Invitation of Expression of Interest for System Improvement and Development of the National Horticultural Traceability System EOI- KCDMS-FY2020-031

Country: Kenya

Name of the Project: NHTS Redesign, Development & Re-implementation

EOI -KCDMS-FY2020-031
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1 Background

The Horticultural Crops Directorate (HCD) which was formerly known as Horticultural Crops Development Authority ('HCDA') was established under the Agriculture Act, Chapter 318 of the Laws of Kenya, through Legal Notice No. 229 of 1967.

The statutory objective of the Directorate is to promote, develop and coordinate the production and marketing of horticultural produce. At the time of its establishment, the horticultural sub-sector was seen as a viable solution for the country’s need for cash crop diversification, enhanced food nutrition, income generation, employment creation and foreign exchange earning in addition to providing raw material for agro-processing industries.

The focus of the Directorate at inception was mainly the small -holder farmers who had the potential to utilize their own labour, as the production processes were labour intensive, with a view to getting high return for their limited land. The sub-sector has been the focus of most government policies. The Government has developed a National Horticultural Policy that outlines key policy interventions to revamp and reposition the sub-sector

In 2013, the Horticulture Crops Directorate (HCD) entered into an agreement with the USAID funded Kenya Agriculture Value Chain Enterprises – USAID (KAVES) project to support the development of an online National Horticulture Traceability System (NHTS) whose objectives were to:

- Develop a database of all farmers of horticultural export products in Kenya that is easily accessible by regulatory agencies, produce dealers, exporters, and importers through upgrading the HCD Enterprise Resource Planning System1 to an online system.
- Enhance systems for traceability of produce from farm to export points through registration of farmers using geo-referencing.
- Develop a platform where information on product traceability in the horticulture business is captured, maintained, and accessed.
- Build capacity of staff on traceability and implementation of geo-referencing tools
- Restore export market confidence in compliance with food safety requirements.

The National Horticulture Traceability System (NHTS) has been developed and is composed of an android application and a web portal/application that has been provided to the industry players to record all produce that is to be exported after gaining the relevant clearance. An audit was carried out on the NHTS system and it was decided, based on the outcome of the audit, that the NHTS system needs to be enhanced to bridge certain identified gaps and improve the functionality of the system.
2 Objectives of the NHTS

The principal objective of the NHTS is to ensure that there are particular standards around the quality of the exported produce. The National Horticulture Traceability System would provide a platform for branding Kenya’s export quality in the market. The system’s targeted users range from farmers right through to the exporters and cross border importers and distributors.

In order to enhance the current system to achieve the above mentioned objective, HCD invites consultants to express their interest to improve and re-implement the system and to bridge the functionality and security gaps that have been identified during the audit. The system comprises a web based application and mobile Android application which have been developed, and an iOS, which will need to be developed.

The system will automate the traceability of fresh produce through a partnership between the Government and the private sector. In summary, The National Horticulture Traceability System application (web and mobile) is, at a minimum, expected to:

- Trace the fresh produce back to the farm where it was grown (including the geolocation of the farm).
- Give information about the chemicals/fertilizers that have been used to grow the produce.
- Detect inconsistencies by tracing exceptions back to the farmer.
- Meet the requirements set forth by the Horticulture Crops Directorate in line with the KS 1758.
- Have the potential to integrate into various stakeholder platforms.
- Have capabilities of on-boarding additional commodities that are not necessarily horticulture products.
- Register and license farms, farmers, distribution centres, dealers, exporters and other persons and organisations engaged in horticulture and agriculture.
- Promote Kenyan produce in domestic and international markets.
- Assist in the development of production, processing and packaging of the various horticulture and agriculture products.
- Aid in collection, maintenance, and publication of statistical data from farmers, processors, exporters, buyers, etc.

