

# Invitation to Tender on Development of Elkana Management Information System (EMIS)

## Biological Farming Association Elkana

### 1. Background

The Biological Farming Association Elkana is a Georgian non-governmental organization established in 1994, which facilitates improvement of social-economic state of population of Georgia and environmental protection through fostering development of sustainable organic farming and increasing self-reliance of the rural population.

The main fields of activity of the organization are:

- )] Sustainable & organic farming extension and training;
- )] Conservation and sustainable utilization of agricultural biodiversity;
- )] Introducing internal control/management systems (ICS/IMS) for group certification in the field of organic and fair trade certification in farmers groups;
- )] Supporting the business activities of organic farmers, producers and farmer groups;
- )] Local product development and promotion on local and international markets;
- )] Rural tourism and the valorization of traditional food and wine production & processing;
- )] Public awareness on the importance of agroecology, organic farming and traditional varieties;
- )] Advocacy of farmers' rights.

Having started with 9 farmers in 1994, the association works now with about 2,000 rural households and more than 50 agricultural cooperatives/small rural enterprises all over Georgia.

Ever so increasing scale, intensity and geographic coverage of activities, coupled with rapidly growing number of beneficiaries, has led ELKANA to seek a universal electronic medium (henceforth, Elkana Management Information System or EMIS) for:

- )] Registration/management of diverse GPS-linked data about beneficiary farmers and businesses and their farms/production units;
- )] Organization of internal control/management system (ICS/IMS) operations for group certification;
- )] Registration/management of data about extension services and technical assistance provided to farmers and/or businesses;
- )] Statistical processing and organization of the above data into pre-defined reports.

### 2. Task Specification

#### *System's Functional Description*

The text below represents a review of key aspects of the Elkana Management Information System (EMIS) omits details about data, validations and alike. Actual Functional Specification (FS) of the EMIS will be elaborated together with the selected Service Provider.

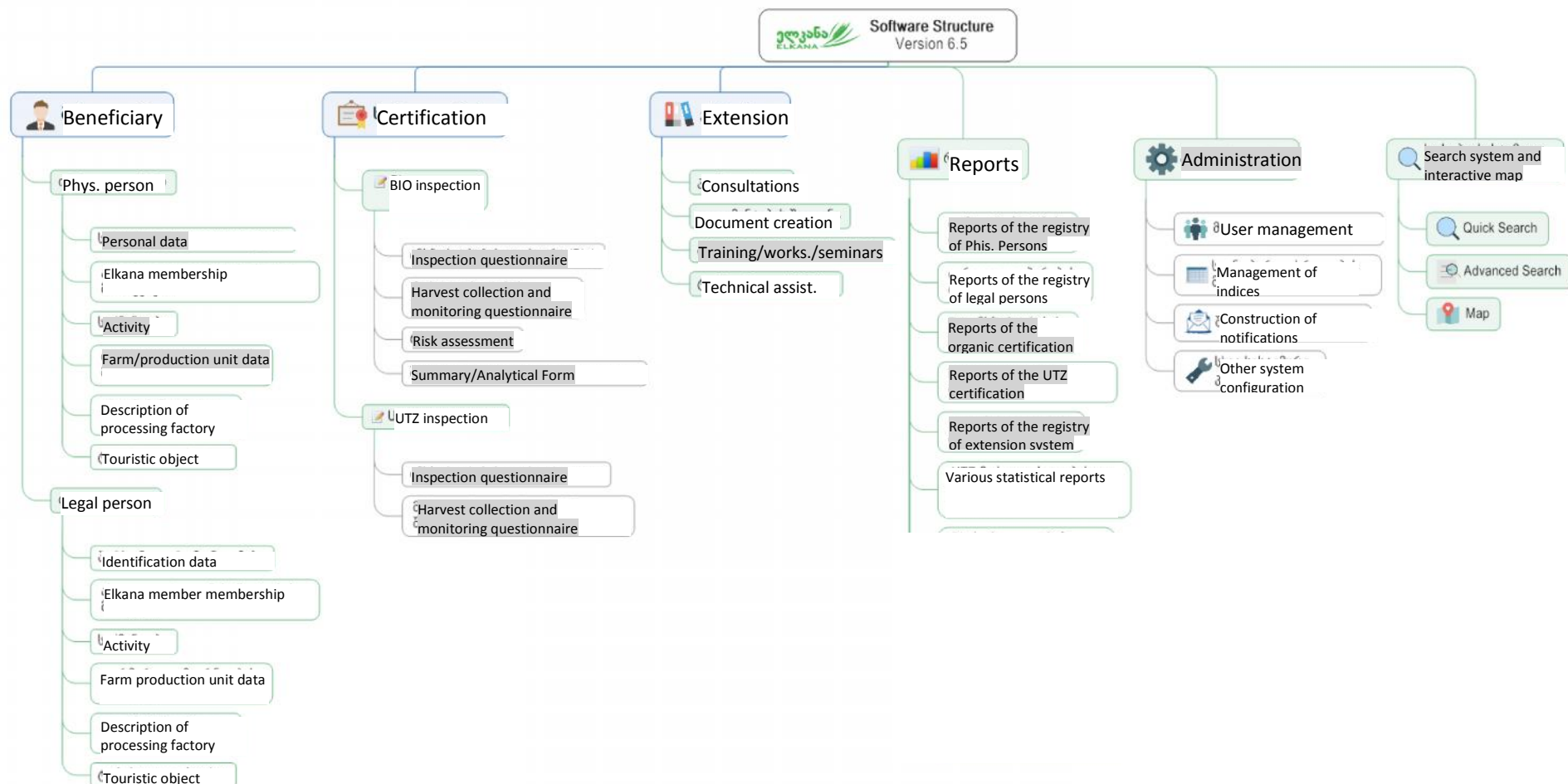
The EMIS consists of 4 main modules:

