

Terms of Reference

Information system consultant

Agriculture Resilience and Competitiveness Project (P171266)

Subcomponent 3.2: Information Technology (IT) Systems for Improving Food Safety

IT Consultant for FSA BH

1. Background information about the project

The Bosnia and Herzegovina has received financing from the World Bank in the amount of 61.4 million EUR toward the cost of Agricultural Resilience and Competitiveness Project. The proposed project aims to help Bosnia and Herzegovina in increasing climate resilience and the competitiveness of the agricultural sector. The project consists of four components:

- Component 1: Improving the resilience and traceability of public support
 - Subcomponent 1.1 – Improvement of agricultural information systems
 - Subcomponent 1.2 – Support for agriculture resistant to climate change
- Component 2: Improving agricultural productivity, adapting to climate change and strengthening market linkages
 - Subcomponent 2.1 – Strengthening value chains and developing productive partnerships
 - Subcomponent 2.2 – Improvement of irrigation and drainage systems for climate change adaptation
- Component 3: Improving food quality and safety
 - Subcomponent 3.1 – Food quality and safety standards
 - Subcomponent 3.2 – Information Technology (IT) Systems for Improving Food Safety

This sub-component will finance the development and upgrading of IT software and hardware systems in the areas of veterinary medicine, food safety and plant health in FBiH and BiH, which are crucial for documenting real-time control activities and preparedness for increased foodborne risks associated with climate change. Therefore, these activities are key to improving compliance with national and international food safety standards.

- Component 4: Project Management

2. Objectives of the assignment

With regard to the activities related to the upgrading of the information system of the Food Safety Agency of Bosnia and Herzegovina, the consultant will be under the direct responsibility and supervision of the Working group appointed by the decision of the director of the Food Safety Agency of Bosnia and Herzegovina, contact person Alem Demir and the consultant for the information system will have duties and responsibilities as follows:

- 1) Network analysis - which includes an overview of the current state, creating a network topology, a proposal for establishing a network connection between different databases and its users, enabling, maintaining and ensuring the security of LAN, WAN and VPN communication between databases and creating a detailed specification of the communication equipment for the establishment with a

minimum data transfer rate capacity 100 MB/sec. between central bodies and annular connecting bodies.

- 2) Analysis of the FSIS system - The IT consultant will make a proposal and accordingly prepare a proposal for upgrading the existing FSIS or creating a new FSIS solution, preparation of detailed specifications for the purchase of network equipment, servers and communication equipment, testing of new hardware and software.
- 3) Writing guidelines for the creation, application and security verification of information systems, which ensures the confidentiality, integrity and availability of information content, systems and processes within the institution for the purpose of implementing the Standard from the ISO/IEC 27000 ISO/IEC series (Information Security Management Systems (ISMS) - Information technology - Security techniques - Information security management systems).
- 4) Preparation and delivery of reports and documentation for all necessary IT activities:
 - a) Creation of a detailed specification for the procurement of the necessary equipment for the functioning and maintenance of information systems based on the analyzed organizations and the design of work tasks.
 - b) Making analyzes of the state and existing capacity of active and passive equipment for communications and internal connections, and a detailed description of the necessary equipment, analyzed and estimated the power of communication between the central ring and external users, and making a detailed description of the equipment for setting up ADSL/VPN networks,
 - c) Creation of checklists of works that will be used for technical evaluation and acceptance of contracted works, with the expected duration of activities.
 - d) Prepare organizational documentation for hardware management including detailed manuals for backup, disaster recovery and continuity.
 - e) Prepare a detailed network establishment report when the work is completed, with full specifications and descriptions of structure, performance, security, etc.

3. Scope of work

The consultant will have duties and responsibilities as follows:

For the needs of the Food Safety Agency of Bosnia and Herzegovina:

- 1) FSIS Software Design – Preparation of design drafts and related technical specifications for FSIS procurement:
 - a) Detailed system design specifications;
 - b) Detailed technical architecture documentation, including information and diagrams showing systems, interfaces and software architecture;
 - c) Full description of IPMIS program modules;
 - d) Operational maintenance procedures;
 - e) Availability and capacity plan;
 - f) Business continuity plan, contingency plan and disaster recovery plan;
 - g) Writing guidelines for the creation, application and verification of the security of information systems, which ensures the confidentiality, integrity and availability of information content, systems and processes within the institution for the purpose of implementing the Standard from the ISO/IEC 27000 ISO/IEC series (Information Security Management Systems (ISMS) - Information technology - Security techniques - Information security management systems).

There are several tasks that a consultant must go through in relation to software design.