The key stake holders involved in this process are:

- Agriculture and Food Authority (AFA)
- Horticulture Crops Directorate (HCD)
- Kenya Plant Health Inspectorate Service (KEPHIS)
- Kenya Flower Council (KFC)
• Fresh Produce Consortium (FPC)
• Fresh Produce Exporters Association of Kenya (FPEAK)
• Farmers
• Horticultural consolidators and exporters
• Overseal importers

The project objectives focused on the following key areas:

• Licensing
• Development
• Promotion
• Farmer welfare
• Research
• Statistics
• Finance

This project will deliver the following benefits to the various stakeholders, businesses, farmers, exporters, etc.

• Quick response times: The proposed portal/web application will benefit the buyers, small growers, brokers, collection agents, exporters, international buyers/importers, researchers, etc. with information updates relating to the progress of the services requested.

• Online submission of applications for the issuance of certificates/licenses for exporters/farmers/relevant stakeholders

• The applicant can receive a digitally signed copy of the license or certificate after approval

• Online submission of applications and online status tracking of the same by the industry applicants

• System generated acknowledgement (with date and time stamp) while submission of application

• Communication to the small-scale growers about the schemes and participation

• Effective planning, monitoring and implementation of various schemes and mapping it to schedule.

• Effective governance, regulation, and enforcement as per the KS 1758

• Speedy processing of applications by leveraging Online Software based application for processing and issuance
• Efficient and transparent institutional processes across the various stakeholder bodies for strict adherence to the quality standards

• Single sign on facility for the stakeholders

• Operating Guidelines: The overall processes as well as internal stakeholder processes will be standardized. This will ensure effective and efficient operation within the department and enable the different levels of stakeholders involved to work in collaborative manner.

• Intervention of Technology: With the help of the National Horticulture Traceability System (NHTS), the information will be available at a single location (the NHTS website) and the same information will be available to all users who have access to the application (web or mobile) resulting in seamless information flow. All databases will be located in a single location and accessible to the authorised government bodies and relevant authorised personnel who will be assigned user rights and will be monitored while accessing the facilities through embedded and configured control mechanisms.

Through this EOI, HCD is interested in short listing qualified Information Technology Consultancy Organizations for providing IT based services to improve, enhance functionality and re-implement the National Horticulture Traceability System. HCD reserves the rights to accept or reject any of the offers at any stage of the process. The selection of the successful vendor shall be based on the evaluation of the response to the request for financial and technical proposals which will be sent to shortlisted bidders only.

3 Scope of Work for the NHTS

The scope of work will cover services in software development, including potential redevelopment/redesign*, training, implementation, maintenance, management, and user support in two phases.

* - As described above, the NHTS was originally designed and developed in 2014, has undergone a pilot test in 2016 and was handed over in 2018. HCD currently has access to the developed system and is in the process of securing the source code from the original developers. In 2019, the HCD in conjunction with RTI procured the services of a consultant to carry out a detailed review of the NHTS including an assessment of whether the original objectives and desired benefits of the system were met. Various observations and recommendations were raised by the consultant which have informed the need for the current redesign effort. Successful applicants to this EOI will be provided with detailed information on the background to the original NHTS and the significant observations and recommendations by the consultant which will allow the submission of a more informed proposal at the subsequent technical proposal stage. In responding to this EOI, applicants need to have an awareness that their ultimate deliverable will need to be with reference to the original NHTS and the audit findings and recommendations thereon and will involve improvement, redesign and redevelopment of the original NHTS. HCD prefers to have the current NHTS system enhanced rather than to embark on a complete redevelopment. Applicants need to therefore consider this preference and its viability given the possible unavailability of the original source code and should include in their EOI comments in this
regard. Therefore, all references to design and development in this document should be considered with this background.

3.1 **Phase 1: Re-design, Correction, and Implementation of the NHTS system**

Re-design and implementation services to enhance the functionality of the National Horticulture Traceability System to cover the following:

- Adjust and re-design the NHTS system based on the approved user, stakeholder and industry requirements gathered during the feasibility study of the existing product design. Ensure compliance with the KS 1758 regulations such as geo-coordinates capture while creating farms, farm location and field locations auto-capture, UID creation of produce for purposes of labelling, etc. and also industry standards based on the ISO 22005 for the objectives of a traceability system.

