

**Romania**  
**Ministry of National Education and Scientific Research**  
**Romania Secondary Education Project**  
**Loan Agreement N° 8481-RO**

**Terms of Reference for IT Security Specialist for the Project Management Information System**

**1. Background**

On April 17, 2015, the Government of Romania (GoR) and the World Bank (WB) signed the Loan Agreement N° 8481-RO on the implementation of the **Romania Secondary Education Project** (hereinafter referred to as **the ROSE Project**). The ROSE Project was declared effective on October 14, 2015, and will be implemented by the Ministry of National Education and Scientific Research of Romania (MENSUR) until November 2022. The ROSE Project Development Objectives (PDO) are to improve the transition from upper secondary to tertiary education and increase the retention in the first year of tertiary education in project-supported education institutions. It is structured in three components, as described below.

**Component 1 – School-based and Systemic Interventions.** This component finances supply-side interventions at the school and system levels to address the academic and personal factors hindering Romanian students from transitioning from upper secondary to tertiary education, including dropping out, declining to take the Baccalaureate, or scoring a low mark at the Baccalaureate exam.

**Sub-component 1.1 – School-based Interventions.** This sub-component supports the transition of students from upper secondary to tertiary education using a decentralized approach based on non-competitive grants to low-performing public high schools. The criteria for selection of eligible high schools combine the following rates: Baccalaureate passing rate, dropout rate and upper secondary graduation rate. Grants will be awarded to public high schools for a 4-year period to allow sufficient time for implementing activities aimed at supporting students from Grade 9 through Grade 12. At the end of the Project, it is estimated that approximately 80 percent of Romanian public high schools (1,160) would benefit from this sub-component.

**Sub-component 1.2 – Systemic Interventions.** This sub-component finances: (i) revision of the upper secondary education curriculum, with specific consideration for the needs of disadvantaged students including Roma; (ii) training of teachers and public school directors on implementing the revised curriculum, on adapting the curriculum to the needs and abilities of different students (inclusive education), student-centered teaching approaches, intercultural competence and on formative assessment; (iii) improving teaching conditions within Teachers Houses; (iv) revising and updating Grade 8 and Baccalaureate exam banks of items, and providing training and improvement of existing information and technologies platform; (v) development and implementation of a Grade 10 learning assessment, to be administered at the end of the compulsory education cycle; (vi) development of digital teaching and learning materials; (vii) development and implementation of campaigns to raise student and teacher awareness, which could be tailored for Roma students; and (viii) strengthening of MENSUR's capacity to use educational information to monitor upper secondary education and the transition of students into tertiary education.

**Component 2 – University-Level Interventions and Bridge Programs.** This component supports activities designed to address the needs of students who are at risk of dropping out of faculties in the first year of study in tertiary education. It finances two grant schemes – one non-competitive and one competitive – for public universities that serve these at-risk students. In addition to the grants, this component finances technical assistance for evaluation of proposals and grants implementation monitoring. Approximately 85 percent of Romanian public faculties would benefit from this component.

**Component 3 – Project Management, Monitoring and Evaluation.** This component finances day-to-day project management activities, Monitoring and Evaluation (M&E) activities, project audits, as well as incremental operational and staffing costs of the MENSr's Unit for the Management of Externally Financed Projects. This component also finances the carrying out of: (i) surveys concerning high school students attending bridge programs; (ii) an impact evaluation of the high school grants program to assess improvements in student outcomes and school management processes; (iii) a revision of the existing student loan scheme developed for tertiary education students; (iv) an analysis of existing demand-side programs addressing the needs of disadvantaged upper secondary students that are currently under implementation; and (v) other M&E studies, as needed.

