United Nations Children's Fund
UNICEF
31 August 1989 Str., No. 131
CHISINAU MD-2012
Rep of Moldova

Telephone
Facsimile
Email chisinau@unicef.org

REQUEST FOR PROPOSAL FOR SERVICES

LRPS-2025-9198274 **01 July 2025**

UNITED NATIONS CHILDREN'S FUND (UNICEF)

Wishes to invite you to submit a proposal for

Institutional Consultancy for Updating the Educational Management Information System (EMIS) and Integrating the EduTrack Tool in EMIS

THIS REQUEST FOR PROPOSAL FOR SERVICES HAS BEEN:

Prepared By: Liliana Prosii Digitally signed by Liliana Prosii Date: 2025.07.01 11:30:50 +03'00'

_____ **Date:** _____

Liliana Prosii
(To be contacted for additional information, NOT FOR SENDING PROPOSALS)
Email : lprosii@unicef.org

Approved By: Tatiana Ribac Digitally signed by Tatiana Ribac Date: 2025.07.01 11:40:06 +03'00'

_____ **Date:** _____

Tatiana Ribac

unicef

REQUEST FOR PROPOSAL FOR SERVICES FORM

This FORM must be completed, signed and returned to UNICEF.
Proposal must be made in accordance with the instructions contained in this Request for Proposal for Services (RFPS).

TERMS AND CONDITIONS OF CONTRACT
Any Contract resulting from this RFPS shall contain UNICEF General Terms and Conditions for Institutional and Corporate Contracts and any other Specific Terms and Conditions detailed in this RFPS.

INFORMATION
Any request for information regarding this RFPS must be forwarded by email to the person who prepared this document, with specific reference to the RFPS number.

The Undersigned, having read the Terms and Conditions of RFPS No. **LRPS-2025-9198274** set out in the attached document, hereby offers to execute the services specified in this document.

Currency of Proposal: _____

Validity of Proposal: _____

Please indicate which of the following Early Payment Discount Terms are offered by you:

10 Days 3.0%_____ 15 Days 2.5%_____ 20 Days 2.0%_____ 30 Days Net_____ Other_____

Declaration

The undersigned, being a duly authorized representative of the Company, represents and declares that:

1.	The Company and its Management[1] have not been found guilty pursuant to a final judgment or a final administrative decision of any of the following:	YES	NO
	a. fraud	☐	☐
	b. corruption	☐	☐
	c. conduct related to a criminal organisation	☐	☐
	d. money laundering or terrorist financing	☐	☐
	e. terrorist offences or offences linked to terrorist activities	☐	☐
	f. sexual exploitation and abuse;	☐	☐
	g. child labour, forced labour, human trafficking;	☐	☐
	h. irregularity (non-compliance with any legal or regulatory requirement applicable to the Company or its Management).	☐	☐

1 #Management" means any person having powers of representation, decision-making or control over the Organization. This may include, for example, executive management and all other persons holding downstream managerial authority, anyone on the board of directors, and controlling shareholders.

2.	The Company and its Management have not been found guilty pursuant to a final judgment or a final administrative decision of grave professional misconduct.	☐	☐
3.	The Company and its Management are not: bankrupt, subject to insolvency or winding-up procedures, subject to the administration of assets by a liquidator or a court, in an arrangement with creditors, subject to a legal suspension of business activities, or in any analogous situation arising from a similar procedure provided for under applicable national law.	☐	☐
4.	The Company and its Management have not been the subject of a final judgment or a final administrative decision finding them in breach of their obligations relating to the payment of taxes or social security contributions.	☐	☐
5.	The Company and its Management have not been the subject of a final judgment or a final administrative decision which found they created an entity in a different jurisdiction with the intent to circumvent fiscal, social or any other legal obligations in the jurisdiction of its registered office, central administration, or principal place of business *(creating a shell company)*.	☐	☐
6.	The Company and its Management have not been the subject of a final judgment or a final administrative decision which found the Company was created with the intent referred to in point (5) *(being a shell company)*.	☐	☐

The UNICEF reserves the right to disqualify the Company suspend or terminate any contract or other arrangement between the UNICEF and the Company, with immediate effect and without liability, in the event of any misrepresentation made by the Company in this Declaration.

It is the responsibility of the Company to immediately inform the UNICEF of any changes in the situations declared.

This Declaration is in addition to, and does not replace or cancel, or operate as a waiver of, any terms of contractual arrangements between the UNICEF and the Company.

Signature: _____

Date: _____

Name and Title: _____

Name of the Company: _____

UNGM #: _____

Postal Address: _____

Email: _____

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Item	Service Description	Quantity	Unit	Unit Price	Price
10	**EMIS update - EduTrack tool in EMIS**				
	EMIS update - EduTrack Tool in EMIS	1	PU		

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SPECIAL NOTES

PART I - PURPOSE OF THIS REQUEST FOR PROPOSALS FOR SERVICES

1. Background

1.1 UNICEF promotes the rights and wellbeing of every child, in everything we do. Together with our partners, we work in 190 countries and territories to translate that commitment into practical action, focusing special effort on reaching the most vulnerable and excluded children, to the benefit of all children, everywhere.

2. Solicitation

2.1 The purpose of this Request for Proposals for Services ("RFPS"), detailed in the Terms of Reference attached at Annex B, is to request proposals for the update of Educational Management Information System (EMIS) and integration of a tracking tool (EduTrack) in EMIS.

2.2 This RFPS document is comprised of the following:
- This document
- The UNICEF General Terms and Conditions of Contract (Services) which are attached as Annex A to this document
- The full Terms of Reference attached as Annex B to this RFPS

2.3 This RFPS is an invitation to treat and shall not be construed as an offer capable of being accepted or as creating any contractual, other legal or restitutionary rights. No binding contract, including a process contract or other understanding or arrangement, will exist between the Proposer and UNICEF and nothing in or in connection with this RFPS shall give rise to any liability on the part of UNICEF unless and until a contract is signed by UNICEF and the successful Proposer.

PART II - PROPOSAL SUBMISSION PROCESS

1. Proposal Submission Schedule

1.1 Acknowledgement of receipt of RFPS. Proposers are requested to inform UNICEF as soon as possible by email at lprosii@unicef.org that they have received this RFPS.

1.2 Instructions for proposal submission:

E-mailed submissions:

Proposals sent by e-mail should be submitted in ENGLISH and must be received not later than 23:59 (EEST) on 29 July 2025,

in a separate e-mail for the Technical Proposal containing a scanned copy of the duly signed and dated Technical Proposal with the e-mail subject "LRPS-2025-9198274 Technical", and **another separate e-mail for the Price Proposal containing a scanned copy duly signed and dated with the e-mail subject " LRPS-2025-9198274 Financial"**

All offer files should be enclosed in the email, offers submitted as links to external file sharing platforms will be rejected.

Failing to specify RFPS number in subject line may lead to the offer not being opened for evaluation.

The duly signed REQUEST FOR PROPOSAL FOR SERVICES FORM (pages 3-5 from this document) must be attached to the Technical Proposal e-mail. Incomplete proposals will be rejected.

The official address for e-mail submission is chisinautenders@unicef.org.

The e-mail sent shall be free from viruses and corrupted files. Max. File Size per transmission: 20 MB. Large offers can be split and sent in multiple emails, marked accordingly.
Please note that submissions received after the deadline will be rejected.

1.3 Questions from Proposers. Proposers are required to submit any questions in respect of this RFPS by email to Liliana Prosii at lprosii@unicef.org. The deadline for receipt of any questions is two working days before the application deadline, COB.
IMPORTANT: PROPOSALS ARE NOT TO BE SENT TO THE INDIVIDUAL STATED ABOVE - ANY PROPOSALS SENT TO THE ABOVE NAMED INDIVIDUAL WILL BE DISQUALIFIED.
A bid conference will be held on 15 July, 14.00 at UN House, 31 August street, 131, Chisinau, to address any questions that may arise regarding this competition. Those interested to participate should register the https://forms.office.com/e/X0ZXhCJ98c?origin=lprLink. The document with Q&A will be added to the published competition. Proposers are required to keep all questions as clear and concise as possible.
Proposers are also expected to immediately notify UNICEF in writing of any ambiguities, errors, omissions, discrepancies, inconsistencies or other faults in any part of the RFPS, providing full details. Proposers will not benefit from such ambiguities, errors, omissions, discrepancies, inconsistencies or other faults.
UNICEF will compile the questions received. UNICEF may, at its discretion, at once copy any anonymized question and its reply to all other invited Proposers and/or post these on the UNICEF website and/or respond to the question at a bid conference. After any such bid conference, a Questions and Answers document may be prepared and posted on the UNICEF website.
Usually, the questions received will be anonymized and posted, together with the replies, on the UN.md and UNGM.org webpages this announcement is published on.

1.4 Amendments to RFPS Documents. At any time prior to the Submission Deadline, UNICEF may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Proposer, modify the RFPS documents by amendment. If the RFPS was available publicly online, amendments will also be posted publicly online. Further, all prospective Proposers that have received the RFPS documents directly from UNICEF will be notified in writing of all amendments to the RFPS documents. In order to afford prospective Proposers reasonable time in which to take the amendment into account in preparing their Proposals, UNICEF may, at its sole discretion, extend the Submission Deadline.

1.5 Submission Deadline. The deadline for submission of proposals is as follows:
29 July 2025, 23:59 (EEST**).**
Any proposals received by UNICEF after the Submission Deadline will be rejected.

1.6 Proposal Opening. Due to the nature of this RFPS, there will be no public opening of proposals.
2. Language
2.1 The Proposal prepared by the Proposer and all correspondence and documents relating to the Proposal exchanged by the Proposer and UNICEF, will be written in **ENGLISH**. Supporting documents and printed literature furnished by the Proposer may be in another language provided that they are accompanied by an appropriate translation in ENGLISH. When interpreting the Proposal, the translated version of these supporting documents and printed literature will prevail over the original version of these documents. The sole responsibility for translation, including the accuracy of the translation, will rest with the Proposer.

3. Validity of proposals; Modification and Clarifications; Withdrawal

3.1 Validity Period. Important!
****
Proposers must indicate the validity period of their Proposal. Due to a mandatory UNICEF

requirement, proposals should be valid for a period of one hundred and twenty (120) days after the Submission Deadline.
****

A Proposal valid for a shorter period of time shall not be further considered.

UNICEF may request the Proposer to extend the validity period. The Proposal of Proposers who decline to extend the validity of their Proposal shall become disqualified as no longer valid.
3.2 Other Changes. All changes to a Proposal must be received by UNICEF prior to the Submission Deadline. The Proposer must clearly indicate that the revised Proposal is a modification and supersedes the earlier version of the Proposal, or state the changes from the original Proposal.
3.3 Withdrawal of Proposal. A Proposal may be withdrawn by the Proposer on e-mailed, faxed or written request received by UNICEF from the Proposer prior to Submission Deadline. Negligence on the part of the Proposer confers no right for the withdrawal of the Proposal after it has been opened.
3.4 Clarifications Requested by UNICEF. During the evaluation of Proposals, UNICEF may, in its sole discretion, seek clarifications from any Proposer in order for UNICEF to fully understand the Proposer's Proposal and assist in the examination, evaluation and comparison of Proposals. UNICEF may seek such clarifications through written communications or may request an interview with any Proposer. During this clarification process, no change in the price or substance of the Proposal will be sought, offered or permitted, except as required in order to allow for correction of arithmetical errors discovered by UNICEF.
3.5 References. UNICEF reserves the right to contact any or all references supplied by the Proposer(s) and to seek references from other sources as UNICEF deems appropriate.

4. Eligibility; Proposer Information
4.1 Proposer. The term "Proposer" refers to those companies that submit a proposal pursuant to this RFPS and "Proposal" refers to all the documents provided by the Proposer in its response to this RFPS. A Proposer will only be eligible for consideration if it complies with the representations set out in Part V of this RFPS, including the representations on ethical standards, including conflicts of interest.
4.2 Joint Venture, Consortium or Association.
(a) 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, each such legal entity will confirm in their joint Proposal that:
- 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 will be evidenced by a Joint Venture Agreement among the legal entities, which will be submitted along with the Proposal; and
- if they are awarded the contract, the designated lead entity will enter into the contract with UNICEF, who will be acting for and on behalf of all the member entities comprising the joint venture.
(b) After the Proposal has been submitted to UNICEF, the lead entity identified to represent the joint venture will not be altered without the prior written consent of UNICEF.
(c) If a joint venture's Proposal is the Proposal selected for award, UNICEF will award the contract to the joint venture, in the name of its designated lead entity. The lead entity will sign the contract for and on behalf of all other member entities.
4.3 Proposals from Government Organizations. The eligibility of Proposers that are wholly or partly owned by the Government will be subject to UNICEF'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 these RFPS documents, and others that may lead to undue advantage against other Proposers, and the eventual rejection of the Proposal.
4.4 Proposals from organizations where the sole proprietor is a former or retired UNICEF/UN

staff member. Any organization, whose sole proprietor is a former or retired staff member of UNICEF (or any other United Nations organization), which submits a Proposal must disclose this previous United Nations employment at the time of submission. Any such Proposal will be treated as though the Proposal came from an individual for the purposes of UNICEF's standard conditions on contracting former and retired members of staff.

5. Preparation of Offer

5.1 Proposers are responsible to inform themselves in preparing their Proposal. In this regard, the Proposers will ensure that they:

- Examine all terms, requirements and formal submission instructions (e.g. regarding form and timing of submission, marking of envelopes, no price information in technical proposal etc.) included in the RFPS documents (including the Instruction to Proposers section);
- Review the RFPS to ensure that they have a complete copy of all documents;
- Review the standard UNICEF Contractual Provisions and the UNICEF General Terms and Conditions of Contract (Services) for the supply of services publicly available on the UNICEF Supply website: http://www.unicef.org/supply/index_procurement_policies.html;
- Review the UNICEF policies publicly available on the UNICEF Supply website: http://www.unicef.org/supply/index_procurement_policies.html.

In particular, Proposers should familiarize themselves with the obligations imposed on suppliers and their personnel and sub-contractors under the UNICEF Policy Prohibiting and Combatting Fraud and Corruption and the UNICEF Policy on Conduct Promoting the Protection and Safeguarding of Children;

- Attend any bid conference if it is mandatory under this RFPS;
- Fully inform and satisfy themselves as to requirements of any relevant authorities and laws that apply, or may in the future apply, to the supply of the services.

Proposers acknowledge that UNICEF, its directors, employees and agents make no representations or warranties (express or implied) as to the accuracy or completeness of this RFPS or any other information provided to the Proposers.

5.2 Failure to meet all requirements and instructions in the RFPS documents or to provide all requested information will be at the Proposer's own risk, and may result in rejection of the Proposer's Proposal.

5.3 The Proposal must be organized to follow the format of this RFPS. Each Proposer must respond to the stated requests or requirements, and indicate that the Proposer understands and confirms acceptance of UNICEF's stated requirements. The Proposer should identify any substantive assumption made in preparing its offer. The deferral of a response to a question or issue to any contract negotiation stage is not acceptable. Any item not specifically addressed in the Proposal will be deemed as accepted by the Proposer. Incomplete or inadequate responses, lack of response or misrepresentation in responding to any questions will affect the evaluation of the Proposal.

5.4 All references to descriptive materials should be included in the appropriate Proposal paragraph, though the material/documents themselves may be provided as annexes to the Proposal. The Proposer must also provide sufficient information in the Proposal to address each area of the evaluation criteria as presented in this document to allow a fair assessment of all of the Proposers and their Proposals. It is for UNICEF to determine, in its sole discretion, whether information provided is sufficient.

5.5 The completed and signed Request for Proposal for Services Form (Bid Form) must be submitted along with the Technical Proposal. The Request for Proposal for Services Form must be signed by a duly authorized representative of the Organization/Company.

Please provide in the Bid Form the United Nations Global Marketplace (UNGM) vendor number, if available. To register the company in the UNGM, please follow the simple registration process detailed at https://www.ungm.org/Public/Pages/RegistrationProcess. Although the required registration is 'Basic Level', all UNICEF vendors are encouraged to register at 'Level 1' in order to provide the certificate of registration/incorporation.

5.6 If answer Sheets are provided by UNICEF then these must be completed by the Proposer.
5.7 Technical Proposal: The Technical Proposal should address the criteria and requirements outlined in this RFPS, paying particular attention to its Terms of Reference/Statement of Work and its evaluation criteria. It is important to note that UNICEF actively welcomes innovative proposals and original solutions to the stated service need. **NO PRICE INFORMATION SHOULD BE CONTAINED IN THE TECHNICAL PROPOSAL OR IN THE BID FORM.**

5.8 Price Proposal: The Price Proposal should be prepared in accordance with the requirements contained in the Terms of Reference/Statement of Work for this RFPS.
5.9 Each Proposer acknowledges that its participation in any stage of the solicitation process for this RFPS is at its own risk and cost. The Proposer is responsible for, and UNICEF is not responsible for, the costs of preparing its Proposal or response to this RFPS, attendance at any bid conference, site visit, meetings or oral presentations, regardless of the conduct or outcome of the solicitation process.

5.10 Check-list for proposal preparation:

- BID conference will be held on 15 July, 14:00, UN House,31 August street, 131, Chisinau. Those interested should register using the https://forms.office.com/e/X0ZXhCJ98c?origin=lprLink.
- Separate e-mails/envelopes for Technical and Price proposals.
- Request for Proposals for Services Form filled and signed.
Please mark "YES" if company or management has NOT been charged for any of the actions listed. Choose "NO" if official decisions were issued regarding company or management (subject to additional screening).
- Request for Proposals for Services Form included in the Technical Offer e-mail/envelope.
- All Technical/Price Offers files included in the email, no files submitted as external links.
- Proposals are clearly marked with the RFPS number: LRPS-2025-9198274 in the email title or on the envelope.
- Joint venture/consortium/subcontractor arrangements are documented and included in the Technical Proposal.
- Validity period of the proposal- at least 120 days.
- Proposal sent to the official tender e-mail address: chisinautenders@unicef.org, no other UNICEF e-mails in cc.

6. Proposal Documents; Confidentiality
6.1 This RFPS, together with all Proposal documents provided by the Proposer to UNICEF, will be considered the property of UNICEF and Proposals will not be returned to the Proposers.
6.2 Information contained in the Proposal documents, which the Proposer considers to be its confidential information, should be clearly marked "confidential", next to the relevant part of the text, and UNICEF will treat such information accordingly.
6.3 All information and documents provided to the Proposers by UNICEF ("RFPS Materials") shall be treated as confidential by the Proposers. If the Proposer declines to respond to this RFPS, or, if the Proposal is rejected or unsuccessful, the Proposer will promptly return all such RFPS Materials to UNICEF, or destroy or delete all such RFPS Materials. The Proposer shall not use the RFPS Materials for any purpose other than the purpose of preparing a Proposal and shall not disclose the RFPS Materials to any third party, except: (a) with the prior written consent of UNICEF; (b) where the third party is assisting the Proposer in preparing the Proposal, provided the Proposer has previously ensured that party's adherence to this duty of confidentiality; (c) if the relevant RFPS Materials are at the time of this RFPS lawfully in the possession of the Proposer through a party other than UNICEF; (d) if required by law, and provided that the Proposer has previously informed UNICEF in writing of its obligation to disclose the RFPS Materials; or (e) if the RFPS Materials are generally and publicly available other than as a result of breach of confidence by the person receiving the RFPS Materials.

7. Multiple proposals and proposals from related organizations
7.1 Proposers shall not submit more than one Proposal as part of this RFPS process.
7.2 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 then neither the lead entity nor the member entities of the joint venture may submit another Proposal, either in its own capacity or as a lead entity or a member entity for another joint venture submitting another Proposal.
7.3 UNICEF reserves the right to reject separate Proposals submitted by two or more Proposers if the Proposers are related organizations and are found to have any 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 a relationship with each other, that gives one or more Proposers access to confidential information about, or influence over, the other Proposal(s); or
(d) 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
(e) an expert proposed to be in the team of one Proposer participates in more than one Proposal received for this solicitation process.

PART III -AWARD/ADJUDICATION OF PROPOSALS

1. Award
1.1 Proposal Evaluation Process. The evaluation is carried out by UNICEF in accordance with UNICEF's regulations, rules and practices and all determinations are made in UNICEF's sole discretion.
After opening the Proposals, UNICEF will carry out the following steps in the following order:
First, each Proposal will be evaluated for compliance with the mandatory requirements of this RFPS. Proposals deemed not to meet all of the mandatory requirements will be considered non-compliant and rejected at this stage without further consideration. Failure to comply with any of the terms and conditions contained in this RFPS, including, but not limited to, failure to provide all required information, may result in a Proposal being disqualified from further consideration.
Second, UNICEF will evaluate the Technical Proposal part for compliance with the technical requirements stated in this RFPS on the basis of the Proposal evaluation approach set out below.
Third, UNICEF will undertake a commercial evaluation of the Price Proposal part of technically compliant Proposals on the basis of the Proposal evaluation approach set out below.

1.2 Proposal Evaluation Approach.
Weighted scoring evaluation approach
The evaluation criteria will be a split between technical and commercial (price proposal) scores (a 70/30 split).
Proposals submitted in response to this RFPS should include and will be evaluated against the following:

a) Technical Evaluation, based on the following criteria:

Overall Response - 10 maximal points
Company and Key Personnel - 50 maximal points
Proposed Methodology - 10 maximal points
(please find detailed technical sub criteria in the ToR)
Total Maximum technical score - 70 Points

Only Proposals which receive a minimum of 50 points will be considered for further evaluation.

b) Price Proposal (commercial evaluation)
The total amount of points allocated for the price component is 30. The maximum number of points will be allotted to the lowest price proposal that is opened and compared among those invited firms/institutions which obtain the threshold points in the evaluation of the technical component. All other price proposals will receive points in inverse proportion to the lowest price; e.g.:
Score for price proposal X = Max. score for price proposal (30 Points) * (Price of lowest priced proposal) / Price of proposal)
Total obtainable Technical and Price points: 100
The Proposer(s) achieving the highest combined technical and price score will (subject to any negotiations and the various other rights of UNICEF detailed in this RFPS) be awarded the contract(s).

1.3 Multiple Arrangements. UNICEF reserves the right to make multiple arrangements for any service(s) where UNICEF considers it to be in its best interest to do so.
1.4 Negotiation. UNICEF reserves the right to negotiate with the Proposer(s) that has/have attained the best rating/ranking, i.e. those providing the overall best value Proposal.
1.5 Award Notification. UNICEF will only notify the Proposer(s) that has/have been awarded the contract(s) resulting from this solicitation process; UNICEF may, but is not required to, notify the other Proposers of the outcome of this solicitation process.

1.6 Limited company evaluation. During the selection process, UNICEF may conduct a limited company evaluation as part of the standard internal procedure. In this regard, the bidder may be requested the latest audited financial statements with comparative figures for the two most recent years, the certificate of registration and UNGM vendor number.

2. General Terms And Conditions Of Contract (Services)
2.1 UNICEF's General Terms and Conditions of Contract (Services) will apply to any contract(s) awarded in connection with this RFPS. By signing the Request for Proposal for Services Form, each Proposer is deemed to have confirmed its acceptance of the UNICEF General Terms and Conditions (Services). The Proposer understands that if it proposes any amendments or additional terms to the UNICEF General Terms and Conditions (Services), these must be clearly detailed in the Proposal and may negatively affect the evaluation of the Proposal.

3. Rights of UNICEF
3.1 UNICEF reserves the following rights:
(a) to accept any Proposal, in whole or in part; to reject any or all Proposals; or to cancel this solicitation process in its entirety;
(b) to verify any information contained in Proposer's response (and the Proposer will provide UNICEF with its reasonable cooperation with such verification);
(c) to invalidate any Proposal received from a Proposer that, in UNICEF's sole opinion has previously failed to perform satisfactorily or complete contracts on time, or UNICEF believes is not in a position to perform the contract;
(d) to invalidate any Proposal that, in UNICEF's sole opinion, fails to mEEST the requirements and instructions stated in this RFPS;
(e) to suspend negotiations or withdraw an award to a Proposer at any time up until a contract has been signed with such Proposer. UNICEF is not required to provide any justification, but will give notice prior to any such suspension of negotiations or withdrawal of award.
3.2 UNICEF is not liable to any Proposer for any costs, expense or loss incurred or suffered by such Proposer in connection with this RFPS or solicitation process, including, but not limited to, any costs, expense or loss incurred as result of UNICEF exercising any of its rights in paragraph 3.1 above.

PART IV - REQUIREMENTS

1. Price and Payment

1.1 Price. The fee for the services and deliverables will be treated as inclusive of all costs, expenses, charges or fees that the Proposer may incur in connection with the performance of the work. The Proposer is invited to offer any unconditional discounts. Further, the Proposer may offer early payment discounts, i.e. payment within a specific period of time faster than UNICEF's standard payment terms of 30 days.

1.2 Payment Terms. Invoices may be issued to UNICEF only after the services (or components of the services) have been provided and the deliverables (or installments of the deliverables) have been delivered (a) in accordance with the contract and (b) to UNICEF's satisfaction. The standard terms of payment are net 30 days, after receipt of invoice. Payment will be performed by bank transfer in the currency of the contract.

The Proposer will suggest a payment schedule for the contract that is linked to clear milestones and/or deliverables identified in the Terms of Reference/Statement of Work.

1.3 Currency.

(a) The currency of the Proposal shall be in MDL or USD. UNICEF will reject any proposals submitted in another currency.

(b) If the above paragraph (a) explicitly permits two or more specified currencies for the Proposals, then for evaluation purposes only, offers submitted in a currency other than US Dollars will be converted into US Dollars using the United Nations rate of exchange in effect on the submission deadline date.

1.4 Taxes. Article II, Section 7, of the Convention on the Privileges and Immunities provides, inter alia, that the United Nations, including UNICEF as a subsidiary organ, is exempt from all direct taxes, except charges for public utility services, and is exempt from customs restrictions, duties, and charges of a similar nature in respect of articles imported or exported for its official use. All prices/rates quoted in the Proposal must be net of any direct taxes and any other taxes and duties, unless otherwise specified in the RFPS documents.

2. Implementation

2.1 No Reliance. Except as expressly set out in the RFPS documents, UNICEF will have no obligation to provide any assistance to the contractor and UNICEF makes no representations as to the availability of any facilities, equipment, materials, systems or licenses which may be helpful or useful for the performance of the work. If the Proposer requires any facilities, equipment, materials, systems or licenses in order to do the work, this must be explicitly detailed in its Proposal.

2.2 Sub-contractors. Proposers must identify in their Proposal, any products which may be offered by themselves, but originate from another supplier and/or country. Further, Proposers must identify in their proposal any planned subcontracting of services. All subcontracting arrangements will be reviewed by UNICEF as part of its evaluation of the Proposal.

2.3 Experts. If so required in the Terms of Reference/Statement of Work each key expert profile requested in the Terms of Reference/Statement of Work must sign an exclusivity and availability statement. The purpose of Exclusivity and Availability Statement is as follows:

(a) The key experts proposed in the Proposal must not be part of any other Proposer's Proposal being submitted for this RFPS process. They must therefore engage themselves exclusively to the Proposer.

(b) Each key expert must also undertake to be available, able and willing to work for all the periods foreseen for his/her input during the implementation of the contract as indicated in the Terms of Reference/Statement of Work and the Proposal.

Having selected a Proposal partly based on an evaluation of the key experts presented in the Proposal, UNICEF expects the contract to be executed by these specific experts. As the expected date of mobilization is given in the RFPS, UNICEF will only consider substitutions after the deadline for the submission of offers in cases of unexpected delays in the commencement date beyond the control of the Proposer, or exceptionally because of the incapacity of a key expert for health reasons or due to force majeure or other circumstances which may justify a replacement and which would not have any effect on the selection of the Proposal. The desire of

a Proposer to use an expert on another project or a change of mind on the part of an expert about the contract will not be accepted as a reason for substitution of any of the key experts.

2.4 Joint Ventures. The description of the organization of the joint venture/consortium/association must clearly define the expected role of each of the entities in the joint venture in delivering the requirements of this RFPS, both in the Proposal and the Joint Venture Agreement. All entities that comprise the joint venture will be subject to the eligibility and qualification assessment by UNICEF.
Where a joint venture is presenting its track record and experience in a similar undertaking as those required in this RFPS, it should present such information in the following manner:
(i) Those that were undertaken together by the joint venture; and
(ii) Those that were undertaken by the individual entities of the joint venture expected to be involved in the performance of the services defined in this RFPS.
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.

3. Liquidated Damages
3.1 Liquidated damages. Any contracts awarded in connection with this RFPS will include the following clause on liquidated damages:
"In addition to, and without prejudice to any of the other rights and remedies of UNICEF including, but not limited to, those set out in the UNICEF General Terms and Conditions of Contract (Services), if the Contractor fails to provide the Services or the Deliverables in accordance with the time schedule set out in the Contract, or if UNICEF determines that the Services or Deliverables do not conform to the requirements of the Contract, UNICEF may claim liquidated damages from the Contractor and, at UNICEF's option, the Contractor will pay such liquidated damages to UNICEF or UNICEF will deduct such liquidated damages from the Contractor's invoice(s). Such liquidated damages will be calculated as follows: one half of one per cent (0.5%) of the Contract Fee for the delayed Services and Deliverables for each day of delay, or in the case of a Fee calculated on a time-based rate, one half of one per cent (0.5%) of the time-based rate for all the Contractor Personnel required to provide the relevant Services or Deliverables, until performance of conforming Services or delivery of conforming Deliverables, up to a maximum of ten per cent (10%) of the value of the Contract. The payment or deduction of such liquidated damages will not relieve the Contractor from any of its other obligations or liabilities pursuant to the Contract."

PART V - PROPOSER REPRESENTATIONS

1. Price - Most Favoured Customer
1.1 The Proposer confirms that the fees, rates and charges and related pricing terms with respect to the services specified in the Proposal are the most favourable pricing terms available to any customer of the Proposer (or any of the Proposer's affiliates). If at any time during the term of any contract resulting from the Proposal, any other customer of the Proposer (or of any of the Proposer's affiliates) obtains more favourable pricing terms than those provided to UNICEF, the Proposer will retroactively adjust the fee and related pricing terms under the contract to conform to the more favourable terms and the Proposer will promptly pay UNICEF any amounts owing to UNICEF as a result of such retroactive fee adjustment.

2. General Representations
By submitting its Proposal in response to this RFPS, the Proposer confirms to UNICEF as at the Submission Deadline:
2.1 The Proposer has (a) the full authority and power to submit the Proposal and to enter into

any resulting contract, and (b) all rights, licenses, authority and resources necessary, as applicable, to develop, source and supply the services and to perform its other obligations under any resulting contract. The Proposer has not and will not enter into any agreement or arrangement that restrains or restricts any person's rights to use, sell, dispose of or otherwise deal with any service, deliverable or outcome that may be acquired under any resulting contract.
2.2 All of the information it has provided to UNICEF concerning the services and the Proposer is true, correct, accurate and not misleading.
2.3 The Proposer is financially solvent and is able to supply the services to UNICEF in accordance with the requirements described in this RFPS.
2.4 The use or supply of the services does not and will not infringe any patent, design, trade-name or trade-mark.
2.5 The development and supply of the services has complied, does comply, and will comply with all applicable laws, rules and regulations.
2.6 The Proposer will fulfill its commitments with the fullest regard to the interests of UNICEF and will refrain from any action which may adversely affect UNICEF or the United Nations.
2.7 It has the personnel, experience, qualifications, facilities, financial resources and all other skills and resources to perform its obligations under any resulting contract.
2.8 The Proposer agrees to be bound by the decisions of UNICEF, including but not limited to, decisions as to whether the Proposer's Proposal mEESTs the requirements and instructions stated in this RFPS and the results of the evaluation process.

