

TERMS OF REFERENCE

Developing, deploying and managing the SMS based monitoring solution for the Command and Control Centre for the upcoming 2012 population and housing census of Rwanda

1. Background:

The fourth General Census of Population and Housing will be held in Rwanda in August 2012. In this exercise, house-to-house visits by enumerators will facilitate collecting information about people living in Rwanda. Around 16,700 enumerators, one for each enumeration area (EA), will visit every household in Rwanda.

The fieldwork for the upcoming Census concerning *household listing* and *data capturing* which is expected to last for 18 days must be closely monitored for any significant deviations from the planned exercise.

In order to achieve that – the National Institute of Statistics of Rwanda (NISR) intends to obtain the services of an expert– to develop, deploy and manage a SMS based software solution meeting the intended objectives as outlined below.

2. System characteristics:

The system is expected to work as follows:

For the first three days, the system is expected to monitor and report the work of enumerators in listing of the households in all EAs. It is expected that each enumerator will cover all households for listing in first three days of work. After which (from the fourth day onwards), the enumerators will start the interviews and collecting household data. It is expected that the enumerators will cover 12 households each day. The interviews are expected to last for 13 days.

The system will monitor the work of the enumerators based upon the SMS reports sent by them detailing the status of the work for each day– either directly to the SMS gateway or/and to their immediate team supervisors. This information from the database then gets the form of rendered map on web browser with specified delimiters and other reports.

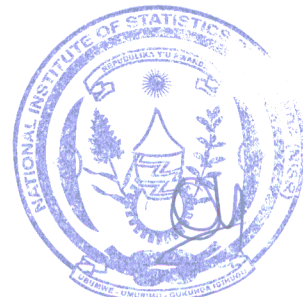
The system will provide the functionality to print reports/maps for further discussions within NISR. The system will have the details about the geographic areas including EA and personnel data such as enumerators and their supervisors.

The system is expected to work in the Free and Open Source environment without any licensing costs.

3. Scope of the work:

The scope of the work includes but not limited to the following:

- Develop a methodology for meeting the requirements of the assignment and produce a technical overview and wireframes for the SMS system and web-based dashboard functionality;
- A secure and restricted (password protected) dashboard/web interface for standard visualization which may include colour coded/rendered map detailing up to the level of EAs, exception reports and real time analytics (with alerts) including provision for ad hock querying;



- Setting-up the database with master datasets which may include data concerning map, enumeration area, enumerators, team supervisors, sector supervisors, zone controllers, district census coordinators, and province census coordinators;
- Programming to connect database with the web interface, hosting the application in a reliable and secure environment;
- Developing the mobile interface/s for reporting (and feedback) through SMS, including the connection between the recipient entity and the database;
- Providing support in coordinating and obtaining other relevant products and services concerning this work – which may include obtaining short codes and airtime/user groups;
- Training of the users of the system;
- Maintaining and managing the system for the period of census data collection; and
- Developing related documentation and making it accessible online as an open source product.

4. Competencies and Qualifications:

- It is required that the expert has experience working with SMS Gateways and has already developed SMS Applications (ex: Ushahidi, RapidSMS)
- It is required that the expert has experience in developing and maintaining applications using a modern MVC framework
- It is strongly advantageous for the expert to be the author, maintainer, contributor or other active member of at least one open-source project.
- It is strongly advantageous for the expert to have experience developing dynamic forms.

5. Reporting arrangements and overall coordination:

The expert shall report to the Director General of NISR, with the primary point of contact for the work being the ICT Department Director and Census Department Director. The ICT Department shall provide necessary and timely information and will coordinate inputs/comments from key stakeholders and technical team involved.


6. Period:

The work is expected to take a maximum of 60 days. These include up to 10 days for desk review and planning for the assignment and a further 50 days to develop, test, document and deploy the system.

7. How to apply:

The interested candidates should send their application package to NISR including their CV in specified format by 3 PM June 5, 2012.

Done at Kigali on May 23, 2012:


Odette Mbabazi
 Deputy Director General – Corporate Services
 National Institute of Statistics of Rwanda

