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TECHNICAL SPECIFICATIONS

for service delivery for

creating a Transparency Register

information and communication system

Kyiv 2024

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1. BACKGROUND DATA

Services for creating the Transparency Register information and communication system (hereinafter referred to as TR ICS) shall be provided under a contract concluded between the National Agency on Corruption Prevention, the Promoting Integrity in the Public Sector Activity (USAID/Pro-Integrity) program of international technical assistance to Ukraine, and the winner of tender procedures.

The recipient is the National Agency on Corruption Prevention.

The service provider is to be determined on a competitive basis.

The project contractor is the Promoting Integrity in the Public Sector Activity (USAID/Pro-Integrity) program of international technical assistance to Ukraine, registration card No. 5413 issued by the Secretariat of the Cabinet of Ministers of Ukraine, date of registration: February 9, 2024.

The basis for service delivery is the relevant agreement between the National Agency on Corruption Prevention, the Promoting Integrity in the Public Sector Activity (USAID/Pro-Integrity) program of international technical assistance to Ukraine, and the winner of tender procedures.

Scheduled terms of service delivery:

Start of service delivery: from the date of contract signing.

End of service delivery: by December 21, 2024.

1.1. THE SYSTEM'S FULL AND SHORT NAME

The full name of the information and communication system is the Transparency Register Information and Communication System.

Short name is TR ICS.

The full name of the specialized software is Transparency Register specialized software.

The short name is TR SPZD SW.

The comprehensive information security system's full name is the Comprehensive Information Security System of the Transparency Register Information and Communication System.

The short name is CISS TR ICS.

1.2. INFORMATION ON THE SYSTEM OWNER

The National Agency on Corruption Prevention (hereinafter the National Agency) is the holder and responsible entity for administering and maintaining the Transparency Register.

The National Agency is a central executive body with a special status that ensures the development and implementation of the state anti-corruption policy.

Address of the TR ICS: National Agency, 01103, 28 Mykoly Mikhnovskoho Blvd, Kyiv, Ukraine.

Address of the TR ICS and its components: 01103, 28 Mykoly Mikhnovskoho Blvd, Kyiv, Ukraine.

1.3. PURPOSE AND OBJECTIVES OF ICS CREATION

The purpose of the TR ICS is to operate an effective and secure system for obtaining, processing, and recording information on lobbying entities and other information specified in the Law of Ukraine "On Lobbying."

The purpose is —

- to ensure the registration of lobbying entities, the possibility of submitting reports, and to provide free public access to up-to-date and reliable information about lobbying entities and their reports;
- to ensure a unified approach to collecting, analyzing and storing information about lobbying entities and their reporting;
- to ensure the protection of information received from lobbying entities;
- to ensure appropriate protection against unauthorized access to information received from lobbying entities.

1.4. DEFINITIONS, TERMS AND ABBREVIATIONS

AWS	Automated workstation
DB	Database
Law	The Law of Ukraine "On Lobbying"
ICS	Information and Communication System
QES	Qualified electronic signature
CISS	Comprehensive Information Security System
HWK	Hardware kit

CUAO	Code of Ukraine on Administrative Offences
RD	Regulatory document
TR	Transparency Register
LE	Lobbying entity
SPZD SW	Specialized software
ToR	Terms of Reference
TIS	Technical information security

Transparency Register Specialized software (TR SPZD SW) consists of public and classified parts to ensure the collection, accumulation, protection, accounting, display, processing, and provision of information on lobbying entities, reporting, etc.

The Transparency Register Information and Communication System (TR ICS) is an organizational and technical system implementing the information exchange and processing technology (the procedure for collecting, analyzing and storing information, reports and notifications) provided by lobbying entities in the classified part of the Register, as well as information (notifications) provided by an individual or legal entity that has free access to the public part of the Register via the Internet, using technical and software means by transmitting and receiving information.

A qualified electronic signature (QES) is an advanced electronic signature created using a qualified electronic signature tool based on a qualified public key certificate.

The Transparency Register is an information and communication system that enables the collection, accumulation, protection, accounting, display, processing and provision of information on lobbying entities and their reporting.

Authorized person is a person who is authorized to take action and is responsible for the consequences under the law.

Lobbying entity is an individual or legal entity that carries out lobbying on the grounds and in the manner prescribed by the Law of Ukraine "On Lobbying."

1.5. LIST OF DOCUMENTS BASED ON WHICH THE SERVICES ARE PROVIDED

Services for the Transparency Register Information and Communication System creation shall be provided in accordance with the following list of regulatory, legal and guiding documents:

- The Law of Ukraine “On Lobbying”;
- The Law of Ukraine “On Public Electronic Registers”;
- The Law of Ukraine “On Prevention of Corruption”;
- The Law of Ukraine “On Information”;
- The Law of Ukraine “On Personal Data Protection”;
- The Law of Ukraine “On Protection of Information in Information and Telecommunication Systems”;
- The Law of Ukraine “On E-Identification and E-Trust Services”;
- Regulation on the Transparency Register approved by the Cabinet of Ministers of Ukraine;
- Regulation on Technical Protection of Information in Ukraine, approved by the Decree of the President of Ukraine No. 1229 dated September 27, 1999;
- Resolution of the Cabinet of Ministers of Ukraine No. 522 “Procedure for Connecting to Global Data Transmission Networks” dated April 12, 2002;

- Rules for ensuring the protection of information in information, telecommunications, and information and telecommunications systems approved by Resolution of the Cabinet of Ministers of Ukraine № 373 dated March 29, 2006;
- DSTU 3396.0-96. Information protection. Technical protection of information. Basic principles;
- DSTU 3396.1-96. Information protection. Technical protection of information. Order of carrying out the works;
- Regulation on the State Examination in the Field of Technical Protection of Information, approved by Order of the Administration of the State Service for Special Communications and Information Protection of Ukraine No. 93 dated May 16, 2007;
- The Procedure for Updating Antivirus Software With a Positive Expert Opinion Based on the Results of the State Examination in the Field of Technical Protection of Information, approved by the Order of the Administration of the State Service for Special Communications and Information Protection of Ukraine No. 45 dated March 26, 2007;
- ND TZI 1.1-002-99 General provisions for protecting information in computer systems against unauthorized access;
- ND TZI 1.1-003-99 Terminology in the field of protecting information in computer systems against unauthorized access;
- ND TZI 1.4-001-00 Model Regulations on the information security service in automated systems;
- ND TZI 2.5-004-99 Criteria for assessing the information security in computer systems against unauthorized access;
- ND TZI 2.5-005-99 Classification of automated systems and standard functional profiles of processed information security against unauthorized access;
- ND TZI 2.5-010-03 Requirements for protecting the information on the webpage from unauthorized access;
- ND TZI 3.7-001-99 Methodical instructions regarding the development of the terms of reference for creating a comprehensive information security system in the automated system;
- ND TZI 3.7–003-2005. Procedure for setting up a comprehensive information security system in the information and telecommunication system;
- Regulation on the Procedure for the Development, Production and Operation of Cryptographic Information Protection Means, approved by the Order of the Administration of the State Service for Special Communications and Information Protection of Ukraine No. 141 dated July 20, 2007;
- The Concept of Creating the Transparency Register;
- Description of the business process of using the Transparency Register;
- Feasibility study for creating the Transparency Register information and communication system.

2. PURPOSE OF SERVICES DELIVERY

The purpose of service delivery is to ensure the creation and commissioning of the TR ICS, which includes the TR SPZD SW and CISS TR ICS.

The TR ICS is developed within the framework of implementation of the Law of Ukraine “On Lobbying.”

The CISS TR ICS is developed within the framework of implementation of the Law of Ukraine “On Protection of Information in Information and Telecommunication Systems.”

3. ICS CHARACTERISTICS

The Law provides for the creation of the TR. Under the Law, the TR shall be created with the possibility of registration and provision of information by the LE, in particular:

- Information about LEs and their reporting (hereinafter TR objects);
- Registration numbers of TR objects by which they are identified;

- Information on an individual — lobbying entity:
  - last name, first name, patronymic (if any);
  - day, month and year of birth;
  - registration number of the taxpayer's record card (if any) or series (if any) and number of the identification document;
  - unique record number in the Unified State Demographic Register (if any);
  - address of the declared and/or registered place of residence (stay);
  - phone number or other technical means of electronic communication, email;
  - website (if any);
  - the source of funding (if any);
  - the field of lobbying.
- Information on a legal entity — lobbying entity:
  - name of the legal entity;
  - legal form;
  - code according to the EDRPOU (if any);
  - location of the legal entity;
  - phone number or other technical means of electronic communication, email;
  - website (if any);
  - information on the registration of a representative office of a foreign business entity (for foreign legal entities);
  - last name, first name, patronymic (if any) of the head of the legal entity;
  - last names, first names, patronymic (if any) of the founders (members), ultimate beneficial owners of the legal entity who are individuals (if any);
  - information on individuals who lobby on behalf of the legal entity (last name, full name, patronymic (if any), date, month and year of birth, registration number of taxpayer's record card (if any) or series (if any) and number of the identification document, unique record number in the Unified State Demographic Register, address of the declared and/or registered place of residence and phone number);
  - the source of funding (if any);
  - the field of lobbying.
- Information on the current status (terminated, suspended) of the lobbying entity;
- Reporting of the lobbying entity (reports are submitted for every six months, for the first six months — by July 31 (inclusive) of the reporting year, for the second six months — by January 31 (inclusive) of the year following the reporting year);
- The information stipulated by the Regulation on the TR (the Regulation on the TR is to be approved by the Cabinet of Ministers of Ukraine).

