

REQUEST FOR EXPRESSIONS OF INTEREST (CONSULTING SERVICES – INDIVIDUAL CONSULTANTS)

Republic of Serbia

The Western Balkan Trade and Transport Facilitation Project (WBTF)

Project ID No. P162043

Assignment Title:

Individual Consultant (part time) – Technical Adviser to Support Intelligent Transport Systems (ITS) Implementation and Capacity Building in Serbia, Reference No. SER- WBTF -IC-CS-20-10

The International Bank for Reconstruction and Development (IBRD) has granted to the Republic of Serbia (RoS) EUR 35 million loan for The Western Balkan Trade and Transport Facilitation Project (WBTF). WBTF project is a part of a Multiphase Programmatic Approach covering in the first phase Serbia, Albania and North Macedonia supporting a combination of investments, technical assistance and regulatory and institutional reforms. WBTF project aims to support Western Balkan governments to promote deeper economic integration, within the region and the EU by assisting with the implementation of measures aiming at: facilitating cross-border movement of goods, enhancing transport efficiency and predictability and enhancing market access for trade in services and investments.

RoS intends to apply part of the proceeds to payments for consulting services to be procured under this project.

The assignment aims to carry out activities that would be used as inputs and basis for implementation of Component 2 of the project – implementation of ITS in Serbia. The activities include:

- Support to the consultant to be contracted for development of ITS Strategy and Action Plan. This will be conducted through active participations in workshops and provision of own assessment of ITS service needs based on the current and future transport challenges and identifying key priorities for ITS service Serbia. The assessment of this consultant will be one of the inputs for ITS Strategy and Action Plan;
- Awareness raising and capacity building to the main stakeholders, by facilitating the discussion on proposed ITS Strategy and identification of priority interventions;
- Preparation of bidding documents for applications identified as priority in the ITS Strategy and Action Plan;
- Planning, monitoring, controlling and giving technical advice on implementation of the short-term priority services and quality control.

In particular, the Consultant should undertake the following tasks:

Task 1: Support for development of ITS Strategy and Action Plan

Task 2: Bidding documents preparation, including monitoring and implementation plan

Task 3: Provide continuous technical support to key stakeholders in planning and implementing proposed activities and capacity building

The consultancy is expected to commence in October 2020 and the successful applicant will be recruited part time (estimated at 450 staff-days) on a contractual basis for the period of 30 months, or any other period as may be subsequently agreed by the parties in writing.

Parts of the assignment (60%) can be home-based while other 40% of the work shall be performed within the appointed entity (ies) (Corridors of Serbia, Roads of Serbia, PIU) premises¹.

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

- Master's degree in transport engineering or related fields,
- 10 years of general experience,
- 8 years of expertise in ITS design, planning and implementation,
- Proven track record of work in the area of ITS,
- Experience in ITS design and practical project implementation within Europe, and EU norms and standards
- Strong experience in leading ITS projects,
- Thorough understanding of ITS Architectures and standards, practical experiences in ITS deployments, and working knowledge of hardware components included in ITS technology,
- Excellent written, communication and presentation skills in English,
- Excellent interpersonal communication, coordination and planning skills,
- The Consultant must be an individual that has no direct or indirect affiliations (financial or otherwise) with ITS product manufacturer/vendor and must disclose any associations that may affect the impartiality of the study outcome.

The Consultant shall present the following documents:

- Personal CV indicating all past experience from similar projects, as well as the contact details (email and telephone number) of the Clients and at least two (2) professional references,
- Brief description of why the individual considers him/herself as the most suitable for the assignment, and a methodology on how they will approach and complete the assignment,

The detailed Terms of References for the above referenced consulting services is posted on the official website of the Ministry of Construction, Transport and Infrastructure <https://www.mgsi.gov.rs/en>.

