

REQUEST FOR PROPOSALS

Development of the Information System "SAISE Admin"

Democracy Programme / Elections Republic of Moldova

United Nations Development Programme February 2016

Section 1. Letter of Invitation

Chisinau, Republic of Moldova

18 February 2016

Ref. no.: RfP16/01184

Subject: Development of the Information System "SAISE Admin"

Dear Sir / Madam:

The United Nations Development Programme (UNDP) hereby invites you to submit a Proposal to this Request for Proposal (RFP) for the above-referenced subject.

This RFP includes the following documents:

Section 1 - This Letter of Invitation

Section 2 – Instructions to Proposers (including Data Sheet)

Section 3 - Terms of Reference

Section 4 - Proposal Submission Form

Section 5 – Documents Establishing the Eligibility and Qualifications of the Proposer

Section 6 - Technical Proposal Form

Section 7 – Financial Proposal Form

Section 8 - Form for Proposal Security - Not required

Section 9 - Form for Performance Security - Not required

Section 10 – Form for Advanced Payment Guarantee – Not required

Section 11 - Contract for Professional Services, including General Terms and Conditions

Your offer, comprising of a Technical and Financial Proposal, in separate sealed envelopes, should be submitted in accordance with Section 2.

You are kindly requested to submit an acknowledgment letter to UNDP to the following address:

United Nations Development Programme in Moldova

131, 31 August 1989 Street, MD-2012 Chisinau, Republic of Moldova

Email: sc.md@undp.org

Attention: Procurement Unit

The letter should be received by UNDP no later than Close of Business, 4 March 2016. The same letter should advise whether your company intends to submit a Proposal. If that is not the case, UNDP would appreciate your indicating the reason, for our records.

If you have received this RFP through a direct invitation by UNDP, transferring this invitation to another firm requires your written notification to UNDP of such transfer and the name of the company to whom the invitation was forwarded.

Should you require further clarifications, kindly communicate with the contact person identified in the attached Data Sheet as the focal point for queries on this RFP.

UNDP looks forward to receiving your Proposal and thanks you in advance for your interest in UNDP procurement opportunities.

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Narine Sanakyan,

Deputy Resident Representative

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Section 2: Instruction to Proposers

Definitions

- a) "Contract" refers to the agreement that will be signed by and between the UNDP and the successful proposer, all the attached documents thereto, including the General Terms and Conditions (GTC) and the Appendices.
- b) "Country" refers to the country indicated in the Data Sheet.
- c) "Data Sheet" refers to such part of the Instructions to Proposers used to reflect conditions of the tendering process that are specific for the requirements of the RFP.
- d) "Day" refers to calendar day.
- e) "Government" refers to the Government of the country that will be receiving the services provided/rendered specified under the Contract.
- f) "Instructions to Proposers" (Section 2 of the RFP) refers to the complete set of documents that provides Proposers with all information needed and procedures to be followed in the course of preparing their Proposals
- g) "LOI" (Section 1 of the RFP) refers to the Letter of Invitation sent by UNDP to Proposers.
- h) "Material Deviation" refers to any contents or characteristics of the proposal that is significantly different from an essential aspect or requirement of the RFP, and: (i) substantially alters the scope and quality of the requirements; (ii) limits the rights of UNDP and/or the obligations of the offeror; and (iii) adversely impacts the fairness and principles of the procurement process, such as those that compromise the competitive position of other offerors.
- "Proposal" refers to the Proposer's response to the Request for Proposal, including the Proposal Submission Form, Technical and Financial Proposal and all other documentation attached thereto as required by the RFP.
- i) "*Proposer"* refers to any legal entity that may submit, or has submitted, a Proposal for the provision of services requested by UNDP through this RFP.
- j) "RFP" refers to the Request for Proposals consisting of instructions and references prepared by UNDP for purposes of selecting the best service provider to perform the services described in the Terms of Reference.
- k) "Services" refers to the entire scope of tasks and deliverables requested by UNDP under the RFP.
- I) "Supplemental Information to the RFP" refers to a written communication issued by UNDP to prospective Proposers containing clarifications, responses to queries received from prospective Proposers, or changes to be made in the RFP, at any time after the release of the RFP but before the deadline for the submission of Proposals.
- m) "Terms of Reference" (TOR) refers to the document included in this RFP as Section 3 which describes the objectives, scope of services, activities, tasks to be performed, respective responsibilities of the proposer, expected results and deliverables and other data pertinent to the performance of the range of duties and services expected of the successful proposer.

A. GENERAL

- 1. UNDP hereby solicits Proposals in response to this Request for Proposal (RFP). Proposers must strictly adhere to all the requirements of this RFP. No changes, substitutions or other alterations to the rules and provisions stipulated in this RFP may be made or assumed unless it is instructed or approved in writing by UNDP in the form of Supplemental Information to the RFP.
- 2. Submission of a Proposal shall be deemed as an acknowledgement by the Proposer that all obligations stipulated by this RFP will be met and, unless specified otherwise, the Proposer has read, understood and agreed to all the instructions in this RFP.
- 3. Any Proposal submitted will be regarded as an offer by the Proposer and does not constitute or imply the acceptance of any Proposal by UNDP. UNDP is under no obligation to award a contract to any Proposer as a result of this RFP.
- 4. UNDP implements a policy of zero tolerance on proscribed practices, including fraud, corruption, collusion, unethical practices, and obstruction. UNDP is committed to preventing, identifying and addressing all acts of fraud and corrupt practices against UNDP as well as third parties involved in UNDP activities.

(See http://www.undp.org/about/transparencydocs/UNDP_Anti_Fraud_Policy_English_FINAL_june_2011.pdf

And http://www.undp.org/content/undp/en/home/operations/procurement/procurement_protest/ for full description of the policies).

- 5. In responding to this RFP, UNDP requires all Proposers to conduct themselves in a professional, objective and impartial manner, and they must at all times hold UNDP's interests paramount. Proposers must strictly avoid conflicts with other assignments or their own interests, and act without consideration for future work. All Proposers found to have a conflict of interest shall be disqualified. Without limitation on the generality of the above, Proposers, and any of their affiliates, shall be considered to have a conflict of interest with one or more parties in this solicitation process, if they:
- Are or have been associated in the past, with a firm or any of its affiliates which have been engaged UNDP to provide services for the preparation of the design, specifications, Terms of Reference, cost analysis/estimation, and other documents to be used for the procurement of the goods and services in this selection process;
- Were involved in the preparation and/or design of the programme/project related to the services requested under this RFP; or
- 5.3 Are found to be in conflict for any other reason, as may be established by, or at the discretion of, UNDP.

In the event of any uncertainty in the interpretation of what is potentially a conflict of interest, proposers must disclose the condition to UNDP and seek UNDP's confirmation on whether or not such conflict exists.

- 6. Similarly, the Proposers must disclose in their proposal their knowledge of the following:
- 6.1 That they are owners, part-owners, officers, directors, controlling shareholders, or they have key personnel who are family of UNDP staff involved in the procurement functions and/or the Government of the country or any Implementing Partner receiving services under this RFP; and
- 6.2 All other circumstances that could potentially lead to actual or perceived conflict of interest, collusion or unfair competition practices.

Failure of such disclosure may result in the rejection of the proposal or proposals affected by the non-disclosure.

- 7. The eligibility of Proposers that are wholly or partly owned by the Government shall be subject to UNDP's further evaluation and review of various factors such as being registered as an independent entity, the extent of Government ownership/share, receipt of subsidies, mandate, access to information in relation to this RFP, and others that may lead to undue advantage against other Proposers, and the eventual rejection of the Proposal.
- **8.** All Proposers must adhere to the UNDP Supplier Code of Conduct, which may be found at this link: http://web.ng.undp.org/procurement/undp-supplier-code-of-conduct.pdf.

B. CONTENTS OF PROPOSAL

9. Sections of Proposal

Proposers are required to complete, sign and submit the following documents:

- 9.1 Proposal Submission Cover Letter Form (see RFP Section 4);
- 9.2 Documents Establishing the Eligibility and Qualifications of the Proposer (see RFP Section 5);
- 9.3 Technical Proposal (see prescribed form in RFP Section 6);
- 9.4 Financial Proposal (see prescribed form in RFP Section 7);
- 9.5 Proposal Security, if applicable (if required and as stated in the **Data Sheet** (DS nos. 9-11), see prescribed Form in RFP Section 8);
- 9.6 Any attachments and/or appendices to the Proposal.

10. Clarification of Proposal

- Proposers may request clarifications of any of the RFP documents no later than the date indicated in the **Data Sheet** (DS no. 16) prior to the proposal submission date. Any request for clarification must be sent in writing via courier or through electronic means to the UNDP address indicated in the **Data Sheet** (DS no. 17). UNDP will respond in writing, transmitted by electronic means and will transmit copies of the response (including an explanation of the query but without identifying the source of inquiry) to all Proposers who have provided confirmation of their intention to submit a Proposal.
- 10.2 UNDP shall endeavor to provide such responses to clarifications in an expeditious manner, but any delay in such

response shall not cause an obligation on the part of UNDP to extend the submission date of the Proposals, unless UNDP deems that such an extension is justified and necessary.

11. Amendment of Proposals

- At any time prior to the deadline of Proposal submission, UNDP may for any reason, such as in response to a clarification requested by a Proposer, modify the RFP in the form of a Supplemental Information to the RFP. All prospective Proposers will be notified in writing of all changes/amendments and additional instructions through Supplemental Information to the RFP and through the method specified in the **Data Sheet** (DS No. 18).
- In order to afford prospective Proposers reasonable time to consider the amendments in preparing their Proposals, UNDP may, at its discretion, extend the deadline for submission of Proposals, if the nature of the amendment to the RFP justifies such an extension.

C. PREPARATION OF PROPOSALS

12. Cost

The Proposer shall bear any and all costs related to the preparation and/or submission of the Proposal, regardless of whether its Proposal was selected or not. UNDP shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the procurement process.

13. Language

The Proposal, as well as any and all related correspondence exchanged by the Proposer and UNDP, shall be written in the language (s) specified in the **Data Sheet** (DS No 4). Any printed literature furnished by the Proposer written in a language other than the language indicated in the **Data Sheet**, must be accompanied by a translation in the preferred language indicated in the **Data Sheet**. For purposes of interpretation of the Proposal, and in the event of discrepancy or inconsistency in meaning, the version translated into the preferred language shall govern. Upon conclusion of a contract, the language of the contract shall govern the relationship between the contractor and UNDP.

14. Proposal Submission Form

The Proposer shall submit the Proposal Submission Form using the form provided in Section 4 of this RFP.

15. Technical Proposal Format and Content

Unless otherwise stated in the Data Sheet (DS no. 28), the Proposer shall structure the Technical Proposal as follows:

- 15.1 Expertise of Firm/Organization this section should provide details regarding management structure of the organization, organizational capability/resources, and experience of organization/firm, the list of projects/contracts (both completed and on-going, both domestic and international) which are related or similar in nature to the requirements of the RFP, and proof of financial stability and adequacy of resources to complete the services required by the RFP (see RFP clause 18 and DS No. 26 for further details). The same shall apply to any other entity participating in the RFP as a Joint Venture or Consortium.
- Proposed Methodology, Approach and Implementation Plan this section should demonstrate the Proposer's response to the Terms of Reference by identifying the specific components proposed, how the requirements shall be addressed, as specified, point by point; providing a detailed description of the essential performance characteristics proposed; identifying the works/portions of the work that will be subcontracted; and demonstrating how the proposed methodology meets or exceeds the specifications, while ensuring appropriateness of the approach to the local conditions and the rest of the project operating environment. This methodology must be laid out in an implementation timetable that is within the duration of the contract as specified in the **Data Sheet** (DS nos. 29 and 30).

Proposers must be fully aware that the products or services that UNDP requires may be transferred, immediately or eventually, by UNDP to the Government partners, or to an entity nominated by the latter, in accordance with UNDP's policies and procedures. All proposers are therefore required to submit the following in their proposals:

- a) A statement of whether any import or export licences are required in respect of the goods to be purchased or services to be rendered, including any restrictions in the country of origin, use or dual use nature of the goods or services, including any disposition to end users; and
- b) Confirmation that the Proposer has obtained license of this nature in the past, and have an expectation of obtaining all the necessary licenses, should their Proposal be rendered the most responsive.
- Management Structure and Key Personnel This section should include the comprehensive curriculum vitae (CVs) of key personnel that will be assigned to support the implementation of the proposed methodology, clearly defining the roles and responsibilities vis-à-vis the proposed methodology. CVs should establish competence and demonstrate

qualifications in areas relevant to the TOR.

In complying with this section, the Proposer assures and confirms to UNDP that the personnel being nominated are available for the Contract on the dates proposed. If any of the key personnel later becomes unavailable, except for unavoidable reasons such as death or medical incapacity, among other possibilities, UNDP reserves the right to consider the proposal non-responsive. Any deliberate substitution arising from unavoidable reasons, including delay in the implementation of the project of programme through no fault of the Proposer shall be made only with UNDP's acceptance of the justification for substitution, and UNDP's approval of the qualification of the replacement who shall be either of equal or superior credentials as the one being replaced.

- Where the **Data Sheet** requires the submission of the Proposal Security, the Proposal Security shall be included along with the Technical Proposal. The Proposal Security may be forfeited by UNDP, and reject the Proposal, in the event of any or any combination of the following conditions:
- a) If the Proposer withdraws its offer during the period of the Proposal Validity specified in the **Data Sheet** (DS no. 11), or;
- b) If the Proposal Security amount is found to be less than what is required by UNDP as indicated in the **Data Sheet** (DS no. 9), or;
- c) In the case the successful Proposer fails:
- i. to sign the Contract after UNDP has awarded it;
- ii. to comply with UNDP's variation of requirement, as per RFP clause 35; or
- iii. to furnish Performance Security, insurances, or other documents that UNDP may require as a condition to rendering the effectiveness of the contract that may be awarded to the Proposer.

16. Financial Proposals

The Financial Proposal shall be prepared using the attached standard form (Section 7). It shall list all major cost components associated with the services, and the detailed breakdown of such costs. All outputs and activities described in the Technical Proposal must be priced separately on a one-to-one correspondence. Any output and activities described in the Technical Proposal but not priced in the Financial Proposal, shall be assumed to be included in the prices of other activities or items, as well as in the final total price.

17. Currencies

All prices shall be quoted in the currency indicated in the **Data Sheet** (DS no. 15). However, where Proposals are quoted in different currencies, for the purposes of comparison of all Proposals:

- a) UNDP will convert the currency quoted in the Proposal into the UNDP preferred currency, in accordance with the prevailing UN operational rate of exchange on the last day of submission of Proposals; and
- b) In the event that the proposal found to be the most responsive to the RFP requirement is quoted in another currency different from the preferred currency as per **Data Sheet** (DS no. 15), then UNDP shall reserve the right to award the contract in the currency of UNDP's preference, using the conversion method specified above.

Proposals submitted by two (2) or more Proposers shall all be rejected if they are found to have <u>any</u> of the following:

- a) they have at least one controlling partner, director or shareholder in common; or
- b) any one of them receive or have received any direct or indirect subsidy from the other/s; or
- c) they have the same legal representative for purposes of this RFP; or
- d) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about, or influence on the Proposal of, another Proposer regarding this RFP process;
- e) they are subcontractors to each other's Proposal, or a subcontractor to one Proposal also submits another Proposal under its name as lead Proposer; or
- f) an expert proposed to be in the team of one Proposer participates in more than one Proposal received for this RFP process. This condition does not apply to subcontractors being included in more than one Proposal.

18. Documents Establishing the Eligibility and Qualifications of the Proposer

The Proposer shall furnish documentary evidence of its status as an eligible and qualified vendor, using the forms provided under Section 5, Proposer Information Forms. In order to award a contract to a Proposer, its qualifications must be

documented to UNDP's satisfaction. These include, but are not limited to, the following:

- a) That, in the case of a Proposer offering to supply goods under the Contract which the Proposer did not manufacture or otherwise produce, the Proposer has been duly authorized by the goods' manufacturer or producer to supply the goods in the country of final destination;
- b) That the Proposer has the financial, technical, and production capability necessary to perform the Contract; and
- c) That, to the best of the Proposer's knowledge, it is not included in the UN 1267/1989 List or the UN Ineligibility List, nor in any and all of UNDP's list of suspended and removed vendors.

19. Joint Venture, Consortium or Association

If the Proposer is a group of legal entities that will form or have formed a joint venture, consortium or association at the time of the submission of the Proposal, they shall confirm in their Proposal that: (i) they have designated one party to act as a lead entity, duly vested with authority to legally bind the members of the joint venture jointly and severally, and this shall be duly evidenced by a duly notarized Agreement among the legal entities, which shall be submitted along with the Proposal; and (ii) if they are awarded the contract, the contract shall be entered into, by and between UNDP and the designated lead entity, who shall be acting for and on behalf of all the member entities comprising the joint venture.

After the Proposal has been submitted to UNDP, the lead entity identified to represent the joint venture shall not be altered without the prior written consent of UNDP. Furthermore, neither the lead entity nor the member entities of the joint venture can:

- a) Submit another proposal, either in its own capacity; nor
- b) As a lead entity or a member entity for another joint venture submitting another Proposal.

The description of the organization of the joint venture/consortium/association must clearly define the expected role of each of the entity in the joint venture in delivering the requirements of the RFP, both in the Proposal and the Joint Venture Agreement. All entities that comprise the joint venture shall be subject to the eligibility and qualification assessment by UNDP.

Where a joint venture is presenting its track record and experience in a similar undertaking as those required in the RFP, it should present such information in the following manner:

- a) Those that were undertaken together by the joint venture; and
- b) Those that were undertaken by the individual entities of the joint venture expected to be involved in the performance of the services defined in the RFP.

Previous contracts completed by individual experts working privately but who are permanently or were temporarily associated with any of the member firms cannot be claimed as the experience of the joint venture or those of its members, but should only be claimed by the individual experts themselves in their presentation of their individual credentials.

If a joint venture's Proposal is determined by UNDP as the most responsive Proposal that offers the best value for money, UNDP shall award the contract to the joint venture, in the name of its designated lead entity. The lead entity shall sign the contract for and on behalf of all other member entities.

20. Alternative Proposals

Unless otherwise specified in the **Data Sheet** (DS nos. 5 and 6), alternative proposals shall not be considered. Where the conditions for its acceptance are met, or justifications are clearly established, UNDP reserves the right to award a contract based on an alternative proposal.

21. Validity Period

Proposals shall remain valid for the period specified in the **Data Sheet** (DS no. 8), commencing on the submission deadline date also indicated in the **Data Sheet** (DS no. 21). A Proposal valid for a shorter period shall be immediately rejected by UNDP and rendered non-responsive.

In exceptional circumstances, prior to the expiration of the proposal validity period, UNDP may request Proposers to extend the period of validity of their Proposals. The request and the responses shall be made in writing, and shall be considered integral to the Proposal.

22. Proposer's Conference

When appropriate, a proposer's conference will be conducted at the date, time and location specified in the **Data Sheet** (DS no. 7). All Proposers are encouraged to attend. Non-attendance, however, shall <u>not</u> result in disqualification of an

interested Proposer. Minutes of the proposer's conference will be either posted on the UNDP website, or disseminated to the individual firms who have registered or expressed interest with the contract, whether or not they attended the conference. No verbal statement made during the conference shall modify the terms and conditions of the RFP unless such statement is specifically written in the Minutes of the Conference, or issued/posted as an amendment in the form of a Supplemental Information to the RFP.

D. SUBMISSION AND OPENING OF PROPOSALS

23. Submission

- The Financial Proposal and the Technical Proposal Envelopes <u>MUST BE COMPLETELY SEPARATE</u> and <u>each of them must be submitted sealed individually</u> and clearly marked on the outside as either "TECHNICAL PROPOSAL" or "FINANCIAL PROPOSAL", as appropriate. Each envelope MUST clearly indicate the name of the Proposer. The outer envelopes shall bear the address of UNDP as specified in the **Data Sheet** (DS no.20) and shall include the Proposer's name and address, as well as a warning that state "not to be opened before the time and date for proposal opening" as specified in the **Data Sheet** (DS no. 24). The Proposer shall assume the responsibility for the misplacement or premature opening of Proposals due to improper sealing and labeling by the Proposer.
- Proposers must submit their Proposals in the manner specified in the **Data Sheet** (DS nos. 22 and 23). When the Proposals are expected to be in transit for more than 24 hours, the Proposer must ensure that sufficient lead time has been provided in order to comply with UNDP's deadline for submission. UNDP shall indicate for its record that the official date and time of receiving the Proposal is the <u>actual</u> date and time when the said Proposal has physically arrived at the UNDP premises indicated in the **Data Sheet** (DS no. 20).
- Proposers submitting Proposals by mail or by hand shall enclose the original and each copy of the Proposal, in separate sealed envelopes, duly marking each of the envelopes as "Original Proposal" and "Copy of Proposal" as appropriate. The 2 envelopes shall then be sealed in an outer envelope. The number of copies required shall be as specified in the **Data Sheet** (DS No. 19). In the event of any discrepancy between the contents of the "Original Proposal" and the "Copy of Proposal", the contents of the original shall govern. The original version of the Proposal shall be signed or initialed by the Proposer or person(s) duly authorized to commit the Proposer on every page. The authorization shall be communicated through a document evidencing such authorization issued by the highest official of the firm, or a Power of Attorney, accompanying the Proposal.
- Proposers must be aware that the mere act of submission of a Proposal, in and of itself, implies that the Proposer accepts the General Contract Terms and Conditions of UNDP as attached hereto as Section 11.