The Lobbying Report shall contain the following information (for an individual):

- Identifying data of the lobbying entity:
  - last name, first name, patronymic (if any);
  - day, month and year of birth;
  - registration number of the taxpayer's record card (if any) or series (if any) and number of the identification document;
  - unique record number in the Unified State Demographic Register (if any);
  - address of the declared and/or registered place of residence;
- Identifying data of the client or other beneficiary (if lobbying is carried out in the commercial interests of the beneficiary under the lobbying contract):
  - for a foreign state — the name
  - name of the person representing the interests of a foreign state (if any);
  - for an individual:

        - last name, first name, patronymic (if any);
        - day, month and year of birth;
        - registration number of the taxpayer's record card (if any) or series (if any) and number of the identification document;
        - unique record number in the Unified State Demographic Register (if any);
        - address of the declared and/or registered place of residence;
    - For a legal entity:
        - name;
        - legal form;
        - code according to the EDRPOU (if any);
        - location;
        - phone number or other technical means of electronic communication, email (if any);
        - website (if any);
        - last name, first name, patronymic (if any) of the head;
    - for a group of persons — all the above information;
- General information about the beneficiary (if lobbying is carried out in the commercial interests of the beneficiary without concluding a lobbying contract):
    - for a foreign state — the name
    - for an individual:
        - last name, first name, patronymic (if any);
        - registration number of the taxpayer's record card (if any) or series (if any) and number of the identification document;
        - unique record number in the Unified State Demographic Register (if any).
    - For a legal entity:
        - name;
        - legal form;
        - code according to the EDRPOU (if any);
        - location;
    - for a group of persons — all the above information;
- Lobbying object, lobbying entity by lobbying fields;
- Date of conclusion, term and price of each lobbying contract in the following amounts:
    - up to UAH 100,000;
    - from UAH 100,000 to UAH 1,000,000;
    - from UAH 1,000,000 to UAH 10,000,000;
    - more than UAH 10,000,000;
- The amount of funds received by the lobbying entity during the reporting period from the client under each lobbying contract in the following amounts:
    - up to UAH 100,000;
    - from UAH 100,000 to UAH 1,000,000;
    - from UAH 1,000,000 to UAH 10,000,000;
    - more than UAH 10,000,000;
- The amount of funds spent by the lobbying entity during the reporting period in each field of lobbying, with a list of lobbying objects (if lobbying is carried out in the lobbying entity's own commercial interests or in the commercial interests of the beneficiary without concluding a lobbying contract) in the following amounts:
    - up to UAH 100,000;
    - from UAH 100,000 to UAH 1,000,000;
    - from UAH 1,000,000 to UAH 10,000,000;
    - more than UAH 10,000,000;

- Meetings and communication with lobbying objects that hold responsible or particularly responsible positions within the definition of the Law of Ukraine "On Prevention of Corruption," during which lobbying was carried out, by indicating the following information about the lobbying objects: last name, first name, patronymic (if any); position; date of interaction; type of interaction (meeting/event);
- Amount of contributions made by the lobbying entity in support of political parties, contributions to election funds (indicating the names of parties/their local organizations, the amount, type of each contribution and the date of its payment).

The Lobbying Report shall contain the following information (for a legal entity):

- Identifying data of the lobbying entity:
  - name;
  - legal form;
  - code according to the EDRPOU (if any);
  - location;
- Identifying data of the client or other beneficiary (if lobbying is carried out in the commercial interests of the beneficiary under the lobbying contract):
  - for a foreign state — the name
  - name of the person representing the interests of a foreign state (if any);
  - for an individual:
    - last name, first name, patronymic (if any);
    - day, month and year of birth;
    - registration number of the taxpayer's record card (if any) or series (if any) and number of the identification document;
    - unique record number in the Unified State Demographic Register (if any);
    - address of the declared and/or registered place of residence;
  - for a legal entity:
    - name;
    - legal form;
    - EDRPOU code (if any);
    - location;
    - phone number or other technical means of electronic communication, email (if any);
    - website (if any);
    - last name, first name, patronymic (if any) of the head;
  - for a group of persons — all the above information;
  - general information about the beneficiary (if lobbying is carried out in the commercial interests of the beneficiary without concluding a lobbying contract):
    - for a foreign state — the name
    - for an individual:
      - last name, first name, patronymic (if any);
      - registration number of the taxpayer's record card (if any) or series (if any) and number of the identification document;
      - unique record number in the Unified State Demographic Register (if any).
    - for a legal entity:
      - name;
      - legal form;
      - code according to the EDRPOU (if any);
      - location;
    - for a group of persons — all the above information;
  - lobbying object, lobbying entity by lobbying fields;
  - date of conclusion, term and price of each lobbying contract in the following amounts:

    - up to UAH 100,000;
    - from UAH 100,000 to UAH 1,000,000;
    - from UAH 1,000,000 to UAH 10,000,000;
    - more than UAH 10,000,000;
- The amount of funds received by the lobbying entity during the reporting period from the client under each lobbying contract in the following amounts:
    - up to UAH 100,000;
    - from UAH 100,000 to UAH 1,000,000;
    - from UAH 1,000,000 to UAH 10,000,000;
    - more than UAH 10,000,000;
- The amount of funds spent by the lobbying entity during the reporting period in each field of lobbying, with a list of lobbying objects (if lobbying is carried out in the lobbying entity's own commercial interests or in the commercial interests of the beneficiary without concluding a lobbying contract) in the following amounts:
    - up to UAH 100,000;
    - from UAH 100,000 to UAH 1,000,000;
    - from UAH 1,000,000 to UAH 10,000,000;
    - more than UAH 10,000,000;
- Meetings and communication with lobbying objects that hold responsible or particularly responsible positions within the definition of the Law of Ukraine "On Prevention of Corruption," during which lobbying was carried out, by indicating the following information about the lobbying objects: last name, first name, patronymic (if any); position; date of interaction; type of interaction (meeting/event);
- Amount of contributions made by the lobbying entity in support of political parties, contributions to election funds (indicating the names of parties/their local organizations, the amount, type of each contribution and the date of its payment).

Article 5 of the Law "On Lobbying" stipulates the following requirements for the TR:

- open round-the-clock access to the public part of the TR;
- data of the TR are open and publicly accessible, except as provided by the Law;
- public registrars of the TR are authorized employees of the National Agency. The creators (LEs) exercise the powers of public registrars of the TR within the powers specified by the Law;
- information is entered into the TR by public registrars and creators (LEs), who ensure the accuracy of data entered into the TR;
- TR is maintained in Ukrainian and English using software developed per national standards;
- compatibility and interaction of the TR with other information systems and networks that constitute the state's information resource is ensured;
- information contained in the TR is provided in a format accessible for automated collection, processing and downloading of information, as well as in other formats specified in the Regulation on the TR;
- information on the LEs contained in the TR is up-to-date and available for search and download;
- the possibility to view, copy and print information (except for information with restricted access as specified by the Law);
- protection of restricted information (LEs' personal data);
- access to the following information specified during registration is restricted:
    - registration number of taxpayer's record card;
    - unique record number in the Unified State Demographic Register;
    - series and number of the identification document;
    - address of the declared and/or registered place of residence (stay);
    - phone numbers of individuals;
    - emails of an individual;

- date of birth of an individual;
- the possibility of generating digital extracts from the TR, the content of which is specified in the Regulation on the TR;
- detailed information about LEs (except for information with restricted access as determined by the Law) shall be displayed;
- the possibility to search LEs in the TR by the type of register data;
- TR shall interact with the electronic interaction system of electronic resources;
- access to a set of data (digital document) arranged in a format that allows its automated processing by electronic means (machine-readable) for the purpose of reuse is provided.

In addition, the possibility of the following shall be ensured:

- recording and storage of information received from LEs;
- informing LEs about their status;
- informing LEs about the procedures, status and results of their monitoring;
- communication with LEs in the form of notifications and requests for additional information, if necessary.

A detailed description of the processes expected to be used by TR subjects defined by the Law is provided in the document “Description of the Business Process of Using the Transparency Register.”

The TR information and communication system (hereinafter the ICS) shall be created as a single portal, taking into account the following requirements:

- independent physical servers shall be used for ICS operation, with access granted only to persons performing the functions of the TR ICS administration;
- TR ICS shall use network information security means (Intrusion Prevention System, Firewall, etc.) and anti-virus protection tools;
- the LE database containing restricted information shall be deployed on a separate database server (physical or virtual), and user access to the database shall be provided exclusively using the TR SPZD SW;
- access of the developers of TR ICS and TR SPZD SW to the LE database shall be restricted;
- TR SPZD SW shall allow logging of user actions (except for users of the public part of the TR) and viewing of specific messages and information with restricted access for LEs.

To ensure flexibility and the ability to dynamically customize message processing rules, the TR SPZD SW shall have business process modification tools. The TR SPZD SW shall implement interfaces for different categories of users. TR SPZD SW interfaces are shown in Fig. 1. In particular, the following roles of TR SPZD SW users are considered:

External user (visitor). A user who uses the public part of the TR SPZD SW to review public information. The visitor shall have an interface that can be accessed without registration in the TR SPZD SW. The interface shall enable searching for LEs in the TR, viewing information about them (except for restricted information), their reporting, and filing a report on violations.

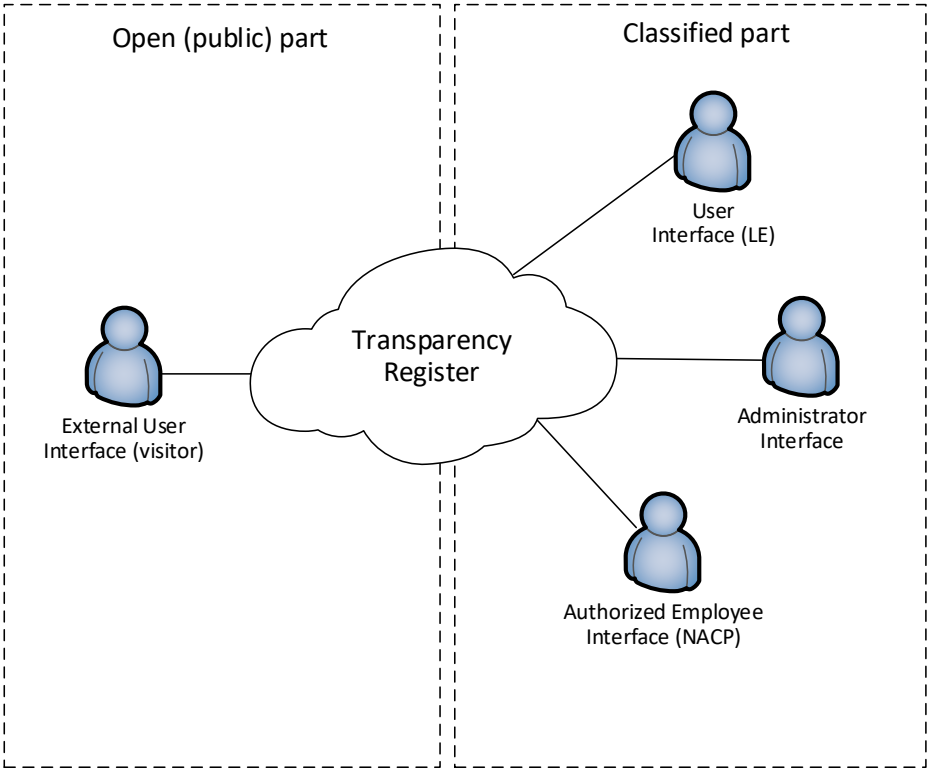

Fig. 1. TR SPZD SW interfaces.

