Beneficial Ownership Module
of the Automated Information System "Nedra"

Ministry of Natural Resources, Ecology and Technical Supervision of the Kyrgyz Republic

TERMS OF REFERENCE

42 pages

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DEFINITIONS, ABBREVIATIONS AND NOTATION

Definitions

Automated Information System (AIS) — a set of hardware-software tools and specialised data processing methods designed to automate activities related to the storage, transmission and processing of information.

Authentication — verification of the identity of a person authorising access to the AIS, or the procedure for verifying a signature through a certification authority.

Authorisation — granting a specific person or group of persons the rights to perform certain actions.

Database (DB) — an electronic system for storing structured information.

Beneficial Owner — a natural person or state that is the ultimate owner of a subsoil user and/or applicant for the right to use subsoil, through:

- direct and/or indirect ownership of 10 or more percent of shares or participation interests in the authorised capital; and/or
- direct and/or indirect ownership of 10 or more percent of votes in the supreme governing body; and/or
- direct and/or indirect appointment and/or dismissal of members of governing bodies.

Business Process (BP) — a set of interrelated actions and activities for the delivery of public or municipal services.

Module — a part of an information system that automates one or more operational processes, integrated with other modules and using a shared database, developed so that its modification or upgrade does not affect the operation of other modules or the system as a whole.

Business Process Optimisation — actions and measures aimed at improving outcomes and simplifying the execution of a business process.

Interagency Electronic Interaction System "Tündük" — the interagency electronic interaction system that integrates the AIS of state and municipal bodies into a unified information environment.

System — a set of developed modules or any individual module.

Electronic Reference Books / Classifiers — a set of immutable data contained in a database table.

Terms of Reference (ToR) — a document containing the objectives, goals and client requirements for the AIS, governing system delivery, implementation and acceptance.

Rich Client — a desktop application deployed on workstations in an organisation’s network using client-server architecture, providing extended functionality independently of the central server.

Thin Client — a browser-based client in a client-server network architecture that transfers all or most data processing tasks to the server.

Web Service — a software system identified by a web address with standardised interfaces. Web services interact with each other and with third-party applications via protocol-based messages. A web service is the unit of modularity in a service-oriented application architecture.

Abbreviations

KR	Kyrgyz Republic
AIS	Automated Information System
DB	Database
GB	Government Body
OS	Operating System
SW	Software
SA	Software Application
SD	Structural Divisions
DBMS	Database Management System
ToR	Terms of Reference
SToR	Specific Terms of Reference
BO Module	Beneficial Ownership Module
the Ministry	Ministry of Natural Resources, Ecology and Technical Supervision of the Kyrgyz Republic
Ministry of Justice	Ministry of Justice of the Kyrgyz Republic
BODS	Beneficial Ownership Data Standard
EITI	Extractive Industries Transparency Initiative
TIN	Taxpayer Identification Number
PEP	Politically Exposed Person

1. GENERAL DOCUMENT INFORMATION

System Name: Beneficial Ownership Module of the Automated Information System "Nedra"

Short Name: BO Module

Client: Ministry of Natural Resources, Ecology and Technical Supervision of the Kyrgyz Republic

User (Beneficiary): Ministry of Natural Resources, Ecology and Technical Supervision of the Kyrgyz Republic

Contractor: Selected through competitive tender

Start of Works: From the date of contract signing

Completion of Works: In accordance with the work schedule annexed to the contract

Deliverables: Delivered to the User in stages in accordance with the work schedule annexed to the contract

All developed System software: Transferred to the User together with source code

All materials: Transferred to the User with accompanying documents from the Contractor

General Project Description: These Terms of Reference provide for the development of the Beneficial Ownership Module within the Automated Information System "Nedra" and a public portal for the disclosure of beneficial ownership information.

Legal and Regulatory Basis:

- Law of the Kyrgyz Republic "On Subsoil", No. 49, dated 19 May 2018
- Law of the Kyrgyz Republic "On the Licensing and Permitting System", No. 195, dated 19 October 2013
- Law of the Kyrgyz Republic "On the Enactment of the Digital Code of the Kyrgyz Republic", No. 179, dated 31 July 2025
- EITI Standard
- EITI Beneficial Ownership Disclosure Implementation Plan of the Kyrgyz Republic
- Resolution of the Government of the Kyrgyz Republic "On Licensing Issues for Subsoil Use Rights", No. 561, dated 29 November 2018
- Resolution of the Government of the Kyrgyz Republic No. 744, dated 31 December 2019
- Resolution of the Government of the Kyrgyz Republic No. 762, dated 21 November 2017
- Resolution of the Government of the Kyrgyz Republic No. 760, dated 21 November 2017
- Resolution of the Government of the Kyrgyz Republic "On Approval of Requirements for Information System Interaction within the Interagency Electronic Interaction System 'Tündük'", No. 200, dated 11 April 2018
- Order of the Cabinet of Ministers of the Kyrgyz Republic No. 444-r, dated 23 July 2024

- Other legal grounds

2. PURPOSE, OBJECTIVES AND GOALS

2.1. Purpose of the System

The Beneficial Ownership Module of the Automated Information System "Nedra" (hereinafter — the BO Module or the System) is designed to automate the processes of collecting, storing, updating, verifying, analysing and publishing information on the beneficial owners of legal entities operating in the subsoil sector of the Kyrgyz Republic.

The System is designed to ensure transparency of information on the owners and persons exercising control over subsoil users, to improve the effectiveness of public administration in the subsoil sector, and to fulfil the requirements of the legislation of the Kyrgyz Republic and international commitments under the Extractive Industries Transparency Initiative (EITI).

The BO Module shall ensure:

- collection of beneficial ownership information from applicants and subsoil users through the Nedra AIS;
- centralised storage of information on legal entities, their participants and beneficial owners;
- automated retrieval and updating of data from state information systems;
- verification of the completeness and accuracy of submitted information;
- maintenance of a data change history;
- generation and publication of open data through a dedicated public portal;
- provision of API interfaces for data exchange and reuse.

2.2. Objectives of the System

The objective is to develop the Beneficial Ownership Module within the Nedra AIS to enable centralised management of beneficial ownership data for subsoil users and applicants for subsoil use rights.

The System is designed to enhance transparency in subsoil licensing processes, ensure the accuracy of information on ultimate beneficial owners and persons exercising control over legal entities, and automate disclosure processes in accordance with the legislation of the Kyrgyz Republic and the EITI Standard.

Key System Features:

1. Unified State Register of Beneficial Owners of Subsoil Users

Used for storing and managing information on legal entities, their participants, beneficial owners and ownership structures.

2. Integration with State Information Systems

Ensures data retrieval and updating through integration with state information resources and interagency electronic interaction systems.

3. Support for International Data Disclosure Standards

The System shall support the storage and publication of data in accordance with the Beneficial Ownership Data Standard (BODS).