- Adjust the functioning of the web portal/web application and mobile applications (both for Android and iOS) for easier use by the various stakeholders, including farmers and exporters based on the requirements that have been set forth by them to enable planning, planting, scouting, spraying, produce management and movement, harvest, units of measure of harvest, shipment tracking, validation of phyto-sanitary certificate numbers, validation of farmer details, etc.

- Streamline the interfaces to enable data exchange between the various relevant stake holder databases including but not limited to PCPB, KEPHIS, etc.

- Integrate the current licensing portal, IMIS, within the NHTS system that will enable applicants to apply for new licenses, renewal of licenses, etc. for purposes of produce exports.

- Development of Online help portal for small scale growers, manufacturers, exporters, etc. to gather information relating to site visits, approvals, etc. with clear tracking times taken for each level.

- Refine online report generation capabilities from scouting officers, planting officers, etc. in relation to the produce, chemicals used, and other mandatory fields set forth by the relevant stake holders.

- Optimise the database, through load balancing, etc. to ensure that there is high availability of the service at all times.

- Develop and embed internal controls within the software to enhance control within the business processes that will be enabled through the NHTS system.

- Train the IT department at HCD on how to manage the application and carry out basic troubleshooting.

- Create a user manual to enable user training and establish mechanisms to train the end users.
• Handover the system, all development libraries and source code and any other intellectual property developed during the NHTS project during the project implementation.

Note: All developments will only be accepted and signed off after a successful UAT and a Quality Assurance audit by an independent third-party quality assurance auditor. The significant milestones for this phase shall be as set-out below (with reference to the award date) and the complete phase, including final UAT and QA sign-off shall be completed no later than Six (6) months from the date of award of the contract to successful bidder:

Business requirements gathering, Process model, Logical data model, Functional specification gathering, Requirements review and approval – Month 1

Technical Architecture, system standards definition, system prototype, technical specifications, proof of concept documentation and system design blueprint – Month 2

System modules, units testing, system integration and testing, user manual development, training materials and system documentation – Month 3

Data initiation/upload/conversion, user training and deployment – Month 4

Final UAT, system acceptance, system handover (this will include the source code of the application, database schema, tools used for the development of the NHTS and all interfaces developed for the functioning of the NHTS), operational acceptance, documentation acceptance, implementation and quality assurance sign-off – Month 6.

Note: All developments made during this project are property of HCD and therefore should be handed over to HCD as part of the project deliverables. Any replication of the same will be strictly prohibited.

The successful bidder shall also provide warranty and technical support to HCD for the successful running of the proposed National Horticulture Traceability System, after the successful completion of the redesign, development and launch of the portal for public services.

The broad scope of such support shall include the following activities:

• Maintenance, bug-fixes, and end-user problem resolution

• Essential upgrades

• Configuration management and Version Control

• Release management

• Training and implementation support to national, county and field offices of the relevant stake holders

• Helpdesk support to users

• Weekly and monthly reporting with project status

• Documentation of any changes made to the system, up to and including the user manuals.
The warranty and technical support shall be valid for a period of one year.

4 Selection Criteria
The selection criteria will be in two stages:

4.1 Expression of Interest (EOI)
HCD invites expression of interest from established software firms with experience in software development, maintenance, management, and user support for the agriculture/horticulture sector. HCD shall shortlist only those organisations that have fulfilled the pre-qualification criteria detailed in section 5.

4.2 Request for Proposal (RFP)
   a. HCD shall circulate a detailed RFP to the shortlisted bidders only
   b. The short-listed bidders will also be informed of the detailed requirements including background information to the original NHTS and the significant observations from the consultant’s review of the original NHTS. This will be conducted subject to prior execution of a non-disclosure agreement with shortlisted bidders. The disclosure of the detailed SOW will take place in the form of a presentation which will be attended only by invited bidders who have signed the non-disclosure agreement.
   c. The shortlisted vendors shall submit a detailed Technical and Financial proposal as per the RFP.
   d. The proposals will be evaluated by HCD and an evaluation committee
   e. The agreement contract resulting from this solicitation will go to the responsible seller (bidder) whose offer conforms to the RFQ/RFP, is most advantageous to HCD in terms of price and other factors considered. The award will be made to the Seller representing the best value to HCD. For the purpose of this RFQ/RFP, price, delivery, technical and past performance are of equal importance for the purposes of evaluating and selecting the “best value” awardee. HCD intends to evaluate offers and award an Agreement without discussions with Sellers. Therefore, the Seller’s initial offer should contain the Seller’s best terms from a price and technical standpoint.