Administrator (authorized employee of the National Agency). The administrator has access to changing TR functions and their display, as well as configuring and administering the TR SPZD SW.

User (LE). A user who registers as an LE submits reports and can update information, get an extract about themselves, and submit applications for status termination/suspension/renewal/re-acquisition.

User of the National Agency (authorized employee). A user with access to restricted information may, on the grounds stipulated by the Law, change the LE status, review applications submitted by the LE, review actions taken by the LE (registration, data updates, report submission, etc.), and send notifications to the LE. Also, the National Agency's user interface shall provide for the display and reporting on persons who have submitted the report late or failed to submit it and the number of applications for status termination/suspension.

A user of a state authority. A user who, because of the status of a state authority defined by law, which stipulates unimpeded access to information resources and information and communication systems owned by other state authorities, has access to restricted information and may view, copy, and store it.

To unify notifications, standardized notification forms shall be designed within the TR SPZD SW.

The results of monitoring/reviewing LE's applications shall be published by the LE in the following form:

- LE identifier and status (in case of status termination/suspension/renewal);
- result of monitoring/review of applications (change or retention of the existing LE status).

The LE card can have the following statuses:

- Active LE status;
- Suspended LE status;
- Terminated LE status;

Users of the TR SPZD SW (LEs, authorized employees of the NACP, users of the state authority) receive access to the TR SPZD SW after the authentication procedure based on their own QES. Once the authentication is completed, users (LEs, authorized NACP employees, and users of the state authority) receive access to their e-cabinet (account). Users of the National Agency in the account can view LEs cards and, if necessary, change their statuses depending on the review of applications submitted by LEs or the results of monitoring of authorized employees of the National Agency. The results of the application review and/or LE monitoring shall be entered

into the portal and accessible for review. It is also envisaged that authorized National Agency employees shall inform LEs about changes in their status.

After the authentication procedure, National Agency users shall also receive access to tools for analyzing the statistics of LE registration, LE statuses, and other information from the TR SPZD SW.

To protect information processed in the TR ICS, it is envisaged to create the CISS TR ICS. Creating the CISS TR ICS will ensure control over the TR ICS equipment and software and information on lobbying entities processed in the TR ICS. This will significantly reduce the risks of unauthorized access to restricted information received from LEs.

4. REQUIREMENTS FOR THE CONTENT AND PROCEDURE OF SERVICE DELIVERY.

As part of the service delivery, the following works shall be performed:

- Develop a CISS TR ICS implementing the business logic of the Transparency Register following the Law, "the Concept of creating the Transparency Register," and "Description of the business process of using the Transparency Register."
- Create the TR ICS designed to ensure the functioning of the TR SPZD SW.
- Develop and implement the TR SPZD SW.

Services shall be provided under the agreement, applicable Ukrainian regulatory acts, and regulatory documents in the field of informatization and technical protection of information.

4.1. DEVELOPMENT OF SPECIALIZED SOFTWARE

The development milestones of TR SPZD SW and work stages shall correspond to those specified in Table 4.1.

Table 4.1. Development milestones and stages of work on creating TR SPZD SW

Development milestones	Work stages
1. Terms of Reference	Development and approval of the Terms of Reference
2. TR SPZD SW design	Development and approval of the working draft
3. Final draft	Software development
	Development of operational documentation
	Software testing
4. Implementation	Software deployment and acceptance testing

Content of the work on the development of the TR SPZD SW shall comply with the following.

Depending on the specifics of the TR SPZD SW being created and its conditions, certain stages of work can be performed before the completion of the previous milestones and in parallel.

4.1.1. DEVELOPMENT OF THE TERMS OF REFERENCE FOR CREATING TR SPZD SW

At the stage of developing the terms of reference (ToR), to create the TR SPZD SW, the task is set, source materials are collected, and criteria for the efficiency and quality of the software under development are selected and justified.

The task setting presupposes the following:

- determining the structure of input and output data;
- preliminary selection of methods for solving tasks;
- justifying the feasibility of using previously developed programs;
- determining the requirements for technical means.

Also, the stage of developing the ToR for the TR SPZD SW creation presupposes the following:

- determining software requirements;
- choice of a programming language;
- coordinating and approving the ToR for TR SPZD SW creation.

The requirements for the ToR execution for the TR SPZD SW creation are set out in para. 5.1.1 of Section 5 hereof.

4.1.2. DEVELOPMENT OF A WORKING DRAFT FOR THE TR SPZD SW.

The working and final drafts will be developed after the ToR for the development of the TR SPZD SW is approved and adopted. Also, at this stage, work will start on developing the terms of reference for creating the TR ICS under para. 4.2.

The development of a working draft includes the following types of work:

- detailed description of the structure of input and output data;
- developing a task solution algorithm;
- determining formats for input and output data presentation;
- developing software structure;
- finalizing the configuration of technical means;
- developing an action plan for the development and implementation of software;
- developing software documentation;
- approving and adopting software documentation.

The development of software documentation shall comply with the requirements of the ToR for the development of the TR SPZD SW.

Specified program documents for TR SPZD SW shall be developed under para. 5.2.1 of Section 5 hereof.

4.1.3. TR SPZD SW DEVELOPMENT.

The stage of creating the TR SPZD SW includes programming, configuring, and testing its performance and operation in a designated testing environment.

4.1.4. TR SPZD SW TESTING AND BETA TESTING.

Appropriate tests are needed to verify the TR SPZD SW's compliance with the ToR's requirements.

The program and software testing methodology are developed, coordinated and approved beforehand.

Testing is performed within the terms specified in the contractual documents.

The scope and methods of testing are defined in para. 6.3 hereof.

Based on testing results, a protocol is drawn up, which indicates testing results and contains a conclusion on the possibility of transferring the developed TR SPZD SW to the Recipient for beta testing and acceptance tests.

If necessary, adjustments are made to the software and software documentation based on testing results.

4.1.5. DEVELOPING OPERATIONAL DOCUMENTATION FOR TR SPZD SW.

The process of devising operational documentation shall comply with the ToR requirements for developing TR SPZD SW.

In particular, operational documents for the TR SPZD SW, as defined in para. 5.3.1 of Section 5 hereof must developed.

4.1.6. TR SPZD SW ACCEPTANCE TESTS.

After deploying TR SPZD SW, acceptance tests shall be conducted in the created TR ICS.

Before that, the acceptance test program and methodology are developed, approved, and adopted.

Acceptance tests shall be performed within the terms specified in the relevant contractual documents.

The scope and methods of testing are defined in the description of para. 6.3 of Section 6 hereof.

If necessary, adjustments shall be made to the software and software documentation based on the acceptance test results.

Based on the acceptance test results, a protocol indicating testing results and the certificate of readiness for implementing the TR SPZD SW is drawn up.

The implementation of TR SPZD SW presupposes the following works:

- preparing and transferring software and program (including operational) documentation;
- executing and approving the acceptance certificate of software and documentation.

This stage is described in detail in para. 6.3 of Section 6 hereof.

4.2. CREATING AN INFORMATION AND COMMUNICATION SYSTEM

TR ICS creation milestones and work stages must correspond to those specified in Table 4.2.

Table 4.2. TR ICS development milestones and work stages

Development milestones	Work stages
Devising requirements for ICS	Inspecting the object where the ICS is to be created. Devising user requirements for ICS.
Terms of Reference	Drafting and approving the Terms of Reference for ICS creation.
Working draft	Developing design solutions for the system and its components. Developing documentation for TR ICS and its components.
Operational documentation	Developing operational documentation for ICS and its components. Software development or adaptation.
Commissioning	Preparing the automation object for ICS commissioning. Start-up works. Preliminary tests. Beta testing. Personnel onboarding and training. Acceptance tests.
ICS support	Performing work following warranty obligations. Post-warranty service.

The contract and the Terms of Reference for TR ICS creation also define the milestones of work stages, which are performed by participating organizations.

Depending on the specifics of the TR ICS being created and its conditions, certain work stages are allowed before the completion of previous milestones and in parallel.

The content of the work on creating TR ICS must comply with the following requirements.

4.2.1. DEVELOPING THE TERMS OF REFERENCE FOR TR ICS CREATION.

Drafting ToR for the TR ICS creation involves completing the preliminary stages of the following works:

- inspecting the object where the TR ICS is to be created.
- drafting user requirements for TR ICS.

After that, the concept of TR ICS architecture is developed, and ToR for creating it is developed, executed, coordinated, and approved.

The requirements for executing ToR for TR ICS creation are defined in para. 5.1.2 of Section 5 hereof.

After approving ToR for TR ICS creation, the Service Provider shall provide the Recipient with equipment specifications and the estimated equipment cost required for ICS deployment. After the Recipient's approval, the specification is used for procurement procedures for the equipment necessary for TR ICS deployment.

Also, after approving the ToR for TR ICS creation, works must begin on the ToR for TR SPZD SW drafting under para. 4.3.

4.2.2. DEVELOPING A WORKING DRAFT FOR THE TR ICS.

The development of a working draft involves several stages:

- Developing design solutions for TR ICS and its components;
- Developing documentation for TR ICS and its components;

At the "Development of design solutions for TR ICS and its components" stage, general solutions are developed for the system and its components, functional and control structure of the system, personnel and organizational structure, structure of technical means, task solution algorithms, organization and maintenance of the information base, information classification and coding system, and software.

At the "Development of documentation for TR ICS and its components" stage, the documentation is developed, executed, approved, and adopted to the extent necessary to describe the full range of decisions made and sufficient for further work on creating TR ICS.

The types and requirements for executing working draft documents are defined in para. 5.2.2 of Section 5 hereof.

