page if necessary.

Software Requirements Specification for MARS Mobile Application

version 1.0

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1 Document Purposes

The primary purpose of this document is to provide requirements specification sufficient for the client, analytics, designers, developers, and managers to follow the project's steps and implement the mobile application that meets the client's goals.

2 Product Overview

The overall objective of the project is to develop a new mobile application for the existing MARS Mobile Data Collection System.

The Mine Action Reporting System (MARS) represents an important data collection tool as part of the GICHD's IMSMA Open project to the humanitarian Mine Action community. This software tool was designed specifically to fill a gap in available technical solutions for mobile data collection tools that can accommodate advanced geo capabilities.

The MARS Mobile Application will help humanitarian organizations working in mine action to report about hazard areas. This Application will enable data to be accurately collected, consistently entered into databases and analysed to provide reliable support to decision-makers, monitors and other interested parties. The flow of data collecting fulfils in the reporting functionality by filling in geo-information and text fields as well.

The MARS system shall be designed using Open Source tools and libraries under MIT GNU 3. The list of preferred tools is presented in the [Preferred libraries](#) section.

The mobile system code shall be available for GICHD to share and publicly distribute.

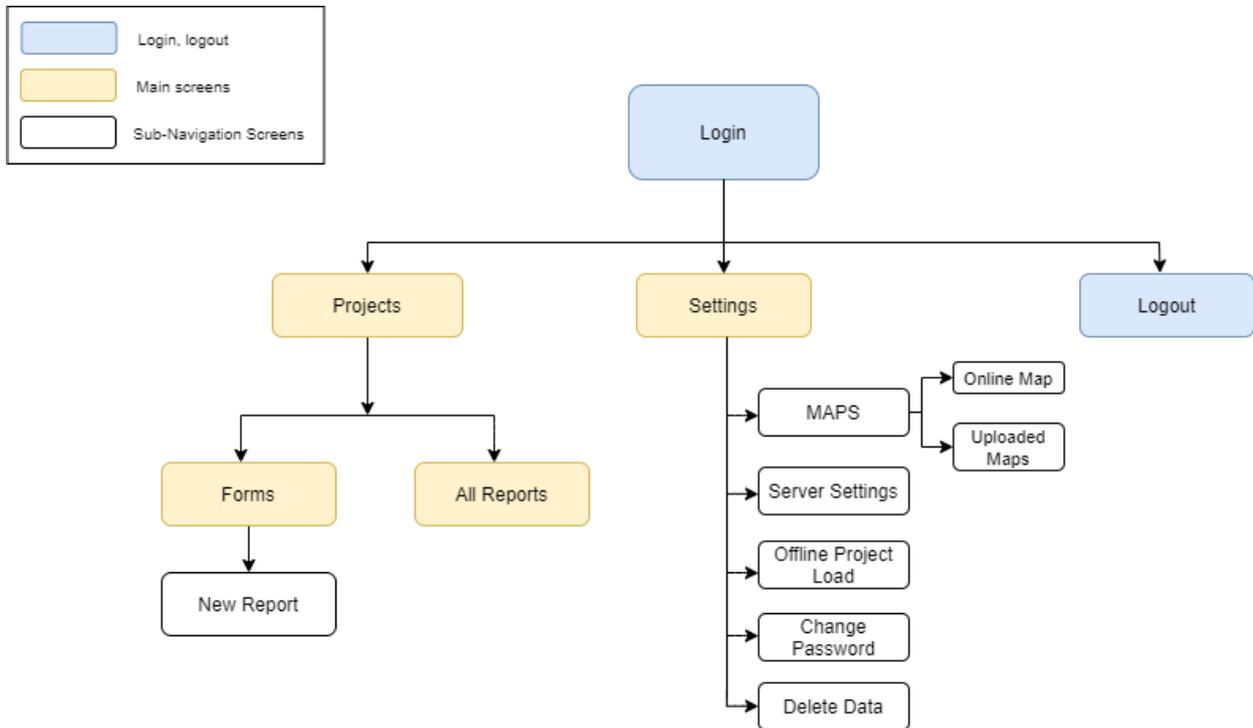
3 MARS Glossary

Notion	Definition
GICHD	The Geneva International Centre for Humanitarian Demining
IMSMA	Information Management System for Mine Action
IMSMA Core	IMSMA Core is a system of tools and processes that can be configured to fit national programmes' specific operational and reporting requirements, which provide access to information to a wide range of stakeholders, foster information sharing and provide near-real time maps and reports on the extent of land contamination. IMSMA Core is built from state-of-the art Geographic Information Systems software (GIS) provided by GIS market leader Esri.
IMSMA Open	Is a Knowledge Base on the use of Open Source GIS tools in mine action.
MARS (Mine Action Reporting System)	A geo data collection system used in the field to organise the reporting of humanitarian mine action activities and finding. MARS is consisting of a mobile application and the MARS server with web interface.
Mobile Application (APP)	Is a type of application software designed to run on a mobile device, such as a smartphone or tablet computer.
Project	Each activity in MA is organised under a project that encamps the forms, the user's permission to access data.
Template	It is the blueprint of a survey that identifies the type of data and questions required to be collected. Their organisation and structure. .