4. Data Currency

Ensured through mechanisms for updating information by subsoil users, periodic synchronisation with external state data sources and maintenance of a change history.

5. Transparency and Openness

Ensured through the publication of information via a dedicated public portal for beneficial ownership disclosure.

6. Data Quality Control

The System shall provide automated verification of the completeness, consistency and logical coherence of information.

2.3. Goals of the System

The System shall achieve the following goals:

- ensuring centralised storage of beneficial ownership information for subsoil users and applicants;
- automating the submission, updating and confirmation of beneficial ownership information;
- integration with the Nedra AIS to obtain information on applicants, licences and subsoil users;
- integration with state information systems to obtain information on legal entities and their founders;
- enabling manual data entry where information is not available from external sources;
- maintaining information on legal entities, natural persons, ownership structures and forms of control;
- ensuring storage of both direct and indirect ownership and control relationships;
- maintaining a history of changes to beneficial ownership information;
- ensuring data quality control, identification of duplicates and logical inconsistencies;
- enabling search for information on legal entities, licences and natural persons;
- enabling the generation of analytical information and statistical reports;
- ensuring the publication of open data through a dedicated public portal;
- enabling data access through application programming interfaces (API);
- ensuring differentiated user access rights based on a role-based access model;
- ensuring registration of user actions and maintenance of audit logs;

- ensuring compliance with the requirements of the legislation of the Kyrgyz Republic on information protection and personal data.

3. DESCRIPTION OF THE AUTOMATION OBJECT

The following processes are subject to automation:

- collection of beneficial ownership information from legal entities operating in the subsoil sector;
- submission of beneficial ownership information when applying for subsoil use rights;
- updating of information by active subsoil users;
- receipt and processing of data from state information systems;
- verification and validation of information on legal entities and beneficial owners;
- maintenance of ownership and control structures;
- storage of historical information and data versions;
- publication of open data on beneficial owners;
- generation of analytical materials and reports;
- interagency data exchange.

Primary System Users:

- applicants for subsoil use rights;
- active subsoil users;
- staff of the Ministry of Natural Resources, Ecology and Technical Supervision of the Kyrgyz Republic;
- system administrators;
- users of the public disclosure portal.

Brief Description of the Automation Object

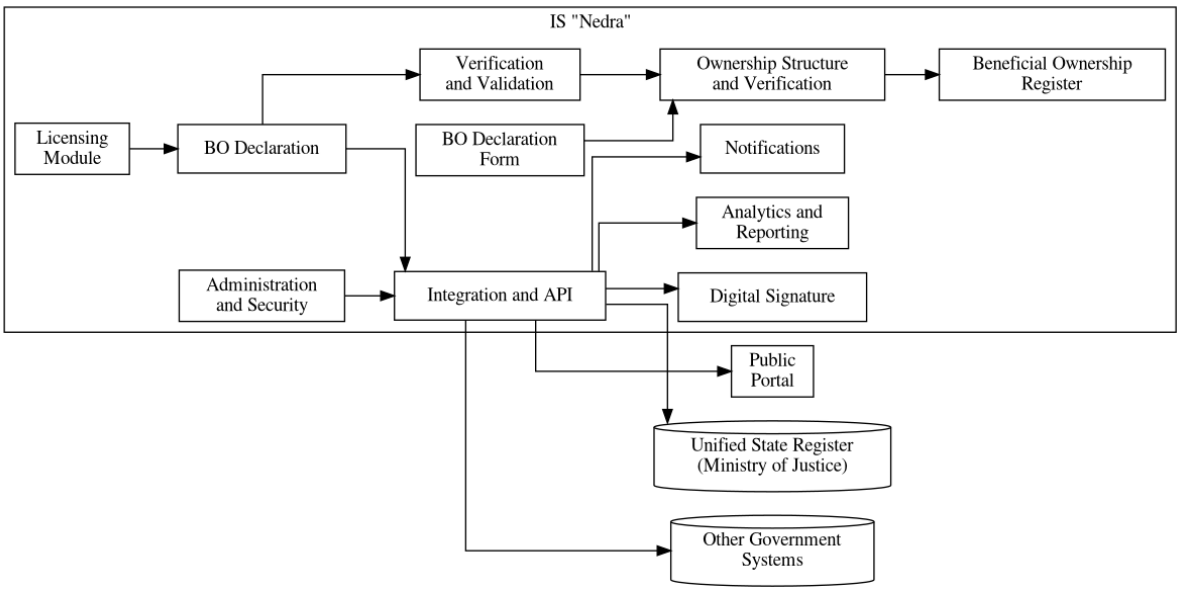
The Ministry of Natural Resources, Ecology and Technical Supervision of the Kyrgyz Republic exercises state administration in the field of subsoil use, licensing of subsoil use rights, monitoring of compliance with licence obligations and ensuring transparency in the extractive sector.

In accordance with the requirements of the legislation of the Kyrgyz Republic and the EITI Standard, the Ministry ensures the disclosure of information on the beneficial owners of companies operating in the extractive sector.

The development of the BO Module is aimed at establishing a single authoritative source of data on the beneficial owners of subsoil users, enhancing transparency in licensing processes and ensuring open access to information within the limits established by the legislation of the Kyrgyz Republic.

4. REQUIREMENTS FOR SYSTEM STRUCTURE AND OPERATION

The BO Module to be developed shall consist of interrelated subsystems covering the full lifecycle of collecting, storing, verifying, updating and publishing beneficial ownership information. The Module is implemented as part of the Nedra AIS and uses existing data on licences, licence areas, applicants and subsoil users.



[Figure 1. System Architecture — see Russian original]

The System shall comprise the following subsystems:

- Subsystem "Reference Data and Classifiers";
- Subsystem "Beneficial Ownership Register";
- Subsystem "Register of Legal Entities, Applicants and Subsoil Users";
- Subsystem "Ownership and Control Structures";
- Subsystem "Declaration of Beneficial Ownership Information";
- Subsystem "Data Integration and Synchronisation";
- Subsystem "Data Verification and Validation";
- Subsystem "Publication Management and Open Data";
- Subsystem "Notifications";
- Public Disclosure Portal (not part of the Nedra AIS);
- Subsystem "Analysis and Reporting";
- Subsystem "Administration and Security".

The logical structure of the System shall ensure centralised data storage within the Nedra AIS and the ability to publish information through a separate public portal via API interfaces.

The System design shall support the storage and publication of data in accordance with the Beneficial Ownership Data Standard (BODS).

Primary data sources:

- information provided by applicants and subsoil users;
- data from the Nedra AIS;
- data from state information systems;
- data received through the Interagency Electronic Interaction System "Tündük";
- data entered by authorised Ministry staff.

