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DEVELOPING, DESIGNING AN INFORMATION ALERT SYSTEM FOR COMMUNITY INFORMATION AGENTS IN THE ELPHANT CORRIDOR (KIBALE, ITWARA, MATIRI AND MUHANGA)

Introduction;

Joint Effort to Save the Environment (JESE) is a non-profit making conservation and Development organization founded in 1993 and based in Fort Portal Tourism City, Uganda.

Joint Effort to Save the Environment (JESE) is looking for a consultant to design, develop setup and implement a Community Information Alert system that will involve the use of digital technologies based on the client/farmer needs/threats to enable adoption and continuous use of adaptive smart-farming, (2) provide quick, flexible and relevant information to farmers, (3) the system should also integrate training modules which can be used by farmers and eco-prenuers shared and used in the field by individual farmers and community trainers with smartphones among others.

It is expected that the Information Alert System execute the following functionalities;

- Localised weather forecasts helping farmers planting in time, grafting, seeding, application of fertilizers and organic insecticides, mulching and water harvesting etc.
- Easily applicable advice for pest and disease management (prevention, identification, countermeasures and spread), best smart agricultural practices and environmental practices
- Monitoring of and alerts when wild life raid farms in the area to prevent crop loss and retaliatory killing of wildlife, plus avoid children taken out of school to guard crops
- Alert in case of theft of vanilla, cocoa pods in fields in the area
- Alerts in case of wildfires in the area

Specific Activities/Objectives;

This consultancy's main objective is to define, design and develop the outlook of the CIA system to be setup at JESE, the system shall enable farmers/green entrepreneurs (women and youth) in the communities adjacent to Kibale, Itwara and Matriri elephant corridors to report on wildlife incidents and threats to forest biodiversity in real time. The consultant is expected to work closely with JESE's Information and Systems Manager to;

1. To come up with actual design and outlook of the Community Information Alert system, and pretest the developed prototype
2. Conduct an information needs assessment with the respective communities to be captured into the system at several stages of system design to inform tools to be adopted in the system
3. Identify/define practicable existing apps/platforms be piloted to under the system some of the apps may include; Whatsapp, facebook, twitter, OpenWeather, Kobotool box, Ushahidi, Frontline SMS, Forest Watcher app etc.).
4. Train users on operating and maintaining the management information system, farmers for data entry, extraction, and maintenance of the system.

Methodology and approaches

The consultant is required to follow all processes for software development for example Modular based approach based on prototyping model must be used for the design, and development of the system.

The consultant shall also carry out a detailed requirement study in addition to JESE's suggested functionalities mentioned under the specific objectives above.

Other innovative, modern and progressive methods of system design, development, outlook definition can be proposed and considered by the consultant. These should be very elaborate in the proposal.

The consultant is at liberty to define appropriate methods of as per the issue at hand

Expected outputs/Deliverables

1. Carry out information/needs assessment to match the system/functionalities requirements aimed at solving the stated tasks in the objectives
2. Technical proposal, outlining details/ process (programming languages, platforms and technologies, of how the Community Information Alert system will be developed

3. Define and test system with tools as per the findings from the assessment in (1) above

The actual design/outlook of the Community Information Alert system, but also showing how the expected functionalities below can be achieved;

Test and Deploy the final design

Key functionalities and specifications of the Community Information Alert System

- Have both web-based or app front end data entry forms using appropriate and efficient web technologies that reflect real time incidents (time, location, maps).
 - Categorize reported incidents for easy tracking and action (feedback)
 - Allow provision of localized weather forecasts helping farmers planting in time, grafting, seeding, application of fertilizers and organic insecticides, mulching and water harvesting etc.
 - Have relevant import/export capabilities to pre-designed templates
 - Allow integration with the Knowledge Management platform to be established
 - Enable field staff to give farmers advice on pest and diseases management (prevention, identification, countermeasures and spread), best smart agricultural practices and environmental practices
 - Allow monitoring of all incidents/alerts when wild life raid farms in the area to prevent crop loss and retaliatory killing of wildlife, plus avoid children taken out of school to guard crops
 - Visualization of reports received in form of maps, graphs charts etc.
- Note JESE shall at any time adjust the above functionalities in agreement with consultant, depending on the circumstances
- Run on android, windows, linux and iOS operating systems

Timeframe

The entire work of software development and testing should be completed within 2 months from the date of receipt of letter of award of work. The time period of 2 months for the vendor is only for collecting requirements, designing, development and testing of the software. Training of Master Trainers may be conducted only after testing and acceptance of the software by the JESE and FoW. The training should not take more than 2 days.

Educational Qualifications:

Interested individual consultants or lead developer for consulting firms should hold:

- A Master' s degree in Computer science, Information Technology, Information management, or another related discipline
- At least five years' experience in developing Software/Management Information Systems solutions and providing I.T. support and maintenance services;
- Proven professional experience in developing Information Systems within the non-profit sector;

- Proven professional experience in app/web technologies, including their development and deployment, and development of web-based information systems; and
- At least two references of previously developed management and reporting system for a Not for Profit organization.

Selection Criteria:

Consultants are invited to submit technical and financial proposals based on the Terms of Reference. The selection process will focus on:

- Understanding of the subject and objective of the consultancy; (outcome 1 and output 1)
- Methodology suggested;
- Qualifications, experiences, and competencies;
- Budget;
- Task Schedule;

How to Apply:

Interested candidates will be expected to provide the following documentation:

- Produce evidence of tax compliance
- Be registered with PPDA
- If company/firm be legally registered
- Detailed Technical proposal in response to the Terms of Reference.
- A brief description of the consultant; outlining evidence of recent experience of the consultant on assignments of a similar nature.
- Financial proposal and Work plan indicating respective cost centers.
- Company profile or Curriculum Vitae in case of individual consulting.

Deadline: Submission of Technical and proposals should be submitted not later than 15th June, 2021. To: Procurement Committee, Joint Effort to Save the Environment (JESE) P.O Box 728, Fort-Portal. Kitumba, Binanata Zone. or by Email jese@jese.org and busiinge@jese.org. For more information about JESE, visit www.jese.org