1. Beneficiary

2. Certification
3. Extension
4. User Management

Furthermore, the system will have to be capable of generating and managing reports and adding and processing data tags on geoinformation maps.

The main system object is a beneficiary because the data entered in other modules are directly related to an object registered in the beneficiary module. For instance, there are several different forms in the extension module which are filled during consultations and other similar activities for farmers registered in the beneficiary module.



## I. Beneficiary module

The beneficiary module will contain data on both 1) physical and 2) legal persons. In essence, forms and data do not really differ between these two because both record identical data with few exceptions:

- i. **Identity data** includes personal information about either physical or legal person which is not subject to frequent change and therefore remains virtually static all the time;
- ii. **Elkana membership data.** If a beneficiary is an Elkana member simultaneously, this form will be populated with data on date of membership award, service packs and respective fees. The system should be able to generate reminders to users and beneficiaries for forthcoming payment deadlines;
- iii. **Farm/production unit description form** will contain information about land plots owned or used by beneficiaries, their technical parameters and other details such as harvests, hired labor and any major change to the farm (takes place every year);
- iv. **Processing factory description form** registers data on facilities, products and production status;
- v. **Touristic object form** registers information about the status of the objects, their certification under rural tourism standards, their current ownership and the number of beds.

## II. Extension module

The extension module registers information about extension activities such as consultations, document preparations, educational-informational actions, technical assistance. The first step is the creation of an activity profile with relevant characteristics. Next step is addition of persons who benefitted from the given activity. Addition of beneficiaries should be possible both individually and group-wise, with pre-defined parameters.

## III. Certification module

The certification module consists of two different components: group organic certification and UTZ certification. The module constitutes a tool for keeping record of inspections being carried out under either of the certification component, and for validation of inspection results. Thus, the process breaks down to respective stages of collecting pre-define data about the physical person seeking certification and his/her farm, analysis and appraisal of the collected data in line with relevant standards.

Accordingly, the certification module should operate both forms and appraisal system to enable objective decision making for every certification seeker on the basis of the data entered in the relevant forms and calculation of appraisal points assigned.

