

REQUEST FOR EXPRESSIONS OF INTEREST

CONSULTING SERVICES – INDIVIDUAL CONSULTANTS

Republic of Serbia

The Serbia Railway Sector Modernization Project (SRSM)

Project ID No. P170868

Assignment Title:

Individual Consultant (part time) – Railway ITC Specialist

Reference No. SER-SRSM-IC-CS-21-06

For the purpose of financing Serbia Railway Sector Modernization Project, Phase 1 of the MPA, IBRD and the Agence Francaise de Développement (AFD), jointly, granted to the Republic of Serbia EUR 102 million loan to support enhancing the efficiency and safety of existing railway assets and improving governance and institutional capacity of the railway sector and the Republic of Serbia intends to apply part of the proceeds to payments for consulting services to be procured under this project.

Scope of Work

The Railway ITC Specialist of the PIU will be responsible for the following duties:

- Prepare and participate in preparation of the Terms of References and Bidding Documents as well as in assisting the evaluation committee on the evaluation of expressions of interest and proposals related to the above listed 3 subcomponents;
- Reviewing and evaluating contractors'/consultants' technical documentation, and schedule for the above mentioned 3 components;
- Assistance to the Client in management of execution of work and/or service contracts ensuring their completion within defined timeframe, budget and at the required quality for the above mentioned 3 components;
- Coordinate projects with and ensuring their compliance with activities of government regulatory or other government agencies;
- Monitor and coordinate the work of consultants and contractors throughout projects execution to ensure proper execution of the technical activities in term of technical solution implementation, design costs, document submission schedule and quality;
- Monitor and ensuring application of required standards, procedures and criteria during design and execution phase;
- Implementation of Project activities related to ICT application for IRS through introduction/implementation of new technologies, system design development and maintenance;
- Assistance for ICT infrastructure budgeting, procurement and asset control within the project scope;
- Analysis of the requirement and elaboration of internal policies and procedures on the use of ICT for IRS including ERTMS (as needed);
- Assistance to IZS, SV and SC in development and update of the ICT Infrastructure annual plan and road map for IRS including ERTMS;
- Providing advice and expertise on ICT for IRS including ERTMS operational, tactical and strategic planning and co-ordination;
- Responsible for shaping technical requirements & follow up of IRS including ERTMS projects;
- Assisting the Head of the PIU in preparing the PIU Reports to the MCTI and World Bank Cost, Time, Resources, and Scope;
- Facilitation of knowledge building and knowledge sharing;
- Ensuring compliance of the projects with relevant national, WB and EU regulations/procedures;

- Liaising with the PIU staff, PITs, Central Fiduciary Unit (CFU) and Head of the PIU regarding technical inputs needed for preparation of Bidding Documents, Technical Specifications, Requests for Proposals, Terms of Reference, Monitoring Reports etc., and
- Any other task assigned by the Head of the PIU.

It is expected that the period over which the consultant shall provide the Services will be 60 months, respectively by the end of the project dated December 30, 2026. The assignment is part-time and it is estimated that total input of the Consultant will be 600 days over the Contract period. The Consultant should be available to commence no later than one month after the contract signature.

In order to be selected, the Consultant must possess, at the minimum, the following qualifications:

- Educational qualifications: At least a 5- year University Degree in electrical engineering, transport engineering, IT or similar;
- Area of professional expertise: Information and Communications Technology applied to the railways sector;
- Minimum 10 years of relevant professional expertise;
- At least 2 successfully implemented railways IT projects in the past 7 years, in the field of railways telecommunications, control-command, SCADA, or similar;
- Ability to understand the interfaces between the different railways IT systems;
- Experience in preparation of tender documentation and other relevant project documentation (e.g. ToRs, technical and functional specifications, etc.) will be an advantage;
- Previous experience ERTMS projects will be advantage;
- Experience working with the public sector will be an advantage;
- Excellent knowledge of English language;
- Computer skills: Word, Excel, scheduling tools (e.g.: MS Project or similar);
- Project Management with multiple stakeholders;
- Self-Planning & Organizing, Problem Solving, Communication, Teamwork, Initiative.

