

Section II: Schedule of Requirements

eSourcing reference: RFQ/2017/529

Software and Civil Engineering Support for the Development of the Better Construction Supervision System

A. General Background

FieldSight is a technological platform for remote monitoring, supervision, and quality assurance on humanitarian, development, and construction projects. By connecting semi-skilled and project personnel working in the field with skilled and management personnel based in regional or central offices, FieldSight ensures that progress and quality can be better monitored, tracked, and captured throughout construction and project implementation.

The concept attempts to address many of the challenges that project managers and implementing organizations face when operating in the remote and resource-constrained environments that characterize humanitarian and development work—including limited accessibility to sites, strained technical capacity, and insufficient budgets—while also taking advantage of recent developments such as improvements and price reductions for mobile technology and the increasing reach of mobile networks.

FieldSight consists of a web-based application and an Android-based mobile application connected via a central server. The web application allows users to set-up and configure projects as well as to review data that is submitted by field users. The mobile application is used to collect and submit data from field sites. Tools for assessing submissions, sharing project plans and guidance materials, and communicating across multiple channels further enhance the connection between office and site, facilitating coaching, collaboration, and capacity building. FieldSight is a people-based technological platform. Effective use of the system requires integrating it with project quality assurance content and within an effective supervision program, consisting of:

- Quality Assurance Content: The assessments, surveys, forms, and guidance materials that are basis of quality assurance and supervision processes, and
- Supervision Personnel: The multiple layers of staff, project structure, logistical support, and other program elements that enable data collection and supervision at all scales of a project.

Developed in the Nepal Innovation Lab, FieldSight is currently being piloted on a number of projects throughout Nepal, including to conduct a village-scale Multi-Level Hazard Assessment for the National Reconstruction Authority, to monitor the construction of schools and clinics being built by World Vision, Miyamoto, and the World Food Programme, and to monitor the quality of earthquake reconstruction projects funded by UK DFID.

FieldSight is built to scale and works across projects ranging in size from a small handful to hundreds of sites. Dashboards embedded in the system provide aggregate data across sites, projects, and organizations that allow project managers and staff to more effectively understand progress, integrate activities, and analyze data.

B. Development Objective

FieldSight will contribute to higher quality construction and reduced long-term risks, reduced costs, increased capacity and knowledge in local communities, and enhanced transparency and accountability in construction and reconstruction projects.

C. Immediate Objectives

The immediate objectives of the consultancy include:

- A maintained and supported technological platform connects site supervisors and builders on remote construction sites with centralized skilled engineers and project managers in order to facilitate monitoring, review, feedback, and coaching.
- A training platform ensures that the many users of BCSS have the skills needed to deploy it successfully.
- Stakeholders throughout Nepal are engaged to understand, support, and, where appropriate, use BCSS.

D. Outputs

In order to support the development of BCSS, UNOPS seeks consultancy services to support the ongoing maintenance and development of the FieldSight platform. The consultants are expected to deliver the following results:

- Maintenance, trouble-shooting, and fixing bugs within the FieldSight platform that includes mobile application; server and back-end architecture; web based dashboard and interface; and minimum device specifications.
- Ongoing development of the platform to add additional and/or modify existing features
- A training platform and curriculum to on-board users of the BCSS, including project managers, project engineers, site supervisors, and contractors.
- Stakeholder engagement with potential partner and user organizations in Nepal.

E. Activities

Activities include, but are not necessarily limited to, the following tasks:

Output 1: Maintain and Support FieldSight Technical Platform—providing ongoing support for the maintenance and use of the FieldSight system, including:

1. Provide server space and hosting for the FieldSight Platform;
2. Maintain FieldSight accounts on Google PlayStore and any other App Stores;
3. Work with UNOPS to provide ongoing improvements to the FieldSight platform including by helping to troubleshoot, fix bugs, and respond to errors as they arise in the web application, the android application, and the back-end architecture;
4. Develop and configure projects and forms for clients within the FieldSight system;
5. Participate in periodic reviews of the prototype and subsequent versions of the software with UNOPS staff and partners, and incorporate feedback into further iterations of the software.
6. Deliver the software to UNOPS under an open-source license.
7. Maintain and update training guides for using the software that can be provided to UNOPS staff and partners that are interested in using the software.

Output 2: Develop and Modify Features—Work with the FieldSight team to identify additional features and modifications to existing features that can be further integrated into FieldSight. Specifically, the consultant will:

8. Work with the FieldSight team at UNOPS to identify and agree upon the key components, functionality, and content types to be included in the software system. Develop a wire-frame model and mock-ups of the structure.
9. Participate in planning and development workshops in order to clearly outline the specific aspects to be developed and to ensure that products will be aligned with UNOPS internal systems and regulations.
10. Develop a schedule with delivery milestones for the development and introduction of new features based on team availability, workload, and needs of the system.

F. Inputs

UNOPS will provide the following inputs:

- UNOPS will be responsible for client engagement and program direction around the use of FieldSight, which will provide key background information and guidance for the IT team.

The Consultant will provide the following for a period of ten months (9 March 2017 to 31 December 2017):

- Necessary equipment, including servers, computers, and hosting.
- Full-time staff
 - Sr. Web Developer (Django)
 - Jr. Web Developer (Django)
 - UX/UI Designer
 - Android Developers
 - Civil Engineer
 - Architect / Designer
- Part-Time Staff (~10 hours per month)
 - Technical Advisor
 - System Admin
 - Android Consultant
 - Django Consultant
 - Web GIS Developer

Sr. Web Developer: 4-5 Years' experience.

Jr. Web Developer: 1-2 Years

All staff must be skilled and have the necessary education and experience backgrounds in software, technology, design, and or civil engineering. Staff must be fluent in English and Nepali.

G. Timing

The consultancy is planned to start 9 March 2017 and last for ten months.

H. Payment Schedule

Payments will be made monthly based on the rates put forward in the contract and the work completed.