24. Deadline for Submission of Proposals and Late Proposals

Proposals must be received by UNDP at the address and no later than the date and time specified in the **Data Sheet** (DS nos. 20 and 21).

UNDP shall not consider any Proposal that arrives after the deadline for submission of Proposals. Any Proposal received by UNDP after the deadline for submission of Proposals shall be declared late, rejected, and returned unopened to the Proposer.

25. Withdrawal, Substitution, and Modification of Proposals

- Proposers are expected to have sole responsibility for taking steps to carefully examine in detail the full consistency of its Proposals to the requirements of the RFP, keeping in mind that material deficiencies in providing information requested by UNDP, or lack clarity in the description of services to be provided, may result in the rejection of the Proposal. The Proposer shall assume the responsibility regarding erroneous interpretations or conclusions made by the Proposer in the course of understanding the RFP out of the set of information furnished by UNDP.
- A Proposer may withdraw, substitute or modify its Proposal after it has been submitted by sending a written notice in accordance with Clause 23.1, duly signed by an authorized representative, and shall include a copy of the authorization (or a Power of Attorney). The corresponding substitution or modification of the Proposal must accompany the respective written notice. All notices must be received by UNDP prior to the deadline for submission and submitted in accordance with RFP Clause 23.1 (except that withdrawal notices do not require copies). The respective envelopes shall be clearly marked "WITHDRAWAL," "SUBSTITUTION," or MODIFICATION".
- 25.3 Proposals requested to be withdrawn shall be returned unopened to the Proposers.
- No Proposal may be withdrawn, substituted, or modified in the interval between the deadline for submission of Proposals and the expiration of the period of proposal validity specified by the Proposer on the Proposal Submission Form or any extension thereof.

26. Proposal Opening

UNDP will open the Proposals in the presence of an ad-hoc committee formed by UNDP of at least two (2) members. If electronic submission is permitted, any specific electronic proposal opening procedures shall be as specified in the **Data Sheet** (DS no. 23).

The Proposers' names, modifications, withdrawals, the condition of the envelope labels/seals, the number of folders/files and all other such other details as UNDP may consider appropriate, will be announced at the opening. No Proposal shall be rejected at the opening stage, except for late submission, for which the Proposal shall be returned unopened to the Proposer.

27. Confidentiality

Information relating to the examination, evaluation, and comparison of Proposals, and the recommendation of contract award, shall not be disclosed to Proposers or any other persons not officially concerned with such process, even after publication of the contract award.

Any effort by a Proposer to influence UNDP in the examination, evaluation and comparison of the Proposals or contract award decisions may, at UNDP's decision, result in the rejection of its Proposal.

In the event that a Proposer is unsuccessful, the Proposer may seek a meeting with UNDP for a debriefing. The purpose of the debriefing is discussing the strengths and weaknesses of the Proposer's submission, in order to assist the Proposer in improving the proposals presented to UNDP. The content of other proposals and how they compare to the Proposer's submission shall not be discussed.

E. EVALUATION OF PROPOSALS

28. Preliminary Examination of Proposals

UNDP shall examine the Proposals to determine whether they are complete with respect to minimum documentary requirements, whether the documents have been properly signed, whether or not the Proposer is in the UN Security Council 1267/1989 Committee's list of terrorists and terrorist financiers, and in UNDP's list of suspended and removed vendors, and whether the Proposals are generally in order, among other indicators that may be used at this stage. UNDP may reject any Proposal at this stage.

29. Evaluation of Proposals

- 29.1 UNDP shall examine the Proposal to confirm that all terms and conditions under the UNDP General Terms and Conditions and Special Conditions have been accepted by the Proposer without any deviation or reservation.
- The evaluation team shall review and evaluate the Technical Proposals on the basis of their responsiveness to the Terms of Reference and other documentation provided, applying the evaluation criteria, sub-criteria, and point system specified in the **Data Sheet** (DS no. 32). Each responsive Proposal will be given a technical score. A Proposal shall be rendered non-responsive at this stage if it does not substantially respond to the RFP particularly the demands of the Terms of Reference, which also means that it fails to achieve the minimum technical score indicated in the **Data Sheet** (DS no. 25). Absolutely no changes may be made by UNDP in the criteria, sub-criteria and point system indicated in the **Data Sheet** (DS no. 32) after all Proposals have been received.
- In the second stage, only the Financial Proposals of those Proposers who achieve the minimum technical score will be opened for evaluation for comparison and review. The Financial Proposal Envelopes corresponding to Proposals that did not meet the minimum passing technical score shall be returned to the Proposer unopened. The overall evaluation score will be based either on a combination of the technical score and the financial offer, or the lowest evaluated financial proposal of the technically qualified Proposers. The evaluation method that applies for this RFP shall be as indicated in the **Data Sheet** (DS No. 25).

When the Data Sheet specifies a combined scoring method, the formula for the rating of the Proposals will be as follows:

Rating the Technical Proposal (TP):

TP Rating = (Total Score Obtained by the Offer / Max. Obtainable Score for TP) \times 100

Rating the Financial Proposal (FP):

FP Rating = (Lowest Priced Offer / Price of the Offer Being Reviewed) x 100

Total Combined Score:

(TP Rating) x (Weight of TP, e.g. 60%)

+ (FP Rating) x (Weight of FP, e.g., 40%)

Total Combined and Final Rating of the Proposal

- 29.4 UNDP reserves the right to undertake a post-qualification exercise aimed at determining, to its satisfaction the validity of the information provided by the Proposer. Such post-qualification shall be fully documented and, among those that may be listed in the **Data Sheet** (DS No.33), may include, but need not be limited to, all or any combination of the following:
- a) Verification of accuracy, correctness and authenticity of information provided by the Proposer on the legal, technical and financial documents submitted;
- b) Validation of extent of compliance to the RFP requirements and evaluation criteria based on what has so far been found by the evaluation team;
- c) Inquiry and reference checking with Government entities with jurisdiction on the Proposer, or any other entity that may have done business with the Proposer;
- d) Inquiry and reference checking with other previous clients on the quality of performance on ongoing or previous contracts completed;
- e) Physical inspection of the Proposer's offices, branches or other places where business transpires, with or without notice to the Proposer;
- f) Quality assessment of ongoing and completed outputs, works and activities similar to the requirements of UNDP, where available; and
- g) Other means that UNDP may deem appropriate, at any stage within the selection process, prior to awarding the contract.

30. Clarification of Proposals

To assist in the examination, evaluation and comparison of Proposals, UNDP may, at its discretion, ask any Proposer for a clarification of its Proposal.

UNDP's request for clarification and the response shall be in writing. Notwithstanding the written communication, no change in the prices or substance of the Proposal shall be sought, offered, or permitted, except to provide clarification, and confirm the correction of any arithmetic errors discovered by UNDP in the evaluation of the Proposals, in accordance with RFP Clause 32.

Any unsolicited clarification submitted by a Proposer in respect to its Proposal, which is not a response to a request by UNDP, shall not be considered during the review and evaluation of the Proposals.

31. Responsiveness of Proposal

UNDP's determination of a Proposal's responsiveness will be based on the contents of the Proposal itself.

A substantially responsive Proposal is one that conforms to all the terms, conditions, TOR and other requirements of the RFP without material deviation, reservation, or omission.

If a Proposal is not substantially responsive, it shall be rejected by UNDP and may not subsequently be made responsive by the Proposer by correction of the material deviation, reservation, or omission.

32. Nonconformities, Reparable Errors and Omissions

Provided that a Proposal is substantially responsive, UNDP may waive any non-conformities or omissions in the Proposal that, in the opinion of UNDP, do not constitute a material deviation.

Provided that a Proposal is substantially responsive, UNDP may request the Proposer to submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the Proposal related to documentation requirements. Such omission shall not be related to any aspect of the price of the Proposal. Failure of the Proposer to comply with the request may result in the rejection of its Proposal.

Provided that the Proposal is substantially responsive, UNDP shall correct arithmetical errors as follows:

a) if there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of UNDP

there is an obvious misplacement of the decimal point in the unit price, in which case the line item total as quoted shall govern and the unit price shall be corrected;

- b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
- c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to the above.

If the Proposer does not accept the correction of errors made by UNDP, its Proposal shall be rejected.

F. AWARD OF CONTRACT

33. Right to Accept, Reject, or Render Non-Responsive Any or All Proposals

UNDP reserves the right to accept or reject any Proposal, to render any or all of the Proposals as non-responsive, and to reject all Proposals at any time prior to award of contract, without incurring any liability, or obligation to inform the affected Proposer(s) of the grounds for UNDP's action. Furthermore, UNDP shall not be obliged to award the contract to the lowest price offer.

UNDP shall also verify, and immediately reject their respective Proposal, if the Proposers are found to appear in the UN's Consolidated List of Individuals and Entities with Association to Terrorist Organizations, in the List of Vendors Suspended or Removed from the UN Secretariat Procurement Division Vendor Roster, the UN Ineligibility List, and other such lists that as may be established or recognized by UNDP policy on Vendor Sanctions.

(See http://www.undp.org/content/undp/en/home/operations/procurement/procurement_protest/ for details).

34. Award Criteria

Prior to expiration of the period of proposal validity, UNDP shall award the contract to the qualified Proposer with the highest total score based on the evaluation method indicated in the **Data Sheet** (DS nos. 25 and 32).

35. Right to Vary Requirements at the Time of Award

At the time of award of Contract, UNDP reserves the right to vary the quantity of services and/or goods, by up to a maximum twenty five per cent (25%) of the total offer, without any change in the unit price or other terms and conditions.

36. Contract Signature

Within fifteen (15) days from the date of receipt of the Contract, the successful Proposer shall sign and date the Contract and return it to UNDP.

Failure of the successful Proposer to comply with the requirement of RFP Clause 35 and this provision shall constitute sufficient grounds for the annulment of the award, and forfeiture of the Proposal Security if any, and on which event, UNDP may award the Contract to the Proposer with the second highest rated Proposal, or call for new Proposals.

37. Performance Security

A performance security, if required, shall be provided in the amount and form provided in Section 9 and by the deadline indicated in the **Data Sheet** (DS no. 14), as applicable. Where a Performance Security will be required, the submission of the said document, and the confirmation of its acceptance by UNDP, shall be a condition for the effectiveness of the Contract that will be signed by and between the successful Proposer and UNDP.

38. Bank Guarantee for Advanced Payment

Except when the interests of UNDP so require, it is the UNDP's preference to make no advanced payment(s) on contracts (i.e., payments without having received any outputs). In the event that the Proposer requires an advanced payment upon contract signature, and if such request is duly accepted by UNDP, and the said advanced payment exceeds 20% of the total proposal price, or exceed the amount of USD 30,000, UNDP shall require the Proposer to submit a Bank Guarantee in the same amount as the advanced payment. A bank guarantee for advanced payment shall be furnished in the form provided in Section 10.

39. Vendor Protest

UNDP's vendor protest procedure provides an opportunity for appeal to those persons or firms not awarded a purchase order or contract through a competitive procurement process. In the event that a Proposer believes that it was not treated fairly, the following link provides further details regarding UNDP vendor protest procedures: http://www.undp.org/procurement/protest.shtml.

Instructions to Proposers

DATA SHEET

The following data for the services to be procured shall complement, supplement, or amend the provisions in the Instruction to Proposers. In the case of a conflict between the Instructions to Proposers, the Data Sheet, and other annexes or references attached to the Data Sheet, the provisions in the Data Sheet shall govern.

DS No. ¹	Cross Ref. to Instructions	Data	Specific Instructions / Requirements
1		Project Title:	Democracy Programme / Elections
2		Title of Services/Work:	Development of the Information System "SAISE Admin"
3		Country / Region of Work Location:	Republic of Moldova
4	C.13	Language of the Proposal:	⊠ English
5	C.20	Conditions for Submitting Proposals for Parts or sub-parts of the TOR	☑ Not allowed
6	C.20	Conditions for Submitting Alternative Proposals	☑ Shall not be considered
7	C.22	A pre-proposal conference will be held on:	Time: 11:00 (Moldova local time) Date: 4 March 2016 Venue: UN House Conference Room, 131, 31 August 1989 Street, MD-2012 Chisinau, Moldova The UNDP focal point for the arrangement is: Elena Birau, Democracy Programme / Elections Procurement Assistant Telephone: +373 (79) 183 283 E-mail: elena.birau@undp.org
8	C.21	Period of Proposal Validity commencing on the submission date	□ 60 days ☑ 90 days □ 120 days
9	B.9.5 C.15.4 b)	Proposal Security	☑ Not Required
10	B.9.5	Acceptable forms of Proposal Security	N/A
11	B.9.5 C.15.4 a)	Validity of Proposal Security	N/A
12		Advanced Payment upon signing of contract	☑ Not allowed
13		Liquidated Damages	N/A
14	F.37	Performance Security	☑ Not Required

¹ All DS number entries in the Data Sheet are cited as reference in the Instructions to Proposers. <u>All DS nos. corresponding to a Data must not be modified</u>. Only information on the 3rd column may be modified by the user. If the information does not apply, the 3rd column must state "N/A" but must not be deleted.

15	C.17, C.17 b)	Preferred Currency of Proposal and Method for Currency conversion	☑ United States Dollars (USD) Reference date for determining UN Operational Exchange Rate: 18 March 2016
16	B.10.1	Deadline for submitting requests for clarifications/ questions	3 (three) days before the submission date.
17	B.10.1	Contact Details for submitting clarifications/questions ²	Focal Person in UNDP: Diana Zaharia, Senior Project Officer Address: Vasile Alecsandri 119 Str., Chisinau, Moldova E-mail address dedicated for this purpose: diana.zaharia@undp.org
18	B.11.1	Manner of Disseminating Supplemental Information to the RFP and responses/clarifications to queries	☑ Direct communication to prospective Proposers by email or fax, and Posting on the website³ http://www.undp.md/tenders/index.shtml
19	D.23.3	No. of copies of Proposal that must be submitted [if transmitted by courier]	Original: 1 Copies: 1
20	D.23.1 D.23.2 D.24	Proposal Submission Address	UNDP Moldova 131, 31 August 1989 Street MD-2012 Chisinau Republic of Moldova Attention: Registry Office/Procurement
21	C.21 D.24	Deadline of Submission	Date and Time: 18 March 2016, 14:30 (GMT+2)
22	D.23.2	Allowable Manner of Submitting Proposals	☑ Courier/Hand Delivery ☑ Electronic submission of Bid ⁴
23	D.23.2 D.26	Conditions and Procedures for electronic submission and opening, if allowed	 ☑ Official Address for e-submission: tenders-Moldova(@undp.org) ☑ Free from virus and corrupted files ☑ Format: PDF files only, password protected ☑ Password must not be provided to UNDP until the date and time of Bid Opening as indicated in No. 24 ☑ Max. File Size per transmission: 5 MB ☑ Max. No. of transmission: 5 (five) for technical proposal and 1 (one) for financial proposal ☑ No. of copies to be transmitted: 1 (one) ☑ Mandatory subject of email for the Technical Proposal: "Technical Proposal for RfP16/o1184: Development of the Information System "SAISE Admin" ☑ Mandatory subject of email for the Financial Proposal: "Financial Proposal for RfP16/o1184: Development of the Information System "SAISE Admin"

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² This contact person and address is officially designated by UNDP. If inquiries are sent to other person/s or address/es, even if they are UNDP staff, UNDP shall have no obligation to respond nor can UNDP confirm that the query was officially received.

³ Posting on the website shall be supplemented by directly transmitting the communication to the prospective offerors.

⁴ If this will be allowed, security features (e.g., encryption, authentication, digital signatures, etc.) are strictly required and must be enforced to ensure confidentiality and integrity of contents.

			☑ Time Zone to be Recognized: Moldova (GMT+2:00)
24	D.23.1	Date, time and venue for opening of Proposals	N/A
25	E.29.2 E.29.3 F.34	Evaluation method to be used in selecting the most responsive Proposal	☑ Combined Scoring Method, using 60%-40% distribution for technical and financial proposals, respectively, where minimum passing score of technical proposal is 70%
26	C.15.1	Required Documents that must be Submitted to Establish Qualification of Proposers (In "Certified True Copy" form only)	☑ Company Profile, which should not exceed fifteen (15) pages, and product catalogues relevant to the goods/services being procured including a brief and clear description of implemented projects of similar complexity (title, period of project implementation, project objectives, and beneficiary); ☑ Portfolio of clients whom services similar to those requested under this RFP have been delivered to over the past 5 years; ☑ Certificate of Registration of the business, including Articles of Incorporation, or equivalent document if Bidder is not a corporation; ☑ Official Letter of Appointment as local representative, if Bidder is submitting a Bid on behalf of an entity located outside Moldova ☑ Specialized certificates (ISO 27001), accreditations, awards and citations received by the Bidder (if any); ☑ Latest Audited Financial Statement (Income Statement and Balance Sheet) including Auditor's Report for the past 2 years; ☑ Statement of Satisfactory Performance from the Top 2 Clients in terms of Contract Value the past 3 years; ☑ All information regarding any past and current litigation during the last five (5) years, in which the bidder is involved, indicating the parties concerned, the subject of the litigation, the amounts involved, and the final resolution if already concluded; ☑ Detailed CVs of Key Personnel comprising information requested in the Terms of Reference (ToR) RfP Section 3.
27		Other documents that may be Submitted to Establish Eligibility	N/A
28	C.15	Structure of the Technical Proposal (only if different from the provisions of Clause 15)	 ☑ In case the Service Provider is a consortium of companies, the application should contain a clear distribution of tasks among the consortium members/subcontractors, including a clear division of tasks for the personnel of the companies participating in the consortium; ☑ If the Bidder subcontracts activities of obtaining any deliverable, then it shall submit the Work Package attached to these activities in a form signed by both the Bidder as well as proposed Subcontractor and shall contain: date, responsible person (including CV, qualifications supported by Certificates), description of the work package, description of deliverables that are part of the working package, quality-checking methods to be used, level of

			resources to be allocated, date of commencement and finalization, constraints, reporting method.
29	C.15.2	Latest Expected date for commencement of Contract	07 April 2016
30	C.15.2	Expected duration of contract (Target Commencement Date and Completion Date)	April 2016 — November 2017
31		UNDP will award the contract to:	☑ One Proposer only
32	E.29.2 F.34	Criteria for the Award of Contract and Evaluation of Proposals	(See Tables below)
33	E.29.4	Post-Qualification Actions	 ☑ Verification of accuracy, correctness and authenticity of the information provided by the bidder on the legal, technical and financial documents submitted; ☑ Validation of extent of compliance to the RfP requirements and evaluation criteria based on what has so far been found by the evaluation team; ☑ Inquiry and reference checking with Government entities with jurisdiction on the bidder, or any other entity that may have done business with the bidder; ☑ Inquiry and reference checking with other previous clients on the quality of performance on ongoing or previous contracts completed;
34		Conditions for Determining Contract Effectiveness	☑ Others: signing the contract by both parties
35		Other Information Related to the RFP ⁵	Further information, instructions and/or amendments to the solicitation documents shall be published at the UNDP Moldova tenders website: http://www.undp.md/tenders/index.shtml

Summa	Summary of Technical Proposal Evaluation Forms		Points Obtainable
1.	Expertise of Firm / Organization	30%	300
2.	Proposed Methodology, Approach and Implementation Plan	35%	350
3. Management Structure and Key Personnel 3		35%	350
Total	Total		

Technical Proposal Evaluation Form 1		
	Expertise of the Firm/Organization	
1.1	Reputation of Organization and Staff / Credibility / Reliability / Industry Standing	50

⁵ Where the information is available in the web, a URL for the information may simply be provided.

