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/004
Project number: 92009
Posting date: 15 April 2020
Deadline for submission of the Request for Quotation form: 27 April 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 to support to the Mine Action community ever since. This software tool was designed specifically to fill a gap in available technical solutions for mobile data collection tools that can accommodate advance geo capabilities.

Throughout 2018-2020 MARS System was maintained by Itransition Group (and several countries were benefiting of the system use (e.g. Libya, Chile, Afghanistan, Colombia, etc.).

The overall objective of this tender is to continue the development and maintains of the MARS system during the 2020. Provide technically support to countries that use MARS and finally upgrade MARS to be able to streamline to IMSMA NG and IMSMA Core systems.

2. Profiles of the required experts

See Required Profiles for MARS attached below attachment.

3. 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. Deliverables are therefore expected 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).

4. Task assignment procedure/s

4.1. The following task 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, as well as 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. A specific contract will be prepared by GICHD 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 the task in view of providing the agreed deliverable(s).

4.2. In case there exists a contract, containing a number of person-days destined to cover various tasks (like e.g. advanced technical support), the following simplified procedure, using the Jira issue tracking system and/or e-mail exchange, shall apply:

1. GICHD will request the implementation of a specific task, providing also the related technical specifications;
(2) The selected Contractor shall estimate the work hours or days the task will require, as well as the delivery date;

(3) If necessary GICHD will discuss the offer with the selected Contractor until an agreement for the undertaking of the task or part of the task is reached;

(4) Once the effort is accepted by GICHD, the selected Contractor undertakes the task and provides the deliverable(s).

Delivery dates of the services

<table>
<thead>
<tr>
<th>Description</th>
<th>DATE</th>
<th>TIME</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deadline for submission of tenders (email delivered)</td>
<td>27 April 2020</td>
<td>17:00</td>
</tr>
<tr>
<td>Validity of the tenders</td>
<td>08 May 2020</td>
<td>17:00</td>
</tr>
<tr>
<td>Tender opening session</td>
<td>28 April 2020</td>
<td>09:00</td>
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<tr>
<td>Contract Validity Period</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Start Date</td>
<td>01 May 2020</td>
<td>08:00</td>
</tr>
<tr>
<td>End Date</td>
<td>31 December 2020</td>
<td>23:59</td>
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</table>

Estimated work days to deliver the services

Based on the GICHD user requirements and deployment timelines for MARS, the tenderer will provide country support activities for the GICHD 2020 plan. This effort is expected to include software bug fixes, testing and configuration management in support of the MARS. Along maintaining the MARS serve up and running without any interruption or access issues. The tenderer will work with the GICHD’s MARS Project Manager to identify specific tasks for country support during 2020.

In addition, the tenderer will provide assistance with the MARS deployments in areas of upgrade/importing support and advanced technical support, as directed and requested by the Centre.

Below these two main categories of support are described in detail.

1. The “Country Support” groups the deliverables needed for a successful roll-out of the MARS system, and the tasks dealing with software maintenance and testing.
BUG TRACKING & FIXING

The tenderer will continue to use JIRA to capture and organise MARS issues reported by the countries and take action on what's important based on priorities set from the Centre. These issues may refer to:

- Fix critical, high, medium and low priority defects
- Update core components
- Refactor code of MARS mobile or MARS web and MARS API
- Increase performance
- Fix issues caused by the switch of MySQL to PostgreSQL database engine

In addition, the SCRUM methodology integrated into JIRA will be utilised with a two-week long sprint (i.e. work cycle) where issues are identified and investigated in an iterative way over a number of discrete time periods, and an estimated commitment of sprint goals is made. The tenderer will provide after every sprint these reports:

- Burndown Chart: to track the total work remaining and to project the likelihood of achieving the sprint goal.
- Sprint Report: to understand the work completed or pushed back to the backlog in each sprint.
- Velocity Chart: to track the amount of work completed from sprint to sprint.
- Control Chart: to identify whether data from the current process can be used to determine future performance.
- Cumulative Flow Diagram: identify the number of issues in each status over time. If there is an increase in the number of issues in a particular status it may be a sign there is a bottleneck to be investigated.

A sample sprint is displayed below:

TESTING

Manual and automated testing will be used to continuously test the code delivered, using different Android versions and different network configurations (client/network).