However, HCD reserves the right to conduct discussions if later determined to be necessary.

The evaluation factors will be comprised of the following criteria:
- **PRICE** - Lowest evaluated ceiling price (inclusive of option quantities).
- **DELIVERY** - Seller provides the most advantageous delivery schedule.
- **TECHNICAL** - Items/Services shall satisfy or exceed the specifications described in RFQ/RFP and in particular demonstration of ability to work with and remediate observations/implement recommendations on the original NHTS.
• **PAST PERFORMANCE** - Seller can demonstrate his/her capability and resources to provide the items/services requested in this solicitation in a timely and responsive manner.

RTI is the contracting entity for this project on behalf of HCD. The NHTS is owned by HCD; RTI is procuring this service on behalf of HCD, therefore all contractual obligations, responsibilities and norms for the execution of this contract are directly evaluated, monitored and executed by RTI on behalf of HCD.
5 Pre-qualification Criteria

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| 1     | The applicant firm should be a single entity and should have been in existence for at least 5 years | • Company certificate of incorporation or Registration or equivalent  
• Financial statements for the past 2 years.  
• VAT registration certificates  
• Current valid tax compliance certificate or its equivalent |
| 2     | Capability statements                                                                 | • State the firm’s experience relevant to the assignment, details of Key people involved, details of the work undertaken (brief summary of the work, contract value, contact person and contact details) as well as project duration and year performed.  
• Recommendation letters from clients of the applicant firm where similar assignments have been undertaken in the past 3 years |
| 3     | The applicant firm should have access to technically qualified and well-experienced strong project management personnel, software developers, security analysts and database administrators resource base | • CVs of Key personnel, copy of their qualifications/certificates and professional certifications (such as MCSA, PMP, etc.) |
| 4     | If the applicant is using services of a third party on a contractual/subcontractual arrangement, the applicant will be required to mention this and also submit the contract as a proof for his proposal to be considered. The applicant will be responsible the subcontracted party or consortium throughout the project. | • Consortium agreement or contract  
• Subcontractor’s resource availability, details of key personnel involved, and proof of similar projects undertaken. |
| 5     | The below certifications will be an added advantage.                                                                                           | • Copy of the relevant certificates                                                                 |

ISO 9001:2008 for Software Development / Software Maintenance or ISO 27000 or CMMI Level 3 Certification or equivalent.

All vendor applications will be evaluated based on the experiences of the firm, expertise of the personnel within the firm, evaluation of referrals, quality of previous projects undertaken, etc. Vendors who are successfully will be directly contacted by RTI.

Vendors shall be excluded from participation in the selection procedure if they do not meet the requirements of this EOI.
6 Submission of EOI

All interested firms will submit an EOI which contains offers for all items and options included in this EOI. All information presented in the bidder’s EOI will be considered during bid evaluation. Failure to submit the information required in this EOI may result in bidder’s expression of interest being deemed non-responsive. Bidders are responsible for submitting offers, and any modifications, revisions, or withdrawals, so as to reach by the time and date specified below.

EOIs should be submitted by e-mail in PDF format no later than 5.30pm on 12th June 2020. E-mails should be addressed to procurement@kcdmsd.rti.org with the subject: EOI for NHTS Redesign, Development & Implementation EOI KCDMS-FY2020-031

Any offer, modification, revision, or withdrawal of an offer received at the office designated in the EOI after the exact time specified for receipt of EOI is “late” and may not be considered.