

1. Description of the Project

Eurasia Foundation (EF), a U.S. non-profit organization promoting civil society development and good governance, is requesting proposals from software development firms or individual entrepreneurs to update the Adlia legislative information system. This initiative will be supported as part of Social Innovation in Central Asia (SICA). Funded by the United States Agency for International Development (USAID), the purpose of SICA is to cultivate a vibrant and responsive citizen-oriented civil society in Central Asia.

SICA will assist the Ministry of Justice of the Republic of Tajikistan (MoJ) to update the Adlia system, a centralized database of legislative and legal information in Tajikistan. Adlia operates on a commercial basis and is owned and operated by the Konuniyat State Enterprise, which is overseen by the MoJ. The Adlia system includes a database of current legislation in the Russian and Tajik languages, including all editions/revisions that have been made to normative legal acts, as well as changing the status of the document (from when a bill was passed to when it was overturned or reversed), the source and date of publication, and other relevant data points. The database contains the following:

- Legislation of the Republic of Tajikistan
- Decrees of the government of the Republic of Tajikistan
- Decrees of the President of the Republic of Tajikistan
- Instructions, regulations and other normative legal acts issued by state bodies of the Republic of Tajikistan
- International laws, treaties, and reviews of the judicial and arbitration practice
- Other legal information

In addition, Adlia has several filters for sorting legislative information and a keyword search function. The Adlia database and portal interface is available at <http://www.adlia.tj/>.

Adlia was developed using Visual FoxPro 9.0 and consists of a desktop application for Windows OS and a website, which is installed on the Konuniyat server using Microsoft Windows Server 2019 OS. Adlia uses outdated technologies, which are slower, less powerful, and more vulnerable to cybercrime. Additionally, it offers limited features in the Tajik version, which makes it difficult to install and use the application on modern computers. The Adlia platform needs to be updated with new functionality.

The software development firm/individual entrepreneur is expected to (1) update and expand the Adlia system, (2) build a downloadable desktop application and (3) create a mobile application (collectively, the Adlia platform). The development team may include a business process analyst, a database engineer, a technical writer or others, as needed.

In addition, the software development firm/individual entrepreneur is expected to contribute to the development of technical specifications for the platform, provide training, and work in close coordination with representatives of the MoJ and Konuniyat.

2. Description of Services

The main purpose of the project is to provide technical support to the MoJ and Konuniyat to update and expand the Adlia system and set up a user-friendly platform in Tajik and Russian that will provide efficient and high-quality legislative information services to citizens of the Republic of Tajikistan. The MoJ and Konuniyat are committed to offering access to the updated platform free of charge to non-governmental organizations registered in Tajikistan. The updated platform should have the following characteristics and elements:

- To the maximum extent possible, the Adlia platform should be designed to minimize the total cost of ownership, including the use of open-source, rather than proprietary, software and software for which there is strong technical support available in Tajikistan's IT market.
- The Adlia system will be searchable by key search criteria, allowing users to find information quickly.
- The platform will include a mobile application that will be accessible to users across a range of devices and operating systems (e.g., iOS, Android).
- The platform will also be available through an updated downloadable desktop version that will enable users to access the system from their personal computers and be notified of new updates.
- A reporting system for creating quantitative and qualitative reports.
- System development must be based on the requirements outlined in Section 4 below and in accordance with the current legislation of the Republic of Tajikistan.

In addition to delivering the updated Adlia platform as described above, the vendor is expected to complete the following tasks:

- Provide technical support and trainings to the employees of Konuniyat and the MoJ to enhance their computer literacy and to teach them new business processes.
- Develop guides (instruction manuals) for administrators, operators, and users.

3. Main Tasks and Responsibilities

Under EF supervision and in consultation with the MoJ and Konuniyat (the beneficiaries), the software development firm/individual entrepreneur is expected to perform the following activities:

1. Examine the current version of Adlia and analyze underlying business processes. Provide a detailed written report summarizing the analysis, its key findings, and recommendations.
2. Develop and agree with the beneficiary detailed terms of reference, including:
 - a. layout design of the system
 - b. architecture of the system and planned technical solutions
 - c. description of business processes for managing the new system
 - d. timeframe for the development and implementation of the system
3. Develop a new version of Adlia:
 - a. update and expand the Adlia web portal
 - b. build a downloadable Windows OS desktop application for:
 - i. single-user licenses, which are installed on personal computers or laptops
 - ii. network licenses, which are installed in a server-client environment and managed by a server admin
 - c. create a mobile application for Android OS and Apple iOS
 - d. migrate data from the current version of the system to the new version

4. Install the new Adlia applications on the beneficiary's servers for testing and trial operation.
5. Develop operational documentation (guidelines for the administrator, operators, and users), a test program and methodology, and documentation for placing mobile applications in the Google Play and Apple App stores.
6. Conduct trainings for Konuniyat and MoJ employees on how to use the new version of Adlia.
7. Carry out acceptance testing following the trial operation period, and sign the protocol of acceptance testing.
8. Deliver the system and sign the certificate of delivery.
9. Transfer the system source code and the distribution kit to the beneficiary.
10. Provide warranty and technical support to Konuniyat for six months after signing the certificate of delivery.

