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| **Country** | **Bangladesh** |
| **Location** | Dhaka City Corporation slums (Baunya-Badh, Pallabi) |
| **Project Title** | #GirlUp  OPM/2018/04018 |
| **Application Deadline:** | 20th February 2020 |
| **Type of Contract:** | Consultancy |
| **Post Level:** | National Consultant for Android App Development |
| **Languages Required:** | English and Bangla |
| **Expected Duration of Assignment:** | March 2020 – June 2020 |

**1.** **Background**

ARBAN is a non-governmental development organization, concerned with the fundamental rights and the basic needs of the people; registered with the NGO Affairs Bureau (NGOAB) in Bangladesh in 1989. It was founded on 18th February 1984. ARBAN believes that all development projects and programs, designed and implemented by the Government, NGOs, International Organizations, UN bodies and others should be directed towards the fulfillment of the basic needs and fundamental rights of the people who live in perpetual poverty, famine, malnutrition, disease, deprivation, indebtedness, injustice and exploitations.

ARBAN has recently received the approval of a grant from the Tavola Valdese” Call for Proposals to implement a one year’s project whose title is “*#GirlUp*”, project code is OPM/2018/04018. The project aims to contribute to the achievement of the Sustainable Development Goal 5 – achieve gender equality and empower all women and girls, with a special focus on children (girls under the age of 18). Specifically, it aims to reduce the incidence of all forms of violence against all women and girls in the public and private spheres, as well as harmful practices, such as child marriage.

Among other activities, the project envisages to scale-up a network of slum-based adolescent girls introducing some adjustment to an android-based Application (App) named **“Jukta Hoe Mukta”** which wasdeveloped in 2017 by a local App development firm to ensure real-time connectivity of girls. ARBAN is seeking a Consultancy firm able to perform specific tasks as specified below.

**“Jukta Hoe Mukta” App - System overview**

The current android and mobile-based App is targeting 20 smartphone holders - Team Leaders (TLs), each of whom is supervising 10 other feature-phone-holder girls. This android application serves the targeted girls by providing them with necessary information on the services available in the slum of Baunya-Badh and by helping them facing any emergency situation.

The server and the database which are hosted on cloud are built with state-of-the art technology. Both the server and the database support the application and the website in real-time, store all the information related to adolescent girls and manage the team structures. A web-based CMS [Content Management System] is by the project staff to regularly update the information stored in the database and to make any necessary change in the team structure as well.

The root of the system is a cloud-hosted ‘Main Server’. The android application is able to communicate with the server whenever needed. The application is also able to auto download all new information inserted / updated in the database by the project staff.

An emergency situation can be initiated at any level of the girl structure. If a girl without any phone [no smart phone and no feature-phone] faces any emergency situation, she can ask for help from a girl with a feature phone. She can consequently call or text her TL via her feature phone. The smartphone application has an easy-to-access button for creating an emergency situation. The TL girl can initiate an emergency situation just by pressing that button.

When a TL presses the button to initiate an emergency situation, the android application internally communicates with the Main Server. The main server will notify the project staff and other TLs, depending on the kind of situation, via push notification and by generating an alarm.

Please see the figure below for a visual representation of how the App works.

**The App: how does it work?**



**System database**

**Smartphones holders**

**Normal features phones holders**

**Other girls connected with or without phones**

**“Jukta Hoe Mukta” App - Technical Description**

The Android application is developed with native framework as Android Studio is used as the IDE.

The server works on real-time and is hosted on cloud. The server communicates with the database to fetch and update system information, team structure, contact information and information entered by the project staff. The server uses a MySQL database which stores the data securely with proper encryption.

The server provides REST APIs for android application, the web application and the admin module (CMS). It is built with Java 1.8 Spring Boot Framework in the back-end whereas Angularjs is used as a front-end technology for the CMS panel.

The android application is very user-friendly. It consists of images and icons instead of large texts. The android application is also able to communicate with the server and handle push notifications sent from the server. The application supports various display sizes and consumes limited bandwidth. The application also keeps track of the amount of bandwidth the phone is using through this application. The team structure needs to be auto-managed while logged in with the userID [i.e. phone number]. The android application supports 98% of the devices that runs Android SDK world-wide.

A CMS or an Administrator module is updated with the necessary information by the project staff and it restructures the teams. The project staff will use the module to monitor, change and edit any user [girl]. The project staff through the module is able to manage the roles of users, notifications, change user contents, and update information. This module maintains a certain level of security and build.

A website has also been designed and developed in consultation with ARBAN to support the information requirement of adolescent girls. The technology stack of the website is mostly WordPress that comes with basic HTML, CSS and Javascript and PHP.

**Scope of the work**

The consultancy firm will be entrusted with the following tasks:

1. Grant access to the App to other 20 Team Leaders.

20 additional TLs need to be included in the system. Each of them will be coupled with one of the current TLs who will play the role of mentors to them. The same 20 normal features phone holder girls under the current TLs will be available under the new TL as well. Under this output please include the following costs:

* Database remodeling along with new API design and development for mentors
* App side database re-modeling to provide offline support
* Testing, quality assurance and App publishing
* On demand bug fixing and live testing

1. Include maps of the service providers available in Baunya-Badh slum or in the vicinity.

Based on the service providers’ location information, to be provided by the girls connected through the “Jukta Hoe Mukta” App, the Consultancy firm shall enable the capability of locating and providing directions to the service-providers’ location using the App. The consultancy firm will share with the project team a data format with the information (latitude and longitude of the providers) to be collected by the girls. The location information will be put into the cloud-database once collected and the data will be served in the App using the Application Programming Interface (API) that will be developed by the Consultancy firm. Under this output please include the following costs:

* API for map data to show a map using Google Maps to locate the service providers in the area and provide directions.
* Changes in the existing design of the app in order to support the navigation using the map.
* Develop the capability for locating the service providers in the map and providing directions.
* Integrate the API for getting the map locations from the server API.

1. Provide training to 40 TLs in May 2020 on how to use the map and develop guidelines (hardcopy and softcopy / Bangla and English) for this purpose

**Timeline**

The contract period will be from 01/03/2020 to 30/06/2020.

**Support services**

The vendor will provide necessary technical support to ARBAN project staff during the contract duration.

**Required skills and experience**

**Education:**

* Master degree in Computer Science and Engineering.

**Experience:**

* At least 3 years of working experience in development software industries;
* Having proven experience in developing similar software applications.

**Language:**

* Excellent Bangla and English writing and communication skills.

**Additional Competencies**

* Effective interpersonal, communication and presentation skills to provide adequate trainings to the users;
* Ability to meet deadlines and quality;
* Ability to solve problems with minimal supervision;
* Ability to receive/integrate feedback;
* Proven ability to work as a team, develop synergies and positive working relationships, establishing effective communication with ARBAN;
* Experience in handling young people will be a plus;
* Cultural, gender, religion, race, nationality and age sensitivity;
* Ability to treat all people fairly without favoritism.

**Application procedure**

**Qualified candidates are requested to submit an application to Mongchingsha Marma (**mong.arban@gmail.com**) that should contain:**

* A short concept note (maximum 2 pages) including the firm understanding of the assignment;
* CV of the main professionals to be engaged in the consultancy;
* Financial following the enclosed format for submit budget:



Incomplete applications will not be considered. Please make sure you have provided all requested materials. In case you need further specification, please contact the above-mentioned email addresses.