The detailed Terms of Reference for the above referenced consulting services is posted on the website of the Ministry of Construction, Transportation and Infrastructure (MCTI) www.mgsi.gov.rs/en/dokuments/serbia-railway-sector-modernization-srsm-project-piu.

The Central Fiduciary Unit (CFU) of the Ministry of Finance now invites eligible individual consultants to indicate their interest in providing the Services. Interested consultants must provide Cover Letter and CV representing description of similar assignments, experience in similar conditions and availability of appropriate skills (scanned diplomas to be sent with CV).

The evaluation criteria for the assignment:

- Qualifications and Competence relevant to the Assignment (40 Points)
- Specific Experience relevant to the Assignment (60 Points)

The attention of interested Consultants is drawn to paragraph 3.16 and 3.17 of the **World Bank's Procurement Regulations for IPF Borrowers – Procurement in Investment Project Financing Goods, World, Non-Consulting and Consulting Services, July 2016, revised November 2017, August 2018 and November 2020** (“the Regulations”) setting forth the World Bank’s policy on conflict of interest.

A Consultant will be selected in accordance with the *Open Competitive Selection of Individual Consultants* as set out in the Regulations.

Interested consultants may obtain further information from the CFU at the address below from 09:00 to 15:00 hours.

Expressions of interest **in English language** must be delivered to the e-mail address below by **February 2, 2022, 12:00 hours, noon, local time**.

When submitting Expressions of interest please indicate assignment and reference number for which you are applying.

Contact:	E-mail:	Address:
To:	zorica.petrovic@mfin.gov.rs Ms. Zorica Petrovic Procurement Specialist	Ministry of Finance Central Fiduciary Unit 3-5 Sremska St 11000 Belgrade, Serbia
Cc:	ljliljana.dzuver@mfin.gov.rs ljliljana.stojic@mgsi.gov.rs	Tel/Fax: (+381 11) 765 2587

TERMS OF REFERENCE
Railway ITC Specialist
Serbia Railway Sector Modernization Project

Background

The International Bank for Reconstruction and Development (IBRD) launched the Multiphase Programmatic Approach (MPA) to support the Government of Serbia in continuation of institutional, physical and operational modernization of the railway sector in an integrated manner through providing financial support to Serbia Railway Sector Modernization Project as part of the Multiphase Programmatic Approach to be implemented in three overlapping phases over the ten-year period.

For the purpose of financing Serbia Railway Sector Modernization Project, Phase 1 of the MPA, IBRD and the Agence Francaise de Développement (AFD), jointly, granted to the Republic of Serbia EUR 102 million loan to support enhancing the efficiency and safety of existing railway assets and improving governance and institutional capacity of the railway sector.

The Project includes following components:

- Component 1: Infrastructure Investments and Asset Management: Sub-Component 1.1: Reliable and Safe Railway Infrastructure (track rehabilitation, level crossings, railway station “Prokop”, Bogojevo station bypass, measurement stations), Sub-Component 1.2: Technical Documentation for the Phase 2, Sub-Component 1.3: Asset Management
- Component 2: Institutional Strengthening and Project Management: Sub-Component 2.1: Sectoral Governance, Sub-Component 2.2: Human capital, Sub-Component 2.3: Project Management and Citizen Engagement
- Component 3: Railway Modernization Enablers: Sub-Component 3.1: Intelligent Railway Systems (ITS) and Safety Management System (SMS), Sub-Component 3.2: Integrated Territorial Development and Sub-Component 3.3: Modal Shift

Component 1, Infrastructure Investments and Asset Management, focuses on improving the quality and safety of railway infrastructure and enhancing rail asset management practices. After almost 50 years of no or deficient maintenance and rehabilitation, the quality and safety of the railway network are seriously compromised. The current state of disrepair of the rail infrastructure is the main immediate cause of excessive operational costs and low service quality. Rehabilitation of rail infrastructure is a necessary condition for the sector to eventually regain modal share - shifting road to rail - and thereby contribute to reducing GHG emissions. The quality of the railway network will be improved through targeted renewal interventions and preparation of technical documentation for the investments in next phases of the Program. Railway safety will be improved through track renewal and also through upgrading of railway crossings throughout Serbia. To ensure the long-term sustainability of the Government of Serbia’s (GoS) ambitious railway investment plan and to provide for systematic, transparent, and objective planning of investments in infrastructure maintenance and rehabilitation, the component will finance the introduction Asset Management Systems (including the capability to carry out Life Cycle Cost –LCC, analyses).

