

TERMS OF REFERENCE FOR INDIVIDUAL CONSULTANTS AND CONTRACTORS

Title of consultancy: Individual National Consultancy for Development of the Education Management Information System (EMIS) software in Turkmenistan	Funding Code WBS 4360/A0/06/884/002/005-Distance Learning and Digital Education. NON-Grant or Grant: SC189904 (Education thematic)	Type of engagement <input checked="" type="checkbox"/> Consultant <input type="checkbox"/> Individual Contractor Part-Time <input type="checkbox"/> Individual Contractor Full-Time	Duty Station: Ashgabat, Turkmenistan
Consultant sourcing: <input checked="" type="checkbox"/> National <input type="checkbox"/> International <input type="checkbox"/> Both Consultant selection method: <input type="checkbox"/> Competitive Selection (Roster) <input checked="" type="checkbox"/> Competitive Selection (Advertisement/Desk Review/Interview)		Request for: <input checked="" type="checkbox"/> New SSA – Individual Contract <input type="checkbox"/> Extension/ Amendment	
If Extension, Justification for extension:			
Supervisor: Education Specialist	Start Date: 01 August, 2022	End Date: 21 November, 2022	Number of Days (working) 80 days

Background

Education Management Information System (EMIS) is an indispensable component of any modern education system. The purpose of an EMIS is collection, maintenance, analysis, dissemination, and utilization of data in an education system. In Turkmenistan, Article 35(20) of the Law of Turkmenistan on Education (2021) refers to “creation and integration of electronic database system for education and works for ensuring its availability” among the competencies of the executive body for governing education sphere. The Concept of Turkmenistan on Transitioning to 12-year General Secondary Education specifies that establishment of digital management systems must improve management, accountability and preparation of respective documents. The Concept of Turkmenistan for Developing Digital Education System adopted in 2017 also emphasizes the importance of informatization of education management system and creating digital school management systems. In the Presidential Program of Socio-Economic Development of Turkmenistan for the period 2019-2025, EMIS is listed among the works to be carried out: Creating education management information system to provide Ministry of Education of Turkmenistan and other educational organizations with information and knowledge to make information-based decisions and gradually transitioning to it. In the National Plan of Action for Realization of Children's Rights in Turkmenistan for 2018-2022 the activity on “Development of national data collection and analysis system to ensure monitoring and assessment of learning achievements in line with international standards” refers to EMIS.

The current education management information system in Turkmenistan requires upgrading to increase the scope, disaggregation, timeliness, and responsiveness of the data collected from the education system. The Ministry of Education of Turkmenistan and UNICEF is working together to develop a sustainable EMIS in Turkmenistan as part of

national efforts to continuously modernize the national education system in line with the national development strategy, the Concept of Turkmenistan for Developing Digital Education System, and international best-practices. EMIS will be developed as a sustainable system that can evolve in response to changing education data needs of the government and technological developments in the field.

The Ministry of Education in cooperation with UNICEF aims to develop an EMIS pilot in 2022. EMIS pilot development consists of planning, technical development, software development, documentation, and training activities. These activities will be coordinated by the EMIS Working Group (the WG) the core membership of which includes specialists from the Ministry of Education, Innovation Information Centre of the Ministry of Education, and UNICEF. The software development component of EMIS pilot project will be implemented in accordance with the technical requirements approved by the WG. With this ToR, UNICEF is seeking a national consultant to support the Ministry of Education in developing Education Management Information System (EMIS) software and technical documentation.

Objective of the Assignment

The consultancy will support MoE by designing EMIS software architecture, developing, installing, and maintaining the pilot EMIS application in accordance with the national requirements and priorities.