4.2.3. TR ICS DEPLOYMENT.

TR ICS deployment involves several work stages:

- developing TR SPZD SW;
- preparing the automation object for ICS commissioning;
- start-up works;
- personnel onboarding and training.

At the "TR SPZD SW development" stage, the software is developed under para. 4.1.

At the "Preparing the automation object for ICS commissioning" stage, works are carried out to prepare the automation object for TR ICS commissioning, including:

- implementing design decisions on TR ICS organizational structure;

- providing management object units with instructional and methodological materials;
- implementing information classifiers.

At the “Start-up works” stage, the following works are performed:

- autonomous adjustment of technical and software means;
- uploading information into the database and testing the database maintenance system;
- comprehensive adjustment of all system tools.

At the “Personnel onboarding and training” stage, the personnel are trained and tested against their ability to ensure the TR ICS operation.

4.2.4. TR ICS’S PRELIMINARY AND BETA TESTING.

At the “Preliminary testing” stage, the following works are performed:

- testing TR ICS for operability and compliance with the ToR for TR ICS based on the program and methodology of preliminary testing;
- troubleshooting and amendments to the TR ICS documentation, including operational documents based on the testing report;
- executing an acceptance certificate for TR ICS for beta testing.

The scope and methods of testing are defined in para. 6.3 hereof.

At the “Beta testing” stage, the following works are performed:

- TR ICS beta testing;
- analysis of the results of TR ICS beta testing;
- TR SPZD SW finalization (if required);
- additional adjustment (if required) of TR ICS technical means;
- execution of the beta testing completion certificate.

4.2.5. DEVELOPING OPERATIONAL DOCUMENTATION FOR THE TR ICS.

At the “Developing working documentation for ICS and its components” stage, working documentation containing all necessary and sufficient information is developed to ensure the performance of works on commissioning and operation of the TR ICS and to maintain the level of system characteristics (quality) in accordance with design decisions, their execution, approval, and adoption.

Types of TR ICS operational documents and requirements for their execution are listed in para. 5.3.2 hereof.

4.2.6. TR ICS ACCEPTANCE TESTING.

At the “Acceptance testing” stage, the following works are performed:

- testing compliance of ToR for TR ICS based on the acceptance testing program and methodology;
- TR SPZD SW acceptance testing;
- analyzing test results of TR ICS and TR SPZD SW and eliminating deficiencies identified during testing;
- executing a certificate for TR ICS’s acceptance for full operation.

The scope and methods of testing are defined in para. 6.3 hereof.

At the “Performance of works following warranty obligations” stage, works are carried out to eliminate deficiencies identified during the operation of TR ICS during warranty periods and to make necessary changes to the documentation on TR ICS. This stage is described in detail in para. 6.4 of Section 6 hereof.

At the “Post-warranty service” stage, works are performed on the following:

- analysis of system operation;
- identifying deviations of the actual operational characteristics of TR ICS from design values;
- establishing causes of such deviations;
- eliminating identified deficiencies and ensuring the stability of TR ICS operational characteristics;
- making necessary changes to TR ICS documentation.

This stage is described in detail in para. 6.5 of Section 6 hereof.

4.3. CREATING AND IMPLEMENTING A COMPREHENSIVE INFORMATION SECURITY SYSTEM OF THE ICS

CISS TR ICS shall be created based on milestones and stages stipulated in ND TZI 3.7-003-05 "Procedure for creating a comprehensive information security system within an information and communication system." Once created, the CISS shall undergo the State Examination in the Field of Technical Protection of Information under the Order of the Administration of the State Service for Special Communications and Information Protection No. 93 dated May 16, 2007, "On Approving the Regulation on State Examination in the Field of Technical Protection of Information (as amended)," registered with the Ministry of Justice of Ukraine under No. 820/14087 on July 16, 2007.

Types of documents for developing a CISS in the TR ICS and requirements for their execution are provided in the regulatory documents on technical information protection.

4.4. REQUIREMENTS FOR ELECTRONIC INFORMATION INTERACTION WITH OTHER IT SYSTEMS

Detailed requirements for electronic information interaction with other IT systems shall be determined at the stage of TR SPZD SW development and the terms of reference for TR ICS, which shall include the following information:

- a complete list of IT systems with which the TR SPZD SW/TR ICS will interact electronically;
- grounds for electronic information interaction with other IT systems;
- a list of resources (input and output data) to be used in the electronic information interaction of the TR SPZD SW/TR ICS with other IT systems;
- TR SPZD SW/TR ICS interfaces and components to implement electronic information interaction with other IT systems.

4.5. SOFTWARE RELIABILITY AND DATA INTEGRITY REQUIREMENTS

TR SPZD SW shall function seamlessly despite any possible errors (defects) that may occur during operation. Identified errors (defects) shall be corrected during preliminary testing, beta testing, and full (commercial) operation of TR SPZD SW.

TR SPZD SW must interact with other programs and software tools and not disrupt their operation.

Failure of the TR SPZD SW shall not cause data corruption in the database.

The reliability measures of TR SPZD SW are the following:

- recovery of TR SPZD SW performance after a power outage that did not lead to failures of the database and TR SPZD SW settings — no more than 30 minutes after the power supply is restored;
- TR SPZD SW recovery from an archive (backup) copy — no more than 8 hours.

Information integrity may be ensured through compliance with the following requirements:

- operating conditions of TR SPZD SW and its components, specified in the TR SPZD SW developer's operational documentation;
- backup procedure (key data, reference copy, etc.) of the TR SPZD SW and the procedure for restoring from backups.

4.6. REQUIREMENTS FOR INFORMATION EXCHANGE BETWEEN SYSTEM COMPONENTS

Information exchange between system components shall be defined by the Service Provider in the relevant terms of reference for creating TR SPZD SW, TR ICS and CISS within TR ICS, indicating the list of system components, information resources and flows (input and output data), and the procedure for implementing such exchange.

4.7. REQUIREMENTS FOR SYSTEM OPERATION MODES

TR SPZD SW must enable continuous 24/7 operation (twenty-four hours a day, seven days a week).

TR SPZD SW may have the following functioning modes:

- operating mode;
- scheduled maintenance mode;
- emergency mode.

The operating mode is the main functioning mode of TR SPZD SW.

TR SPZD SW's scheduled maintenance mode is intended for performing necessary preventive measures for TR SPZD SW maintenance.

During scheduled maintenance, backup copies of the TR SPZD SW databases and settings are made, and software versions are updated.

The scheduled maintenance mode of the TR SPZD SW is enabled during the lowest load on the TR SPZD SW by users and may envisage disabling the TR SPZD SW;

TR SPZD SW's emergency mode is characterized by the failure of one or more TR SPZD SW modules. If signs indicating possible switching of the TR SPZD SW to the emergency mode are identified, the TR SPZD SW maintenance personnel shall take the necessary measures to:

- routinely shut down software modules of the TR SPZD SW, which presupposes data saving;
- back up data;
- inform TR SPZD SW users about the need for an urgent, routine shutdown of the TR SPZD SW;
- disable access to the TR SPZD SW, if necessary;
- eliminate causes that led to the TR SPZD SW's emergency mode and restore its operability.

4.8. REQUIREMENTS FOR SYSTEM LOGIN

Events in the TR SPZD SW shall be logged using a database to collect and store information on TR SPZD SW events to display the actions of AWS users and administrators via the TR SPZD SW web interface for users with administrative rights in the TR SPZD SW.

Event logs shall record the following events in the TR SPZD SW:

- editing (deleting and exporting) information in the TR SPZD SW;
- creating information in the TR SPZD SW;
- changing information in the TR SPZD SW.

The registration of events of TR ICS components shall be ensured within the TR ICS.

A note about each of these events shall have mandatory details that enable:

- identifying the user/administrator (process) that performed the action;
- identifying the object (list of objects) for which the action was performed;
- determining and recording date and time when the action was performed;
- identifying a workstation where the action was performed (IP of the user's and/or administrator's AWS and the server);
- determining the content of the user's/administrator's action (process) and its success or failure.

The specific list and content of entry details in the event audit (registration) log, including the name, entry format, and type of entry display, shall be specified in the software documentation of the TR SPZD SW and the documentation of the technological design of the TR ICS and the CISS TR ICS.

The information contained in the log shall be sufficient to unambiguously identify the user/administrator, process and/or object involved in each recorded event.

The system of visual display of registered events shall provide:

- the ability to analyze information recorded in the audit log (search for events by details, highlight key events, filter and sort the audit log by several detail types);
- the ability to generate reports based on the results of analyzing the user's work from the database and to print and save them to a file.

A full list of events to be recorded shall be specified separately in the software documentation for TR SPZD SW and at the stage of the technical design of TR ICS and CISS in the TR ICS.

4.9. REQUIREMENTS FOR LANGUAGE SUPPORT

TR SPZD SW's interface shall be displayed in Ukrainian and English.

4.10. REQUIREMENTS FOR THE APPLIED SOFTWARE

In addition to the system software, the following applied software tools shall be used in the TR ICS:

- database management systems;
- web browsers;
- event monitoring and logging;
- backup;
- information protection;
- qualified electronic signature;
- and others.

The respective terms of reference for creating the TR SPZD SW, TR ICS, and CISS in TR ICS shall define detailed requirements for the applied software, indicating names, features, and components of applied software and the minimum system requirements and technical specifications.

4.11. REQUIREMENTS FOR NAVIGATING ACROSS TR SPZD SW.

The TR SPZD SW's user interfaces shall implement the intended features for each user group.

The TR SPZD SW's interface shall be clear and convenient, not overloaded with graphic elements, and ensure a prompt display of screen forms based on the design approved by the NACP.

Navigation elements shall be user-friendly.

The TR SPZD SW's user interface shall enable the reversibility of user actions and require confirmation of potentially destructive user actions to modify and restore data.

The user interface shall provide the means of obtaining reference data on TR SPZD SW's capabilities, i.e., the ability to receive context-sensitive on-screen tips concerning the performance of actions, functions, etc.

Data input/output, control command receipt/acceptance, and execution result display shall all take place in the interactive/dialog mode.

The TR SPZD SW's interface must mostly require using a mouse, i.e., it should be controlled using a set of on-screen menus, buttons, icons, and other visual elements.