1.2	General Organizational Capability which is likely to affect implementation	75
	 financial stability (up to 15 pts.); strength of project management support (up to 25 pts.); project management controls (up to 20 pts.); 	
	- project financing capacity (<i>up to 15 pts.</i>).	
1.3	Extent to which any work would be subcontracted (subcontracting carries additional risks which may affect project implementation, but properly done it offers a chance to access specialized skills.)	15
1.4	Quality assurance procedures, warranty	30
1.5	 Relevance of: Minimum 5 years of working experience in developing IT systems (5 years – 30 pts., each additional year – 2 pts., up to max 40 pts.); Minimum 2 IT projects of similar task complexity implemented and their brief description (2 projects – 30 pts., each additional project – 5 pts., up to max 55 pts.); The experience in the development of IT applications for electoral processes would be an advantage (no – 0 pts., yes – 30 pts.); Company is committed to workforce diversity (additional 5 pts.) 	130
Total Form 1		300

Technical Proposal Evaluation Form 2		Points Obtainable
	Proposed Methodology, Approach and Implementation Plan	
2.1	To what degree does the Proposer understand the task?	60
2.2	Have the important aspects of the task been addressed in sufficient detail?	50
2.3	Are the different components of the project adequately weighted relative to one another?	30
2.4	Is the conceptual framework adopted appropriate for the task?	40
2.5	Is the scope of task well defined and does it correspond to the TOR?	80
2.6 Is the presentation clear and is the sequence of activities and the planning logical, realistic and promise efficient implementation to the project?		90
Total	Form 2	350

Technical Proposal Evaluation Form 3			Points Obtainable
	Management Structure and Key Personnel		
3.1	Project Manager		95
	Licensed in ICT (master degree will be an advantage) (University degree – 5 pts., Master degree – 10 pts.);	10	
	3 years of experience in the proposed position (less than 3 years – o pts., 3 years – 10 pts., every additional year – 5 pts., up to max 30 pts.);	30	
	Specific experience in ICT proved through the implementation of similar projects like principles of operation or area of interest (min 1 project of similar complexity in which the person was involved should be explicitly described in his/her CV) (1 project – 10 pts., each additional project – 5 pts., up to max. 30 pts.);	30	
	Experience of working in IT system development methodology for the government sector of the Republic of Moldova would be an advantage (No – o pts., Yes – 8 pts.);	8	
	Proved certification in Project Management (Prince, PMI, etc.) would be a strong asset (No – o pts., Yes – 7 pts.);	7	

	Excellent knowledge of Romanian and English languages (each language – 5 pts., max 10 pts.);	10	
	Canian Davidan and Busin and Analyst		
3.2	Senior Developer/ Business Analyst		105
	Licensed in ICT (master degree will be an advantage) (University degree – 5 pts., Master degree – 10 pts.);	10	
	3 years of experience in the proposed position (less than 3 years – o pts., 3 years – 10 pts., every additional year – 5 pts., up to max 30 pts.);	30	
	Specific experience in ICT proved through the implementation of similar projects like principles of operation or area of interest (min 1 project of similar complexity in which the person was involved should be explicitly described in his/her CV) (1 project – 10 pts., each additional project – 5 pts., up to max. 30 pts.);	30	
	Certification in MTA in Software Development is an advantage (No – o pts., Yes – 10 pts.);	10	
	Proved working experience in technologies related to the SAISE development platform: C#, Asp.Net MVC, jQuery, NHibernate, SSRS, MCSD would be an advantage (No – o pts., Yes – 15 pts.);	15	
	Perfect knowledge of Romanian. English language will be an advantage (Romanian – 5 pts., English – 5 pts., max 10 pts.);	10	
3.3	Developer		80
	Licensed in ICT (master degree will be an advantage) (University degree – 5 pts., Master degree – 10 pts.);	10	
	2 years of experience in the proposed position (less than 2 years — o pts., 2 years — 10 pts., every additional year — 5 pts., up to max 35 pts.);	35	
	Proved certification in MTA in Software Development certification would be an advantage (No – o pts., Yes – 10 pts.)	10	
		15	
	advantage (No – o pts., Yes – 10 pts.) Proved working experience in technologies related to the SAISE development platform: C#, Asp.Net MVC, jQuery, NHibernate, SSRS, MCSD would be an		
3.4	advantage (No – o pts., Yes – 10 pts.) Proved working experience in technologies related to the SAISE development platform: C#, Asp.Net MVC, jQuery, NHibernate, SSRS, MCSD would be an advantage (No – o pts., Yes – 15 pts.); Perfect knowledge of Romanian and/or Russian (Romanian – 5 pts., Russian. – 5	15	70
3.4	advantage (No – o pts., Yes – 10 pts.) Proved working experience in technologies related to the SAISE development platform: C#, Asp.Net MVC, jQuery, NHibernate, SSRS, MCSD would be an advantage (No – o pts., Yes – 15 pts.); Perfect knowledge of Romanian and/or Russian (Romanian – 5 pts., Russian. – 5 pts.);	15	70
3.4	advantage (No – o pts., Yes – 10 pts.) Proved working experience in technologies related to the SAISE development platform: C#, Asp.Net MVC, jQuery, NHibernate, SSRS, MCSD would be an advantage (No – o pts., Yes – 15 pts.); Perfect knowledge of Romanian and/or Russian (Romanian – 5 pts., Russian. – 5 pts.); Tester Licensed in ICT (master degree will be an advantage) (University degree – 5 pts.,	15	70
3.4	advantage (No – o pts., Yes – 10 pts.) Proved working experience in technologies related to the SAISE development platform: C#, Asp.Net MVC, jQuery, NHibernate, SSRS, MCSD would be an advantage (No – o pts., Yes – 15 pts.); Perfect knowledge of Romanian and/or Russian (Romanian – 5 pts., Russian. – 5 pts.); Tester Licensed in ICT (master degree will be an advantage) (University degree – 5 pts., Master degree – 10 pts.); 2 years of experience in the proposed position (less than 2 years – o pts., 2 years	10	70

Perfect knowledge of Romanian and/or Russian (Romanian – 5 pts., Russian. – 5 pts.).	10	
		350

Section 3: Terms of Reference (TOR)

Development of the Information System "SAISE Admin"

PROJECT TITLE

"Improving the Quality of Moldovan Democracy through Parliamentary and Electoral Support" (Democracy Programme / Electoral Component)

PROJECT DESCRIPTION

UNDP Moldova Democracy Programme/Elections (further referred as Programme) is a multiyear institutional development project that aims to support the institutional consolidation of the Central Electoral Commission (CEC) as well as the modernization of the Moldovan electoral process towards:

- 1. Improving the capacity of CEC to meet European gender and human rights standards and of the approved Strategic Development Plan of the CEC;
- 2. Improving the institutional environment for electoral management bodies that can deliver inclusive and modern electoral processes;
- 3. Improving the electoral and public registration process of the Republic of Moldova citizens with the right to vote.

1. BACKGROUND INFORMATION

In the context of implementing Law No. 101 of 15.05.2008 on the Concept of the State Automated Information System "Elections" (SAISE), the Central Electoral Commission (CEC) shall implement the Function Block "Preparation". Nowadays, SAISE covers a significant portion of functionalities of this function block. However, re-engineering of the Function Block "Voting" imposed the need to carry out sound re-engineering of other SAISE components as well.

Therefore, the Function Block "Preparation" shall be implemented under an application that would provide also administration and operation mechanisms for the whole SAISE (generically named SAISE Admin).

Subsequently, other SAISE applications will be modified according to the architectural principles comprised by SAISE Admin aimed at implementing the CEC interoperability framework and eliminating the duplication of functionalities within the CEC IT Subsystems.

Hence, SAISE Admin shall serve as SAISE core, which, along with the provision of Function Block "Preparation" operation, shall serve as Register of resources, roles, users and their rights for all SAISE applications.

This fact shall enable the establishment of a foundation for the CEC interoperability mechanism through the implementation of a single mechanism intended for the management of Users, their rights and roles under all SAISE applications aimed to authenticate, authorize and notify all SAISE Users and to ensure logging of all SAISE application business events.

This document is intended for SAISE Admin development, and defines the IT solution goals, tasks and functions, the organizational structure and regulatory and legal constraints, the functional and non-functional requirements needed to develop and operate the Information System.

The prepared Scope of Work is stemming from the information technologies and national policy related to IT solutions envisaging to underpin the activity carried out by the Moldovan public authorities.

SAISE Admin represents a software identified to have immediate benefits and impact on the CEC activity. It is focused mainly on covering the IT and information needs of all actors involved in SAISE operation. SAISE Admin is a component of the State Automated Information System "Elections", representing, from the programming standpoint, a decoupled/released module, but logically it ensures the integration of all SAISE applications (Function Blocks).

Terminology

The totality of Acronyms and Abbreviations used in this document are defined in Table 1.1.

Table 1.1. Acronyms and Abbreviations used in the Document

No.	Abbreviation/Acronym	Description
1.	CEC	Central Election Commission
2.	СРА	Central Public Authority
3.	DB	Database
4.	DBMS	Database Management System
5.	IT	Information Technology
6.	ICT	Information and Communications Technology
7.	KPI	Key performance indicators
8.	SAISE	The State Automated Information System "Elections"
9.	SDD	Software design document – written description of a software product, that a software designer writes in order to give a software development team overall guidance to the architecture of the software project.
10.	SRS	Software Requirements Specification – a document that contains detailed descriptions of all scenarios of Users' interaction with the Information System.
11.	TLS/SSL	TLS Protocol or its predecessor and SSL Protocol are cryptographic protocols that ensure reliable communication between two hubs of the computer network for such actions like visiting Websites/Web pages, E-mail, Internet-fax, simultaneous exchange of messages and other data transfers.

All terms frequently used in this document are displayed and explained in Table 1.2.

Table 1.2. Definitions and terms used in this document

No.	Abbreviation/Acronym	Description
1.	Credentials	A set of symbols that establish the Users' and systems identity and authentication within information systems.
2.	Data Integrity	Data status when they maintain their content and are interpreted unambiguously in cases of random actions. It is deemed that the data maintained their integrity if they have not been altered or deteriorated (deleted).
3.	Database	A collection of data organized as per the design structure describing the basic characteristics and relation amongst entities
4.	Data	Elementary information units about people, subjects, facts, events, phenomena, processes, objects, situations, etc. presented in a way that enables their notification, commenting and processing.
5.	Information and Communications Technology	Common term that includes all technologies used for information exchange and processing.
6.	Information object	Virtual representing of the existing tangible and intangible entities.
7.	Information resource	Set of documented information in the information system, maintained according to legal requirements in force.

No.	Abbreviation/Acronym	Description
8.	Information system	An information processing system along with the associated organizational resources such as human and technical resources, which provide and disseminate the information.
9.	IT subsystem	Component (with the possibility of functional decoupling) of a complex IT system.
10.	IT system	The totality of software and hardware that ensures data automatic processing (the automated component of an information system).
11.	Logging	A function of recording the information on events. The records about events entered into the information systems include details about the date and time, User, and action carried out.
12.	Metadata	The way of assigning semantic value to the data stored in the database (data about data).
13.	Personal Data	Any information referring to an identified or identifiable natural person (subject of personal data). To this end, an identifiable person is the one who can be identified, directly or indirectly, in particular, through referring to an identification number or to one or more specific elements describing the person physical, physiological, psychical, economic, cultural or social identity.
14.	Reliability of data	Level of correspondence of data, stored in Information Systems memory or documents to the actual state in the system that are reflected by these data.
15.	SAISE Admin	The Information System "SAISE Admin" is the goal of this document, which is intended to improve Function Block "Preparation" of SAISE and deliver the entirety of SAISE administration facilities.

References and Legal Aspects for the SAISE Admin Development

The processes concerning the creation, implementation and operation of SAISE Admin shall not contravene the field-related regulatory acts in effect regarding the CEC activity and the development of IT solutions intended for Moldovan public authorities.

This category comprises, inter alia, the following legal and regulatory acts:

- 1. Law No. 101 of 15.05.2008 on the Concept of the State Automated Information System "Elections", Official Gazette No. 117-119 of 04.07.2008;
- 2. The Electoral Code of the Republic of Moldova, adopted through Law No. 1381 of 21.11.1997, Official Gazette No. 81 of 08.12.1997;
- 3. Government Decision No. 735 of 11.06.2002 on Special Telecommunication Systems of the Republic of Moldova, Official Gazette No. 79-81 of 20.06.2002;
- 4. Law No. 467-XV of 21.11.2003 on Computerisation and State Information Resources, Official Gazette No. 6-12/44 of 01.01.2004;
- 5. Law No. 133 of 08.07.2011 on Personal Data Protection, Official Gazette No. 171-175 of 14.10.2011.
- 6. Government Decision No 1123 of 14 December 2010 approving the Requirements for ensuring the security of personal data during their processing in the information system of personal data, Official Gazette No 254-256 of 24 December 1010;
- 7. Standard of the Republic of Moldova SMV ISO CEI 15288:2009 "Systems and Software Engineering. System life cycle processes";
- 8. Technical regulation "Processes of the Software Life Cycle" RT 38370656-002:2006; Official Gazette No 95-97/335 of 23 June 2006;

9. Other relevant laws, regulations, standards in the ICT area.

The international guidelines and recommendations listed below should be implemented in order to define SAISE Admin concept and ensure its further development:

- 1. Michael O. Leavitt, Ben Shneiderman, Research-Based Web Design & Usability Guidelines, U.S. Government Printing Office, http://www.usability.gov/quidelines/guidelines_book.pdf
- 2. Recommendations of the World Wide Web Consortium (W₃C) (http://www.w₃c.org) on the quality of websites, the possibilities to have proper information visualization, using widely used Internet WEB browsers, and compatibility with different IT platforms;
- 3. Recommendation of the W₃C (<u>http://validator.w₃.org</u>) on website testing. All pages generated by SAISE Admin shall be tested as per these recommendations.

Basic Principles of the SAISE Admin

In order to ensure the attainment of the objectives set for the IT solution, the following general principles shall be taken into account while developing and implementing SAISE Admin:

- **Principle of Legality:** implies the establishment and operation of Information Systems in compliance with the national legislation in effect and with the international rules and standards recognized in this area;
- **Principle of split-level architecture:** involves independent design of SAISE components (SAISE Admin is a SAISE component) in compliance with interface standards between levels;
- **Principle of service-oriented architecture (SOA):** involves dividing the application operation into smaller and distinct units called services that can be assigned into a network and can be used together to create applications intended for the implementation of Computer System business functions.
- **Principle of reliable data:** stipulates that data shall be entered into the system through authorized and authenticated channels only;
- **Principle of information security:** implies ensuring an adequate level of integrity, selectivity, accessibility and efficiency to protect the data against losses, alteration, deterioration and unauthorized access.
- **Principle of transparency**: implies designing and implementing as per the modular principle, having used transparent standards in the area of IT and telecommunications;
- **Principle of expansibility**: stipulates the possibility to expand and supplement the Information System with new functions or improve the existing ones;
- **Principle of first person/single center priority:** implies the appointment of a high-rank responsible person who has sufficient rights to take decisions and coordinate the activities aimed at Information System establishment and operation;
- **Principle of scalability:** implies ensuring constant IT performance in case of increased volume of data and stress for the Information System;
- Principle of usage simplicity and complacency: implies the design and implementation of all applications, hardware and software resources available to the System users, based exclusively on visual, ergonomic and logical principles of design.

In particular, the following essential principles shall be complied with by an Information System Architecture:

- implementing a WEB based client-server solution with authorized access to interface and data;
- ensuring adequate security for the Information System to protect the information and subsystem components against their illegal use or disclosure of personal data or of limited access information;
- recognizing information as an asset and ensuring its adequate management;
- developing and implementing Information Systems that enable their use for other processes or ensure opportunities for developing new functionalities;
- minimizing the number of various technologies and products that offer the same or similar functionalities as per their purpose (reuse of technologies already implemented within the CEC);

- ensuring high-speed processing of service requests/inquiries addressed to the CEC IT Subsystems (authentication, authorization, logging or notification);
- ensuring recovery capacities following disasters (ensuring physical and logical security) as an implementation plan component.

2. SCOPE OF SERVICES, EXPECTED OUTPUTS AND TARGET COMPLETION

The SAISE Admin main purpose is to provide high-performance IT solutions for CEC intended to manage joint Metadata of all SAISE applications and implement an interoperability mechanism amongst all SAISE subsystems and IT applications of the CEC.

Some functionalities of this Information System meet the provisions laid down by Law No. 101 of 15.05.2008 on the Concept of the State Automated Information System "Elections" (Function Block "Preparation"). The other functionalities are targeted to develop an interoperability framework amongst the CEC IT applications, which, in fact, matches the contemporary e-Government visions promoted amongst the central public authorities (CPAs) of the Republic of Moldova.

The SAISE Admin establishment and implementation shall enable CEC to attain the following objectives:

- Implementing the Function Block "Preparation" developed on the basis of Law No. 101 of 15.05.2008 on the Concept of the State Automated Information System "Elections", which will enable centralization of metadata related to the CEC territorial infrastructure and of local and foreign actors involved in elections;
- Creating an interoperability framework amongst the CEC IT applications and implementing certain joint services for the authentication, authorization, notification and logging of all SAISE applications;
- Implementing a single mechanism intended to manage the Users of all SAISE applications;
- Implementing a single mechanism intended to manage the roles and access rights of all SAISE application Users;
- Implementing a single mechanism intended to manage resources of all SAISE applications with the aim to configure the roles and access strategies to them, the transfer of work flows and logging policy for business events;
- Centralizing the principles of administration and use of joint Metadata for the functionalities of all SAISE applications.

SAISE Admin Architecture

SAISE Admin shall provide a WEB interface that is accessible through a widely-used Internet browsers (Microsoft Internet Explorer, Mozila FireFox, Opera, Google Chrome or Safari). From the functional standpoint, it is envisaged to develop a reliable and scalable solution both for the increased number of competitor Users and for the increased volume of information managed by it.

As *SAISE Admin* is not an isolated IT solution and it would interact with other CEC IT Subsystems or with external IT solutions, the developed application shall offer the support necessary to integrate with other IT subsystems.

SAISE Admin relies on at least three-level client-server (that excludes direct interaction with the DB) based on the state-of-the-art WEB technologies.

In order to ensure an adequate information security level, the delivered application shall enable the implementation of secured connections amongst client stations and application server to grant safe information transfer (via VPN channels and TLS/SSL sessions).

The IT solution shall be developed on the basis of advanced Internet/Intranet technologies. The interaction of all Information System actors and nodes is displayed in Figure 2.1.

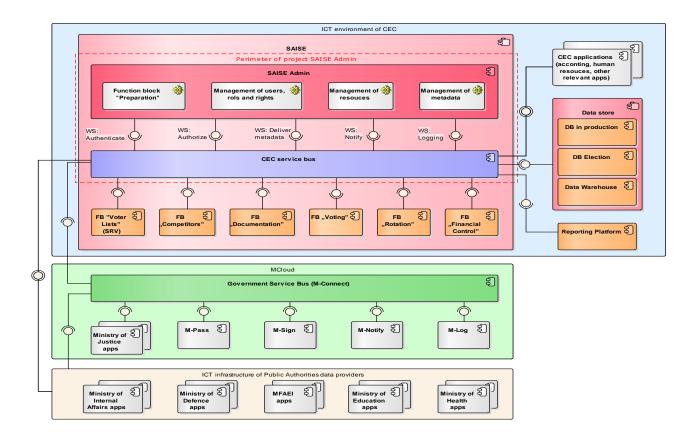


Figure 2.1. SAISE Admin Architecture.

As can be seen in Figure 2.1, the solution of pooling the resources aiming to ensure *SAISE Admin* functionalities comprises four categories of distinct hubs:

- **CEC Data Centre** the CEC ICT infrastructure that will host SAISE *Admin* and where there are a series of information systems installed SAISE *Admin* would interact with. Those functionalities that fall within the red dashed-line perimeter shall be implemented under the current document;
- M-Cloud joint governmental information infrastructure operating on the basis of "cloud computing" technology (*M-Cloud*), hosting a series of Information Systems with which *SAISE Admin* should interact or which services would be used by *SAISE Admin*. In the long-run, all connections with external Information Systems shall be ensured mainly through *M-Connect* service-bus of *M-Cloud* (even for those Information Systems that are not hosted by *M-Cloud*). It is worth mentioning that a series of *M-Cloud* platform services will be reused by *SAISE* (*M-Pass* as an User authentication mechanism through the digital certificate, *M-Sign for* the use of digital signature under some function blocks (e.g. Voting, Financial Control, etc.), *M-Notify for* the integration of Users' notification mechanism, *M-Log –* for logging the business critical events).
- **Public Authorities Data Centre** an ICT infrastructure of public authorities Information Systems, which should serve as data sources for SAISE and would interact with *SAISE* either directly, by using their exposed services, or through the governmental platform of interoperability (*M-Connect*). In the future, priority should be given to interconnections via *M-Connect*.
- **Client Computers** computers from where the Users (depending on their rights and roles) shall be granted access to *SAISE Admin* functionalities.

In order to have access and use SAISE Admin, client computers shall use as client applications at least two of the most popular Internet web browsers (compatibility with Microsoft Internet Explorer is binding). The interface and functionalities assigned to each individual User will depend on the User's level, rights and roles.

Regardless of the User's access level, all connections of Users to SAISE Admin shall be carried out via safe means.

In order to form the interoperability framework of CEC Information Systems, SAISE Admin shall publish several interfaces and, to this end, one implementation for each of them shall be carried out, namely (see Figure 2.1.):

- 1. WEB Service **Authenticate**, which interacts with all *SAISE* applications to deliver a universal and centralized mechanism for Users' authentication, regardless of the used *SAISE* application. Along with the internal authentication mechanism (CEC authentication *service*) *M-Pass* will be used as an alternative service for those external Users that have a digital certificate.
- 2. WEB Service **Authorize**, which interacts with all *SAISE* applications to deliver a universal and centralized mechanism for Users' authorization (providing functionalities and data accessible to them), regardless of the used *SAISE* application.
- 3. WEB Service **Deliver Metadata**, which interacts with all SAISE applications to deliver joint Metadata used by them and related to Function Block "Preparation" or interoperability services implemented under *SAISE Admin*.
- 4. WEB Service **Notify**, which interacts with all SAISE applications to deliver a universal and centralized mechanism to notify all *SAISE* Users regardless of the used *SAISE* application.
- 5. WEB Service Logging, which interacts with all SAISE applications to deliver a universal and centralized mechanism for logging all business events generated by the activity of authorized Users under the used SAISE applications

3. PARTIES INVOLVED AND ROLES OF THE SAISE ADMIN

3.1. SAISE Admin Business Roles

In the process of SAISE Admin development and operation the following stakeholders should be involved:

- **CEC** as a permanent public authority established to implement the electoral policy and ensure sound organization and conduct of elections. The CEC Mission is to create optimal conditions so that all Moldovan citizens can freely exercise their constitutional right to elect and be elected during free and fair ballots. The CEC shall be responsible for SAISE administration and operation.
- UNDP Project "Improving the Quality of Moldovan Democracy through Parliamentary and Electoral Support" as an institution that would finance and monitor SAISE *Admin* development and implementation activities.

