

Standard Summary Project Fiche – IPA centralised programmes

Project Number 14: Modernisation of Railways

1. BASIC INFORMATION

- 1.1. CRIS Number:** 2011/022-585
- 1.2. Title:** Modernisation of Railways
- 1.3. ELARG Statistical code:** 03.21 European standards. Trans-European networks
- 1.4. Location:** Republic of Serbia

Implementing arrangements:

- 1.5. Contracting Authority:** EU Delegation to the Republic of Serbia
- 1.6. Implementing Agency:** EU Delegation to the Republic of Serbia
- 1.7. Beneficiary (including details of project manager):**

Ministry: Ministry of Infrastructure (MoI)

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Steering Committee: This will be chaired by the SPO and it will consist of representatives from EUD, NIPAC, MoI and PERS,

Financing:

- | | |
|---|---|
| 1.8. Overall cost (VAT excluded): | EUR 8.3 million |
| 1.9. EU contribution: | EUR 8.3 million |
| 1.10. Final date for contracting: | 2 years after the signature of the Financing Agreement (FA) |
| 1.11. Final date for execution of contracts: | 4 years after the signature of the FA |
| 1.12. Final date for disbursements: | 5 years after the signature of the FA |

2. OVERALL OBJECTIVE AND PROJECT PURPOSE

2.1. Overall Objective:

To advance the completion, modernisation and sustainable development of the Serbian railway transport system within the Pan-European Corridors X, in order to meet the required capacity levels and quality standards relevant to the TEN-T network.

2.2. Project purpose:

Preparation of project documentation for the upgrade and modernization of the railway line between Novi Sad–Subotica-Hungarian Border and preparation of project documentation for the construction of a railway bypass around the City of Niš.

2.3. Link with AP/NPAA / EP/ SAA

The **European Partnership** document emphasizes the importance for implementation of the Memorandum of Understanding (MoU) on the Development of the South East Europe Core Regional Transport Network.

The **Stabilisation and Association Agreement** (under the Title VIII, section Cooperation policies, Transport, article 108 see extract in Annex IV) stipulates: **Cooperation may notably aim at** restructuring and modernising the Serbian transport modes, improving the free movement of passengers and goods, enhancing the access to the transport market and facilities, including ports and airports. Furthermore, cooperation may support the development of multi-modal infrastructures in connection with the main Trans-European networks to reinforce regional links in South East Europe in line with the aforementioned MoU. The cooperation should lead to operating standards comparable to those in the EU as well as developing a transport system that is compatible and aligned with that of the EU and protects the environment.

The **National programme for the Integration of the Republic of Serbia into the EU (Page 158)** envisages the implementation of large infrastructure projects of special interest for the economic growth of the country (Corridor X and other projects in 2011 and 2012).

2.4. Link with MIPD

The project Modernisation of Railways falls under the Transport sector and more specifically under its objectives to support the modernization of the transport system in Serbia and to strengthen regional cooperation, as well as implement the commitments made in the framework of the regional transport initiatives.

The main objective of EU support for the transport sector is to promote sustainable economic growth. Transport is a key element in the EU's cooperation with its neighbouring countries to promote sustainable economic growth, trade and cultural exchange, employment, and to improve living conditions.

Reconstruction, maintenance and development of the transport infrastructure network is one of the priorities of the Serbian government together with the development of Corridor VII and X, also a priority objective for the EU. These corridors provide in fact improved and sustainable market connectivity between the West and the East, and contribute directly to the EU 2020 targets.

Link with National Development Plan (where applicable)

N/A

2.5. Link with national/ sectoral investment plans (where applicable)

The Needs Assessment Document 2009-2011, Transport section (Page 28), stipulates the following: “Starting from European Transport Policy and Strategy of Transport Development in the Republic of Serbia from 2008-2015 (hereinafter the Strategy), priority of the Government is to, with financial support from the EU, continue construction of road and railway infrastructure in the Republic of Serbia, as well as to establish necessary conditions for unhindered navigation in internal navigation routes, and especially on Danube and Sava”.

The National Strategy for Sustainable Development (Page 109, paragraph 2 and 4) emphasises that reconstruction, maintenance and development of transport infrastructure is one of the main priorities of Republic of Serbia.

The General Master Plan for Transport in Serbia has identified a number of railway projects for implementation till 2027; both projects covered with this PF are foreseen in the general master plan for transport as priority projects.