The MENSr is the main implementing agency responsible for the ROSE Project. Public high schools and public tertiary education institutions identified as beneficiaries of the grant components implement their corresponding parts of the Project under a decentralized approach, but with technical assistance of specialists financed under the Project. School Inspectorates play a role in the transfer of funds to public high schools under the implementation of the Sub-component 1.1. ROSE Project implementation arrangements rely on the existing structure of the MENSr. The MENSr's Unit for the Management of Externally Financed Projects (UMEFP) has extensive experience with Bank-financed projects, having implemented almost all of the previous operations in Romania, as well as projects financed from other sources. This unit has the adequate capacity to carry out day-to-day project management activities including centralized procurement, financial management, reporting, and project M&E.

A project management and information system for monitoring, reporting and financial management has to be developed on the terms and in a manner acceptable to the World Bank.

Accounting records will be kept in the MENSr's existing accounting software, with supplemental project records and reports kept, in both local and loan currency, in a ROSE Management Information System (RMIS) to be developed with project funds. The UMEFP is responsible for keeping detailed accounting records for the ROSE Project. Specific functionalities should be in place for the timely archiving of the monthly files and regular information backup. Given the large multi-tranche grants schemes for a high number of geographically-dispersed recipients, it is considered beneficial that the RMIS is implemented for monitoring, reporting, and financial management (FM), in particular related to these components which account for more than 80 percent of the loan. It is expected that this RMIS would be able to maintain multi-currency records, per each project component, category, activity, contract and grant, and generate automatic reports to be used for project monitoring, financial reporting and disbursement of the loan proceeds. Appropriate project analytical records and supporting documentation would be maintained at grantees level as well.

The RMIS's objects should be designed to store financial data and to prepare monthly reports to the Ministry of Public Finance, quarterly and annual reports to the World Bank (according to the templates of interim unaudited financial reports), financial statements for the auditors, and other relevant project reports such as the Project Implementation Plan and Project Procurement Plan. RMIS's objects should store all needed data for management of all activities defined in the Project Implementation Plan in terms of: financial management (resources allocated, committed, and spent); procurement (procurement method, estimated and actual dates of all relevant phases of the procurement process); implementation schedule (estimated and actual implementation periods); and monitoring (measurement of related intermediate and outcome indicators).

The RMIS's data model should include instruments to manage the grants schemes supported by the ROSE, both for the financial and technical activities, according to specific procedures for management of grants to high schools and universities provided by UMEFP.

The RMIS should allow introduction of data from different entities, approximately 1.500, over an Internet connection. It also should allow for keeping detailed project accounting records, including distinct records for each grant project that UMEFP manages.

The RMIS should be able to maintain multi-currency records in Euros and Romanian Lei, per each project component, category, activity, contract and grant, and generate automatic reports to be used for project monitoring, financial reporting and disbursement of the loan proceeds; The RMIS should allow the timely archiving of the monthly files and regular information backup.

The RMIS should be able to produce *inter alia*:

- Project Interim Unaudited Financial Reports (see templates in Annex 1).
- Project Implementation Plan (see templates in Annex 2).
- Project Procurement Plan (see template in Annex 3).
- Project Indicators Monitoring Report (see template in Annex 4).

## **2. Objective**

The objective of this assignment is to recommend and implement hardware and software configuration and overall system security requirements for the successful functioning of the ROSE Management Information System (RMIS).

## **3. Scope of Services**

To achieve the objective of this assignment, the Consultant is expected to undertake the following activities:

- *Learning tasks:*
  - Familiarize with the ROSE Project documents including the Project Appraisal Document, Loan Agreement No 8481-RO, Project Operations Manual, Project Implementation Plan and Project Procurement Plan.