3. Ethical Standards
UNICEF requires that all Proposers observe the highest standard of ethics during the entire solicitation process, as well as the duration of any contract that may be awarded as a result of this solicitation process. UNICEF also actively promotes the adoption by its suppliers of robust policies for the protection and safeguarding of children and the prevention and prohibition of sexual exploitation and sexual abuse.
By submitting its Proposal in response to this RFPS, the Proposer makes the following representations and warranties to UNICEF as at the Submission Deadline:
3.1 In respect of all aspects of the solicitation process the Proposer has disclosed to UNICEF any situation that may constitute an actual or potential conflict of interest or could reasonably be perceived as a conflict of interest. In particular, the Proposer has disclosed to UNICEF if it or any of its affiliates is, or has been in the past, engaged by UNICEF to provide services for the preparation of the design, specifications, cost analysis/estimation, and other documents to be used for the procurement of the services requested under this RFPS; or if it or any of its affiliates has been involved in the preparation and/or design of the programme/project related to the services requested under this RFPS.
3.2 The Proposer has not unduly obtained, or attempted to unduly obtain, any confidential information in connection with the solicitation process and any contract that may be awarded as a result of this solicitation process.
3.3 No official of UNICEF or of any United Nations System organisation has received from or on behalf of the Proposer, or will be offered by or on behalf of the Proposer, any direct or indirect benefit in connection with this RFPS including the award of the contract to the Proposer. Such direct or indirect benefit includes, but is not limited to, any gifts, favours or hospitality.
3.4 The following requirements with regard to former UNICEF officials have been complied with and will be complied with:
(a) During the one (1) year period after an official has separated from UNICEF, the Proposer may not make a direct or indirect offer of employment to that former UNICEF official if that former UNICEF official was, during the three years prior to separating from UNICEF, involved in any aspect of a UNICEF procurement process in which the Proposer has participated.
(b) During the two (2) year period after an official has separated from UNICEF, that former official may not, directly or indirectly on behalf of the Proposer, communicate with UNICEF, or present to UNICEF, about any matters that were within such former official's responsibilities while at UNICEF.
3.5 Neither the Proposer nor any of its affiliates, or personnel or directors, is subject to any

sanction or temporary suspension imposed by any United Nations System organisation or other international inter-governmental organisation. The Proposer will immediately disclose to UNICEF if it or any of its affiliates, or personnel or directors, becomes subject to any such sanction or temporary suspension during the term of the contract. If the Proposer or any of its affiliates, or personnel or directors becomes subject to any such sanction or temporary suspension during the term of any resulting contract, UNICEF will be entitled to suspend the contract for a period of time up to thirty (30) days or terminate the contract, at its sole choice, with immediate effect upon delivery of a written notice of suspension or termination, as the case may be, to the Proposer. If UNICEF choses to suspend the contract it will be entitled to terminate the contract at the end of the thirty (30) days' suspension at UNICEF's sole choice.
3.6 The Proposer will (a) observe the highest standard of ethics; (b) use its best efforts to protect UNICEF against fraud, in the solicitation process and in the performance of any resulting contract; and (c) comply with the applicable provisions of UNICEF's Policy Prohibiting and Combatting Fraud and Corruption which can be accessed on the UNICEF website at http://www.unicef.org/supply/index_procurement_policies.html. In particular, the Proposer will not engage, and will ensure that its personnel, agents and sub-contractors do not engage, in any corrupt, fraudulent, coercive, collusive or obstructive conduct as such terms are defined in UNICEF's Policy Prohibiting and Combatting Fraud and Corruption.
3.7 The Proposer will comply with all laws, ordinances, rules and regulations bearing upon its participation in this solicitation and the UN Supplier Code of Conduct (available at the United Nations Global Marketplace website - www.ungm.org).
3.8 Neither the Proposer nor any of its affiliates, is engaged, directly or indirectly, (a) in any practice inconsistent with the rights set forth in the Convention on the Rights of the Child, including Article 32, or the International Labour Organisation's Convention Concerning the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labour, No. 182 (1999); or (b) in the manufacture, sale, distribution, or use of anti-personnel mines or components utilised in the manufacture of anti-personnel mines.
3.9 The Proposer has taken and will take all appropriate measures to prevent sexual exploitation or abuse of anyone by its personnel including its employees or any persons engaged by the Proposer to perform any services in the Proposer's participation in this solicitation. For these purposes, sexual activity with any person less than eighteen years of age, regardless of any laws relating to consent, will constitute the sexual exploitation and abuse of such person. The Proposer has taken and will take all appropriate measures to prohibit its personnel including its employees or other persons engaged by the Proposer, from exchanging any money, goods, services, or other things of value, for sexual favours or activities or from engaging in any sexual activities that are exploitive or degrading to any person.

3.10 The Proposer confirms that it has read UNICEF's Policy on Conduct Promoting the Protection and Safeguarding of Children. The Proposer will ensure that its Personnel understand the notification requirements expected of them and will establish and maintain appropriate measures to promote compliance with such requirements. The Proposer will further cooperate with UNICEF's implementation of this Policy.

3.11 The Proposer will inform UNICEF as soon as it becomes aware of any incident or report that is inconsistent with the undertakings and confirmations provided in this Article 3.
3.12 Each of the provisions in this Article 3 of Part V constitutes an essential condition of participation in this solicitation process. In the event of a breach of any of these provisions, UNICEF is entitled to disqualify the Proposer from this solicitation process and/or any other solicitation process, and to terminate any contract that may have been awarded as a result of this solicitation process, immediately upon notice to the Proposer, without any liability for termination charges or any liability of any kind. In addition, the Proposer may be precluded from doing business with UNICEF and any other entity of the United Nations System in the future.

4. Audit
4.1 From time to time, UNICEF may conduct audits or investigations relating to any aspect of a

contract awarded in relation to this RFPS, including but not limited to the award of the contract and the Proposer's compliance with the provisions of Article 3 above. The Proposer will provide its full and timely cooperation with any such audits or investigations, including (but not limited to) making its personnel and any relevant data and documentation available for the purposes of such audits or investigations, at reasonable times and on reasonable conditions, and granting UNICEF and those undertaking such audits or investigations access to the Proposer's premises at reasonable times and on reasonable conditions in connection with making its personnel and any relevant data and documentation available. The Proposer will require its sub-contractors and its agents to provide reasonable cooperation with any audits or investigations carried out by UNICEF.

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INSTRUCTION TO PROPOSERS

1. MARKING AND RETURNING PROPOSALS

1.1 Proposals shall be submitted in the manner specified earlier in this solicitation document. Detailed submission guidance at paragraphs 1.7, 1.8 and/or 1.9 should then be followed accordingly.

1.2 The Bid Form/Request for Proposal for Services Form must be signed, and submitted together with the Proposal. The Bid Form/Request for Proposal for Services Form should be signed by the duly authorized representative of the submitting company.

1.3 Proposals must be clearly marked with the RFP(S) number and the name of the company submitting the Proposal.

1.4 Proposers should note that Proposals received in the following manner will be invalidated:

a) with incorrect (as applicable) postal address, email address or fax number;
b) received after the stipulated closing time and date;
c) failure to quote in the currency(ies) stated in the RFP(S);
d) in a different form than prescribed in the RFP(S).

1.5 Technical Proposal: The Technical Proposal should address the criteria and requirements outlined in this RFP(S), paying particular attention to its schedules/Terms of Reference/Statement of Work and its evaluation criteria. It is important to note that UNICEF actively welcomes innovative proposals and original solutions to the stated service/goods need.

NO PRICE INFORMATION SHOULD BE CONTAINED IN THE TECHNICAL PROPOSAL.

1.6 Price Proposal: The Price Proposal should be prepared in accordance with the requirements contained in the schedules/Terms of Reference/Statement of Work for this RFP(S).

1.7 Sealed Proposals (as applicable)

1.7.1 See paragraph 1.1 above concerning applicability of this paragraph.

1.7.2 The Proposal must be sent for the attention of unit/team and address as specified in this RFP/RFPS. Proposals not sent in this manner will be disqualified.

1.7.3 They must be clearly marked as follows:

* Outer sealed envelope:
Name of company
[RFP(S) NO.]
[NAME OF UNIT & UNICEF OFFICE ADDRESS]

* Inner sealed envelope - Technical Proposal (1 original and 2 copies): Name of company, RFP(S) number - technical proposal

* Inner sealed envelope - Price Proposal (1 original and 2 copies): Name of company, RFP(S) number - price proposal

No price information should be provided in the Technical Proposal.

Proposals received in any other manner will be invalidated.

1.7.4 In case of any discrepancy between an original and a copy, the original will prevail.

1.7.5 Any delays encountered in the mail delivery will be at the risk of the Proposer.

1.8 Faxed Proposals (as applicable)

1.8.1 See paragraph 1.1 above concerning applicability of this paragraph.

1.8.2 Faxed Proposals must be returned to the ONLY ACCEPTABLE FAX NUMBER for Proposals as specified in this RFP(S) Document. Proposers should note that Proposals received at any other fax number will be invalidated.

No price information should be provided in the Technical Proposal.

1.9 E-mailed Proposals (as applicable)

1.9.1 See paragraph 1.1 above concerning applicability of this paragraph.

1.9.2 All e-mailed Proposals must be submitted to the ONLY ACCEPTABLE E-MAIL ADDRESS as specified in this solicitation document. No other recipient should be "Cc" or "Bcc" in the e-mail submission. Proposals not sent in this manner will be disqualified.

1.9.3 All Proposals submitted by e-mail must be submitted as email attachments. The Technical Proposal and Price Proposal must be sent as separate attachments and clearly indicated as such in the file name (e.g. Company ABC Technical Proposal, Company ABC Price Proposal). Email links (e.g. to documents to be downloaded from cloud based folders) are not acceptable unless otherwise specifically requested. Proposals submitted as a link or through a link will be invalidated.

2. OPENING OF PROPOSALS

2.1 Proposals received prior to the stated closing time and date will be kept unopened. UNICEF will open Proposals when the specified time has arrived and no Proposal received thereafter will be considered.

2.2 UNICEF will accept no responsibility for the premature opening of a Proposal which is not properly addressed or identified.

2.3 In cases when a Public Opening is held, the invited proposers, or their authorized representative, may attend the public Proposal opening at the time, date and location specified in the RFP(S) documents.

3. UNGM REGISTRATION

3.1 UNICEF is part of the United Nations Global Marketplace(UNGM). Accordingly, all proposers are encouraged to become a UNICEF vendor by creating a vendor profile in the UNGM website: www.ungm.org

4. AWARD NOTIFICATION

4.1 UNICEF reserves the right to make a public notification of the outcome on an RFP(S) advising product/service, awarded supplier and total value of award.

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ANNEX A
GENERAL TERMS AND CONDITIONS

GENERAL TERMS AND CONDITIONS OF CONTRACT (Services)

Definitions and UNICEF Supply Website

1.1 In these General Terms and Conditions (Services), the following terms have the following meaning:

"Affiliates" means, with respect to the Contractor, any of its corporate affiliates or associates, including parent entities, subsidiaries, and other entities in which it owns a substantial interest.

"Confidential Information" means information or data that is designated as confidential at the time of exchange between the Parties or promptly identified as confidential in writing when furnished in intangible form or disclosed orally, and information, the confidential or proprietary nature of which, is or should be reasonably apparent from the inherent nature, quality or characteristics of such information.

"Contract" means the services contract that incorporates these General Terms and Conditions of Contract (Services). It includes contracts for services issued by UNICEF, whether or not they are issued under a long-term arrangement or similar contract.

"Contractor" means the contractor named in the Contract.

"Deliverables" means the work product and other output of the Services required to be delivered by Contractor as part of the Services, as specified in the relevant section of the Contract.

"Disabling Code" means any virus, back door, timer or other limiting routine, instruction or design, or other malicious, illicit or similar unrequested code that may have the consequence (whether by design or unintentionally) of disrupting, disabling, harming, circumventing security controls or otherwise impeding in any manner the normal operation or performance of (i) any software or service or (ii) any UNICEF information system or network.

"End User" means, in the event that the Services or Deliverables involve the use of any information systems, any and all UNICEF employees, consultants and other personnel and any other external users collaborating with UNICEF, in each case, authorized by UNICEF to access and use the Services and/or Deliverables.

"Fee" is defined in Article 3.1.

"Host Government" means a Government with which UNICEF has a programme of development cooperation, and includes a Government of a country in which UNICEF provides humanitarian assistance.

Contractor's "Key Personnel" are: (i) Personnel identified in the proposal as key individuals (as a minimum, partners, managers, senior auditors) to be assigned for participation in the performance of the Contract; (ii) Personnel whose resumes were submitted with the proposal; and (iii) individuals who are designated as key personnel by agreement of the Contractor and UNICEF during negotiations.

"Parties" means the Contractor and UNICEF together and a "Party" means each of the Contractor and UNICEF.

Contractor's "Personnel" means the Contractor's officials, employees, agents, individual sub-contractors and other representatives.

"Security Incident" means, with respect to any information system, service or network used in the delivery of the Services or Deliverables, one or more events that (a) indicates that the security of such information system, service, or network may have been breached or compromised and (b) that such breach or compromise could very likely compromise the security of UNICEF's Confidential Information or weaken or impair UNICEF's operations. Security Incident includes any actual, threatened or reasonably suspected unauthorized access to, disclosure of, use of or acquisition of UNICEF Data that compromises the security, confidentiality, or integrity of the UNICEF Data, or the ability of UNICEF or End Users to access the UNICEF Data.

"Services" means the services specified in the relevant section of the Contract.

"UNICEF Data" means any and all information or data in digital form or processed or held in digital form that (a) are provided to the Contractor by, or on behalf of, UNICEF and/or End Users under the Contract or through UNICEF's and/or End Users' use of the Services or in connection with the Services, or (b) are collected by the Contractor in the performance of the Contract.

"UNICEF Supply Website" means UNICEF's public access webpage available at http://www.unicef.org/supply/index_procurement_policies.html, as may be updated from time to time.

1.2 These General Terms and Conditions of Contract, UNICEF's Policy Prohibiting and Combatting Fraud and Corruption, UNICEF's Policy on Safeguarding (as updated from time to time), the UN Supplier Code of Conduct and UNICEF's Information Disclosure Policy referred to in the Contract, as well as other policies applicable to the Contractor, are publicly available on the UNICEF Supply Website. The Contractor represents that it has reviewed all such policies as of the effective date of the Contract.

2. Provision of Services and Deliverables; Contractor's Personnel; Sub-Contractors

Provision of Services and Deliverables

2.1 The Contractor will provide the Services and deliver the Deliverables in accordance with the scope of work set out in the Contract, including, but not limited to, the time for delivery of the Services and Deliverables, and to UNICEF's satisfaction. Except as expressly provided in the Contract, the Contractor will be responsible at its sole cost for providing all the necessary personnel, equipment, material and supplies and for making all arrangements necessary for the performance and completion of the Services and delivery of the Deliverables under the Contract.

2.2 The Contractor acknowledges that, other than as expressly set out in the Contract, UNICEF will have no obligation to provide any assistance to the Contractor and UNICEF makes no representations as to the availability of any facilities, equipment, materials, systems or licenses which may be helpful or useful for the fulfillment by the Contractor of its obligations under the Contract. If UNICEF provides access to and use of UNICEF premises, facilities or systems (whether on site or remotely) to the Contractor for the purposes of the Contract, the Contractor will ensure that its Personnel or sub-contractors will, at all times (a) use such access exclusively for the specific purpose for which the access has been granted and (b) comply with UNICEF's security and other regulations and instructions for such access and use, including, but not limited to, UNICEF's information security policies. The Contractor will ensure that only those of its Personnel that have been authorized by the Contractor, and approved by UNICEF, have access to UNICEF's premises, facilities or systems.

2.3 The Contractor will use its best efforts to accommodate reasonable requests for changes (if any) to the scope of work of the Services or time for provision of the Services or delivery of the Deliverables. If UNICEF requests any material change to the scope of work or time for delivery, UNICEF and the Contractor will negotiate any necessary changes to the Contract, including as to the Fee and the time schedule under the Contract. Any such agreed changes will become effective only when they are set out in a written amendment to the Contract signed by both UNICEF and the Contractor. Should the Parties fail to agree on any such changes within thirty (30) days, UNICEF will have the option to terminate the Contract without penalty notwithstanding any other provision of the Contract.

2.4 The Contractor will neither seek nor accept instructions from any entity other than UNICEF (or entities authorized by UNICEF to give instructions to the Contractor) in connection with the provision of the Services or development and delivery of the Deliverables.

2.5 Title to any equipment and supplies which may be provided to the Contractor by UNICEF, will remain with UNICEF. Such equipment and supplies will be returned to UNICEF at the conclusion of the Contract or when no longer needed by the Contractor in the same condition as when they were provided to the Contractor, subject to normal wear and tear. The Contractor will pay UNICEF the value of any loss of, damage to, or degradation of, the equipment and supplies beyond normal wear and tear.

Non-conforming Services and Consequences of Delay

2.6 If the Contractor determines it will be unable to provide the Services or deliver the Deliverables by the date stipulated in the Contract, the Contractor will (i) immediately consult with UNICEF to determine the most expeditious means for delivery of the Services and/or Deliverables; and (ii) take necessary action to expedite delivery of the Services and/or Deliverables, at the Contractor's cost (unless the delay is due to force majeure as defined in Article 6.8 below), if reasonably so requested by UNICEF.

2.7 The Contractor acknowledges that UNICEF may monitor the Contractor's performance under the Contract and may at any time evaluate the quality of the Services provided and the Deliverables to determine whether or not the Services and Deliverables conform to the Contract. The Contractor agrees to provide its full cooperation with such performance monitoring and evaluation, at no additional cost or expense to UNICEF, and will provide relevant information as reasonably requested by UNICEF, including, but not limited to, the date of receipt of the Contract, detailed status updates, costs to be charged and payments made by UNICEF or pending. Neither the evaluation of the Services and Deliverables, nor failure to undertake any such evaluation, will relieve the Contractor of any of its warranty or other obligations under the Contract.

2.8 If the Services or Deliverables provided by the Contractor do not conform to the requirements of the Contract or are delivered late or incomplete, without prejudice to any of its other rights and remedies, UNICEF can, at its option:

(a) by written notice, require the Contractor, at the Contractor's expense, to remedy its performance, including any deficiencies in the Deliverables, to UNICEF's satisfaction within thirty (30) days after receipt of UNICEF's notice (or within such shorter period as UNICEF may determine, in its sole discretion, is necessary as specified in the notice);

(b) require the Contractor to refund all payments (if any) made by UNICEF in respect of such non-conforming or incomplete performance;

(c) procure all or part of the Services and/or Deliverables from other sources, and require the Contractor to pay UNICEF for any additional cost beyond the balance of the Fee for such Services and Deliverables;

(d) give written notice to terminate the Contract for breach, in accordance with Article 6.1 below, if the Contractor fails to remedy the breach within the cure period specified in Article 6.1 or if the breach is not capable of remedy;

(e) require the Contractor to pay liquidated damages as set out in the Contract.

2.9 Further to Article 11.5 below, the Contractor expressly acknowledges that if UNICEF takes delivery of Services or Deliverables that have been delivered late or otherwise not in full compliance with the requirements of the Contract, this does not constitute a waiver of UNICEF's rights in respect of such late or non-compliant performance.

Contractor's Personnel and Sub-Contractors

2.10 The following provisions apply with regard to the Contractor's Personnel:

(a) The provisions of Article 7 (Ethical Standards) will apply to the Contractor's Personnel as expressly stated in Article 7.

(b) The Contractor will be responsible for the professional and technical competence of the Personnel it assigns to perform work under the Contract and will select professionally qualified, reliable and competent individuals who will be able to effectively perform the obligations under the Contract and who, while doing so, will respect the local laws and customs and conform to a high standard of moral and ethical conduct.

(c) The qualifications of any Personnel whom the Contractor may assign or may propose to assign to perform any obligations under the Contract will be substantially the same as, or better than, the qualifications of any personnel originally proposed by the Contractor.

(d) At any time during the term of the Contract, UNICEF can make a written request that the Contractor replace one or more of the assigned Personnel. UNICEF will not be required to give an explanation or justification for this request. Within seven (7) working days of receiving UNICEF's request for replacement the Contractor must replace the Personnel in question with Personnel acceptable to UNICEF. This provision also extends to Personnel of the Contractor who have "account manager" or "relationship manager" type functions.

(e) If one or more of Contractor's Key Personnel become unavailable, for any reason, for work under the Contract, the Contractor will (i) notify the UNICEF contracting authority at least fourteen (14) days in advance; and (ii) obtain the UNICEF contracting authority's approval prior to making any substitution of Key Personnel. In notifying the UNICEF contracting authority, the Contractor will provide an explanation of the circumstances necessitating the proposed replacement(s) and submit justification and qualification of replacement Personnel in sufficient detail to permit evaluation of the impact on the engagement.

(f) The approval of UNICEF of any Personnel assigned by the Contractor (including any replacement Personnel) will not relieve the Contractor of any of its obligations under the Contract. The Contractor's Personnel, including individual sub-contractors, will not be considered in any respect as being the employees or agents of UNICEF.

(g) All expenses of the withdrawal or replacement of the Contractor's Personnel will, in all cases, be borne exclusively by the Contractor.

2.11 The Contractor will obtain the prior written approval and clearance of UNICEF for all institutional sub-contractors it proposes to use in connection with the Contract. The approval of UNICEF of a sub-contractor will not relieve the Contractor of any of its obligations under the Contract. The terms of any sub-contract will be subject to, and will be construed in a manner that is fully in accordance with, all of the terms and conditions of the Contract.

2.12 The Contractor confirms that it has read UNICEF's Policy on Safeguarding (as updated from time to time). The Contractor will ensure that its Personnel understand the notification requirements expected of them and will establish and maintain appropriate measures to promote compliance with such requirements. The Contractor will further cooperate with UNICEF's implementation of this policy.

2.13 The Contractor will supervise its Personnel and sub-contractors and will be fully responsible and liable for all Services performed by its Personnel and sub-contractors and for their compliance with the terms and conditions of the Contract.

2.14 The Contractor will comply with all applicable international standards and national labor laws, rules and regulations relating to the employment of national and international staff in connection with the Services, including, but not limited to, laws, rules and regulations associated with the payment of the employer's portions of income tax, insurance, social security, health insurance, worker's compensation, retirement funds, severance or other similar payments. Without limiting the provisions of this Article 2 or Article 4 below, the Contractor will be fully responsible and liable for, and UNICEF will not be liable for (a) all payments due to its Personnel and sub-contractors for their services in relation to the performance of the Contract; (b) any action, omission, negligence or misconduct of the Contractor, its Personnel and sub-contractors; (c) any insurance coverage which may be necessary or desirable for the purpose of the Contract; (d) the safety and security of the Contractor's Personnel and sub-contractors' personnel; or (e) any costs, expenses, or claims associated with any illness, injury, death or disability of the Contractor's Personnel and sub-contractors' personnel, it being understood that UNICEF will have no liability or responsibilitywith regard to any of the events referred to in this Article 2.14.

3. Fee; Invoicing; Tax Exemption; Payment Terms

3.1 The fee for the Services is the amount in the currency specified in the fee section of the Contract (the "Fee"), it being understood that such amount is specified in United States dollars unless otherwise expressly provided for in the fee section of the Contract. Unless expressly stated otherwise in the Contract, the Fee is inclusive of all costs, expenses, charges or fees that the Contractor may incur in connection with the performance of its obligations under the Contract; provided that, without prejudice to or limiting the provisions of Article 3.3 below, all duties and other taxes imposed by any authority or entity must be separately identified. It is understood and agreed that the Contractor will not request any change to the Fee after the Services or Deliverables have been provided and that the Fee cannot be changed except by written agreement between the Parties before the relevant Service or Deliverable is provided. UNICEF will not agree to changes to the Fee for modifications or interpretations of the scope of work if those modifications or interpretations of the scope of work have already been initiated by the Contractor. UNICEF will not be liable to pay for any work conducted or materials provided by the Contractor that are outside the scope of work or were not authorized in advance by UNICEF.

3.2 The Contractor will issue invoices to UNICEF only after the Contractor has provided the Services (or components of the Services) and delivered the Deliverables (or installments of the Deliverables) in accordance with the Contract and to UNICEF's satisfaction. The Contractor will issue (a) one (1) invoice in respect of the payment being sought, in the currency specified in the Contract and in English, indicating the Contract identification number listed on the front page of the Contract; and (b) provide a clear and specific description of the Services provided and Deliverables delivered, as well as supporting documentation for reimbursable expenses if any, in sufficient detail to permit UNICEF to verify the amounts stated in the invoice.

3.3 The Contractor authorizes UNICEF to deduct from the Contractor's invoices any amount representing direct taxes (except charges for utilities services) and customs restrictions, duties and charges of a similar nature in respect of articles imported or exported for UNICEF's official use in accordance with the exemption from tax in Article II, Section 7 of the Convention of the Privileges and Immunities of the United Nations, 1946. In the event any governmental authority refuses to recognize this exemption from taxes, restrictions, duties or charges, the Contractor will immediately consult with UNICEF to determine a mutually acceptable procedure. The Contractor will provide full cooperation to UNICEF with regard to securing UNICEF's exemption from, or refund of amounts paid as, value-added taxes or taxes of a similar nature.

3.4 UNICEF will notify the Contractor of any dispute or discrepancy in the content or form of any invoice. With respect to disputes regarding only a portion of such invoice, UNICEF will pay the Contractor the amount of the undisputed portion in accordance with Article 3.5 below. UNICEF and the Contractor will consult in good faith to promptly resolve any dispute with respect to any invoice. Upon resolution of such dispute, any amounts that have not been charged in accordance with the Contract will be deducted from the invoice(s) in which they appear and UNICEF will pay any agreed remaining items in the invoice(s) in accordance with Article 3.5 within thirty (30) days after the final resolution of such dispute.

3.5 UNICEF will pay the uncontested amount of the Contractor's invoice within thirty (30) days of receiving both the invoice and the required supporting documents, as referred to in Article 3.2 above. The amount paid will reflect any discount(s) shown under the payment terms of the Contract. The Contractor will not be entitled to interest on any late payment or any sums payable under the Contract nor any accrued interest on payments

withheld by UNICEF in connection with a dispute. Payment will not relieve the Contractor of its obligations under the Contract and will not be deemed to be acceptance by UNICEF of, or waiver of any of UNICEF's rights with regard to, the Contractor's performance.

3.6 Each invoice will confirm the Contractor's bank account details provided to UNICEF as part of the Contractor's registration process with UNICEF. All payments due to the Contractor under the Contract will be made by electronic funds transfer to that bank account. It is the Contractor's responsibility to ensure that the bank details supplied by it to UNICEF are up-to-date and accurate and notify UNICEF in writing by an authorized representative of the Contractor of any changes in bank details together with supporting documentation satisfactory to UNICEF.

3.7 The Contractor acknowledges and agrees that UNICEF may withhold payment in respect of any invoice if, in UNICEF's opinion, the Contractor has not performed in accordance with the terms and conditions of the Contract, or if the Contractor has not provided sufficient documentation in support of the invoice.

3.8 UNICEF will have the right to set off, against any amount or amounts due and payable by UNICEF to the Contractor under the Contract, any payment, indebtedness or other claim (including, without limitation, any overpayment made by UNICEF to the Contractor) owing by the Contractor to UNICEF under the Contract or under any other contract or agreement between the Parties. UNICEF will not be required to give the Contractor prior notice before exercising this right of set-off (such notice being waived by the Contractor). UNICEF will promptly notify the Contractor after it has exercised such right of set-off, explaining the reasons for such set-off, provided, however, that the failure to give such notification will not affect the validity of such set-off.

3.9 Each of the invoices paid by UNICEF may be subject to a post-payment audit by UNICEF's external and internal auditors or by other authorised agents of UNICEF, at any time during the term of the Contract and for three (3) years after the Contract terminates. UNICEF will be entitled to a refund from the Contractor of amounts such audit or audits determine were not in accordance with the Contract regardless of the reasons for such payments (including but not limited to the actions or inactions of UNICEF staff and other personnel).

4. Representations and Warranties; Indemnification; Insurance

Representations and Warranties

4.1 The Contractor represents and warrants that as of the effective date and throughout the term of the Contract: (a) the Contractor has the full authority and power to enter into the Contract and to perform its obligations under the Contract and the Contract is a legal, valid and binding obligation, enforceable against it in accordance with its terms; (b) all of the information it has previously provided to UNICEF, or that it provides to UNICEF during the term of the Contract, concerning the Contractor and the provision of the Services and the delivering of the Deliverables is true, correct, accurate and not misleading; (c) it is financially solvent and is able to provide the Services to UNICEF in accordance with the terms and conditions of the Contract; (d) it has, and will maintain throughout the term of the Contract, all rights, licenses, authority and resources necessary, as applicable, to provide the Services and deliver the Deliverables to UNICEF's satisfaction and to perform its obligations under the Contract; (e) the work product is and will be original to the Contractor and does not and will not infringe any copyright, trademark, patent or other proprietary right of any third party; and (f) except as otherwise expressly stated in the Contract, it has not and will not enter into any agreement or arrangement that restrains or restricts any person's rights to use, sell, dispose of or otherwise deal with any Deliverable or other work resulting from the Services. The Contractor will fulfill its commitments with the fullest regard to the interests of UNICEF and will refrain from any action which may adversely affect UNICEF or the United Nations.

4.2 The Contractor further represents and warrants, as of the effective date and throughout the term of the Contract, that it and its Personnel and sub-contractors will perform the Contract and provide the Services and Deliverables (a) in a professional and workmanlike manner; (b) with reasonable care and skill and in accordance with the highest professional standards accorded to professionals providing the same or substantially similar services in a same industry; (c) with priority equal to that given to the same or similar services for the Contractor's other clients; and (d) in accordance with all laws, ordinances, rules, and regulations bearing upon the performance of its obligations under the Contract and the provision of the Services and Deliverables.

4.3 The representations and warranties made by the Contractor in Articles 4.1 and 4.2 above are made to and are for the benefit of (a) each entity (if any) that makes a direct financial contribution to UNICEF to procure the Services and Deliverables; and (b) each Government or other entity (if any) that receives the direct benefit of the Services and Deliverables.

Indemnification

4.4 The Contractor will indemnify, hold and save harmless and defend, at its own expense, UNICEF, its officials, employees, consultants and agents, each entity that makes a direct financial contribution to UNICEF to procure the Services and Deliverables and each Government or other entity that receives the direct benefit of the Services and Deliverables, from and against all suits, claims, demands, losses and liability of any nature or kind, including their costs and expenses, by any third party and arising out of the acts or omissions of the Contractor or its Personnel or sub-contractors in the performance of the Contract. This provision will extend to but not be limited to (a) claims and liability in the nature of workers' compensation, (b) product liability, and (c) any actions or claims pertaining to the alleged infringement of a copyright or other intellectual property rights or licenses, patent, design, trade-name or trade-mark arising in connection with the Deliverables or other liability arising out of the use of patented inventions or devices, copyrighted material or other intellectual property provided or licensed to UNICEF under the terms of the Contract or used by the Contractor, its Personnel or sub-contractors in the performance of the Contract.

4.5 UNICEF will report any such suits, proceedings, claims, demands, losses or liability to the Contractor within a reasonable period of time after having received actual notice. The Contractor will have sole control of the defence, settlement and compromise of any such suit, proceeding, claim or demand, except with respect to the assertion or defence of the privileges and immunities of UNICEF or any matter relating to UNICEF's privileges and immunities (including matters relating to UNICEF's relations with Host Governments), which as between the Contractor and UNICEF only UNICEF itself (or relevant Governmental entities) will assert and maintain. UNICEF will have the right, at its own expense, to be represented in any such suit, proceeding, claim or demand by independent counsel of its own choosing.

Insurance

4.6 The Contractor will comply with the following insurance requirements:

(a) The Contractor will have and maintain in effect with reputable insurers and in sufficient amounts, insurance against all of the Contractor's risks under the Contract (including, but not limited to, the risk of claims arising out of or related to the Contractor's performance of the Contract), including the following:

(i) Insurance against all risks in respect of its property and any equipment used for the performance of the Contract;

(ii) General liability insurance against all risks in respect of the Contract and claims arising out of the Contract in an adequate amount to cover all claims arising from or in connection with the Contractor's performance under the Contract;

(iii) All appropriate workers' compensation and employer's liability insurance, or its equivalent, with respect to its Personnel and sub-contractors to cover claims for death, bodily injury or damage to property arising from the performance of the Contract; and

(iv) Such other insurance as may be agreed upon in writing between UNICEF and the Contractor.

(b) The Contractor will maintain the insurance coverage referred to in Article 4.6(a) above during the term of the Contract and for a period after the Contract terminates extending to the end of any applicable limitations period with regard to claims against which the insurance is obtained.

(c) The Contractor will be responsible to fund all amounts within any policy deductible or retention.

(d) Except with regard to the insurance referred to in paragraph (a)(iii) above, the insurance policies for the Contractor's insurance required under this Article 4.6 will (i) name UNICEF as an additional insured; (ii) include a waiver by the insurer of any subrogation rights against UNICEF; and (iii) provide that UNICEF will receive thirty (30) days' written notice from the insurer prior to any cancellation or change of coverage.