[Figure 2. Data Flow Diagram — see Russian original]

Master Data Management Principles

The BO Module shall implement the principle of a Single Source of Truth. The following master sources are established within the System:

- licence information — Nedra AIS;
- information on legal entities and founders — data obtained from the state registers of the Ministry of Justice of the Kyrgyz Republic;
- beneficial ownership information — declarations submitted by applicants and subsoil users;
- verification and validation results — BO Module.

All changes shall be recorded with the data source and the time of update.

Data Currency

The System shall provide a mechanism for periodic confirmation of the currency of beneficial ownership information. Confirmation shall be performed:

- upon submission of a new application for subsoil use rights;
- upon changes to legal entity information;
- upon changes to the ownership structure;
- at least once per calendar year.

The System shall automatically notify users of the need to confirm the currency of information.

4.1. Communication Requirements for Data Exchange Between System Components

The System shall be centralised. All master data on beneficial owners, legal entities, ownership structures and related information shall be stored in the unified database of the Nedra AIS.

The System shall operate in multi-user mode using data integrity mechanisms at the DBMS and application software levels. Interaction between system components shall be carried out through secured API interfaces. JSON and XML formats shall be used for data exchange. Data transmission shall be carried out over secured communication channels using modern encryption and authentication tools.

The System shall ensure:

- synchronous data exchange via REST API;
- asynchronous message exchange for long-running operations;
- logging of data exchange operations;
- integrity control of transmitted data;
- error handling in integration interactions;
- retry of requests upon temporary failures of external systems.

4.2. Data Exchange Scheme with Other Information Systems

The BO Module shall provide integration interaction with external information systems for the receipt, updating, verification and publication of beneficial ownership information.

1. Nedra AIS. Data exchange shall ensure:

- receipt of information on applicants;
- receipt of information on subsoil users;
- receipt of information on licences and licence areas;
- transmission of beneficial ownership information;
- receipt of notifications on the creation of new applications and licences.

2. Information Systems of the Ministry of Justice of the Kyrgyz Republic. Data exchange shall ensure:

- receipt of information on legal entities;
- receipt of information on founders and participants of legal entities;
- receipt of registration data of legal entities;
- receipt of information on the status of legal entities;
- periodic updating of previously loaded data.

Where data cannot be obtained from external sources, the System shall support manual data entry by the user.

3. Interagency Electronic Interaction System "Tündük"

The System shall ensure data retrieval and interaction with state information systems through "Tündük" in accordance with applicable data exchange regulations.

4. Public Disclosure Portal

The Public Disclosure Portal shall receive data exclusively through the BO Module API interfaces. The independent storage of master data on the public portal is not permitted. The portal shall provide: information search; viewing of company profiles; viewing of beneficial owner profiles; viewing of ownership structures; viewing of licence information; open data export; provision of open API.

The list of integrations, the composition of transmitted data and data exchange formats shall be specified at the survey and technical design stage.

4.3. Data Versioning

The System shall maintain a complete history of changes to information on legal entities, ownership structures, beneficial owners and publications. For each record version, the following shall be stored: date and time of change; user or source of changes; changed attributes; previous values; reason for change; publication status.

5. FUNCTIONAL REQUIREMENTS

The list of data, attribute composition, business rules, screen forms and data processing mechanisms shall be specified and agreed upon at the system survey and design stage.

5.1. Subsystem "Reference Data and Classifiers"

This subsystem is designed for the centralised management of reference information used by all subsystems of the BO Module.

Functions and Key Features:

- creation, editing and archiving of reference books;
- maintenance of reference book versions;
- maintenance of multilingual reference books;
- import of reference data from external information systems;
- search and filtering of records;
- integrity control of reference information;
- logging of changes.

The subsystem shall maintain the following categories of reference books:

- countries; citizenships; types of legal entities; types of control and ownership; types of beneficial interest; grounds for establishing control; document types; data verification statuses; publication statuses; licence types; minerals; administrative and territorial units; other reference books required for system operation.

The subsystem shall support connection to and use of centralised state classifiers and reference books.

5.2. Subsystem "Beneficial Ownership Register"

This subsystem is the central component of the BO Module and is designed for the storage, processing and management of beneficial ownership information. The subsystem shall store information on both natural persons and the ownership and control relationships associated with them.

Core Beneficial Owner Data:

- unique record identifier; last name, first name, patronymic; date of birth; citizenship; country of residence; identification number (if available); identity document information;
- Politically Exposed Person (PEP) status where required by legislation: whether the person is a PEP; position; organisation; period in office;
- date of acquisition of beneficial owner status; date of termination of beneficial owner status; data source information;
- change history: date of change; changed by; what changed; reason for change; previous version.

Functions and Key Features:

- creation of a new beneficial owner record; editing of information; viewing the beneficial owner profile; search by various attributes;
- identification and merging of duplicate records; maintenance of a change history; storage of supporting documents; maintenance of data verification statuses;
- display of related legal entities; display of related licences; display of ownership and control structure;
- data export in machine-readable formats;
- support for data storage in a structure compatible with the Beneficial Ownership Data Standard (BODS).

The subsystem shall store both current and historical information without loss of previously recorded data. All changes shall be recorded in an audit log specifying the user, date, time and nature of the changes.

5.3. Subsystem "Register of Legal Entities, Applicants and Subsoil Users"

This subsystem is designed to maintain a centralised register of legal entities that are applicants for subsoil use rights or operate in the subsoil sector. The subsystem shall store information on legal entities necessary for organisation identification, ownership structure analysis, licensing and beneficial ownership disclosure.

Core Legal Entity Data:

- unique record identifier; full name; short name; legal form; registration number; TIN; date of state registration; status; registered address; country of registration; information on the head of the organisation; information on founders; information on licences; data source information; change history.

Functions and Key Features:

- creation and maintenance of legal entity profiles; data retrieval through integration with state information systems; manual entry and correction of information where data is not available from external sources;
- search and filtering; maintenance of a change history; storage of information on founders and participants; storage of information on licences and licence areas;
- display of related beneficial owners; display of ownership and control structure; identification and merging of duplicate records; data export; logging of changes.

The subsystem shall link legal entities with licences, beneficial owners, participants, documents and ownership structures. The subsystem shall support the storage of historical information without deletion of previously recorded entries.

5.4. Subsystem "Ownership and Control Structures"

This subsystem is designed for the storage, analysis and visualisation of ownership and control relationships between natural persons and legal entities. The subsystem shall support the construction of ownership chains and the identification of ultimate beneficial owners in accordance with Kyrgyz Republic legislation and international disclosure standards.

The subsystem shall support the following types of relationships:

- direct ownership; indirect ownership; joint ownership; direct control; indirect control; control through the right to appoint governing bodies; control through agreements between participants; other forms of control provided for by legislation.

Core Ownership and Control Relationship Data:

- ownership subject (natural person, legal entity or state represented by an authorised body); ownership object (legal entity); type of relationship; participation share; share of voting rights; description of the control mechanism; date of establishment; date of termination; data source; supporting documents; verification status.