Scope of Work

1. Review the national education system, its structure and components and design a secure, scalable, extensible, modular, object-oriented, responsive and forward-looking software architecture including programme code, relational database, and utility tools, in accordance with the Terms of Reference of EMIS approved by the EMIS working group.
2. Develop, install, and maintain EMIS application in accordance with EMIS ToR on the server(s) indicated by the EMIS working group.
3. Setup and maintain a development environment updated with latest software and security improvements for EMIS pilot development.
4. Deliver all technical information related to the work, including source code, database schemas, installation files, modules to EMIS working group on digital media.
5. Provide technical information for preparation of user and developer manuals, and capacity-building activities to EMIS working group.
6. Integrate security measures into EMIS application in accordance with the national regulations of Turkmenistan in the sphere of software development and cybersecurity.
7. Participate in meetings on EMIS development with national and international partners.
8. Communicate with UNICEF Education Specialist, EMIS focal points of MoE and Innovation Information Center of MoE and receive supervision, guidance, and feedback to ensure the program priorities of EMIS stakeholders are integrated in the deliverables.

Workplan and deliverables

It is expected that, in the given timeframe, the national consultant will perform the following tasks and deliverables to achieve the objectives of the assignment:

Work Assignment Overview			
Tasks/Milestone:	Deliverables/Outputs:	Timeline:	Days
1. Develop EMIS system architecture - Draft system architecture proposal in accordance with the EMIS Terms of Reference and	Software architecture scheme and development inception report and meeting	01-12 August	10 days

analysis of the national education system, - Conduct inception meeting with EMIS working group			
2. EMIS application core modules - Develop EMIS application core modules in accordance with the EMIS Terms of Reference - Demonstrate working application on the demo server to EMIS working group	EMIS pilot application – core modules (Authentication, Users, School Standard Data Collection, Generate/Export Standard forms, full source code)	15 August – 09 September	20 days
3. EMIS application data modules - Develop EMIS application data modules in accordance with the EMIS Terms of Reference and prepare for use by selected pilot schools/users, Presentation of pilot EMIS application progress - Develop and install EMIS application in accordance with the EMIS Terms of Reference	EMIS pilot application – a working pilot application (Custom Forms Constructor, Generate/Export Custom Forms, International Education Indicators, SDG indicators, Generate/Export International Education Indicators)	12 September – 4 November	40 days
4. Provide a final report with recommendations for further steps to develop EMIS software in Turkmenistan - Develop final report including technical details of the system, major findings, lessons learned from the work performed and recommendations - Finalize report with incorporated feedback from the EMIS working group	Final report with recommendations for further steps in EMIS software development in Turkmenistan	7 November – 21 November	10 days

Reporting requirements

All the reports and documents will be developed in Russian or English and translated by UNICEF, as needed.

Payment schedule

The payment will be made in instalments, according to the following schedule.

Deliverable
1st instalment: 09/09/2022, upon satisfactory implementation of the tasks 1, 2 as per above table. The instalment will include 30 consultancy days.
2nd instalment: 04/11/2022, upon satisfactory implementation of the tasks 3 as per above table. The instalment will include 40 consultancy days.

3rd instalment: 21/11/2022, upon satisfactory implementation of the tasks 4 as per above table. The instalment will include 10 consultancy days.

Work arrangements

Day to day supervision will be provided by the Education Specialist of the UNICEF Turkmenistan Country Office. Additional guidance and lead will be provided by the Deputy Representative and Child Rights Monitoring Specialist. Consultant will work in close collaboration with other consultants working on EMIS project.

UNICEF will regularly communicate with the selected consultant and provide formats for reports, feedback and guidance on performance and all other necessary support so as to achieve objectives of the exercise, as well as remain aware of any upcoming issues related to expert's performance and quality of work. UNICEF will provide logistical support for organisation and coordination of meetings. There is no international travel expected in the consultancy. The selected consultant is responsible for making own arrangements for travelling in Turkmenistan.

General Terms and Conditions

UNICEF's general terms and conditions will apply to the contract awarded to the vendor. Please note that, in the evaluation of the technical merits of each proposal, UNICEF will take into consideration any proposed amendments to the UNICEF General Terms and Conditions. Proposed amendments to the UNICEF general terms and conditions may negatively affect the evaluation of the technical merits of the proposal.