(e) The Contractor will, upon request, provide UNICEF with satisfactory evidence of the insurance required under this Article 4.6.

(f) Compliance with the insurance requirements of the Contract will not limit the Contractor's liability either under the Contract or otherwise.

Liability

4.7 The Contractor will pay UNICEF promptly for all loss, destruction or damage to UNICEF's property caused by the Contractor's Personnel or sub-contractors in the performance of the Contract.

5. Intellectual Property and Other Proprietary Rights; Data Protection; Confidentiality

Intellectual Property and Other Proprietary Rights

5.1 Unless otherwise expressly provided for in the Contract:

(a) Subject to paragraph (b) of this Article 5.1, UNICEF will 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, documents, data and other materials ("Contract Materials") that (i) the Contractor develops for UNICEF under the Contract and which bear a direct relation to the Contract or (ii) are produced, prepared or collected in consequence of, or during the course of, the performance of the Contract. The term "Contract Materials" includes, but is not limited to, all maps, drawings, photographs, plans, reports, recommendations, estimates, documents developed or received by, and all other data compiled by or received by, the Contractor under the Contract. The Contractor acknowledges and agrees that Contract Materials constitute works made for hire for UNICEF. Contract Materials will be treated as UNICEF's Confidential Information and will be delivered only to authorized UNICEF officials on expiry or termination of the Contract.

(b) UNICEF will not be entitled to, and will not claim any ownership interest in, any intellectual property or other proprietary rights of the Contractor that pre-existed the performance by the Contractor of its obligations under the Contract, or that the Contractor may develop or acquire, or may have developed or acquired, independently of the performance of its obligations under the Contract. The Contractor grants to UNICEF a perpetual, non-exclusive, royalty-free license to use such intellectual property or other proprietary rights solely for the purposes of and in accordance with the requirements of the Contract.

(c) At UNICEF's request, the Contractor will take all necessary steps, execute all necessary documents and generally assist in securing such proprietary rights and transferring them (or, in the case, intellectual property referred to in paragraph (b) above, licensing) them to UNICEF in compliance with the requirements of the applicable law and of the Contract.

Confidentiality

5.2 Confidential Information that is considered proprietary by either Party or that is delivered or disclosed by one Party ("Discloser") to the other Party ("Recipient") during the course of performance of the Contract or in connection with the subject matter of the Contract will be held in confidence by the Recipient. The Recipient will use the same care and discretion to avoid disclosure of the Discloser's Confidential Information as the Recipient uses for its own Confidential Information and will use the Discloser's Confidential Information solely for the purpose for which it was disclosed to the Recipient. The Recipient will not disclose the Discloser's Confidential Information to any other party:

(a) except to those of its Affiliates, employees, officials, representatives, agents and sub-contractors who have a need to know such Confidential Information for purposes of performing obligations under the Contract; or

(b) unless the Confidential Information (i) is obtained by the Recipient from a third party without restriction; (ii) is disclosed by the Discloser to a third party without any obligation of confidentiality; (iii) is known by the Recipient prior to disclosure by the Discloser; or (iv) at any time is developed by the Recipient completely independently of any disclosures under the Contract.

5.3 If the Contractor receives a request for disclosure of UNICEF's Confidential Information pursuant to any judicial or law enforcement process, before any such disclosure is made, the Contractor (a) will give UNICEF sufficient notice of such request in order to allow UNICEF to have a reasonable opportunity to secure the intervention of the relevant national government to establish protective measures or take such other action as may be appropriate and (b) will so advise the relevant authority that requested disclosure. UNICEF may disclose the Contractor's Confidential Information to the extent required pursuant to resolutions or regulations of its governing bodies.

5.4 Subject to Article 5.3, the Contractor may not communicate at any time to any other person, Government or authority external to UNICEF, any information known to it by reason of its association with UNICEF that has not been made public, except with the prior written authorization of UNICEF; nor will the Contractor at any time use such information to private advantage.

Data Protection and Security

5.5 The Parties agree that, as between them, all UNICEF Data, together with all rights (including intellectual property and proprietary rights), title and interest to such UNICEF Data, will be the exclusive property of UNICEF, and the Contractor has a limited, nonexclusive license to access and use the UNICEF Data as provided in the Contract solely for the purpose of performing its obligations under the Contract. Except for the foregoing license, the Contractor will have no other rights, whether express or implied, in or to any UNICEF Data or its content.

5.6 The Contractor confirms that it has a data protection policy in place that meets all applicable data protection standards and legal requirements and that it will apply such policy in the collection, storage, use, processing, retention and destruction of UNICEF Data. The Contractor will comply with any guidance or conditions on access and disclosure notified by UNICEF to Contractor in respect of UNICEF Data.

5.7 The Contractor will use its reasonable efforts to ensure the logical segregation of UNICEF Data from other information to the fullest extent possible. The Contractor will use safeguards and controls (such as administrative, technical, physical, procedural and security infrastructures, facilities, tools, technologies, practices and other protective measures) that are necessary and sufficient to meet the Contractor's confidentiality obligations in this Article 5 as they apply to UNICEF Data. At UNICEF's request, the Contractor will provide UNICEF with copies of the applicable policies and a description of the safeguards and controls that the Contractor uses to fulfil its obligations under this Article 5.7; provided that any such policies and description provided by the Contractor will be treated as the Contractor's Confidential Information under the Contract. UNICEF may assess the effectiveness of these safeguards, controls and protective measures and, at UNICEF's request, the Contractor will provide its full cooperation with any such assessment at no additional cost or expense to UNICEF. The Contractor will not, and will ensure that its Personnel will not, transfer, copy, remove or store UNICEF Data from a UNICEF location, network or system without the prior written approval of an authorized official of UNICEF.

5.8 Except as otherwise expressly stated in the Contract or with UNICEF's express prior written consent, the Contractor will not install any application or other software on any UNICEF device, network or system. The Contractor represents and warrants to UNICEF that the Services and Deliverables provided under the Contract will not contain any Disabling Code, and that UNICEF will not otherwise receive from the Contractor any Disabling Code in the performance of the Contract. Without prejudice to UNICEF's other rights and remedies, if a Disabling Code is identified, the Contractor, at its sole cost and expense, will take all steps necessary to: (a) restore and/or reconstruct any and all UNICEF Data lost by UNICEF and/or End Users as a result of Disabling Code; (b) furnish to UNICEF a corrected version of the Services without the presence of Disabling Codes; and (c) as needed, re-implement the Services.

5.9 In the event of any Security Incident, the Contractor will, as soon as possible following the Contractor's discovery of such Security Incident and at its sole cost and expense: (a) notify UNICEF of such Security Incident and of the Contractor's proposed remedial actions; (b) implement any and all necessary damage mitigation and remedial actions; and (c) as relevant, restore UNICEF's and, as directed by UNICEF, End Users' access to the Services. The Contractor will keep UNICEF reasonably informed of the progress of the Contractor's implementation of such damage mitigation and remedial actions. The Contractor, at its sole cost and expense, will cooperate fully with UNICEF's investigation of, remediation of, and/or response to any Security Incident. If the Contractor fails to resolve, to UNICEF's reasonable satisfaction, any such Security Incident, UNICEF can terminate the Contract with immediateeffect.

Service Providers and Sub-Contractors

5.10 The Contractor will impose the same requirements relating to data protection and non-disclosure of Confidential Information, as are imposed upon the Contractor itself by this Article 5 of the Contract, on its service providers, subcontractors and other third parties and will remain responsible for compliance with such requirements by its service providers, subcontractors and other third parties.

End of Contract

5.11 Upon the expiry or earlier termination of the Contract, the Contractor will:

(a) return to UNICEF all of UNICEF's Confidential Information, including, but not limited to, UNICEF Data, or, at UNICEF's option, destroy all copies of such information held by the Contractor or its sub-contractors and confirm such destruction to UNICEF in writing; and

(b) will transfer to UNICEF all intellectual and other proprietary information in accordance with Article 5.1(a).

6. Termination; Force Majeure

Termination by Either Party for Material Breach

6.1 If one Party is in material breach of any of its obligations under the Contract, the other Party can give it written notice that within thirty (30) days of receiving such notice the breach must be remedied (if such breach is capable of remedy). If the breaching Party does not remedy the breach within the thirty (30) days' period or if the breach is not capable of remedy, the non-breaching Party can terminate the Contract. The termination will be effective thirty (30) days after the non-breaching Party gives the breaching Party written notice of termination. The initiation of conciliation or arbitral proceedings in accordance with Article 9 (Privileges and Immunities; Settlement of Disputes) below will not be grounds for termination of the Contract.

ANNEX A
GENERAL TERMS AND CONDITIONS

Additional Termination Rights of UNICEF

6.2 In addition to the termination rights under Article 6.1 above, UNICEF can terminate the Contract with immediate effect upon delivery of a written notice of termination, without any liability for termination charges or any other liability of any kind:

(a) in the circumstances described in, and in accordance with, Article 7 (Ethical Standards); or

(b) if the Contractor breaches any of the provisions of Articles 5.2-5.11 (Confidentiality; Data Protection and Security); or

(c) if the Contractor (i) is adjudged bankrupt, or is liquidated, or becomes insolvent, or applies for a moratorium or stay on any payment or repayment obligations, or applies to be declared insolvent, (ii) is granted a moratorium or a stay, or is declared insolvent , (iii) makes an assignment for the benefit of one or more of its creditors, (iv) has a receiver appointed on account of the insolvency of the Contractor, (v) offers a settlement in lieu of bankruptcy or receivership or (vi) has become, in UNICEF's reasonable judgment, subject to a materially adverse change in its financial condition that threatens to substantially affect the ability of the Contractor to perform any of its obligations under the Contract.

6.3 In addition to the termination rights under Article 6.1 and Article 6.2 above, UNICEF can terminate the Contract at any time by providing written notice to the Contractor in any case in which UNICEF's mandate applicable to the performance of the Contract or UNICEF's funding applicable to the Contract is curtailed or terminated, whether in whole or in part. UNICEF can also terminate the Contract on sixty (60) day's written notice to the Contractor without having to provide any justification.

6.4 As soon as it receives a notice of termination from UNICEF, the Contractor will take immediate steps to bring the performance of any obligations under the Contract to a close in a prompt and orderly manner, and in doing so, reduce expenses to a minimum, and will not undertake any further or additional commitments as of and following the date it receives the termination notice. In addition, the Contractor will take any other action that may be necessary, or that UNICEF may direct in writing, in order to minimise losses or protect and preserve any property, whether tangible or intangible, related to the Contract that is in the possession of the Contractor and in which UNICEF has or may be reasonably expected to acquire an interest.

6.5 If the Contract is terminated by either Party, the Contractor will immediately deliver to UNICEF any finished work which has not been delivered and accepted prior to the receipt of a notice of termination, together with any data, materials or work-in-process related specifically to the Contract. If UNICEF obtains the assistance of another party to continue the Services or complete any unfinished work, the Contractor will provide its reasonable cooperation to UNICEF and such party in the orderly migration of Services and transfer of any Contract-related data, materials and work-in-process. The Contractor will at the same time return to UNICEF all of UNICEF's Confidential Information and will transfer to UNICEF all intellectual and other proprietary information in accordance with Article 5.

6.6 If the Contract is terminated by either Party no payment will be due from UNICEF to the Contractor except for Services and Deliverables provided to UNICEF's satisfaction in accordance with the Contract, but only if such Services and Deliverables were required or requested before the Contractor's receipt of the notice of termination or, in the case of termination by the Contractor, the effective date of such termination. The Contractor will have no claim for any further payment beyond payments in accordance with this Article 6.6, but will remain liable to UNICEF for all loss or damages which may be suffered by UNICEF by reason of the Contractor's default (including but not limited to cost of the purchase and delivery of replacement or substitute Services or Deliverables).

6.7 The termination rights in this Article 6 are in addition to all other rights and remedies of UNICEF under the Contract.

Force Majeure

6.8 If one Party is rendered permanently unable, wholly, or in part, by reason of force majeure to perform its obligations under the Contract, the other Party may terminate the Contract on the same terms and conditions as are provided for in Article 6.1 above, except that the period of notice will be seven (7) days instead of thirty (30) days. "Force majeure" means any unforeseeable and irresistible events arising from causes beyond the control of the Parties, including acts of nature, any act of war (whether declared or not), invasion, revolution, insurrection, terrorism or other acts of a similar nature or force. "Force majeure" does not include (a) any event which is caused by the negligence or intentional action of a Party; (b) any event which a diligent party could reasonably have been expected to take into account and plan for at the time the Contract was entered into; (c) the insufficiency of funds, inability to make any payment required under the Contract, or any economic conditions, including but not limited to inflation, price escalations, or labour availability; or (d) any event resulting from harsh conditions or logistical challenges for the Contractor (including civil unrest) associated with locations at which UNICEF is operating or is about to operate or is withdrawing from, or any event resulting from UNICEF's humanitarian, emergency, or similar response operations.

7. Ethical Standards

7.1 Without limiting the generality of Article 2 above, the Contractor will be responsible for the professional and technical competence of its Personnel including its employees and will select, for work under the Contract, reliable individuals who will perform effectively in the implementation of the Contract, respect the local laws and customs, and conform to a high standard of moral and ethical conduct.

7.2 (a) The Contractor represents and warrants that no official of UNICEF or of any United Nations System organisation has received from or on behalf of the Contractor, or will be offered by or on behalf of the Contractor, any direct or indirect benefit in connection with the Contract, including the award of the Contract to the Contractor. Such direct or indirect benefit includes, but is not limited to, any gifts, favours or hospitality.

(b) The Contractor represents and warrants that the following requirements with regard to former UNICEF officials have been complied with and will be complied with:

(i) During the one (1) year period after an official has separated from UNICEF, the Contractor may not make a direct or indirect offer of employment to that former UNICEF official if that former UNICEF official was, during the three years prior to separating from UNICEF, involved in any aspect of a UNICEF procurement process in which the Contractor has participated.

(ii) During the two (2) year period after an official has separated from UNICEF, that former official may not, directly or indirectly on behalf of the Contractor, communicate with UNICEF, or present to UNICEF, about any matters that were within such former official's responsibilities while at UNICEF.

(c) The Contractor further represents that, in respect of all aspects of the Contract (including the award of the Contract by UNICEF to the Contractor and the selection and awarding of sub-contracts by the Contractor), it has disclosed to UNICEF any situation that may constitute an actual or potential conflict of interest or could reasonably be perceived as a conflict of interest.

7.3 The Contractor further represents and warrants that neither it nor any of its Affiliates, or Personnel or directors, is subject to any sanction or temporary suspension imposed by any United Nations System organisation or other international inter-governmental organisation. The Contractor will immediately disclose to UNICEF if it or any of its Affiliates or Personnel or directors, becomes subject to any such sanction or temporary suspension during the term of the Contract.

7.4 The Contractor will (a) observe the highest standard of ethics; (b) use its best efforts to protect UNICEF against fraud, in the performance of the Contract; and (c) comply with the applicable provisions of UNICEF's Policy Prohibiting and Combatting Fraud and Corruption. In particular, the Contractor will not engage, and will ensure that its Personnel, agents and sub-contractors do not engage, in any corrupt, fraudulent, coercive, collusive or obstructive conduct as such terms are defined in UNICEF's Policy Prohibiting and Combatting Fraud and Corruption.

7.5 The Contractor will, during the term of the Contract, comply with (a) all laws, ordinances, rules and regulations bearing upon the performance of its obligations under the Contract and (b) the standards of conduct required under the UN Supplier Code of Conduct (available at the United Nations Global Marketplace website - www.ungm.org).

7.6 The Contractor further represents and warrants that neither it nor any of its Affiliates is engaged, directly or indirectly, (a) in any practice inconsistent with the rights set out in the Convention on the Rights of the Child, including Article 32, or the International Labour Organisation's Convention Concerning the Prohibition and Immediate Action for the Elimination of the Worst Forms of Child Labour, No. 182 (1999); or (b) in the manufacture, sale, distribution, or use of anti-personnel mines or components utilised in the manufacture of anti-personnel mines.

7.7 The Contractor represents and warrants that it has taken and will take all appropriate measures to prevent sexual exploitation or abuse of anyone by its Personnel including its employees or any persons 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, will constitute the sexual exploitation and abuse of such person. In addition, the Contractor represents and warrants that it has taken and will take all appropriate measures to prohibit its Personnel including its employees or other persons engaged by the Contractor, from exchanging any money, goods, services, or other things of value, for sexual favours or activities or from engaging in any sexual activities that are exploitive or degrading to any person. This provision constitutes an essential term of the Contract and any breach of this representation and warranty will

entitle UNICEF to terminate the Contract immediately upon notice to the Contractor, without any liability for termination charges or any other liability of any kind.

7.8 The Contractor will inform UNICEF as soon as it becomes aware of any incident or report that is inconsistent with the undertakings and confirmations provided in this Article 7.

7.9 The Contractor acknowledges and agrees that each of the provisions in this Article 7 constitutes an essential term of the Contract.

(a) UNICEF will be entitled, in its sole discretion and at its sole choice, to suspend or terminate the Contract and any other contract between UNICEF and the Contractor with immediate effect upon written notice to the Contractor if: (i) UNICEF becomes aware of any incident or report that is inconsistent with, or the Contractor breaches any of, the undertakings and confirmations provided in this Article 7 or the equivalent provisions of any contract between UNICEF and the Contractor or any of the Contractor's Affiliates, or (ii) the Contractor or any of its Affiliates, or Personnel or directors becomes subject to any sanction or temporary suspension described in Article 7.3 during the term of the Contract.

(b) In the case of suspension, if the Contractor takes appropriate action to address the relevant incident or breach to UNICEF's satisfaction within the period stipulated in the notice of suspension, UNICEF may lift the suspension by written notice to the Contractor and the Contract and all other affected contracts will resume in accordance with their terms. If, however, UNICEF is not satisfied that the matters are being adequately addressed by the Contractor, UNICEF may at any time, exercise its right to terminate the Contract and any other contract between UNICEF and the Contractor.

(c) Any suspension or termination under this Article 7 will be without any liability for termination or other charges or any other liability of any kind.

8. Full Cooperation with Audits And Investigations

8.1 From time to time, UNICEF may conduct inspections, post-payment audits or investigations relating to any aspect of the Contract including but not limited to the award of the Contract, the way in which the Contract operates or operated, and the Parties' performance of the Contract generally and including but not limited to the Contractor's compliance with the provisions of Article 7 above. The Contractor will provide its full and timely cooperation with any such inspections, post-payment audits or investigations, including (but not limited to) making its Personnel and any relevant data and documentation available for the purposes of such inspections, post-payment audits or investigations, at reasonable times and on reasonable conditions, and granting UNICEF and those undertaking such inspections, post-payment audits or investigations access to the Contractor's premises at reasonable times and on reasonable conditions in connection with making its Personnel and any relevant data and documentation available. The Contractor will require its sub-contractors and its agents, including, but not limited to, the Contractor's attorneys, accountants or other advisers, to provide reasonable cooperation with any inspections, post-payment audits or investigations carried out by UNICEF.

9. Privileges and Immunities; Settlement of Disputes

9.1 Nothing in or related to the Contract will be deemed a waiver, express or implied, deliberate or inadvertent, of any of the privileges and immunities of the United Nations, including UNICEF and its subsidiary organs, under the Convention on the Privileges and Immunities of the United Nations, 1946, or otherwise.

9.2 The terms of the Contract will be interpreted and applied without application of any system of national or sub-national law.

9.3 The Parties will use their best efforts to settle amicably any dispute, controversy or claim arising out of, or relating to the Contract. Where the Parties wish to seek such an amicable settlement through conciliation, the conciliation will take place in accordance with the UNCITRAL Conciliation Rules then in force, or according to such other procedure as may be agreed between the Parties. Any dispute, controversy or claim between the Parties arising out of the Contract which is not resolved within ninety (90) days after one Party receives a request from the other Party for amicable settlement can be referred by either Party to arbitration. The arbitration will take place in accordance with the UNCITRAL Arbitration Rules then in force. The venue of the arbitration will be New York, NY, USA. The arbitral proceedings will be conducted in English. The decisions of the arbitral tribunal will be based on general principles of international commercial law. The arbitral tribunal will have no authority to award punitive damages. In addition, the arbitral tribunal will have no authority to award interest in excess of the United States Federal Reserve Bank of New York's Secured Overnight Financing Rate (SOFR) then prevailing and any such interest will be simple interest only. In light of the privileges and immunities of UNICEF, references in the UNCITRAL Arbitration Rules to the place of arbitration shall connote only the actual location for the arbitral proceedings but shall not mean the "seat" or "juridical seat" or "juridical place" for such proceedings. The Parties will be bound by any arbitration award rendered as a result of such arbitration as the final adjudication of any such controversy, claim or dispute.

10. Notices

10.1 Any notice, request or consent required or permitted to be given or made pursuant to the Contract will be in writing, and addressed to the persons listed in the Contract for the delivery of notices, requests or consents. Notices, requests or consents will be delivered in person, by registered mail, or by confirmed email transmission. Notices, requests or consents will be deemed received upon delivery (if delivered in person), upon signature of receipt (if delivered by registered mail) or twenty-four (24) hours after confirmation of receipt is sent from the addressee's email address (if delivered by confirmed email transmission).

10.2 Any notice, document or receipt issued in connection with the Contract must be consistent with the terms and conditions of the Contract and, in case of any ambiguity, discrepancy or inconsistency, the terms and conditions of the Contract will prevail.

10.3 All documents that comprise the Contract, and all documents, notices and receipts issued or provided pursuant to or in connection with the Contract, will be deemed to include, and will be interpreted and applied consistently with, the provisions of Article 9 (Privileges and Immunities; Settlement of Disputes).

11. Other Provisions

11.1 The Contractor acknowledges UNICEF's commitment to transparency as outlined in UNICEF's Information Disclosure Policy and confirms that it consents to UNICEF's public disclosure of the terms of the Contract should UNICEF so determine and by whatever means UNICEF determines.

11.2 The failure of one Party to object to or take affirmative action with respect to any conduct of the other Party which is in violation of the terms of the Contract will not constitute and will not be construed to be a waiver of the violation or breach, or of any future violation, breach or wrongful conduct.

11.3 The Contractor will be considered as having the legal status of an independent contractor as regards UNICEF. Nothing contained in the Contract will be construed as making the Parties principal and agent or joint venturers.

11.4 The Contractor will not, without the prior written consent of UNICEF, assign, transfer, pledge or make other disposition of the Contract, or of any part of the Contract, or of any of the Contractor's rights or obligations under the Contract.

11.5 No grant of time to the Contractor to cure a default under the Contract, nor any delay or failure by UNICEF to exercise any other right or remedy available to UNICEF under the Contract, will be deemed to prejudice any rights or remedies available to UNICEF under the Contract or constitute a waiver of any rights or remedies available to UNICEF under the Contract.

11.6 The Contractor will not seek or file any lien, attachment or other encumbrance against any monies due or to become due under the Contract, and will not permit any other person to do so. It will immediately remove or obtain the removal of any lien, attachment or other encumbrance that is secured against any monies due or to become due under the Contract.

11.7 The Contractor will not advertise or otherwise make public for purposes of commercial advantage or goodwill that it has a contractual relationship with UNICEF or the United Nations. Except as regards references to the name of UNICEF for the purposes of annual reports or communication between the Parties and between the Contractor and its Personnel and sub-contractors, the Contractor will not, in any manner whatsoever use the name, emblem or official seal of UNICEF or the United Nations, or any abbreviation of the name of the United Nations, in connection with its business or otherwise without the prior written permission of UNICEF.

11.8 The Contract may be translated into languages other than English. The translated version of the Contract is for convenience only, and the English language version will govern in all circumstances.

11.9 No modification or change in the Contract, and no waiver of any of its provisions, nor any additional contractual relationship of any kind with the Contractor will be valid and enforceable against UNICEF unless set out in a written amendment to the Contract signed by an authorised official of UNICEF.

11.10 The provisions of Articles 2.14. 3.8, 3.9, 4, 5, 7, 8, 9, 11.1, 11.2 and 11.7 will survive provision of the Services and delivery of the Deliverables and the expiry or earlier termination of the Contract.

Annex B, Terms of Reference, LRPS-2020-9198274

UNICEF Moldova

Terms of Reference

Institutional Consultancy for the update of Educational Management Information System (EMIS) and integration of a tracking tool (EduTrack) in EMIS

Duration and timeline: 6 months (August 2025 – January 2026)

1. Background

The Republic of Moldova embraces an education policy that is consistent with the European and international education policy, that responds to the current issues and needs of the education system and its beneficiaries. The documents underpinning the strategic development of the education system are proof of the high regard of the Government of the Republic of Moldova to shifting focuses on education in favour of quality and sustainability.

The importance of education data has increased due to an increasing demand for data-driven policy making and education planning for achieving national goals. The Education Management Information System (EMIS) has become a system to collect, integrate, and maintain education-related data and information to support policy analysis, formulation and education planning and management. EMIS engages a broad range of education stakeholders, including the Ministry of Education and Research (MER), local authorities, educational institutions, school personnel, teachers and students, their families, and civil society.

For those reasons, MER has established the EMIS to collect important educational data on students, teachers, educational institutions, etc. This system, which was updated in 2017 as part of broader educational reforms outlined in the Education Strategy 2014-2020, was collaboratively implemented by various stakeholders including the Centre for Information and Communication Technologies in Education (CICTE), district education departments, and schools nationwide. The system is structured into modules for different educational levels such as preschool, general and vocational. It collects comprehensive data on various aspects of the educational process, including infrastructure, student demographics, academic evaluations, staff details, and budget allocation, among others. Through the Open Data Portal EMIS and the EMIS General Education Module, the system facilitates evidence-based policy formulation and decision-making by providing insights into educational resource planning and management at both national and local levels.

Despite its advancements, efforts are still needed to enhance the system's capacity, particularly in areas such as monitoring teacher professional development, improving support mechanisms for disadvantaged students, and tracking IT equipment distribution. The system also lacks the rapid assessment tools, early warning and support systems to identify and support the disadvantaged/lagging students. Additionally, there is a recognized need to strengthen management capacities at rayon and school levels to ensure efficient day-to-day operations and maintenance of EMIS components and data assets, aligning with broader goals of data management and utilization strategies in the education sector.

Based on the above, UNICEF Moldova is seeking for technical assistance from an institutional consultancy to support the MER and CICTE **to update the EMIS components based on the identified needs, including the design and integration of a tracking tool (EduTrack) in EMIS.**

2. The purpose of the assignment

The purpose of the institutional consultancy is to support the MER and CICTE in updating the EMIS based on the identified needs, including the design and integration of a tracking tool (EduTrack) in EMIS

- dashboard functionality designated to MER, district educational directorates, school managers and class advisors. This update aims to enhance the functionality, effectiveness, and usability of the EMIS by incorporating updated features, improving data management processes, and enabling evidence-based decision-making at various levels of the education system. Additionally, the integration of an EduTrack tool in EMIS will provide comprehensive monitoring of student progress and needs, with a special focus on at-risk students, including those with special educational needs, and inform education authorities at all levels, by providing different reports and data.

3. Objectives of the consultancy

Based on the functional and business requirements specifications (see Annex 1 and 2), the objectives of this consultancy are as follows:

- Enhance the functionality of the EMIS by implementing new features and improvements to streamline data collection, processing, and reporting processes, through the implementation of dashboard functionality designated to MER, district educational directorates, school managers and class advisors
- Design and develop EduTrack tool to be fully integrated into EMIS, as a separate module, with clear protocols for data collection, visualization and reporting. The tool will be developed in accordance with clearly defined Functional and Technical Requirements (Annexes 1 and 2)
- Improve the user interface and design of the EMIS and EduTrack tool to ensure a user-friendly and intuitive experience for administrators, enabling them to navigate and access information efficiently
- Optimize the EMIS database structure and performance to ensure data integrity, accuracy, history, autofill and efficient data retrieval
- Enhance the interoperability of the EMIS with other education systems and platforms, enabling seamless data exchange and integration for comprehensive data analysis and reporting
- Integrate data analysis and visualization tools (dashboards, statistical reports, alerts) within EMIS, enabling evidence-based decision-making at national, district, and institutional levels
- Optimize the workflow processes within the EMIS to streamline administrative tasks and reduce manual effort. This can involve automating data processing, integrating workflow management functionalities, and improving data synchronization between different modules of the system
- Improve user access controls and security features within the EMIS to ensure that data is accessed and managed by authorized personnel only. This will upgrade implemented user roles and permissions, multi-factor authentication, and data encryption to protect sensitive information
- Support the deployment and testing of the updated EMIS and EduTrack components, ensuring functionality, interoperability, and data security

4. Details of how the work should be delivered

a. Modular Architecture and Integration
   i. EduTrack must be developed as a modular, self-contained component of EMIS, with clear APIs for integration.
   ii. Full interoperability with existing EMIS databases, particularly student records, attendance, performance, and special needs modules.
   iii. Reusability of core EMIS components (authentication, user roles, institutional hierarchies).
b. Phased Development and Rollout - Work should be delivered in distinct, reviewable phases, such as:
   i. Requirements & concept validation

ii. Prototype (UX/UI)
iii. Core module development (MVP)
iv. EMIS integration
v. QA and testing
vi. Training and documentation
vii. Rollout and support

Each phase must be validated and signed off by designated MER and DEDR representatives.

c. UX/UI Design and Prototyping
   i. User-centered design approach, including input from MER policymakers and district-level users.
   ii. UX must reflect role-based dashboards (e.g., MER dashboard, Raion dashboard, Class Advisor dashboard).
   iii. Provide clickable prototypes early, with iteration based on feedback.
d. Data and Indicator Configuration - Delivery must include:
   i. Configurable indicators (attendance, academic performance, CES tracking, alerts).
   ii. Logic for comparative analytics (school, district, national benchmarks).
   iii. Integration with national databases (e.g., CNAS, SIPAS, RSUD).
e. Notifications & Alert System
   i. Develop automated alert mechanisms (e.g., for drop in performance, absenteeism, data gaps).
   ii. Configurable thresholds and delivery channels (dashboard alerts, emails, SMS optional).
f. Testing and Validation
   i. Complete unit, integration, and acceptance testing.
   ii. Pilot deployment in selected districts before national roll-out.
   iii. Real-user testing with MER and DEDR staff for usability and functionality.
g. Documentation and Training
   i. Technical documentation for EMIS administrators.
   ii. User manuals and training materials for MER/DEDR users.
   iii. Delivery of training sessions or videos for system onboarding.
h. Security and Compliance
   i. Role-based access control aligned with EMIS user management.
   ii. Data security protocols in line with national standards (including GDPR-style protections if applicable).
   iii. Logging and audit trails for user actions.
i. Support and Maintenance
   i. Post-deployment support period (e.g., 3–6 months) for bug fixing and small enhancements.
   ii. Clear handover plan to EMIS team or designated support unit.
   iii. Optional: SLA for long-term maintenance.

EMIS works in accordance with the provisions of government decision 601/2020 (https://www.legis.md/cautare/getResults?doc_id=122778&lang=ro).

EMIS technical information:

- Technological stack of informational modules for maintenance:
- Database: Oracle Database Standard Edition 2, version 19C;
- The languages SQL, PL/SQL, Javascript, C#;
- Application Express ver. 5.1 or newer;
- Oracle REST Data Services version 21.1 or newer;
- Web communication through the HTTPS protocol;
- Interaction with other departmental systems through the SOAP protocol (XML, JSON);

- Hosting on the governmental platform MCloud;

5. Deliverables and delivery dates

Nr	Deliverables	Technical specification	Timeline
	UX/UI Prototype	Interactive prototypes for MER and Rayon dashboards, class advisor view, filters, and alerts; aligned with EMIS visual identity and responsive design	August - September 2025
2.	**Core Module Development (MVP)**	Development of core features: student tracking indicators (attendance, performance, CES), dynamic dashboards, and alert logic	September – October 2025
3.	**Integration with EMIS & Data Sources**	API connections to EMIS, EMIS-VET, CNAS, RSUD, SIPAS, electronic agenda; authentication and user role synchronization with EMIS	October – November 2025
4.	**Testing & Quality Assurance**	Unit and integration testing, bug fixes, system optimization, security testing, and user acceptance testing (UAT)	November 2025
5.	**Training & Documentation**	User manuals, training materials, delivery of 2–3 training sessions for MER and Rayon-level users; handover documentation for administrators	November – December 2025
6.	**Roll-out & Monitoring**	National deployment of the tool; setup of performance monitoring; final adjustments based on initial feedback from target users	October 2025 – January 2026

** Exact deadlines will be mutually agreed upon contract signature.*

All products and deliverables will be submitted in Romanian, as outlined in the above table.