Functions and Key Features:

- creation of links between natural persons and legal entities; creation of links between legal entities; storage of direct and indirect ownership information;
- automatic construction of ownership chains; automatic identification of ultimate beneficial owners; graphical display of the ownership structure;
- display of historical ownership structures as at a selected date; verification of ownership structure correctness; identification of circular and contradictory relationships; maintenance of a change history; data export.

The subsystem shall support multi-level ownership structures without limitation on nesting levels. The System shall store the ownership structure as a graph model of relationships between natural persons and legal entities.

The System shall store data in a format compatible with BODS, including the following entities: Entity; Person; OwnershipOrControlStatement; PublicationDetails; Source; InterestedParty; Subject.

The subsystem shall provide visual display of the ownership structure as an interactive relationship diagram between natural persons, legal entities and licensed objects.

5.5. Subsystem "Declaration of Beneficial Ownership Information"

This subsystem is designed for the submission, updating and confirmation of beneficial ownership information by applicants and subsoil users through the Nedra AIS.

The subsystem shall support the submission of information:

- when submitting an application for subsoil use rights;
- when amending legal entity information;
- when the composition of beneficial owners changes;
- when information update is required at the request of the authorised body;
- in other cases provided for by the legislation of the Kyrgyz Republic.

Core Subsystem Functions:

- creation of a new beneficial ownership declaration; editing of a previously created declaration; saving of drafts;
- automatic data population from external information systems; manual data entry by the user; attachment of supporting documents;

- preliminary verification of data completeness; verification of logical consistency of information; submission of information for review;
- receipt of notifications on verification results; re-submission of information after addressing comments.

The subsystem shall support automatic retrieval of information on the legal entity and its participants from external state information systems. Where information is not available from external sources, manual data entry shall be supported.

For each beneficial owner, it shall be possible to specify:

- last name, first name and patronymic (if applicable); citizenship; year of birth; contact address; PEP status (if applicable);
- direct and/or indirect participation share in the legal entity; share of votes in the supreme governing body;
- information on the authority to appoint and/or dismiss members of governing bodies;
- date of establishment of the ownership (control) relationship; date of termination; supporting documents.

The subsystem shall generate and store a history of all submitted declarations. Each declaration shall have a lifecycle with the following statuses: Draft; Being Completed; Submitted; Under Review; Requires Clarification; Approved; Published; Archived.

All user actions shall be recorded in an audit log. The subsystem shall support signing of declarations with an electronic signature in accordance with the legislation of the Kyrgyz Republic. The subsystem shall support storage and management of supporting documents, including upload, viewing, download, versioning, file format control, file size control and a document access log.

5.6. Subsystem "Data Integration and Synchronisation"

This subsystem is designed for the automated retrieval, updating and transmission of data between the BO Module and external information systems. The subsystem shall provide integration interaction via API, web services and interagency electronic interaction mechanisms.

Core Subsystem Functions:

- import of data from external sources; export of data to external systems; automatic data synchronisation; manual initiation of synchronisation procedures;
- quality control of received data; logging of exchange operations; integration error control; re-processing of failed operations.

The subsystem shall provide integration with the following resources:

1. Nedra AIS. Integration shall ensure: receipt of licence information; receipt of applicant information; receipt of subsoil user information; transmission of beneficial ownership information; receipt of notifications on data changes.

2. Ministry of Justice information systems. Integration shall ensure (at least once every 24 hours): receipt of registration information on legal entities; receipt of information on founders and participants; receipt of information on the status of legal entities; updating of previously

imported data; receipt of information on liquidation, reorganisation and changes to registration data.

3. Interagency Electronic Interaction System "Tündük". Integration shall support data receipt and transmission in accordance with the "Tündük" system regulations.

4. Public Disclosure Portal. Integration shall ensure: publication of open data; updating of published information; data transmission for the search index; provision of open API.

5. Initial Data Population. The Contractor shall load data in the format provided by the Client. The Client shall be responsible for the accuracy of the source data. The System shall ensure: import of active subsoil users from the Nedra AIS; import of legal entity registration data from the Ministry of Justice; generation of the initial list of companies required to disclose beneficial ownership information; creation of tasks for information updating.

Object Identification Attributes:

For each object: internalId; externalId; sourceSystem; sourceRecordId. For legal entities: TIN; Ministry of Justice registration number. For natural persons: internal GUID; without publication of personal identifiers. For the state: full name; name of the authorised state body acting on behalf of the state; registered address of the authorised state body.

Minimum API Set:

- GET /companies; GET /companies/{id}; GET /beneficialOwners/{id}; GET /ownershipStructure/{id}; GET /licenses/{id}; GET /changes; GET /exports/bods

The subsystem shall support the following exchange modes:

- real-time exchange; scheduled exchange; event-driven exchange; operator-requested exchange.

All data exchange operations shall be recorded in an integration operations log: request; response; error code; execution time. The System shall store information on the origin source of each record and each data version.

5.7. Subsystem "Data Verification and Validation"

This subsystem is designed for the verification, analysis, approval and confirmation of beneficial ownership information submitted by applicants and subsoil users. The subsystem shall support the work of authorised Ministry staff.

Core Subsystem Functions:

- viewing of received declarations; verification of the completeness of submitted information; verification of data entry accuracy;
- analysis of ownership and control structure; verification of attached documents; comparison of information with data from external state information systems;
- generation of comments and requests for clarification; approval of information; rejection of information with reasons stated;
- confirmation of data publication; maintenance of a verification log.

The subsystem shall provide automated checks:

- presence of mandatory fields; data format correctness; verification of logical consistency; duplicate record verification;
- participation share control; identification of circular ownership relationships; identification of contradictions between different data sources; completeness control of the ownership chain.

For each verification, it shall be possible to generate comments and recommendations.

The System shall maintain the following verification statuses:

- Not Verified; Under Review; Requires Clarification; Verified; Approved; Rejected; Published.

For each declaration, a history of all verification stages shall be stored, including: verification date; staff member who performed the verification; identified comments; decisions made; grounds for the decision. The subsystem shall support the re-verification of previously approved information.

5.8. Subsystem "Publication Management and Open Data"

This subsystem is designed for the preparation, management and publication of open data on the beneficial owners of subsoil users. The subsystem shall publish information in accordance with the legislation of the Kyrgyz Republic, EITI requirements and international disclosure standards.

Core Subsystem Functions:

- management of information publication; generation of open data sets; control of the composition of published information; management of publication versions; data export; data publication via API; data publication through the public portal; maintenance of a publication history.

Publication of Information

The subsystem shall automatically publish beneficial ownership information on the public web portal in the scope established by the legislation of the Kyrgyz Republic. Publication shall occur automatically following approval by an authorised staff member.