3.2. SAISE Admin Possessor

The CEC shall be the Information System Holder. The role of system holder mirrors the administrative aspect related to the CEC full competences, which are necessary for Information System continuous administration and development.

As a SAISE Admin Holder, the CEC would be able to assign roles and rights of access to User's interface and data to its employees, depending on their job duties.

3.3. SAISE Admin Owner

The CEC shall be the IT solution Keeper that would provide the technical infrastructure to host SAISE Admin.

The possibility of hosting certain components of *SAISE Admin* outside the CEC Data Centre has been also considered. One of such solutions could be the joint governmental platform *M-Cloud*.

3.4. SAISE Admin Purchaser

SAISE Admin will be purchased by the *UNDP Project* "*Improving the Quality of Moldovan Democracy through Parliamentary and Electoral Support*" on behalf of the CEC. Although CEC is the direct Beneficiary of the IT solution, the consultants contracted by the *UNDP Project* "*Improving the Quality of Moldovan Democracy through Parliamentary and Electoral Support*" will be involved at all SAISE Admin development stages, its commissioning and final acceptance.

3.5. SAISE Admin actors and their roles

Human roles or information systems that interact with SAISE Admin are displayed in Figure 3.1. As can be seen in this Figure, three categories of human actors and 12 categories of Information Systems would be interacting under this application.

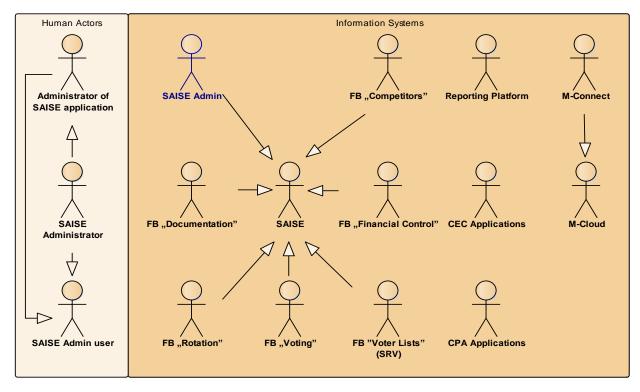


Figure 3.1. SAISE Admin actors.

SAISE Administrator - human actor assigned with Users management rights, monitoring of system operation, SAISE configuration, as well as starting/stopping/restarting the System components. If the technological environment includes sufficient abilities to carry out administration works, then their implementation in the system is optional. This category of actors has got the following distinct roles:

- uses unconditionally all functionalities of the Information System, except for amending the logging files;
- generate User's accounts based on the data regarding the authorized people and actors involved in the electoral process entered by the users with the role of SAISE Admin User;
- generates and exports the DB intended for the Function Block "Voting";
- generates reports related to the audit of SAISE interoperability services;
- manage the SAISE Admin Metadata (configurations, ways of access, credentials for accessing external services, Nomenclatures, classifiers, variables, etc.);
- administers application servers;
- administers production DB;
- configure and generate DB backups.

Administrator of SAISE application - human actor with roles and rights to administer a SAISE Applications that would use the available User's interface with SAISE Admin to administer the data necessary for authentication, authorization, notification and logging procedures implemented within the application it administers. This category of actors has got the following distinct roles:

- manage resources of the administered application (add/edit/delete, configures the logging strategy for the business events produced by the resource, secures the logging of events produced by SAISE applications, sets the rights of access to the resources, configures the transitions of the data flow, etc.);
- manage the roles related to the administered application (add/edit/delete the application-related roles);
- manage Users' accounts related to the application (add/edit/delete Users' Accounts, assigns/eliminates the roles of access to application resources to Users, assigns/eliminates the Users' rights of access to data, etc.).

SAISE Admin user - human actor from CEC assigned with the roles and rights of Metadata administration related to the Function Block "Preparation". This category of actors has got the following distinct roles:

■ manage the data on election and their general configurations;

- configures the CEC territorial infrastructure relating to elections (polling station, district electoral council, hierarchical relations amongst them);
- manage the data on the authorized people related to the CEC territorial infrastructure during elections (members of district electoral council, polling stations staff and their roles);
- manage the data on actors involved in elections (members of initiative groups for conducting a referendum, election accredited observers, authorized representatives of election candidates).

The SAISE Admin implementation implies the interaction of six categories of information systems as follows:

- 1. **SAISE Admin** is intended to improve Function Block "Preparation" of SAISE and deliver the entirety of SAISE administration facilities, necessary for implementing the CEC interoperability framework and is the subject of development and implementation of this document.
- 2. SAISE The State Automated Information System "Elections" (SAISE) developed on the basis of Law No. 101 of 15.05.2008 that implement the CEC electoral processes. As SAISE Admin is supposed to administer much of joint Metadata of other SAISE applications and shall serve as basis for the CEC interoperability framework, this subsystem shall be considered as SAISE kernel. One can define the following SAISE subsystems, which would interact with SAISE Admin:
 - Function Block "Voter Lists", which includes the function associated with the preparation of voter lists, will reuse the totality of relevant Metadata managed through SAISE Admin and will implement the interoperability framework via services rendered by SAISE Admin.
 - Function Block "Competitors", which includes functions associated with the registration of competitors in the SAISE, as well as their trustworthy persons. This IT Subsystem shall reuse the totality of relevant Metadata managed via SAISE Admin and implement the interoperability framework via services rendered by SAISE Admin.
 - Function Block "Documentation", which includes functions of issuing registration and accreditation documents, service cards for the elected persons, generating samples of organization and disposition documents. This IT Subsystem shall reuse the totality of relevant Metadata managed via SAISE Admin and implement the interoperability framework via services rendered by SAISE Admin.
 - Function Block "Voting", which includes the functions of recordkeeping on voting, of votes expressed for candidates, electronic voting, calculation of the number of voters who participated on vote, preliminary totalization of voting results. This IT Subsystem shall reuse the totality of relevant Metadata managed via SAISE Admin and implement the interoperability framework via services rendered by SAISE Admin.
 - Function Block "Rotation", which includes functions of recordkeeping on persons dismissed from elective positions and recordkeeping on persons who can be appointed to vacant elected posts. This IT Subsystem shall reuse the totality of relevant Metadata managed via SAISE Admin and implement the interoperability framework via services rendered by SAISE Admin.
 - Function Block "Financial Control", which includes control functions over the use of funds by competitors during the election campaigns, recordkeeping on amounts lent to competitors by the state, exercising control over the use and repayment of amounts lent by the state, as well as over the funds provided to political parties (financing of political parties). This IT Subsystem shall reuse the totality of relevant Metadata managed via SAISE Admin and implement the interoperability framework via services rendered by SAISE Admin.
 - Function Blok "Electoral Lists" (State Register of Voters) a information system which is keeping the records regarding Moldovan voters, collect, store, update and analyze of information on Moldovan citizens who reached the age of 18 and are not legally limited in exercising their civil rights. This Information System shall reuse the totality of relevant Metadata managed via SAISE Admin and implement the interoperability framework via services rendered by SAISE Admin.
- 3. Reporting Platform represents a universal mechanism reused by all CEC Information Systems aimed for processing and presenting the data in the Reports form. This Information System shall reuse the totality of relevant Metadata managed via SAISE Admin and implement the interoperability framework via services rendered by SAISE Admin.
- 4. **CEC Applications** represent all of the information systems used by CEC; the primary objective is not related to granting direct support to electoral processes (e.g. *accounting system, human resources management system, etc.*), but which indirectly could retrieve data from SAISE to automatize the processes of primary data collection, which are necessary for the business processes managed through these applications. Such applications shall use

the interoperability framework via services rendered by SAISE Admin to implement the automated data anchoring/synchronization procedures.

- 5. **CPA Applications** represent all of the information systems used held by CPAs hosted under the Governmental Technological Platform M-Cloud or outside of it, which would interact with SAISE applications (e.g. *State Register of Voters*) to deliver primary electoral data. This interaction shall be achieved via M-Connect (when the CPAs information systems expose services via M-Connect), either via direct interaction with third party information systems (e.g. *State Register of Population, the State Register of Legal Entities, The MIA applications, etc.*).
- 6. **M-Cloud** a joint governmental information infrastructure, which is operated based on "Cloud Computing" technology that makes available the interoperability framework for SAISE Admin to integrate the following services and Information Systems hosted in M-Cloud. SAISE Admin shall deliver an architecture, which, in the long-run, would integrate via M-Connect with services delivered by the interoperability framework:
 - **M-Connect** the interoperability governmental framework which allows interaction with other public authorities Information Systems.
 - **M-Pass** governmental platform service used to exercise control on the access to information systems and ensure the authentication procedures via a digital certificate or mobile identity.
 - M-Sign governmental platform service used when applying and validating the digital signature, including mobile signature.
 - *M-Log* governmental platform service used for logging all critical business events related to Information Systems of Moldovan public authorities;
 - **M-Notify** governmental platform service used as notification mechanism for all Information Systems hosted in M-Cloud.

4. FUNCTIONAL MODEL OF THE SAISE ADMIN

4.1. Informational Objects of SAISE Admin

The Figure 4.1 presents the informational objects which is serving as foundation for designing and developing the SAISE Admin.

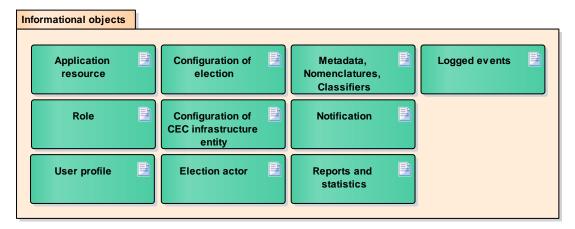


Figure 4.1. SAISE Admin Information Objects.

As can be seen in Figure 4.1, the IT solution comprises ten categories of information objects, of various complexity, to be taken into account in the process of SAISE Admin design and implementation:

- 1. Application resource.
- 2. Role.
- 3. User profile.
- 4. Configuration of election.
- 5. Configuration of CEC infrastructure entity.

- 6. Election actor.
- 7. Metadata, Nomenclatures, Classifiers.
- 8. Notification.
- 9. Reports and statistics.
- 10. Logged events.

Objects shall be identified within the SAISE Admin by using, for each of them, a single identification number.

Application resource.

It represents a complex informational object comprising the totality of data that identify a resource of SAISE applications to ensure a centralized mechanism for managing the security of all SAISE applications.

To introduce this category of informational object into SAISE Admin the following categories of data shall be used:

- resource name;
- identifier of the application to whom the resource belongs;
- alias of the resource;
- resource description;
- resource parent category (resource hierarchical level);
- business events generated by the resource:
 - alias of the event generated by the resource;
 - generic name of business event generated by the resource;
 - description of business events generated by the resource;
 - type of business events (add, edit, delete, view) generated by the resource;
 - activation/deactivation of business events generated by the resource;
 - roles that have access to the business event generated by the resource.
- statuses of business events generated by the resource:
 - name of the business event status generated by the resource;
 - active/inactive status of business event generated by the resource;
 - description of the status of business event generated by the resource;
 - marking the initial status of business event generated by the resource;
 - roles entitled to transfer the resource in the transition status of business event generated by the resource.
- Transitions of business events generated by the resource:
 - name of transition;
 - initial status of transition;
 - final status of transition;
 - arrangement of transition of business event generated by the resource;
 - roles entitled to perform the transition of business event generated by the resource.
- Other relevant data.

Role

It represents a complex informational object comprising the totality of data that identify the rights of access to User's interface of SAISE applications to ensure a centralized mechanism to manage the security of them. To introduce this category of informational object into the SAISE Admin, the following categories of data shall be used:

- role identifier;
- identifier of the application that uses the role;
- generic name of the role;
- role description;
- other relevant data.

Once introduced, a category of informational object of role type would be accessible under resource management modules and Users' profile to configure the rules for accessing the User's interface of Users with the corresponding role.

User profile.

It represents a complex informational object comprising the totality of data related to authorize Users of SAISE applications. This information object will contain the following categories of information:

- User's IDNP code;
- User's Last Name;
- User's First Name;
- Contact E-mail address;
- Contact phone;
- Login;
- Password;
- Authentication strategy (User + Password, Digital Certificate, Active Directory);
- Status of account (active/inactive);
- Type of user (Superuser/Application Administrator/Non-administrator User)
- Access validity period;
- Linguistic version of User's interface;
- SAISE application available to the User;
- User's roles;
- Other relevant data.

Configuration of election

It represents a complex informational object, which defines the totality of data for configuring a election. This information object shall be reused by the majority of SAISE applications and shall comprise the following categories of information:

- Name of election;
- Type of election;
- Date/dates of election;
- Period/periods of electoral campaign;
- CEC infrastructure involved in the elections (polling stations, election district, etc.);
- Other relevant data.

Configuration of CEC infrastructure entity

It represents a complex informational object, which defines the totality of data for configuring a CEC entity to be involved in the elections (polling station, district electoral council, etc.) This informational object shall be reused by most SAISE

applications and shall comprise the following categories of information:

- name of CEC infrastructure entity;
- entity parent (hierarchical level of the current entity);
- data on geographical location of the entity;
- address of the entity;
- contact phone of the entity;
- contact E-mail of the entity;
- status of the entity (active/inactive);
- other relevant data.

Election actor

It represents a complex information object, which defines the totality of data for configuring an actor involved in the election representing the CEC, competitor or the bodies registered as observers. For part of actors representing the CEC SAISE Admin a User's account would be generated automatically so that this informational object is able to supply the following data regarding the actor:

- IDNP;
- Last name;
- First name;
- E-mail;
- Phone;
- Type of actor (polling station staff, operator of polling station, observer, etc.);
- The entity represented by the actor (polling station, competitor, etc.);
- Other relevant data.

Metadata, Nomenclatures, Classifiers

This represents a category of complex informational objects comprising the totality of Classifiers, Nomenclatures and Metadata used under SAISE Admin and SAISE applications.

It shall comprise the totality of national Classifiers managed by the *National Bureau of Statistics*, *S.E. "CRIS Registru"* and internal Nomenclatures of *SAISE* such as:

- State Classifiers/Nomenclatures (CUATM, CFOJ, Addresses etc.);
- Internal Classifiers/Nomenclatures of SAISE;
- Variables to configure SAISE applications (ways of access, global variables, etc.);
- Configurations of access to external WEB services;
- Other categories of Metadata.

Notification

This represents a category of complex informational objects used for notification with or without confirmation of *SAISE* application authorized Users. A notification shall comprise the following specific information:

- identifier of notification (order number assigned automatically by SAISE Admin).
- the application that sent the notification;
- business event related to the notification;
- reference of access to the business event that sent the notification (where appropriate);
- timestamp of the notification delivery;
- notification delivery strategy (E-mail or internal messenger, SAISE application);

- subject of the notification;
- content of the notification;
- sender of the notification;
- recipient of the notification;
- other relevant data.

Reports and statistics

This represents a complex informational object comprising the totality of predefined Reports (physically incorporated) or generated instantly by *SAISE Admin*, designed for types of authorized Users with the aim to publish, manage and monitor the activity of all people who interact with *SAISE* applications.

The informational object Reports and statistics shall be described by the following categories of data:

- identifier (order number assigned automatically by SAISE);
- report name;
- reference period;
- report content.

Logged events

This represents a complex informational object intended for conducting the ICT audit and implementing the information security policy. Any accessing or modification of data: creation, updating, deletion, changing the status, etc. shall be logged in a special log file, with the recorded timestamp, the application, the event and the User who carried out the action. When the modifications do not involve physical removal of data for each registration, it would be possible to see the User who made the last change.

4.2. Basic Functionalities of SAISE Admin

The functionalities provided by SAISE Admin and the actors who can benefit from them are displayed in Figure 4.2.

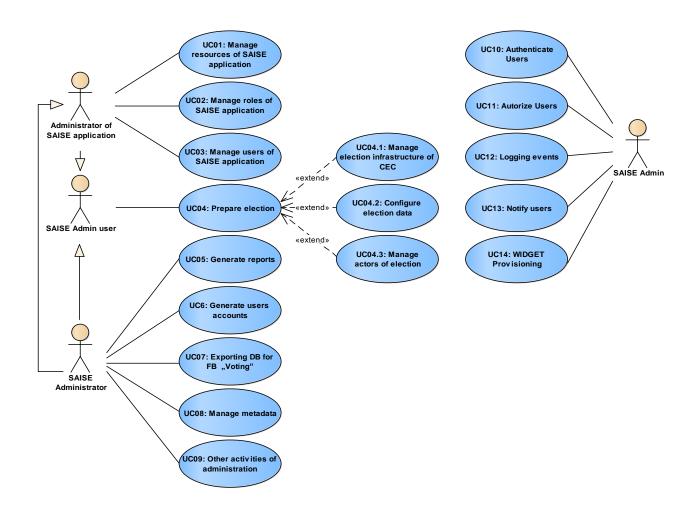


Figure 4.2. Functionalities of the SAISE Admin.

According to the Figure 4.2, SAISE Admin actors have access to 14 use cases that provide the following functionalities:

UCo1: Manage resources of SAISE application

Administrator of SAISE application can configure and manage the relevant SAISE application in order to manage the access of authorized Users via the User's interface and data provided and administered by SAISE application. As resource shall be considered any modular component of the application (form, menu, menu option, field, etc.), which degree of details is sufficient for configuring the rights of access, transitions of workflows and actions accessible to Users.

The mechanism for centralized management of *SAISE* applications resources will deliver a centralized mechanism to manage the Users' access rights. In particular, for the election period, this mechanism shall ensure support to the function of automatic generation of Users with temporary access to DB for configuring the election (depending on the actor introduced in the election, access shall be granted to those application resources, which are relevant).

UCo2: Manage roles of SAISE application

This represents a function available to Administrator of SAISE application by which it is possible to configure and manage the SAISE applications roles in order to authorize access to the User's interface and data access and administered by the information system. Depending on the roles attached to a User's account, SAISE applications shall know and provide the User's interface and data available to it.

UCo3: Manage users of SAISE application

This represents a function available to Administrator of SAISE application by which it is possible to configure and manage the Users' profiles of SAISE applications. This is a centralized mechanism for administering the Users who have access to all SAISE applications.

UCo4: Prepare election

This is one of the most important use case of the SAISE Admin necessary to configure and update all data related to election. This use case corresponds to Function Block "Preparation", which data are used by other SAISE applications. This use case shall be implemented via the following use cases:

- UCo4.1: Manage election infrastructure of CEC. It represents a function by which the CEC Users are empowered with the respective roles of SAISE Admin shall manage the data about CEC territorial infrastructure used during elections (polling stations, district electoral council, hierarchical relations amongst them, etc.);
- UCo4.2: Configure election data. It represents a function by which the CEC Users are empowered with the
 respective roles of SAISE Admin shall manage the data related to elections conducted in the Republic of
 Moldova.
- UCo4.3: Manage actors of election. It represents a function by which the CEC Users are empowered with the
 respective roles of SAISE Admin shall manage the data of the authorized persons related to CEC territorial
 infrastructure during the election period (members of district electoral council, members of polling station, etc.)
 and other categories of actors involved in elections (members of initiative groups for conducting a referendum,
 observers accredited to elections, authorized representatives of competitors).

UCo5: Generate Reports

Function accessible to users of SAISE Administrator level that enables generating predefined administrative and ad hoc reports on the performed processes of all SAISE applications. Such reports are useful for the analysis of carried processes (system information base, performance of authorized Users), allowing to anticipate the information security issues

UCo6: Generate Users' Accounts

This is a function accessible to SAISE Administrator user level that enables automatic generation of Users' accounts with the right of access to SAISE applications based on the data on the involved actors in elections, managed via the use case UCo₅. SAISE Admin shall create automatically Users' accounts and fill in the profiles with data managed via Function Block "Preparation", having assigned automatically relevant roles and rights to each User.

UCo7: Exporting DB for FB "Voting"

This is a function accessible to SAISE Administrator user level that enables automatic generation of DB for the IT subsystem that implement Function Block "Voting". The use case UCo7 shall generate a DB to comprise the totality of records necessary for the operation in good conditions of Function Block "Voting".

UCo8: Manage Metadata

This use case delivers the functionalities intended for SAISE Administrator by which nomenclatures, classifiers and other types of metadata of the SAISE Admin can be administered.

UCog: Other activities of administration

This use case is intended for SAISE Administrator that describes the functionalities accessible to them and used to administer and audit the SAISE:

- maintain the list and integrity of credentials of users who have access to the administration area;
- retrieval of the Reports from the system logs to be subject to analysis/review and to detect any potential security issues of SAISE, etc.

SAISE Administrator shall have a mechanism for configuring and assigning roles to all categories of Users involved in the administration and operation of the information system. This mechanism shall enable defining the parameters of access to interface, services, files and DB contents.

UC10: Authenticate Users

This use case is intended to implement a universal procedure to authenticate all SAISE applications via a web service. It is useful when *SAISE* applications are designed by different Developers. The WEB Service shall enable elimination of the need to have an authentication mechanism in place for each CEC applications (authentication service shall be required all the time).

The authentication service shall be a first step of the CEC service bus (the interoperability framework of CEC applications). The IT solution shall be developed on the basis of an Architecture that would subsequently enable (after bringing in the production of the SAISE Admin) implementing authentication procedures via the government service for authentication and authorization M-Pass (for authentication based on digital certificate).