4. Information System Requirements

4.1 General System Requirements

Adlia must be available to users to operate in the following modes:

- Web portal (<http://www.adlia.tj/>) to access the system through a web browser.
- Desktop application (single-user and network (corporate) versions) for installation on Windows OS devices.
- Mobile application for Android OS and Apple iOS.

The system's code base (or the logic of the system) should be developed based on a modular micro-service architecture, with the following subsystems interacting with each other based on RESTful API and providing data for different presentation modes.

The system should consist of the main subsystems:

1. Data storage subsystem
2. Subsystem for managing directories and classifiers
3. Administration subsystem
4. Data visualization subsystem
5. Search subsystem
6. Subsystem for downloading and updating regulatory legal acts
7. Integrational subsystem

Software patents must adhere to the Republic of Tajikistan's patent laws.

Implementing technical, software, organizational, and other solutions provided by the system design must not violate copyright and related rights of third parties.

As part of the development of the system, Adlia must use free licenses such as GNU General Public License, MIT and Apache. Konuniyat must receive the right to:

- use the program for any purpose not prohibited by law
- access the source texts (codes) of the program, both to study and adapt it
- process and distribute the program (free of charge or for a fee being charged at its discretion)

- make changes to the program (rework)
- distribute copies of the modified (reworked) program, taking into account possible inheritance of license requirements.

When implementing the system, open-source software must be used, except for operating and payment systems.

Adlia users are a) individuals and legal entities - authorized users of the system with the ability to view the database; b) employees of Konuniyat to update regulatory legal acts; and c) system administrators for management and technical system support.

The system should support the Tajik and Russian languages.

4.1.1 General principles of the system

During development, all the main characteristics or functions of the current Adlia system, including the following principles, must be taken into account and maintained:

- the principle of systematicity. During decomposition, links should be established between the structural elements of the subsystems to ensure the integrity of the subsystems and their interaction with other systems.
- the principle of development (openness). Based on the prospects for the development of the automation object, the system should be created taking into account the possibility of replenishing and updating the functions and composition of subsystems without disrupting its functioning.
- the principle of compatibility. Information interfaces must be implemented in a way that each subsystem can interact with other systems in accordance with established rules.
- the principle of standardization (unification). Typical, unified and standardized elements, design solutions, application software packages, libraries, and components should be rationally applied.
- the principle of development (modifiability). Subsystems should provide the possibility of development, expansion and integration with other systems. Technical solutions used at the stages of design and implementation of subsystems should allow minimizing labor costs for modernization required in connection with the adoption of new regulatory legal acts that lead to a change in the technological process.
- the principle of relative independence of subsystems (principle of modularity). Subsystems should be implemented as a set of separate maximally independent functional modules.
- the principle of authorized access to information. Subsystems must provide authorized access to information. Subsystems should have administration functions that allow administrators to set access rights to information.

4.2 Requirements for subsystems

4.2.1 Data storage subsystem

To store data in the system, relational databases should implement built-in mechanisms for building indexes and monitoring data integrity.

The vendor should include individual system configuration parameters that are not subject to modification during the system's normal operation and maintenance in external configuration files.

General requirements for the Database Management System implementation:

- support for a relational or object-relational database model
- support for client-server technology
- support for multiprocessor architecture
- availability of tools for creating indexes and data clusters
- automatic recovery of the database
- compatibility with various operating systems of database servers
- support for TCP/IP network protocols
- availability of graphical administration tools
- ability to control access to data
- centralized management of user accounts
- query optimization

The composition of the data must be sufficient to perform all the functions of the system and meet the requirements of completeness, reliability, unambiguous identification, consistency, and the required accuracy of presentation.

4.2.2 Subsystem for managing directories and classifiers

This subsystem is designed to maintain unified regulatory directories and classifiers that ensure the consistency and comparability of the system data.

The subsystem must support simple (linear) directories and tree-like (hierarchical) directories. A directory entry (element) may contain several attributes, that is indicators that describe the properties of this element.

The subsystem should provide the user with an interface for working with directories. The subsystem should provide the presentation of the directory data as a register (list) with page output to the screen. When viewing and editing the registry, the user should be able to sort and filter (select) records by the directory's attributes, adjust the width of the registry columns, and the height of the registry headers at the user's discretion.

Full logging of directory data changes must be provided, with the date, time and user/author of the change saved.