The following information shall be published for each beneficial owner:

- last name; first name; patronymic (if applicable); citizenship; year of birth; contact address;
- participation share (direct and indirect), in percent; share of votes in the supreme governing body (direct and indirect), in percent;
- information on the authority to appoint and/or dismiss members of governing bodies (directly and indirectly);
- information on PEP status, including position held (if applicable).

Where the beneficial owner is the Kyrgyz Republic or a foreign state, the System shall publish: full name of the state; name of the authorised body acting on behalf of the state; registered address of the authorised body; size of the participation share belonging to the state.

Where the subsoil user or a participant in the ownership structure is a publicly listed company, the System shall publish: name; registered address; participation share (direct and indirect);

share of votes in the supreme governing body; information on authority to appoint and/or dismiss members of governing bodies; stock exchange name; identification code and other details; link to the official website of the stock exchange; link to the company's page on the stock exchange website; information on other beneficial owners (if any).

Additionally, the System shall publish: record publication date; date of last update; data verification status (not verified / under review / confirmed / rejected); data source.

Open Data and API

The subsystem shall provide the following open data through the web interface, API and file exports.

Legal Entity Data:

- full and short name; legal form; TIN; Ministry of Justice registration number; information on subsoil use licences.

Beneficial Owner Data:

- last name; first name; patronymic (if applicable); citizenship; year of birth; contact address; PEP status and position (if applicable);
- participation share — direct and indirect (in percent); share of votes in the supreme governing body — direct and indirect (in percent);
- information on the authority to appoint and/or dismiss members of governing bodies — direct and indirect.

Where the beneficial owner is a state: full name; name of the authorised state body; registered address of the authorised state body; size of the participation share belonging to the state.

Where a publicly listed company is a participant in the ownership structure: name; registered address; participation share — direct and indirect; share of votes in the supreme governing body; authority to appoint and/or dismiss members of governing bodies; stock exchange name; identification code; link to the official stock exchange website; link to the company's page.

Publication Metadata:

- record publication date; date of last record update; information currency date; history of changes to published data.

The subsystem shall maintain a publication log recording: publication date; user who performed the publication; published data version; grounds for publication.

The subsystem shall support data export in the following formats:

- XLSX; CSV; JSON; XML; BODS JSON.

The subsystem shall support the generation of official open data sets for: EITI Kyrgyz Republic; Open Ownership; government bodies; international organisations; other interested parties.

The subsystem shall support the generation of publications compatible with the requirements of the Open Ownership Register, including data export in BODS JSON format and transmission of required publication metadata.

All publications shall be versioned and accompanied by information on the publication date, data source and period of information validity. Publication shall comply with the requirements of the legislation of the Kyrgyz Republic on personal data protection.

5.9. Subsystem "Notifications"

The Notifications subsystem shall provide:

- notification of the need to update data (including cases where data is absent);
- notification of comments; notification of approval; notification of rejection; notification of status change;
- notification of changes to founders according to Ministry of Justice data;
- notification of the need to confirm data; notification of expiry of the declaration validity period; notification of return for revision.

Notification channels: personal account; email.

5.10. Subsystem "Public Disclosure Portal"

This subsystem is designed to provide open access to information on the beneficial owners of subsoil users in the Kyrgyz Republic.

The Public Portal is not a master data storage system. All primary data, reference books, registers, ownership structures, and information on legal entities and beneficial owners are stored exclusively in the Nedra AIS. The Portal uses data through API interfaces and shall not maintain master data independently.

The Public Portal shall operate independently of the internal Nedra AIS environment and receive data through API interfaces.

Core Subsystem Functions:

- information search: full-text search; partial name search; search in Cyrillic and Latin scripts; case-insensitive search;
- viewing of subsoil user information; viewing of licence information; viewing of beneficial ownership information;
- viewing of ownership and control structures; viewing of change history; open data export; provision of open API; publication of statistical indicators.

Information Search

The Portal shall support search and filtering of information by: name of the legal entity; registration number; TIN; licence number; full name of the beneficial owner; citizenship of the beneficial owner; type of mineral; region of operations; type of beneficial owner (natural person, legal entity, state); presence of a PEP among beneficial owners; other parameters.

Search results shall support filtering, sorting and pagination.

Legal Entity Profile

For each legal entity, a separate profile shall be generated containing: organisation name; registration information; information on licences; list of beneficial owners; ownership structure

information; participation share information; information on grounds for control; change history; information currency date.

Beneficial Owner Profile

For each beneficial owner, a separate profile shall be generated containing: full name; citizenship; country of residence; information on participation shares held; information on related legal entities; information on licences of related companies; information on control mechanisms; history of information changes.

Ownership Structure Visualisation

The Portal shall provide graphical display of the ownership and control structure. Visualisation shall provide: display of natural persons; display of legal entities; display of participation shares; display of control mechanisms; display of multi-level ownership chains; navigation between related objects; diagram scaling and navigation.

Open Data

The Portal shall provide access to open data sets through: web interface; API; file exports. Data export shall be supported in the following formats: CSV; XLSX; JSON; XML; BODS JSON.

Minimum API Set:

- company search; retrieval of company profile; retrieval of beneficial owner profile; retrieval of ownership structure; export of changes for a period; BODS JSON export.

The System shall support automated data export for publication in the Open Ownership Register.

Statistics and Analytics

The Portal shall display statistical information, including: number of subsoil users; number of licences; number of beneficial owners; distribution by citizenship of beneficial owners; distribution by type of mineral; distribution of licences by region of the Kyrgyz Republic (by location of licence areas); distribution by type of beneficial owner (natural persons, legal entities, states); other indicators.

The subsystem shall support the state language, official language and English language.

All published information shall be accompanied by the currency date and data origin source.

The System shall check text fields for visually similar characters from different alphabets (Unicode homoglyphs) and warn the user or block the saving of incorrect values.

5.11. Subsystem "Analysis and Reporting"

This subsystem is designed for the generation of analytical materials, statistical reports and monitoring of beneficial ownership information.

The subsystem shall ensure:

- generation of standardised reports; generation of analytical reports; monitoring of disclosure completeness; monitoring of information currency; analysis of ownership structures; analysis of beneficial ownership changes; analysis of licences and subsoil users.

Functions and Key Features:

- report builder; configuration of report parameters; data filtering; data grouping; generation of charts and graphs; data export; saving of report templates.

The subsystem shall support generation of the following reports:

- list of subsoil users; list of beneficial owners; information on companies with incomplete disclosure; information on companies with changes in beneficial ownership;
- information on licences; information by region; information by type of mineral; EITI reports; open data publication reports; statistical reports.

Analysis results shall be provided in the form of: tables; charts; interactive monitoring dashboards; printable reports. The subsystem shall support report export in PDF, XLSX, CSV and DOCX formats.

5.12. Subsystem "Administration and Security"

This subsystem is designed for user management, system configuration, access rights management, audit log maintenance and information security.

Subsystem Functions:

- user management; role management; access rights management; system parameter configuration; reference data management; integration management; publication management; audit log maintenance; data backup; system health monitoring.