UC11: Authorize the Users

This use case is intended to implement a universal authorization procedure (via a web service) for all *SAISE* applications. It is useful when *SAISE* applications are designed by different Developers. The WEB Service shall enable elimination of the need to have an authorization mechanism in place (authorization service shall be required all the time). The authorization service shall be a first step of the CEC service bus (the interoperability framework of CEC applications).

UC12: Logging Events

It is intended for the implementation of a universal logging procedure of business events generated through the operation of SAISE applications to ensure audit and security procedures of information systems.

WEB Service shall enable excluding the need to develop a separated logging mechanism for each *SAISE* application. The logging service shall be a first step of the CEC service bus (the interoperability framework of CEC applications). The IT solution shall be developed on the basis of an Architecture that would subsequently enable (after deployment of *SAISE Admin*) the implementation of logging procedures via the government service for logging *M-Log*.

UC13: Notify Users

It is intended to implement a universal user notification procedure (messaging, E-mail) for all *SAISE* applications. This WEB Service shall enable excluding the need to develop a notification mechanism for each *SAISE* application (notification service shall be required all the time).

The notification service shall be a first step of the CEC service bus (the interoperability framework of CEC applications). The IT solution shall be developed on the basis of an Architecture that would subsequently enable (after deployment of *SAISE Admin*) implementing notification procedures via the government service for notification *M-Notify*.

UC14: WIDGET Provisioning

It is a use case which allow authenticated user to navigate between the SAISE applications using a single sign on mechanism. This fact is useful when the User has got the rights of access to several SAISE applications without the need to change URL or go through repeated authentication procedures to go from one application to another.

4.3. User Interface of SAISE Admin

SAISE Admin shall offer an ergonomic interface, intuitive and accessible to all types of Users via a web browser optimized for the resolution of 1360x768. The System shall have an agreeable, balanced and distinct graphical design, responsive to the totality of devices used (desktop PC, notebook, tablet, smartphone). While developing the concept of User interface it is advisable to take account of the good CEC practices implemented in the following applications: SRV, Function Block "Voting". For Users' simplicity, the IT solution shall have a system of online contextual help (the Romanian version - mandatorily), at the level of each User interface.

Users with the role of Administrator of SAISE application, SAISE Administrator and SAISE Admin User shall have access to User interface with the aim to exercise the duties, carrying out the following tasks:

- Administration of SAISE applications resources;
- Administration of SAISE applications roles;
- Administration of SAISE applications user profiles;
- Exporting of the DB intended for conducting elections (intended for Function Block "Voting");
- Management of common Metadata intended for the operation of all SAISE subsystems;
- Insertion and administration of data related to Function Block "Preparation".

SAISE Admin shall deliver a user interface in Romanian language. The procedures of data retrieval shall be performed via simple search or via more complex search forms (QBE forms). Regardless of the type of searched information, the User shall use the same method of queries and retrieval of information for any section of SAISE Admin.

In addition to the searching module implemented based on QBE principle, which would offer the possibility to define visually sophisticated queries, the interface shall offer the possibility to refine the search results by ensuring the possibility to filter the data in the list containing the search results.

The SAISE Admin user interface shall ensure filtering the records that match the search criterion presented by Users depending on their rights of access.

Indexed values (values from Classifiers, Nomenclatures) shall have the option to be filtered by picking up the value from predefined lists. For numerical types of fields or calendar data there should be the possibility to filter as per the exact value of the searched characteristic (*Example: 31.10.2013 - all records with the specified date*) or by logical criteria

(Example: **<28.09.2014** – all records with the date older than 28.09.2014, **>11.02.1996** – all records with the date more recent than 11.02.1996).

Also, it should be granted the possibility to filter the result according to the mask (*for example, filtering by IDNP*) as per the sample: **og85600043*** - all the records that begin with the series of characters "**og85600043**", ***ESCU** - all the records that end with the series of characters "**ORA*** - all the records that comprise the series of characters "**ORA*** in their contents.

The content of any table with results or electronic format, depending on the type of information comprised, shall have the possibility to be exported in any of the following format: CSV, RTF and PDF.

4.4. Reporting, Audit and Statistics Mechanism of SAISE Admin

SAISE Admin should have implemented functionalities intended for auditing/logging widely used in this area. This is configurable for logging technical and business events. The information system shall deliver a mechanism to generate predefined and ad hoc reports capable to ensure a pertinent review or assessment of the processes for SAISE Admin functionalities operation. It is timely that SAISE Admin could deliver an OLAP mechanism intended for dynamic generation of various ad hoc reports.

SAISE Admin shall be capable to interact with the CEC Reporting Platform to have access to certain reports customized to the needs of SAISE Admin authorized Users.

5. REQUIREMENTS FOR THE SAISE ADMIN

5.1 Functional Requirements

UCo1: Manage resources of SAISE Application

The functional requirements related to centralized management component of SAISE applications resources are defined in Table 5.1.

Table 5.1. The functional requirements set for the use case UCo1

Identifier	Binding Requirements	Functional Requirement Description
FR 01.01	М	SAISE Admin will deliver a centralized mechanism for the registration of all SAISE applications resources in order to deliver a centralized mechanism for defining the Users' rights of access to Users' Interfaces of all SAISE applications.
		As resource shall be deemed any modular component of the application (form, menu, menu option, field, etc.), which degree of details is sufficient for configuring the rights of access, transitions of workflow and actions accessible to Users.
FR 01.02	М	<i>SAISE Admin</i> shall enable configuring application resource hierarchy, at the root level being placed relevant <i>SAISE</i> applications, while the subordinated levels shall not be limited in their depth, the hierarchy being determined by their architecture.
FR 01.03	М	Depending on the administrated application, the Users with the role of Administrator of SAISE application shall have access to the administered resource applications only.
FR 01.04	М	Any resource registered within <i>SAISE Admin</i> shall contain data on the: <i>SAISE</i> application, generic name, alias, brief description, actions available to Users (business events they could generate), statuses through which the managed via resource data may go and transitions during the status change.
FR 01.05	М	SAISE Admin will be able to define the authorizations related to actions (of business events) available to Users with access to resources. SAISE Admin

Identifier	Binding Requirements	Functional Requirement Description
		shall enable configuring the following categories of actions available to Users:
		■ view records;
		■ add records;
		■ update records;
		■ delete records;
		■ other relevant actions.
FR 01.06	М	When configuring a business event of resource SAISE Admin shall enable the introduction of the following data:
		■ event alias;
		■ generic name of the business event;
		■ description of the business event;
		■ type of the business event (visualizing, supplementing, amending, removing);
		■ activation/deactivation of business event;
		■ rules for logging a business event;
		■ roles that have access to the business event.
FR 01.07	М	SAISE Admin shall ensure logging of all active business events generated by the resources of the system. Once a business event is activated — automatically the logging is activated without the possibility to deactivate (deactivation of logging will occur in parallel with the deactivation of the business event).
FR 01.08	М	The logging strategy (logging rules) consists of configuring the additional parallel logging parameters through <i>M-Log</i> (activation/deactivation of parallel logging of business event via <i>M-Log</i>).
FR 01.09	М	SAISE Admin would be able to define the transaction statuses through which the data of a SAISE application resource can go through (workflow links). This shall allow to configure the technological stages through which they pass, e.g.: data of an electronic form of the application. The following data shall be defined:
		■ status name;
		■ status: active/inactive;
		■ status description;
		■ marking the incipient status;
		■ roles entitled to transfer the resource in the transition status.
FR 01.10	М	SAISE Admin shall be able to define the transitions through which the data of a SAISE application resource could go (configuring the workflow: transition from one status to another). This fact shall enable configuring the possible transitions amongst admissible statuses of SAISE application resource. The following data shall be defined:
		■ transition name;
		■ transition incipient status;

Identifier	Binding Requirements	Functional Requirement Description
		■ transition final status;
		■ authorization of transition;
		■ roles entitled to perform the transition.
FR 01.11	М	In order to configure the transitions, <i>SAISE Admin</i> shall deliver the activation/deactivation function to notify the Users affected by this transition.
FR 01.12	М	The Developer shall prove proper functioning of SAISE application resources management mechanism via configurations of SAISE Admin resources. All the resources, business events, statuses and transitions of SAISE Admin resources will be configured and the use of their configuration shall be proved.

UCo2: Manage roles of SAISE Application

The functional requirements related to centralized management component of SAISE applications roles are defined in Table 5.2.

Table 5.2. The functional requirements set for the use case UCo2

Identifier	Binding Requirements	Functional Requirement Description
FR 02.01	М	SAISE Admin shall deliver a centralized mechanism to record the roles of all SAISE applications in order to deliver a centralized mechanism for defining the Users' rights of access to Users' Interfaces of all SAISE applications.
FR 02.02	М	Depending on the administered application, the Users with the role of Administrator of SAISE application shall have access to the roles of administered applications only (would be able to configure and manage only the roles for those related applications).
FR 02.03	М	One role is defined by the generic name, brief description and the active/inactive status. UCo3: Manage Users of SAISE Application
FR 02.04	М	Once the role is introduced and activated, it would be available to be used in Users' management modules (attaching to Users' roles) and resource management (attaching the roles that have access to resources and configuring the method of access to them).
FR 02.05	М	SAISE Admin shall not enable removing a role if it is attached at least to one User or one resource.
FR 02.05	М	The Developer shall prove proper functioning of the management mechanism of SAISE Application roles via configuring SAISE Admin roles. All SAISE Admin roles shall be configured and proper functioning of the configuration shall be proved.

UCo3: Manage Users of SAISE Application

The functional requirements related to centralized management of SAISE Admin Users' profiles, are defined in Table 5.3.

Table 5.3. The functional requirements set for the use case UCo_3

Identifier	Binding Requirements	Functional Requirement Description
FR 03.01	М	SAISE Admin shall deliver a centralized mechanism to manage the profiles (accounts) of all Users of SAISE applications.
FR 03.02	М	SAISE Admin shall contain a default category of Users created by the Developer and credentials shall be assigned to it upon delivery for the category of Super-administrator (Supervisor Administrator).
FR 03.03	М	SAISE Admin shall enable the possibility of lock/unlock of the User's access.
FR 03.04	М	Within the Users' profiles the following categories of data should be managed:
		■ user's last name;
		■ user's first name;
		■ contact E-mail address;
		■ contact phone;
		■ login access;
		■ password access;
		■ authentication strategy (User + Password, Digital Certificate, Active Directory);
		■ active/inactive account;
		■ Supervisor Administrator/Administrator Application/ Non-administrator User;
		■ access validity period;
		■ linguistic version of User's interface;
		■ SAISE Application available to the User;
		■ user's roles;
		■ other relevant data.
FR 03.05	М	Profiles of Users of SAISE Applications could be added by Supervisor Administrators and Administrator of SAISE application only.
FR 03.06	М	SAISE Admin shall deliver a defining mechanism for Users' rights of access to data depending on geographical criteria (district electoral council, locality, district, municipality etc.) or organizational (polling station, district electoral council, CEC subdivision, etc.).
FR 03.07	М	A User account could be physically removed only when there is no event logging produced by the removed User or data entered by him.
FR 03.08	М	A User account could be physically removed only when the User has no access to other applications and there is no event logging produced by the removed User.
FR 03.09	М	Regardless of the actor that created the User's account, the Users of Supervisor Administrator or Administrator of SAISE application would be able to edit the profile and assign/revoke roles of SAISE Application.
FR 03.10	М	The Developer shall prove proper functioning of the management mechanism of Users (their roles and rights) based on the resource configurations and <i>SAISE Admin</i> roles.

UCo4. Prepare Elections

The functional requirements related to Function Block "Preparation" are defined in Table 5.4.

Table 5.4. The functional requirements set for the use case UCo4

Identifier	Binding Requirements	Functional Requirement Description
FR 04.01	М	SAISE Admin shall deliver a mechanism to implement all functionalities of the Function Block "Preparation".
FR 04.02	М	Functionalities of the Function Block "Preparation" shall be accessible to SAISE Admin User type, which were assigned the corresponding roles.
FR 04.03	М	SAISE Admin shall deliver functionalities to manage the following categories of data related to Function Block "Preparation":
		■ data about elections;
		■ data about polling stations;
		■ data about electoral districts;
		■ data about members of electoral districts;
		■ data about members of polling station;
		■ data about members of initiative groups;
		■ data about observers of elections;
		■ data about representatives of competitors.
FR 04.1.01	М	SAISE Admin shall deliver a functionality of configuration of the CEC infrastructure used during the elections (add, update, delete, activate/deactivate of CEC infrastructure entity).
FR 04.1.02	М	SAISE Admin shall enable defining the hierarchy of entities related to CEC infrastructure for elections (CEC, district electoral council, polling stations etc.).
FR 04.1.03	М	CEC infrastructure related to elections could be reused for the future elections.
FR 04.1.04	М	SAISE Admin shall not have the possibility of removing an entity stored in the SAISE DB (district electoral council, polling station etc.) if it was used in the past elections at least once.
FR 04.1.05	М	SAISE Admin shall deliver functionalities for the deactivation (hiding) of an entity (district electoral council, polling station etc.) so that it could not be used for other elections (if the entity does not exist anymore).
FR 04.1.06	М	SAISE Admin will deliver functionalities to reactivate (display) an entity (electoral council, polling station etc.) so that it could be used in elections (meaning that the entity has been reactivated/reestablished etc.).
FR 04.1.07	М	SAISE Admin shall enable drafting a set of data related to CEC infrastructure to conduct elections that is sufficient for automatic generation of profiles of authorized Users and assigning specific roles to them (e.g. period of validity of polling station operators' accounts).

Identifier	Binding Requirements	Functional Requirement Description
FR 04.1.08	М	SAISE Admin shall enable drafting a set of data related to CEC infrastructure to conduct elections that is sufficient for the generation of DB related to Function Block "Voting" and its reuse by other SAISE applications.
FR 04.2.01	М	SAISE Admin shall deliver functionality for the configuration of elections (add, update, delete the elections).
FR 04.2.02	М	SAISE Admin shall not enable the removal of elections data if they are used in the DB and are used also by other SAISE Applications.
FR 04.3.01	М	SAISE Admin shall deliver functionality for managing the data related to actors involved in elections (add, update, delete the actor).
FR 04.3.02	М	SAISE Admin shall deliver functionalities enabling to manage the data for the following categories of actors involved in elections:
		■ members of polling station office (including operators);
		■ members of electoral councils;
		■ members of initiative groups;
		■ observers of elections;
		■ representatives of competitors;
		■ other relevant categories of actors.
FR 04.3.03	М	Data for the identification of actors involved in elections (IDNP, full name, domicile, gender, etc.) shall be retrieved automatically from the existent State Register of Voters.
FR 04.3.04	М	SAISE Admin shall not enable the removal of an actor involved in elections if this data is used in the SAISE DB.
FR 04.3.05	М	SAISE Admin shall enable drafting a set of data related to the actor involved in elections sufficient for automatic generation of profiles of authorized Users and assigning them specific roles (e.g. Last name, First name, IDNP, etc.).
FR 04.3.06	М	SAISE Admin shall enable drafting a set of data related to the actors involved in elections that is sufficient for the generation of DB related to Function Block "Voting" and for its reuse by other SAISE Applications.

UCo5. Generate Reports

The functional requirements related to the mechanism of report retrieval with the aim to conduct a ICT audit of SAISE Applications are defined in Table 5.5.

Table 5.5. The functional requirements set for the use case UCo5 $\,$

Identifier	Binding Requirements	Functional Requirement Description
FR 05.01.	М	The System shall be able to offer a number of management reports, statistical reports and ad-hoc reports so that the administrative roles could monitor the system's activity and status.
FR 05.02.	М	The SAISE Admin reporting mechanism is intended to support the audit and does not include Reports related to CEC business activities.

Identifier	Binding Requirements	Functional Requirement Description
FR 05.03.	М	Such reporting is necessary for the whole system, including:
		■ Nomenclatures and classifiers;
		■ records;
		■ User activity;
		■ access and security authorizations.
FR 05.04.	М	The reporting mechanism shall contain OLAP solution intended for the generation of ad-hoc reports.
FR 05.05.	М	The System shall make available to administrative roles a series of configurable standard reports and it shall be easy to authorize the production of ad-hoc reports upon request.
FR 05.06.	М	Reports shall be generated based on the following categories of logging events:
		■ successful authentication of Users;
		■ unsuccessful authentication of Users;
		■ notification sent;
		■ actions performed on data (add, update, delete).
FR 05.07.	М	The System shall enable aggregated retrieval of reports or their detailing by specific User or by subdivision of a group of Users.
FR 05.08.	М	A User that visualize a report within the system shall be able to export it to an editable external file.
FR 05.09.	М	The Developer shall implement up to 10 predefined reports for the IT audit requested by the <i>CEC</i> .

UCo6. Generate Users Accounts

The functional requirements related to the mechanism for automatic generation of Users' accounts are defined in Table 5.6.

Table 5.6. The functional requirements set for the use case UCo6

Identifier	Binding Requirements	Functional Requirement Description
FR 06.01.	М	SAISE Admin shall deliver a mechanism for automatic generation of Users' accounts in the DB managed via the use case UCo4.
FR 06.02.	М	Only SAISE Administrator would be able to launch the process of User's account generation.
FR 06.03.	М	To generate Users' accounts <i>SAISE Admin</i> shall take automatically the data on the categories of relevant actors introduced via UCo ₄ (these data contain the totality of details on the profile, roles and rights to be assigned to Users' accounts).
FR 06.04.	М	While generating the account, <i>SAISE Admin</i> shall assign automatically a non-trivial Password to the User's account.

Identifier	Binding Requirements	Functional Requirement Description
FR 06.05.	М	Once generated and activated Users' account, SAISE <i>Admin</i> shall have the possibility of notification to the contact E-mail address on credentials of the generated/activated User.
FR 06.06.	М	SAISE Admin shall have the operation to retrieve and print out (after going through certain filtering criteria) the list of Users with their related credentials (including username and password of the User's account) into an editable type of format file (*.xls, *.xlsx, *.csv, *.doc etc.).
FR 06.07.	М	The main criteria of unique User's account is its IDNP Code.
FR 06.08.	М	If in the process of account generation it is detected an old account with the same IDNP, <i>SAISE Admin</i> shall take the actions necessary to update that profile, activate the account and generate a new access password.
FR 06.09.	D	As a User's login, it is preferable to utilize the IDNP Code of the person properly.
FR 06.10	М	It is required to ensure logging of all actions related to automatic generation of Users' accounts and their results.

UCo7. Exporting DB for the Function Block "Voting"

The functional requirements related to automatic generation of a DB for the applications operation on the Election Day are defined in Table 5.7.

Table 5.7. The functional requirements set for the use case UCo7

Identifier	Binding Requirements	Functional Requirement Description
FR 07.01.	М	SAISE Admin shall deliver a mechanism for automatic generation of a DB for the operation of applications on the election day (Function Block "Voting").
FR 07.02.	М	The process of DB generation for the applications of Function Block "Voting" shall be launched by SAISE Administrator only.
FR 07.03.	М	The DB intended for the applications of Function Block "Voting" shall be generated based on the selected elections (a single selection) and on data related to it: CEC electoral infrastructure, voters' profile from the SRV, profiles of Users with roles assigned under the applications of Function Block "Voting" etc.
FR 07.04.	М	The layout of the generated DB shall meet the constraints effective for the applications of Function Block "Voting".
FR 07.05.	М	The Developer shall prove the correctness of exporting the DB for the applications of Function Block "Voting" through the proper functioning of the applications of Function Block "Voting" (no changes would be required in the programme code of the applications of Function Block "Voting").
FR 07.06.	М	It is required to ensure logging of all actions related to automatic generation of a DB intended for the applications of Function Block "Voting".

UCo8. Manage Metadata

 $The functional\ requirements\ related\ to\ SAISE\ Admin\ Metadata\ management\ are\ defined\ in\ Table\ 5.8.$

Table 5.8. The functional requirements set for the use case UCo8

Identifier	Binding Requirements	Functional Requirement Description
FR 08.01.	М	The System shall have a mechanism for managing the Nomenclatures, Classifiers that contain the totality of Metadata DB.
FR 08.02.	М	If necessary, classifiers managed by the <i>National Bureau of Statistics (CAEM Rev.2, CUATM, CFOJ, CFP</i> , etc.) shall be used, as well as other official classifiers managed by <i>CPAs</i> and LPAs of the Republic of Moldova.
FR 08.03.	М	The rights on making changes shall be limited for official classifiers. For this category of classifiers amendments shall be made only when the latter are operated by the CPA that administers them.
FR 08.04.	М	For the system of Nomenclatures and in-house Metadata, the IT solution shall ensure their dynamic administration.
FR 08.05.	М	The System shall not enable the removal of any category of Metadata if it is used at least in one DB entry.
FR 08.06.	М	The System of Metadata administered via SAISE Admin shall comprise:
		■ system configuration for all SAISE applications;
		■ parameters and constant values necessary to ensure the functioning of SAISE applications;
		■ configurations of external services accessed by SAISE applications;
		■ official Nomenclatures and classifiers of the Republic of Moldova (CUATM, FOJ, CAEM etc.);
		■ Nomenclatures and classifiers related to the Function Block "Preparation";
		■ other categories of global Metadata reused by SAISE applications.

UCog: Other Activities of Administration

The functional requirements related to administration activities of SAISE Admin are defined in Table 5.9.