On-screen forms shall be designed considering standardization requirements. The user interface's on-screen forms must be created in a single graphic design, with the main controls and navigation elements found in the

same location. Similar graphic icons, buttons, and other elements must be used to indicate similar operations. Unified terms must be used to describe typical operations and the order of user actions. External behavior of similar interface elements (response to hovering a mouse, focus switching, button pressing) must be implemented identically for the same type of elements.

The interface under creation must meet contemporary ergonomic requirements and ensure convenient access to the main TR SPZD SW features and operations.

5. REQUIREMENTS FOR DOCUMENTATION

The requirements for documentation can be specified in the ToR for creating the TR SPZD SW, TR ICS and CISS TR ICS.

5.1. REQUIREMENTS FOR THE TERMS OF REFERENCE

5.1.1. REQUIREMENTS FOR THE TERMS OF REFERENCE FOR TR SPZD SW DEVELOPMENT

The terms of reference for TR SPZD SW development must include the following sections:

- Introduction;
- Grounds for development;
- Purpose of development;
- Requirements for specialized software;
- Requirements for software documentation;
- Development milestones and stages;
- Quality Assurance and Acceptance Procedure;

The content of sections must comply with the following requirements.

The Introduction must contain a name, a brief description of the scope of the specialized software, and the object where it is used.

The “Grounds for development” section shall specify the following:

- document(s) based on which the software is being developed;
- organization that approved this document and the date of its approval;
- name and/or a conventional symbol of the development topic.

The “Purpose of Development” section shall specify the functional and operational purpose of the specialized software.

The “Requirements for Specialized Software” section shall contain the following subsections:

- requirements for functional characteristics;
- reliability requirements;
- requirements for the composition and parameters of technical means;
- requirements for information and software compatibility;
- special requirements.

The “Requirements for Functional Characteristics” subsection must specify the requirements for the composition of functions performed, the organization of input and output data, time characteristics, etc.

The “Reliability Requirements” subsection must specify the requirements for ensuring reliable operation (ensuring stable functioning, control over input and output data, recovery time after failures, etc.)

The “Requirements for the Composition and Parameters of Technical Means” subsection specifies the required composition of technical means, including their main technical specifications. Procuring technical equipment goes beyond the scope of service delivery hereunder and is a matter of a separate contract.

The “Requirements for Information and Software Compatibility” subsection must specify the requirements for input and output information structures and solution methods, exchange file formats, source codes, programming languages and software tools used by the software.

Additionally, the requirements for ensuring the protection (confidentiality, integrity, availability and controllability) of information and software must be specified.

The “Requirements to the Software Documentation” must specify the preliminary composition of software documentation (under paras. 5.2.1 and 5.3.1 hereof) and, if necessary, special requirements.

The “Development Milestones and Stages” section (under para. 4.1 hereof) must indicate development milestones, stages and content of works (list of software documents to be developed, approved, and adopted based on paras. 5.2.1 and 5.3.1 hereof).

The “Quality Assurance and Acceptance Procedure” section must specify types of testing and general requirements for work acceptance (under paras. 4.1.4 and 4.1.6 and Section 6 hereof).

5.1.2. REQUIREMENTS FOR DRAFTING TERMS OF REFERENCE FOR TR ICS CREATION

The ToR for TR ICS development is the main document that defines the requirements and procedure for TR ICS development, based on which the TR ICS is developed and accepted for implementation.

The ToR for TR ICS shall contain the following sections, which may be divided into subsections:

- Background Information;
- Purpose and Objectives of TR ICS Creation;
- Characteristics of the Automation Object;
- Requirements for TR ICS;
- Composition and Content of Works on TR ICS Creation;
- Quality Assurance and Acceptance Procedure;
- Requirements for the Composition and Content of Works on Preparing the Automation Object for System Commissioning;
- Requirements for Documentation.

The “Background Information” section includes:

- full and short name of the ICS;
- subject code or contract code (number);
- name of the organization of the Service Provider and the TR ICS Recipient and their bank details;
- a list of documents based on which the system is being created, including when and who approved these documents;
- information on the sources and procedure for financing works;
- procedure for registration and submission to the Recipient of results of work on system creation (its components), the production and configuration of certain means (technical, software, information) and software and hardware (software and methodology) modules of the system.

The “Purpose and Objectives of ICS Creation” section must consist of the following subsections:

- system purpose;
- objective of system creation.

The “System Purpose” subsection must indicate a type of activity to be automated (management, design, etc.) and a list of automation objects where it is intended to be used.

The “Objective of System Creation” subsection must specify the name and required values of technical, technological, production, economic, or other indicators of the automation object to be achieved by creating the TR ICS and the criteria for assessing the achievement of system creation goals.

The “Characteristics of the Automation Object” section must contain the following data:

- brief information on the automation object or references to documents containing such information;
- information on the operating conditions of the automation object and environmental characteristics.

The “Requirements for TR ICS” section must consist of the following subsections:

- requirements for the entire system;
- requirements for functions (tasks) performed by the system;
- requirements to types of support.

Each subsection contains references to applicable regulatory and technical documents defining system requirements.

The “Requirements for the Entire System” subsection must specify the following:

- requirements for the structure and functioning of the system;
- requirements for the number and qualifications of the system personnel and their mode of operation;
- purpose indicators;
- reliability requirements;
- safety requirements;
- requirements for protecting information from unauthorized access;
- requirements for information retention in case of accidents;
- requirements for patent clearance;
- requirements for standardization and unification;
- additional requirements.

The “Requirements for Functions (Tasks) Performed by the System” subsection must specify:

- for each subsystem, a list of functions, tasks or their sets (including those ensuring the interaction between parts of the system) to be automated;
- schedule for the implementation of each function or task (or set of tasks);
- requirements for the quality of the implementation of each function (task or set of tasks), the form of input information presentation, characteristics of the required accuracy and execution time, requirements for simultaneous execution of a group of functions, and reliability of output;
- failure list and criteria for each function for which reliability requirements are set.

The “Composition and Content of Works on TR ICS Creation” section must contain a list of milestones and work stages of system creation (under para. 4.2hereof), deadlines, a list of performing organizations, links to documents confirming the consent of these organizations to participation in system creation, or and entry designating a person in charge (Service Provider or Recipient) for these works.

The following information must also be specified in this section:

- list of documents to be submitted upon completion of relevant milestones and stages;
- type and procedure for technical documentation acceptance (stage, phase, scope of documentation, etc.);

The “System Control and Acceptance Procedure” section must do the following:

- types, composition, scope and testing methods of the system and its components (types of tests under the applicable legislation relevant to the system under development), in accordance with paras. 4.2.4, 4.2.6 and 6.3 hereof;
- general requirements for work acceptance by milestones (list of enterprises and organizations participating in the acceptance of works, place and time of conduct), procedure for approving and adopting acceptance documentation, under Section 6 hereof;

The “Requirements for the Composition and Content of Works on Preparing the Automation Object for System Commissioning” section must specify the list of main activities and their performers to be undertaken when preparing the automation object for commissioning the TR ICS.

The “Requirements for Documentation” section must contain a list of documents (paras. 5.2.2, 5.3.2, and 6.3) to be developed and approved by the Service Provider and the Recipient.

The “Sources of Development” section must list documents and information materials (feasibility study, reports on completed research works, other information materials) based on which the ToR for TR ICS was developed and which must be used to create the respective system.

5.1.3. REQUIREMENTS FOR EXECUTING TERMS OF REFERENCE FOR CREATING CISS TR ICS

The ToR for creating CISS TR ICS is a fundamental organizational and technical document that governs work performance to ensure information security within the system.

Execution of the ToR for CISS TR ICS, its content, and the procedure for approval and adoption must comply with ND TZI 3.7-001-99 “Methodical instructions regarding the development of technical specifications for creating a comprehensive information security system within the automated system.”

5.2. REQUIREMENTS FOR PROJECT DOCUMENTATION DRAFTING

5.2.1. REQUIREMENTS FOR TR SPZD SW PROJECT DOCUMENTATION DRAFTING

The following documents must be created during the development of project documentation for TR SPZD SW:

- Specifications;
- Software Text (Digital);
- Software Description;
- Explanatory Note.

Specifications must contain information on the composition and software documentation for TR SPZD SW. The document must contain the following sections:

- Documentation;
- Sets;
- Components.

Each section of the document must be compiled as a table with the following list of column headings: “Designation,” “Name,” and “Note.”

Specification columns must be completed as follows:

- in the “Designation” column:
  - for the “Documentation” section — designation (type/code) of software documents;
  - for the “Sets” section — designation of set specifications, which are part of the set;
  - for the “Components” section — designation of the main software documents of components.
- in the “Name” column:
- for the “Documentation” section — the name and type of the software document for documents concerning the relevant software; full name of the software, name and type of document for borrowed documents;
- for the “Sets” and “Components” sections — full name of the software, name and type of document.

In the “Note” column, additional information related to software specified in the specifications must be listed. The “Software Text” document must contain a software recording with the necessary digital comments (in a separate file(s) with the software recording in the programming language).

The “Program Description” document must contain information on the logical structure and functioning of TR SPZD SW. The document must contain the following sections:

- Background Information;
- Functional Purpose;
- Logical Structure Description;
- Technical Means Used;

- Calling and Downloading;
- Input Data;
- Output Data;
- Appendices (if needed).

The “Background Information” section must contain the designation and name of the specialized software, a list of software required for software operation, and the programming languages used.

The “Functional Purpose” section must contain a list of automated business logic features.

The “Logical Structure Description” section must describe software algorithms according to a certain list of automated features, methods used, software structure with a description of its components’ features and links between them, and the software’s links with other software.

The “Technical Means Used” section must list AWSs, servers and other technical means needed for TR SPZD SW operation.

The “Calling and Downloading” section must contain information on saving download and configuration files, the order of actions to call and download TR SPZD SW using different means (methods), install, configure and run features for administrators and users of TR SPZD SW.

The “Input Data” and “Output Data” sections must contain a complete list of relevant data, key details, values, and presentation form.

In the “Appendices” section, extended information from any section of the relevant document may be indicated, as needed.

The “Explanatory Note” document must consist of the following sections:

- Introduction;
- Purpose and Scope;
- Technical Specifications;
- Sources Used.

The Introduction must contain general information about the TR SPZD SW.

The “Purpose and Scope” section must contain the following subsections:

- The purpose of the specialized software defining the specific purpose of the TR SPZD SW;
- The scope of specialized software, where the scope of TR SPZD SW application is determined.

