
REPUBLIC OF CROATIA
MINISTRY OF SCIENCE, EDUCATION AND YOUTH
Donje Svetice 38, Zagreb 10000, Croatia

DIGITAL INNOVATION AND GREEN TECHNOLOGY (DIGIT)
9558-HR

TERMS OF REFERENCE FOR CONSULTANCY SERVICES

SUPERVISORY ENGINEER FOR THE M&E SOFTWARE

1. Background

The Government of Croatia and the International Bank for Reconstruction and Development (IBRD) have signed the Loan Agreement (Loan No. 9558-HR) for the Digital Innovation and Green Technology Project (DIGIT) in the amount of EUR 106 million. The Project seeks to advance research and innovation with a digital and green focus through enhancing institutional infrastructure and research performance of research organizations and firms. The Project is managed by the Ministry of Science, Education and Youth (MSEY).

The Project comprises two components over a duration of 5 years. Component 1 (*Enabling institutional conditions for digital and green research and innovation*) provides technical assistance and financing to strengthen institutional capacities and support the efficient use of EU funds. Component 2 (*Programs for digital and green research and innovation*) provides sub-financing through grant support programs to cover the gaps in EU funding and improve the targeting of research and innovation support to digital and green technology.

Under Component 1, MSEY is establishing the M&E software, which is developed and implemented by an IT vendor contracted by MSEY (the “IT Vendor”). The system will support the tracking, monitoring and reporting of programs and projects managed by MSEY and the related reporting obligations, and will be integrated with the existing information systems used in the management of EU funds and of research data. Considering the technical complexity of the system, the number of integrated components, the applicable security and accessibility requirements, and the need to protect the public funds invested, MSEY requires independent technical supervision of the delivery of the system by the IT Vendor, from the design documentation to the technical handover.

2. Objectives

The objective of engaging a Supervisory Engineer (the “Consultant”) is to provide MSEY with independent technical oversight and quality assurance during the development, testing and acceptance of the M&E software.

Acting as the technical representative of MSEY towards the IT Vendor, the Consultant will verify that each deliverable complies with the technical specification and with the signed IT contract, document deviations and deficiencies in a timely manner, and provide MSEY with reasoned recommendations for the acceptance or rejection of the deliverables, up to the technical handover of the system.

3. Scope of Work

The Consultant will provide independent technical supervision and quality assurance of the delivery of the M&E software, as outlined below:

- Design documentation review: review and formally assess the design documentation produced by the IT Vendor, in particular the software development implementation plan, the system test plan and the system design document covering the database and the front end; issue a written finding on each document within the deadline agreed in writing with MSEY upon the submission of that document, confirming acceptance or specifying the required corrections.
- Development environment and progress oversight: verify the establishment of the development, test and production environments and of the access to the source code repository, and conduct two progress reviews during the development phase, each resulting in a written status report for MSEY.
- Testing and technical verification: verify, through live demonstration in the test environment, the functional requirements of the system, the user roles and the data ownership structure, the reporting and e-mail automation mechanisms, the software, database and front-end architecture, and the system administration functions, including authentication, logging, automated backup and version control; verify that penetration testing has been carried out by an independent third party on the systems that are not covered by NIAS authentication and that the resulting recommendations have been implemented; verify the integration with CroRIS and with at least one programme monitoring information system.
- Data migration and import script verification: verify the completeness, integrity and consistency of the data migrated for all programmes covered by the technical specification, and the functionality of the scripts for bulk data import from spreadsheet templates and from the source systems.
- Delivery, documentation and technical handover: review and formally accept the end-user and technical documentation, including the user manual in the Croatian language, and prepare and sign the technical handover record upon the fulfilment of all acceptance criteria.
- Ongoing coordination: facilitate technical communication between MSEY and the IT Vendor throughout the delivery of the system, and report to MSEY without delay any finding or risk requiring immediate attention.

The Consultant acts as the independent technical representative designated by MSEY. MSEY will request the technical review and recommendation of the Consultant prior to the acceptance of the deliverables of the IT Vendor, the approval of change requests and the technical handover of the system. All decisions on acceptance, payments and amendments in relation to the IT Vendor remain with MSEY.