Table 5.9. The functional requirements set for the use case UCo9

Identifier	Binding Requirements	Functional Requirement Description
FR 09.01.	М	The System shall allow the administrative roles to retrieve, display and reconfigure the parameters of SAISE applications functioning and all of system settings.
FR 09.02.	М	The System shall allow for dynamic administration of all Nomenclatures and Classifiers, as well as of other entities related to the Metadata system.
FR 09.03.	М	SAISE Admin shall enable the SAISE Administrator to configure the access to WEB services delivered by external Information Systems with which SAISE applications interact.
FR 09.04.	М	SAISE Admin shall enable the SAISE Administrator to access the system logs.
FR 09.05.	М	SAISE Admin shall enable the SAISE Administrator to monitor the operation of SAISE applications.

Identifier	Binding Requirements	Functional Requirement Description
FR 09.06.	М	SAISE Admin shall enable the SAISE Administrator to generate the IS backups and to recover the system operation based on these backups;
FR 09.07.	М	SAISE Admin shall deliver to the SAISE Administrator the totality of functionalities necessary to ensure sound operation of SAISE applications in safe conditions.

UC10: Authenticate Users

The functional requirements related to Users' authentication component of SAISE applications are defined in Table 5.10.

Table 5.10. The functional requirements set for the use case UC10

Identifier	Binding Requirements	Functional Requirement Description
FR 10.01	М	Authentication of Users of SAISE applications shall be done via a WEB service delivered by SAISE Admin.
FR 10.02	М	Depending on the User (data for configuring its profile) authentication, the WEB service shall be taken into account the following authentication constraints:
		■ mandatory connection through VPN;
		■ IP address or MAC of access;
		■ authentication via User name + Password;
		■ authentication via the digital certificate;
		■ authentication via Active Directory.
FR 10.03	D	SAISE Admin shall ensure authentication of Users via the governmental authentication service M-Pass of M-Cloud Platform.
FR 10.04	М	As User's credentials for authentication could serve the credentials configured in SAISE Admin.
FR 10.05	М	SAISE Admin shall use a mechanism that relies on minimum traffic and server resources to ensure conducting the authentication procedure and authorized operation of SAISE applications.
FR 10.06	М	The Users' authentication mechanism with SAISE applications shall offer Single Sign-On and Single Logout mechanisms regardless of the application that is initially accessed or abandoned by the User.
FR 10.07	М	It is necessary to ensure logging of all authentication and disconnection events in SAISE Admin corresponding tables.

UC11: Authorize Users

The functional requirements related to the Authorization Component for the Users of SAISE Applications are displayed in Table 5.11.

Table 5.11. The functional requirements set for the use case UC11

Identifier	Binding Requirements	Functional Requirement Description
FR 11.01	М	Authorizing the access of Users of SAISE applications shall be done via a WEB service delivered by SAISE Admin.
FR 11.02	М	Depending on the User (data on its profile configuration), accessible roles and configurations of application resources where he is authenticated, the WEB service shall deliver to the application the totality of data necessary to configure the user interface provided to the User.
FR 11.03	М	Depending on the User (data on its profile configuration), the WEB service shall deliver to the application the totality of data necessary to configure the limitation of data access for this User.
FR 11.04	D	The WEB Service authorization delivered by <i>SAISE Admin</i> shall be capable to take over the totality of data necessary to provide Users' interfaces and apply constraints on access to data via the governmental authentication service <i>M-Pass</i> .

UC12: Logging Events

The functional requirements related to logging component of business events produced during the operation of SAISE applications are defined in Table 5.12.

Table 5.12. The functional requirements set for the use case UC12

Identifier	Binding Requirements	Functional Requirement Description
FR 12.01	М	Logging of business events produced during the operation of <i>SAISE</i> Information Systems shall be done via a WEB service delivered by <i>SAISE Admin</i> .
FR 12.02	М	Depending on the application resource (data for resource configuration), the WEB service shall deliver three logging rules of business events generated by a specific resource.
FR 12.03	М	The following categories of events shall be logging:
		■ User's authentication;
		■ User's disconnection;
		■ adding/updating/deleting/activating/deactivating/ accessing/registering;
		■ business events specific for applications (multiple voting, failed search of a voter, vote interdiction, interdiction on inclusion on the list of candidates, interdiction to be assigned a mandate, registration of voters on the main/supplementary list, registration of voters for the mobile ballots, accessing personal data etc.);
		■ report generation/accessing;
		■ DB querying;
		■ other specific business events.
FR 12.04	М	The logging events would save the following categories of data (depending on the type of logging event):
		■ identifier of application;
		■ identifier of User that generated the event;

Identifier	Binding Requirements	Functional Requirement Description
		■ category of event logging;
		■ time of event logging;
		■ resource of applications that generated the business event;
		■ registration affected by the business event;
		■ action performed by the User.
FR 12.05	М	The System shall ensure in-depth logging of all produced business events.
FR 12.06	М	The SAISE Applications shall ensure parallel logging, via the governments logging service M-Log, of critical events for which such a logging strategy was configured in the resources.

UC13: Notify Users

The functional requirements related to the component of notification of Users of SAISE Applications are defined in Table 5.13.

Table 5.13. The functional requirements set for the use case UC13

Identifier	Binding Requirements	Functional Requirement Description
FR 13.01	М	Notification of Users of SAISE Applications shall be done via a WEB service delivered by SAISE Admin.
FR 13.02	М	Depending on the type of User (its profile), the WEB service for notification shall apply one out of 3 notification strategies:
		■ notification via E-mail;
		■ notification in the User's dashboard;
		■ both categories mentioned above.
FR 13.03	М	Depending on the configurations of application resources, the WEB service for notification shall send to relevant Users a notification when a transaction has taken place within the application resource.
FR 13.04	М	SAISE Admin shall use a standard format for notification so that it should be easy to implement and recognize it within all SAISE applications.
FR 13.05	D	Notification shall contain reference to accessing the resource /form / relevant business events, which generated the notification.
FR 13.06	D	SAISE Admin shall notify SAISE Administrator on any issues that may affect SAISE Admin performance and availability.
FR 13.07	D	The WEB Service notification delivered by <i>SAISE Admin</i> shall be capable to send notifications via the Government service <i>M-Notify</i> .

UC14: WIDGET Provisioning

The functional requirements related to the widget of rapid access of SAISE applications to User's interface are defined in Table 5.14.

Table 5.14. The functional requirements set for the use case UC14

Identifier	Binding Requirements	Functional Requirement Description
FR 14.01	М	SAISE Admin shall deliver a WIDGET that shall ensure access to all SAISE applications available for an authenticated User.
FR 14.02	М	WIDGET delivered by SAISE Admin can be easily incorporated in the User's interface of SAISE applications.
FR 14.03	М	Once authenticated in application, SAISE User, SAISE WIDGET shall check the rights and roles assigned to it and display buttons, icons/reference of direct access to other SAISE applications accessible to the User.
FR 14.04	М	Accessing another SAISE application via <i>SAISE</i> WIDGET shall not require repeated authentication (the Single Sign-On mechanism defined in FR10.06 shall apply).

5.2. SAISE Admin Non-functional Requirements

General and Performance Requirements

The general system and performance requirements are defined by the policy and strategies developed and adopted in the Republic of Moldova. It is worth noting that these documents are based on the best field-related practices and cover a series of organizational and technical measures. The general system requirements specific for SAISE Admin are defined in Table 5.15.

Table 5.15. All system requirements of SAISE Admin

Identifier	Binding Requirements	Requirement Description
TGEN 001	М	All Users' Interfaces and the DB content shall be prepared in Romanian, using the Romanian diacritics.
TGEN 002	М	The User's Interface elements shall comply with Level A of Web Content Accessibility Guidelines (WCAG) 2.0.
TGEN 003	М	The User's Interface shall be optimized to 1360x768 resolution, having avoided the appearance of scrollbars for the voter's search forms and records on his/her presence to the polling station.
TGEN 004	М	SAISE Admin shall have the possibility to adjust the User's interface (shall deliver a responsive interface) depending on the device used (notebook, netbook, desktop PC, Smartphone, tablet, etc.)
TGEN 005	М	SAISE Admin shall ensure compatibility with W3C XForms standard.
TGEN 006	М	SAISE Admin shall be optimized in the minimum data transfer between the client computer and server, having focused on avoiding as much as possible the redundant requests, implementing AJAX with JSON, reducing to minimum the server resources necessary for authentication, authorization and logging procedures.
TGEN 007	М	SAISE Admin shall be based on at least a three-level service-oriented architecture (with a distinct level for data).
TGEN 008	М	The potentially variable information of SAISE Admin (parameter, methods of storage of data, methods of connecting to external services, etc.) shall be configurable and would not require solution recompilation or direct interventions into the DB.

Identifier	Binding Requirements	Requirement Description
TGEN 009	М	SAISE Admin shall use open standards for formats and communication protocols.
TGEN 010	М	The services exposed to the public by <i>SAISE Admin</i> shall ne technologically neutral (Operation System, Internet Explorer/Search Engine, etc.).

Specific performance requirements of SAISE Admin are defined in Table 5.16.

Table 5.16. All performance requirements outlined for the SAISE Admin

Identifier	Binding Requirements	Description of Performance Requirements
PERF 001	М	Average time for server response shall not exceed three seconds upon the system nominal load.
PERF 002	М	The System shall be capable to perform authentication/authorization actions of more than 5000 competing Users in a 10-minute time-limit.
PERF 003	М	The System shall enable the competing activity of at least 1000 Users and concurrent servicing of at least 200 queries.
PERF 004	М	Prior to the delivery of IT solution, <i>SAISE Admin</i> performance test shall occur.
PERF 005	М	Performance testing shall include at least two components: system <i>load</i> testing and system stress testing.

Security and Protection Requirements

The System shall comply with the technical requirements imposed on Information Systems by the Moldovan Standard SMV ISO/CEI 27002:2009 Information Technology. Security Techniques. Code of good practices for information security management.

The IT solution shall comply in full with the security requirement defined in Table 5.17.

Table 5.17. Requirements for SAISE Admin security and protection

Identifier	Binding Requirements	Description of Security and Protection Requirement
SR 001	М	SAISE Admin guarantees full storage and integrity of SAISE Admin DB content.
SR 002	М	Access to functions granted to unauthorized and non-authenticated Users shall be monitored using protection means against overstressing the service by one or several network hubs.
SR 003	М	All fields of forms filled in by Users must be validated by type of both the client and server.
SR 004	М	The System shall be secured against OWASP Top 10 vulnerabilities.
SR 005	М	The System shall ensure confidentiality of data transmitted-received via communications channels.

Identifier	Binding Requirements	Description of Security and Protection Requirement
SR 006	М	Access to the SAISE Admin shall be monitored.
SR 007	М	Access to functions for in-house Users shall be granted by their authentication, using User + Password, Active Directory or digital certificate.
SR 008	М	All Users' actions shall be entered into electronic logs.
SR 009	М	The System shall make a periodic sound signal that tells about its functional status.

Software, Hardware and Communication Channel Requirements

Table 5.18 contains the totality of requirements for software, hardware and communications technology assurance laid down for *SAISE Admin*.

Table 5.18. Requirements for software, hardware and communications technology assurance of SAISE Admin

Identifier	Binding Requirements	Description of requirements for software, hardware and communications technology solutions
SHC 001	М	The IT solution shall be developed having the following platform constraints:
		■ Windows Server 2012 R2;
		■ IIS 8;
		■ .NET 4.5,
		■ MS SQL Server 2012 (11.1.3128.0).
SHC 002	М	The System shall have the possibility to be installed on both dedicated servers and on virtual solutions.
SHC 003	М	It is necessary to demonstrate the capacity of virtualization via the delivery of a system image to the Beneficiary that could be uploaded and become operational with minimum configurations on one of the virtualization solutions available on the CEC architecture.
SHC 004	М	The System shall be accessed through communication channels of at least 128kbps.
SHC 005	М	For SAISE Admin development it is envisaged to apply the technologies used in the process of developing the existing components of SAISE and SRV.
SHC oo6	М	The System is capable to be virtualized at the software-hardware level.
SHC 007	М	The System shall be tolerant to errors by offering support for clustering and fail over for the whole platform and own components.
SHC 008	М	It is advisable to ensure that the service parts exposed to the public are technologically neutral.
SHC 009	М	Verification shall be done through using a set of (modern) platforms expecting that the performance parameters are similar or even better than those from the reference configuration.
SHC 010	М	The generic programme product recommended for operation and interaction with SAISE Admin represents the WEB Explorer.

Identifier	Binding Requirements	Description of requirements for software, hardware and communications technology solutions	
SHC 011	М	The System shall be compatible with at least two the most recent versions of the following WEB browsers: Microsoft Internet Explorer, Mozilla Firefox, Google Chrome, Safari and Opera.	
SHC 012	М	Compatibility with <i>Microsoft Internet Explorer</i> is binding.	
SHC 013	М	SAISE Admin shall incorporate a Heart-beat service to periodically communicate the system normal work status.	
SHC 014	D	The System shall include configurable means for technical logging.	
SHC 015	М	The System shall be able to produce at least the following levels of technical logging: <i>info</i> ; <i>warning</i> ; <i>critic</i> ; <i>error</i> .	
SHC 016	М	The Developer shall list the means to be used for system troubleshooting.	
SHC 017	М	The Developer shall prepare means that facilitate the system administration functions:	
		■ starting the system components;	
		stopping the system components;	
		■ restarting the system components,	
		■ creating a DB back-up,	
		■ recovery of data using the indicated back-up,	
		■ refreshing the system operational memory.	
SHC 018	М	The System shall operate in TCP/IP networks and, especially, in HTTPS.	
SHC 019	М	The Developer shall suggest other network services and utilities necessary for system operation.	

5.3 SAISE Admin Documentation Requirements

The IT solution shall be accompanied by a full package of documentation of SAISE Admin comprising the sections included in Table 5.19.

Table 5.19. Documentation requirements of SAISE Admin

Identifier	Binding Requirements	Description of documentation requirements of SAISE Admin
DOC 001	М	The Developer shall prepare and publish interactive guidance materials included in the User's Interface of <i>SAISE Admin</i> .
DOC 002	М	The Developer shall prepare and deliver <i>SAISE Admin</i> Technical Design (SRS+SDD).
DOC 003	М	The Developer shall prepare and deliver User's Manual in Romanian.
DOC 004	М	The Developer shall prepare and deliver Administrator's Manual in Romanian.
DOC 005	М	Developer's Manual shall contain detailed guidelines for configuring resources, business events, statuses, transitions, roles, rights and Users' applications.

Identifier	Binding Requirements	Description of documentation requirements of SAISE Admin
DOC oo6	М	The Developer shall prepare and deliver the Guide on system installation and configuration (to include at least guidelines for code compilation, installation of application, hardware and software requirements, platform description and configuration, application configuring, and disaster recovery procedures).
DOC 007	М	The Developer shall prepare and deliver the System Architecture Documentation with the description of models in UML language, to include a sufficient level of details in terms of Architecture in several cross-sections (including the data logical and physical model).
DOC oo8	М	The Developer shall prepare and deliver API documentation exposed to be integrated with other Information Systems.
DOC 009	М	The Developer shall deliver the totality of electronic mediums necessary to describe and validate the interfaces in WSDL language.
DOC 010	М	The Developer shall deliver the source code for applications and components developed under the Project.

5.4 SAISE Admin Maintenance Requirements

The Developer shall ensure post-delivery maintenance period and technical support comprising the sections included in Table 5.20.

Table 5.20. Maintenance period and technical support of SAISE Admin

Identifier	Binding Requirements	Description of maintenance period and technical support
GMS 001	М	The Developer shall offer maintenance and technical support for 12 months following the acceptance of the Information System.
GMS 002	М	The maintenance period and technical support shall meet the National Standard SM ISO/CEI 14764:2005 – Information Technology. Software Maintenance.
GMS 003	М	The Beneficiary shall report all technical issues that could occur through a ticketing mechanism, E-mail or instant message.
GMS 004	М	The Developer shall ensure support to document the technical issues and their traceability for the Beneficiary.
GMS 005	М	The deadline for reaction and remedy for the reported issues should be at most eight working hours following their reporting.
GMS oo6	М	For major complexity issues the remediation period shall not exceed 72 hours.
GMS 007	М	The Developer shall prove its ability to provide post-delivery technical support in compliance with the requirements of GMS 001-GMS 006.

6. FINAL PRODUCT AND DELIVERABLES

The final product (Information System "SAISE Admin") is composed of software artefacts and system documentation, as well as of knowledge transfer to the system keeper and administrator.

Artefacts related to the SAISE Admin deliverables are displayed in Table 6.1.

Table 6.1. Deliverables for SAISE Admin

Identifier	Binding Requirements	Artefact Brief Description
DELIV 001	М	Complete source code of modules and components necessary to compile the delivered software.
DELIV 002	М	Full deployment and configuration of SAISE Admin on the production platform of CEC;
DELIV 003	М	Final product packed for easy installation in the proposed technological environment.
DELIV 004	М	Technical design (SRS+SDD).
DELIV 005	М	Document on system configuration and deployment (guidelines for deployment).
DELIV 006	М	User's Manual.
DELIV 007	М	Administrator's Manual (including a contingency plan).
DELIV 008	М	Developer's Manual that shall contain detailed guidelines for configuring resources, business events, statuses, transitions, roles, rights and Users' applications.
DELIV 009	М	Training documentation (intended for trainers who would train the CEC staff in operating the IT solution).
DELIV 010	М	Technical specifications for the published and used interfaces.
DELIV 011	М	Totality of artefacts copied on electronic medium (CD-R or DVD+-R).

Besides the artifacts related to the SAISE Admin deliverables, all the services needed for knowledge transfer indicated in Table 6.2. will be provided.

Table 6.2. Knowledge transfer services related to delivered artefacts

Identifier	Binding Requirements	Artefact Brief Description
DELIV 010	М	Training of Users and Administrators (four Users of a system with the role of SAISE Administrator, four Users of a system with the role of Administrator of SAISE application and ten Users of a system with the role of SAISE Admin User).
DELIV 011	М	Assistance during the system pilot testing period.
DELIV 012	М	Assistance in testing the system acceptance.
DELIV 013	М	Assistance in system bringing in the production.
DELIV 014	М	Solving of the deficiencies identified during the pilot period and acceptance testing.
DELIV 015	М	Post-implementation technical support (after the system bringing into the production) for a 12-month period, including corrective, adaptive and preventive maintenance, in compliance with ISO/IEC 14764.

The designing, building, testing and implementation of SAISE Admin must be done in accordance with the following schedule:

- 1. **IT System development stage,** which shall be subdivided into the phases coordinated with the CEC as follows:
 - a. The developer proceeds with analysing the terms of reference, domains of activity and with due approval of the direct Beneficiary (CEC) proposes their vision with regards to developing the information system bearing on a technical Project composed of two documents: SRS and SDD (one month);
 - b. The developer proceeds with developing a program code and integration of modules developed into a prototype version of the information system (the first presentation to the stakeholders shall follow meant to demonstrate existence of all functionalities described in the technical specification), which subsequently will be improved until signing of the final acceptance of the information subsystem. This stage will not exceed 3 months;
 - c. The developer proceeds with testing the system in laboratory mode (in-house testing) and prepares a set of accompanying documentation (presented shall be the functionalities of the system complete with corrections and adjustments made during previous sub-stage; also presented shall be a set of technical documentation, etc.). The duration of the stage in question shall be two weeks. The testing procedure shall mandatory comprise the following stages:
- applied to the system by the third party shall be stress and load testing scenarios with the purpose of checking the level of its compliance with the CEC's expectations;
- the developer shall obtain the results of load and stress testing based on which, if necessary, shall introduce the totality of required adjustments and changes, thus, preparing an improved version of the software product;
- applied by the third party to the improved version of system shall be stress and load testing scenarios with the view of checking its compliance with CEC's expectations. If necessary, direct improvements shall apply until all of the traced out problems are cleared.
 - 2. **SAISE Admin Implementation Stage** will begin with the approval of the minutes of acceptance by the owner of the IT system in the submitted variant and the signing of the statement of acceptance in experimental operation. Implementation of the IT solution shall last for maximum 1.5 months.
 - 3. **Training stage** shall start concomitantly with the implementation of the IT solution and shall cover training of 4 system Users assigned to act as *SAISE Administrators*, 4 system Users assigned to act as *Administrator* of *SAISE application* and 10 Users assigned to act as *SAISE Admin User*.
 - 4. **Commissioning of SAISE Admin** begins with the signing of the IT System Commissioning Statement and starting of its operation.
 - 5. **SAISE Admin warranty period** is the period during which the system Developer is assuming the obligation to the owner to grant the assistance in maintaining the capacity of the information system to provide services as well as in upgrading the software, while maintaining its integrity. *SAISE Admin* start-up warranty period 12 months.

8. MANAGEMENT ARRANGEMENT

The contractor will work under the guidance of Directorate of Information Technology and Management of Electoral Lists, Central Electoral Commission of the RM and in close cooperation with UNDP Democracy Programme / Electoral Component for both substantive and administrative aspects of the assignment and under the direct supervision of the Electoral Specialist, Democracy Programme/Elections Senior Project Officer and UNDP IT consultants.

All deliverables shall be coordinated with the Beneficiary and accepted by UNDP Democracy Programme Electoral Specialist and Programme Manager if these meet the requirements of the Terms of Reference.

Language

All discussions with the beneficiaries of the project will be conducted in Romanian. All the relevant documentation, information solution interface and training and technical support will be conducted in Romanian.