The “Technical Specifications” section must contain the following information:

- Setting the task for TR SPZD SW development (including the justification of technical and feasibility decisions concerning SPZD SW);
- Description of the methods used;
- Description of permissible restrictions associated with selected methods;
- Description of the algorithm and functioning of TR SPZD SW (including the algorithm scheme and description of modules; databases; mechanisms of protection, identification, authentication and authorization, and backup; integrity, updating, logging, etc.);
- Interaction between the software with other software;
- Description of the method for organizing input and output data;
- Description of the composition of hardware and software used in TR SPZD SW.

The “Sources Used” section must contain a list of regulatory and technical documents whose requirements, recommendations, and definitions were used in the document’s development.

5.2.2. REQUIREMENTS FOR TR ICS PROJECT DOCUMENTATION DRAFTING

Project documentation on creating TR ICS must include the following:

- Technical Design Sheet;

- Explanatory Note to the Technical Design, which must contain the following separate sections:
  - Functional structure diagram;
  - Description of automated features;
  - Disposition plan;
  - Hardware kit structural diagram;
  - Table of connections and links;
  - Functional diagram;
  - Equipment specifications;
- Organization structure description;
- Hardware kit description;
- Software description.

The “Technical Design Sheet” must list all documents developed at the relevant stages of TR ICS creation under paragraph 4.2 hereof. The list of documents must include all documents specified in this paragraph.

The sheet must be filled out by sections — parts of the TR ICS project.

The document must be drafted as a table with the following column headings:

- Line number;
- Document format (hard copy/digital);
- Designation;
- Name;
- Number of sheets;
- Copy number;
- Notes.

The “Line Number” column must indicate the serial number of the line.

The “Document Format” column must indicate the format for each separately developed document.

The “Designation” column must indicate the designation (code) of the ICS technical design documents, as needed.

The “Name” column must indicate the type of documentation and the full name of the document.

The “Number of Sheets” and “Copy Number” columns must indicate the number of sheets for each separately developed document and the number of the corresponding copy.

The “Notes” column may contain any additional information related to the developed list of TR ICS technical documentation.

The “Explanatory Note to the Technical Design” must contain the following sections:

- General Provisions;
- Operating Process Description;
- Key Technical Solutions;
- Measures To Prepare the Automation Object for System Commissioning.

The “General Provisions” section must contain the following:

- name of the designed TR ICS and names of documents, their numbers and approval dates, based on which the TR ICS is designed;
- list of organizations involved in system development and deadlines for stage completion;
- objectives, purpose and areas of TR ICS use;
- information on the regulatory and technical documents used in the design;
- order of system creation and the scope of each phase.

The “Operating Process Description” section shall reflect the composition of procedures (operations), considering interconnections and compatibility of automated and non-automated operations. It must make up the requirements for work organization during TR ICS operation.

The “Key Technical Solutions” section must include the following:

- decisions on the structure of the system, subsystems, means and methods of communication for information exchange between the components of the system or subsystems:
- solutions for interconnecting TR ICS with adjacent systems, ensuring its compatibility;
- decisions on operating modes and system diagnostics;
- decisions on the number, qualifications and functions of the TR ICS personnel, their operating modes, and the procedure for interactions;
- information on ensuring consumer characteristics of the system (subsystems), which determine its quality, specified in ToR for creating TR ICS;
- composition of functions, task sets (tasks) implemented by the system;
- decisions on a hardware kit and its placement at the object;
- decisions on the composition of information, volume, methods of its organization, types of data media, incoming and outgoing documents and notifications, the order of information processing and other components;
- decisions on the composition of software tools, activity languages, procedure and operation algorithms, and implementation methods.

The “Measures To Prepare the Automation Object for System Commissioning” section must include the following:

- measures to train and test personnel qualifications;
- measures to create necessary units and workstations;
- measures to change the automation object;
- other measures based on the specific features of TR ICS.

The “Functional Structure Diagram” section must contain:

- elements of the ICS functional structure (TR ICS subsystems); automated functions and/or tasks (task sets); a set of actions (operations) performed in the implementation of automated functions using only technical means (automatically) and separately manually (by a person);
- data links between ICS elements and between the ICS and the external environment, a brief description of the content of messages transmitted between elements;
- detailed diagrams of parts of the functional structure (if required).

The “Description of Automated Functions” section must contain the following subsections:

- Output Data;
- Objectives of TR ICS and automated functions;
- Functional structure characteristics;
- Typical solutions (if any).

The “Output Data” section must contain the following information:

- list of documents used in the development of the functional part of the TR ICS project;
- features of the management object that affect design solutions for automated functions;
- data on management systems interconnected with TR ICS under development and data on the information it must exchange with users and other systems;
- description of the object’s information model along with its control system.

The “ICS Objectives and Automated Functions” section must describe automated functions to achieve the established objectives.

The “Functional Structure Characteristics” subsection must contain the following:

- list of TR ICS subsystems indicating the functions and/or tasks implemented in each subsystem;
- description of the process of function performance;
- requirements for the time schedule and characteristics of the process of automated functions implementation (accuracy, reliability, etc.) and task solving.

The “Model Solutions” subsection must contain a list of model solutions indicating the functions, tasks, and sets of tasks for which they are intended.

The “General System Description” document must contain the following sections:

- TR ICS Purpose;
- TR ICS Description;
- Description of TR ICS Interconnections With Other Systems;
- Subsystem Description (as needed).

The “TR ICS Purpose” section must indicate the following:

- type of activity the system is designed to automate;
- list of automation objects where the system is used;
- list of functions implemented by the system.

The “TR ICS Description” section must indicate the following:

- system structure and the purpose of its components;
- information about the TR ICS as a whole and its components necessary to ensure system operation;
- description of the operation of the system and its components.

The “Description of TR ICS Interconnections With Other Systems” section must indicate the following:

- list of systems to which the TR ICS is connected;
- description of links between the systems;
- description of communication regulations;
- description of TR ICS interconnections with units of the automation object.

The “Subsystem Description” section must specify the following:

- the subsystem structure and the purpose of its components;
- information about subsystems and their components necessary to ensure their operation;
- description of the operation of subsystems and their components.

The “Hardware Kit Structural Diagram” section contains the composition of the hardware kit and connections between these technical means or groups of technical means combined based on logical signs (for example, the joint performance of an individual or several functions, the same purpose, etc.)

When executing diagrams, the following must be taken into account:

- indication of key characteristics of technical means;
- presentation of the HWK of TR ICS (if necessary) by several diagrams, the first of which is the enlarged diagram of the HWK of TR ICS as a whole.

The “Table of Connections and Links” section must indicate electrical connections between devices and appliances (mounting products) installed in panels, consoles, installations of modules, telecommunication cabinets, etc., and wiring to the specified technical means.

The “Functional Diagram” section must define the following:

- principle of operation;
- composition, main technical characteristics and interaction of the hardware kit of the TR ICS designed to perform the functions of control, protection, measurement, signaling, power supply, etc.;
- table of symbols used in the diagram that are not provided for by current standards;
- required textual explanations.

The “Disposition Plan” section must define the disposition plan for the hardware that is performed during the development of the technical design. The disposition plan must determine the disposition of control points, and hardware means that require special premises or separate areas for placement.

The “Organization Chart” document must contain the following sections:

- Changes in the Organizational Structure of the Object Management;
- Unit Organization;
- Restructuring of Existing Management Units.

The “Changes in the Organizational Structure of the Object Management” must specify the following:

- design solutions to change the organizational structure of the object’s management and their justification;
- description of changes in the interconnections between units.

The “Unit Organization” section must specify the following:

- description of the organizational structure and functions of units established to ensure TR ICS operation;
- composition of units (officials) of the organization ensuring TR ICS operation or using information received from TR ICS when making decisions;
- key functions and connections between units and individual officials indicated on the diagram and their subordination;
- description of the operating procedures;
- list of employee categories and the number of staff units.

The “Restructuring of Existing Management Units” section must describe changes caused by the creation of TR ICS required in each of the management units in the organizational structure, functions of units, work regulations, and personnel composition of units.

The “Hardware Kit Description” document must contain the following sections:

- General Provisions;
- Hardware Kit Structure;
- Computer Equipment;
- Data Transmission Equipment.

The “General Provisions” section must define output data used in the design of TR ICS hardware.

The “Hardware Kit Structure” section must specify the following:

- justification of the hardware kit (HWK) structure, including technical solutions for data exchange with technical means of other ICSs (if such connections are available), for the use of restricted technical means (based on the list approved following the established procedure);
- description of HWK operation, including in start-up and emergency modes;
- description of HWK positioning at the facility, taking into account safety requirements and compliance with technical conditions for operation of technical means;
- justification for the use and technical requirements for the equipment provided for in the TR ICS;
- justification of methods for protecting technical means from mechanical, thermal, electromagnetic and other influences, protecting data, including from unauthorized access to them, and ensuring the specified data reliability in the process of HWK operation (if necessary);
- results of design assessment of HWK reliability.

The “Computer Equipment” section must include the following:

- justification and description of the main decisions on the choice of user workstations;
- justification and description of the main decisions on the choice of peripheral means, including means of obtaining, controlling, preparing, collecting, registering, storing and displaying information;
- description of the structural diagram of technical means placed in the National Agency's data center and at the personnel workstations;
- calculation results or calculation of the number of technical means and the need for machine data media;

- justification of the number of personnel ensuring the operation of technical means in different modes;
- technical solutions for equipping personnel workstations, including a description of workstations and calculation of areas;
- description of the peculiarities of the functioning of technical means in the scheduled maintenance mode, operating and emergency modes.

The “Data Transmission Equipment” section must specify:

- decisions on the selection of technical means ensuring communication with communication channels, including the results of calculation (or calculation) of the need for them;
- requirements for leased communication channels;
- information on the location of users and the characteristics of transmitted data;
- the main indicators of reliability, accuracy and other technical characteristics of data transmission equipment.

The “Software Description” document must contain an introduction and the following sections:

- Software Structure;
- Software Component Features;
- Methods and Means of Software Development;
- Operating System;
- Tools Extending Operating System’s Capabilities.

The Introduction should specify the basic information about the technical, informational and other types of TR ICS required for software development or links to TR ICS project documents containing the relevant information in full.

The “Software Structure” section must define a list of software components, indicating their interconnections and justification for selecting each component.