- *Have regular meetings with UMEFP Director and other relevant team members* in order to prepare, develop and coordinate all the activities required to fulfill the tasks envisaged. The progress of the services will be closely analyzed, highlighting issues and constraints that may impact the delivery of the RMIS.
- *Coordinate with the Data Model Design Consultant, hereinafter called lead IT consultant*, during the work progress to provide consistency with the other IT consultants.
- *Provide inputs to the work plan for the proposed tasks* and submit to the lead IT consultant.
- *Recommend hardware and software configuration* for the installation of the RMIS including core numbers and speed of processor, storage capacity and redundancy, reliability, network requirements in terms of speed, bandwidth, power and cooling requirements, operating systems and databases.
- *Analyze the whole business process for RMIS operation and recommend detailed security requirements* for all users, processes and actors.
- *Provide inputs to the comprehensive documentation* for the RMIS core. The RMIS core includes financial management, procurement, monitoring and evaluation, reporting and auditing
- *Test each program developed* for the RMIS, provide feedback of tests results and integration with existing information systems.
- *Assist the UMEFP staff to acquire the proper hardware, setup and configure* hardware and software platform for RMIS and deploy this system.
- *Perform security assessment* for the RMIS.
- *Provide training to the UMEFP staff* for introducing data and utilization of RMIS, in terms of data security.
- *Perform risk assessment* for the RMIS.
- *Assist the UMEFP in RMIS administration*, perform minor adjustments over the course of the contract to be signed based on this Terms of Reference.

*The Consultant will make all reasonable efforts to provide clean, error free software, with all required functionalities.* The consultant will support the Lead IT Consultant to fix any bug over a one year functioning of the RMIS.

#### **4. Deliverables**

As a result of the services described above, the Consultant shall deliver the following:

<b>Deliverable</b>	<b>Deadline (weeks from contract signature)</b>	<b>Deadline (due date)</b>
Inputs to Draft version work plan	1	

<b>Deliverable</b>	<b>Deadline (weeks from contract signature)</b>	<b>Deadline (due date)</b>
Inputs to Final version work Plan	2	
Recommended hardware and software configuration report	4	
Security requirements report	5	
Inputs to RMIS core documentation	16	June 14, 2016
Report with results of tests of new programs	16	June 14, 2016
Inputs to RMIS system deployment report	16	June 14, 2016
Specific training for the UMEFP staff and report (phase 1 – RMIS core)	18	June 28, 2016
Security assessment report	40	
Specific training for the UMEFP staff and report (phase 2)	42	
Risk assessment report	48	
Inputs to Final implementation report	52	

*All reports will be prepared in Romanian language.*

## **5. Qualification**

The minimum competencies required from the Consultant are the following:

- Bachelor/Master degree or equivalent in Computer Science or related field;
- Minimum of 5 years of experience in IT security field;
- Strong knowledge and experience with on-line training platforms;
- Ability to deliver under tight deadlines and produce high quality outputs;
- Experience in documenting and managing issues and actions for development of information systems;
- Ability to work in teams, preparing technical specifications, and communicating with all team members;
- Demonstrate client orientation: balance a responsive and proactive approach to meeting client needs;
- Demonstrate strong interpersonal skills and good written and oral communication skills in English and Romanian;
- High standards of personal integrity and ability to treat people with fairness and respect.

## **6. Other Relevant Terms**

**Period of the Assignment.** This assignment is planned between March, 2016 and April, 2017.

**Reporting.** The Consultant should report to the Project Director, and will closely work with the Technical Coordinator, Financial Management Specialist, Grant Officers, Information System Specialist and Monitoring and Evaluation Specialist in the UMPFE.

**Deployment of the RMIS.** The RMIS should be installed in the MNESR/UMEPF (using the recommended hardware acquired by the MNESR).

**Confidentiality.** The Consultant shall not at any time communicate to any person or entity any confidential information acquired in the course of the proposed assignment.

**Proprietary Rights.** All program codes and relevant documentation such as diagrams, models, and databases compiled or prepared by the Consultant for the MNESR/UMEFP in the course of the proposed assignment shall be confidential and become and remain the absolute property of the MNESR. The Consultant shall, not later than upon termination or expiration of the Contract to be prepared for the proposed assignment, deliver all such program codes and documents to the UMEFP.

**Equipment and Software for Development of the RMIS.** The Consultant should use his/her own equipment to carry out the tasks proposed in this Terms of Reference.

