



TERMS OF REFERENCE

DEVELOPMENT OF A MANAGEMENT INFORMATION SYSTEM (MIS) FOR DATA MANAGEMENT

Organization	Somalia Resilience Action Consortium (STREAM Consortium)
Project	Building Resilience through Social Safety Nets in South-Central Somalia Program
Position Type	Short-Term Consultancy
Study Topic	Development of a Management Information System (MIS) for Data Management
Position Location	Nairobi, with frequent travels - visits to Lower Juba region of Somalia
Duration	45 Days
Reporting To	Consortium M&E Coordinator
Working With	STREAM consortium Secretariat, ACTED, SADO and Adeso and Monitoring and Evaluation units
Starting Date	Immediately
Application Deadline	2 nd March 2018
Vacancy Contact	Please send applications to consultancy@adesoafrika.org , Adeso will only respond to short-listed applicants.

1.0 Introduction:

The STREAM Consortium Project (*comprising of ACTED, SADO and ADESO*) is a long term, predictable, market-based intervention that strives to help households manage their own coping mechanisms and livelihood opportunities, minimizing the negative impacts of shock events and humanitarian crises. The project aims at reducing lower Juba community's vulnerability to acute and chronic food insecurity. The program is reaching 5,000 households with regular cash transfers and livelihood support, and the overall communities', an estimated 15,000 households, with improved access to early warning messaging, disaster risk reduction and a scale-up of cash transfers in the event of a shock or disaster event. The project will also support a body of research on Social Safety Net Programming, enabling service providers to continue to deliver better-designed Safety Net interventions into the future.

2.0 Objectives of the Use of Technology for Data Collection, Analysis and Management:

For the STREAM Consortium to adequately implement this project, quality monitoring and evaluation practice has been highlighted as one of the key components to be highlighted. Thus, the routine collection of project data, its analysis, and utilization thereof for informed decision making will be paramount. For this to be effective, the timely availability of adequate and quality data will be essential.



Thus, it is paramount to: showcase interventions that the organization is/has implemented and people benefiting from the same; showcase progress made both at the outputs level and outcomes level (changes in perceptions, attitudes, knowledge, behaviour etc.); readily make available data on resilience programming for informed decision making at the project level, create awareness/notify communities on impending disasters/shocks and above all provide evidence that influences resilience programming and DRR policies.

On the basis of the above, the STREAM Consortium seeks the services of a Mobile App Service Provider/Management Information System Developer, to enable the collection, analysis, management and reporting/dissemination of data gathered in the course of our programming.

3.0 Summary of Features Sought

An outline of the functionalities sought for the Management Information System/Mobile Application are shown in details in section 4 below. However, at the minimum the system should have:

- a. Ability to capture data through mobile phones (all OS's) or enter data directly through a console
- b. Ability to analyse data, both quantitative and qualitative. For quantitative data, ability to filter and cross tabulate data collected
- c. Ability to visualize filtered/cross-tabulated data (showing info-graphics for frequencies, percentages, trends, geo-maps/spatial data etc.) on real time dashboards
- d. Ability to support case management for longitudinal data processing
- e. Application Programming Interface at the minimum with Qlik and/or Tableau among others
- f. Linkage possibilities with an existing organizational website (website integration/publishing data or information online)

4.0 Details of Functionalities Sought

- i. **Validations:** The system/App should have ability to: set questions as either required or optional; to make provisions that address questions that require; an email address, a number (*including constraints like: must be a number that is greater or lower than that given in a previous response*), a word, a date (*including constraints like: must be a date before or after that entered in a previous response etc.*) and; to provide for instructional questions or help texts for the data collector.