The “Software Component Features” section must specify the purpose and description of each software component’s main features.

The “Software Development Methods and Means” section must define a list of programming methods and software development means of TR SPZD SW, indicating software components in the development of which the appropriate methods and means should be used.

The “Operating System” section must specify:

- name, designation and a brief description of the selected operating system and its version required for the software to operate, with justification of the choice and indication of sources containing a detailed description of the selected version;
- name of the guidelines under which the selected operating system should be generated;
- requirements for the generation option of the selected operating system.

The “Tools Extending the Operating System’s Capabilities” section must contain subsections where for each tool that is used and extends the operating system capabilities, the following must be indicated:

- name, designation and a brief description of the tool justifying the need for its use and indicating the source with a detailed description of the selected tool;
- name of guidelines according to which the used tool should be configured for a specific application;
- requirements for setting up the tool.

5.2.3. REQUIREMENTS FOR DRAFTING CISS TR ICS PROJECT DOCUMENTATION

The following documents must be created during the development of project documentation for CISS TR ICS:

- Technical Design Sheet;

- Explanatory Note;
- Hardware Kit Description;
- Software Description;
- Organizational Structure Description.

The requirements for drafting documents are similar to para. 5.2.2 of this section, but the description must be compiled in view of the development of CISS TR ICS. In addition, the requirements for the content and execution of CISS TR ICS documents are stipulated in ND TZI 2.6-001-11 “Procedure for the state examination of technical means of information protection against unauthorized access and comprehensive information security systems in information and communication systems.”

5.3. REQUIREMENTS FOR OPERATIONAL DOCUMENTATION

5.3.1. REQUIREMENTS FOR DRAFTING TR SPZD SW’S OPERATIONAL DOCUMENTATION

Operational documents of TR SPZD SW must contain information to ensure software functioning and operation.

The following documents must be created during the development of the operational documentation for TR SPZD SW:

- List of operational documents;
- Sheet;
- Application description;
- Guidelines on TR SPZD SW deployment;
- System administrator’s guide;
- Administrator’s Guide (a separate document for each designated administrative role);
- User Manual (a separate document for each designated user role).

The “List of Operational Documentation” must contain information on the composition of TR SPZD SW’s operational documentation and the following sections:

- Software Documents;
- Software Component Documents.

Each section of the document must be compiled as a table with the following list of column headings: “Designation,” “Name,” “Number of Copies,” and “Note.”

Specification columns must be completed as follows:

- in the “Designation” column:
  - for the “Software Documents” section — designation (type/code) of software documents;
  - for the “Software Component Documents” section — designation of key documents for components/sets.
- in the “Name” column:
  - for the “Software Documents” section — the name and type of operational document for documents on the relevant software; full name of the software, name and type of the document for borrowed documents;
  - for the “Software Component Documents” section — the full name of the software, the name and type of document for the borrowed documents;
- In the “Note” column, additional information related to software specified in the specifications must be listed.

The “Sheet” document must contain the following sections:

- General Guidelines;
- Background Information;
- Main Characteristics;
- Completeness;

- Acceptance Certificate
- Warranty Obligations;
- Information On Complaints;
- Information On Storage;
- Information On Changes;
- Special Notes.

The “General Guidelines” section must contain information on the required operational documents during the operation of TR SPZD SW, unit(s) and person(s) responsible for TR SPZD SW operation, regulatory and technical documents that are taken into account in the developed operational documentation.

The “Background Information” section must contain the relevant information in the following subsections:

- name of the software;
- designation of the software;
- name and details of the developing enterprise;
- number of the enterprise’s software;
- background information on the software;
- general technical information on the software.

The “Main Characteristics” section must contain information on load characteristics, frequency of TR SPZD SW version updates and computer equipment upgrades, minimum system and technical characteristics, reliability indicators and other general indicators of TR SPZD SW functioning.

The “Completeness” section must specify the relevant information according to the table:

Designation	Name	Number	Serial tracking number	Note

The “Acceptance Certificate” section must contain information on the TR SPZD SW’s name, designation, compliance with the technical requirements and the terms of reference (details of the technical requirements and the terms of reference), recognition of the TR SPZD SW as suitable for operation, the date of commissioning, and signatures persons responsible for acceptance.

The “Warranty Obligations” section must contain a complete list of works related to warranty and post-warranty obligations and the relevant terms for such works.

The “Information On Changes” section must contain the relevant information in the following format: Grounds (reference number of the accompanying document and date)	Date of change	Content of change	Serial number of change	Position, last name and signature of the person responsible for the change	Signature of the person responsible for software operation

The “Special Notes” section must contain several blank sheets for special notes to be entered during the software operation.

The “Application Description” document (including the “Guidelines on TR SPZD SW Deployment” document) must contain information on the purpose of TR SPZD SW, the scope of its application, methods used, class of task resolution, restrictions for application, minimum configurations of technical means.

Separately, the “Guidelines on TR SPZD SW Deployment” document must describe organizational and technical measures aimed at carrying out sequential actions to organize and perform the configuration and commissioning of TR SPZD SW.

The “System Administrator’s Guide” document must contain information for verification, ensuring the functioning and configuration of TR SPZD SW on the terms of its specific application, following the established access control rules.

The “Administrator’s Guide” document must contain information on the conditions of software execution and direct software operation (list of features and the order of actions during their execution) for the administrator roles defined in the TR SPZD SW, following the established access control rules. A separate document must be drafted for each separately designated administrative role of TR SPZD SW.

The “User Manual” document must contain information on ensuring the procedure for the operator’s interaction with the computer system during software execution, as well as conditions for software execution and direct software operation (list of features and order of actions during their execution) for user roles defined in TR SPZD SW, following the established access control rules. A separate document must be executed for each designated user role of the TR SPZD SW.

5.3.2. REQUIREMENTS FOR DRAFTING TR ICS OPERATIONAL DOCUMENTATION

The following documents must be included in the working and operational documentation for the TR ICS creation:

- Operational Documentation Sheet;
- User Manual (guidelines/instructions);
- Administrator’s Guide;
- Guidelines on TR ICS Deployment;
- Hardware Kit (HWK) Operator’s Manual;
- Passport Sheet.

The “List of Operational Documentation” document contains a list of operational documents per ToR for creating TR ICS.

The list must be compiled by sections — parts of the ICS project and similarly to the “Technical Design Sheet” under para. 5.2.2 hereof.

The “User Manual” must contain the following sections:

- Introduction;
- Purpose and Terms of Use;
- Preparing for Operation;
- Operation Description;
- Emergencies;

The Introduction must contain the following information:

- scope of use;
- brief description of capabilities;
- level of user training;
- a list of operational documentation that the user is expected to know.

The “Purpose and Terms of Use” section must specify the following:

- types of activities, functions intended for automation, and the automation tool;

- conditions, subject to which the automation tool is used according to its purpose (for example, the configuration of technical means, operating environment and system-wide software tools, input information, storage media, requirements for specialist training, etc.).

The “Preparing for Operation” section must include the following:

- composition and content of the distribution media;
- the procedure for downloading data and software;
- procedure for testing operability.

In the “Operation Description” section, the following must be indicated:

- description of all functions, tasks, sets of tasks, and procedures;
- description of data processing technological process operations required to perform functions, sets of tasks (tasks), and procedures.

For each data processing operation, the following must be determined:

- name;
- conditions under which the operation can be performed;
- preparatory activities;
- key actions in the prescribed order;
- final actions;
- resources spent on the operation.

It is allowed to refer to prompt files stored on magnetic media in the description of actions.

The “Emergencies” section must specify the following:

- actions in case of non-compliance with conditions of the technological process, including in case of prolonged failures of technical means;
- actions to recover software and/or data in case of magnetic media failure or data errors;
- actions in case of unauthorized data interference;
- actions in other emergencies.

A separate document must be executed for each designated user role in the TR ICS.

The “Administrator’s Guide” must be compiled similarly to the “User Manual.” A separate document must be drafted for each designated administrative role in the TR ICS.

The following sections must be included in the “HWK Operator’s Manual”:

- General Guidelines;
- Security Measures;
- Work Order;
- Checking Correct Operation;
- Instructions for Actions in Different Modes.

The “General Guidelines” section must include the following:

- type of equipment for which the manual is written;
- name of TR ICS features implemented on the relevant equipment;
- work regulations and operating modes of equipment for feature deployment;
- a list of operational documents to additionally guide personnel in the operation of the relevant equipment.

The “Safety Measures” section must list safety rules to be followed when preparing the equipment for operation and during its operation.

The “Work Order” section must specify the following:

- composition and qualifications of personnel authorized to operate the equipment;

- procedure for testing the knowledge of personnel and their admission to work;
- work description and the order of their performance.

The “Checking Correct Operation” section must contain the content and brief methods of basic tests to check equipment operability and system features.

The “Instructions for Actions in Different Modes” section must list personnel’s actions in operating, emergency, and scheduled maintenance modes.

The “Passport Sheet” must contain the following sections:

- Background Information on TR ICS;
- Main Characteristics of TR ICS;
- Completeness;
- Acceptance Certificate;
- Developer’s (Supplier’s) Warranties;
- Information on TR ICS Status.

The “Background Information on ICS” section must specify the name of TR ICS, its designation provided by the developer, the name of the supplier (developer), the date of TR ICS commissioning, general instructions to the personnel concerning the operation of TR ICS, requirements for maintaining the sheet and its storage, including a list of technical documentation that the personnel should review.

The “Main Characteristics of TR ICS” section must provide the following information:

- information on the composition of features deployed in TR ICS, including measuring and control features;
- quantitative and qualitative characteristics of TR ICS and its components;
- description of TR ICS operation;
- TR ICS general regulations and modes of operation and information on the possibility of changing its operation modes;
- information on the compatibility (interaction) of TR ICS with other systems.

The “Completeness” section must specify all modules of technical and software means and specific tools, including data media and operational documents, that are incorporated into the TR ICS.

The “Acceptance Certificate” section must contain the date of signing the certificate(s) of accepting TR ICS and its components into commercial operation and the last names of persons who signed the certificate, as well as the last names of commission chairs who accepted the TR ICS.

The “Developer’s (Supplier’s) Warranties” section must specify warranty periods for TR ICS as a whole and its individual components if these terms do not coincide with the warranty terms of the TR ICS as a whole, and contain a list of technical means of TR ICS with warranty lifetimes shorter than warranty lifetimes for the system.