## Annex 1 - Project Interim Unaudited Financial Reports

ROMANIA  
SECONDARY EDUCATION PROJECT  
SOURCES AND USES OF FUNDS  
FOR THE QUARTER ENDED XXXX/201X  
IN LOCAL CURRENCY

Description	Actual		Planned		Variance			PAD
	Current Quarter	Year To-Date	Cumulative	Current Quarter	Year To-Date	Cumulative		
Opening Cash Balances								
Total								
Sources of Funds								
State Budget pre-financing funds								
Total Sources								
Uses of Funds by Components								
Component 1								
Component 2								
Component 3								
Total Project								





*Interim un-audited Financial Reports (IFR)*

**ROMANIA**  
**SECONDARY EDUCATION PROJECT**  
**TREASURY ACCOUNT STATEMENT**  
**FOR THE QUARTER ENDED XX/XX/201X**  
**IN LOCAL CURRENCY**

[illegible]

ROMANIA  
SECONDARY EDUCATION PROJECT  
SUMMARY OF WITHDRAWAL APPLICATIONS  
FOR THE QUARTER ENDED XX/XX/201X  
IN LOCAL CURRENCY

1. Withdrawal application #1 covering the period	Amount requested	Amount approved	Cumulative	Value date
<b>Total Withdrawal Applications</b>				

ROMANIA  
SECONDARY EDUCATION PROJECT  
BREAKDOWN OF GRANTS TO HIGH SCHOOLS  
FOR THE QUARTER ENDED XX/XX/201X  
IN LOCAL CURRENCY

	Grant No. / approval date	Approved Grant amount	Paid Grant amount	Remaining balance	Payments incurred during the quarter	Payments incurred cumulative-to- date
<b>Sub-component 1.1 School-based and Systemic interventions</b>						
<b>Beneficiary 1</b>						
Pedagogical activities						
Extracurricular activities						
Small rehabilitations						
Grant management costs						
<b>Beneficiary 2</b>						
Pedagogical activities						
Extracurricular activities						
Small rehabilitations						
Grant management costs						
<b>Beneficiary 3</b>						
Pedagogical activities						
Extracurricular activities						
Small rehabilitations						
Grant management costs						
<b>Total</b>						

*Interim un-audited Financial Reports (IFR)*

ROMANIA  
SECONDARY EDUCATION PROJECT  
BREAKDOWN OF GRANTS TO UNIVERSITIES  
FOR THE QUARTER ENDED XXXX/201X  
IN LOCAL CURRENCY

	Grant No. / approval date	Approved Grant amount	Paid Grant amount	Remaining balance	Payments incurred during the quarter	Payments incurred cumulative-to-date
Component 2. University-level Interventions and Bridge Programs						
Beneficiary 1 (university)						
Grant 1						
Bridge programs						
Grant 2						
Learning centers						
Sub-beneficiary 1 (faculty)						
Academic activities						
Grant management costs						
Sub-beneficiary 2 (faculty)						
Academic activities						
Grant management costs						
Beneficiary 2 (university)						
Grant 1						
Bridge programs						
Grant 2						
Learning centers						
Sub-beneficiary 1 (faculty)						
Academic activities						
Grant management costs						
Sub-beneficiary 2 (faculty)						
Academic activities						
Grant management costs						