Given two types of inspections (under Bio and UTZ respectively), the system should integrate various forms for both of them:

- i. BIO - Inspection questionnaire form (with Annex);
- ii. BIO – Harvesting inspection questionnaire form;
- iii. BIO - Risk assessment form;
- iv. BIO – Analytical form of the risk assessment;
- v. BIO – Summary form of the risk assessment;
- vi. UTZ - Inspection questionnaire form (with Annex)
- vii. UTZ - Harvesting inspection and child labour monitoring questionnaire form

#### IV. User module

The module should ensure management of user roles, namely:

- i. Assignment of rights by user roles (review, add, edit, delete)
- ii. Creation of user groups by various criteria
- iii. Two-tier mechanism of user authorization

The system should have relevant response options in place in case of user idleness (automatic system exit, temporary user blocking, etc.).

#### V. Analytical module

- i. Dynamic reporting and calculation functional
- ii. Report visualization in various formats (tables, diagrams, etc.)
- iii. Report creation using the data contained in the system and report editing tools (with T-SQL support)

#### VI. Technical Requirements

Both system and functional modules have to be built on technologies to the latest Industry Standard.

The database:

- i. The system should be able to support various database types
  - ✓ SQL (MS SQL, Postgre SQL, Oracle, etc.)
  - ✓ noSQL (e.g. MongoDB)
- ii. The system should be capable of Object-Relational Mapping (ORM), which is to
  - ✓ Run several simultaneous transactions
  - ✓ Load several types of collections at once
  - ✓ Launch object-oriented DML commands

Programming technologies:

- iii. Microsoft ASP.NET Core platform
- iv. AngularJs or MVC Razor

The following are required for the smooth system development process:

- ✓ Development environment (dev)
- ✓ Testing environment (test)
- ✓ Product (real) environment (live)

It is important that a programme code control system (for instance, Visual SVN, GIT, Mercurial) be used in the development of a programme code. What is more, there should be an opportunity for remote control over the work on programme code and tasks.

System compatibility:

- v. Operation systems - MS Windows, Linux, AndroidOS, iOS
- vi. Browsers - Google Chrome, MS Edge, Mozilla Firefox, Safari, Opera

Integration capabilities:

- vii. The system should contain integration instrument (API)
- viii. The system should be able of accommodating different data exchange technologies (REST/WCF, WSDL, SOAP)

The system should contain a tool for asynchronous cross-module data exchange - Service Bus, RPC.

The development has to define the data for cross-module exchange via Service Bus.

## VII. System documentation

The following documents will be inseparable parts of the system:

- i. *The System Architecture* containing description of all the key components and modules of the system and their interrelation
- ii. *The Database* containing description of the structure of all the system tables and their interrelation
- iii. *Guides* such as 1. User Guide and 2. Admin Guide

## **3. Requirements to the Service Provider**

Please see the Annex 1.

## **4. Submission of the Tender Documentation**

- ) Tender documentation should consist of the filled in and signed Annexes 1 and 2 below (pdf format), accompanied by CVs of the personnel involved in the assignment (in Georgian language)
- ) Application deadline 26.09.2018, 18:00
- ) Tender documentation should be submitted in the electronic form to the flowing email address: [pr@elkana.org.ge](mailto:pr@elkana.org.ge)
- ) The subject line of the email should indicate – Vendors Proposal for System Development

For more information please contact: Elene Shatberashvili, project manager, Tel: (+995 32) 328321, E-Mail: [pr@elkana.org.ge](mailto:pr@elkana.org.ge)

## **5. Contracting and Reimbursement**

- ) Pre-selected vendors can be asked for interview before final decision
- ) Decision will be made based on the experience of the company and its proposed personnel, as well as its financial proposal
- ) Elkana reserves the right not to grant assignment to any company

- ) Pre-selecting vendors may be asked to provide the following additional documentation: Certificate from the tax office that no debt towards budget exists and Statement of Bank on financial turnover during the last 3 years
- ) Terms of reimbursement will be negotiated with the pre-selected vendors.