Component 2, Institutional Strengthening and Project Management, focuses on institutional transformation of the rail sector to deepen and sustain recent reforms. The GoS previous reform cycle introduced fundamental structural changes, clarified contractual arrangements among institutions, and defined their separate obligations and responsibilities. These measures need to be followed up with institutional capacity building and the introduction of modern management systems and approaches, especially to promote more efficient, customer-responsive and commercially oriented ways of operating. Thus, within this Component support to the effort of GoS in continuing the sectoral reforms through institutional capacity building and the introduction of modern management systems and approaches, especially those that will promote more efficient, transparent, customer-responsive and commercially oriented ways of operating, will be ensured.

Component 3, Railway Modernization Enablers, will finance measures for strengthening the enabling environment for the railway sector through selected innovations. In Serbia, utilization of information technologies in railway transport is still in its infancy. Knowledge of market potentials is not structured, and strategies for attracting unconventional users are absent. The GoS would like to introduce new approaches that have been proven to improve efficiency, effectiveness, and safety.

Project will be managed by the Ministry of Construction, Transport and Infrastructure (MoCTI) through the Project Implementation Unit (PIU) supplemented by the Project Implementation Teams (PITs) in Railway Directorate (RD) and railway companies, respectively Serbian Railway Infrastructure (IZS), Serbia Voz (SV) and Serbia Cargo (SC). PITs will act as subordinate implementing agencies and provide technical support for specific Project subcomponents or activities of the MPA that pertain to their area of expertise. Primary responsibility for Project execution lies on PIU which will ensure that the Project development objectives are met.

Ministry of Construction, Transport and Infrastructure (the Client) intends to engage a highly qualified consultant (individual expert) to provide required services more closely described below. The successful candidate will work closely with the Client and other relevant stakeholders, RD, SV, SC and IZS to ensure that the investments within the Project are managed efficiently both technically and in compliance with the objectives of the Project Appraisal Document (PAD), the Loan Agreement, Credit Facility Agreement and the Project Operations Manual. The consultant, always aligned with the Head of the PIU and in collaboration with the other PIU staff, shall interact and liaise with PITs, contractors, consultants, World Bank, AFD, and others relevant for successful completion of the tasks. He/she will closely monitor the implementation of the activities in order to coordinate the inputs from the different actors, ensure excellent technical execution, quickly address design challenges and efficiently react to unexpected developments. The main challenge is to ensure that works, goods and services are satisfactorily completed on time, within budget, aligned with the contractual requirements and in a coherent way across components.

General information

Individual Consultant Title: Railway Information Technology Communication (ITC) Specialist of the PIU, Serbia Railway Sector Modernization Project. The Consultant shall report to the Head of the PIU, linked to the MoCTI of the Republic of Serbia.

Position in organization

Immediate superior: Head of the Project Implementation Unit

Main position objective

Generally, the Consultant's main responsibilities will be for technical support to the implementation of the Sub-component 1.3: "Asset Management", Sub-component 2.1: "Sectoral Governance" and Sub-component 3.1: "Intelligent Railway Systems (IRS) and Safety Management Systems (SMS)".