In the Strategy of Railway, Road, Inland Waterway, Air and Intermodal Transport Development in the Republic of Serbia, 2008–2015, the following is stated (page 41, English version): “2.9. Short-term to mid-term development of the railway network - Priority EU projects in the Republic of Serbia in the railway sector, according to the previously quoted HLG document, are defined on the List 1 - Short-term and long-term projects and they include the reconstruction and modernization of the railway: Hungarian border-Belgrade-Niš-Bulgarian border/border with FYR Macedonia, including the bridge over the Danube in Novi Sad; ...”

3 DESCRIPTION OF PROJECT

This project will prepare the technical and tender documentation for two rail modernisation projects; the first component is for railway line between Novi Sad and Subotica, and the second component is for a rail by-pass around the city of Niš.

3.1. Background and justification

General background:

Serbia's railway network includes 3,819 km of lines, which are partly located within the Pan-

Serbian rail network typology	
Single track lines	3533,2 km
Double track lines	275,5 km
Narrow gauge lines	21,7 km
Non electrified lines	2612,7 km
Electrified lines	1196,1km

European Transport Corridor X, but also within other important international routes connecting Serbia with neighbouring countries. The network is of regional and local importance and is operated by the Public Enterprise Railways of Serbia.

The railway network dates to the end of the 19th Century (the first railway line in Serbia was put into operation in 1884), and more than 55% of all lines were built then. The first railway connection between Serbia and Western Europe, the Belgrade-Subotica-Budapest line is still operational, as a one

track line from Stara Pazova to Subotica (150km). It connects three major Serbian cities Belgrade, Novi Sad and Subotica with Budapest and Vienna, and then to almost the whole Europe.

The current categorization of railway network is summarised in the adjacent table. The backbone of the Serbian rail network is part of the Pan European Transport Corridor X (Salzburg-Ljubljana-Zagreb-) Sid-Belgrade-Nis-Presevo (-Skopje-Veles-Thessaloniki) with branches from Subotica on the Hungarian border (Corridor Xb) and Dimitrovgrad on the Bulgarian border (Corridor Xc). In total the backbone represents a length of 872 km, which is 23% of the Serbian network.

Along with Corridor X, its branch lines¹ are included within the international agreements.

The efficiency of the Serbian rail network is subject to temporary speed restrictions. This is due to the unsatisfactory track conditions caused by insufficient investments in the maintenance and development. In addition, as a consequence of dissolution of the former Yugoslavia and the transition period during the 1990's, traffic on most parts of the Serbian railway network rapidly declined. Over the last 15 years the number of passengers, as well as the number of passenger trains, was in constant decline. There are external and internal reasons for this. First, the decrease of railway passenger traffic is a consequence of the war in former Yugoslavia and the economic crisis during the 1990's. Second the rail infrastructure was not maintained during that period. Third, there have been structural changes to the rail market.

¹ Branch lines: Belgrade-Vrbnica (-Bar) [AGC route E79], (Budapest-) Subotica-Nis-Presevo (-Skopje-Athens) [AGC route E85], Subotica-Vrbnica (-Vinkovci-Sarajevo) [AGC route E771] and Belgrade-Vrsac (-Timisoara-Bucharest) [AGC route E66].

The performances of rail network infrastructure, the quality of rail rolling stock, and quality of services are below European standards and do not meet modern transportation expectations and standards.

Transport services have two main market segments: International and Domestic transport. Freight transport contributes 38% of PERS' total revenues, i.e. about 45% of transport income.

The General Master Plan for Transport in Serbia² (GTMP, 2009–2027) establishes the strategic goals and steps required for improvement of Serbian transport infrastructure. The GTMP contains a list of investment projects that are designed to eliminate current network limitations and bottlenecks, and satisfy the increasing demand for transport capacity, safety and quality. It has a clear EU perspective.

First Component:

One of the priorities identified in the GTMP is the reconstruction and modernisation of the existing single track railway line between Stara Pazova, Novi Sad and Subotica (a total of 143 km) line and its doubling. This line is part of the Pan European Transport Corridor Xb and the South East Europe Core Regional Transport Network (SEECN). The concept of modernization must fulfil international criteria³ with a design speed of 160 km/h.