UNICEF retains the right to patent and intellectual rights, as well as copyright and other similar intellectual property rights for any discoveries, inventions, products or works arising specifically from the implementation of the project in cooperation with UNICEF. The right to reproduce or use materials shall be transferred with a written approval of UNICEF based on the consideration of each separate case. Consultant should always refer to UNICEF Turkmenistan support in developing the materials when publishing the results of the research conducted while in Turkmenistan in academic journals, books and websites.

In the event of unsatisfactory performance, UNICEF reserves the right to terminate the Agreement. In case of partially satisfactory performance, such as serious delays causing the negative impact on meeting the programme objectives, low quality or insufficient depth and/or scope of the assignment completion, UNICEF is entitled to decrease the payment by the range from 30% to 50% of the contract value as decided jointly by the Contract Supervisor and Operations Manager.

Minimum Qualifications required: <input checked="" type="checkbox"/> Bachelors <input type="checkbox"/> Masters <input type="checkbox"/> PhD <input type="checkbox"/> Other	Knowledge/Expertise/Skills required: <ul style="list-style-type: none"> • Higher education degree in software development, management information systems, computer science, or other relevant fields / a master's or PhD. degree in these areas will be an advantage; (30 pts) • Knowledge of object-oriented programming, database design, frontend and backend development. (20 pts) • At least 2 years of experience in software development. (20 pts) • Previous experience in developing software for the national education system / experience in management information systems will be an asset; (20 pts) • Knowledge of English and Turkmen or Russian languages, knowledge of both Turkmen and Russian will be an advantage; (10 pts)
Technical Proposal	The technical proposal should include <ul style="list-style-type: none"> - A cover letter, including <ul style="list-style-type: none"> o Assessment of suitability vis-à-vis the requirements of this ToR; o A summary of experience in similar assignments; o Links to/attachments of examples of similar work;

	<ul style="list-style-type: none">- CV of the candidate (including qualifications and experience)- References																
Financial Proposal	<p>Candidates are expected to submit a lump sum financial proposal to complete the entire assignment based on the terms of reference. The lump sum should be broken down to show the detail for the following:</p> <table><tr><th>Items</th><th>Quantity</th><th>Unit cost</th><th>Total in USD</th></tr><tr><td>Number of working days</td><td>80</td><td></td><td></td></tr><tr><td>Other: <i>Specify</i></td><td></td><td></td><td></td></tr><tr><td>Total in USD</td><td></td><td></td><td></td></tr></table>	Items	Quantity	Unit cost	Total in USD	Number of working days	80			Other: <i>Specify</i>				Total in USD			
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Evaluation criteria	<p>Each proposal will be assessed first on its technical merits and subsequently on its price. In making the final decision, UNICEF considers both technical and financial aspects to ensure best value for money. The Evaluation Team first reviews the technical aspects of the offer, followed by review of the financial offers of the technically compliant candidates. The proposal obtaining the highest overall score after adding the scores for the technical and financial proposals together, that offers the best value for money will be recommended for award of the contract.</p> <p>A cumulative analysis will be used to evaluate and award proposals. The evaluation criteria associated with this TOR is split between technical and financial as follows:</p> <p>75 % Technical</p> <p>25 % Financial</p> <p>100 % Total</p>																

Individuals engaged under a consultancy or individual contract will not be considered “staff members” under the Staff Regulations and Rules of the United Nations and UNICEF’s policies and procedures, and will not be entitled to benefits provided therein (such as leave entitlements and medical insurance coverage). Their conditions of service will be governed by their contract and the General Conditions of Contracts for the Services of Consultants and Individual Contractors. Consultants and individual contractors are responsible for determining their tax liabilities and for the payment of any taxes and/or duties, in accordance with local or other applicable laws.