- Analyzes of the legal framework and the impact on software functionality;
- Analyzes of the Regulations according to which work is done in FSA BH;
- Process flow analyzes in FSA BH;
- Defining the main functionality of the system;
- Creation of the main project of the system:
- Defining all modules;
- Creating a technical specification;
- Consultant will be included to advise the tender evaluation committee and to participate in assessment of offers during their opening.

All tasks will be performed in close cooperation with the FSA BH working group. The consultant will perform the work in the premises of the FSA BiH at the address Kneza Višelava bb Mostar and organize meetings with the working group. The Food Safety Agency of Bosnia and Herzegovina will provide a shared office with an employee for the Consultant in its official premises, provide a computer, Internet access and a common printer, as well as small office supplies. Transportation to and from meetings is organized by the Food Safety Agency of Bosnia and Herzegovina. The consultant is obliged, at his own expense, to ensure a stay in Mostar and an overnight stay to hold meetings outside the headquarters.

4. Expected outcomes

The consultant must prepare three relevant documents. The first will be used to prepare the ToR for the procurement of FSIS software for FSA BH. The second document is the technical specification for the procurement of hardware and the necessary licenses, which will be used to prepare the ToR for the procurement. These are the following documents:

- 1) FSIS Software Design and Technical Specifications in Written Form
- 2) Technical specification for procurement of hardware and licenses
- 3) Set of documents for the implementation of Standards from the ISO/IEC 27000 ISO/IEC series (Information Security Management Systems (ISMS) - Information technology - Security techniques - Information security management systems).

5. Qualification requirements and evaluation criteria

- University diploma at the level minimum of Master of Science - Business software, Faculty of Electrical Engineering and Computing, Faculty of Natural Sciences or another IT-relevant faculty,
- Knowledge of Microsoft technologies, operating system, application software, network solutions and DBMS, certified.
- Prior experience in the development and implementation of the same or similar projects,
- Knowledge of computer and network hardware.
- At least three (3) years of relevant professional experience, after obtaining the title of Master of Science.
- Good knowledge of the English language, written and spoken.
- Appropriate experience in IT management.
- Adequate experience in developing ICT systems.
- Having the appropriate Microsoft MVP and Cisco certification.

- Knowledge of EU agricultural and rural development policies is desirable.

The evaluation criteria are scoring, based on meeting the qualification requirements, scoring maximum number points of 100 as follows:

Applicants' qualification requirements will be further evaluated based on the below criteria:

No.	Qualification requirement / Evaluation criteria	Points
1	General Qualifications	20
1.1	University degree of minimum Master of Science level - Business Software, from the Faculty of Electrical Engineering and Computing, Faculty of Natural Sciences or another IT faculty	20
2	Adequacy for the assignment	70
2.1	Knowledge of Microsoft technologies, operating systems, application software, network solutions and DBMS, certified	10
2.2	Prior experience in the development and implementation of the same or similar projects	20
2.3	Knowledge of computer and network hardware	10
2.4	At least three (3) years of relevant professional experience, after obtaining the Master of Science degree	5
2.5	Appropriate experience in IT management	5
2.6	Adequate experience in the development of ICT systems	5
2.7	Possession of appropriate Microsoft MVP and Cisco certification	10
2.8	Knowledge of EU agricultural and rural development policies (is desirable)	5
3	Language	10
3.1	Good knowledge of English, written and spoken	10
TOTAL points		100

6. Task duration and estimated input time

The consultant will be engaged a *1 -year-contract, part-time engagement under Time based contract*, according to the dynamics of the Project. The engagement will be implemented in four phases, namely:

- Overview of the state and analysis of the network (preparation of proposals for the procurement of hardware and licenses), 3 months
- Overview of the state and analysis of the FSIS system (preparation of proposals for the procurement of software), 3 months
- Writing guidelines for the implementation of Standards from the ISO/IEC 27000 ISO/IEC series, 3 months
- Monitoring the development of FSIS software by the selected bidder, 3 months

7. Reporting Requirements

The consultant will prepare appropriate documentation and records of his work, and all results will be submitted to FSA BH upon completion of the engagement.

- creating an activity plan for the implementation of planned tasks;

- quarterly report on completed tasks;
- Final software design
- Certificate of operational acceptance

Selection of Consultant

The Consultant will be selected under the provisions of the World Bank's Procurement Regulations for IPF Borrowers – Procurement in Investment Project Financing Goods, Works, Non-Consulting and Consulting Services (July 2016 Revised November 2017 and August 2018) ("the Regulations") based on the method of Individual Consultants Selection (IC), an open competitive approach for a *time-based* contractual arrangement.