Sub-component 1.3 will support the adoption of specialized Railway Infrastructure Asset Management System encompassing the functionalities of the Life-Cycle Cost (LCC) analysis, cost-benefit, Failure Mode Effects and Criticality Analysis (FMECA) and Reliability, Availability, Maintainability, and Safety (RAMS) as IZS's standard tool for planning and decision making for financing activities. Further, introduction and establishment of Railway Infrastructure Asset Management System (RI – AMS) will be financed to assist IZS to manage all railway infrastructure assets and make tangible savings within the domain of railway infrastructure maintenance and renewal (M&R), as well as raise the overall M&R work performance and management quality to the level of the developed railways. This sub-component includes procurement and customization of basic RI-AMS system, procurement of basic software (SQL Server or Oracle database) for database and accompanying hardware, if there is a need, and annual maintenance and support fees which depends on supplier's licensing policy. Implementing targeted system initiatives such as Intelligent Railways, Safety Management, and Asset Management not only goes hand-in-hand with EU's standards, but also promotes the modernization of human capacity and organizational change toward a culture of putting customers at the center of the organization's activities. The new asset management system will facilitate the efficient maintenance and use of infrastructure, mitigating emissions through longer asset life cycles. The asset management cycle will also be adapted to the requirements of the changing climate, e.g. more frequent tamping of track ballast.

Within Sub-component 2.1 support to IZS, SC and SV will be provided to adopt commercially oriented, independent management and to modernize their outdated internal structures and systems through wider adoption of ICT and introduction of business support systems, asset management systems, financial reporting systems, and document management systems. Also, procurement of software for the construction of the railway table will be financed. For SC support for introduction of business process support systems, financial reporting systems, and document management systems will be financed. While the European Bank for Reconstruction and Development (EBRD) is supporting digitalization of passenger service operations, SC lacks the IT systems needed to perform the transactions and properly record day to day operations such as ordering of freight wagons, consignment notes, shipment tracing and tracking, and real-time submission of data for financial and operational purposes. If appropriate, support could also be provided to IZS for data management systems and process support systems.

Sub-component 3.1 This subcomponent will support (i) the initiation of structured planning of IRS; (ii) the introduction of SMS in the railway sector; and (iii) development of the General Data Protection Regulation (GDPR) and Cybersecurity rule book.

IRS encompasses a wide range of technologies for improving energy efficiency and emissions, preventing accidents and incidents, increasing capacity and asset utilization, improving reliability and other elements of service quality, boosting economic viability and profits, controlling costs,

and managing risks. First, this subcomponent will provide advisory services to help Serbian sector institutions to implement the European Railway Traffic Management System (ERTMS), which is the system of standards for interoperation of signaling for railways of the EU. Currently, the EU is financing a strategy/plan for ERTMS in Serbia. Second, this subcomponent will finance the delivery of an implementation plan for IRS for command, control, communications, and information (C3I), as well as for grade crossings, defect detection, and planning and scheduling systems. Other IRS will be considered for planning and implementation in subsequent phases of the MPA. This work will be guided by current cooperation between the RD, railway companies, MCTI, and the World Bank.

Global best practice for systematic and sustainable railway safety is through full implementation of the SMS approach. SMS procedures, processes, and programs include, but are not limited to, maintenance, inspection, repair work, rules and procedures compliance, employee/contractor training, and public safety outreach. This subcomponent will finance the following activities: (i) preparation of an SMS action plan; (ii) development of a railway network resilience and investment plan; (iii) selected SMS and resilience interventions; (iv) monitoring and safety equipment for IZS; and (v) risk management plans and early warning systems to respond to natural disasters and pandemics more effectively. The latter should identify short term investments needed to respond to COVID-19 operating conditions such as social distancing in trains and stations, staffing safety and health measures, and adequate service design during a pandemic emergency.

The GDPR and Cybersecurity rule book will transpose the EU GDPR compliant local law. It will serve as a binding framework for implementation of any future IRS or IT system in the railway sector. Cybersecurity is key to the successful implementation and operation of an IRS and any IT system. Proper addressing of GDPR and cybersecurity must be incorporated in IRSs before deployment. The rulebook will describe what principles and approaches have to be used when developing, deploying and maintaining any IT based solution for railway sector.