The CFU of the Ministry of Finance now invites eligible individual consultants to indicate their interest in providing the above 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:

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

¹ Due to travel restrictions stemming from the COVID-19 pandemic, some activities that require in-country presence may not be able to be performed as long as travel restrictions stay in place. In these cases, the consultant will carry out these tasks virtually in close coordination with the relevant stakeholders in Serbia.

and Consulting Services, July 2016, revised November 2017 and August 2018 (“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 **September 17, 2020, 12:00 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 Petrović Procurement Specialist	Ministry of Finance Central Fiduciary Unit 3-5 Sremska St
Cc:	ljliljana.dzuver@mfin.gov.rs ljliljana.stojic@mgsi.gov.rs	11000 Belgrade, Serbia Tel/Fax: (+381 11) 202-15-30

TERMS OF REFERENCES (TOR)

Technical Adviser to Support Intelligent Transport Systems (ITS) Implementation and Capacity Building in Serbia

Background

The International Bank for Reconstruction and Development (IBRD) launched the Multiphase Programmatic Approach to facilitate the achievement of the Western Balkans Governments' goal of reducing trade costs and increasing transport efficiency. The Program includes two phases: i) phase 1 includes Albania, North Macedonia and Serbia, and ii) phase 2 other beneficiaries in the Western Balkan. For the purpose of financing of the Western Balkan Trade and Transport Facilitation Project (WBTF), part of Phase 1 of the Program, IBRD has granted to the Republic of Serbia (RoS) EUR 35 million loan to support a combination of investments, technical assistance and regulatory and institutional reforms. At the regional level, the Secretariat for Transport Community Treaty (TCT) will play the role of the regional coordination and liaison office for the Western Balkans Six, for all the transport related dimensions of the project. The CEFTA Secretariat will play the same role for the trade elements of the proposed project. At the national level, Project Implementation Unit (PIU), within the Ministry of Construction, Transport and Infrastructure of Republic of Serbia (MCTI), has primary responsibility for Project execution ensuring that the Project development objectives are met.

The Project consists of 4 Components whereas the Service described under this Terms of Reference is expected to be carried out as a part of the 'Component 2: Enhancing transport efficiency and predictability' with special focus on the implementation of the Intelligent Transport Systems (ITS) in Serbia. ITS can significantly contribute to a cleaner, safer and more efficient transport system by applying various information and communication technologies to all modes of passenger and freight transport. Moreover, the integration of existing technologies can create new services. The cumulative impact of low utilization rates of available infrastructure and low conversion efficiency and sub-optimal resources has resulted in uncompetitive transport costs (in many cases cross-subsidized by inadequate environmental protection) and the transport interconnections, insufficient to support the free flow of goods and people. Hence ITS systems are key to support jobs and growth in the transport sector.

ITS subcomponent of the WBTF project is also aiming to increase the climate-resilience of transportation networks with the introduction of ITS, more specifically with the installation of a new set of IoT weather sensors and an early warning system along corridor X. The IoT weather sensors will become part of the respective country meteorological services' monitoring network, which will use the data to further refine their predictions and emit regional alerts related to extreme weather events (such as storms, flooding events, etc.). This information will be sent to the ITS control centers which, following a previously designed protocol, will display warning messages along the potentially affected areas and provide alternative routing and safety recommendations to road users. The control centers will also have direct access to the IoT weather sensors' data in order to display warning messages on real time weather conditions and improve communication and responses in the event of a natural disaster.

ITS application deployment in Serbia is still in its infancy. Currently, ITS has been and is being implemented only on some sections of Corridor X, while toll payment (together with e-toll) exists on all segments of Corridor X and Route 4. Current state can be considered as advantage because Republic of Serbia can avoid the friction of legacy systems and easily build a state of the art ITS Architecture at national level,

providing specifications that enable compatibility of information delivered to end users through different media.

There are no established methodologies to evaluate the economic benefits and costs of the implementing the ITS. ITS deployment can be evaluated using various Cost-Benefit methods, such as "sketch-planning", "before-and-after" studies, multi-criteria analysis (MCA) or simulation. However, all these require a data collection and treatment effort that cannot be undertaken before the start of the project activities. Available data is also not detailed enough at this point to justify the use of such advanced techniques. To this end, the Government of Serbia decided to implement ITS Strategy and Action Plan through the WBTF project.

In addition, the Ministry of Construction, Transport and Infrastructure of Republic of Serbia (MCTI), Corridors of Serbia and Roads of Serbia (Beneficiaries) intend to engage a highly qualified individual international consultant to provide services as ITS Expert throughout the whole period of implementation of the ITS subcomponent. The successful candidate will work closely with the MCTI, the Beneficiaries, Project Implementation Unit (PIU), the consultant team that will be implementing ITS Strategy and Action Plan, and the Transport Community Treaty Secretariat (TCT) officials and other relevant national and regional stakeholders to ensure that the ITS related activities of the Project are managed efficiently both technically and in compliance with the objectives of the Project documents.