Test automation is the use of special software (separate from the software being tested) to control the execution of tests and the comparison of actual outcomes with predicted outcomes. Various framework/scripting techniques are generally used; however, the tenderer will find the most appropriate tool for MARS and will define test cases that need to be run to verify that MARS runs as expected.

2. The “Upgrade/Import Support” required under this tender consists of support and advanced technical support, as directed and requested by the Centre. This task is expected to include support for the high-priority programs for 2020.
During 2020, the tenderer will provide a variety of efforts to the GICHD supporting several major programs, data migration planning, creating and documenting support information including updates to MARS Dashboard:

- Localisation Support – Continued assisting the Centre in troubleshooting locale issues, language, backup and restore issues.
- Migration and Auxiliary data assistance
- Remote support activities
- Performance analysis
- Upgrade verification
- Migration analysis and reporting

3. **Additional requirements, information and implementation provisions**

3.1. The selected contractor should resolve problems and bugs that are attributable to them within 1 week from the announcement of the issue by GICHD. In case of mission-critical service requests (e.g. application is not functional), the resolution should not exceed 24 hours.

3.2. For any request or question by GICHD, the selected contractor commits to respond with an acknowledgment message within 48 hours, giving short comment and estimate of when the question can be resolved/answered, which must not exceed a maximum of five (5) working days, unless it concerns tasks larger than 1 day. The contractor shall handle larger tasks in a reasonable delay, i.e. the delay shall never be more than the time it actually takes to execute the tasks.

3.3. The project team members shall be the ones described in the tenderer’s technical proposal. In case of replacement for whatever reason of any member of the project team, the selected contractor should propose a candidate with the same level of qualifications and experience for the project and commit to take all measures for ensuring that the eventual changes in the project team will have no negative impact on the execution of the services (in terms of quality, deadlines and costs).

3.4. The selected Contractor should always keep GICHD updated about the names and qualifications of all people participating in each work package. GICHD will **NOT** accept contractor’s experts to carry out any tasks related to MARS development without the MARS project Manager written approval.

3.5. The contractor should replace within 10 working days a person involved in the project under the present call for tenders:

   (1) Whose conduct and behaviour are considered to be unsatisfactory

   (2) Whose abilities and/or performance have proven unsatisfactory.
3.6. The Contractor shall provide 12 months guarantee (free fixes of bugs) for any developed module.

3.7. The selected contractor will be able to connect remotely to GICHD server(s) as appropriate, in agreement with GICHD information and network security rules and policies.

3.8. GICHD can provide a test environment; however, the selected contractor should have his own test & development server and must ensure that it is compliant with software licensing policies, where applicable.

3.9. Any new code or module developed and integrated with the current system, should not break existing functionality. The selected contractor must apply appropriate testing to guarantee this.

3.10. All deliverables should first undergo rigid and thorough testing before being submitted for acceptance testing by GICHD.

3.11. The selected contractor will provide monthly and quarterly delivered work reports according to the scope of the deliverables, demonstrating the completed work performed during this period.
The organisations/companies shall provide a coherent, organized and clear proposal in response to the request.

Project resources

Name of the company: ADD NAME
Name of Contact Person: ADD NAME OF INDIVIDUAL
Address: ADD ADDRESS

Proposals

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

Availability

Consultant: 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.

<table>
<thead>
<tr>
<th>Services</th>
<th>Days/Units</th>
<th>Rate in CHF</th>
<th>Total</th>
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<tbody>
<tr>
<td>Fees</td>
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<td></td>
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<tr>
<td>Daily fees</td>
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<td>Professional costs (estimates)</td>
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<td></td>
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<tr>
<td>Transportation costs</td>
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<tr>
<td>Accommodation</td>
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<tr>
<td>Other costs (estimates)</td>
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<tr>
<td>Purchase of equipment, VAT, etc.</td>
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<td></td>
<td></td>
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<tr>
<td>Total</td>
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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):

<table>
<thead>
<tr>
<th>Name</th>
<th>Tel</th>
<th>Email</th>
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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 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 short project description attached, do you feel confident having the technical and managerial skills to fulfil the requirements with in-house capacity?