Form	It is the published template and linked to a project, users, maps and auxiliary data.
Report	A filled-up form with data and information by the field.
Auxiliary Table	Predefined tables with data that used by the IMSMA system such country structure, gazetteers, ordnance data ..etc

4 Information Architecture Diagram

The diagram below represents the high-level information architecture of the future system.

Scheme 1. Architecture Diagram



Basic requirements for the APP:

- flexible, intuitive interface;
- the ability to import/export information to/from web system;
- the ability to use the mobile application offline;
- the ability to sync data with the web system;
- protection against unauthorized access and reliability of information storage.

5 User Roles

The mobile application should provide access to all web user roles:

- User;
- Project Manager;
- Organization Administrator;
- System Administrator.

All user roles should have access to the application according to the permission level set for them on the web system. The back-end part of the APP shall track the user role of the logged-in user and display the content depending on the permissions for the user role.

6 Non-functional Requirements

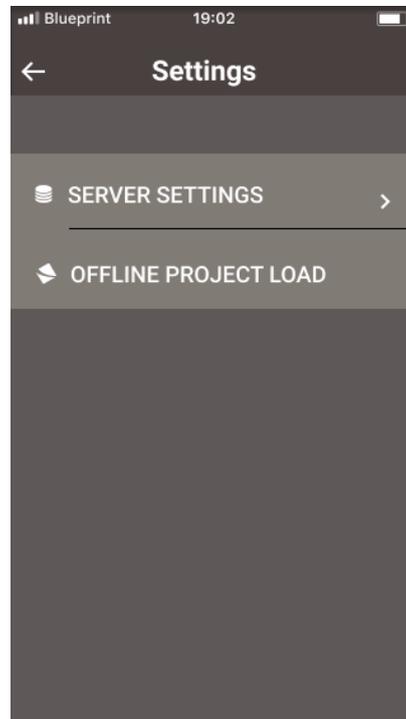
Parameter	Requirements
Platform compatibility	The application should run on devices that support Android OS from 6 and up, iOS 11 and up.
Types of devices	The application should run on smartphone and tablet devices.
Orientation	The application should support portrait orientation only.
Availability in offline	The application should work both offline and online.
Applications UI requirements	The application UI should be modeled based on iOS/Android guidelines with the use of standard platform-specific controls.

7 Login Page

Wireframe 1. Login page



Wireframe 2. App settings



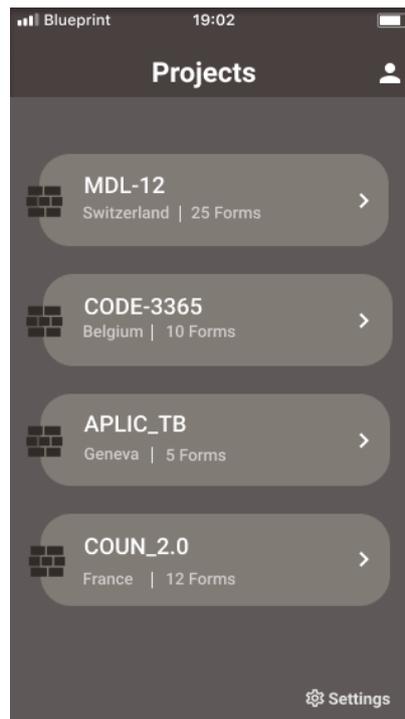
The Log-in page should provide the following functionality:

1. Users should be able to log in to the application only if he/she is already a registered user.
2. The system should enable a user to stay logged in after a user minimized the application.
3. The system should be able to remember a logged-in user.
4. Until a user logged-in the application, they should be able to fulfill the following actions:
 - a. manage server settings such as: server address, API Salt, Access Key;
 - b. manually download projects offline from a user device.
5. After successful log-in, the APP should upload from the server the projects available for a user according to his/her user role. The system should display the page with all Projects (a page description is presented below) that were uploaded from the server and manually downloaded from a user device.
6. The system should enable the user to log out of the system.
7. Optionally, the app could support Face ID and Touch ID functionality.