Objective

The objective of 'Component 2 - Implementation of ITS in Serbia' is to develop a desirable intelligent transport system that could support improvements in congestion management, incident detection and recovery, advice on diversion and rerouting, real time travel information, using of V2X concepts, and better journey time estimate. Harmonization or interoperability of systems is also essential for seamless and safe cross border transport movements.

More specific objective is to draw up a design for the installation of equipment for traffic management as well as the procurement and installation of equipment on the motorway of Corridor X, as the most frequent road in the Serbia, with the aim of more efficient and safe traffic running. ITS equipment that can be carried out within the first phase is, but not limited to, the following: (i) a system for collecting data on traffic flow in the form of inductive loops that are positioned into the carriageway; (ii) Weight in Motion (WIM); (iii) Elements to control the height of vehicles that access highway; (iv) A system to collect data on weather conditions along the route of the highway (IoT weather sensors); and (v) A system for detecting the transport of dangerous goods.

Scope of the work

The assignment aims to carry out activities which would be used as inputs and basis for implementation of Component 2 of the project – implementation of ITS in Serbia. The activities include:

- Support to the consultant to be contracted for development of ITS Strategy and Action Plan. This will be conducted through active participations in workshops and provision of own assessment of ITS service needs based on the current and future transport challenges and identifying key priorities for ITS service Serbia. The assessment of this consultant will be one of the inputs for ITS Strategy and Action Plan,
- Awareness raising and capacity building to the main stakeholders, by facilitating the discussion on proposed ITS Strategy and identification of priority interventions,
- Preparation of bidding documents for applications identified as priority in the ITS Strategy and Action

Plan,

- Plan, monitor, control and give technical advice on implementation of the short term priority services and quality control.

Several background documents are available and can be used as a basis for the study and these are (but not limited to): Strategic Framework for implementation of ITS on TEN-T Core/Comprehensive Network on the WB6, various SEETO reports and findings on this topic like the assessment of ITS deployment on TEN-T Core Network in the Western Balkans, REBIS study and subsequent documents etc.

In particular, the Consultant should undertake the following tasks:

Task 1: Support for development of ITS Strategy and Action Plan

- Undertake consultation with stakeholders to become familiar with all available documentation, current transport services, prevailing issues and identify needs for ITS applications. The consultant is expected to carry out a desk review of existing documents, available technical specifications and reports related to ITS in Serbia and Western Balkans Region (key documents will be provided to the consultant),
- Review existing policy and legal documents related to transport and identify opportunities and barriers to planned implementation,
- Review existing documents and standards related to ITS as well as analyzing and providing the comments on strategic documents in Project related areas,
- Produce Need assessment report. This report will be in the format applicable to be used as input for ITS Strategy and Action Plan.

Task 2: Bidding documents preparation, including monitoring and implementation plan

- Preparation of full technical requirements/specification including budget breakdown, for priority short term ITS applications determined by the ITS Strategy. BDs shall include all required technical specifications, financing requirements, target performance, monitoring mechanisms, etc. detail designs request for ITS components, which are recommended for immediate deployment within the identified locations.

Task 3: Provide continuous technical support to key stakeholders in planning and implementing proposed activities and capacity building

- Provide ongoing technical support to the involved parties in the Project,
- Together with PIU and beneficiaries prepare, supervise, monitor, and manage all ITS related activities included in the Project,
- Ensure full implementation of the ITS activities in relation with the timeline/critical paths,
- Support the activities during the tendering process (evaluation and selection). Liaise with PIU and with all the relevant departments / beneficiaries / agencies / Ministries and their focal points and provide relevant technical inputs in the process of preparation the ITS related Bidding Documents, Technical Specifications, Requests for Proposals, Terms of Reference, Monitoring Reports, etc.,
- Conduct face-to-face consultations and raise awareness of benefits of ITS to stakeholders,
- Meet with relevant agencies to study institutional arrangements and functions to identify opportunities and constraints faced in efficient and effective implementation of ITS and share this information with the consultant responsible for ITS Strategy development,
- Support the MCTI in implementing firm collaboration modalities between several actors in the sector, based on the institutional arrangements recommended in the ITS Strategy and to create a joint understanding of capacity and capacity constraints - to create awareness among staff and stakeholders about possible need for change;

- Support the MCTI in introducing necessary standardizations
- Support the MCTI in introducing data communication protocols and ITS Architecture as defined in the ITS Strategy and Action Plan;
- Other activities relevant for successful implementation of the ITS Strategy.