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- ii. **Field types:** The system/App should support the use of; text, numbers, date choosers, radio buttons, photos/videos. GPS coordinates, repeat fields and bar code scanning.
- iii. **Languages:** The System/App should support other languages other than English
- iv. **Duplicate checking:** The System/App should support this by blocking data collection from a respondent who has already participated in the exercise. Some of the duplicate checkers may include; ID number, email address, participants name etc.
- v. **Case management:** The System/App should give provision for relationship/pulling data previously collected/entered using the same App, hence supporting longitudinal surveys/tracking of responses from the same respondents.
- vi. **Data entry from web console:** The System/App should give provision for data entry directly onto a web console and not only through hand held devices.
- vii. **Skip logic or conditional fields:** The System/App should support the setting up of survey logic including skip logic, branch logic, setting constraints etc.
- viii. **Calculations:** The System/App should generally support calculations including; *sum, average, counts* etc. both during data collection and analysis after data upload.
- ix. **Roles and permissions:** The System/App should have a provision for working with users with either; writing rights only, reading rights only or both writing and reading rights.
- x. **SMS and IVR functionality:** The System/App should support the use of SMS/IVR functionalities for data collection. Further, compatibility with USSD functionalities should be supported.
- xi. **Linkages with other Apps:** The System/App should be able to 'speak' with other Apps. Thus, if other locations are using different Apps, there should be a way of merging information with ease. The App should also be able to support reporting.



- xii. **Ease of customization:** The System/App should be readily customizable to fit the organization's emerging data collection, analysis and management requirements beyond the STREAM Project.
- xiii. **Offline functionality:** The System/App should have provisions for collecting data/working offline, as long as the questionnaire has been deployed to the device.
- xiv. **Preliminary analysis and visualization:** After data collection, the System/App should provide for preliminary analysis of data (*mean, mode, median, Standard Deviation, regression, correlation, cross tabulation etc.*) and with clear visualization of results (*bar charts, pie charts, infographics etc.*) on filterable dashboards.
- xv. **Hosting services:** The System/App should ensure confidentiality and security of data collected and submissions made. The data should be encrypted and inaccessible to by hackers. If hosted on the cloud, Amazon is most preferred.
- xvi. **Export functions:** The System/App should provide for export functions, at the minimum SPSS and STATA, for additional analysis if need be.
- xvii. **Search engine:** The system should be able to help one search for keywords within the titles and descriptions of the icons' text boxes.

5.0 Scope of Work and Responsibilities:

The MIS development process will involve the following steps:

- a. Conduct needs assessment with STREAM Consortium M+E team (*including ADESO and ACTED M+E teams*) on the conceptual design behind the data bank, queries' and reports expected prior to configuration of the data bank
- b. Design, implement and test the database management system
- c. Migrate sample data from the spreadsheet to the new database
- d. Connect the database to the document library and mapping interface to facilitate direct updates. Create a sample document and mapping layer based information in the data management system.



- e. Address any problems with functionality or usability identified during the testing period to be specified in the contract.
- f. Develop a user guide that includes summaries of all of the system features (creating profiles, data input, search functionality, resolving problems, how to manage links with ADESO mapping tool and other content).
- g. Present output, train and provide technical support to the STREAM M&E team either remotely or in person, on how to use the database (ability to update, edit, and delete information, to add fields and produce new reports as needed). Provide capacity to expand data base use.
- h. Backstopping support to ensure trouble shooting and validation of database requirements.

6.0 Deliverables

The following are the deliverables expected from the MIS development assignment:

1. Technical assessment report with recommendations and action plan developed.
2. Conceptual model developed for STREAM on-line Information Management System.
3. Presentation of layout and design of system and incorporation of technical suggestions.
4. Database underlying forms, sheets and tables developed for data entry and access.
5. Final model of web based data bank with all features including mapping features developed.
6. Migration of all existing data in the new systems and testing including validation.
7. Staff training session on management of systems and backstopping plans developed.
8. Web based data bank with mapping Administrator and Editor Guidelines available.

7.0 Application Procedure:

Applications should be submitted to consultancy@adesoafrika.org with the subject line “**STREAM Consortium: MIS Development**” not later than **2nd March, 2018**. The selection committee will review applications on a rolling basis. Applications should be made in soft copy and with the following included:

1. Profile of the service provider
2. A technical proposal detailing;
 - Understanding of the TOR.
 - Ability to meet the functionalities sought.
 - Previous/current experience in supporting a similar kind of work.
 - Examples of organizations currently supported.
 - Turn-around times for support services.



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- Time required to set up and utilize the Management Information System.

3. A financial proposal outlining

- Monthly/annual/other costs for use of the software (including hosting, training (*kindly give estimates for either onsite training in Nairobi, Kenya or online training*), support costs etc.)
- When sending in the costs, kindly work with this scenario in mind: around 45 enumerators in Somalia will be collecting data from 600 respondents every month using a questionnaire with approximately 30 questions.

4. Contact details for three references the consortium can contact.