The subsystem shall support the following primary user roles:

- System Administrator; Security Administrator; Ministry Staff Member; Head of Division; Data Verification Operator; Subsoil User; Applicant; Public Portal User.

For each role, it shall be possible to configure access rights to: subsystems; sections; functions; data; export and publication operations.

Role	Primary Functions
Applicant	Declaration submission
Subsoil User	Data updating
Operator	Data verification
Head of Division	Approval
Administrator	System configuration
Portal User	Data viewing

Function	Applicant	Subsoil User	Operator	Head	Admin
Create declaration	Yes	Yes	No	No	Yes
Edit	Yes	Yes	No	No	Yes
Verify	No	No	Yes	No	Yes
Approve	No	No	No	Yes	Yes
Publish	No	No	No	Yes	Yes

The subsystem shall ensure: user authentication; user authorisation; action log maintenance; security event registration; password management; account blocking; control of failed login attempts; automatic termination of inactive sessions.

All user actions shall be recorded in an audit log specifying: user; date and time; IP address; action performed; operation result.

The subsystem shall support recovery from failures and monitoring of system service availability. The System shall comply with the requirements of the legislation of the Kyrgyz Republic on information security, data protection and personal data.

6. STAFFING AND QUALIFICATION REQUIREMENTS

Requirements for the number and operating mode of System users are set out in Table 1.

Table 1. System User Operating Mode

User Category	Number
User Staff	Up to 50
Subsoil Users and Applicants	Up to 2,000
Public Portal Users	Unlimited
Super-Administrator	1
System Administrator	1
Security Administrator	1
Database Administrator	1

The qualification of users shall ensure effective operation of the System in all provided operating modes. All system users are divided into the following groups: internal Ministry users; applicants and subsoil users; system administrators; public portal users. Users shall have skills in working with modern web applications and office software.

The Contractor shall provide training for system users and administrators. As part of the implementation, the following shall be carried out: training for system administrators; training for Ministry staff; preparation of training materials; preparation of user manuals; provision of consultations during pilot operation.

Technical Support:

The Contractor shall provide software technical support for 12 months following system handover to the User, after which technical support shall be the responsibility of the User.

7. GENERAL SYSTEM REQUIREMENTS

7.1. Reliability Requirements

The System shall operate on a 24/7 basis, except during scheduled maintenance and preventive works. The System technical availability coefficient shall be no less than 99%.

The System shall ensure:

- data backup; recovery from failures; protection against data loss; data integrity control; logging of errors and exceptions.

The maximum system recovery time after a failure (RTO) shall not exceed 4 hours. Data loss due to hardware or software failures (RPO) shall not exceed 24 hours from the last backup.

7.1.1. List of Emergency Situations with Reliability Requirements and Corresponding Indicators

The System shall ensure recovery of operation in the following situations: power failure; server hardware failure; software failure; communication channel failure; user errors; errors in integration interaction with external systems.

7.1.2. Software Fault Tolerance

The System shall ensure: error handling without system crash; automatic service recovery; control of hung processes; re-execution of integration operations; error log maintenance.

7.1.3. Hardware Reliability

The System shall support deployment in a fault-tolerant infrastructure using redundancy of computing resources, databases and communication channels.

7.2. System Security Requirements

The System shall comply with the requirements of the legislation of the Kyrgyz Republic in the field of information and personal data protection. Access to system functionality shall be granted only to authorised users. The System shall ensure: user authentication; user authorisation; differentiation of access rights; registration of user actions; operation auditing; API security control. All connections shall use the HTTPS secure protocol.

7.3. Requirements for Protection Against Unauthorised Access

The System shall ensure: role-based access model; differentiation of rights at the function and data level; account blocking after a specified number of failed login attempts; automatic termination of user sessions; logging of user actions.

7.4. Information Security Analysis and Control

The System shall ensure: security log maintenance; control of suspicious activity; monitoring of unauthorised access attempts; registration of security events; ability to integrate with external security monitoring and auditing tools.

7.5. Performance Indicators

The user interface response time for standard operations shall not exceed: page loading — up to 5 seconds; search execution — up to 10 seconds; report generation — up to 60 seconds; ownership structure generation — up to 10 seconds.

The System shall support concurrent use by at least: 100 internal users; 500 authorised external users; 1,000 public portal users.

7.6. Standardisation and Unification Requirements

Internationally accepted standards for software design and development shall be used. The System shall be compatible with: Beneficial Ownership Data Standard (BODS); OpenAPI standards; "Tündük" system requirements; modern web browsers. All software components shall have documented interfaces and support further development without changing the architectural principles of the System.

7.7. General Hardware and Software Requirements

7.7.1. Application Software

The application software of the System shall have the following properties: functional sufficiency; modular design and ease of operation; use of three-tier architecture (client-server) in a distributed system; compatibility of software products in terms of hardware, system software and overall architecture within the technical requirements, and information compatibility within data exchange requirements.

The System shall include the following layers:

- user interface layer — for user access to System functions;
- business logic layer — a set of software services executed on the application server implementing all business logic and system-wide mechanisms;
- data layer — to be implemented based on an industrial-grade DBMS and storage network;
- integration layer — designed for interaction between System components and adjacent systems.

The service user interface shall be developed for various screen resolutions with support for modern browsers and standards. The service shall be developed without the use of proprietary third-party plugins such as Adobe Flash or Google Chrome plugins.

7.7.2. System Software

Requirements for system software are set out in Table 2. System software specifications shall be defined at the technical design stage and included in the "System Architecture Description".

Table 2. System Software Requirements

No.	Software Category	Requirement
1	Application Server	The server shall serve as a runtime environment and management tools for web service-based applications. The configuration shall provide clustering capabilities, load-balancing components with caching of frequently used information, and high-availability functions in distributed environments. The server shall support Linux/Windows operating systems and shall be compatible with the DBMS selected for the System.
2	Database Management System (DBMS)	The DBMS shall provide: support for the relational data model; data integrity using built-in mechanisms; data protection and full recovery capability following failures; load redistribution, SQL query optimisation and correction, error detection and forecasting; DBMS clustering capability; ability to partition tables and indexes into simpler components; scalability providing fast and reliable access to frequently used data; automatic and dynamic data partitioning across multiple servers; ability to store and retrieve documents in XML and JSON formats; continuous data access and transaction integrity, including in the event of failures.
3	HTTP Server	The HTTP server shall provide: the ability to establish a secure connection with client software; static content and document caching; external request load balancing; server response compression using the Gzip method.

7.8. Requirements for Modifications and Upgrades

The System shall have high flexibility to allow for functional expansion. System flexibility shall be defined by its ability to incorporate new attributes and objects without disrupting the structure. Technical solutions adopted during system enhancement shall comply with the principle of development based on anticipated changes.