Timeframe

Taking into account the existing technological restrictions, the activities 1-5 may be implemented gradually over the following calendar period:

- Activity 1. IT System development stage 4.5 months (April August 2016)
- Activity 2. SAISE Admin Implementation Stage 1.5 month (August October 2016)
- Activity 3. **Training stage** 0.5 month (October 2016)

- Activity 4. **Commissioning of SAISE Admin** (November 2016)
- Activity 5. **SAISE Admin warranty period** (November 2016 November 2017).

9. ELIGIBILITY

Successful bidder must meet the following minimum qualification requirements for the company:

- Company must have permanent branches/consortium with a local company (Consortium agreement)/local subcontractor (Collaboration Agreement) in the Republic of Moldova (in case the bidder is a foreign company).
- Minimum 5 years of working experience in developing IT systems;
- Minimum 2 IT projects of similar task complexity implemented and their brief description;
- Certification in ISO 27001.

Failure to comply with the above-mentioned minimum requirements may constitute a reason for disqualification

Criteria for the evaluation of the corporate competencies:

• The experience in the development of IT applications for electoral processes would be an advantage.

The bidder shall submit the technical bid with clear CVs (based on the template indicated in the present RfP) of the project staff and the qualifications of each staff proposed. Explicitly persons holding the following key positions shall be presented:

- 1 Project Manager/ Team Leader, in case the bidder is a foreign company, this specialist must be local:
- 1 Senior Developer/ Business Analyst
- 1 Developer;
- 1 Tester.

The UNDP Moldova is committed to workforce diversity. Women, persons with disabilities, Roma and other ethnic or religious minorities, persons living with HIV, as well as refugees and other non-citizens legally entitled to work in the Republic of Moldova, are particularly encouraged to apply.

Section 4: Proposal Submission Form⁶

[insert: Location] [insert: Date]

To: [insert: Name and Address of UNDP focal point]

Dear Sir/Madam:

We, the undersigned, hereby offer to provide professional services for [insert: title of services] in accordance with your Request for Proposal dated [insert: Date] and our Proposal. We are hereby submitting our Proposal, which includes the Technical Proposal and Financial Proposal sealed under a separate envelope.

We hereby declare that:

- a) All the information and statements made in this Proposal are true and we accept that any misrepresentation contained in it may lead to our disqualification;
- b) We are currently not on the removed or suspended vendor list of the UN or other such lists of other UN agencies, nor are we associated with, any company or individual appearing on the 1267/1989 list of the UN Security Council;
- c) We have no outstanding bankruptcy or pending litigation or any legal action that could impair our operation as a going concern; and
- d) We do not employ, nor anticipate employing, any person who is or was recently employed by the UN or UNDP.

We confirm that we have read, understood and hereby accept the Terms of Reference describing the duties and responsibilities required of us in this RFP, and the General Terms and Conditions of UNDP's Contract for Professional Services.

We agree to abide by this Proposal for [insert: period of validity as indicated in Data Sheet]

We undertake, if our Proposal is accepted, to initiate the services not later than the date indicated in the Data Sheet.

We fully understand and recognize that UNDP is not bound to accept this proposal, that we shall bear all costs associated with its preparation and submission, and that UNDP will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the evaluation.

Authorized Sig	nature [<i>In full and i</i>	initials]:		
Name and Title			 	
Name of Firm:			 	····
Contact Details	:		 	

⁶ No deletion or modification may be made in this form. Any such deletion or modification may lead to the rejection of the Proposal.

Section 5: Documents Establishing the Eligibility and Qualifications of the Proposer

Proposer Information Form⁷

Date: [insert date (as day, month and year) of Proposal Submission] RFP No.: RfP16/01184

Page _____ of ____ pages

⁷ The Proposer shall fill in this Form in accordance with the instructions. Apart from providing additional information, no alterations to its format shall be permitted and no substitutions shall be accepted.

Joint Venture Partner Information Form (if Registered)⁸

Date: [insert date (as day, month and year) of Proposal Submission] RFP No.: RfP16/01184

Page _____ of ____ pages

Proposer's Legal Name: [insert Proposer's legal name]					
2. JV's Party legal name: [insert JV's Party legal name]					
3. JV's Party Country of Registration: [insert JV's Party country of registration]					
4. Year of Registration: [insert Party's year of registration]					
5. Countries of Operation	6. No. of staff in each Country	7.Years of Operation in each Country			
8. Legal Address/es in Country/ies o	8. Legal Address/es in Country/ies of Registration/Operation: [insert Party's legal address in country of registration]				
9. Value and Description of Top thre	ee (3) Biggest Contract for the past fiv	e (5) years			
10. Latest Credit Rating (if any)					
11. Brief description of litigation history (disputes, arbitration, claims, etc.), indicating current status and outcomes, if already resolved.					
12. JV's Party Authorized Represe	ntative Information				
Name: [insert name of JV's Party authorized representative]					
Address: [insert address of JV's Part					
•	ephone/fax numbers of JV's Party aut. s of JV's Party authorized representati	•			
	documents of: [check the box(es) of th				
14. Accuence are copies or original	adeditions of ferreek the box(cs) of the	ic actached original accoments)			
☐ All eligibility document requirem	ents listed in the Data Sheet				
☐ Articles of Incorporation or Regis	tration of firm named in 2.				
☐ In case of government owned en commercial law.	tity, documents establishing legal and	financial autonomy and compliance with			

⁸ The Proposer shall fill in this Form in accordance with the instructions. Apart from providing additional information, no alterations to its format shall be permitted and no substitutions shall be accepted.

TECHNICAL PROPOSAL FORMAT INSERT TITLE OF THE SERVICES

Note: Technical Proposals not submitted in this format may be rejected. The financial proposal should be included in separate envelope.

Name of Proposing Organization / Firm:	
Country of Registration:	
Name of Contact Person for this Proposal:	
Address:	
Phone / Fax:	
Email:	

SECTION 1: EXPERTISE OF FIRM/ ORGANISATION

This section should fully explain the Proposer's resources in terms of personnel and facilities necessary for the performance of this requirement. All contents of this section may be modified or expanded depending on the evaluation criteria stated in the RFP.

- 1.1 Brief Description of Proposer as an Entity: Provide a brief description of the organization / firm submitting the proposal, its legal mandates/authorized business activities, the year and country of incorporation, types of activities undertaken, and approximate annual budget, etc. Include reference to reputation, or any history of litigation and arbitration in which the organisation / firm has been involved that could adversely affect or impact the performance of services, indicating the status/result of such litigation/arbitration.
- <u>1.2. Financial Capacity:</u> Provide the latest Audited Financial Statement (Income Statement and Balance Sheet) duly certified by a Public Accountant, and with authentication of receiving by the Government's Internal Revenue Authority. Include any indication of credit rating, industry rating, etc.
- <u>1.3. Track Record and Experiences:</u> Provide the following information regarding corporate experience within the last five (5) years which are related or relevant to those required for this Contract.

Name of project	Client	Contract Value	Period of activity	Types of activities undertaken	Status or Date Completed	References Contact Details (Name, Phone, Email)

SECTION 2 - APPROACH AND IMPLEMENTATION PLAN

This section should demonstrate the Proposer's responsiveness to the TOR by identifying the specific components proposed, addressing the requirements, as specified, point by point; providing a detailed description of the essential performance characteristics proposed; and demonstrating how the proposed methodology meets or exceeds the requirements.

- <u>2.1. Approach to the Service/Work Required</u>: Please provide a detailed description of the methodology for how the organisation/firm will achieve the Terms of Reference of the project, keeping in mind the appropriateness to local conditions and project environment.
- <u>2.2. Technical Quality Assurance Review Mechanisms</u>: The methodology shall also include details of the Proposer's internal technical and quality assurance review mechanisms.
- 2.3 Implementation Timelines: The Proposer shall submit a Gantt Chart or Project Schedule indicating the detailed

sequence of activities that will be undertaken and their corresponding timing.

- <u>2.4. Subcontracting</u>: Explain whether any work would be subcontracted, to whom, how much percentage of the work, the rationale for such, and the roles of the proposed sub-contractors. Special attention should be given to providing a clear picture of the role of each entity and how everyone will function as a team.
- <u>2.5. Risks / Mitigation Measures</u>: Please describe the potential risks for the implementation of this project that may impact achievement and timely completion of expected results as well as their quality. Describe measures that will be put in place to mitigate these risks.
- <u>2.6.</u> Reporting and Monitoring: Please provide a brief description of the mechanisms proposed for this project for reporting to the UNDP and partners, including a reporting schedule.
- <u>2.7. Anti-Corruption Strategy</u>: Define the anti-corruption strategy that will be applied in this project to prevent the misuse of funds. Describe the financial controls that will be put in place.
- <u>2.8. Partnerships</u>: Explain any partnerships with local, international or other organizations that are planned for the implementation of the project. Special attention should be given to providing a clear picture of the role of each entity and how everyone will function as a team. Letters of commitment from partners and an indication of whether some or all have successfully worked together on other previous projects is encouraged.
- <u>2.9 Statement of Full Disclosure</u>: This is intended to disclose any potential conflict in accordance with the definition of "conflict" under Section 4 of this document, if any.
- 2.10 Other: Any other comments or information regarding the project approach and methodology that will be adopted.

SECTION 3: PERSONNEL

- <u>3.1 Management Structure</u>: Describe the overall management approach toward planning and implementing this activity. Include an organization chart for the management of the project describing the relationship of key positions and designations.
- 3.2 Staff Time Allocation: Provide a spreadsheet will be included to show the activities of each staff member and the time allocated for his/her involvement. (Note: This spreadsheet is crucial and no substitution of personnel will be tolerated once the contract has been awarded except in extreme circumstances and with the written approval of the UNDP. If substitution is unavoidable it will be with a person who, in the opinion of the UNDP project manager, is at least as experienced as the person being replaced, and subject to the approval of UNDP. No increase in costs will be considered as a result of any substitution.)
- 3.3 Qualifications of Key Personnel. Provide the CVs for key personnel (Team Leader, Managerial and general staff) that will be provided to support the implementation of this project. CVs should demonstrate qualifications in areas relevant to the Scope of Services. Please use the format below:

Name:					
Position for this Contract:					
Nationality:					
Contact information:					
Countries of Work Experience:					
Language Skills:					
Educational and other Qualification					
Summary of Experience: Highlight e	•	n the region and on similar p	rojects.		
Relevant Experience (From most re					
Period: From – To		activity/ Project/ funding	Job Title and Activities		
	organisat	tion, if applicable:	undertaken/Description of actual role performed:		
e.g. June 2004-January 2005					
Etc.					
Etc.					
References no.1 (minimum of 3):	Name				
	Designati				
	Organizat				
	Contact Ir	nformation – Address; Phone	e; Email; etc.		
Reference no.2	Name				
	Designati				
	Organizat				
		nformation – Address; Phone	e; Email; etc.		
Reference no.3	Name				
	Designati				
	Organizat				
	Contact Ir	nformation – Address; Phone	e; Email; etc.	L	
Declaration:					
Lonfirm my intention to serve in the	stated nos	ition and present availabilit	ty to serve for the term of the proposed		
I confirm my intention to serve in the stated position and present availability to serve for the term of the proposed contract. I also understand that any wilful misstatement described above may lead to my disqualification, before or					
during my engagement.	,				
doming my engagement					
Signature of the Nominated Team Le	eader/Mem	 ıber	Date Signed		
				Г	

Section 7: Financial Proposal Form9

The Proposer is required to prepare the Financial Proposal in an envelope separate from the rest of the RFP as indicated in the Instruction to Proposers.

The Financial Proposal must provide a detailed cost breakdown. Provide separate figures for each functional grouping or category.

Any estimates for cost-reimbursable items, such as travel and out-of-pocket expenses, should be listed separately.

In case of an equipment component to the service provider, the Price Schedule should include figures for both purchase and lease/rent options. UNDP reserves the option to either lease/rent or purchase outright the equipment through the Contractor.

The format shown on the following pages is suggested for use as a template in preparing the Financial Proposal. The format includes specific expenditures, which may or may not be required or applicable but are indicated to serve as examples.

A. Cost Breakdown per Deliverables*

SN	Deliverable	Number and category of staff involved in this deliverable	Total number of WDs allocated per deliverable (also in %)	Price per deliverable (lump sum, all inclusive)
1	 Technical design (SRS+SDD); Document on system configuration and deployment (guidelines for deployment); Technical specifications for the published and used interfaces 	e.g. PM/TL – 1 Senior Developer – 1 Developer – 2 Total: 4 staff	e.g. 24 WDs (10 %)	
2	 Assistance in: system pilot testing period; testing the system acceptance; system bringing in the production. Solving of the deficiencies identified during the pilot period and acceptance testing. 			
3	 Training of Users and Administrators (four Users of a system with the role of SAISE Administrator, four Users of a system with the role of Administrator of SAISE application and ten Users of a system with the role of SAISE Admin User); Training documentation (intended for trainers who would train the CEC staff in operating the IT solution). 			
4	 User's Manual; Administrator's Manual (including a contingency plan); Developer's Manual that shall contain detailed guidelines for configuring resources, business events, statuses, transitions, roles, rights and Users' applications. 			

⁹ No deletion or modification may be made in this form. Any such deletion or modification may lead to the rejection of the Proposal.

6	 Post-implementation technical support (after the system bringing into the production) for a 12-month period, including corrective, adaptive and preventive maintenance, in compliance with ISO/IEC 14764. 		
5	 Complete source code of modules and components necessary to compile the delivered software; Full deployment and configuration of SAISE Admin on the production platform of CEC; Final product packed for easy installation in the proposed technological environment; Totality of artefacts copied on electronic medium (CD-R or DVD+-R). 		

^{*}Basis for payment tranches

B. Cost Breakdown by Cost Component:

The Proposers are requested to provide the cost breakdown for the above given prices for each deliverable based on the following format. UNDP shall use the cost breakdown for the price reasonability assessment purposes as well as the calculation of price in the event that both parties have agreed to add new deliverables to the scope of Services.

Description	Total number of staff of this category	Number of working days for each staff	Total working days for each staff	Cost per one working day for each category of staff (in USD)	Total cost for all working days (in USD)
Personnel Services					
Project Manager /	e.g. 1	e.g. 90 WDs	e.g. 90 WDs	e.g. 10 USD	e.g. 900 USD
Team leader					
Senior Developer /	e.g. 1	e.g. 50 WDs	e.g. 50 WDs	e.g. 8 USD	e.g. 400 USD
Business Analyst					
Developer	e.g. 2	e.g. 30 WDs	e.g. 6o WDs	e.g. 6 USD	e.g. 360 USD
Tester	e.g. 2	e.g. 20 WDs	e.g. 40 WDs	e.g. 5 USD	e.g. 200 USD
Total	6	n/a	240 WDs	n/a	1,860 USD

Description	Number of items	Cost per one item	Total cost of items
Out of Pocket Expenses			
Travel Costs			
Daily Allowance			
Communications			
Reproduction			
Equipment Lease			
Others			
Total			
Other related costs			
Total			

Section 11: Contract for Professional Services

THIS IS UNDP'S TEMPLATE FOR CONTRACT FOR THE PROPOSER'S REFERENCE. ADHERENCE TO ALL TERMS AND CONDITIONS IS MANDATORY.

[THE .PDF VERSION OF THE CONTRACT FOR PROFESSIONAL SERVICES AND THE GENERAL TERMS AND CONDITIONS ARE PROVIDED ON THE FOLLOWING PAGES]

Dear Sir	/Madam,
Ref.:	
[compa COUNT SUMM	nited Nations Development Programme (hereinafter referred to as "UNDP"), wishes to engage your ny/organization/institution], duly incorporated under the Laws of [INSERT NAME OF THE TRY] (hereinafter referred to as the "Contractor") in order to perform services in respect of [INSERT NAME OF THE TRY] (hereinafter referred to as the "Services"), in accordance with the ag Contract:
1.	<u>Contract Documents</u>
1.1	This Contract is subject to the UNDP General Conditions for Professional Services attached hereto as Annex I. The provisions of such Annex shall control the interpretation of this Contract and in no way shall be deemed to have been derogated by the contents of this letter and any other Annexes, unless otherwise expressly stated under section 4 of this letter, entitled "Special Conditions".
1.2	The Contractor and UNDP also agree to be bound by the provisions contained in the following documents, which shall take precedence over one another in case of conflict in the following order:
	a) this Letter;
	b) the Terms of Reference [refdated], attached hereto as Annex II;
	c) the Contractor's Proposal [ref, dated] d) The UNDP Request for Proposal [ref, dated]
1.3	All the above shall form the Contract between the Contractor and UNDP, superseding the contents of any other negotiations and/or agreements, whether oral or in writing, pertaining to the subject of this Contract.
2.	Obligations of the Contractor
2.1	The Contractor shall perform and complete the Services described in Annex II with due diligence and efficiency and in accordance with the Contract.
2.2	The Contractor shall provide the services of the following key personnel:
	Name Specialization Nationality Period of service
2.3	Any changes in the above key personnel shall require prior written approval of[NAME and TITLE], UNDP.
2.4	The Contractor shall also provide all technical and administrative support needed in order to ensure the timely and satisfactory performance of the Services.
2.5	The Contractor shall submit to UNDP the deliverables specified hereunder according to the following schedule:
	[LIST DELIVERABLES] [INDICATE DELIVERY DATES]

e.g.

Date _____

	Progress report		
	Final report		// //
2.6	Contract during the	period of time covered in	nguage, and shall describe in detail the services rendered under the n such report. All reports shall be transmitted by the Contractor by o the address specified in 9.1 below.
2.7	of entering into this		ccuracy of any information or data provided to UNDP for the purpose juality of the deliverables and reports foreseen under this Contract in essional standards.
		ОРТК	ON 1 (FIXED PRICE)
3.	Price and Payment		
3.1			sfactory performance of the Services under this Contract, UNDP shal f [INSERT CURRENCY & AMOUNT IN FIGURES AND
3.2			adjustment or revision because of price or currency fluctuations or the performance of the Contract.
3.3			or shall be deemed neither to relieve the Contractor of its obligations OP of the Contractor's performance of the Services.
3.4			ctor after acceptance by UNDP of the invoices submitted by the low, upon achievement of the corresponding milestones and for the
	MILESTONE	<u>AMOUNT</u>	TARGET DATE
	Upon		//
			//
	Invoices shall indicat	e the milestones achieved	d and corresponding amount payable.
		OPTION 2 (0	COST REIMBURSEMENT)
3.	Price and payment		
3.1			sfactory performance of the Services under this Contract, UNDP shal [INSERT CURRENCY & AMOUNT IN FIGURES AND
3.2	Breakdown of Costs category that are re	s in Annex[INS	eximum total amount of reimbursable costs under this Contract. The ERT ANNEX NUMBER] contains the maximum amounts per cost intract. The Contractor shall reflect in his invoices the amount of the primance of the Services.
3.3	which may result in a	any costs in excess of the a	any equipment, materials and supplies, or perform any other services amount under 3.1 or of any of the amounts specified in the Breakdowr prior written agreement of [NAME and TITLE]

3.4	Payments effected by UNDP to the Contractor shall be deemed neither to relieve the Contractor of its obligations under this Contract nor as acceptance by UNDP of the Contractor's performance of the Services.
3.5	The Contractor shall submit invoices for the work done every [INSERT PERIOD OF TIME OR MILESTONES].
	OR
3.5.	The Contractor shall submit an invoice for[INSERT AMOUNT AND CURRENCY OF THE ADVANCE PAYMENT IN FIGURES & WORDS] upon signature of this Contract by both parties and invoices for the work done every [INSERT PERIOD OF TIME OR MILESTONES].
3.6	Progress and final payments shall be effected by UNDP to the Contractor after acceptance of the invoices submitted by the Contractor to the address specified in 9.1 below, together with whatever supporting documentation of the actual costs incurred is required in the Breakdown of Costs or may be required by UNDP. Such payments shall be subject to any specific conditions for reimbursement contained in the Breakdown of Costs.
4.	<u>Special conditions</u>
4.1	The responsibility for the safety and security of the Contractor and its personnel and property, and of UNDP's property in the Contractor's custody, rests with the Contractor.
4.2	The advance payment to be made upon signature of the contract by both parties is contingent upon receipt and acceptance by UNDP of a bank guarantee for the full amount of the advance payment issued by a Bank and in a form acceptable to UNDP.
4.3	The amounts of the payments referred to under section 3.6 above shall be subject to a deduction of[INSERT PERCENTAGE THAT THE ADVANCE REPRESENTS OVER THE TOTAL PRICE OF THE CONTRACT] % (percent) of the amount accepted for payment until the cumulative amount of the deductions so effected shall equal the amount of the advance payment.
4.4	Owing to [], Article(s) [] of the General Conditions in Annex I shall be amended to read/be deleted.
5.	Submission of invoices
5.1	An original invoice shall be submitted by mail by the Contractor for each payment under the Contract to the following address:
5.2	Invoices submitted by fax shall not be accepted by UNDP.
6.	Time and manner of payment
6.1	Invoices shall be paid within thirty (30) days of the date of their acceptance by UNDP. UNDP shall make every effort to accept an invoice or so advise the Contractor of its non-acceptance within a reasonable time from receipt.
6.2	All payments shall be made by UNDP to the following Bank account of the Contractor:
	[NAME OF THE BANK]
	[ACCOUNT NUMBER]
	[ADDRESS OF THE BANK]
7.	Entry into force. Time limits.