6. Reporting requirements

All activities and deliverables undertaken by the consultancy shall be discussed and planned in consultation with MER and UNICEF. The selected service provider shall develop an initial work plan in consultation with MER and UNICEF, outlining tasks, milestones, and timelines. The work plan shall be submitted electronically (in Word format) in Romanian to the Education Officer by email, with the Education Specialist in copy.

The selected service provider will provide monthly updates to MER and UNICEF, ensuring transparency and accountability throughout the project. Monthly progress reports will contain a comprehensive summary of completed tasks, ongoing activities, and any challenges encountered during the implementation. Updates will be communicated to the Education Officer via email, with the Education Specialist also kept informed.

Upon the successful completion of the contract, the selected service provider will prepare a detailed final report. This report will encompass the outcomes of the EMIS update and training activities,

highlighting key achievements, impact, and recommendations for future improvements. The final report shall be submitted electronically in English, using Word format and digital signed PDF, to the Education Officer, with the Education Specialist in copy.

7. Ethical considerations

Furthermore, the contractor should protect the anonymity and confidentiality of individual information. All participants should be informed about the context and purpose of the analysis, as well as about the confidentiality of the information shared.

The methodology must comply with UNICEF Procedure for ethical standards in research, evaluation, data collection and analysis. The proposed research methodology and report should include a section identifying anticipated or actual ethical issues as well as measures and methods to address or mitigate these issues, for example: collecting data directly from stakeholders, protecting anonymity and confidentiality of individual information sources, etc.

Use of documents and information provided by UNICEF or acquired during the contract implementation is allowed only for the tasks related to these terms of reference.

8. Performance indicators for evaluation of results:

The performance of work will be evaluated based on the following indicators:

- Completion of tasks specified in ToR;
- Compliance with the established deadlines for submission of deliverables;
- Quality of work;
- Demonstration of high standards in cooperation and communication with UNICEF and counterparts

9. Qualifications and experience

- National consultancy company with proven experience in developing and implementing on-line monitoring systems and/or dashboards in the last 5 years, preferably in the education sector (but not limited to it); at least 1 member of the team with previous experience in the education sector
- Previous experience in developing content and conducting face to face and on-line training for database/reporting module users, preferably in the field of education
- Demonstrated experience in the design, implementation, and maintenance of large-scale information systems of national significance, particularly within state institutions
- Minimum of 5 years of experience in IT consulting
- Proven experience in the development, implementation and maintenance of solutions based on Oracle DBMS technology, Oracle Application Express, SQL, PL/SQL, JavaScript languages, and submission of the list of integrated functional IT systems (Project, Date of integration, Beneficiary, Brief description)
- Knowledge of and previous experience in integration of e-Government services and platforms and submission of the list of integrated functional IT systems (Project, Date of integration, Beneficiary, Brief description)
- Knowledge of and previous experience with the EMIS, is an asset
- Previous work with UNICEF/ UN agencies is an asset

10. Professional experience of key personnel:

The service provider will provide CVs for all key members corresponding to the following requirements:

Role	Minimum Requirements & Relevant Experience
Team Lead	- Minimum 5 years of experience in IT product or project management (preferably in GovTech or EdTech) - Proven experience leading cross-functional teams in agile environments - Familiarity with EMIS, education data, and policy frameworks - Strong stakeholder management skills (ministries, donors, tech teams)
Business Analyst	- Minimum 3 years of experience in business analysis, preferably in education, government, or data-driven systems - Skilled in drafting functional and technical specifications - Experience working with dashboards, data models, and education information flows
UI/UX Designer	- Minimum 3 years of experience in designing user interfaces for web platforms - Strong portfolio of work using Figma, Adobe XD, etc. - Experience with dashboard/data-heavy applications - Familiarity with user-centered and accessibility design principles
Backend Developer	- Minimum 5 years of experience in backend development (Oracle PL/SQL, C#, or equivalent stack used in EMIS) - Experience working with government systems, REST/SOAP APIs, data integration - Familiarity with MCloud and data security standards
Frontend Developer	- Minimum 4 years of experience in building responsive web applications (e.g., JavaScript, React, or the EMIS tech stack) - Experience integrating dashboards, charts, and role-based interfaces
QA Engineer	- Minimum 3 years of experience in manual and automated testing - Familiarity with education data flows, dashboards, and user acceptance testing - Experience developing test cases and regression testing for public systems
Data Integration Specialist	- Experience integrating public registries (e.g., CNAS, SIPAS, RSUD) - Strong understanding of data mapping, quality assurance, and validation processes - Knowledge of XML, JSON, and EMIS interoperability protocols
Education Specialist	- Minimum 3 years of experience in education sector - Experience with EMIS, at user level - Experience working with MER or similar agencies is a strong asset

11. Content of technical proposal

The submissions should contain two separate proposals: Technical Proposal and Financial Proposal. The Technical Proposal structure should include, but not limited to, the following:

i. Corporate profile of the organization/institution/agency
ii. Detailed description of the methodology and technical approach
iii. Tentative work plan with timeframe and deadlines for deliverables
iv. Project dependencies, risks, and assumptions, as well as proposed relevant mitigation measures
v. Roles and responsibilities of the institutions/ and consultants, if any

Bidders are requested to back up their submissions by providing:

- Evidence in the form of job completion certificate, contracts and/or references.
- At least three examples of similar projects/assignments, containing the following:
    - Name of Client
    - Title of the Project/Study/ Assessment
    - Year and duration of the assignment
    - Scope of the Projects/Requirements
    - Proposed Solutions and Outcomes – include visuals, web-links, etc.
    - Team members on each of the project and their specific roles
    - Project timelines (start and end date year, and any other information necessary)
    - Reference /Contact person details

Details of the Proposed Team for the assignment including the following information:

- Title/Designation of each team member on the project
- Educational qualifications and professional experiences
- Past experience in working on similar projects and assignments – list all similar projects they worked on and their roles on those projects.
- Project implementation plan showing the detailed sequence and timeline for each activity and days necessary for each proposed team member
- Quality assurance mechanism, ethical concern and risk mitigation measures put in place

12. Content of financial proposal

The financial proposal shall indicate the total budget estimated in USD, as well as a detailed breakdown of budget items. Payments will be based on outputs, i.e., upon delivery of the services specified in the TOR.

The financial offer should include all additional applicable costs, such as: translation, meeting costs, transportation (local and international), daily subsistence costs. If not provided by ToR, UNICEF will not reimburse additional costs not directly related to the assignment outcome, such as translation/interpretation services, local travel, passport/visa costs, hardware, software, stationery, logistics and meeting costs.

In case when a Moldovan resident company is selected for contracting, MDL will serve as contract currency, converted at the UN exchange rate applicable at the contract signature date.

13. Evaluation criteria for selection

The submissions should contain two separate proposals: a Technical Proposal and a Financial Proposal. The Technical proposal will be evaluated against the following criteria:

Technical Criteria	Technical Sub-criteria	Maximum Points
Overall Response	Completeness of response Overall concord between RFP requirements and the proposal	5 5
Maximum Points		**10**

Company and Key Personnel	**Institution/Company:** ● National consultancy company with proven experience in developing and implementing on-line monitoring systems and/or dashboards in the last 5 years, preferably in the education sector (but not limited to it); at least 1 member of the team with previous experience in the education sector; ● Previous experience in developing content and conducting face to face and on-line training for database/reporting module users, preferably in the field of education; ● Experience in the development, implementation and maintenance of information systems of state importance; ● Minimum of 5 years of experience in IT consulting; ● Proven experience in the development, implementation and maintenance of solutions based on Oracle DBMS technology, Oracle Application Express, SQL, PL/SQL, JavaScript languages and submission of the list of integrated functional IT systems (Project, Date of integration, Beneficiary, Brief description) ● Knowledge of and previous experience in integration of e-Government services and platforms and submission of the list of integrated functional IT systems (Project, Date of integration, Beneficiary, Brief description). ● Knowledge of and previous experience with the EMIS, is an asset; ● Previous work with UNICEF/ UN agencies is an asset. **Team Lead** - Minimum 5 years of experience in IT product or project management (preferably in GovTech or EdTech) - Proven experience leading cross-functional teams in agile environments - Familiarity with EMIS, education data, and policy frameworks - Strong stakeholder management skills (ministries, donors, tech teams) **Business Analyst** - Minimum 3 years of experience in business analysis, preferably in education, government, or data-driven systems - Skilled in drafting functional and technical specifications - Experience working with dashboards, data models, and education information flows **UI/UX Designer**	35 15

	- Minimum 3 years of experience in designing user interfaces for web platforms - Strong portfolio of work using Figma, Adobe XD, etc. - Experience with dashboard/data-heavy applications - Familiarity with user-centered and accessibility design principles **Backend Developer** - Minimum 5 years of experience in backend development (Oracle PL/SQL, C#, or equivalent stack used in EMIS) - Experience working with government systems, REST/SOAP APIs, data integration - Familiarity with MCloud and data security standards **Frontend Developer** - Minimum 4 years of experience in building responsive web applications (e.g., JavaScript, React, or the EMIS tech stack) - Experience integrating dashboards, charts, and role-based interfaces **QA Engineer** - Minimum 3 years of experience in manual and automated testing - Familiarity with education data flows, dashboards, and user acceptance testing - Experience developing test cases and regression testing for public systems **Data Integration Specialist** - Experience integrating public registries (e.g., CNAS, SIPAS, RSUD) - Strong understanding of data mapping, quality assurance, and validation processes - Knowledge of XML, JSON, and EMIS interoperability protocols **Education Specialist** - 3+ years of experience in education sector - Experience with EMIS, at user level - Experience working with MER or similar agencies is a strong asset	

Maximum Points		**50**
Proposed Methodology and Approach	Project plan & Technologies used - compatibility with UNICEF Project management, monitoring and quality assurance process Innovation approach, Instructional strategies	5 5
Maximum Points		**10**
Total Maximum obtained for Technical Criteria		**70**
Minimum score for technical compliance		**50**

The maximum number of points to be allocated for the technical evaluation component is 70.
The maximum number of points to be allocated for the price component is 30. Thirty points will be allotted to the lowest price proposal of a technically qualified offer. Points for other offers will be calculated as **Points (x) = (lowest offer/ offer x) * 30.**

The company which submitted the offer that obtained the highest cumulative score (technical evaluation points + financial evaluation points) will be considered for contracting.

14. Payment schedule

The payment for the services provided will be made within 30 days of satisfactory delivery of listed products. Payment will be disbursed upon submission and approval of deliverables, certified by the UNICEF Project Officer, indicating that the services have been satisfactorily performed. Payment will be done based on the actual number of delivered products.

Nr.	Deliverables	Proportion of payment
1.	**UX/UI Prototype of Dashboards at all user levels, including the designs of alerts and notifications propagation to Electronic agenda and EMIS**	10%
2.	**Core Module Development (MVP), including the integration with EMIS and Data sources**	50%
3.	**Training & Documentation**	10%
4.	**Roll-out & Monitoring**	30%
	TOTAL	100%

UNICEF reserves the right to withhold all or a portion of payment if performance is unsatisfactory, if work/outputs are incomplete, not delivered for failure to meet deadlines.

15. Definition of supervisory arrangements

The selected organization will work under the oversight of the Education Officer of UNICEF Moldova. Payments will be rendered upon successful completion of each task upon written approval by the UNICEF Supervisor, and contingent upon the quality of deliverables.

16. Support provided by UNICEF

To achieve the above-mentioned objectives, UNICEF will regularly communicate with the consultancy company and provide feedback and guidance and necessary support, as well as remain aware of any upcoming issues related to the performance and quality of work. MER and UNICEF will provide an initial package of relevant documents and available research, and an initial list of relevant counterparts to

work with. If need be, UNICEF will also request relevant data – as agreed upon with the consultant – from relevant government counterparts.

17. Copyrights & utilization rights

The copyright and the right of the utilization of all the materials will belong to UNICEF Moldova and MER. All outputs remain the exclusive property of UNICEF and must not be retained, shared or disclosed in any manner with third parties, except when authorized by UNICEF.

Annex 1

Functional and Technical Requirements for the "Class Teacher" and "School Manager" Dashboards in EMIS

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Definitions and acronyms

Acronyms

Acronym	Interpretation
MoER	Minister of Education and Research
EMIS	Education Management Information System
ISPSD	Information System for Personalizing Study Documents
DMISIE	Data Management Information System in the field of Inclusive Education
SEN	Special educational needs
VET	Vocational education training

Definitions

Term	Definition
Promotion	The absolute or nominal value of the number of graduates who passed the national exams, at each level of study.
Absenteeism	Prolonged absence of the student from classes.
Chronic absenteeism	Prolonged absence from classes, where the share of absences exceeds 10% of total classes.
Excessive absenteeism	Prolonged absence from classes, where the share of absences exceeds 15% of total classes.

Special educational needs (NES)	Educational needs of the child/pupil/student, which involve schooling adapted to individual particularities or characteristics of a disability or learning disorder, as well as specific intervention through appropriate rehabilitation or recovery actions[1].

Introduction

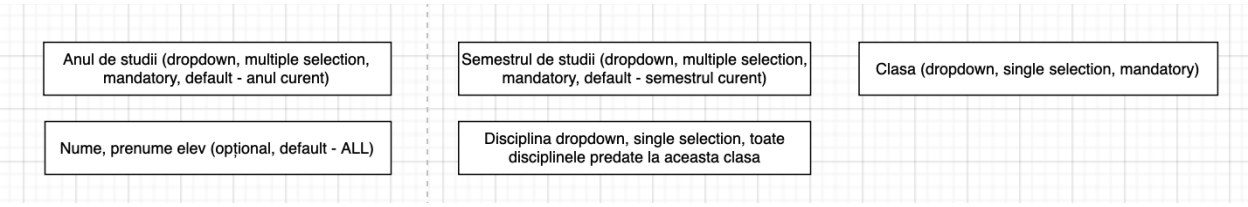
The initial analysis of EMIS highlighted the need to improve the system's capacity to monitor student academic performance and absenteeism, with the aim of facilitating early interventions for at-risk students and supporting personalized educational pathways.

In this context, the present report outlines the technical and functional requirements for the dashboards intended for school principals and class teachers.

Functional requirements for the dashboard intended for the class teacher

1. Interface Design – Header and Quick Filter Module

This quick filter interface is intended for the class teacher, who accesses the dashboard for analysis and decision-making. The filter set for the class teacher's dashboard allows them to view and analyze relevant data about the class or students they oversee. The filters enable the selection and segmentation of data based on several key parameters:



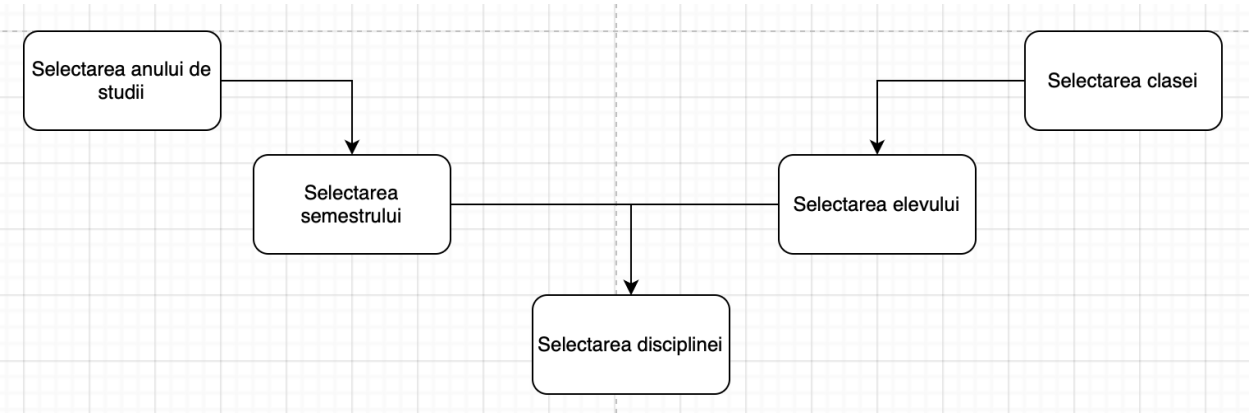
The **filter area** will contain 5 dynamic and contextual filters, meaning that selecting one filter may determine the display or limitation of options in the others. This interdependent logic increases the relevance of the displayed data and prevents incoherent selections.

[1] https://www.legis.md/cautare/getResults?doc_id=148031&lang=ro#

Filter	Control Type	Selection	Required	Default Value	Description
Academic Year	Dropdown Menu	Multiple	Mandatory	Current year (e.g. 2024–2025)	Allows class teachers to select one or more academic years for which they want to view data. Useful for year-over-year comparisons.
Semester	Dropdown Menu	Multiple	Mandatory	Current semester (e.g. Semester 1)	One or more semesters can be selected to filter relevant data (e.g. absences, performance, etc.).
Class	Dropdown Menu	Single	Mandatory	–	Selects the class for which the class teacher views data. This is an essential filter as it is the core of all analyses.
Student Name	Dropdown Menu	Single	Optional	All	Allows filtering at the individual student level. If no student is selected, data for all students in the class is displayed.
Subject	Dropdown Menu	Single	Optional	All	Lists all subjects taught in the selected class. Useful for viewing performance or absences by specific subject.

Filter Logic and Influence

The class teacher's dashboard is built with interdependent filters that influence each other to prevent incoherent selections and to provide only data relevant to the selected context. This logic allows class teachers to easily navigate through the data and gain a clear overview of the performance and participation of the students in their class.



Filter	Influences	Logic
Academic Year	Semester, Class, Students, Available Subjects	When a specific academic year is selected (e.g., 2024–2025), only the semesters, classes, students, and subjects active in that year are enabled. This prevents the display of irrelevant data.
Semester	Displayed data (absences, grades, participation, etc.)	The filter allows the selection of one or more semesters (e.g., Semester I and II). The dashboard data is automatically updated for the selected period.
Class	Students, Subjects	When a class is selected (e.g., Grade 9A), only the students in that class and the subjects taught there are displayed. This is the central, mandatory filter.
Student Name	Data displayed only for that student	If a specific student is selected, the dashboard automatically filters all relevant data (grades, absences, participation) for that student within the selected class, year, and semester.
Subject	Displayed performance and participation data	If a subject is selected (e.g., Mathematics), the dashboard will display only the data related to that subject for the selected class's students.

Users should be informed about filter restrictions or relationships through tooltips or messages such as “Select a class first to view students.” Quick reset functionalities can be added (e.g., “Reset Filters”).

Proposed Additional Functionalities:

Functionality	Description	"Must have"
Real-time filtering	changing a filter automatically updates the data displayed in the dashboard	yes
User selection memory	when returning to the dashboard, the last selections are retained	no
Filtered data export	ability to download data (Excel/CSV) after filters are applied	yes
Information button	added next to each dashboard indicator, provides the definition and/or calculation formula	yes

2. Main Sections of the Class Teacher Dashboard and Indicators Structured by Component

The Class Teacher Dashboard provides a clear and up-to-date overview of academic performance and class attendance through a set of key indicators, interactive visualizations, and automated alert mechanisms.

Its functionality is especially designed to support comparative analysis, rapid risk identification, progress monitoring, and timely intervention.

With interdependent filtering logic and drill-down options, the class teacher can access detailed data on absenteeism, performance, inclusion, and other essential factors for the strategic management of the class.

Dashboard diriginte

Anul de studii (dropdown, multiple selection, mandatory, default - anul curent)

Semestrul de studii (dropdown, multiple selection, mandatory, default - semestrul curent)

Clasa (dropdown, single selection, mandatory)

Nume, prenume elev (opțional, default - ALL)

Disciplina dropdown, single selection, toate disciplinele predate la aceasta clasa

Tabel
num prenume elevi, disciplina, media generală, media pe disciplina, num absente

Reusita academica

Media generala

Media la teze

Grafic
Default:
Distribuția pe intervale de note vs media clasei

Locul

Comparativ cu media școlii XXX din YYY

Comparativ cu media raionului XXX din YYY

Comparativ cu media națională XXX din YYY

Tabel Elevi cu media sub 5

1. Scenariul fără selectare unei discipline de studii - toți elevii cu media sub 5 (nume prenume elev, disciplina media)
2. Scenariul cu selectarea unei discipline de studii - toți elevii cu media sub 5, la disciplina selectata

[Checkbox] Compara cu media clasei

Tabel Elevi cu media sub media clasei

[Checkbox] Compara cu media școlii

Tabel Elevi cu media sub media școlii

[Checkbox] Compara cu media raionului

Tabel Elevi cu media sub media raionului

[Checkbox] Compara cu media națională

Tabel Elevi cu media sub media națională

Prezenta la ore

Total absente

Motivate **Nemotivate**

Rata prezenței elevilor num total de prezente/nr total de ore

Saptamana (in curs - default, precedenta) Luna Zi

Grafic

1. Scenariul fără selectarea unei discipline de studii - toate disciplinele vs numărul de absente
2. Scenariul cu selectarea unei discipline de studii - disciplina selectata vs numărul de absente

Locul

Comparativ cu media școlii

Comparativ cu media raionului

Comparativ cu media națională

Tabel Elevi cu mai mult de 10% din ore absentate din total număr de ore

[Checkbox] Compara cu media clasei

Tabel Elevi cu media sub media clasei

[Checkbox] Compara cu media școlii

Tabel Elevi cu media sub media școlii

[Checkbox] Compara cu media raionului

Tabel Elevi cu media sub media raionului

[Checkbox] Compara cu media națională

Tabel Elevi cu media sub media națională

Alerte si notificări

Tabel Elevi în risc de abandon (prezență scăzută și medii mici)

med generala <7, nr absente = 20%

Tabel Absențe frecvente pentru un elev

Tabel Modificarea performantei academice pe disciplina sau general (month to month)

Disciplina, modificarea mediei clasei comparativ cu luna precedenta (%), codificare după culoare (roșu - scădere, verde - creștere)

Tabel Modificarea prezentei la ore, pe disciplina sau general (month to month)

Disciplina, modificarea absenteismului comparativ cu luna precedenta (%), codificare după culoare (roșu - creștere, verde - scadere)

Educatie incluziva

Ponderea elevilor cu CES, Ponderea elevilor cu CES si dizabilitate (pe grad de dizabilitate)

Nume prenume elevi, discipline la care au curriculum modificat

a. General monitoring indicators

This section provides a detailed overview for each student in the class, combining academic performance and school attendance. It is useful for quick individual or collective assessments. The general monitoring indicators will be displayed in a table format, with the following columns:

- Student's First and Last Name
- Subject
- Overall Average, Subject Average
- Number of Absences, Number of Unexcused Absences
- SEN Status
- Modified Curriculum
- Special Situations

Column	Functional Requirement	Additional Notes
Student Name and Surname	Text; alphabetically sortable; searchable	Optional: “Student Profile” button with access to detailed view
Subject	Text; displays all subjects associated with the class	Can be filtered separately or via main filter section
Overall Average	Numeric (0.00–10.00); color coding (e.g.: <5 red, 5–7 yellow, >7 green)	Tooltip can show previous average
Subject Average	Numeric; based on selected subject from the filter	Expand/collapse available for all subjects
Number of Absences	Numeric; total per student	Can be sorted descending for quick identification
Number of Unexcused Absences	Numeric; subset of previous column	Displayed only if data is available
SEN Status	Yes/No; optional details on type (disability, disorders, etc.)	Tooltip or icon to indicate type
Modified Curriculum	Yes/No; with subject-specific details where applied	Secondary pop-up window can show details

Column	Functional Requirement	Additional Notes
Special Situations	Short text (e.g.: scholarship, social case, low attendance)	Optionally displayed via icons/legends

Recommended Additional Functionalities:

- Sorting on all numeric and text columns
- Quick search by first name/last name
- Advanced filtering (e.g., only students with SEN, only those with averages below 6)
- Table export in Excel/CSV format
- Responsive display – essential columns on mobile, additional details expandable on demand

b. Academic performance

This section monitors student outcomes and the dynamics of academic performance based on relevant variables.

- Overall average
- Exam (thesis) average
- Grade distribution by range
- Students with academic achievement below 5
- Comparative indicators with averages: class, school, district, national

Indicator	Description	Data Source	Suggested Visualization
Overall average	Displays the overall arithmetic average of the selected student(s) and the trend compared to the previous semester	EMIS, Electronic Gradebook	Numeric/statistical card and trend line
Exam (thesis) average	Displays the average of thesis exam grades for the selected student(s), compared to the class average	EMIS, Electronic Gradebook	Numeric/statistical card
Grade distribution by intervals	Academic performance of students grouped into score ranges (e.g., 1–4, 5–6, 7–8, 9–10); number of students in each range	EMIS, Electronic Gradebook	Histogram / Bar chart

Indicator	Description	Data Source	Suggested Visualization
Students with academic achievement below 5	Names of students with an average below 5, either in a selected subject or across all subjects if no subject filter is applied	EMIS, Electronic Gradebook	Table
Comparison indicator – vs. class average	Names of students with averages below the class average, for the selected subject or all subjects (if no filter is applied); controlled by checkbox to show/hide the comparison	EMIS, Electronic Gradebook	Table / Horizontal bar chart
Comparison indicator – vs. school average	Names of students with averages below the school average, for the selected subject or all subjects (if no filter is applied); controlled by checkbox to show/hide the comparison	EMIS, Electronic Gradebook	Table / Horizontal bar chart
Comparison indicator – vs. district average	Names of students with averages below the district average, for the selected subject or all subjects (if no filter is applied); controlled by checkbox to show/hide the comparison	EMIS, Electronic Gradebook	Table / Horizontal bar chart
Comparison indicator – vs. national average	Names of students with averages below the national average, for the selected subject or all subjects (if no filter is applied); controlled by checkbox to show/hide the comparison	EMIS, Electronic Gradebook	Table / Horizontal bar chart

c. School Absenteeism

This component provides a clear overview of student attendance, identifying trends, problem areas, and correlations with other factors.

- Total absences (excused and unexcused)
- Student attendance rate
- Attendance by week/month

- Students with attendance below 90%
- Comparative indicators with the averages of the class, school, district, and national levels

The **filter area** will include an additional dynamic and contextual filter for selecting a specific study week, day, or month.

Indicator	Description	Data Source	Suggested Visualization
Total absences (segregated into excused and unexcused)	Number of absences accumulated by class/student, either for the selected subject or all subjects (if no subject is selected in the filters).	EMIS, Electronic Gradebook	Numeric/statistical card with colored badge: green – OK, yellow – moderate, red – critical
Student attendance rate	Ratio of days present vs. total, compared to reference values	EMIS, Electronic Gradebook	Donut chart / Bar chart
Students with attendance < 90%	Names of students with attendance below 90%, either for the selected subject or all subjects (if no subject is selected).	EMIS, Electronic Gradebook	Table with colored alert, includes percentage and reason
Comparison indicator – vs. class average(checkbox-controlled)	Names of students with average attendance below class average, either for the selected subject or all subjects.	EMIS, Electronic Gradebook	Table / Horizontal bar chart
Comparison indicator – vs. school average(checkbox-controlled)	Names of students with average attendance below school average, either for the selected subject or all subjects.	EMIS, Electronic Gradebook	Table / Horizontal bar chart
Comparison indicator – vs. district average(checkbox-controlled)	Names of students with average attendance below district average, either for the selected subject or all subjects.	EMIS, Electronic Gradebook	Table / Horizontal bar chart

Indicator	Description	Data Source	Suggested Visualization
Comparison indicator – vs. national average(checkbox-controlled)	Names of students with average attendance below national average, either for the selected subject or all subjects.	EMIS, Electronic Gradebook	Table / Horizontal bar chart

d. Alerts and notifications

This module helps the class teacher respond quickly where chronic or localized issues arise, by generating automated notifications based on predefined thresholds.

- Alert: Students at risk of dropping out
- Alert: Frequent absences
- Alert: Change in academic performance
- Alert: Change in class attendance

Indicator	Description	Data Source	Suggested Visualization
Alert: Students at risk of dropping out	Students with an overall average <7 and attendance <90%	EMIS, Electronic Gradebook	Table with traffic light coding (red – high risk, yellow – moderate)
Alert: Frequent absences	Students with frequent absences, listed in descending order by number of absences	EMIS, Electronic Gradebook	Table / Bullet chart / Bar chart
Alert: Change in academic performance	Displays grade evolution over time, with color coding for easy identification of changes. Flags significant drops in a subject or overall.	EMIS, Electronic Gradebook	Line chart with traffic light coding (green – progress, red – decline); configurable threshold

Indicator	Description	Data Source	Suggested Visualization
Alert: Change in class attendance	Displays attendance evolution over time, with color coding for easy identification of changes. Flags significant drops in a subject or overall.	EMIS, Electronic Gradebook	Line chart with traffic light coding (green – progress, red – decline); configurable threshold

Each indicator should be interactive (with drill-down capability to institution or class level). It is recommended to include a general class-level scorecard with traffic light coding (green – under 5% absenteeism, red – over 15%, etc.) and quick data export options for reporting (PDF, Excel).

e. Inclusion – Special educational needs (SEN)

This set of indicators supports the tracking of progress and the assurance of equity for students with SEN (Special Educational Needs), in alignment with inclusive education policies. It provides an overview of the situation of students within a class, including data on academic performance, attendance, and special educational status.

The filter area will include an additional dynamic and contextual filter, meaning that selecting one filter may affect the display or limit the options in others — specifically: SEN status, degree of disability, or both.

Monitoring indicators will include:

- Proportion of students with SEN
- List of students following a modified curriculum

Indicator	Description	Data Source	Suggested Visualization
Proportion of students with SEN	Displays the proportion of students with Special Educational Needs (SEN). Includes distribution of students with SEN and disabilities, detailed by severity level. This indicator helps identify additional needs for support or adapted resources.	EMIS, SIMDDEI, psycho-pedagogical assessment reports	Donut chart
List of students with a	Includes: student first and last name, and the subjects for which the curriculum is adapted or modified. Allows individualized monitoring of	EMIS, SIMDDEI	Tabular list

Indicator	Description	Data Source	Suggested Visualization
modified curriculum	educational interventions and ensures equity in the learning process.		