It is recommended to use solutions that allow for further system development without fundamental redesign, through the use of modern integration technologies. The ability to scale subsystems as system load increases shall be provided. The System shall have an open architecture that does not impede further development in the following directions: functional expansion; integration with adjacent systems; scaling of hardware and software resources in line with information flow growth.

7.9. Interface Requirements

Detailed user interface requirements and user interface prototypes shall be developed, meeting the following requirements: unified graphical design with consistent placement of primary controls and functions across all screen forms; simplicity, clarity and convenience at all stages of data entry, processing, analysis and transmission; messages, labels and other text elements

shall be in the state and official languages; terms used to describe standard operations and user action sequences shall be unified; ability to use keyboard shortcuts for the most frequently used functions; contextual help (general system usage information and tooltips for specific navigation and control elements); correct handling of situations caused by incorrect user actions, incorrect format or invalid input values.

The interface shall be clear and user-friendly, not overloaded with graphical elements, and shall ensure fast display of screen forms. It shall be designed primarily for use with a mouse, with system control via menus, buttons, icons and other screen elements.

The System shall display contextual help ("i") for fields requiring specialist legal knowledge. Reference information shall contain definitions of terms in accordance with the legislation of the Kyrgyz Republic.

7.10. Access Control

Management (creation, activation, blocking and deletion) of user accounts, including external users. Implementation of role-based method, types (view, edit) and access differentiation rules. Separation of authorities (roles) for different categories of information system users and within categories, in accordance with their authorities.

Assignment of minimum necessary rights and privileges to users, administrators and persons ensuring the functioning of Subsystems: assignment of users to categories; assignment of roles, groups and user access rights. Display of available system sections/functions to the user in accordance with their assigned rights.

Documentation of user actions, including registration of: username upon login to subsystems; date and time of the work session (start/end); data addition, editing and deletion events. Documentation of user actions shall be recorded in a log file. Restriction of failed login attempts with subsequent automatic blocking of the user account. Blocking of session access after a set period of user inactivity, or at the user's request.

7.11. Security Event Logging

The System shall ensure mandatory registration of all security events in protected system logs, including the automatic recording of: login attempts (successful and unsuccessful); password change, password reset; creation, modification or deletion of user accounts; modification of roles and access rights; access to protected sections and data; data export and deletion; failures and errors in system components; unauthorised access attempts; actions of the system administrator and system services.

Each event shall include:

- event date and time (UTC); unique session and user identifier; action description; event criticality level; user IP address and device (if applicable); result status (successful / error / denied).

Security logs shall be generated in a format compatible with SIEM systems and shall be accessible only to authorised users with the "Security" or "Auditor" role. The System shall provide for log rotation and archiving with retention for the established period.

7.12. System Operating Mode Requirements

The following operating modes shall be provided for the System:

- Normal mode — the primary mode, in which round-the-clock execution of tasks and functions is ensured;
- Service mode — the mode required for System maintenance, software complex upgrade and emergency resolution;
- Emergency mode — the mode into which the System transitions when an abnormal situation arises and normal operation is not possible. Emergency operating mode shall be characterised by the failure of one or more software and/or hardware components.

7.13. System Diagnostics Requirements

Infrastructure and application monitoring tools shall be implemented to diagnose System operability.

7.14. Information System and Data Integrity

Integrity control of software, including information security software. Ensuring the possibility of software recovery, including information security software, in the event of abnormal situations.

7.15. Data Preservation Requirements in Emergency Situations

Data preservation shall be ensured in the following emergency situations: hardware or software failure; communication equipment failure; emergency power outage.

The following functions shall be provided to ensure data preservation:

- configuration of backup parameters for system components with remote storage capability;
- backup management and accounting;
- data recovery to a consistent state following hardware/software failures in the computational operating environment;
- data recovery to a consistent state following network software and hardware failures.

Protection against personnel errors shall be ensured through user access rights management tools in accordance with the role-based model.

To ensure recovery of information lost due to errors by authorised personnel, cyclic backup of all System data shall be implemented with storage of multiple backup versions.

To ensure high availability and recovery from hardware failures with minimum downtime, a fault-tolerant solution consisting of at least two parallel operating nodes shall be used for Subsystems.

The ability to restore System operability without critical data loss in emergency situations is achieved through database replication to a backup server located off the User's premises, as

well as a data archiving and recovery system. Critical data loss refers to the irretrievable loss of data entered into the System database as a result of a correctly completed transaction.

8. SUPPORT REQUIREMENTS AND TECHNICAL CONDITIONS FOR DEVELOPMENT AND OPERATION

8.1. Software Requirements

The Module to be developed shall be implemented as an integral part of the Nedra AIS and shall comply with the existing architecture, technology stack and adopted system development standards. The Contractor shall ensure compatibility of the developed software with the existing software components of the Nedra AIS.

Technologies, software platforms, libraries and development tools used in the Nedra AIS shall be used in development, unless otherwise agreed with the Client. Development shall allow for further functional expansion without the need to change the system architecture.

The software shall ensure:

- modular architecture; support for service-oriented interaction; REST API support; support for data exchange in JSON and XML formats; support for logging mechanisms; support for audit mechanisms; support for role-based access model; ability to integrate with external state information systems.

The System shall support generation and export of data in Beneficial Ownership Data Standard (BODS) format. The source code shall be transferred to the Client in full, including the change history in the version control system.

The technology stack shall correspond to that used in the Nedra AIS:

- Backend: ASP.NET Core 8
- Frontend: React + TypeScript
- Database: PostgreSQL
- API: REST
- Authentication: JWT / existing Nedra AIS mechanism

8.2. Information Support Requirements

The information support of the System shall ensure collection, storage, processing, updating, search, analysis and publication of beneficial ownership information.

The primary data storage objects are:

- legal entities; subsoil users; beneficial owners; ownership and control structures; licences; declarations; documents; verification results; publications; audit logs.

The System shall maintain a data change history. For each record, information on the data origin source, creation date, modification date and the user who made the changes shall be stored.

BODS Standard Compliance

The logical data model shall be designed to maximise compatibility with the BODS structure. The data model shall support storage of information on: natural persons; legal entities;

ownership and control relationships; grounds for exercising control; information sources; publications and data versions.

The System shall support data export in BODS JSON format without the need for additional manual data transformation.

8.3. Language Support Requirements

The System shall support the state and official languages of the Kyrgyz Republic. The public portal shall support the English language. All user interfaces shall support display of information in the selected language. Reference books shall support storage of values in multiple languages.

8.4. Hardware Requirements

The Module to be developed shall operate within the existing Nedra AIS infrastructure. Additional server hardware requirements shall be determined based on design results and shall take into account the Client's existing computing infrastructure. The System shall support operation in modern web browsers without the installation of additional software. Supported browsers: Google Chrome; Microsoft Edge; Mozilla Firefox; Safari.

8.5. Organisational Support Requirements

The following shall be developed for system operation:

- administrator manual; user manual; backup and recovery manual; API description; data structure description; integration interaction description.