## Annex 2 - Project Implementation Plan

ROMANIA SECONDARY EDUCATION PROJECT (ROSE Project)																						
Project Implementation Plan																						
Component	Sub-components	Activities	Implementation of the IP (Yr)			Unit	Fiducary Cost	Costs (USD)							Responsible Unit	Type of Activity	Procurement Arrangements	M&E Arrangements			Link to the Education Sector Plan	
			Start Date	Contract Date	End Date			2016	2017	2018	2019	2020	2021	2022				Total	Output	Related outcome		
																				Description		Timeline
<b>Component 1- School-based and Systemic Interventions</b>																						
<b>Sub-component 1.1 - School-based Interventions</b>																						
		1.1.1 Preparation of guidelines for grant activities (grant manual, financial control & training developing school-level skills inclusive education, professional counselling and guidance, personal development and																				
		1.1.2 Technical assistance to facilitate the preparation & evaluation of grant proposals																				
		1.1.3 Information for Pedagogical Activities																				
		1.1.4 Technical assistance to increase the high school grants																				
		1.1.5 Monitors for the high school grants																				
		1.1.6 Financial operational costs for monitors for the high school grants																				
		1.1.7 Grants to High Schools																				
	<b>Total of Sub-component 1.1</b>																					
<b>Sub-component 1.2 - Systemic Interventions</b>																						
		1.2.1 Revision of the upper secondary education curriculum																				
		1.2.2 Training of teachers and school directors on implementing the revised curriculum																				
		1.2.3 Revision and update to Grade 8 and Mathematics course books database and associated training																				
		1.2.4 Upgrade infrastructure (hardware and software) for National Examinations and Evaluation Certificate Exams system																				
		1.2.5 Training for NCEE to 100% staff (National Examinations)																				
		1.2.6 Development and implementation of Grade 10 Assessment Policy strategy for each																				
		1.2.7 Campaigns to raise student and teachers awareness																				
		1.2.8 Strengthening NCEE IT/MSI capacity and utilization of NCEE data to track upper secondary students and monitor their transition into tertiary education																				
		1.2.9 Development of digital tracking and learning materials																				
		1.2.10 Improving Conditions of Teachers																				
	<b>Total of Sub-component 1.2</b>																					
	<b>Total of Component 1</b>																					
<b>Component 2 - University-Level Interventions and Bridge Programs</b>																						
		2.1 Technical assistance for designing career bridge programmes, programmes for the development of social and emotional skills and tertiary education grant application																				
		2.2 Technical assistance to evaluate the interventions																				
		2.3 Technical assistance to monitor the grants in the level of universities																				
		2.4 Monitors for the university grants																				
		2.5 Financial operational costs for monitors for the university grants																				
		2.6 Small grants for supporting at-risk students																				
		2.7 Medium grants for supporting at-risk students																				
		2.8 Large Grants for supporting at-risk students																				
		2.9 Grants for career bridge programs																				
		2.10 Grants for learning centres																				
	<b>Total of Component 2</b>																					
<b>Component 3 - Project Management, Monitoring and Evaluation</b>																						
		3.1 Financing of UNEP staff salaries																				
		3.2 Financing of UNEP operational costs																				
		3.3 Technology solutions strategy for management of the project																				
		3.4 Purchase of equipment for UNEP (including vehicles)																				
		3.5 UNEP staff training																				
		3.6 Project Financial Audit																				
		3.7 Communication campaigns for project awareness (radio and newspaper)																				
		3.8 Dissemination - Printing and materials																				
		3.9 EMS for monitoring and reporting project awareness (including staff)																				
		3.10 Technical assistance to design the ToR for Project Impact Evaluation and Other Monitoring and Evaluation Studies and Local studies for analysis of demand-side programs																				
		3.11 Project Impact Evaluation and Other Monitoring and Evaluation Studies																				
		3.12 Local studies for analysis of demand-side programs																				
		3.13 Revision student loan scheme																				
	<b>Total of Component 3</b>																					
	<b>Total of Project Costs</b>																					

Procurement Plan - Consultants' Services - updated on  
 Bank approval Date of the Procurement Plan : Original;  
 Period covered by this Procurement Plan:

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## Annex 4 - Project Indicators Monitoring Report