- Yes
- No

5a) If not, 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 be representative of the range of software projects. Please describe those projects in terms of the scope of the mandate, the project organisation, technologies used and key factors that were relevant, such as change management, methods for communication and testing.

<table>
<thead>
<tr>
<th>Program Name</th>
<th>Project Organisation</th>
<th>Period of Performance</th>
<th>Program Scope</th>
<th>Technologies Used</th>
<th>Key Relevant Factors</th>
</tr>
</thead>
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Size

Number of employees

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<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
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<tbody>
<tr>
<td><strong>Number of employees</strong></td>
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<tr>
<td>in all activities</td>
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<td>Number of employees in the field</td>
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<td>of software development</td>
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<td>Number of employees in the field</td>
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<td>of project management</td>
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Annual financial turnover

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<tr>
<th></th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
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<tbody>
<tr>
<td><strong>Annual financial turnover</strong></td>
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<td>in all activities</td>
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<td>Annual financial turnover in the</td>
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<tr>
<td>field of software development</td>
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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.
Profiles of the required experts

PHP/JavaScript developer
Java/Android Developer
Senior Expert - Analyst, engineer and tester
Senior Expert - DB model design expert
Senior Expert - User experience design expert
Senior Expert - XML and interoperability expert
Technical manager

A detailed description of the profiles is provided below. The profiles can be merged.

Task Profile: PHP developer (off-site)

Nature of tasks
- Further development of PHP/JavaScript-based MARS which will reflect the specifications based on user/country requirements;
- Optimisation of the existing MARS code;
- Country technical support;
- JIRA bug follow up and fixes;
- Modification and creation of stored procedures (PostgreSQL) and tables in databases;
- Performance management and troubleshooting;
- Assistance in migrations/upgrades to other tools and environment and other operating systems;

Experience and knowledge
- Post-secondary degree, or equivalent background and experience of at least 2 years, in relevant subject;
- Additional minimum 2 years work experience as developer in PHP/Laravel and experience in JavaScript/Ajax and database development;
- Excellent knowledge of English (speaking/reading/writing).

Task Profile: Android developer (off-site)

Nature of tasks
- Further development of Java/JavaScript-based MARS mobile which will reflect the specifications based on user/country requirements;
- Optimisation of the existing MARS code;
Country technical support;
JIRA bug follows up and fixes;
Modification and creation of stored procedures (PostgreSQL) and tables in databases;
Performance management and troubleshooting;
Assistance in migrations/upgrades to other tools and other operating systems;

Experience and knowledge
- Post-secondary degree, or equivalent background and experience of at least 2 years, in relevant subject;
- Additional minimum 2 years' work experience as developing Android based applications and experience in JavaScript/Ajax and database development;
- Experience in geographical SDK tools implementation and preferability in Esri SDK.
- Excellent knowledge of English (speaking/reading/writing).

Task Profile: Senior Expert - analyst, engineer and tester (off-site)

Nature of tasks
- Analysis of user requirements, functional analysis;
- Design of applications, specifications;
- Feasibility studies, cost/benefit analysis; Consulting, proposing and discussing appropriate solutions;
- Problem diagnosis, recording and resolution;
- Testing of new or modified software; Assist with evaluating and testing products delivered by developers;
- Produce and/or establish quality assurance validation on the relevant technical documentation and user documentation;
- Assist in training the users of the system and designing training sessions;
- Database optimizations, troubleshooting;
- Participation in meetings with GICHD and other stakeholders.

Experience and knowledge
- Post-secondary degree or experience of at least 3 years in relevant subject;
- Additional minimum experience of 5 years in IT, including 2 years at senior analyst level and at least 2 years with the following technologies: JS, XML, POSTGRESQL RDBMS;
- Excellent knowledge of English (speaking/reading/writing).
Task Profile: Senior Expert - Database model design
Expert (off-site)

Nature of tasks

- Development of DB Schema which will reflect the specifications based on user requirements;
- Modification and creation of stored procedures (PostgreSQL) and tables in databases;
- Database design taking into account performance, scalability and security;
- Apply security best practices to DB development (Design and lead the implementation of credentials management, permissions, etc.);
- Testing and validation, deployment, documentation.