The Stara Pazova-Novı Sad-Subotica-Hungarian border (-Budapest) railway line consists of the following sections:

Section	Length (km)	Activity	indicative start of works
Between Stara Pazova and Novi Sad	43	Restoration & modernisation	IQ 2012
Novi Sad railway junction		Reconstruction & modernisation ⁴	2012
Subotica railway junction		Reconstruction & modernisation	2015
Between Novi Sad and Subotica	100	Restoration & modernisation double track traffic	2012
Between Subotica and the border with Hungary (a) Subotica-Kelebija (MAV)	8	Restoration & modernisation in accordance with the agreement signed between PERS and Hungarian Railways (MAV)	Not known
Between Subotica and the border with Hungary (b) Subotica-Horgos-Reske (MAV)	28		Not known

² Project financed through CARDS program.

³ Criteria set by as well as for TEN-T, European Agreement on Main International Railway Lines (AGC) and the European Agreement on Important International Combined Transport Lines and Related Installations (AGTC) and European Standards for Interoperability.

⁴ This is to meet the needs of the city of Novi Sad and technical requirements for modernization of the railway line on the route Belgrade-Budapest.

The General Design for reconstruction and modernization of existing line to take a double track has been prepared for the whole railway line Stara Pazova-Novı Sad-Subotica-Hungarian border. It includes the Preliminary Environmental Impact Assessment and the Pre-Feasibility study. According to the Law on spatial planning, the General and Preliminary Designs must be reviewed and approved by the State Revision Committee, which is authorized to suggest changes and/or give remarks that must be incorporated in the subsequent phases of documentation preparation. It is reviewing and assessing the General Design.

The first phase of improving railway Corridor Xb is the modernization of the section between Stara Pazova and Novi Sad; it is proposed to finance this with IPA Component III assistance from the Operational Programme for Economic Development (OPED: 2012-2013). The necessary co-financing will be provided by IFIs. The IPA 2008 "Project Preparation Facility" will prepare the Feasibility Study and Environmental Impact assessment while Railways of Serbia will finance preparation of the technical part of Preliminary design from their own resources.

The second phase, the section from Novi Sad to the border with Hungary, is hampered by a lack of financial resources for preparing the technical documentation. This in turn prevents Ministry of Infrastructure and PERS from negotiating funds for investment for modernisation. This will lead to delay the modernization of the railway line and junctions of this part of the Pan European Transport Corridor. The General Design for this section is in place and includes the modernisation of the railway junctions at Novi Sad and Subotica.

The length of the railway line Novi Sad – Subotica - Hungarian Border is around 100 km. Modernization of this part of railway corridor X has to be performed in accordance with the standards relevant for international corridors. Therefore, the aim of this project is to prepare technical documentation for the modernisation of the railway line Novi Sad – Subotica – Hungarian Border according to the European Agreement on Main International Railway Lines (AGC), the European Agreement on Important International Combined Transport Lines and Related Installations (AGTC) and the South East European Co-operation Process (SEECP) and the European Standards for interoperability. Preparation of such documentation requires practical knowledge on implementation of mentioned agreements. The overall investment cost is estimated at 323 million euro, while the estimated budget of the service contract for documentation preparation is EUR 6.8 million. The proportion between the estimated investment cost and documentation preparation cost is approximately 2.1%, while the usual ratio is between 3%-5%.

Second component:

In Niš, the transport network is complicated by a growing demand for railway capacity and by the limitations and legacy of the old railway network. The presence of two marshalling yards and several sidings within the city's precincts means that the city centre is surrounded by a triangular network of railway lines. These were constructed when the city was much smaller, but over a period of 125 years the city has expanded and the network is now well within the city's boundaries. Lack of investment in development of Serbian railway and road infrastructure has meant that there are 51 level crossings⁵ in Niš, with attendant congestion and low speeds, which results in inefficient road and railway services, as well as in causing accident black-spots. There are 51 rail crossings of roads and streets, 40 are level-crossings (at-grade intersections), while only 11 of them are grade separations.

⁵ 11 of the 51 crossings are "at-grade" meaning the transport intersections (be they foot, road or rail are at different heights ("grades" in American terminology).

The railway Corridor X, comprising of international routes E-70 and E-85, passing through Niš, connects Paris with Istanbul and Budapest with Athens. The road Corridor X consists of the E-75 from Belgrade to Skopje and E-85 from Niš to Sofija. There are eight (8) rail lines crossing the city, and there are 260 rail traffic movements per day of which 68% are freight movements. The total number of train movements is predicted to increase by 57% by 2020 with the split between passenger and freight nearly equal⁶.