Functional Requirements for Alerts and Notifications in the Electronic Gradebook

Alerts and notifications for each student will be sent in real time to parents who have access to the Electronic Gradebook, including:

a. **Attendance and Absenteeism**
   - Unexcused absence for a class or a full day
   - High number of absences in a week/month
   - Chronic absenteeism alert (e.g., >10% of semester hours)
   - Repeated tardiness to class

b. **Academic Performance**
   - Low grade on an important assessment (e.g., below 5)
   - Significant improvement in grades (positive feedback)
   - Semester average below an alert threshold (e.g., <6)
   - Comparison of the student's average with the class/school average (optional)

Additional Features

- Parents can choose the types of notifications they wish to receive (e.g., only absences and grades below 6)
- Option to confirm receipt of the notification

Differences for Institutions with Integrated Electronic Gradebook and Electronic Register

For institutions that have implemented both the Electronic Gradebook and the Electronic Register, automatic data integration will be ensured:

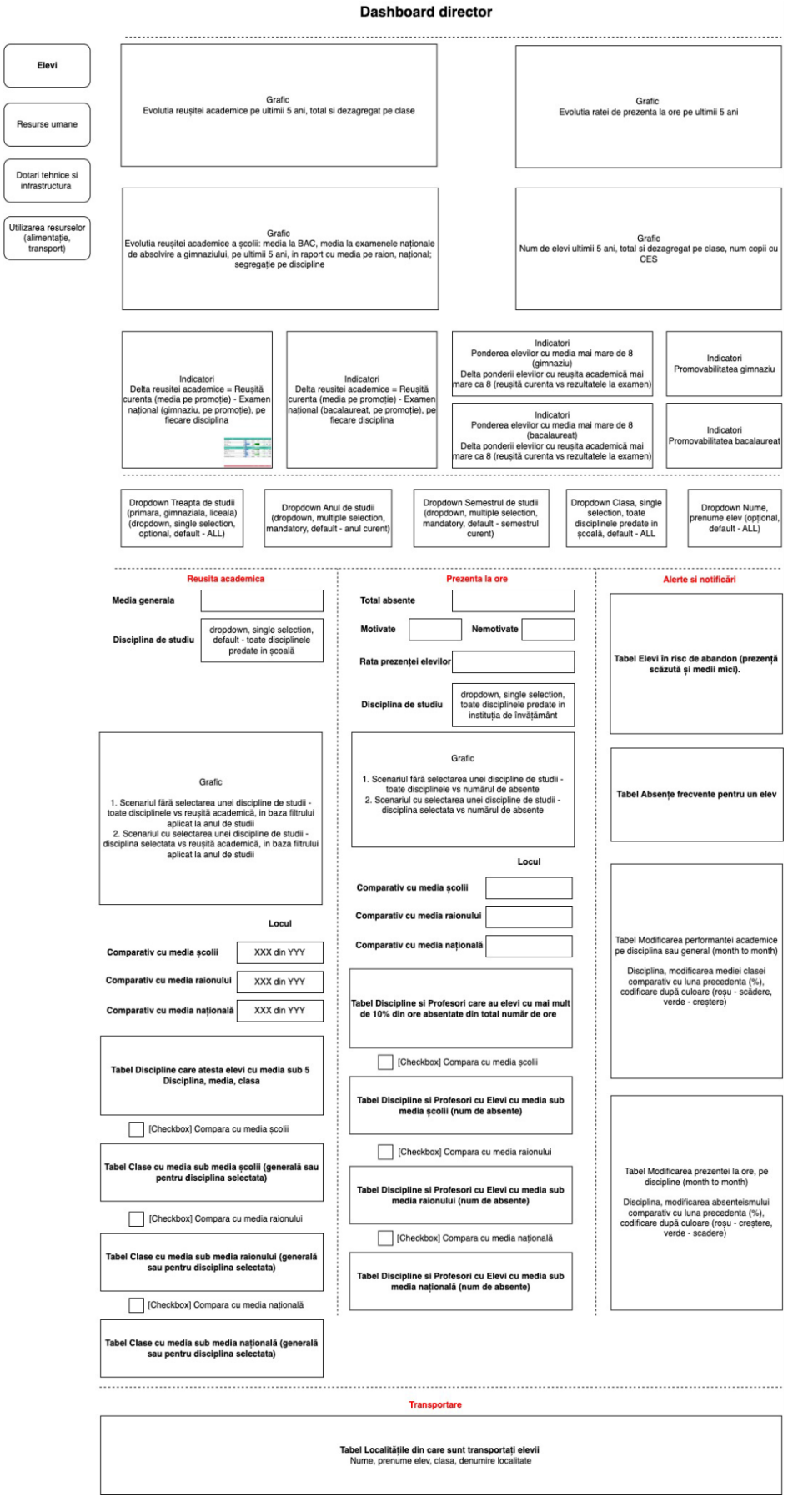
- Direct connection with the Electronic Gradebook to retrieve grades and attendance
- Automatic generation of reports and comparisons (*nice to have*)
- Real-time notifications

Functional Requirements for the Dashboard Intended for School Principals/Managers

The School Principal's Dashboard is an integrated tool for monitoring, analysis, and strategic decision-making, designed for school managers.
It centralizes relevant data from several key areas of school operations, providing a clear, real-time overview of the institution's performance and needs. The information is structured into the following sections:

- **Students** – This section tracks academic achievement, class attendance, educational risk situations, and the distribution of students with Special Educational Needs (SEN). Indicators are presented in a comparative format (class, school, district, national level) and support rapid, personalized interventions.
- **Human Resources** – Offers a detailed view of teaching and support staff, including their distribution, qualifications, workload, and staffing needs. This section is essential for analyzing the institution's capacity to meet educational requirements.
- **Technical Equipment and Infrastructure** – Assesses the physical condition of the institution: classrooms, laboratories, IT equipment, connectivity, and other facilities required for a modern and safe educational process.
- **Resource Utilization (Nutrition, Transport)** – Monitors student access to school transport and meals, highlighting areas at risk of exclusion or dysfunctions in the delivery of these services.

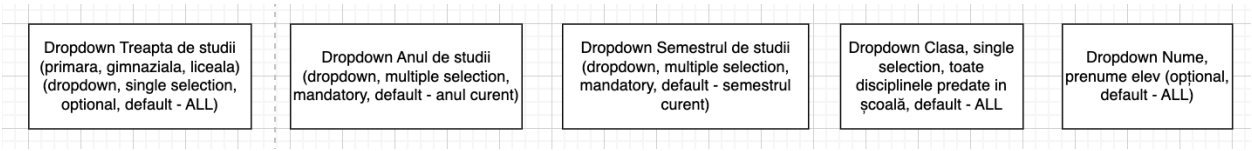
Students


Dashboard director
Elevi
Resurse umane
Dotari tehnice si infrastructura
Utilizarea resurselor (alimentație, transport)
Grafic
Evolutia reușitei academice pe ultimii 5 ani, total si dezagregat pe clase
Grafic
Evolutia ratei de prezenta la ore pe ultimii 5 ani
Grafic
Evolutia reușitei academice a școlii: media la BAC, media la examenele naționale de absolvire a gimnaziului, pe ultimii 5 ani, in raport cu media pe raion, național; segregație pe discipline
Grafic
Num de elevi ultimii 5 ani, total si dezagregat pe clase, num copii cu CES
Indicatori
Delta reusitei academice = Reușită curenta (media pe promoție) - Examen național (gimnaziu, pe promoție), pe fiecare disciplina
Indicatori
Delta reusitei academice = Reușită curenta (media pe promoție) - Examen național (bacalaureat, pe promoție), pe fiecare disciplina
Indicatori
Ponderea elevilor cu media mai mare de 8 (gimnaziu)
Delta ponderii elevilor cu reușita academică mai mare ca 8 (reușită curenta vs rezultatele la examen)
Indicatori
Promovabilitatea gimnaziu
Indicatori
Ponderea elevilor cu media mai mare de 8 (bacalaureat)
Delta ponderii elevilor cu reușita academică mai mare ca 8 (reușită curenta vs rezultatele la examen)
Indicatori
Promovabilitatea bacalaureat
Dropdown Treapta de studii (primara, gimnaziala, liceala) (dropdown, single selection, optional, default - ALL)
Dropdown Anul de studii (dropdown, multiple selection, mandatory, default - anul curent)
Dropdown Semestrul de studii (dropdown, multiple selection, mandatory, default - semestrul curent)
Dropdown Clasa, single selection, toate disciplinele predate in școală, default - ALL
Dropdown Nume, prenume elev (optional, default - ALL)
Reusita academica
Media generala
Disciplina de studiu
dropdown, single selection, default - toate disciplinele predate in școală
Grafic
1. Scenariul fără selectarea unei discipline de studii - toate disciplinele vs reușită academică, in baza filtrului aplicat la anul de studii
2. Scenariul cu selectarea unei discipline de studii - disciplina selectata vs reușită academică, in baza filtrului aplicat la anul de studii
Locul
Comparativ cu media școlii
XXX din YYY
Comparativ cu media raionului
XXX din YYY
Comparativ cu media națională
XXX din YYY
Tabel Discipline care atesta elevi cu media sub 5 Disciplina, media, clasa
[Checkbox] Compara cu media școlii
Tabel Clase cu media sub media școlii (generală sau pentru disciplina selectata)
[Checkbox] Compara cu media raionului
Tabel Clase cu media sub media raionului (generală sau pentru disciplina selectata)
[Checkbox] Compara cu media națională
Tabel Clase cu media sub media națională (generală sau pentru disciplina selectata)
Prezenta la ore
Total absente
Motivate
Nemotivate
Rata prezenței elevilor
Disciplina de studiu
dropdown, single selection, toate disciplinele predate in instituția de învățământ
Grafic
1. Scenariul fără selectarea unei discipline de studii - toate disciplinele vs numărul de absente
2. Scenariul cu selectarea unei discipline de studii - disciplina selectata vs numărul de absente
Locul
Comparativ cu media școlii
Comparativ cu media raionului
Comparativ cu media națională
Tabel Discipline si Profesori care au elevi cu mai mult de 10% din ore absentate din total număr de ore
[Checkbox] Compara cu media școlii
Tabel Discipline si Profesori cu Elevi cu media sub media școlii (num de absente)
[Checkbox] Compara cu media raionului
Tabel Discipline si Profesori cu Elevi cu media sub media raionului (num de absente)
[Checkbox] Compara cu media națională
Tabel Discipline si Profesori cu Elevi cu media sub media națională (num de absente)
Alerte si notificări
Tabel Elevi în risc de abandon (prezență scăzută și medii mici).
Tabel Absențe frecvente pentru un elev
Tabel Modificarea performantei academice pe disciplina sau general (month to month)
Disciplina, modificarea mediei clasei comparativ cu luna precedenta (%), codificare după culoare (roșu - scădere, verde - creștere)
Tabel Modificarea prezentei la ore, pe discipline (month to month)
Disciplina, modificarea absenteismului comparativ cu luna precedenta (%), codificare după culoare (roșu - creștere, verde - scadere)
Transportare
Tabel Localitățile din care sunt transportați elevii
Nume, prenume elev, clasa, denumire localitate

Functional Requirements for the School Principals' Dashboard – Student Section

1. Interface Design – Header and Quick Filter Module

This section of the dashboard is designed to provide the school principal with both an overview and an in-depth view of academic performance, attendance, and the status of students within the educational institution, based on clear indicators, intuitive visualizations, and interactive filters. The filters allow for the selection and segmentation of data according to several key parameters:



The **filter area** will contain 5 dynamic and contextual filters, meaning that selecting one filter may affect the display or limit the options available in the others. This interdependent logic enhances the relevance of the displayed data and prevents inconsistent selections.

To enable personalized analysis, the dashboard includes multiple filters:

- **Level of education** – optional; allows selection between primary, lower secondary, and upper secondary levels.
- **Academic year, Semester, Class** – mandatory filters, with multi-selection for year and semester, and single selection for class.
- **Student name** – optional filter for focused, detailed analysis.

Filter	Control Type	Selection	Mandatory	Default Value	Description
Level of education	Dropdown menu	Single	Optional	–	Allows selection between primary, lower secondary, and upper secondary levels.
Academic year	Dropdown menu	Multiple	Mandatory	Current year (e.g., 2024–2025)	Allows users to select one or more school years for which they want to view data. Useful for year-to-year comparisons.
Semester	Dropdown menu	Multiple	Mandatory	Current semester (e.g., Semester 1)	One or more semesters can be selected to filter relevant data (e.g., absences, performance).

Filter	Control Type	Selection	Mandatory	Default Value	Description
Class	Dropdown menu	Single	Mandatory	–	Selects the class for which the data is displayed. This is a key filter, as it is central to all analyses.
Student name	Dropdown menu	Single	Optional	All	Allows filtering data at the individual student level. If no name is selected, all students in the class are shown.

Users should be informed about restrictions or relationships between filters through tooltips or messages such as “Please select a class first to view the students.” Quick reset functionalities can be added (e.g., “Reset filters”).

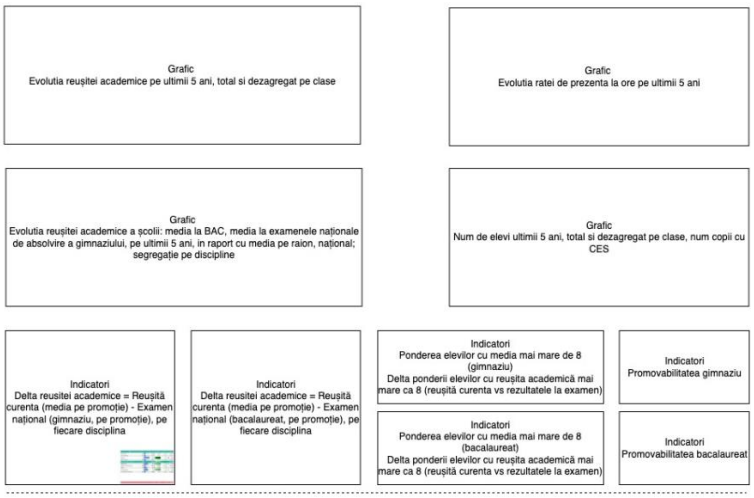
Proposed additional features:

Functionality	Description	Must have
Real-time filtering	Changing a filter automatically updates the data displayed in the dashboard	Yes
User selection memory	When returning to the dashboard, the user’s last selections are retained	No
Filtered data export	Option to download filtered data in Excel/CSV format after applying filters	Yes
Info button	Added next to each dashboard indicator to provide the definition and/or calculation formula	Yes

2. Main Sections of the Principal's Dashboard – Student Section and Indicators Structured by Component

Funcționalitatea dashboardului vizează în mod special analiza comparativă, identificarea rapidă a riscurilor, monitorizarea progresului, dar și sprijinirea intervențiilor în timp util. Printr-o logică de filtrare interdependentă și opțiuni de drill-down, managerul școlar poate accesa date detaliate despre absenteism, performanță, incluziune și alți factori esențiali în managementul strategic al instituției.

a. General monitoring indicators



The principal's dashboard is structured to provide a clear, longitudinal, and comparative view of students' academic performance and participation within the institution. The indicators are organized into two main categories: long-term trend charts and quantitative indicators (by subjects, grades, and levels of study):

1. **Evolution of Academic Performance and Attendance (last 5 years)**
    - **Chart: Evolution of Academic Achievement** – analyzes students' overall average grades over the past five years, with the option to disaggregate by grade and level of study.
    - **Chart: Evolution of Attendance Rate** – reflects the trend in student class attendance, serving as a key indicator for identifying risk of school dropout.
    - **Chart: Academic Achievement at Institution Level** – compares end-of-cycle exam results (National Evaluation, Baccalaureate) with district and national averages, further broken down by subject.
    - **Chart: Number of Students Over the Last 5 Years** – provides insight into the dynamics of the school population, with a focus on students with special educational needs (SEN).
2. **Analytical Indicators – Performance and Equity**
    - **Numeric/statistical card: Academic Achievement Delta** – the difference between students' annual average and their national exam results (gymnasium/high school), analyzed by subject.

- **Numeric/statistical card: Share of Students with Averages Above 8** – shows the proportion of students reaching high academic performance levels, separated by gymnasium and baccalaureate.
- **Numeric/statistical card: Pass Rate** – indicates the percentage of students who successfully completed the gymnasium cycle or passed the baccalaureate exam.

These indicators support:

- Identifying positive or negative trends in performance and participation;
- Comparing internal results with those at district or national levels;
- Monitoring educational equity by analyzing differences between classes, subjects, or student categories;
- Planning interventions and resource allocation at the school level.

b. Academic performance

This component of the dashboard enables the principal to assess the quality of academic results in real time and identify areas requiring intervention. The structure includes an additional filter by subject, allowing the selection of a specific discipline or a general analysis across all subjects.

Indicator	Description	Data Source	Proposed Visualization
Overall Average	Displays the average grade per student, class, or subject.	EMIS	Statistical/Numeric Card
Academic Achievement Distribution	Visualized using a dual-scenario chart: – *Without subject selection*: displays all subjects with the school-wide average. – *With subject selection*: displays only the selected subject.Allows comparative analysis by school years and classes.	EMIS	Trend line / Comparative horizontal bar chart
Position in Comparative Ranking	– *Compared to school average*: shows number of students/classes below or above school average. – *Compared to district average*: highlights alignment or gaps. – *Compared to national average*: provides broader performance context.	EMIS	Statistical/Numeric Card

Indicator	Description	Data Source	Proposed Visualization
Subjects Below Grade 5	List of students and classes with critical performance (below grade 5), for remedial actions.	EMIS	Table (includes: name, subject, grade, class)
Classes Below School, District, or National Average	Identifies groups of students or classes needing additional support. Indicator includes checkboxes for toggling between comparative scenarios.	EMIS	Table (includes: name, subject, grade, class)

C. School absenteeism

This component of the dashboard enables the principal to assess school absenteeism in real time and identify areas that require intervention. The structure includes an additional filter by subject, allowing the selection of a specific discipline or a general analysis across all subjects.

Indicator	Description	Data Source	Proposed Visualization
Total Absences	Total number of absences recorded over a specified period.	EMIS	Simple numeric card (e.g., "2,430 absences")
Justified / Unjustified Absences	Breakdown of absences based on justification.	EMIS	Two numeric cards or a bar chart segmented by absence type
Student Attendance Rate	Percentage of student attendance relative to total scheduled classes.	EMIS	Circular progress indicator (gauge) or percentage bar (e.g., "87%")

Indicator	Description	Data Source	Proposed Visualization
Absence Trends	Visualized using two scenarios: – *Without subject selection*: distribution of absences across all subjects. – *With subject selection*: trends over time for the selected subject.	EMIS	– Without subject filter: bar chart (X-axis: subjects, Y-axis: number of absences) – With subject filter: line or column chart showing weekly/monthly evolution
Institution's Position Compared to Other Levels	– Compared to school average: class/student position by number of absences. – Compared to district average: school/class/student position against district average. – Compared to national average: performance context relative to national trends.	EMIS	Horizontal bar chart with 3 bars (school, district, national)
Subjects and Teachers with Students Exceeding 10% Absences	Subjects and teachers where students have more than 10% of classes missed. Includes comparison option with school average (activates an additional column via checkbox).	EMIS	Table with columns: Subject, Teacher, Total Hours, Missed Hours, Absence %, Difference
Subjects and Teachers with Absenteeism Above School / District / National Average	Subjects and teachers where student absenteeism exceeds the school/district/national average. Includes a checkbox to compare against the school average (adds a difference column).	EMIS	Standard table with columns: Subject, Teacher, Average Student Absences, Reference Average (school/district/national), Difference

Optional – Recommended Additional Functionalities:

- Tooltip on Hover – displays detailed information when hovering over elements (e.g., affected students, specific missed hours).
- Time Filter – allows selection of a specific period (e.g., semester, month) for targeted analysis.
- Export to PDF / Excel – enables export of tables and charts for reporting and documentation purposes.

d. Alerts and notifications

The **"Alerts and Notifications"** section of the dashboard focuses on identifying educational risks and tracking the monthly evolution of academic performance and attendance. This module is essential for **preventing school dropout**, enabling **early intervention**, and improving **educational management through data-driven insights.**

Indicator	Description	Data Source	Proposed Visualization
Students at Risk of Dropout (Low Attendance & Low Grades)	List of students identified based on two combined criteria: – Low attendance rate – Academic averages below a critical threshold	EMIS	Table with columns: Student Name, Class, Attendance Rate (%), Semester Average, Visual Alert (e.g., warning icon or highlighted background). Includes sorting and filtering options by class or subject.
Frequent Absences – Individual Students	Students who have accumulated a high number of absences in a recent period (e.g., last month)	EMIS	Tabular list with: Student Name, Class, Total Absences, Number of Days with Consecutive Absences, Comments/Notes. Visual coding: red for critical cases.
Change in Academic Performance (by Subject or Overall – Monthly)	Evolution of class average or subject-specific performance compared to the previous month	EMIS	Table with color coding: Subject, Current Month Average, Previous Month Average, Difference (%). Color logic: – Red: significant drop – Green: improvement Alternative: Double bar chart (current vs. previous month).
Change in Attendance by Subject (Monthly)	Trends in attendance (or absenteeism) by subject, compared to the previous month	EMIS	Table with columns: Subject, Absence Rate – Previous Month, Absence Rate – Current Month, Difference (%). Color logic: – Red: increase in absenteeism – Green: improvement Alternative: Line chart showing monthly trend.

Recommended Additional Functionalities:

- Automated Notifications – triggered when a student enters a risk zone (e.g., low attendance and/or low academic performance).

- Quick Export – ability to download alert tables in Excel or PDF format for reporting or follow-up actions.
- Click for Details – direct access to the student's profile from within the alert for in-depth review and intervention planning.

e. Transportation

This section of the dashboard, titled **"Transportation,"** is designed to monitor students who benefit from organized transport to the educational institution.

Indicator	Description	Data Source	Proposed Visualization
Localities from Which Students Are Transported	This table lists all students who are transported from a distance, providing details on: – Student's full name – Grade/class – Name of the home locality (pickup location)	EMIS	Simple table with columns: Student First Name, Student Last Name, Class, Home Locality

Useful Functionalities:

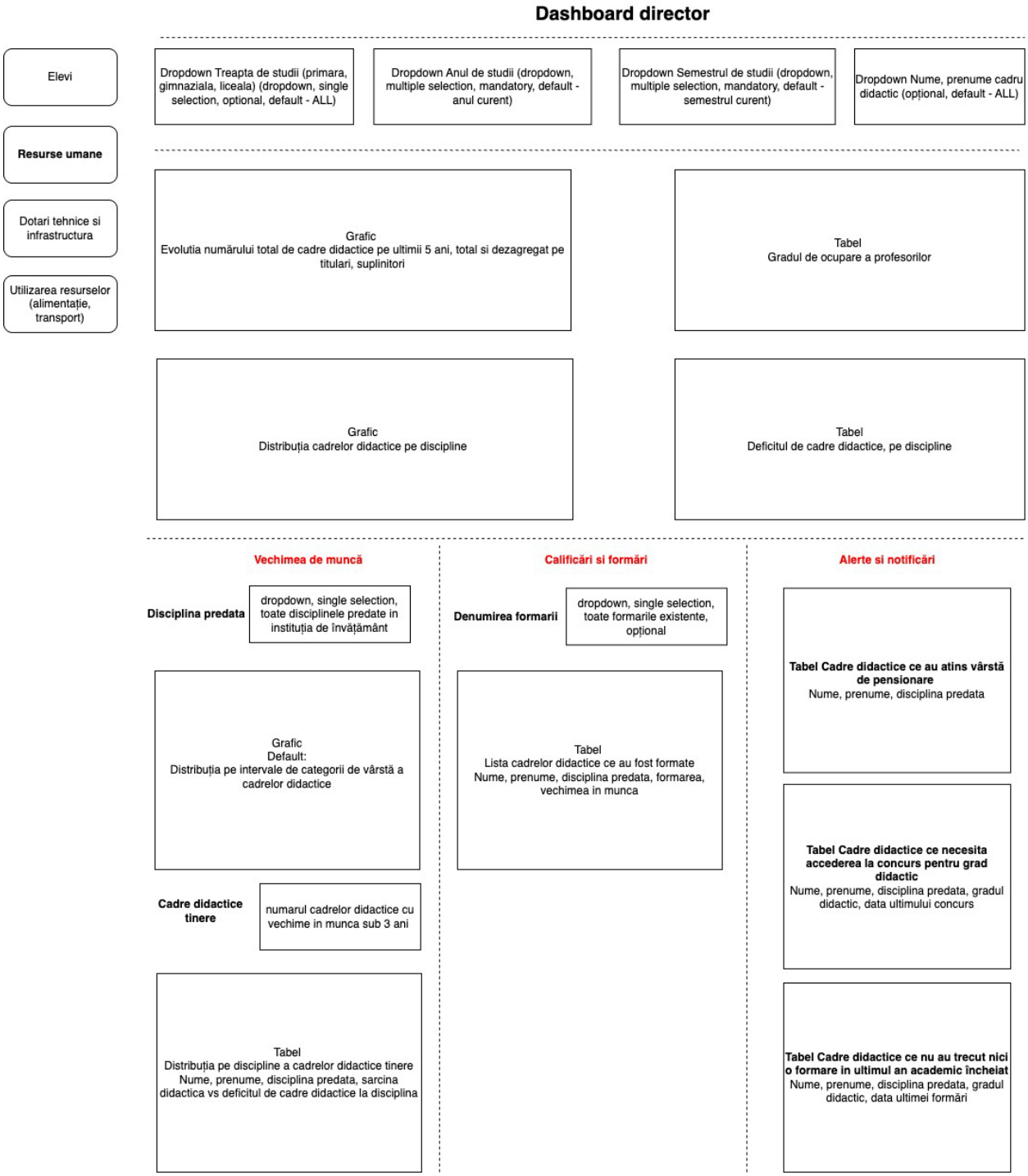
- Filter by locality or filter by class – to allow targeted views.
- Alphabetical or distance-based sorting – organize students by name or by proximity/locality.
- Export button (Excel/PDF) – for quick download and offline use of data.

Additional Suggestions for Enhanced Visualization:

- Interactive map (optional) – to display the geographic distribution of transported students visually.
- Summary chart (e.g., bar chart) – showing the number of transported students per locality for a quick overview.

Purpose:
This section is essential for analyzing the efficiency of school transportation and identifying potential logistical or infrastructure needs.

Human resources



Functional Requirements for the Dashboard Dedicated to School Principals/Managers – Human Resources Section

1. Interface Design – Header and Quick Filter Module

The **"Human Resources"** section of the principal's dashboard provides a clear and detailed overview of the distribution and activity of teaching staff within the educational institution, with filters for

customization and granular analysis. Its purpose is to support decision-making related to **staff allocation**, **identification of training needs**, and **monitoring of teacher attendance and performance**.

Filter	Control Type	Selection	Required	Default Value	Description
Level of Study	Dropdown menu	Single	Optional	All	Allows selection between primary, lower secondary (gymnasium), and upper secondary (high school).
Academic Year	Dropdown menu	Multiple	Required	Current academic year	Enables selection of one or more school years to analyze human resources over a defined period.
Semester	Dropdown menu	Multiple	Required	Current academic semester	Filters data by semester for comparisons or trend analysis.
Teacher's First and Last Name	Dropdown menu	Single	Optional	All	Enables focused analysis of a specific teacher.

Possible Applications of the Filters:

- Analysis of teacher attendance by semester;
- Comparison of teaching hours across different levels of education (primary, lower secondary, upper secondary);
- Identification of overburdened or underutilized teachers, based on assigned teaching loads;
- Visualization of teacher involvement across academic years or by educational cycle.

Users should be informed of filter dependencies or restrictions through tooltips or contextual messages such as:"Please select a class first to view the students." Additionally, a "Reset Filters" functionality can be added to allow quick clearing of all applied filters, improving usability and navigation within the dashboard.

Proposed Additional Functionalities:

Functionality	Description	"Must have"
Real-time filtering	Changing a filter automatically updates the data displayed in the dashboard	Yes
User selection memory	Previously selected filters are retained when the user returns to the dashboard	No
Export filtered data	Allows downloading of filtered data in Excel/CSV format	Yes
Info button	Added next to each dashboard indicator to provide its definition and/or calculation formula	Yes

This filtering area of the dashboard is essential for generating customized reports and providing strategic decision-making support at the institutional leadership level.

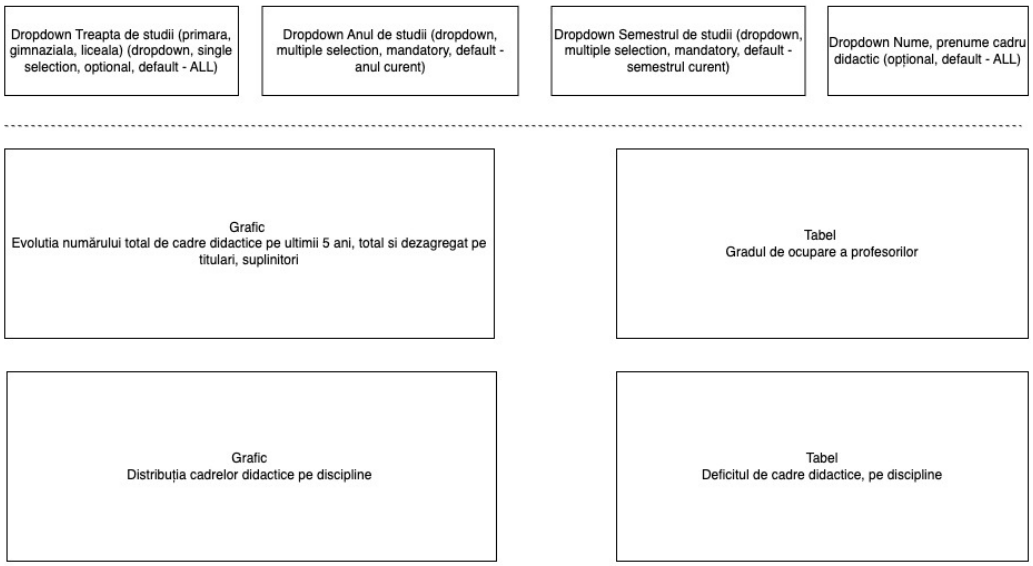
2. Main Sections of the Principal's Dashboard and Component-Based Indicators

The **"Human Resources"** section of the principal's dashboard is part of a digital educational monitoring system, with a focus on **analyzing and managing teaching staff**. This section enables the school principal to:

- Monitor the **distribution**, **seniority**, and **qualifications** of teachers;
- Identify **staffing needs**;
- Track **continuous professional development** and **position coverage**;
- Generate **relevant administrative alerts**.

It supports data-driven management and helps ensure the efficient allocation and development of human resources within the institution.

a. **General monitoring indicators**



The **general monitoring indicators** in the **Human Resources** section of the principal's dashboard provide a vital overview of the structure and functioning of the teaching staff within an educational institution. They enable:

- Tracking the evolution in the number of teachers (both tenured and substitute);
- Identifying the **occupancy rate of teaching loads**;
- Analyzing the **distribution of staff by subject**;
- Highlighting **existing shortages** in specific subjects.

Through these visualizations, principals can make informed decisions regarding **hiring**, **workload redistribution**, and **staff recruitment or professional development needs**.

Indicator	**Description**	**Data Source**	**Proposed Visualization**
Evolution of Total Number of Teaching Staff (Last 5 Years)	Displays the time trend of total teaching staff, split between tenured and substitute teachers. Helps identify increases/decreases and assess staff stability.	EMIS	**Line chart** with two series: – Line 1: Tenured teachers – Line 2: Substitutes **X-axis**: Years (last 5) **Y-axis**: Number of teachers

Indicator	Description	Data Source	Proposed Visualization
Teacher Workload Coverage Rate	Indicates the extent to which available teaching loads are covered. Highlights overburdening or underutilization of staff.	EMIS	**Table** with columns: Teacher Name, Subject Taught, Available Load (hours), Actual Load (hours), Coverage Rate (%) **Color coding**: – Green: >90% – Yellow: 70–90% – Red: <70%
Distribution of Teaching Staff by Subject	Shows how teaching staff are distributed across subjects. Useful for balanced resource planning.	EMIS	**Horizontal bar chart**: **X-axis**: Number of teachers **Y-axis**: Subjects Colored bars for easy identification
Teacher Shortage by Subject	Highlights subjects with insufficient teaching staff. Essential for recruitment and redistribution planning.	EMIS	**Table** with columns: Subject, Number of Required Positions, Number of Filled Positions, Calculated Shortage **Color coding**: Red for subjects with significant shortages

Useful Additional Functionalities:

- **Applicable Filters** – by educational cycle (primary, lower secondary, upper secondary), academic year, and semester;
- **Informational Tooltip** – displays detailed explanations when hovering over data points or column headers;
- **Table Export** – option to download tables in Excel or PDF format for reporting and record-keeping;
- **Sorting Buttons** – enabled for each column in tables to allow ascending/descending sorting (e.g., by subject, load percentage, deficit).

b. **Years of Service**

The **"Years of Service"** section within the principal's dashboard is part of the **Human Resources Analysis** module. This section is essential for evaluating the **stability** and **renewal rate** of the teaching staff in the institution. The structure includes an additional filter by subject, allowing either the selection of a specific discipline or a general analysis across all subjects.

Indicator	Description	Data Source	Proposed Visualization
Age Group Distribution of Teaching Staff	Allows visualization of the age structure of staff, supporting planning for replacement, training, and recruitment. Can be filtered by subject (single-selection dropdown).	EMIS	**Vertical bar chart** or **age pyramid** (if gender breakdown is desired): **X-axis**: Number of teachers **Y-axis**: Age categories (e.g., <30, 31–40, 41–50, 51–60, >60) Color-coded bars for each age group
Young Teachers (Less Than 3 Years of Experience)	Total number of teachers at the beginning of their careers. Key indicator for planning mentoring programs and retention strategies.	EMIS	**Simple numeric card**, clearly highlighted on the dashboard (e.g., "18 young teachers")
Distribution of Young Teachers by Subject	Identifies subjects with less experienced staff, where additional support or training may be needed. Includes useful data: name, subject, teaching load, and subject-level staff shortage.	EMIS	**Table** with columns: First Name, Last Name, Subject Taught, Teaching Load (hours), Subject Deficit (numeric). Includes sorting and filtering options

c. **Qualifications and Trainings**

The **"Qualifications and Trainings"** section of the principal's dashboard provides a clear overview of teaching staff participation in professional development activities. Monitoring these indicators is essential for assessing the **qualification level** of staff and for planning **continuous professional development**.