8 Projects

The Projects section describes the project content in the application.

Wireframe 3. Projects page



The Projects page should meet the following requirements:

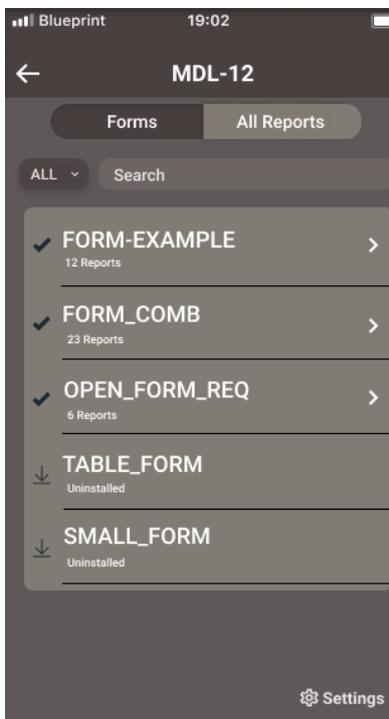
1. The "Projects" tab shall be the home page displayed for users by default after log-in. The list of projects to display should depend on user roles.
2. A user should be able to choose any of the presented projects by clicking on it. A user should be able to return to the list of all projects.
3. A user should be able to upload a project package in *.zip* format from the device offline (files inside the package may include the following formats: **.tpk(map)*; **.csv*; **.jsom* files).
4. The system should provide the following actions depending on the Internet connection:
 - a. if there is an Internet connection → the system should download from the server all projects available for a user according to a user's role;
 - b. if there is no Internet connection → the system should display early uploaded projects;
 - c. regardless of internet connection → a user should be able to upload a project package from the device.
5. Within a project, a user should be able to:

- upload project's forms and use them as a template for a new report;
- create a new report;
- see the list of all early created reports.

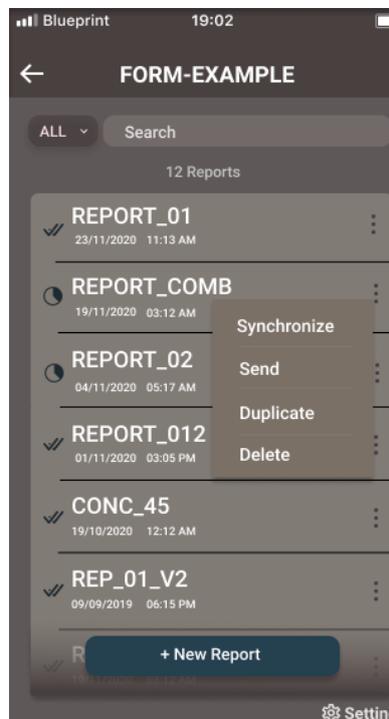
9 Forms and Reports

This section describes functionality connected with the report creation process.

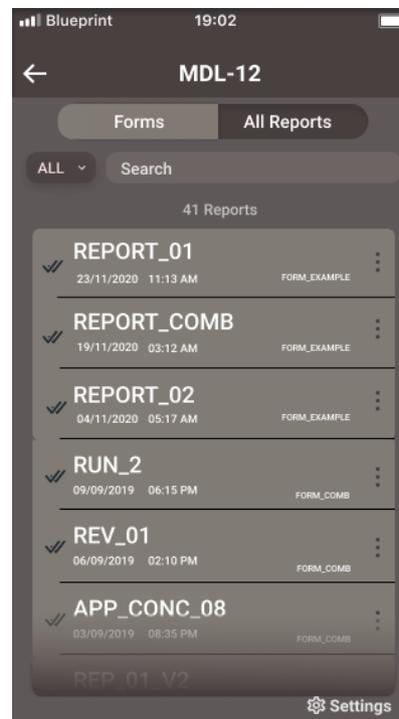
Wireframe 4. Project Forms



Wireframe 5. Form Reports



Wireframe 6. Reports List



The *Forms and Reports* functionality should meet the following requirements:

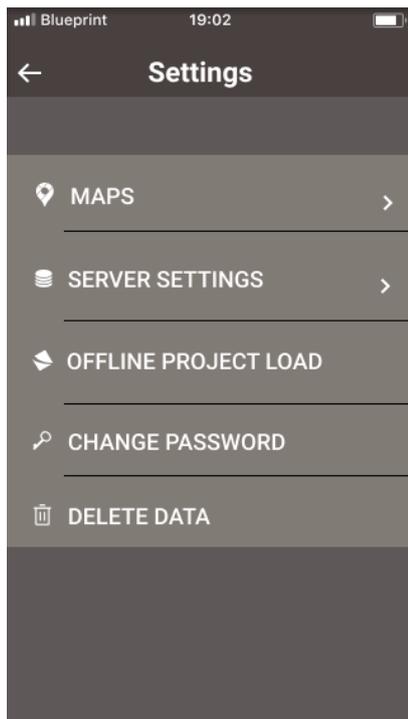
- After a user chose a project, the system should display the list of all project's forms. A user should be able to choose which forms of a project to install from the server. If there is no Internet connection, the system should enable a user to use forms that were installed earlier.
- A user should be able to use the search functionality to find a form.
- The system should enable a user to filter forms by a parameter (the range of filter parameters will be clarified during the development stage).
- To create a new report a user should be able to use any installed form as a template. A user should be able to see the list of all user-created reports within this form (see a mockup **Wireframe 5. Form Reports**).

5. The system should enable a user to continue completing the recently started report.
6. A user should be able to use maps for accurate points selections in the reports. A map should display an accurate user location.
7. The system should be able to auto-generate a Report Name. A user should be able to change the autogenerated name.
8. A user should be able to see the list of all created project's reports apart (see a mockup **Wireframe 6. Reports List**).
9. A user should be able to search for a report and filter reports in the reports list (the range of filter parameters will be clarified during the development stage).
10. By default, the App should synchronize with the back-up part every time when the Internet connection is available. If there is no Internet connection, the system should store a report in the App. After an Internet connection appears, a user should be able to manually synchronize the report with the back-end part of the APP.
11. A user should be able to send reports using the device's installed apps.
12. The system should enable a user to duplicate a created report.

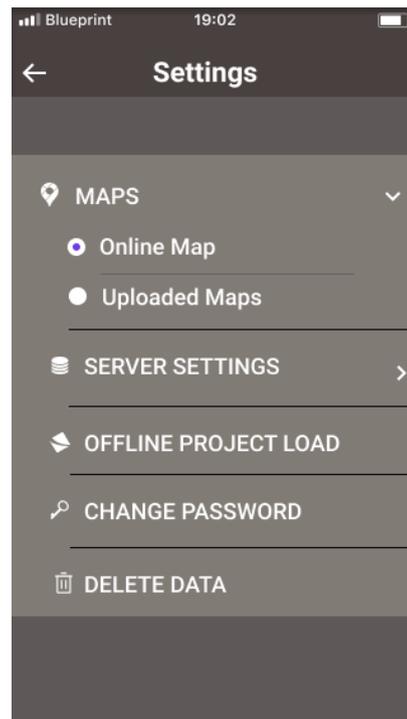
10 Settings

The mobile application settings are described below.

Wireframe 7. Settings



Wireframe 8. Settings open state



The mobile application setting should be as following:

1. A user should be able to choose what kind of maps use in the report:
 - a. Online map - a real-time map with an ability to show accurate user location;
 - b. Uploaded maps - maps for a certain location that are installed with a project loading.
2. The system should enable a user to manage server settings such as: server address, API Salt, Access Key.
3. Users should be able to upload projects offline from their devices in *.zip* format.
4. A user should be able to delete all data created in the app with resetting settings to default. After the user has applied this option, the system should log-out the user from the app. All deleted data should stay saved at the server.
5. A user should be able to change the password by using the email address related to his/her account.

11 Preferred Libraries

For the App creation should be used the Open Source Libraries:

APK	Native REACT for the core
GIS Interface	<ul style="list-style-type: none">• LeafletJs• OpenLayers
Database	SQLite
Online Maps	Open Street Maps or any available map service provider
Offline Maps	TPK and VTPK, vector tile package Kreator

End