Niš' urban and demographic development has not been matched by investment in road and railway infrastructure, consequently these networks are overloaded. The city centre has an insufficient capacity for infrastructure improvements, leaving some suburbs cut off from the centre.

In the southern part of the city, around the roads between Niš Putnička, Niška Banja, Pantelej and Crveni Krst, there are 29 intersections with railway lines, 24 are level crossings, but 5 of them are grade separations; of the latter, within the area of Niš Putnička–Crveni Krst, two are underpasses with inadequate capacity.

The issue of level crossings is acute near the Niš Putnička station and on the Niš–Niška Banja line, where along 10.5 km length of track there are 17 crossings and a single underpass at Zetska Street. The level crossings with primary city roads causes both congestion and safety issues for both road and railway traffic.

The Niš infrastructure corridor Spatial Plan and the City's General development Plan recommend that the railway corridor X should be either elevated or put into a tunnel / cuttings. This would decouple the railway from the roads in the city. An alternative solution is to build a railway bypass around Niš. Having in mind that elevation of the railway line or construction of the tunnel in the city territory requires substantial amount of funds, the alternative solution has been chosen. In addition to this, part of the railway line between Nis and Bulgarian border is the only part of the Corridor X in Serbia which is not electrified. Construction of the bypass will ensure that electrification can be completed and freight transport removed from the city centre. This solution has high potential to contribute to the further development of the City of Niš and area around Niš. In any case, the railway line requires modification according to the AGC and AGTC standards and SEECF Agreement, which envisages the electrification of the whole Corridor X.

This project fiche concerns the development of complete project documentation for two railway modernisation projects:

- Preliminary Project Design
- Environmental Impact Assessment
- Feasibility study, including Cost Benefit Analysis
- Tender documentation

Major projects applying for IPA funding need approval from the European Commission; prior to the approval the IPA regulation⁷ requires a specific set of information; this project will therefore ensure that the following information is available:

⁶ The General Master Plan for Transport in Serbia

⁷ Article 157 of Commission Regulation (EC) No 718/2007

- Information on the nature of the investment and description of its financial volume and location;
- Results of feasibility studies;
- A timetable for the implementation of the project before the closure of the related operational programme;
- An assessment of the overall socio-economic balance of the operation, based on a cost-benefit analysis and including a risk assessment, and an assessment of the expected impact on the sector concerned, on the socio-economic situation of the beneficiary country and, where the operation involves the transfer of activities from a region in a Member State, the socio-economic impact on that region;
- An analysis of the environmental impact; and
- The financing plan, showing the total financial contributions expected and the planned contribution under the IPA Regulation, as well as other EU and other external funding. The financing plan shall substantiate the required IPA grant contribution through a financial viability analysis.

3.2. Assessment of project impact, catalytic effect, sustainability and cross border impact (where applicable)

Modernisation of the Stara Pazova–Novi Sad–Subotica-Hungarian Border railway line is a national priority, given Serbia's central geographical location in the Western Balkan region; a region which needs a quality rail infrastructure and services. The railway line is pivotal to the Pan European Transport Corridor X and the South East Europe Core Transport Network that connects the EU with the Balkans and Turkey and further with the Caucasus and the Caspian Sea as well as with the Middle East to Egypt and the Red Sea. However, due to years of neglecting and insufficient investment in maintenance and infrastructure, it is now imperative to improve the capacity, safety and traffic conditions associated with the Serbian rail network. Therefore, investments are being arranged to establish a fast, safe and efficient flow of freight and passengers through the country and the region.

The selected solution for a new Niš railway bypass (which has been recommended as feasible solution due to budget restrictions) will follow the alignment of the road Corridor X (route E-80) between Pantelej and Prosek stations and run for 10 km; in addition it is an optimal solution to overcome existing problems, together with Crveni Krst Triangle (0.5 km) and the existing railway line from Crveni Krst station to Pantelej (5.5 km), which needs modernisation and maintenance. The new bypass and the modernisation works will increase the rail capacity between Bulgaria and Prahovo.

Serbia is a signatory to AGC, AGTC and SEECF, along with the Treaty establishing the Transport Community. These agreements define the necessity of having infrastructure at international standards and performance parameters. This project will contribute to achieving these standards.