Considering aforementioned, the Consultant is responsible for assisting PITs in the overall implementation of the activities, in particular activities related to design, plan, deploy, train and manage all technologies relevant for the Project. Advising PITs/stakeholders on increasing their effectiveness through the use of innovative technology, overseeing that the stakeholders' ICT infrastructure estate is managed effectively, with the key aim of ensuring operational performance, capacity, risk management and implementation of future strategy and to deliver an excellent ICT service through proactive development and maintenance.

In this respect he/she will plan, monitor, control and provide technical expert advice on foreseen Project activities to ensure achievement of Project objectives. This will be done in close cooperation with the Head of the PIU and the contractors and consultants, as well as the Client, and other agencies (as described in the Project Operation Manual). He/she will closely monitor the implementation of the activities in order to coordinate the inputs from the different actors, ensure excellent technical execution, quickly address design challenges and efficiently react to unexpected developments.

Principle responsibilities

The Railway ITC Specialist of the PIU will be responsible for the following duties:

- Prepare and participate in preparation of the Terms of References and Bidding Documents as well as in assisting the evaluation committee on the evaluation of expressions of interest and proposals related to the above listed 3 subcomponents;
- Reviewing and evaluating contractors'/consultants' technical documentation, and schedule for the above mentioned 3 components;
- Assistance to the Client in management of execution of work and/or service contracts ensuring their completion within defined timeframe, budget and at the required quality for the above mentioned 3 components;
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- Liaising with the PIU staff, PITs, Central Fiduciary Unit (CFU) and Head of the PIU regarding technical inputs needed for preparation of Bidding Documents, Technical Specifications, Requests for Proposals, Terms of Reference, Monitoring Reports etc., and
- Any other task assigned by the Head of the PIU.

Reporting requirements

The Consultant will provide Monthly Progress Reports, within 5 (five) days after the end of the month for which the report is due. The report should contain at least:

- List of meetings held with brief description of participants, objectives and conclusions;
- The status of progress, problems encountered, corrective actions needed, rationale for actions and
- Any further comments relevant for the reporting period.

The Consultant shall prepare ad-hoc reports on any major issues raised during Project implementation, at the Head of the PIU, Client or Bank's request.

Knowledge, experience, skills and competencies

- Educational qualifications: At least a 5- year University Degree in electrical engineering, transport engineering, IT or similar;
- Area of professional expertise: Information and Communications Technology applied to the railways sector;
- Minimum 10 years of relevant professional expertise;
- At least 2 successfully implemented railways IT projects in the past 7 years, in the field of railways telecommunications, control-command, SCADA, or similar;
- Ability to understand the interfaces between the different railways IT systems;
- Experience in preparation of tender documentation and other relevant project documentation (e.g. ToRs, technical and functional specifications, etc.) will be an advantage;
- Previous experience ERTMS projects will be advantage;
- Experience working with the public sector will be an advantage;
- Excellent knowledge of English language;
- Computer skills: Word, Excel, scheduling tools (e.g.: MS Project or similar);
- Project Management with multiple stakeholders;
- Self-Planning & Organizing, Problem Solving, Communication, Teamwork, Initiative.

Length of the assignment

It is expected that the period over which the consultant shall provide the Services will be 60 months, respectively by the end of the project dated December 30, 2026. The assignment is part-time and it is estimated that total input of the Consultant will be 600 days over the Contract period. The Consultant should be available to commence no later than one month after the contract signature.

Facilities to be provided by the Client

The Client will be responsible for provision of the following:

- Fully equipped office space, with access to Internet, local telephone line, printing, photocopying and document binding;
- Access to necessary documents; and
- Where the Consultant is required to travel, to site or elsewhere in accordance with the Client's instruction, transportation costs will be borne by the Client.

Confidentiality

The Consultant undertakes to maintain confidentiality on all information that is not in the public domain and shall not be involved in another assignment that represents a conflict of interest to the prevailing assignment.

Selection of Consultant

The Consultant will be selected applying Open competitive method.

The candidates will be evaluated applying the following evaluation criteria:

- Qualifications and General experience (40 Points)
- Specific Experience relevant to the Assignment (60 Points)

The Consultant is eligible and his selection does not create any conflict of interest as provided in the Bank's Procurement Regulations.