This functionality supports **informed decision-making** regarding training needs based on subject area, level of experience, and the educational priorities of the institution.

Filter	Control Type	Selection	Required	Default Value	Description
Training Name	Dropdown menu	Single	Optional	–	Allows filtering the list of teaching staff by the name of the attended training/course. The dropdown will include all trainings registered in the system.

Indicator	Description	Data Source	Proposed Visualization
List of Trained Teaching Staff	Provides a detailed list of teachers who have participated in professional development programs. Enables analysis of training participation in relation to teaching experience and subject area.	EMIS	**Interactive table**, with suggested columns: – First Name – Last Name – Subject Taught – Name of Training Attended – Years of Service **Applicable Filters**: – Training Name – Subject Taught – Years of Experience Range

Additional Functionalities:

- Sorting by Years of Service – allows easy identification of training participation based on teacher experience;
- Row Color Coding – visually highlights recent trainings vs. older ones (e.g., green for recent, gray for older);
- Export Button (.xlsx / .pdf) – enables quick download of the training list for reporting and archiving;
- Combined Multi-Filtering – allows cross-filtering with other dashboard sections (e.g., by years of service +subject + training), supporting more granular and strategic analysis.

d. **Alerts and notifications**

The **"Alerts and Notifications"** section of the principal's dashboard is designed to quickly highlight situations requiring urgent administrative or managerial intervention. These indicators support the **prevention of operational bottlenecks**(e.g., imminent vacant positions), assist in **human resource planning**, and promote **continuous professional development** among teaching staff.

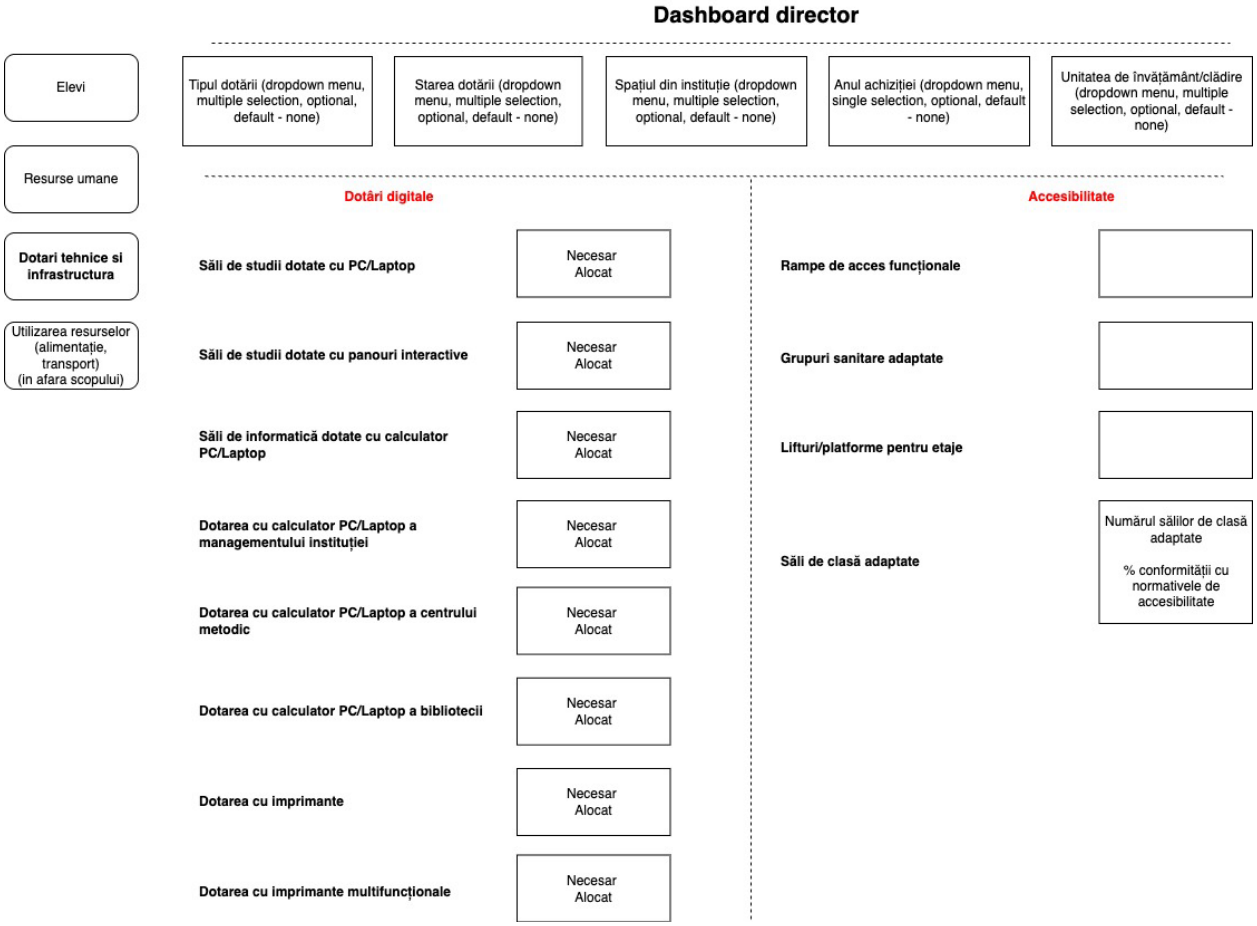
Indicator	Description	Data Source	Proposed Visualization
Teachers Who Have Reached Retirement Age	Lists teachers who have reached the legal retirement age, supporting succession planning and decisions on possible contract extensions.	EMIS	**Table** with columns: First Name, Last Name, Subject Taught. Optional: warning icon next to each row.
Teachers Who Need to Apply for Didactic Rank Advancement	Highlights teachers who have exceeded the recommended time without applying for rank advancement, based on current regulations.	EMIS	**Table** with columns: First Name, Last Name, Subject Taught, Current Didactic Rank, Date of Last Exam. **Color coding**: – **Red**: exceeded legal timeframe – **Yellow**: nearing deadline
Teachers Without Trainings in the Last Academic Year	Displays staff who did not participate in any professional development activities during the last school year.	EMIS	**Table** with columns: First Name, Last Name, Subject Taught, Didactic Rank, Date of Last Training. Suggested addition: quick link to recommended training opportunities.

Additional Functionalities:

- Filtering by educational cycle, subject, or years of service – for targeted alerts and more relevant data views;
- Descending Sorting by Urgency – to prioritize immediate actions (e.g., upcoming retirements, missed deadlines);
- Export to Excel/PDF – for internal documentation or communication with the district inspectorate.

These indicators act as an early warning system, directly supporting the maintenance of educational quality and the strategic planning of human resources.

Technical Equipment and Infrastructure



Functional Requirements for the Dashboard Dedicated to School Principals/Managers – Technical Equipment and Infrastructure Section

1. Interface Design – Header and Quick Filter Module

This section of the principal's dashboard provides an overview of the **status and distribution of the school's physical and digital infrastructure**. The module is designed to support both **strategic and operational planning** by monitoring the level of equipment, functionality of devices, and the accessibility of facilities.

The indicators are grouped into three key components:

1. Digital Equipment,
2. Technical Infrastructure, and
3. Accessibility.

This structure enables the **rapid identification of needs** for investments, repairs, or upgrades, while ensuring a **fair and functional learning environment** for all students and teachers.

Filter	Control Type	Selection	Required	Default Value	Description
Type of Equipment	Dropdown menu	Multiple	Optional	–	Example options: computers, smart boards, furniture, internet network, printers, laboratories, etc.
Equipment Condition	Dropdown menu	Multiple	Optional	–	Options: functional, partially functional, non-functional, missing
Area/Room in Institution	Dropdown menu	Multiple	Optional	–	Useful for locating equipment (e.g., classroom, lab, teachers' lounge, ICT room, library, gym)
Year of Acquisition	Numeric selector or slider	Single	Optional	–	Helps identify outdated or warranty-expired equipment
School Unit / Building (for campuses)	Dropdown menu	Multiple	Optional	–	Applicable in large networks or multi-building campuses

2. Main Sections of the Principal's Dashboard and Indicators Structured by Components

a. Digital Equipment

The indicators focus on IT resources and digital infrastructure used in the educational process.

Indicator	Description	Data source	Proposed visual
Classrooms equipped with PC/Laptop	Minimum number of PCs/laptops required for general classrooms (excluding IT labs): Number of classrooms * 1	EMIS	Comparative statistical card: "required" vs "allocated"

Indicator	Description	Data source	Proposed visual
Classrooms equipped with interactive panels	Minimum number of interactive panels required in classrooms: Number of classrooms * 1	EMIS	Comparative statistical card: "required" vs "allocated"
IT labs equipped with PC/Laptop	Minimum number of PCs/laptops required for IT labs: Number of IT classrooms * 15. *(If the number of students in grades 7–12 is below 15/class, then the number of IT rooms is multiplied by the maximum number of students in grades 7–12)*	EMIS	Comparative statistical card: "required" vs "allocated"
PC/Laptop provision for school management	Minimum number of PCs/laptops required for school management: - 0–250 students: 2 - 251–500 students: 3 - 501–750 students: 4 - 751–1000 students: 5 - 1001–1500 students: 6 - Over 1501 students: 7	EMIS	Comparative statistical card: "required" vs "allocated"
PC/Laptop provision for the methodological center	Minimum number of PCs/laptops for the methodological center: - 0–250 students: 2 - 251–500 students: 3 - 501–750 students: 4 - 751–1000 students: 5 - 1001–1500 students: 6 - Over 1501 students: 7	EMIS	Comparative statistical card: "required" vs "allocated"

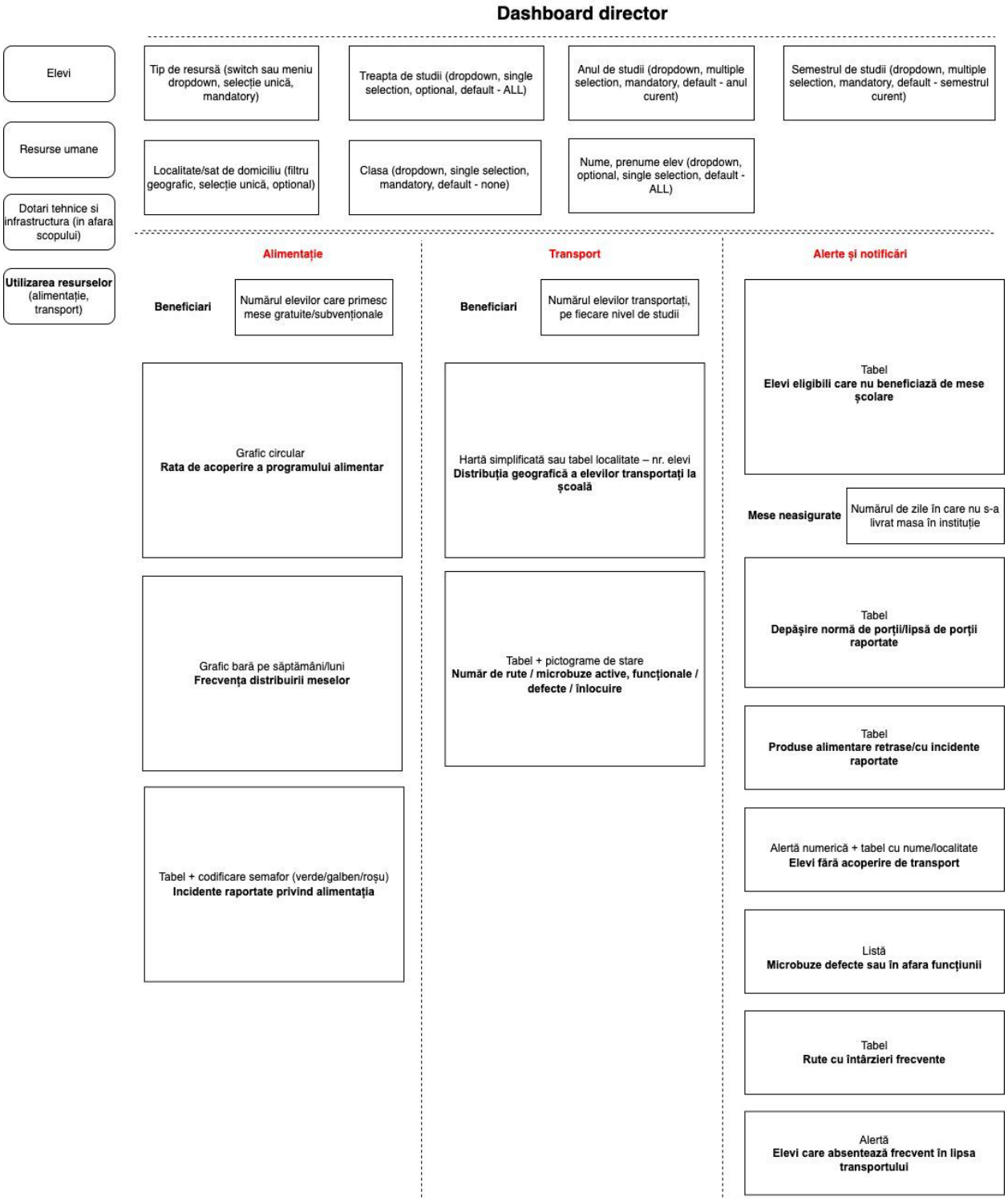
Indicator	Description	Data source	Proposed visual
PC/Laptop provision for the library	Minimum number of PCs/laptops required in the school library: - 0–250 students: 3 - 251–500 students: 4 - 501–750 students: 5 - 751–1000 students: 6 - 1001–1500 students: 7 - Over 1501 students: 8	EMIS	Comparative statistical card: "required" vs "allocated"
Printer provision	Minimum number of printers: - 0–250 students: 1 - 251–500 students: 1 - 501–750 students: 3 - 751–1000 students: 3 - 1001–1500 students: 5 - Over 1501 students: 7	EMIS	Comparative statistical card: "required" vs "allocated"
Multifunction printer provision	Minimum number of multifunction printers: - 0–250 students: 1 - 251–500 students: 1 - 501–750 students: 1 - 751–1000 students: 1 - 1001–1500 students: 2 - Over 1501 students: 3	EMIS	Comparative statistical card: "required" vs "allocated"

b. **Accesibility**

These indicators reflect the degree of infrastructure adaptation for students and staff with disabilities or special needs.

Indicator	Description	Data Source	Proposed Visualization
Functional Access Ramps	Number of operational access ramps	EMIS	Numeric card
Adapted Sanitary Facilities	Number of adapted restrooms	EMIS	Numeric card
Elevators/Platforms for Upper Floors	Number of elevators/platforms available for accessing upper floors (where applicable)	EMIS	Numeric card
Adapted Classrooms	Number of classrooms adapted (e.g., special furniture, audio systems for hearing impairments)	EMIS	Numeric card
Institution Compliant with Accessibility Standards (%)	Percentage of institution meeting accessibility regulations	EMIS	Numeric card

Resource Utilization



Functional Requirements for the Dashboard Dedicated to School Principals/Managers – Resource Utilization Section

1. Interface Design – Header and Quick Filter Module

For the **"Resource Utilization (Nutrition and Transportation)"** section of the principal's dashboard, it is important to include indicators that reflect **equitable access**, **efficiency of use**, **coverage**, and any

unmet needs among students. Below are the structured filters and key indicators required for comprehensive monitoring.

Filter	Control Type	Selection	Required	Default Value	Description
Resource Type	Switch or multi-select dropdown	Single	Required	–	Options: Nutrition, Transportation
Level of Study	Dropdown menu	Single	Optional	All	Allows selection between primary, lower secondary (gymnasium), and upper secondary (high school)
Academic Year	Dropdown menu	Multiple	Required	Current academic year	Enables selection of one or more school years for analyzing resource utilization over time
Semester	Dropdown menu	Multiple	Required	Current academic semester	Filters data by semester for comparisons and trends
Locality / Village of Residence	Geographic filter (for school transport analysis)	Single	Optional	–	Filters data based on students' home locality
Class	Dropdown menu	Single	Required	–	Supports case-specific identification for social or logistical needs
Student Name	Dropdown menu	Single	Optional	All	Allows filtering at student level. If no name is selected, all students in the class are displayed

2. Main Sections of the Homeroom Teacher's Dashboard and Component-Based Indicators

a. School Nutrition

Indicator	Description	Data Source	Proposed Visualization
Total Number of Beneficiaries	Number of students receiving free/subsidized meals	EMIS	**Numeric KPI card** + **Bar chart** by level of education
Coverage Rate of the Nutrition Program	Percentage of eligible students vs. those actually benefiting	EMIS	**Donut chart** (circular chart)
Meal Distribution Frequency	Number of days meals were distributed per month	EMIS	**Bar chart** by week/month
Reported Incidents Related to Nutrition	Examples: insufficient portions, supplier absence, meal refusal	EMIS	**Table** with **traffic light coding**(green/yellow/red)

b. Transportation

Indicator	Description	Data Source	Proposed Visualization
Number of Transported Students	Total number of transported students, broken down by level of study	EMIS	**KPI numeric card** + **Stacked bar chart**
Localities from Which Students Are Transported	Geographic distribution of students transported to school	EMIS	**Simplified map** or **table** with: Locality – No. of students
Number of Active Routes / Buses	Total number of active buses/routes; status: functional / broken / replacement	EMIS	**Table** with **status icons**

Indicator	Description	Data Source	Proposed Visualization
Students Without Transport Coverage	Eligible students without access to organized school transport	EMIS	**Numeric alert** + **table** with Name / Locality

Additional Functionalities:

- Data Export (Excel/PDF): enables quick download of reports for administrative use or sharing with relevant authorities.
- Automatic Flagging of Gaps or Incidents: system highlights situations such as lack of transport coverage or reported nutrition issues without manual input.
- Integration with the "Alerts and Notifications" Section: ensures that social cases (e.g., students without access to meals or transport) are automatically escalated for timely intervention.

c. **Alerts and notifications**

Indicator	Description	Data Source	Proposed Visualization
Eligible Students Not Receiving School Meals	Displays students who meet eligibility criteria but are not receiving meals (e.g., due to missing documents, parental refusal, logistics).	EMIS	**Table**: Student Name, Class, Reason
Days Without Meal Delivery in the Last 30 Days	Number of days when meals were not delivered to the institution.	EMIS	**Numeric alert** + **calendar with visual markers**
Meal Portion Shortage / Over-demand	Identifies days when fewer portions were delivered than required.	EMIS	**Table**: Date, Delivered Quantity vs. Required Quantity
Withdrawn or Problematic Food Products	Examples: complaints about quality or safety of food items.	EMIS	**Table** + **warning icon**

Indicator	Description	Data Source	Proposed Visualization
Eligible Students Without Transport Coverage	Lists students living outside the locality who do not benefit from organized transport.	EMIS	**Table**: Student Name, Locality, Distance, Class
Broken or Out-of-Service Buses	Technical status of vehicles used for school transport.	EMIS	**List**: Status, Number of Affected Students, Temporary Solutions
Routes with Frequent Delays	Reported by students/parents or based on GPS/logistics data.	EMIS	**Table**: Route, Number of Delays, Average Delay Time
Students Frequently Absent Due to Lack of Transport	Correlation between absenteeism and lack of organized transport.	EMIS	**Automatic alert** with link to the "Attendance" section

Useful Additional Functionalities:

- Manual Reporting System — allows homeroom teachers or logistics coordinators to manually flag issues or incidents directly within the dashboard.
- Automatic Notification Dispatch — sends alerts automatically to the Ministry of Education and Research (MEC) or relevant local authorities for timely action and escalation.

Technical requirements

The dashboards dedicated to district and MoER directorates will be integrated within EMIS, respecting the existing technological infrastructure and applicable legal provisions (GD no. 601/2020 and GD no. 320/2024).

a. Architecture and infrastructure

- Application type: Web-based, integrated within EMIS

- Hosting infrastructure: MCloud government platform, ensuring scalability, security and high availability
- Back-end: languages used in EMIS – PL/SQL, C#, JavaScript
- Front-end: development in Oracle APEX version 5.1 or newer, with support for dynamic visualizations
- Database: Oracle Database Standard Edition 2, version 19C
- Access and authentication: Integration with existing mechanisms in EMIS; support for role-based authentication

b. General functionalities

- Advanced filtering: by district, institution, school year, level, gender, SEN, etc.
- Interactive visualizations: bar graphs, line graphs, pie charts, heatmaps, geographic maps
- Drill-down: hierarchical navigation from national to institution level
- Data export: in CSV, Excel, PDF formats
- Modularization: separate components for:
    - Absenteeism
    - Academic performance
    - Inclusion (SEN)
    - Alerts and notifications
    - Teachers and training
- Smart alert system: automatic notifications for missing data, thresholds exceeded, etc.

c. Interoperability and integration

- Compliance with Government Decision 601/2020: EMIS as the main system in education
- Integration with existing EMIS modules: electronic gradebook, electronic agenda
- Interaction with other systems via SOAP (XML/JSON format) for interoperability with:
    - ISPSD – exam grades, study documents
    - DMISIE - special education needs data
    - RSUD – institutional data
    - BNS – educational statistics
    - REST data service: via Oracle REST Data Services version 21.1 or newer

d. Security and data protection

- Role-based authentication (RBAC): differentiated access by level (MoER, departments, schools)
- Encryption: HTTPS in communications, encryption at the database level
- Audit and traceability: complete logging of actions
- Legal compliance: with national legislation on the protection of personal data

e. Scalability and maintainability

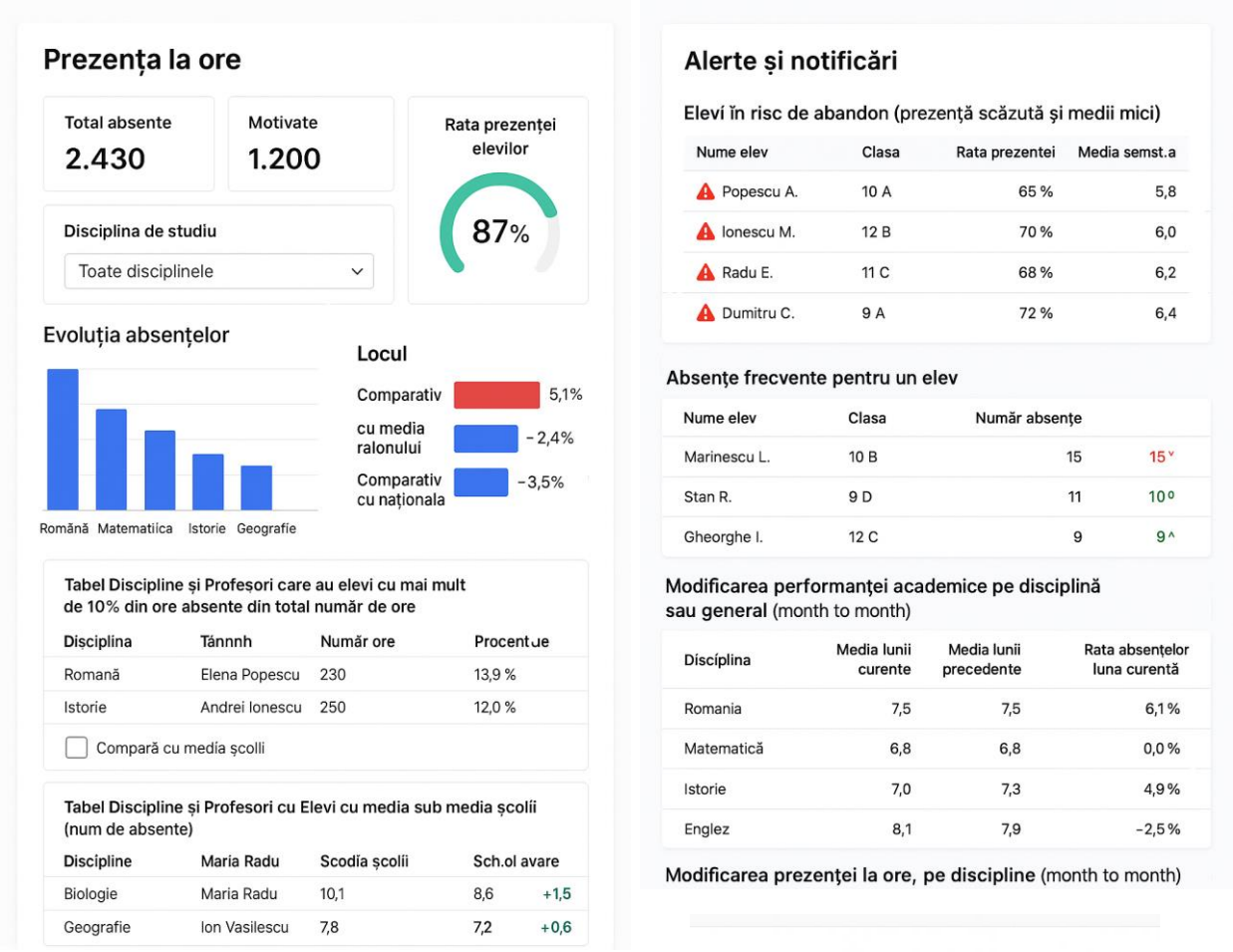
- Extensible system: support for adding new indicators and modules
- Response time: < 2 seconds for frequent queries
- Backup and restoration: automatic, according to policies MCloud
- Complete documentation: for MoER teams and technical partners

f. UX/UI and user support

- Responsive design: desktop, tablet, mobile compatible
- Accessibility: according to WCAG 2.1 standards

- Intuitive interface: with tooltips, legends, integrated tutorials
- Helpdesk & Guides: technical assistance and training materials for users

Annex 1. Dashboard prototype



Prezența la ore

Total absente	Motivate	Rata prezenței elevilor
2.430	1.200	87%

Disciplina de studiu: Toate disciplinele

Evoluția absențelor

Locul

Tabel Discipline și Profesori care au elevi cu mai mult de 10% din ore absente din total număr de ore

Disciplina	Tănnnh	Număr ore	Procentue
Română	Elena Popescu	230	13,9 %
Istorie	Andrei Ionescu	250	12,0 %

Compară cu media școlii

Tabel Discipline și Profesori cu Elevi cu media sub media școlii (num de absente)

Discipline	Maria Radu	Scodia școlii	Sch.ol avare	
Biologie	Maria Radu	10,1	8,6	+1,5
Geografie	Ion Vasilescu	7,8	7,2	+0,6

Alerte și notificări

Elevi în risc de abandon (prezență scăzută și medii mici)

Nume elev	Clasa	Rata prezentei	Media semst.a
Popescu A.	10 A	65 %	5,8
Ionescu M.	12 B	70 %	6,0
Radu E.	11 C	68 %	6,2
Dumitru C.	9 A	72 %	6,4

Absențe frecvente pentru un elev

Nume elev	Clasa	Număr absențe	
Marinescu L.	10 B	15	15 ˅
Stan R.	9 D	11	10 ⁰
Gheorghe I.	12 C	9	9 ^

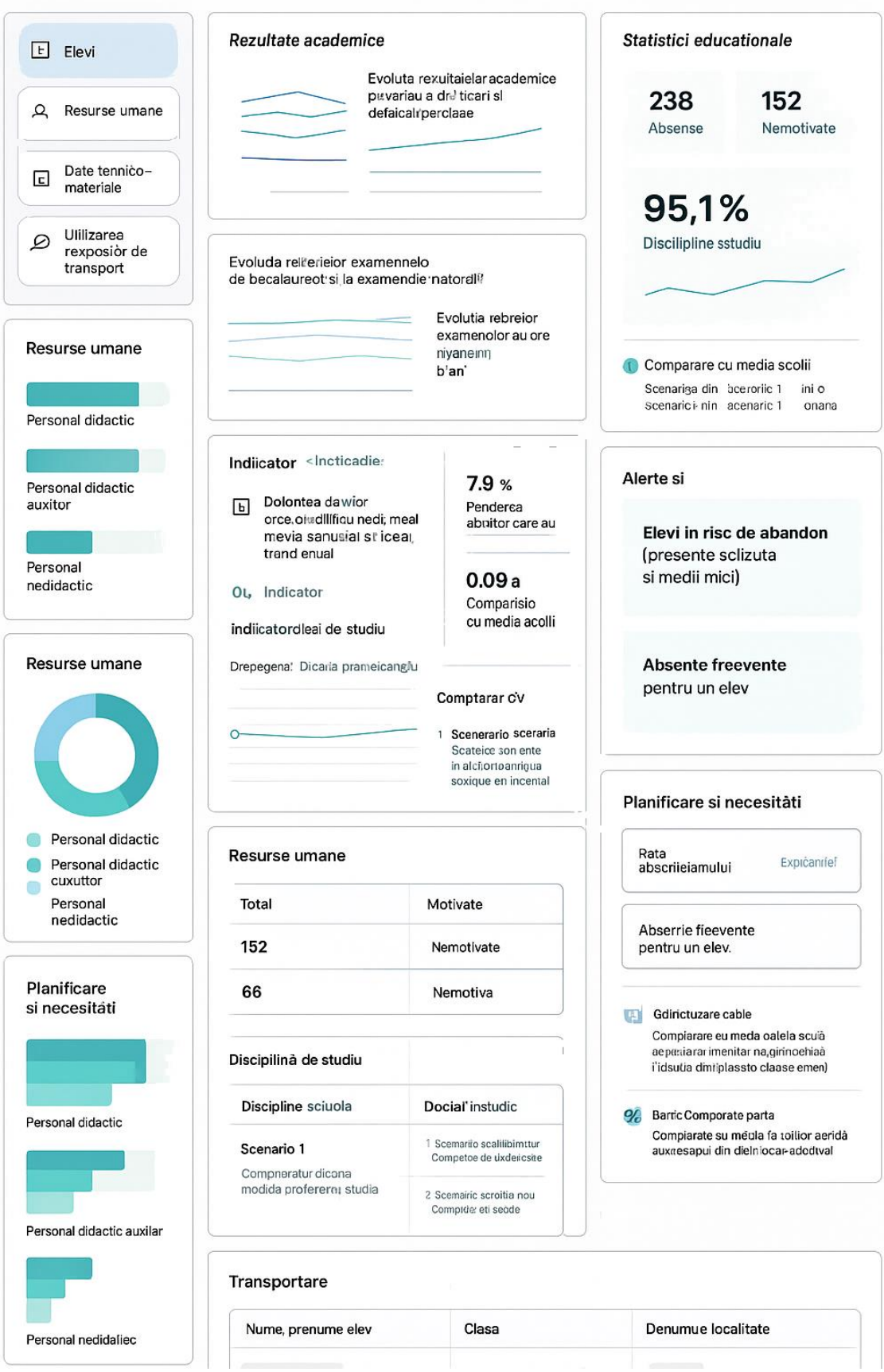
Modificarea performanței academice pe disciplină sau general (month to month)

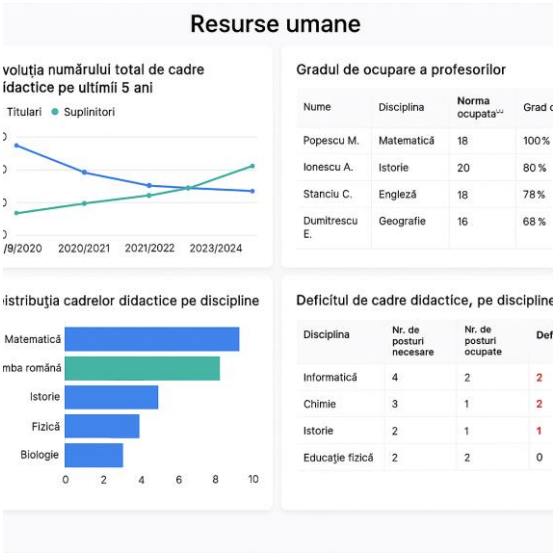
Discíplina	Media lunii curente	Media lunii precedente	Rata absențelor luna curentă
Romania	7,5	7,5	6,1 %
Matematică	6,8	6,8	0,0 %
Istorie	7,0	7,3	4,9 %
Englez	8,1	7,9	-2,5 %

Modificarea prezenței la ore, pe discipline (month to month)