The sustainability of the project is ensured as the maintenance of the railway infrastructure is PERS's responsibility and must be financed from their revenues and from the state budget. Preparation of the documentation based on which modernization of the railway Corridor X and construction of the Niš by pass will be done is essential for starting negotiation procedure with the IFIs and applying for EU grant funds. Mature projects, ready for implementation is key

factor for reaching good rate of return. In practical terms modernised Corridor X will attract more traffic, both passenger and freight. Revenues will increase and this will contribute to better maintenance of the Serbian railway network.

3.3. Results and measurable indicators:

Component 1:

Result 1.1

Project documentation for modernisation of the railway line Novi Sad–Subotica-Hungarian Border prepared in accordance with European standards for Interoperability, AGC, AGTC and the SEECP Agreement.

Indicators: Project documentation prepared within specified deadline and adopted by the State Revision Committee.

Result 1.2

Tender documentation developed in accordance with EU PRAG requirements and FIDIC conditions ready for public procurement process.

Indicators: Tender documentation approved by the Beneficiaries and the Contracting Authority and Tender forecast for works published on the EUROPEAID website.

Result 1.3

Major project request for confirmation of rate of assistance (Application for IPA intervention) prepared in line with DG REGIO requirements.

Indicators: Confirmation of the major project request for assistance received by the operating structure.

Component 2:

Result 2.1:

Project documentation for construction of the single line Niš railway bypass prepared in accordance with European standards, AGC, AGTC and the SEECP Agreement.

Indicators: Project documentation prepared within specified deadline and adopted by the State Revision Committee.

Result 2.2:

Tender documentation developed in accordance with EU PRAG requirements and FIDIC conditions ready for public procurement process.

Indicators: Tender documentation approved by the Beneficiaries and the Contracting Authority and Tender forecast for works published on the EUROPEAID website.

Result 2.3:

Major project request for confirmation of rate of assistance (Application for IPA intervention) prepared in line with DG REGIO requirements.

Indicators: Confirmation of the major project request for assistance received by the operating structure.

3.4. Activities:

Component 1:

Activities related to result 1.1:

1.1.1 Thoroughly assess the General design and pre-feasibility study for the modernisation of the railway line Stara Pazova–Subotica-Hungarian Border approved by the State Revision Committee.

1.1.2 Collect all the data necessary for preparation of the Feasibility study for modernization of the railway line Novi Sad–Subotica-Hungarian Border (including any additional geotechnical and geological surveys that may be required).

1.1.3 Carry out the Feasibility study for the modernization of the railway line Novi Sad–Subotica-Hungarian Border in accordance with relevant standards.

1.1.4 Undertake the Environmental Impact Assessment and prepare the EIA study relevant to modernisation of the railway line Novi Sad–Subotica-Hungarian border.

1.1.5 To prepare Preliminary design for modernization of the railway line Novi Sad–Subotica-Hungarian border in accordance with the relevant standards

Activities related to result 1.2:

1.2.1 Prepare technical specification for modernisation of the railway line Novi Sad–Subotica-Hungarian border in accordance with the European standards for TEN-T, including those relevant for interoperability related to the signalling system, electric traction system, and permanent way and civil engineering standards.

1.2.2 Prepare the bill of quantities on the basis of technical specification for the modernisation of the railway line Novi Sad–Subotica- Hungarian Border.

1.2.3 Prepare technical drawings for the future double track electrified railway line Novi Sad–Subotica- Hungarian Border.

1.2.4 Prepare tender documents and specimen FIDIC contract for the proposed modernisation works.

Activities related to result 1.3:

1.3.1 Prepare all necessary documents to allow the operating structure to submit a Major project request for the modernisation of the Novi Sad–Subotica railway line to the European Commission⁸.

⁸ Article 157 of Commission Regulation (EC) No 718/2007

Component 2

Activities related to result 2.1:

2.1.1 Collect all the data necessary for preparation of the Feasibility study for the Niš railway bypass (including any additional geotechnical and geological surveys that may be required).

2.1.2 Carry out the Feasibility study for the construction of the Niš railway bypass in accordance with relevant standards.