The role of the Consultant is strictly advisory and evaluative. The following activities are excluded from the scope of this assignment:

- day-to-day project management, scheduling or operational staffing of MSEY or of the IT Vendor;
- software development, coding, system engineering, server administration or database configuration;
- policy drafting, content creation, manual data entry or the execution of data migration on behalf of MSEY.

4. Deliverables and payment

The Consultant works under the supervision of the Head of the Department for Monitoring Implementation of Programmes and Projects within the Directorate for Science and Technology. The Consultant is expected to deliver the following:

- written findings on the design documentation reviewed, issued for each document;
- a verification report on the development, test and production environments;
- a test verification record, stating the pass or fail status for each verified requirement;
- a security testing verification report, confirming the independent penetration testing and the implementation of its recommendations;
- a data migration acceptance record;
- a technical handover record, signed by the Consultant and by MSEY;
- a report on services rendered summarizing all activities performed.

All deliverables shall be submitted in English, unless otherwise agreed with MSEY.

Payment for the services will be made on a time spent basis, at a fixed daily rate, monthly, according to the actual number of working days recorded in the timesheet approved by the Head of the Department for Monitoring Implementation of Programmes and Projects.

Working days are recorded in full days. One working day corresponds to 8 hours.

The level of effort is not distributed on a fixed weekly schedule. Working days are called down dynamically, in line with the delivery phases of the system and the actual needs of MSEY, and are planned in relation to the implementation timeline agreed with the IT Vendor.

The assignment is performed primarily remotely. The Consultant will be present at the premises of MSEY in Zagreb for demonstrations and verification sessions in the test environment and for the technical handover of the system, where the nature of the activity so requires. Work performed remotely is remunerated at the same daily rate.

MSEY will provide the Consultant with access to the contract concluded with the IT Vendor and to its technical specification, to the test environment, to the delivered documentation and to the source code repository on a read-only basis, and will designate a point of contact for coordination. The Consultant provides their own computer equipment and standard software tools.

5. Conflict of interest

The Consultant shall not be directly or indirectly connected with the IT Vendor, its subcontractors, affiliates or personnel. The Consultant shall inform MSEY in writing of any such connection, or of any other circumstance that may jeopardize their impartiality, before the assignment starts and immediately upon its arising during the assignment. A circumstance that cannot be resolved in a manner acceptable to MSEY constitutes grounds for exclusion from the selection or for termination of the contract.

In line with paragraphs 3.16 and 3.17 of the applicable Procurement Regulations, the Consultant shall provide professional, objective and impartial advice, shall at all times hold the interests of MSEY paramount, without any consideration of future work, and shall avoid conflicts with other assignments and their own interests.

6. Qualifications and Experience Required

The Consultant should hold a university degree in computer science, information and communication technology, software engineering, electrical engineering or a related field, and have:

- a minimum of 5 (five) years of professional experience in the development or supervision of information systems;
- a minimum of 5 (five) years of professional experience in the management or monitoring of EU-funded projects;

The periods of professional experience referred to in the first and the second indent may run concurrently. Excellent analytical, communication and reporting skills are essential, as is fluency in English and Croatian.

The following will be considered an advantage:

- experience in the verification or acceptance testing of information systems, including the verification of data migration and of bulk data import;
- a demonstrated ability to communicate complex technical matters in clear, non-technical language to management and administrative staff;
- knowledge of cybersecurity principles and of penetration testing methodologies, of the NIAS authentication framework and of the national information systems used in the management of EU funds and of research data.

7. Duration of the Contract

The Consultant will be hired under a Time-Based Contract, issued on a time spent basis, with payment at a fixed daily rate.

The maximum level of effort is 50 (fifty) working days.

The length of the assignment is 12 (twelve) months from the date of signature of the contract.

The assignment is carried out remotely and, where required, at the premises of MSEY in Zagreb, as set out in Section 4.

If the implementation timeline of the IT Vendor is extended or the activities are delayed for reasons not attributable to the Consultant, the period of the contract may be extended by written agreement of the parties. Any increase of the maximum level of effort requires a written amendment to the contract.