The “Information on TR ICS Status” section must specify the following:

- information on malfunctions, including the date, time, nature, cause, and persons who eliminated the malfunction;
- comments concerning the operation and emergencies, measures taken;
- information on the repair of technical means and changes in the software, indicating the grounds, date and content of the change;
- information on the performance of scheduled (preventive) maintenance and its results.

5.3.3. REQUIREMENTS FOR DRAFTING CISS TR ICS OPERATIONAL DOCUMENTATION

Operational documentation includes a description of the CISS operation procedure and guidelines (instructions) for ensuring this procedure by maintenance personnel and users, and the procedure for maintaining the CISS during TR ICS’s life cycle.

The following documents must be created when developing the operational documentation for the CISS:

- Operational Documentation Sheet;
- Information Security Plan, which includes a Threat Model and an Intruder Model, as well as a Security Policy;
- Procedure Specification;
- User Manual (guidelines/instructions);
- Administrator's Guide;
- Regulations on the Information Security Service;
- Guidelines for Modernization and Upgrading TR ICS Components;
- Guidelines for Information Anti-Virus Protection;
- Guidelines for Prompt Recovery of TR ICS Component Functioning;
- Passport Sheet.

The requirements for drafting documents are similar to para. 5.3.2 of this section, but the description must be compiled in view of CISS TR ICS development. In addition, the requirements for the content and execution of certain CISS documents are stipulated in ND TZI 3.7-003-05 "Procedure for creating a comprehensive information security system in an information and communication system," ND TZI 1.4-001-2000 "Model regulation on the information security service in an automated system," and ND TZI 2.6-001-11 "Procedure for the state examination of technical means of information protection against unauthorized access and comprehensive information security systems in information and communication systems."

6. SERVICE ACCEPTANCE PROCEDURE

The Service Acceptance Procedure can be specified in the ToR for creating TR SPZD SW, TR ICS, and CISS TR ICS.

Service Acceptance Procedure stipulates the following:

- drawing up a completion certificate(s);
- adopting order(s) on the start of beta testing by the Recipient;
- drawing up acceptance certificate(s) for beta testing and start of testing;
- adopting order(s) on the establishment and composition of the acceptance board by the Recipient;
- TR SPZD SW testing, preliminary testing of TR ICS and CISS TR ICS, acceptance testing of TR SPZD SW, TR ICS, state examination of CISS TR ICS in the field of technical information security with the participation of the Service Provider and the Recipient;
- transferring all materials on TR SPZD SW, TR ICS and CISS TR ICS to the Recipient;
- providing a service transfer and acceptance certificate and proprietary rights to intellectual property for signing by the Service Provider and the Recipient;
- specifying information in the relevant passport sheets of TR SPZD SW, TR ICS, and CISS TR ICS concerning respective acceptance testing and in each acceptance certificate of relevant services for creating and developing TR SPZD SW, TR ICS, and CISS TR ICS by the Recipient;
- conducting a state examination in the field of technical information security and obtaining a Certificate of CISS compliance with the standards on ensuring information protection following the requirements of legal documents on TIS;
- drafting beta testing certificate(s);
- adopting order(s) on beta testing and testing certificate(s) by the Recipient;
- drafting acceptance certificate(s) for commercial commissioning by the Recipient;
- adopting order(s) on commissioning by the Recipient.

The certificate of work completion must contain the following information:

- name of services provided;
- list of representatives of the Service Provider, Recipient and ITA Project Contractor who drafted the certificate;
- date of service completion;
- name of the document(s) based on which services were provided;

- main results of services provided;
- conclusion on the results of services provided.

The beta testing certificate must contain the following information:

- name of the TR ICS (or its component) accepted for beta testing and the corresponding automation object;
- name of the document based on which the TR ICS was developed;
- composition of the acceptance board and grounds for its work (name, number and date of approval of the document based on which the board was established);
- duration of the board's work;
- names of the Service Provider, Recipient and ITA Project Contractor;
- composition of features of the TR ICS (or its components) accepted for beta testing;
- list of hardware, software, information, and organizational components to be tested during beta testing;
- list of documents to be submitted to the board;
- assessment of the TR ICS's compliance with the terms of reference for its creation;
- main results of acceptance for beta testing;
- the board's decision to accept the TR ICS for beta testing.

The final acceptance of works on the creation of TR SPZD SW, TR ICS, and CISS TR ICS by the Recipient is subject to a positive result of preliminary and acceptance testing of the relevant SPZD SW, ICS and CISS ICS.

6.1. REQUIREMENTS FOR SOFTWARE TRANSFER

The software shall be transferred after the acceptance testing and under the acceptance certificate signed by the ITA Program Contractor, the Service Provider, and the Recipient.

The TR SPZD SW shall be transferred on a removable storage medium (CD or USB flash drive) containing the TR SPZD SW boot and configuration files as a shared archive or installation package. The medium must also contain a complete set of documents (including installation instructions) for TR SPZD SW and its source code. The acceptance certificate must contain information about the storage medium on which the TR SPZD SW is stored, a complete list of files (name and extension), and checksums to verify file integrity.

6.2. REQUIREMENTS FOR HARDWARE PREPARATION AND CONFIGURATION

The hardware shall be prepared and configured by the relevant specialists of the developers of TR SPZD SW, TR ICS, and CISS TR ICS.

6.3. TESTING SCOPE AND METHODS

The completion certificates, order(s) on beta testing start, acceptance certificates for beta testing, and order(s) on the establishment and composition of the acceptance board must be drawn up prior to the start of testing.

Testing programs and methods must be prepared by respective developers of TR SPZD SW, TR ICS, and CISS TR ICS and agreed upon with the Recipient. The list and content of testing to be included in the testing program and methodology shall include the following:

- system completeness;
- documentation completeness and quality;
- completeness, the sufficiency of the composition, quality of software tools and software documentation;
- number and qualifications of maintenance personnel;
- the degree to which the requirements of the system's functional purpose are met;
- compliance of the system with the requirements of ToR;

- monitoring the system's suitability for operation;
- system operation with the use of software means.

Test reports shall include the following:

- name of the test object;
- list of officials who conducted testing;
- testing purpose;
- information on the duration of testing;
- list of relevant ToR paragraphs for compliance with which the tests were conducted;
- list of "Testing Program" items used to conduct testing
- information on the results of observations of the proper operation;
- information about failures, malfunctions and emergencies that occur during testing;
- information on adjustments to the parameters of the test object and technical documentation.

The description of the scope and method of testing for creating TR SPZD SW, TR ICS, and CISS TR ICS must be defined in the relevant software and methodology documents for each of the testing types specified in the relevant paragraphs of Section 4 hereof.

The description of the scope and testing methods of CISS TR ICS must comply with ND TZI 2.7-009-09 "Guidelines for evaluating functional security services in information protection means against unauthorized access", and ND TZI 2.7-010-09 "Methodological guidelines for evaluating the level of guarantees of correct implementation of functional security services within information protection means against unauthorized access."

6.4. REQUIREMENTS FOR WARRANTY SUPPORT

Warranty support must presuppose works to eliminate deficiencies identified during the operation of the TR ICS during the warranty period, making the necessary changes to the documentation on TR ICS, training users to manage tools offered by TR SPZD SW, TR ICS and CISS TR ICS, as well as technical support and maintenance of relevant means by developers of the TR SPZD SW, TR ICS and CISS TR ICS.

Training users of TR SPZD SW, TR ICS and CISS TR ICS of all categories (maintenance personnel, ordinary users and users authorized to manage CISS tools, etc.), which must be held on the relevant topic, relevant instructions, main provisions of the Protection Plan documents, which are necessary for them to comply with the rules of operation of TR ICS components, information security policy, operation of information security means, etc., testing their ability to use the implemented information security technologies and registration of training results.

Warranty servicing must be performed within a period of not less than 12 months from the date of acceptance of TR SPZD SW, TR ICS and CISS TR ICS creation services and full (commercial) TR ICS commissioning.

6.5. REQUIREMENTS FOR POST-WARRANTY SERVICING

Post-warranty servicing must presuppose the provision of the following services by the developers:

- analysis of system operation;
- identifying deviations of the actual operational characteristics of TR ICS from design values;
- establishing causes of such deviations;
- eliminating identified deficiencies and ensuring the stability of TR ICS operational characteristics;
- making necessary changes to TR ICS documentation.

Post-warranty servicing must be performed within six months from the date of warranty service completion.

The list of works and terms of post-warranty servicing must be specified in the relevant contractual documents between the developers of TR SPZD SW, TR ICS, and CISS TR ICS and the Recipient.

7. WORK SCHEDULE

Table 7.1 shows a tentative work schedule for creating TR SPZD SW, TR ICS, and CISS TR ICS.

Table 7.1. A tentative work schedule for creating TR SPZD SW, TR ICS, and CISS TR ICS

No.	Milestone tasks	Milestone result	Deadline
1	Development of technical documentation by the Service Provider, namely: 1. Terms of reference for creating specialized software (SPZD SW) TR ICS 2. Terms of reference for creating TR ICS 3. Requirements for TR ICS hardware	Approved by the Recipient: 1. Terms of reference for developing SPZD SW TR ICS; 2. Terms of reference for creating TR ICS; 3. Requirements for TR ICS hardware.	August 30, 2024
2	Development of the SPZD SW TR ICS, design and operational documentation for SPZD SW TR ICS and ICS by the Service Provider. Deploying and configuring TR ICS	A software copy with testing results is developed. A set of design and operational documentation for SPZD SW and ICS is developed based on ToR requirements. TR ICS is deployed and configured	November 26, 2024
3	Creating a comprehensive information security system and conducting state examination	The ToR for creating CISS ICS is developed and approved by the Administration of the State Special Communications Service. A set of design and operational documentation for CISS TR ICS is developed. Certificate of conformity of CISS TR ICS with a positive expert opinion registered with the State Special Communications Service of Ukraine.	December 20, 2024
4	Works on the TR ICS creation are completed	Acceptance testing of the TR ICS is conducted	December 31, 2024

Depending on the specifics of TR SPZD SW, TR ICS, and CISS TR ICS being created and the conditions of their creation, it is allowed to perform certain work stages before completing previous milestones and to perform work stages simultaneously.