2.1.3 Undertake the Environmental impact assessment and prepare the EAI study relevant to construction of the single track Nis railway by-pass

2.1.4 Prepare Preliminary design for construction of the single rail Nis bypass in accordance relevant standards.

Activities related to result 2.2:

2.2.1 Prepare technical specification for construction of single track Niš railway bypass.

2.2.2 Prepare the bill of quantities on the basis of technical specification for construction of the Niš railway bypass.

2.2.3 Prepare technical drawings for the future single track electrified Niš railway bypass.

2.2.4 Prepare tender documents and specimen FIDIC contract for the proposed Niš railway bypass.

Activities related to result 2.3:

2.3.1 Prepare all necessary documents to allow the operating structure to submit a Major project request for the Niš railway bypass to the European Commission⁹.

This project will be implemented through two service contracts tendered on the global price basis. Activities concerning first project component will be implemented through the first service contract with an estimated amount of EUR 6.8 million, while activities related to the second project component will be implemented through the second service contract with an estimated amount of EUR 1.5 million.

3.5. Conditionality and sequencing:

Conditionality seems to be quite difficult to meet.

According to the Law on spatial planning (see Articles 131 and 133) the general conceptual design, preliminary design, pre-feasibility study and feasibility study must be reviewed and approved by the State Revision Committee. The General Design for the modernisation of the

⁹ Article 157 of Commission Regulation (EC) No 718/2007

Stara Pazova-Subotica railway line has been approved by the State Revision Committee on 8th July 2010.

PERS needs to begin drafting the Detailed Regulation Plan, which has to be accepted by the Municipalities affected by the modernization of the railway infrastructure between Novi Sad and Subotica (Hungarian Border). The Detailed Regulation Plan is an operational plan, providing the regulatory background, alignment and levelling elements, definition of corridors and transport capacity, utilities and other infrastructure, as well as planning and construction rules for the entire area covered by the Plan. Therefore, the Detailed Regulation Plan must be completed and adopted before the project documentation (as defined in activity descriptions related to results 1.1; 1.2; 1.3 and 2.1; 2.2; 2.3) can be prepared.

PERS will provide the contractor with the results of geotechnical and geological surveys of the land along the proposed route of the Novi Sad–Subotica-Hungarian Border railway line modernization. These must be ready before the start of the project as they are necessary inputs for the Feasibility study (FS) and Environmental Impact Assessment (EIA).

With regard to the preparation of the documentation for construction of the railway bypass around Nis, an important requirement is that the detailed regulation plan is prepared. Relevant authorities are working on the land acquisition issues.

Geotechnical and geological surveys for both project components (Novi Sad – Hungarian Border and Nis railway bypass) will be done before the commencement of IPA 2011 project. National institutions will assure financing of these surveys by their financing plans for 2011 and 2012. Anyhow, if necessary for the purpose of successful and qualitative preparation of project documentation, additional surveys may be financed through this respective project. Project documentation must be approved by the State revision committee; the tender dossier and land acquisition relevant to the considered railway sections have to be ready before applying for funding of the works.

In terms of contract sequencing, both service contracts should be implemented in parallel, as the activities of the two components are not linked to each other.

3.6. Linked activities

General Master Plan for Transport in Serbia (CARDS 2005)

The Serbian General Transport Master Plan (GTMP) was completed in December 2009. It is both a conceptual and modelling tool for planning the development and investment in the transport sector. It was an EU-funded project, which purpose was to develop a comprehensive and integrated multi-modal transport master plan in line with Serbian and EU transport policy. It is also a tool for the design and implementation of all modes of transport schemes in the country. It provides an outline for the future development of the Serbian transport system and dedicated software that will be able to model and assess the viability of development projects in the transport sector until 2027. An integrated transport network is important for Serbia's economic development because inter-modal synergies should be able to increase the efficiency of the overall transport sector. It is important that transport investments should take account of both the importance and different functions of the two Pan-European transport corridors (Corridor X and Corridor VII) and their integration with the remainder of the transport network across the country.

The IPA 2007 “Preparation Facilities and Technical Assistance for the Reinforcement of Administrative Capacity” provides technical assistance to support programming of IPA

Component III, including drafting the Operational Programmes for Economic Development (OP-ED for Regional Development: environment, transport and competitiveness). The project also includes training for improving the Serbian administration capacity regarding project preparation at the national and regional levels.

The IPA 2008 “Project Preparation Facility” provides technical assistance to prepare projects identified in the OP-ED. It also provides assistance to the Serbian administration for IPA 2011 and 2012 programming.