Deliverables, Reporting obligations and timeline

The consultant shall work under the direct supervision of Head of PIU and Project Coordinator (MCTI). The consultant will work closely with the persons nominated by Corridors of Serbia and PI Roads of Serbia for this contract and in close consultation with the consultant assigned to develop ITS Strategy and Action Plan and designated World Bank Task Team staff.

The consultant will report directly to the Head of PIU on day-to-day activities and submit reports as required in the agreed upon plan and time schedule. Reports are subject of pre-approval by the Corridors of Serbia and PI Roads of Serbia, and approval of the Head of PIU and the Project Coordinator.

Deliverables	Due date
<p>Inception report. Present an overall approach and detailed program work plan and completion schedule for the services. It should discuss constraints and challenges identified by the Consultant and ways to address them in order to timely and effectively deliver the assignment.</p>	1 month
<p>Need assessment report The report should provide assessment of ITS service needs based on the current and future transport challenges and operating environment with respect to legal and institutional arrangements and technical capacity.</p>	2 months
<p>Bidding documents for ITS application</p> <ul style="list-style-type: none"> • Full set of BDs including technical specifications and financial requirements for immediate ITS implementation by preparing detailed tender-ready specifications or Detail Design requests were deemed needed for ITS components that are recommended for immediate deployment within the identified locations, • Provide relevant technical inputs in preparation of strategic documents in Project related areas, • Support the activities during the tendering process (evaluation and selection), 	Upon request
<p>Capacity building The report should elaborate how the institutional changes defined in the ITS Strategy have been implemented, what steps have been taken and need to be taken to ensure necessary level of standardization, data exchange protocols that have been introduced and mechanism for regular update, build capacity of stakeholders to be able to populate and maintain own ITS Architecture, etc.</p>	29 months
<p>Quarterly reports Within 5 (five) days after the end of three-month period for which the report is due. The report should contain at least the status of progress, problems encountered,</p>	Every 3 months

corrective actions needed, rationale for actions. Consultant shall prepare ad-hoc reports on any major project issues raised during Project implementation.	
Final Report The Report should include short description of achievements, deliverables provided, workshops and/or trainings held, activities performed on capacity building, identified needs to be handled with in the future, problems encountered, and recommendations for future actions to ensure results' sustainability.	No later than 1 month before completion of the contract

If and when necessary, the Project Coordinator, the Bank Task Team and the Consultant may agree to make adjustments to the task descriptions or the time frame for deliverables. The Consultant shall submit all deliverables in English language. All data collected should be in standard open, ideally machine readable, formats. All data collected shall be in the format to be easily electronically transmitted and will be considered public unless the MCTI and/or beneficiaries explicitly asks otherwise.

Competences and experience required

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

- Master's degree in transport engineering or related fields,
- 10 years of general experience,
- 8 years of expertise in ITS design, planning and implementation,
- Proven track record of work in the area of ITS,
- Experience in ITS design and practical project implementation within Europe, and EU norms and standards
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Length of assignment

The consultancy is expected to commence in October 2020 and the successful applicant will be recruited part time (estimated at 450 staff-days) on a contractual basis for the period of 30 months, or any other period as may be subsequently agreed by the parties in writing.

Parts of the assignment (60%) can be home-based while other 40% of the work shall be performed within the appointed entity(ies) (Corridors of Serbia, Roads of Serbia, PIU) premises¹.

The appointed entity(ies) will provide logistical support for the work carried out in the field and preparation of the field visits. More precisely, they are responsible for provision of fully equipped office space, with access to Internet, printing, and document binding.

Terms of Payment

The Contract will be the Standard World Bank Time Based Contract. The payments will be based on quarterly basis for Services rendered at the rate(s) per day spent (subject to a maximum of eight hours per day) in accordance with the rates. The Contract costs will include remuneration and reimbursable expenses reimbursed against presentation of related documents (i.e. invoices and receipts).

Selection of Consultant

The Consultant will be selected applying Open competitive method as set out in the World Bank's Procurement Regulations for IPF Borrowers (July 2016, revised November 2017 and August 2018).

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.

¹ Due to travel restrictions stemming from the COVID-19 pandemic, some activities that require in-country presence may not be able to be performed as long as travel restrictions stay in place. In these cases, the consultant will carry out these tasks virtually in close coordination with the relevant stakeholders in Serbia.