ROSE's Results Framework Performance Monitoring Indicators											
Project Development Objective: the Project Development Objectives are to improve the transition from upper secondary into tertiary education and increase the retention in the first year of tertiary education in project-supported education institutions.											
Project Development Objective Indicators (*)											
Indicator Name	Unit of Measure	Cumulative Target Values							Frequency	Data Source / Methodology	Responsibility for Data Collection
		YR 1	YR 2	YR 3	YR 4	YR 5	YR 6	YR 7			
Average dropout rate in the final grade in project-supported high schools	Percentage	6.5%	6.2%	5.8%	5%	4%	3.8%	3.5%	Annual	MESR's EMIS; School Inspectorates	MESR; School Inspectorates
<i>Sub-type indicator:</i>											
Percentage of project-supported high schools with dropout rate above 7 percent	Percentage	23.1%	22%	19%	16%	13%	11%	10%	Annual	MESR's EMIS; School Inspectorates	MESR; School Inspectorates
Average graduation rate in project-supported high schools	Percentage	86.9%	88%	89%	90%	91%	92%	93%	Annual	MESR's EMIS; School Inspectorates; Graduation in grade 12	MESR; School Inspectorates
Average Baccalaureate passing rate in project-supported high schools	Percentage	49.6%	50%	52%	54%	56%	58%	59%	Annual	MESR's documents	MESR
Average retention rate in the first year of tertiary education in project-supported faculties	Percentage	82.3%	82.3%	82.5%	83%	83.5%	84%	84.5%	Annual	MESR's documents; Project-supported	MESR
Intermediate Results Indicators											
Component 1 – School-based and Systemic Interventions											
Percentage of eligible high schools benefitting from the project grants	Percentage	0%	25%	90%	90%	90%	90%	90%	Semi-annual	MESR's documents	MESR
Percentage of project-supported high schools that implement the grants in compliance with grant performance indicators	Percentage	0%	50%	60%	75%	85%	100%	100%	Semi-annual	Grants performance requirements to be specified in the POM	MESR
Percentage of project-supported high schools that implement the grants in compliance with requirements for citizen engagement applicable to the Project (**)	Percentage	0%	65%	70%	75%	80%	85%	90%	Semi-annual	Requirements for citizen engagement applicable to the Project to be specified in the POM	MESR
Average percentage of students of project-supported high school benefitting from remedial, tutoring or counselling activities (*)	Percentage	0%	10%	20%	30%	40%	45%	50%	Semi-annual	MESR's documents	MESR
Grade 10 assessment developed and administered, and results used to inform policy	Yes/No	No	No	No	No	Yes	Yes	Yes	Semi-annual	MESR's documents	MESR
Component 2 – University-Level Interventions and Bridge Programs											
Percentage of eligible faculties benefitting from project grants	Percentage	0%	25%	80%	80%	80%	80%	80%	Semi-annual	MESR's documents	MESR
Number of at risk tertiary education students benefitting from remediation and counselling programs (*)	Number (in thousands)	0	5	10	60	60	60	60	Semi-annual	MESR's documents	MESR
Number of project-supported high school students who participate in bridge programs (*)	Number (in thousands)	0	1	3	6	8	8	8	Semi-annual	MESR's documents	MESR
Component 3 – Project Management, Monitoring and Evaluation											
Report on the analysis of existing demand-side programs for disadvantaged upper secondary education students published with	Yes/No	No	Yes	Yes	Yes	Yes	Yes	Yes	Semi-annual	MESR's documents	Consultant to be hired to analyze the
Share of students of project-supported high school attending bridge programs who demonstrate motivation to pursue tertiary	Percentage	N/A	N/A	To be determined	N/A	N/A	30%	30%	At the end of YR 3 and YR 6	Two student surveys. The final target is 30% higher than the	Company to be hired to carry out the
Tertiary education students loan scheme revised and used to inform policy makers	Yes/No	No	No	Yes	Yes	Yes	Yes	Yes	Annual	MESR's documents	Consultant to be hired to revise the students loan scheme
Direct project beneficiaries, of which female (*) (core indicator)	Number (in thousands)	0	460	900	1,14	1,39	1,62	1,62	Annual	MESR's documents; MESR's EMIS; School Inspectorates	MESR