The Western Balkan Infrastructure Project Facility - WBIPF (supported through Multi-Beneficiary IPA within the Western Balkan Investment Initiative) supports preparation of infrastructural projects in the area of environment, energy, transport and social infrastructure. The aim of IPF is to prepare bankable projects for further financing by IFIs.

The Technical assistance (TA) contract for the design of the Žeželj bridge (CARDS 2004) began in 2008 to produce detailed design and specifications for the bridge; the new bridge over the Danube will occupy the same location as the original bridge thus restoring the alignment of the railway Pan European Transport Corridor Xb.

The TA contract for supervision of construction of the bridge (IPA 2008) will supervise the reconstruction of the Zezelj rail-road bridge in Novi Sad. It will include: (i) the independent check of the design prepared by the Design and Build Contractor for the bridge; (ii) supervision the construction works in the factory and on site; (iii) issuing the final acceptance of the bridge; and (iv) monitor the project implementation and bridge reconstruction during the defect notification period.

The Žeželj Bridge – Rebuilding Serbian infrastructure (IPA 2009) project will produce the structural steel for the bridge and prepare the foundations of the ramps to the bridge. It will also dismantle the temporary bridge and its foundations.

3.7. Lessons learned

The main lesson is that coordination with stakeholders is critical to the timely and proper implementation and completion of project phases. This lesson is pertinent specifically to this Project because of the necessity of information exchange between beneficiaries and contractor. PERS and the Ministry of Infrastructure must provide all inputs necessary for project preparation and tender documentation in time. Otherwise, the contractor will not be able to perform his tasks in the desired period of time.

4. INDICATIVE BUDGET (amounts in EUR million)

Title: Modernisation of Railways			TOTAL EXP.RE	SOURCES OF FUNDING								
				IPA EU CONTRIBUTION		NATIONAL CONTRIBUTION					PRIVATE CONTRIBUTION	
ACTIVITIES	IB (1)	INV (1)	EUR (a) = (b) + (c) + (d)	EUR (b)	%(2)	Total EUR (c)= (x) + (y) + (z)	% (2)	Central EUR (x)	Regional/ Local EUR (y)	IFIs EUR (z)	EUR (d)	% (2)
Contract 1	X		6.8	6.8	100%							-
Contract 2	X		1.5	1.5	100%							
TOTAL IB			8.3	8.3	100%							
TOTAL INV												
TOTAL PROJECT			8.3	8.3	100%							

Amounts net of VAT

- (1) In the Activity row use "X" to identify whether IB or INV
- (2) Expressed in % of sum of each line of the **Total** Expenditure (column (a))

5. INDICATIVE IMPLEMENTATION SCHEDULE (periods broken down per quarter)

Contracts	Start of Tendering	Signature of contract	Project Completion
Contract 1.1	T+1Q	T+4Q	T+12Q
Contract 2.1	T+1Q	T+4Q	T+10Q

All projects should in principle be ready for tendering in the 1ST Quarter following the signature of the FA

6. CROSS CUTTING ISSUES (where applicable)

6.1 Equal Opportunity

The consultant will ensure that their human resource policies and procedures take account of gender differences. Criteria should be introduced to ensure that gender equality measures are pursued.

6.2 Environment

The project has no intrinsic negative effect on the environment. Furthermore, this project of the modernization of part of railway of Corridor X will produce a positive environmental impact, so future investment activities will be done in line with respective environmental standards.

6.3 Minorities

The project will be implemented in a way that does not discriminate against any individual on the grounds of their ethnic origin, race or religion.

ANNEXES

- I. Log frame in Standard Format
- II. Amounts contracted and Disbursed per Quarter over the full duration of Programme
- III. Description of Institutional Framework
- IV. Reference to laws, regulations and strategic documents:
 - Reference list of relevant laws and regulations
 - Reference to AP /NPAA / EP / SAA
 - Reference to MIPD
 - Reference to National Development Plan
 - Reference to national / sectoral investment plans
- V. Details per EU funded contract (*) where applicable

ANNEX I: Logical framework matrix in standard format

LOGFRAME PLANNING MATRIX FOR Project Fiche			
Title: Modernisation of Railways		Contracting period expires: 2 years after the signature of the FA	Disbursement period expires: 5 years after the signature of the FA
		Total budget: EUR 8.3 million	IPA budget: EUR 8.3 million
Overall objective	Objectively verifiable indicators	Sources of Verification	
To advance the completion, modernisation and sustainable development of the Serbian railway transport system within the Pan-European Corridors X , to the required capacity levels and quality standards relevant to the TEN-T network	Railway line Novi Sad Subotica of a quality relevant to TEN-T, including the Interoperability	Annual Reports of the European Railway Agency	
Project purpose	Objectively verifiable indicators	Sources of Verification	Assumptions
To prepare project documentation for the upgrade and modernization of the railway line between Novi Sad–Subotica and construction of a railway bypass around City of Niš.	Project documentation prepared timely and adopted by the State Revision Committee.	State Revision Committee report	The State Revision Committee report will be delivered in a timely manner.