The subsystem must support the following options for modifying reference information during operation:

- adding a new attribute to the directory
- creation of a new directory
- change the name of the directory position with the preservation of the identifier
- position and all links of the position with other objects of the central data warehouse

The system should provide two types of directories, simple and hierarchical. A hierarchical directory is a directory with a hierarchical structure. For each element of such a directory (except for root elements), a parent element must be specified and the elements must not cyclically refer to each other.

The system should provide the ability to rename directories.

The system must be provided with pre-configured system directories containing information about system settings. The corresponding system indicators should refer to the system directories. System directories should be editable by administrators.

4.2.3 Administration subsystem

This subsystem must meet the following requirements:

- carry out identification and authentication of users
- require a password length of at least six characters
- password alphabet of not less than 70 symbols
- the maximum number of unsuccessful authentication attempts (incorrect password entry) before blocking is three attempts
- ensure differentiation of access rights of users and administrators of the system on the principle of "what is not allowed is prohibited"

The administrator interface should provide for:

- creating, deleting, searching, editing, and viewing user accounts
- editing the list of groups in which the user is included
- creating, editing, viewing, and deleting a role
- assignment of selected roles to certain users
- view user activity log
- when deleting a user account, the system must request confirmation for deletion

4.2.4 Data visualization subsystem

This subsystem should provide the administrator with an interface for express analysis of multidimensional indicators observed in several analytical features.

The user should be provided with a simple, intuitive interface for customizing the appearance of an analytical table by transferring row/column headers using the drag-and-drop method.

It should be possible to save the table obtained as a result of express analysis as a pre-configured analytical report with the possibility of viewing it in the future.

It should be possible to customize graphical representations based on the table obtained as a result of the express analysis.

The subsystem should provide the following features:

- a variety of report titles by selecting objects (elements of the directory) that satisfy a combination of conditions connected by operators "AND" and "OR"
- use parent filter values when setting formulas for nested filters
- set labels for simple (not multiple) filters and use these labels as links to link between the same headings
- convert a period of a certain type into a period of another type (change the period type)
- to form a "dynamic tree" of line headers as a combination of several tree-like directories

4.2.5 Search subsystem

This subsystem should provide the user with the following types of search in the system:

- search by title or content of the document
- search by a thematic classifier
- search by document details
- search for new and changed documents for a certain period
- search by terms and keywords

The search results page displays only documents that match the criteria of the selected filters when they are activated. Search results should be presented in a tabular form with the ability to jump to the document itself.

When following a hyperlink to another level of the hierarchy, its presentation is subject to the presentation rules of the given hierarchy level. The screen form must have a "Back" button to return to the previous document/search result.

4.2.6 Subsystem for downloading and updating regulatory legal acts

This subsystem should allow users with certain roles in the database of regulations:

- create new entries
- edit existing entries
- delete documents with draft status
- upload files
- binding to existing records

The system must implement the mechanism of record statuses for publication in the system:

- draft
- placed
- removed

The system must be able to switch between record statuses.

4.2.7 Integrational subsystem

The integrational subsystem should provide information interaction of the subsystems in various operating modes of the system, namely web portal, desktop, and mobile application.

- The subsystem must support interactions that ensure the import and export of data from the Central Data Repository of the system upon request.
- The subsystem must provide a programming interface for accessing the system's data via the HTTP protocol.
- Transfer data in XML/JSON format.
- Interaction should be based on the REST/SOAP technology using the XML/JSON API.
- The data export service must be able to retrieve data from a tabular view (report, form, or registry) as a table of values.
- The data import service should allow writing (deleting, updating) data.

Restriction of access of an external information system to the system data must be provided by the standard means of the system.

5 Requirements and Qualifications for IT Companies/Individual Entrepreneurs

- At least two (2) years of experience in software and database development
- Availability of qualified experts/consultants with at least three (3) years of experience in software and/or database development
- Availability of the necessary technical and administrative capabilities to directly carry out the work described in the Information System Requirements section for the software product (an attachment of documents confirming the company's experience is welcome).
- Experience in conducting trainings on the use of information systems.
- Professional knowledge of Russian and Tajik is required to develop information systems supporting both languages. Knowledge of English is preferred.

6 Submitting a Proposal

Proposals must include the following:

- Cover letter
- Technical proposal
- Resumes describing experts'/consultants' experience in the required field
- Samples of work performed (if available)
- Residence certificate
- Financial proposal (in USD)

Only complete proposals will be eligible for consideration and review. Each proposal will be reviewed based on the following criteria:

- Quality of technical approach
- Institutional presentation (combination of experience of proposed experts and organizational track record)
- Price competitiveness

For any questions related to this announcement, please contact: Azat Turlymuratov, Contracts Manager,
aturlymuratov@eurasia.org

**Interested individuals or organizations are invited to send proposals
to SICAconsultants@eurasia.org with “TS to update Adlia” in the subject line no
later than 23:59 (Almaty time) on 15 February 2023.**