8.6. Integration Requirements

The System shall support integration via API and interagency electronic interaction mechanisms (with versioning). Integration mechanisms shall ensure: data retrieval from the Nedra AIS; data retrieval from state information systems; interaction through the "Tündük" system; provision of data to the public disclosure portal; provision of an open API for external data consumers.

All API interfaces shall be documented and accompanied by a technical description. All REST APIs shall be documented using the OpenAPI 3.0 (Swagger) specification.

8.7. Requirements for Data Control, Storage, Update and Recovery

Data accuracy control shall be ensured through the implementation of format and logical control functions both at the user form level and at the level of applying necessary constraints on database tables. Data backup shall be performed manually or using third-party software.

9. SCOPE AND CONTENT OF IMPLEMENTATION WORKS

1. ToR Refinement

Prior to commencing System development, the Contractor shall conduct analytical work at the User's premises to refine the Terms of Reference, and shall approve the data storage structure describing the entities and the general user interface design layout.

2. BO Module Development

The selected Contractor shall develop the BO Module in accordance with the ToR. When developing each module and function therein, the Contractor shall prepare and then discuss/agree with the User: (1) a joint work plan; (2) the Contractor team working on the project and their responsibilities; (3) a Technical Specification for the BO Module, which shall include at minimum: (a) Description of all modules included in the BO Module; (b) High-level workflow diagrams (module interaction); (c) High-level data flow diagrams.

3. Integration Configuration

Develop data import services, configure data encoding scripts in accordance with reference books and structure verification, and load data into the main register tables.

4. BO Module Installation on Servers and Workstations

Install and test the BO Module on the designated servers and user workstations.

5. Initial Data Population and Migration

Import of subsoil users from the Nedra AIS, import of legal entity registration data, configuration of synchronisation mechanisms, and quality verification of imported data.

6. Testing and Pilot Operation

The Client and Contractor shall jointly conduct testing (preliminary and acceptance) and pilot industrial operation.

7. Staff Training

Prepare and agree with the Client and User management a training plan that shall include, but not be limited to: (1) Group training for staff (no more than 20 persons per group); (2) On-the-job training (offline). Conduct training for all involved personnel in accordance with the plan.

8. Technical Documentation

Develop Technical Documentation in accordance with Section 11 of these ToR.

9. Project Management

Work closely with the User in connection with the internal regulatory steps required for the official launch of the BO Module.

10. Technical Support

12 months of technical support shall include:

- assistance to the system administrator in addressing identified system gaps;
- resolution of identified errors.

Implementation Schedule:

Work Item	Month 1	Months 2–3	Months 4–5	Month 6	Months 7–12	Months 13–18
ToR Refinement	●					
BO Module Development	●	●	●			
Integration Configuration			●			
BO Module Installation on Server			●			
Staff Training			●	●		
Technical Documentation				●		
Testing and Pilot Operation				●		
Technical Support					●	●

10. CONTROL AND ACCEPTANCE PROCEDURES

Control and acceptance shall be carried out in accordance with the approved document "Procedure for the Creation, Development, Commissioning, Operation and Decommissioning of Information Systems" of the User.

Table 4. Control and Acceptance Procedure

Type of Testing	Timeline	Parties	Documents
Preliminary Testing	1 week	User, Contractor	1. Preliminary Testing Programme and Methodology 2. Preliminary Testing Report 3. Acceptance Certificate for Pilot Operation
Pilot Operation	2 weeks	User, Contractor	1. Pilot Operation Programme and Methodology 2. Pilot Operation Log 3. Pilot Operation Report 4. Certificate of Completion of Pilot Operation and Admission to Acceptance Testing
Acceptance Testing	1 week	User, Client, Contractor	1. Acceptance Testing Programme and Methodology 2. Acceptance Testing Report 3. Certificate of Acceptance for Industrial Operation

10.1. Preliminary Testing

Prior to preliminary testing, measures shall be taken to prepare the automated system for commissioning. Preliminary testing is required to determine the operability of the system being implemented and the possibility of its acceptance for pilot operation. Preliminary testing shall include (iterations until a positive result is obtained): development of the testing programme and methodology; functional verification and system testing; resolution of comments and system refinement.

10.2. Pilot Operation

Pilot operation shall be conducted to verify the functionality of the BO Module on real data, train User personnel for operational mode and ensure readiness for the transition of the BO Module to industrial operation. During pilot operation, a log shall be maintained recording system errors. Exceptional situations recorded in the log shall be resolved.

10.3. Acceptance Testing

Acceptance testing shall be conducted to verify compliance of the BO Module with the requirements of the Terms of Reference. Based on the results of acceptance testing, a decision shall be made on the possibility of accepting the automated system for industrial operation.

10.4. Composition of the Acceptance Committee

The composition of the acceptance committee shall be approved by the Client and the User.

10.5. Warranty Service Information

The Contractor shall provide warranty maintenance of the System and software refinement to address comments identified by users for 12 months from the signing of the certificate of acceptance of the System for industrial operation. Warranty service shall be provided within the timeframes and on the terms set out in the contract.

11. DOCUMENTATION REQUIREMENTS

The following documents shall be prepared during the development, implementation and use of the BO Module:

Working Documentation:

- General description of the module;
- Business process functional model;
- Logical data model;
- Programmer's manual;
- Administrator's manual;
- User's manual;
- Organisational procedure for making changes to the module's logic and data structure;
- Description of minimum operational data or characteristics.

The Contractor shall transfer to the Client:

- full source code; deployment scripts; installation instructions; database structure; API description; configuration files.

Organisational Documentation:

- Preliminary Testing Methodology and Programme; Preliminary Testing Report; Acceptance Certificate for Pilot Operation;
- Pilot Testing Methodology and Programme; Pilot Operation Log; Pilot Operation Report;
- Certificate of Completion of Pilot Operation and Admission to Acceptance Testing;
- Acceptance Testing Methodology and Programme; Acceptance Testing Report;
- Certificate of Acceptance for Industrial Operation (or Certificate of Readiness for Acceptance for Industrial Operation).

Deliverables:

- BO Module commissioned for industrial operation;
- Detailed Terms of Reference for BO Module development;
- BO Module testing programme and methodology for each testing stage;
- Acceptance certificates for each testing stage;
- Technical documentation for the BO Module: solution and software description, user manual, programmer's manual, administrator's manual;
- BO Module training materials.

12. TERMS OF REFERENCE APPROVED

Table 5. Approval Sheet

Organisation, Position	Full Name	Signature	Date

13. DOCUMENT INFORMATION

Table 6. Document Information

Document Identification	2026-07 ToR BO Module Nedra AIS
Version Number	1.0
Effective Date	29 July 2026

Document Change History:

Version	Date	Author	Description of Change
1.0	29.07.2026	Meder Toitonov	First version