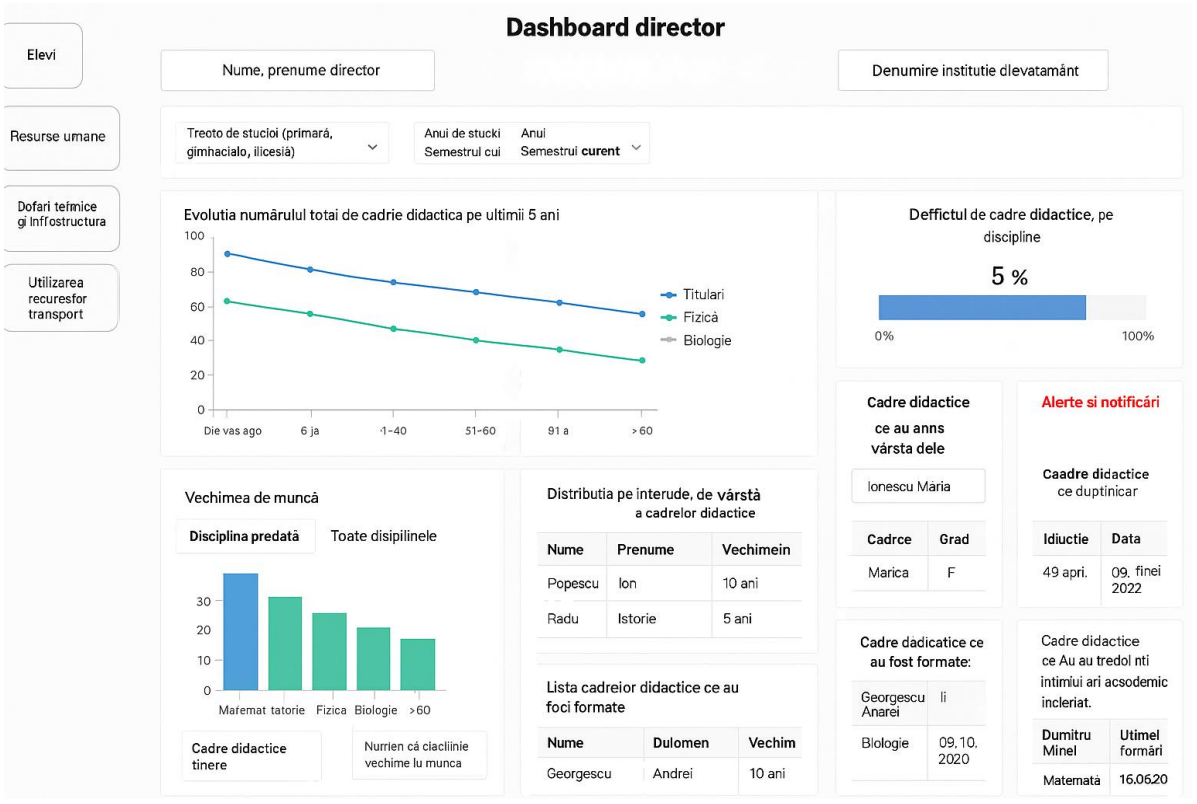
Transportare

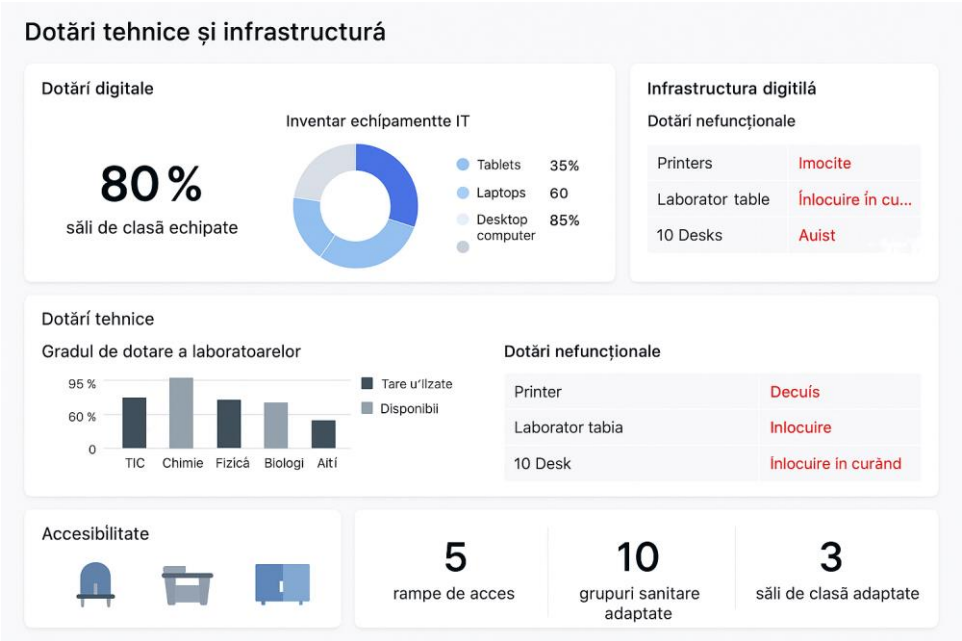
Nume elev	Prenume elev	Clasa	Localitate de proveniență
Popa	Ion	10	Calarași
Rusu	Elena	9	Strășeni
Andrei	Mihai	11	Ialoveni
Mocanu	Ana	12	Nisporeni
Dumitru	Maria	8	Telenești

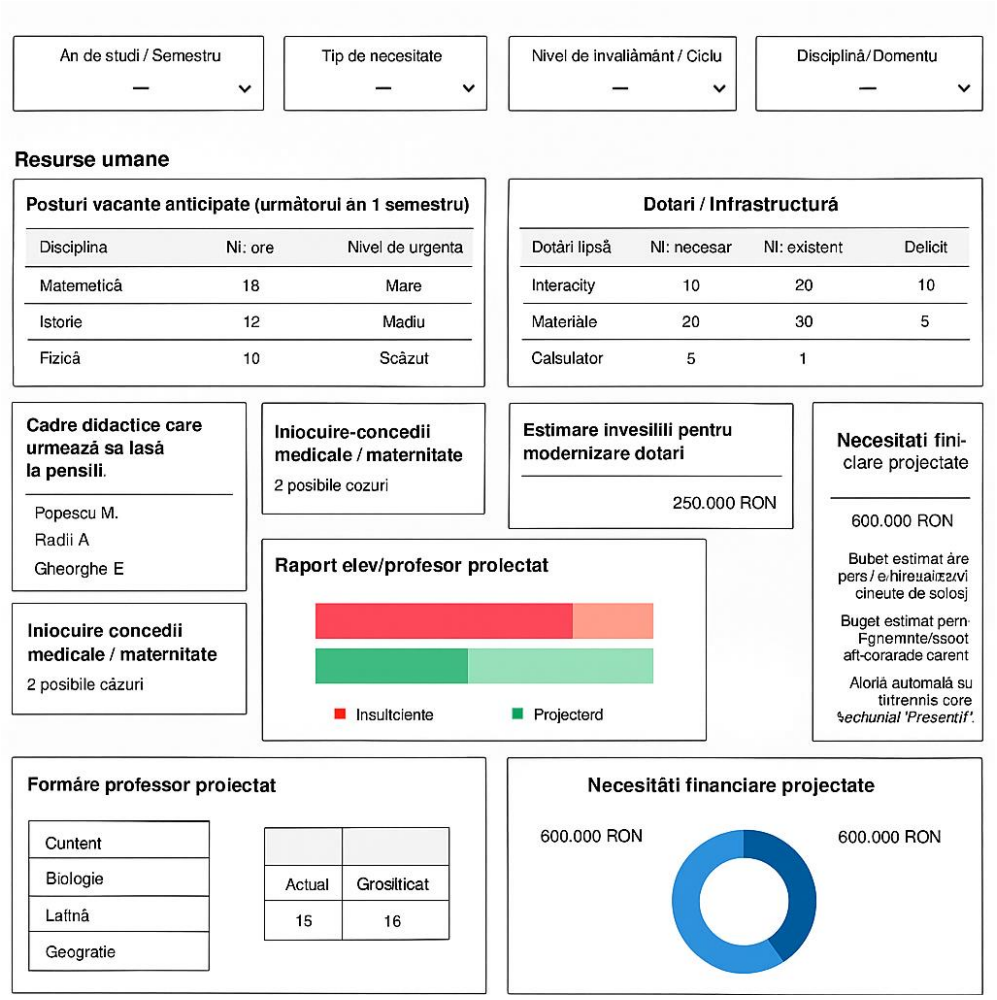

Elevi
Resurse umane
Date tennico-materiale
Ulilizarea rexposiòr de transport
Rezultate academice
Statistici educationale
238
Absense
152
Nemotivate
95,1%
Discilipline sstudiu
Comparare cu media scolii
Resurse umane
Personal didactic
Personal didactic auxitor
Personal nedidactic
Indiicator
7.9 %
0.09 a
Comparisio cu media acolli
Alerte si
Elevi in risc de abandon (presente sclizuta si medii mici)
Absente freevente pentru un elev
Resurse umane
Personal didactic
Personal didactic cuxuttor
Personal nedidactic
Resurse umane
Total
Motivate
152
Nemotivate
66
Nemotiva
Planificare si necesitàti
Rata abscriieiamului
Abserrie fieevente pentru un elev.
Discipilinà de studiu
Discipline sciuola
Docial' instudic
Scenario 1
Planificare si necesitàti
Personal didactic
Personal didactic auxilar
Personal nedidaliec
Transportare
Nume, prenume elev
Clasa
Denumue localitate


Resurse umane
voluția numărului total de cadre idactice pe ultimii 5 ani
Titulari
Suplinitori
/9/2020
2020/2021
2021/2022
2023/2024
Gradul de ocupare a profesorilor
Nume
Disciplina
Norma ocupata...
Grad
Popescu M.
Matematică
18
100%
Ionescu A.
Istorie
20
80 %
Stanciu C.
Engleză
18
78 %
Dumitrescu E.
Geografie
16
68 %
istribuția cadrelor didactice pe discipline
Matematică
mba română
Istorie
Fizică
Biologie
0
2
4
6
8
10
Deficitul de cadre didactice, pe disciplin
Disciplina
Nr. de posturi necesare
Nr. de posturi ocupate
Def
Informatică
4
2
2
Chimie
3
1
2
Istorie
2
1
1
Educaţie fizică
2
2
0

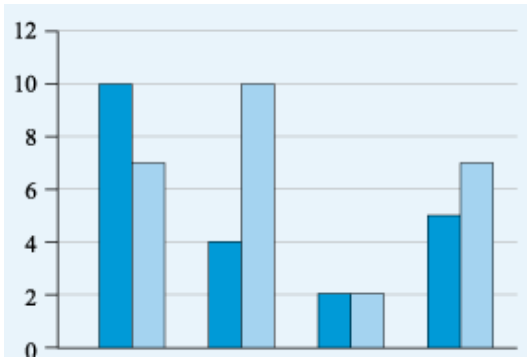
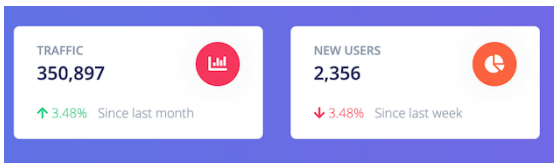
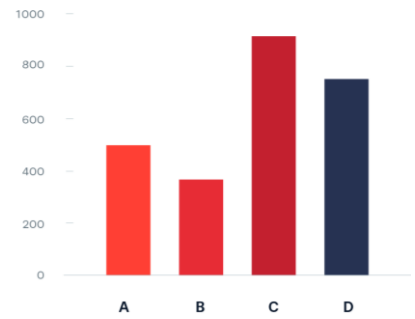
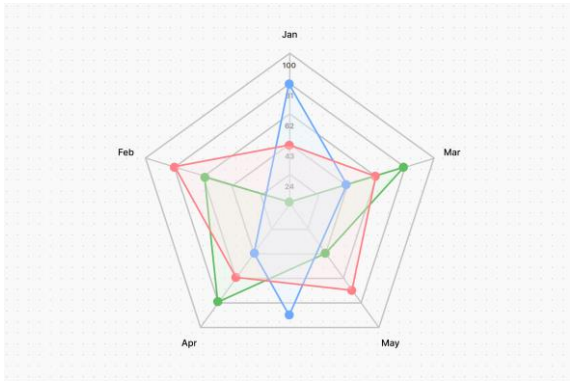
Vechimea de muncá
Disciplina predată
Distribuția pe categorii de vârstă a cadrelor didactice
60
50
40
30
20
10
0
< 30
31–40
41–50
51–60
> 60
> 60
Distribuția pe discipline a cadrelor didactice tinere
Nume
Prenume
Disciplina p
Sarcini
Ionescu
Ion
Matematika
1
Popescu
Elena
Fizică
0
Gheorghe
Maria
Chimie
1
Radu
Andrei
Biologie
1
18
Cadre didactice tinere
Distribuția pe discipline a cadrelor didactice tinere
Nume
Prenume
Disciplina predată
Deficit
Ionescu
Ion
18 hora
1

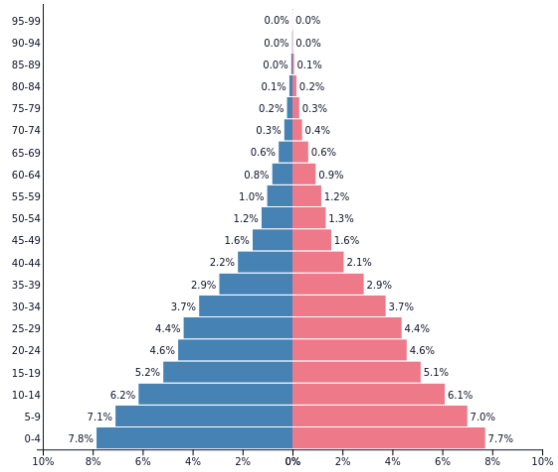
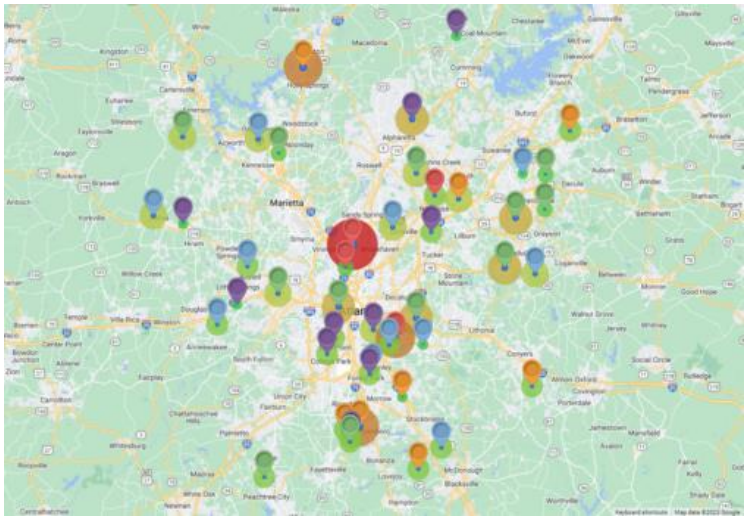
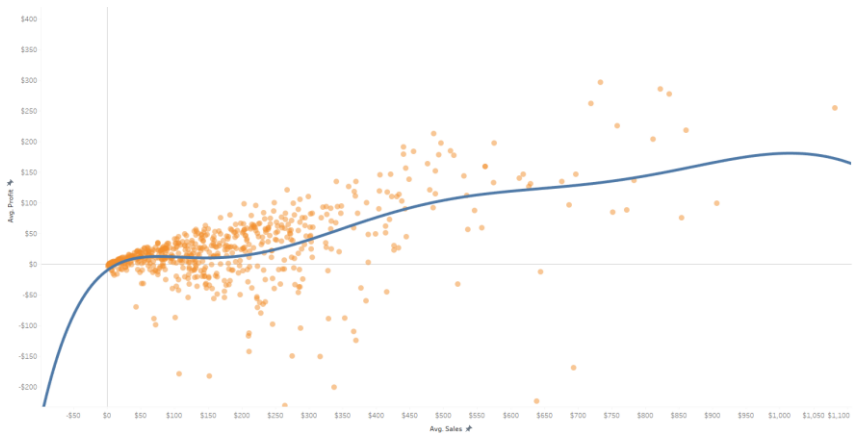

Dashboard director
Elevi
Resurse umane
Dofari tefmice gi Inffostructura
Utilizarea recuresfor transport
Nume, prenume director
Denumire institutie dlevatamânt
Treoto de stucioi (primará, gimhacialo, ilicesiá)
Anui de stucki
Anui
Semestrul cui
Semestrui curent
Evolutia numărulul totai de cadrie didactica pe ultimii 5 ani
100
80
60
40
20
0
Die vas ago
6 ja
1-40
51-60
91 a
> 60
Titulari
Fizicà
Biologie
Deffictul de cadre didactice, pe discipline
5 %
0%
100%
Cadre didactice ce au anns vársta dele
Ionescu Maria
Cadrce
Grad
Marica
F
Alerte si notificári
Caadre didactice ce duptinicar
Idiuctie
Data
49 apri.
09. finei 2022
Vechimea de muncă
Disciplina predată
Toate disipilinele
30
20
10
0
Matemat tatorie
Fizica
Biologie
>60
Cadre didactice tinere
Nurrien cá ciacliinie vechime lu munca
Distributia pe interude, de vârstà a cadrelor didactice
Nume
Prenume
Vechimein
Popescu
Ion
10 ani
Radu
Istorie
5 ani
Lista cadreior didactice ce au foci formate
Nume
Dulomen
Vechim
Georgescu
Andrei
10 ani
Cadre dadicatice ce au fost formate:
Georgescu Anarei
li
Biologie
09.10. 2020
Cadre didactice ce Au au tredol nti intimíui ari acsodemic incleriat.
Dumitru Minel
Utimel formări
Matemată
16.06.20

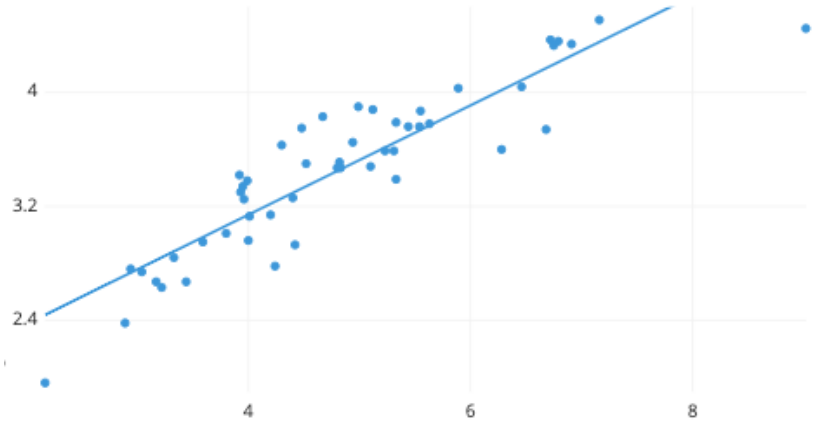
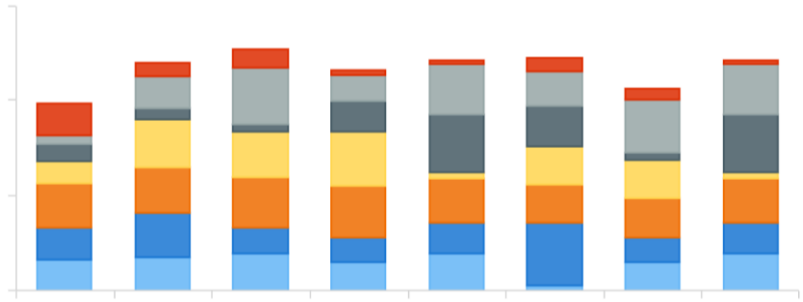
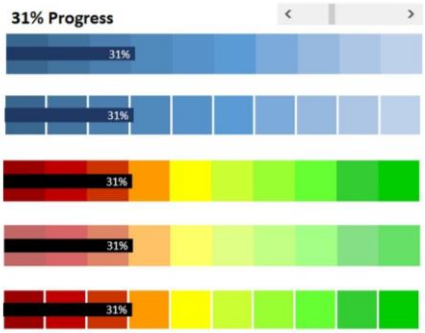

Dotări tehnice și infrastructurá
Dotărí digitale
Inventar echípamentte IT
80 %
săli de clasă echipate
Tablets 35%
Laptops 60
Desktop computer 85%
Infrastructura digitilá
Dotărí nefuncționale
Printers Imocite
Laborator table Ínlocuire ín cu...
10 Desks Auist
Dotărí tehnice
Gradul de dotare a laboratoarelor
95 %
60 %
0
TIC Chimie Fizicá Biologi Aití
Tare u'llzate
Disponibii
Dotări nefuncționale
Printer Decuís
Laborator tabia Inlocuire
10 Desk Ínlocuire ín curând
Accesibilitate
5
rampe de acces
10
grupuri sanitare adaptate
3
săli de clasă adaptate


An de studi / Semestru
Tip de necesitate
Nivel de invaliàmânt / Ciclu
Disciplinâ/Domentu
Resurse umane
Posturi vacante anticipate (urmàtorul ân 1 semestru)
Disciplina Ni: ore Nivel de urgenta
Matemeticâ 18 Mare
Istorie 12 Madiu
Fizicâ 10 Scâzut
Dotari / Infrastructurá
Dotâri lipsâ NI: necesar NI: existent Delicit
Interacity 10 20 10
Materiàle 20 30 5
Calsulator 5 1
Cadre didactice care urmeazá sa lasá la pensili.
Popescu M.
Radii A
Gheorghe E
Iniocuire-concedii medicale / maternitate
2 posibile cozuri
Estimare invesilili pentru modernizare dotari
250.000 RON
Necesitati finiclare projectate
600.000 RON
Bubet estimat âre pers / e/hireuaiæ/vi cineute de solosj
Buget estimat pern Fgnemnte/ssoot aft-corarade carent
Alorlá automalá su tiitrennis core 'echunial 'Presentif'.
Iniocuire concedii medicale / maternitate
2 posibile câzuri
Raport elev/profesor prolectat
Insultciente
Projecterd
Formáre professor proiectat
Cuntent
Biologie
Laftnâ
Geogratie
Actual Grosilticat
15 16
Necesitâti financiare projectate
600.000 RON
600.000 RON

Annex 2. Types of charts

Name	Visual representation
Comparative bar chart	
Statistical card	
Bar chart	
Radar chart	

Pyramidal grade	
Interactive map	
Trend line	

Scatter plot	
Heatmap	
Stacked bars	
Progress bar	

Functional and Technical Requirements for the EduTrack Tool

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d. Inclusion – Special Educational Needs (SEN) 12

e. School transportation 13

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g. Alerts and notifications 16

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Functional requirements for alerts and notifications in the Electronic Agenda 17

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Definitions and acronyms

Acronyms

Acronym	Interpretation
MoER	Minister of Education and Research
EMIS	Education Management Information System
ISPSD	Information System for Personalizing Study Documents
DMISIE	Data Management Information System in the field of Inclusive Education
SEN	Special educational needs
VET	Vocational education training

Definitions

Term	Definition
Promotion	The absolute or nominal value of the number of graduates who passed the national exams, at each level of study.
Absenteeism	Prolonged absence of the student from classes.
Chronic absenteeism	Prolonged absence from classes, where the share of absences exceeds 10% of total classes.
Excessive absenteeism	Prolonged absence from classes, where the share of absences exceeds 15% of total classes.
Special educational needs (NES)	Educational needs of the child/pupil/student, which involve schooling adapted to individual particularities or characteristics of a disability or learning disorder, as well as specific intervention through appropriate rehabilitation or recovery

	actions[2].

Introduction

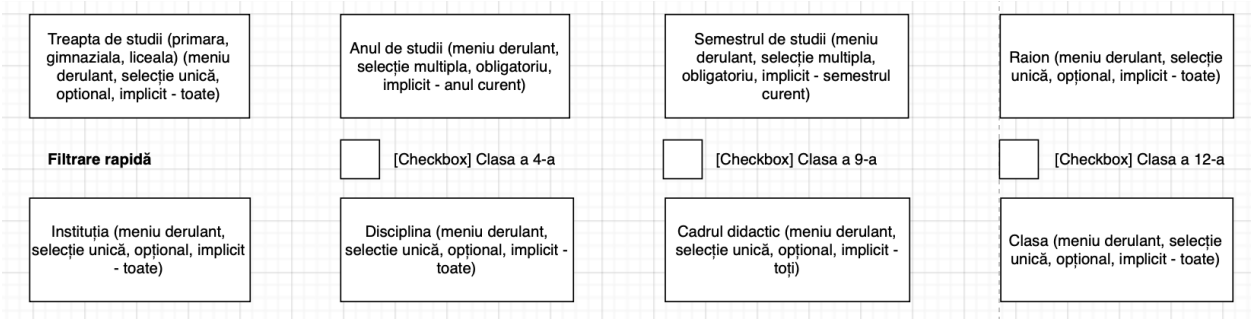
The initial analysis of EMIS highlighted the need to improve the system's capacity to monitor students' academic performance and absenteeism, with the aim of facilitating early interventions for at-risk students and supporting personalized educational pathways.

In this context, the present report outlines the technical and functional requirements for dashboards intended for rayon-level education departments and for users within the Ministry of Education and Research (MoER).

Functional Requirements for the Dashboard Intended for MoER Users

1. Interface Design – Header Module and Quick Filter

This quick filter interface is intended for MoER users who access the dashboard for analysis and decision-making. It allows for the selection and segmentation of data based on several key parameters:



The filter area will contain 8 dynamic and contextual filters, meaning that the selection of one filter can determine the display or limitation of options in the others. This interdependent logic increases the relevance of the displayed data and prevents incoherent selections.

	Type	Selection	Requirement	Default value
Level of education	Dropdown menu	Single	Optional	All (Primary, Middle, High School)

[2] https://www.legis.md/cautare/getResults?doc_id=148031&lang=ro#

	Type	Selection	Requirement	Default value
Academic year	Dropdown menu	Multiple	Mandatory	Current academic year (e.g. 2024-2025)
Semester	Dropdown menu	Multiple	Mandatory	Current semester (e.g. semester 1)
District (Rayon)	Dropdown menu	Single	Optional	All
Institution	Dropdown menu	Single	Optional	All
Subject	Dropdown menu	Single	Optional	All
Teacher	Dropdown menu	Single	Optional	All
Class	Dropdown menu	Single	Optional	All

Quick Selection Checkboxes for Specific Classes

Checkboxes for quick selection of specific classes will allow users to rapidly choose frequently monitored grades:

- Grade 4
- Grade 9
- Grade 12

Filter Logic and Influence

To support efficient data analysis and informed decision-making, the educational dashboard is equipped with a complex yet intuitive set of dynamic filters. These filters allow users (Ministry representatives) to view and compare relevant data across various levels of the education system.

The interdependency logic among the filters ensures a coherent and accurate user experience: selecting one criterion will automatically narrow the available options in the other fields, thus avoiding inconsistencies and interpretation errors. This mechanism helps users quickly access relevant data based on education level, academic year or semester, district, institution, subject, or other key variables. For more details on the dependency logic of the filters, see Annex 1.

Filter	Influences	Logic
Level of education	Classes, Subject, Teacher, Academic year	When selecting a level (e.g., lower secondary), only the

Filter	Influences	Logic
		classes, subjects, and teachers corresponding to that level will be listed.
Academic year	Semester, Available classes, Dashboard data	When selecting a school year (e.g., 2024–2025), only the semesters, classes, and data relevant to that year will be activated.
Semester	Displayed data (absenteeism, performance, etc.)	One or more semesters can be selected. The dashboard will automatically filter data for the selected semester(s).
District (rayon)	List of institutions, classes, teachers	When a district is selected, the list of institutions will be limited to those within that district. The same applies to dependent filters (e.g., classes, teachers).
Institution	Available classes, Subjects, Teacher	When a school is selected, only the classes, subjects, and teachers from that institution will be listed.
Class	Subjects, Teachers, Attendance/Absenteeism/Performance data	Selecting a class will limit the options to only the teachers and subjects associated with that class.
Subject	Teacher, Dashboard data (e.g., subject-specific performance)	A selected subject will display only the teachers who teach that subject in the context of the selected classes and institution.

Filter	Influences	Logic
Checkboxes for grades 4, 9, 12	Overrides the “Class” filter and sets the value explicitly	If “Grade 9” is checked, the class filter is automatically set to that value.

Users should be informed about restrictions or relationships between filters through tooltips or messages such as “First select the level of education to view the classes.” Quick reset functionalities for all filters (“Reset filters”) can be added.

Proposed Additional Functionalities:

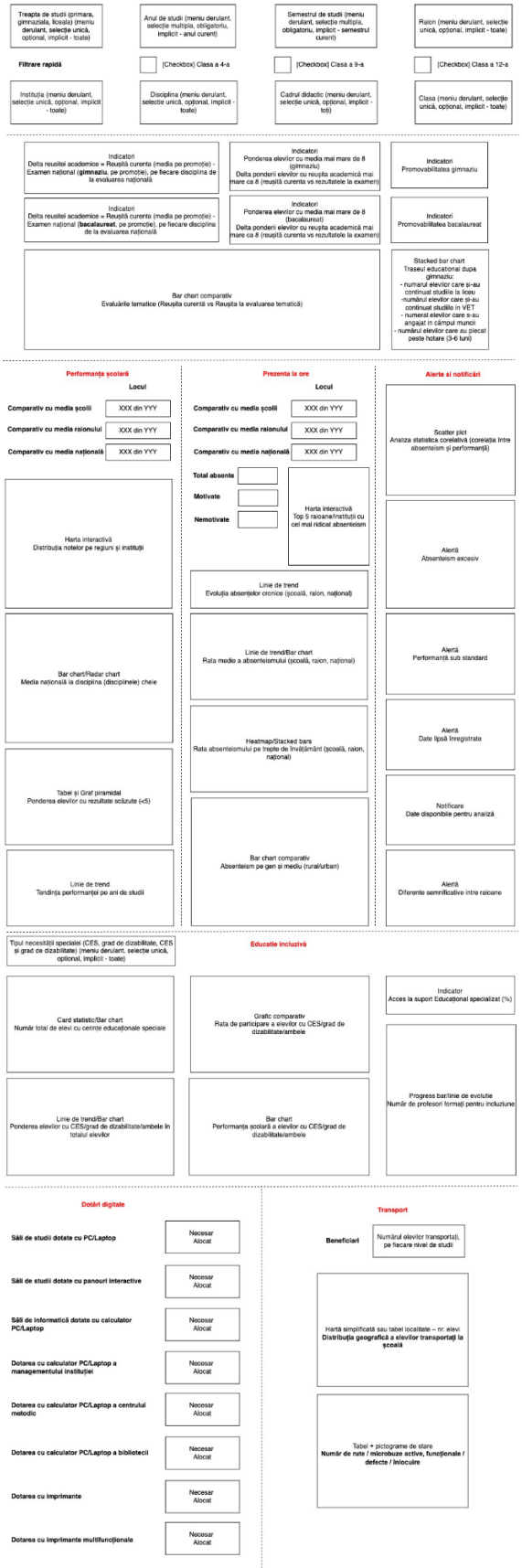
Functionality	Description	“Must have”
Real-time filtering	Changing a filter automatically updates the data displayed on the dashboard.	Yes
User selection memory	When returning to the dashboard, the last selections are retained.	No
Filtered data export	Ability to download filtered data in Excel/CSV format.	Yes
Information button	Added next to each dashboard indicator, provides the definition and/or calculation formula for the indicator	Yes

2. Main Sections of the MoER Dashboard and Indicators Structured by Components

The MoER dashboard provides a clear and up-to-date overview of the performance of the education system at national, regional and institutional levels, through a suite of key indicators, interactive visualizations and automatic alerting mechanisms.