Experience and knowledge

- Post-secondary degree, or equivalent background and experience of at least 4 years, in relevant subject;
- Additional minimum 2 years work experience in database modelling and data design.
- Excellent knowledge of English (speaking/reading/writing).

Task profile: Senior Expert - User experience design Expert
(Off-site)

Nature of tasks

- Design high quality, self-explanatory, simple, user-friendly, java-based User interfaces. The user of these interfaces should not need to receive explicit training or to study instructions;
- Consulting on presentation of information and proposals for graphical and/or user-interface layout and symbols. Give technical guidance to developers to ensure aesthetics, usability and standards such as ISO;
- Expert review of User Interfaces in terms of usability and accessibility.

Experience and knowledge

- Undergraduate or Postgraduate studies on the field (e.g. Human-Computer Interaction);
- Demonstrated academic or professional experience of at least 5 years in related projects of the specific field (including period of studying);
- At least 40h training in the field of User experience design, User interface design or Usability;
- Participation in at least 3 projects with the role of user experience designer;
- Excellent knowledge of English (speaking/reading/writing).
Task profile: Senior Expert -XML and Interoperability Expert (off-site)

Nature of tasks

- Work to promote maXML, coordinate with and establish interoperability and compatibility to all related stakeholders, i.e. researchers, institutes and humanitarian organizations, mine action portals;
- Consult on maXML usage and improvement - Extension, quality, standardisation; relation with crisis matching services, technologies, initiatives, related or similar standards (e.g. HXL, CORD, etc.);
- Attend to at least two meetings and/or missions per year for promotion/dissemination purposes (e.g. conferences in Europe, working group meetings, participation in committees and standardisation bodies, technical meetings with stakeholders and/or with GICHID);
- Consult on improvements on MaXML in full alignment with technical software development and according to IMSMA NG;
- Advise on system technical architecture design and how it is influenced by XML. Propose related software tools and technologies;
- Produce monthly or quarterly reports of activity; provide documentation.

Experience and knowledge

- Post secondary degree or at least 3 years experience in relevant subject;
- Additional minimum 5 years in the IT sector, including at least 1 year at senior technical level and at least 4 years of demonstrated, documented and convincing academic or professional experience and expertise in related projects of the specific field described above;
- Excellent knowledge of English (speaking/reading/writing).

Task Profile: Technical Manager (off-site)

Nature of tasks

- Elicitation of requirements and drafting of technical specifications. By participating in the various meetings, discussions, e-mail communications, interactively produce/convert/distil/codify requirements into appropriate technical specifications and implementable actions;
- Technical project management – Follow-up the entire, continuous life-cycle of the emerging projects and sub-projects within MARS work; issue tracking; administrative follow-up and reporting (report of the percent of execution, invoicing, assessment of deliverables, etc.);
- Responsibility at a managerial level for the good operation and health of MARS System;
- Maintain and cultivate an excellent understanding of the MARS project, the stakeholders involved and their needs, so as to be able to provide educated and informed advice and assistance to GICHD project manager;
- Consult and research on innovative technologies;
- Errors, bugs and remarks collection and reporting;
- Other technical tasks.
Experience and knowledge
- Post-secondary degree or at least 4 years experience on relevant subject;
- Minimum 4 years working in the IT sector, of which at least 2 years work experience in tasks similar to those described above and also specifically with java technologies (e.g. J2EE/Java, XML) and databases (PostgreSQL);
- Team leading in SW development projects;
- Excellent knowledge of English (speaking/reading/writing).

Task Profile: Project Manager (GICHD off-site)

Nature of tasks
- Project management including proposals for project strategies, definition and distribution of tasks and deliverables, review of project deliverables, quality control, risk analysis and management, status reports, problem reporting and management systems, change control systems, planning and reporting (establishment of timeplan / roadmap, control of progress), follow up and organisation; technical system architecture;
- Guidance of team members in charge of project activities and review of their deliverables;
- Participation in functional and technical working groups and progress meetings.

Experience and knowledge
- University degree, or equivalent background and experience of at least 4 years, in a relevant subject;
- Minimum 8 years experience in IT of which minimum 3 years in Project Management of computer software construction and of quality procedures. Practical hands-on experience with most stages of the system development life-cycle is desirable;
- Excellent knowledge of English (speaking/reading/writing).