7.1 The Contract shall enter into force upon its signature by both parties.

7.2	The Contractor shall commence the performance of the Services not later than [INSERT DATE] and shall complete the Services within [INSERT NUMBER OF DAYS OR MONTHS] of such commencement.
7.3	All time limits contained in this Contract shall be deemed to be of the essence in respect of the performance of the Services.
8.	<u>Modifications</u>
8.1	Any modification to this Contract shall require an amendment in writing between both parties duly signed by the authorized representative of the Contractor and[NAME AND TITLE] UNDP.
9.	Notifications
For the	purpose of notifications under the Contract, the addresses of UNDP and the Contractor are as follows:
	For the UNDP:
	Name Designation Address Tel. No. Fax. No. Email address: For the Contractor: Name Designation Address Tel. No. Fax. No. Email address: Tel. No. Fax. No. Email address: Designation Address Tel. No. Fax. No. Email address: Designation Email address: Designation Address Tel. No. Fax. No. Email address:
and dat	
	Yours sincerely,
	[INSERT NAME AND DESIGNATION]
Fo	or [INSERT NAME OF THE COMPANY/ORGANIZATION]
<u> A</u>	greed and Accepted:
Na Ti	gnature ame: tle: ate:

UNDP GENERAL CONDITIONS OF CONTRACT FOR SERVICES

1.0 LEGAL STATUS:

The Contractor shall be considered as having the legal status of an independent contractor vis-à-vis the United Nations Development Programme (UNDP). The Contractor's personnel and sub-contractors shall not be considered in any respect as being the employees or agents of UNDP or the United Nations.

2.0 SOURCE OF INSTRUCTIONS:

The Contractor shall neither seek nor accept instructions from any authority external to UNDP in connection with the performance of its services under this Contract. The Contractor shall refrain from any action that may adversely affect UNDP or the United Nations and shall fulfill its commitments with the fullest regard to the interests of UNDP.

3.0 CONTRACTOR'S RESPONSIBILITY FOR EMPLOYEES:

The Contractor shall be responsible for the professional and technical competence of its employees and will select, for work under this Contract, reliable individuals who will perform effectively in the implementation of this Contract, respect the local customs, and conform to a high standard of moral and ethical conduct.

4.0 ASSIGNMENT:

The Contractor shall not assign, transfer, pledge or make other disposition of this Contract or any part thereof, or any of the Contractor's rights, claims or obligations under this Contract except with the prior written consent of UNDP.

5.0 SUB-CONTRACTING:

In the event the Contractor requires the services of sub-contractors, the Contractor shall obtain the prior written approval and clearance of UNDP for all sub-contractors. The approval of UNDP of a sub-contractor shall not relieve the Contractor of any of its obligations under this Contract. The terms of any sub-contract shall be subject to and conform to the provisions of this Contract.

6.0 OFFICIALS NOT TO BENEFIT:

The Contractor warrants that no official of UNDP or the United Nations has received or will be offered by the Contractor any direct or indirect benefit arising from this Contract or the award thereof. The Contractor agrees that breach of this provision is a breach of an essential term of this Contract.

7.0 INDEMNIFICATION:

The Contractor shall indemnify, hold and save harmless, and defend, at its own expense, UNDP, its officials, agents, servants and employees from and against all suits, claims, demands, and liability of any nature or kind, including their costs and expenses, arising out of acts or omissions of the Contractor, or the Contractor's employees, officers, agents or sub-contractors, in the performance of this Contract. This provision shall extend, inter alia, to claims and liability in the nature of workmen's compensation, products liability and liability arising out of the use of patented inventions or devices, copyrighted material or other intellectual property by the Contractor, its employees, officers, agents, servants or sub-contractors. The obligations under this Article do not lapse upon termination of this Contract.

8.0 INSURANCE AND LIABILITIES TO THIRD PARTIES:

- **8.1** The Contractor shall provide and thereafter maintain insurance against all risks in respect of its property and any equipment used for the execution of this Contract.
- 8.2 The Contractor shall provide and thereafter maintain all appropriate workmen's compensation insurance, or the equivalent, with respect to its employees to cover claims for personal injury or death in connection with this Contract.
- 8.3 The Contractor shall also provide and thereafter maintain liability insurance in an adequate amount to cover third party claims for death or bodily injury, or loss of or damage to property, arising from or in connection with the provision of services under this Contract or the operation of any vehicles, boats, airplanes or other equipment owned or

leased by the Contractor or its agents, servants, employees or sub-contractors performing work or services in connection with this Contract.

- **8.4** Except for the workmen's compensation insurance, the insurance policies under this Article shall:
- **8.4.1** Name UNDP as additional insured;
- 8.4.2 Include a waiver of subrogation of the Contractor's rights to the insurance carrier against the UNDP;
- **8.4.3** Provide that the UNDP shall receive thirty (30) days written notice from the insurers prior to any cancellation or change of coverage.
- 8.5 The Contractor shall, upon request, provide the UNDP with satisfactory evidence of the insurance required under this Article.

9.0 ENCUMBRANCES/LIENS:

The Contractor shall not cause or permit any lien, attachment or other encumbrance by any person to be placed on file or to remain on file in any public office or on file with the UNDP against any monies due or to become due for any work done or materials furnished under this Contract, or by reason of any other claim or demand against the Contractor.

10.0 TITLE TO EQUIPMENT: Title to any equipment and supplies that may be furnished by UNDP shall rest with UNDP and any such equipment shall be returned to UNDP at the conclusion of this Contract or when no longer needed by the Contractor. Such equipment, when returned to UNDP, shall be in the same condition as when delivered to the Contractor, subject to normal wear and tear. The Contractor shall be liable to compensate UNDP for equipment determined to be damaged or degraded beyond normal wear and tear.

11.0 COPYRIGHT, PATENTS AND OTHER PROPRIETARY RIGHTS:

- 11.1 Except as is otherwise expressly provided in writing in the Contract, the UNDP shall be entitled to all intellectual property and other proprietary rights including, but not limited to, patents, copyrights, and trademarks, with regard to products, processes, inventions, ideas, know-how, or documents and other materials which the Contractor has developed for the UNDP under the Contract and which bear a direct relation to or are produced or prepared or collected in consequence of, or during the course of, the performance of the Contract, and the Contractor acknowledges and agrees that such products, documents and other materials constitute works made for hire for the UNDP.
- To the extent that any such intellectual property or other proprietary rights consist of any intellectual property or other proprietary rights of the Contractor: (i) that pre-existed the performance by the Contractor of its obligations under the Contract, or (ii) that the Contractor may develop or acquire, or may have developed or acquired, independently of the performance of its obligations under the Contract, the UNDP does not and shall not claim any ownership interest thereto, and the Contractor grants to the UNDP a perpetual license to use such intellectual property or other proprietary right solely for the purposes of and in accordance with the requirements of the Contract.
- 11.3 At the request of the UNDP; the Contractor shall take all necessary steps, execute all necessary documents and generally assist in securing such proprietary rights and transferring or licensing them to the UNDP in compliance with the requirements of the applicable law and of the Contract.
- 11.4 Subject to the foregoing provisions, all maps, drawings, photographs, mosaics, plans, reports, estimates, recommendations, documents, and all other data compiled by or received by the Contractor under the Contract shall be the property of the UNDP, shall be made available for use or inspection by the UNDP at reasonable times and in reasonable places, shall be treated as confidential, and shall be delivered only to UNDP authorized officials on completion of work under the Contract.

12.0 USE OF NAME, EMBLEM OR OFFICIAL SEAL OF UNDP OR THE UNITED NATIONS:

The Contractor shall not advertise or otherwise make public the fact that it is a Contractor with UNDP, nor shall the Contractor, in any manner whatsoever use the name, emblem or official seal of UNDP or THE United Nations, or any abbreviation of the name of UNDP or United Nations in connection with its business or otherwise.

13.0 CONFIDENTIAL NATURE OF DOCUMENTS AND INFORMATION:

Information and data that is considered proprietary by either Party, and that is delivered or disclosed by one Party ("Discloser") to the other Party ("Recipient") during the course of performance of the Contract, and that is designated as

confidential ("Information"), shall be held in confidence by that Party and shall be handled as follows:

- **13.1** The recipient ("Recipient") of such information shall:
- **13.1.1** use the same care and discretion to avoid disclosure, publication or dissemination of the Discloser's Information as it uses with its own similar information that it does not wish to disclose, publish or disseminate; and,
- 13.1.2 use the Discloser's Information solely for the purpose for which it was disclosed.
- Provided that the Recipient has a written agreement with the following persons or entities requiring them to treat the Information confidential in accordance with the Contract and this Article 13, the Recipient may disclose Information to:
- 13.2.1 any other party with the Discloser's prior written consent; and,
- 13.2.2 the Recipient's employees, officials, representatives and agents who have a need to know such Information for purposes of performing obligations under the Contract, and employees officials, representatives and agents of any legal entity that it controls, controls it, or with which it is under common control, who have a need to know such Information for purposes of performing obligations under the Contract, provided that, for these purposes a controlled legal entity means:
- **13.2.2.1** a corporate entity in which the Party owns or otherwise controls, whether directly or indirectly, over fifty percent (50%) of voting shares thereof; or,
- 13.2.2.2 any entity over which the Party exercises effective managerial control; or,
- 13.2.2.3 for the UNDP, an affiliated Fund such as UNCDF, UNIFEM and UNV.
- 13.3 The Contractor may disclose Information to the extent required by law, provided that, subject to and without any waiver of the privileges and immunities of the United Nations, the Contractor will give the UNDP sufficient prior notice of a request for the disclosure of Information in order to allow the UNDP to have a reasonable opportunity to take protective measures or such other action as may be appropriate before any such disclosure is made.
- The UNDP may disclose Information to the extent as required pursuant to the Charter of the UN, resolutions or regulations of the General Assembly, or rules promulgated by the Secretary-General.
- The Recipient shall not be precluded from disclosing Information that is obtained by the Recipient from a third party without restriction, is disclosed by the Discloser to a third party without any obligation of confidentiality, is previously known by the Recipient, or at any time is developed by the Recipient completely independently of any disclosures hereunder.
- 13.6 These obligations and restrictions of confidentiality shall be effective during the term of the Contract, including any extension thereof, and, unless otherwise provided in the Contract, shall remain effective following any termination of the Contract.

14.0 FORCE MAJEURE; OTHER CHANGES IN CONDITIONS

- 14.1 In the event of and as soon as possible after the occurrence of any cause constituting force majeure, the Contractor shall give notice and full particulars in writing to the UNDP, of such occurrence or change if the Contractor is thereby rendered unable, wholly or in part, to perform its obligations and meet its responsibilities under this Contract. The Contractor shall also notify the UNDP of any other changes in conditions or the occurrence of any event that interferes or threatens to interfere with its performance of this Contract. On receipt of the notice required under this Article, the UNDP shall take such action as, in its sole discretion; it considers to be appropriate or necessary in the circumstances, including the granting to the Contractor of a reasonable extension of time in which to perform its obligations under this Contract.
- 14.2 If the Contractor is rendered permanently unable, wholly, or in part, by reason of force majeure to perform its obligations and meet its responsibilities under this Contract, the UNDP shall have the right to suspend or terminate this Contract on the same terms and conditions as are provided for in Article 15, "Termination", except that the period of notice shall be seven (7) days instead of thirty (30) days.

- 14.3 Force majeure as used in this Article means acts of God, war (whether declared or not), invasion, revolution, insurrection, or other acts of a similar nature or force.
- 14.4 The Contractor acknowledges and agrees that, with respect to any obligations under the Contract that the Contractor must perform in or for any areas in which the UNDP is engaged in, preparing to engage in, or disengaging from any peacekeeping, humanitarian or similar operations, any delays or failure to perform such obligations arising from or relating to harsh conditions within such areas or to any incidents of civil unrest occurring in such areas shall not, in and of itself, constitute force majeure under the Contract.

15.0 TERMINATION

- 15.1 Either party may terminate this Contract for cause, in whole or in part, upon thirty (30) days notice, in writing, to the other party. The initiation of arbitral proceedings in accordance with Article 16.2 ("Arbitration"), below, shall not be deemed a termination of this Contract.
- 15.2 UNDP reserves the right to terminate without cause this Contract at any time upon 15 days prior written notice to the Contractor, in which case UNDP shall reimburse the Contractor for all reasonable costs incurred by the Contractor prior to receipt of the notice of termination.
- 15.3 In the event of any termination by UNDP under this Article, no payment shall be due from UNDP to the Contractor except for work and services satisfactorily performed in conformity with the express terms of this Contract.
- 15.4 Should the Contractor be adjudged bankrupt, or be liquidated or become insolvent, or should the Contractor make an assignment for the benefit of its creditors, or should a Receiver be appointed on account of the insolvency of the Contractor, the UNDP may, without prejudice to any other right or remedy it may have under the terms of these conditions, terminate this Contract forthwith. The Contractor shall immediately inform the UNDP of the occurrence of any of the above events.

16.0 SETTLEMENT OF DISPUTES

- **16.1** Amicable Settlement: The Parties shall use their best efforts to settle amicably any dispute, controversy or claim arising out of this Contract or the breach, termination or invalidity thereof. Where the parties wish to seek such an amicable settlement through conciliation, the conciliation shall take place in accordance with the UNCITRAL Conciliation Rules then obtaining, or according to such other procedure as may be agreed between the parties.
- 16.2 Arbitration: Any dispute, controversy, or claim between the Parties arising out of the Contract or the breach, termination, or invalidity thereof, unless settled amicably under Article 16.1, above, within sixty (60) days after receipt by one Party of the other Party's written request for such amicable settlement, shall be referred by either Party to arbitration in accordance with the UNCITRAL Arbitration Rules then obtaining. The decisions of the arbitral tribunal shall be based on general principles of international commercial law. For all evidentiary questions, the arbitral tribunal shall be guided by the Supplementary Rules Governing the Presentation and Reception of Evidence in International Commercial Arbitration of the International Bar Association, 28 May 1983 edition. The arbitral tribunal shall be empowered to order the return or destruction of goods or any property, whether tangible or intangible, or of any confidential information provided under the Contract, order the termination of the Contract, or order that any other protective measures be taken with respect to the goods, services or any other property, whether tangible or intangible, or of any confidential information provided under the Contract, as appropriate, all in accordance with the authority of the arbitral tribunal pursuant to Article 26 ("Interim Measures of Protection") and Article 32 ("Form and Effect of the Award") of the UNCITRAL Arbitration Rules. The arbitral tribunal shall have no authority to award punitive damages. In addition, unless otherwise expressly provided in the Contract, the arbitral tribunal shall have no authority to award interest in excess of the London Inter-Bank Offered Rate ("LIBOR") then prevailing, and any such interest shall be simple interest only. The Parties shall be bound by any arbitration award rendered as a result of such arbitration as the final adjudication of any such dispute, controversy, or claim.

17.0 PRIVILEGES AND IMMUNITIES:

Nothing in or relating to this Contract shall be deemed a waiver, express or implied, of any of the privileges and immunities of the United Nations, including its subsidiary organs.

18.0 TAX EXEMPTION

- 18.1 Section 7 of the Convention on the Privileges and Immunities of the United Nations provides, inter-alia that the United Nations, including its subsidiary organs, is exempt from all direct taxes, except charges for public utility services, and is exempt from customs duties and charges of a similar nature in respect of articles imported or exported for its official use. In the event any governmental authority refuses to recognize the United Nations exemption from such taxes, duties or charges, the Contractor shall immediately consult with the UNDP to determine a mutually acceptable procedure.
- Accordingly, the Contractor authorizes UNDP to deduct from the Contractor's invoice any amount representing such taxes, duties or charges, unless the Contractor has consulted with the UNDP before the payment thereof and the UNDP has, in each instance, specifically authorized the Contractor to pay such taxes, duties or charges under protest. In that event, the Contractor shall provide the UNDP with written evidence that payment of such taxes, duties or charges has been made and appropriately authorized.

19.0 CHILD LABOUR

- 19.1 The Contractor represents and warrants that neither it, nor any of its suppliers is engaged in any practice inconsistent with the rights set forth in the Convention on the Rights of the Child, including Article 32 thereof, which, inter alia, requires that a child shall be protected from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical mental, spiritual, moral or social development.
- Any breach of this representation and warranty shall entitle UNDP to terminate this Contract immediately upon notice to the Contractor, at no cost to UNDP.

20.0 MINES:

- 20.1 The Contractor represents and warrants that neither it nor any of its suppliers is actively and directly engaged in patent activities, development, assembly, production, trade or manufacture of mines or in such activities in respect of components primarily utilized in the manufacture of Mines. The term "Mines" means those devices defined in Article 2, Paragraphs 1, 4 and 5 of Protocol II annexed to the Convention on Prohibitions and Restrictions on the Use of Certain Conventional Weapons Which May Be Deemed to Be Excessively Injurious or to Have Indiscriminate Effects of 1980.
- Any breach of this representation and warranty shall entitle UNDP to terminate this Contract immediately upon notice to the Contractor, without any liability for termination charges or any other liability of any kind of UNDP.

21.0 OBSERVANCE OF THE LAW:

The Contractor shall comply with all laws, ordinances, rules, and regulations bearing upon the performance of its obligations under the terms of this Contract.

22.0 SEXUAL EXPLOITATION:

- 22.1 The Contractor shall take all appropriate measures to prevent sexual exploitation or abuse of anyone by it or by any of its employees or any other persons who may be engaged by the Contractor to perform any services under the Contract. For these purposes, sexual activity with any person less than eighteen years of age, regardless of any laws relating to consent, shall constitute the sexual exploitation and abuse of such person. In addition, the Contractor shall refrain from, and shall take all appropriate measures to prohibit its employees or other persons engaged by it from, exchanging any money, goods, services, offers of employment or other things of value, for sexual favors or activities, or from engaging in any sexual activities that are exploitive or degrading to any person. The Contractor acknowledges and agrees that the provisions hereof constitute an essential term of the Contract and that any breach of this representation and warranty shall entitle UNDP to terminate the Contract immediately upon notice to the Contractor, without any liability for termination charges or any other liability of any kind.
- The UNDP shall not apply the foregoing standard relating to age in any case in which the Contractor's personnel or any other person who may be engaged by the Contractor to perform any services under the Contract is married to the person less than the age of eighteen years with whom sexual activity has occurred and in which such marriage is recognized as valid under the laws of the country of citizenship of such Contractor's personnel or such other person who may be engaged by the Contractor to perform any services under the Contract.

23.0 SECURITY:

23.1 The Contractor shall:

- (a) Put in place an appropriate security plan and maintain the security plan, taking into account the security situation in the country where the services are being provided;
- (b) Assume all risks and liabilities related to the Contractor's security, and the full implementation of the security plan.
- 23.2 UNDP reserves the right to verify whether such a plan is in place, and to suggest modifications to the plan when necessary. Failure to maintain and implement an appropriate security plan as required hereunder shall be deemed a breach of this contract. Notwithstanding the foregoing, the Contractor shall remain solely responsible for the security of its personnel and for UNDP's property in its custody as set forth in paragraph 4.1 above.

24.0 AUDITS AND INVESTIGATIONS:

- Each invoice paid by UNDP shall be subject to a post-payment audit by auditors, whether internal or external, of UNDP or the authorized agents of the UNDP at any time during the term of the Contract and for a period of three (3) years following the expiration or prior termination of the Contract. The UNDP shall be entitled to a refund from the Contractor for any amounts shown by such audits to have been paid by the UNDP other than in accordance with the terms and conditions of the Contract. Should the audit determine that any funds paid by UNDP have not been used as per contract clauses, the company shall reimburse such funds forthwith. Where the company fails to reimburse such funds, UNDP reserves the right to seek recovery and/or to take any other action as it deems necessary.
- The Contractor acknowledges and agrees that, at any time, UNDP may conduct investigations relating to any aspect of the Contract, the obligations performed under the Contract, and the operations of the Contractor generally. The right of UNDP to conduct an investigation and the Contractor's obligation to comply with such an investigation shall not lapse upon expiration or prior termination of the Contract. The Contractor shall provide its full and timely cooperation with any such inspections, post-payment audits or investigations. Such cooperation shall include, but shall not be limited to, the Contractor's obligation to make available its personnel and any documentation for such purposes and to grant to UNDP access to the Contractor's premises. The Contractor shall require its agents, including, but not limited to, the Contractor's attorneys, accountants or other advisers, to reasonably cooperate with any inspections, post-payment audits or investigations carried out by UNDP hereunder.

25.0 ANTI-TERRORISM:

25.1 The Contractor agrees to undertake all reasonable efforts to ensure that none of the UNDP funds received under this Contract are used to provide support to individuals or entities associated with terrorism and that the recipients of any amounts provided by UNDP hereunder do not appear on the list maintained by the Security Council Committee established pursuant to resolution 1267 (1999). The list can be accessed via http://www.un.org/Docs/sc/committees/1267/1267ListEng.htm. This provision must be included in all sub-contracts or sub-agreements entered into under this Contract.

26.0 AUTHORITY TO MODIFY:

Pursuant to the Financial Regulations and Rules of UNDP, only the UNDP Authorized Official possesses the authority to agree on behalf of UNDP to any modification of or change in this Agreement, to a waiver of any of its provisions or to any additional contractual relationship of any kind with the Contractor. Accordingly, no modification or change in this Contract shall be valid and enforceable against UNDP unless provided by an amendment to this Agreement signed by the Contractor and jointly by the UNDP Authorized Official.