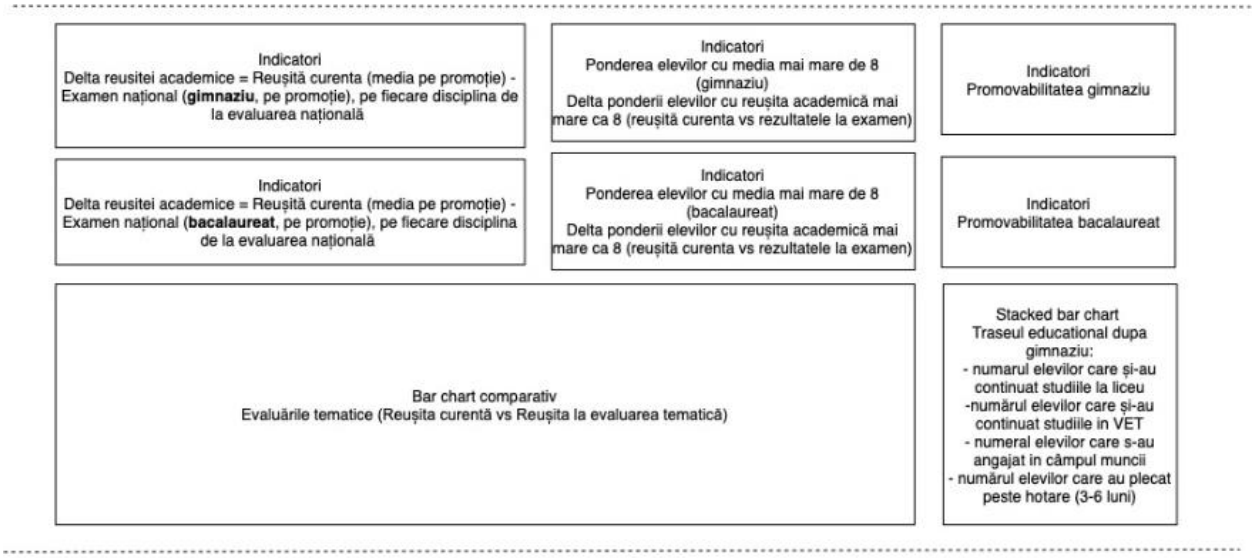
The dashboard functionality specifically targets comparative analysis, rapid risk identification, progress monitoring, but also supporting timely interventions. Through interdependent filtering logic and drill-down options, MoER users can access detailed data on absenteeism, performance, inclusion, teaching staff and other essential factors in strategic educational management.

Dashboard Direcția raionala



a. **General Monitoring Indicators**

The image below illustrates a proposed structuring of indicators for the "General Monitoring Indicators" component of the MoER dashboard. The indicators are organized by two levels of education – middle school and high school (baccalaureate) – and are designed to highlight differences between current student performance and national exam results, as well as to track trends and areas for improvement.



Indicators	**Objective**	**Description**	**Data source**	**Proposed visual**
Academic achievement delta (high school and baccalaureate)	Identifying the differences between the performances obtained during the year and the results in the national exams, for each basic subject.	Current achievement (grade point average) – Achievement in the national assessment.	EMIS, ISPSD	Comparative bar chart
Share of students with an average higher than 8 (for middle school and high school)	High performance assessment and assessment consistency.	The variation between the share of students with an average of over 8 during the year and in national assessments.	EMIS	Comparative bar chart

Indicators	Objective	Description	Data source	Proposed visual
		It is accompanied by an analysis of the "delta share" of students with high academic achievement, comparing the annual average with the results of national exams.		
Promotion (for middle school and high school)	Useful for monitoring the efficiency of the education system and identifying areas at high risk of school failure.	Promotion rate at the level of each educational cycle (percentage of students who passed the gymnasium / baccalaureate)	EMIS, ISPSD	Statistical card
Educational Pathway After Lower Secondary Education	Illustrates the distribution of students who have completed lower secondary education, based on the pathway they followed in the immediate period afterwards.	Number of students who: - Chose the general academic track (upper secondary studies); - Chose the technical and vocational track (VET); - Entered the labor market; - Left the country (absent abroad for more than 3–6 months).	EMIS, EMIS VET, MConnect	Stacked bar chart
Thematic Assessments	Identifying the differences between in-year academic performance and results from thematic	Current performance versus thematic assessment performance.	EMIS	Comparative bar chart

Indicators	Objective	Description	Data source	Proposed visual
	assessments for each core subject.			

b. **Academic performance**

This section monitors student results and the dynamics of academic performance according to relevant variables.

i. National average by key subjects (mathematics, Romanian language, etc.)
ii. Grade distribution and pass rate
iii. Performance by grades and years of study
iv. School performance by districts and institutions
v. Performance of SEN students compared to other students
vi. Correlation between absenteeism and school results

Indicators	Description	Data source	Proposed visual
School's place in the ranking: - **School,** if a subject/class/teaching staff was selected - **District,** if a school/subject/class/teaching staff was selected - **National,** if a school /subject/class was selected	The institution's place in the list of institutions, based on the selection criteria	EMIS, Electronic Catalog	Statistical card
National average in key subjects	Mathematics, Romanian Language, etc	Semester grades, national assessments, EMIS, ISPSD	Bar chart/radar chart
Share of students with low results (<5)	% of students below the minimum threshold	EMIS, Electronic Catalog	Table and pyramidal grade

Indicators	Description	Data source	Proposed visual
Distribution of grades by region and institution	Geographical analysis of performance	EMIS and school structure	Interactive map
Performance trend by years of study	Comparing performance over time	Historical data from EMIS	Trend line
Correlation between absenteeism and performance	Correlative statistical analysis	Combined data	Scatter plot

c. **School absenteeism**

This component provides a clear picture of student attendance in the education system, identifying trends, problem areas and correlations with other factors.

i. Average absenteeism rate by country and district
ii. Absenteeism by education levels and years of study
iii. Top districts/institutions with high absenteeism
iv. Absenteeism by gender, area of residence (urban/rural)
v. Chronic absenteeism (>10% absences from total hours)
vi. Comparison of absenteeism between students with/without SEN

Indicators	Description	Data source	Proposed visual
School's place in the ranking: - **School**, if a subject/class/teaching staff was selected - **District**, if a school/subject/class/teaching staff was selected - **National**, if a school/subject/class was selected	Institution's place in the list of institutions, based on the selection criteria	EMIS, Electronic Catalog	Statistical Card

Indicators	Description	Data source	Proposed visual
Absenteeism, in nominal values	Total absences Total justified absences Total unjustified absences	EMIS, Electronic Catalog	Statistical card
Average absenteeism rate per country	Percentage of total school hours missed nationally	EMIS, Electronic Catalog	Trend line/bar chart
Absenteeism rate by educational level	Breakdown by primary, secondary, high school	EMIS, Electronic Catalog	Heatmap/stacked bars
Top 5 districts with the highest absenteeism	Ranking by percentage of absences	Aggregation at district level	Interactive map/table
Evolution of chronic absences	Number and percentage of students missing >10% of total hours	Electronic gradebook	Trend line
Absenteeism by gender and environment (urban/rural)	Analysis by gender and location	EMIS	Comparative bar chart

d. **Inclusion – Special Educational Needs (SEN)**

The **filter area** will contain an additional, dynamic and contextual filter, meaning that selecting one filter may determine the display or limitation of options in the others, namely: SEN, degree of disability, both. Monitoring indicators will include:

i. This set of indicators supports the tracking of progress and ensuring equity for students with SEN/degree of disability/both, in line with inclusive education policies.
ii. Number and share of students with SEN/degree of disability/both in the system
iii. Access to support services (speech therapist, psychologist, support teacher)

iv. School performance of SEN/degree of disability/both students
v. Attendance rate and absenteeism among SEN/degree of disability/both students
vi. Number of teachers trained for inclusion
vii. Alert: institutions without educational support for SEN/degree of disability/both students

Indicators	**Description**	**Data source**	**Proposed visual**
Total number of students with special educational needs (SEN/degree of disability/both)	Total at national level/by districts	EMIS, DMISIE, psycho-pedagogical evaluation sheets	Statistical card/bar chart
Share of students with SEN/degree of disability/both in total students	% students with SEN/degree of disability/both in total school population	EMIS, DMISIE	Trend line/bar chart
Access to specialized educational support	% students with SEN/degree of disability/both who benefit from a psychologist, speech therapist, etc.	EMIS, DMISIE	Percentage indicator
Number of teachers trained for inclusion	Teachers who have completed specific SEN courses	EMIS, DMISIE	Progress bar/evolution line
Participation rate of SEN/degree of disability/both students	Average attendance compared to students without SEN	Electronic gradebook	Comparative chart
Academic performance of students with SEN/degree of disability/both	Grade average, pass rate	Electronic gradebook	Bar chart

e. **School transportation**

Indicator	Description	Data source	Proposed visual
Number of transported students	Total number of students transported, disaggregated by level of study	EMIS	KPI numeric card + stacked bar chart
Localities from which students are transported	Geographic distribution of students transported to school	EMIS	Simplified map or table with locality – no. of students
Number of active routes/microbuses	Number of active routes or microbuses: functional / non-functional / replaced	EMIS	Table + status icons
Students without transport coverage	Eligible students who do not have access to organized school transport	EMIS	Numeric alert + table with student names/localities

f. **Digital equipment**

The indicators refer to IT resources and digital infrastructure used in the educational process.

Indicator	Description	Data source	Proposed visual
Classrooms equipped with PC/Laptop	Minimum number of PCs/laptops required for general classrooms (excluding IT labs): Number of classrooms * 1	EMIS	Comparative statistical card: "required" vs "allocated"
Classrooms equipped with interactive panels	Minimum number of interactive panels required in classrooms: Number of classrooms * 1	EMIS	Comparative statistical card: "required" vs "allocated"
IT labs equipped with PC/Laptop	Minimum number of PCs/laptops required for IT labs: Number of IT classrooms * 15. *(If the number of*	EMIS	Comparative statistical card: "required" vs "allocated"

Indicator	Description	Data source	Proposed visual
	students in grades 7–12 is below 15/class, then the number of IT rooms is multiplied by the maximum number of students in grades 7–12)		
PC/Laptop provision for school management	Minimum number of PCs/laptops required for school management: - 0–250 students: 2 - 251–500 students: 3 - 501–750 students: 4 - 751–1000 students: 5 - 1001–1500 students: 6 - Over 1501 students: 7	EMIS	Comparative statistical card: "required" vs "allocated"
PC/Laptop provision for the methodological center	Minimum number of PCs/laptops for the methodological center: - 0–250 students: 2 - 251–500 students: 3 - 501–750 students: 4 - 751–1000 students: 5 - 1001–1500 students: 6 - Over 1501 students: 7	EMIS	Comparative statistical card: "required" vs "allocated"
PC/Laptop provision for the library	Minimum number of PCs/laptops required in the school library: - 0–250 students: 3 - 251–500 students: 4 - 501–750 students: 5 - 751–1000 students: 6 - 1001–1500 students: 7 - Over 1501 students: 8	EMIS	Comparative statistical card: "required" vs "allocated"

Indicator	Description	Data source	Proposed visual
Printer provision	Minimum number of printers: - 0–250 students: 1 - 251–500 students: 1 - 501–750 students: 3 - 751–1000 students: 3 - 1001–1500 students: 5 - Over 1501 students: 7	EMIS	Comparative statistical card: "required" vs "allocated"
Multifunction printer provision	Minimum number of multifunction printers: - 0–250 students: 1 - 251–500 students: 1 - 501–750 students: 1 - 751–1000 students: 1 - 1001–1500 students: 2 - Over 1501 students: 3	EMIS	Comparative statistical card: "required" vs "allocated"

g. **Alerts and notifications**

i. This module helps MoER to intervene quickly where systemic or local problems arise, by generating automatic notifications based on pre-established thresholds.
ii. Alert: excessive absenteeism (e.g. >15%)
iii. Alert: missing or incomplete data in EMIS
iv. Alert: institutions with school results below the minimum threshold
v. Alert: significant differences between districts
vi. Notification: availability of new data
vii. Customized notifications for districts/institutions with SEN students

Indicators	Description	Data source	Proposed visual
Alert: excessive absenteeism	Institutions with >15% absenteeism	Configurable threshold	Notification on dashboard and email
Alert: missing data recorded	Schools with missing data (e.g. attendance,	EMIS - data validation	List of non-compliant institutions

Indicators	Description	Data source	Proposed visual
	grades)		
Alert: substandard performance	Schools with >30% students below average 5	Monthly/semester report	Red icon and link to details
Notification: data available for analysis	Completion of data upload from schools	Automatic after each closed academic cycle (semester, annual)	Message in the interface
Alert: significant differences between districts	>20% difference compared to the national median	Regional comparison	Table and intervention recommendation

Each indicator should be interactive (with drill-down to institution or class). It is recommended to include a general scorecard per district, with traffic lights (green – under 5% absenteeism, red – over 15%, etc.) and quick export of data for reporting (PDF, Excel).

Functional requirements for the dashboard intended for users from the district education directorates

The same functional requirements will be followed as for the dashboard intended for the MoER, except for limiting the visualization to the district level. At the same time, the indicators comparative to the national evolution will remain in the dashboard for the district directorates.

Functional requirements for alerts and notifications in the Electronic Agenda

Alerts and notifications for each student will be sent, in real time, to parents with access to the Electronic Agenda, namely:

a. Presence and absenteeism
   - Unexcused absence for an hour or full day
   - Large number of absences in a week/month
   - Chronic absenteeism alert (e.g. >10% of semester hours)
   - Repeated lateness to classes

b. Academic performance
   - Low grade on an important assessment (e.g. below 5)

- Significant improvement in grades (positive feedback)
- Semester average below an alert threshold (e.g. <6)
- Comparison of the student's average with the class/school average (optional)

Additional functionalities:

- The possibility for the parent to choose the types of notifications desired (e.g. only absences and grades below 6).
- The possibility to confirm receipt of the notification.

Differences for institutions that have integrated the Electronic Agenda and the Electronic Catalog

For institutions that have implemented the Electronic Catalog and the Electronic Agenda, automatic data integration will be ensured:

- Direct connection with the Electronic Catalog to retrieve grades and attendance
- Automatic generation of reports and comparisons (nice to have)
- Real-time notifications

Institutions that do not have an electronic gradebook will enter data manually in EMIS.

Technical requirements

The dashboards dedicated to district and MoER directorates will be integrated within EMIS, respecting the existing technological infrastructure and applicable legal provisions (GD no. 601/2020 and GD no. 320/2024).

a. Architecture and infrastructure

- Application type: Web-based, integrated within EMIS
- Hosting infrastructure: MCloud government platform, ensuring scalability, security and high availability
- Back-end: languages used in EMIS – PL/SQL, C#, JavaScript
- Front-end: development in Oracle APEX version 5.1 or newer, with support for dynamic visualizations
- Database: Oracle Database Standard Edition 2, version 19C
- Access and authentication: Integration with existing mechanisms in EMIS; support for role-based authentication

b. General functionalities

- Advanced filtering: by district, institution, school year, level, gender, SEN, etc.
- Interactive visualizations: bar graphs, line graphs, pie charts, heatmaps, geographic maps
- Drill-down: hierarchical navigation from national to institution level
- Data export: in CSV, Excel, PDF formats
- Modularization: separate components for:
    - Absenteeism
    - Academic performance
    - Inclusion (SEN)

        - Alerts and notifications
        - Teachers and training
    - Smart alert system: automatic notifications for missing data, thresholds exceeded, etc.

c. Interoperability and integration

- Compliance with Government Decision 601/2020: EMIS as the main system in education
- Integration with existing EMIS modules: electronic gradebook, electronic agenda
- Interaction with other systems via SOAP (XML/JSON format) for interoperability with:
    - ISPSD – exam grades, study documents
    - DMISIE - special education needs data
    - RSUD – institutional data
    - BNS – educational statistics
    - REST data service: via Oracle REST Data Services version 21.1 or newer

d. Security and data protection

- Role-based authentication (RBAC): differentiated access by level (MoER, departments, schools)
- Encryption: HTTPS in communications, encryption at the database level
- Audit and traceability: complete logging of actions
- Legal compliance: with national legislation on the protection of personal data

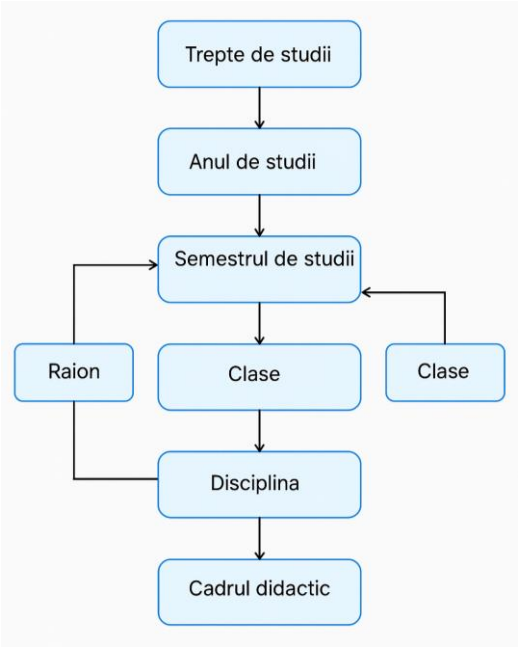
e. Scalability and maintainability

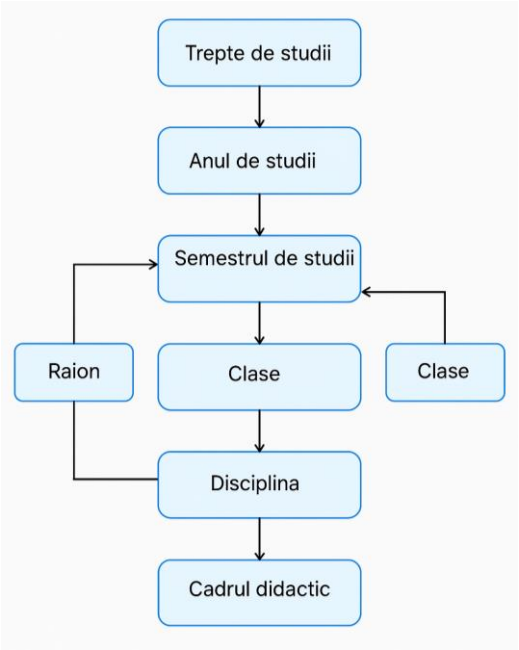
- Extensible system: support for adding new indicators and modules
- Response time: < 2 seconds for frequent queries
- Backup and restoration: automatic, according to policies MCloud
- Complete documentation: for MoER teams and technical partners

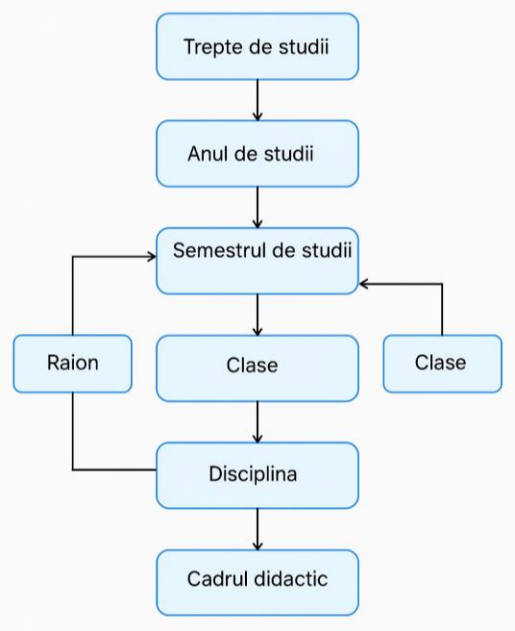
f. UX/UI and user support

- Responsive design: desktop, tablet, mobile compatible
- Accessibility: according to WCAG 2.1 standards
- Intuitive interface: with tooltips, legends, integrated tutorials
- Helpdesk & Guides: technical assistance and training materials for users

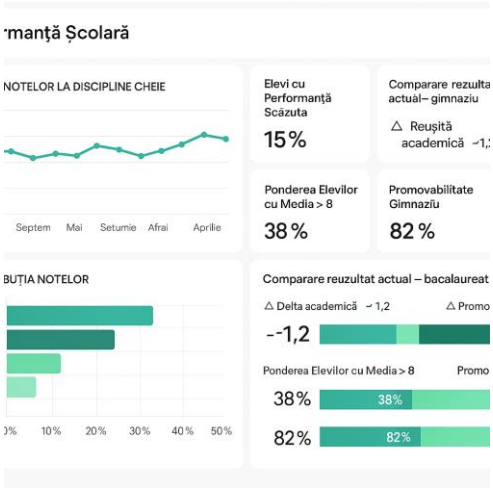
Annex 1. Filter logic

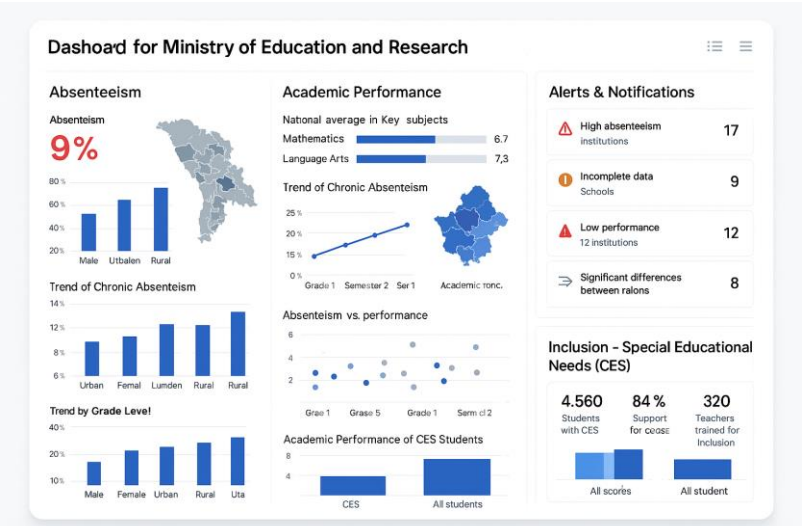






Annex 2. Dashboard prototype





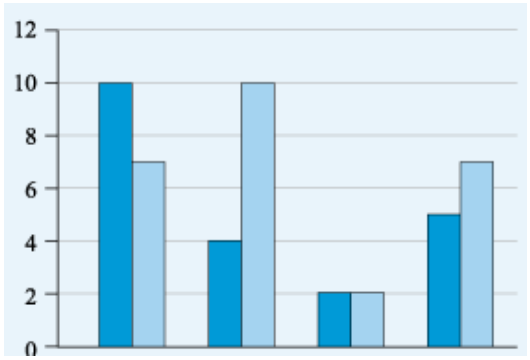
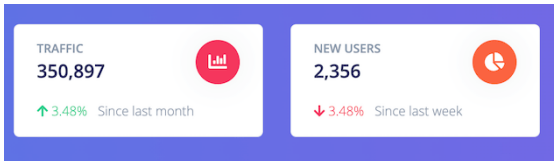
```
import { Card, CardContent } from "@/components/ui/card";
import { Tabs, TabsList, TabsTrigger, TabsContent } from "@/components/ui/tabs";
import { BarChart, LineChart, PieChart } from "lucide-react";

export default function DashboardMEC() {
  return (
    <div className="p-6 grid gap-6">
      <h1 className="text-3xl font-bold mb-4">Dashboard MEC - Monitorizare Educațională</h1>

      <Tabs defaultValue="absenteism">
        <TabsList>
          <TabsTrigger value="absenteism">Absenteism</TabsTrigger>
          <TabsTrigger value="performanta">Performanță Școlară</TabsTrigger>
          <TabsTrigger value="alerte">Alerte & Notificări</TabsTrigger>
          <TabsTrigger value="CES">Incluziune (CES)</TabsTrigger>
        </TabsList>

        <TabsContent value="absenteism">
          <div className="grid grid-cols-1 md:grid-cols-2 lg:grid-cols-3 gap-4">
            <Card>
              <CardContent className="p-4">
                <h2 className="font-semibold">Rata absenteism națională</h2>
                <LineChart className="h-40 w-full text-blue-600" />
              </CardContent>
            </Card>
            <Card>
              <CardContent className="p-4">
                <h2 className="font-semibold">Top raioane cu absenteism</h2>
                <BarChart className="h-40 w-full text-red-500" />
              </CardContent>
```

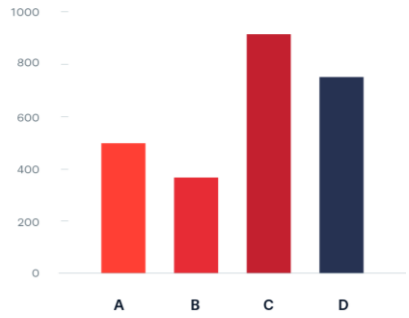
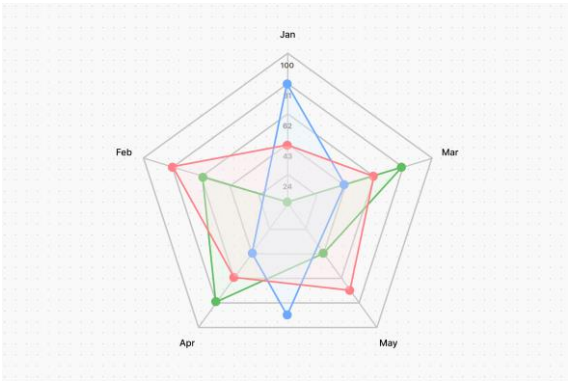
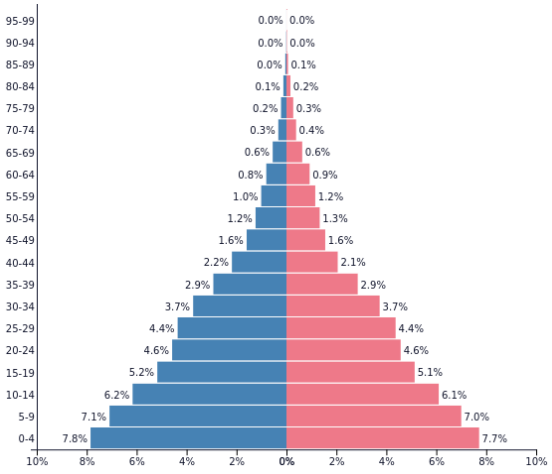
```
  </Card>
  <Card>
   <CardContent className="p-4">
    <h2 className="font-semibold">Absenteism elevi CES</h2>
    <PieChart className="h-40 w-full text-purple-600" />
   </CardContent>
  </Card>
 </div>
</TabsContent>

<TabsContent value="performanta">
 <div className="grid grid-cols-1 md:grid-cols-2 lg:grid-cols-3 gap-4">
  <Card>
   <CardContent className="p-4">
    <h2 className="font-semibold">Media pe discipline-cheie</h2>
    <BarChart className="h-40 w-full text-green-600" />
   </CardContent>
  </Card>
  <Card>
   <CardContent className="p-4">
    <h2 className="font-semibold">Distribuția notelor</h2>
    <LineChart className="h-40 w-full text-yellow-500" />
   </CardContent>
  </Card>
  <Card>
   <CardContent className="p-4">
    <h2 className="font-semibold">Performanță elevi CES</h2>
    <PieChart className="h-40 w-full text-indigo-500" />
   </CardContent>
  </Card>
 </div>
```

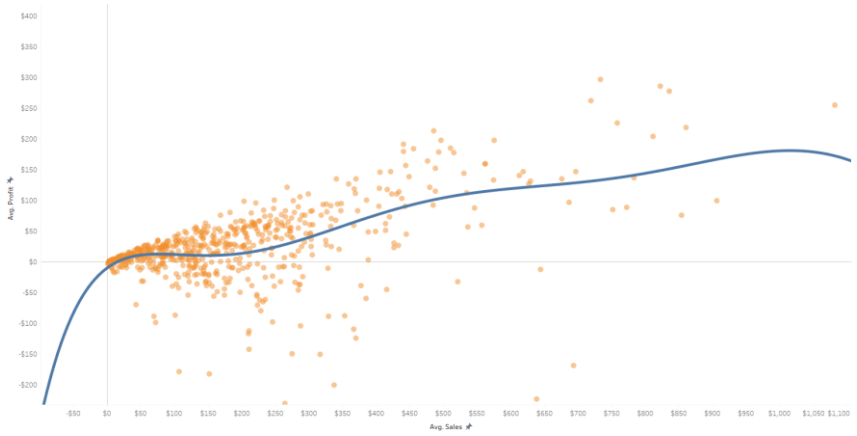
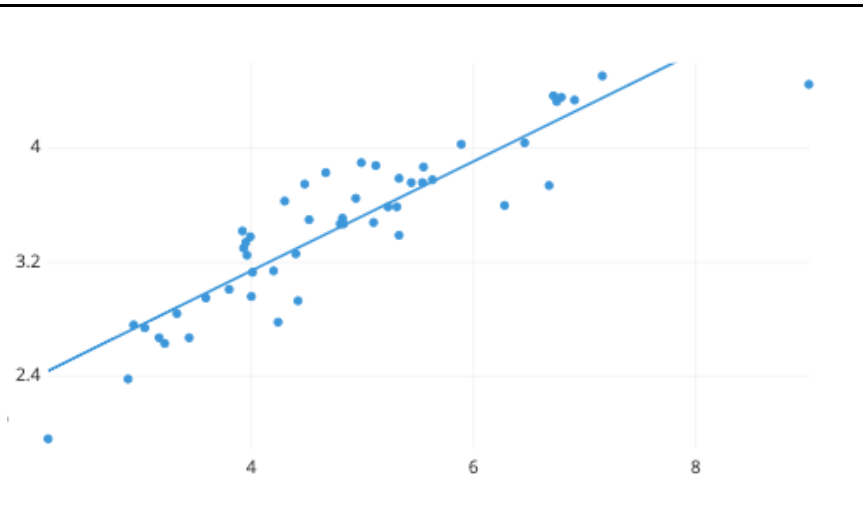
```
</TabsContent>

<TabsContent value="alerte">
 <div className="grid grid-cols-1 md:grid-cols-2 gap-4">
  <Card>
   <CardContent className="p-4">
    <h2 className="font-semibold">Instituții cu absenteism excesiv</h2>
    <BarChart className="h-40 w-full text-red-600" />
   </CardContent>
  </Card>
  <Card>
   <CardContent className="p-4">
    <h2 className="font-semibold">Date lipsă sau incomplete</h2>
    <PieChart className="h-40 w-full text-orange-500" />
   </CardContent>
  </Card>
 </div>
</TabsContent>

<TabsContent value="CES">
 <div className="grid grid-cols-1 md:grid-cols-2 lg:grid-cols-3 gap-4">
  <Card>
   <CardContent className="p-4">
    <h2 className="font-semibold">Număr elevi CES / raion</h2>
    <BarChart className="h-40 w-full text-purple-600" />
   </CardContent>
  </Card>
  <Card>
   <CardContent className="p-4">
    <h2 className="font-semibold">Acces la servicii suport</h2>
    <PieChart className="h-40 w-full text-blue-600" />
```

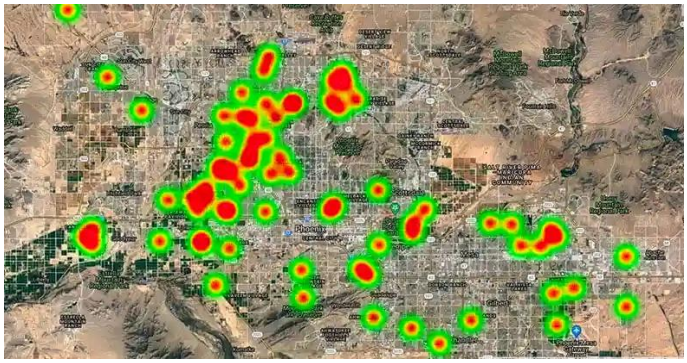
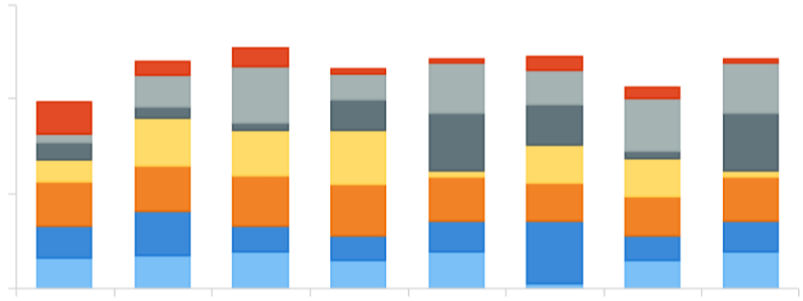
```
          </CardContent>
        </Card>
        <Card>
          <CardContent className="p-4">
            <h2 className="font-semibold">Cadre formate pentru incluziune</h2>
            <LineChart className="h-40 w-full text-green-600" />
          </CardContent>
        </Card>
      </div>
    </TabsContent>
  </Tabs>
 </div>
 );
}
```

Annex 3. Types of charts

Name	Visual representation
Comparative bar chart	
Statistical card	

Bar chart	
Radar chart	
Pyramidal grade	

Interactive map	
Trend line	
Scatter plot	

Heatmap	
Stacked bars	
Progress bar	