Results	Objectively verifiable indicators	Sources of Verification	Assumptions
<u>Component 1:</u> 1.1 Project documentation for modernisation of the railway line Novi Sad–Subotica prepared in accordance with European standards for Interoperability, AGC, AGTC and the SEECF Agreement.	Feasibility Study and EIA Study, Final Project Design complete and approved	Monitoring progress reports Construction permit issued	Geotechnical and geological surveys are provided to the contractor by PERS.
1.2 Tender documentation developed in accordance with EU PRAG requirements and FIDIC conditions ready for public procurement process.	Tender document approved by the Beneficiaries and the Contracting Authority	Monitoring progress report Final report	
1.3 Major project request for confirmation of rate of assistance (Application for IPA intervention) prepared in line with DG REGIO requirements.	Application accepted by the Contracting Authority	Final report	
<u>Component 2:</u> 2.1 Project documentation for construction of the single line Niš railway bypass prepared in accordance European standards, AGC, AGTC and the SEECF Agreement.	Feasibility Study and EIA Study, Final Project Design complete and approved	Monitoring progress reports Construction permit issued	Geotechnical and geological surveys are provided to the contractor by PERS.
2.2 Tender documentation developed in accordance with EU PRAG requirements and FIDIC conditions ready for public procurement process.	Tender document approved by the Beneficiaries and the Contracting Authority	Monitoring progress report Final report	
2.3 Major project request for confirmation of rate of assistance (Application for IPA financing) prepared in	Application accepted by the Contracting Authority	Final report	

Results	Objectively verifiable indicators	Sources of Verification	Assumptions
line with DG REGIO requirements.			

Activities	Means /Costs	Assumptions
<p>Component 1</p> <p>Activities related to result 1.1:</p> <p>1.1.1 Thoroughly assess General design and pre-feasibility study for the modernization of the railway line Stara Pazova–Subotica approved by the State Revision Committee.</p> <p>1.1.2 Collect all the data necessary for preparation of the Feasibility study for modernization of the railway line Novi Sad–Subotica-Hungarian border (including any additional geotechnical and geological surveys that may be required).</p> <p>1.1.3 Carry out the Feasibility study for the modernization of the railway line Novi Sad – Subotica-Hungarian border in accordance with relevant standards.</p> <p>1.1.4 To undertake the environmental impact assessment and prepare the EIA study relevant to modernization of the railway line Novi Sad – Subotica-Hungarian border.</p> <p>1.1.5 To prepare Preliminary design for modernization of the railway line Novi Sad–Subotica-Hungarian border in accordance with the relevant standards</p> <p>Activities related to result 1.2:</p> <p>1.2.1 Preparation of technical specification for modernization of the railway line Novi Sad – Subotica- Hungarian border in accordance with the European standards for TEN-T, including those relevant for interoperability related to the signalling system, electric traction system, and permanent way and civil engineering standards.</p> <p>1.2.2 To prepare the bill of quantities on the basis of technical specification for the modernization of the railway line Novi Sad – Subotica - Hungarian border.</p> <p>1.2.3 Preparation of drawings for the future double tract electrified railway line Novi Sad – Subotica-Hungarian border</p> <p>1.2.4 Prepare tender documents and specimen FIDIC contract for the proposed modernisation works.</p> <p>Activities related to result 1.3:</p> <p>1.3.1 Preparation of the Major project request for confirmation of rate of assistance</p>	<p>One service contract for preparation of the technical documentation for modernization of the railway line Novi Sad – Subotica – Hungarian Border:</p> <p>EUR 6,800,000</p>	

Activities	Means /Costs	Assumptions
(Application for IPA financing) according to the DG REGIO requirements		
<p><u>Component 2</u></p> <p>Activities related to result 2.1:</p> <p>2.1.1 Collect all the data necessary for preparation of the Feasibility study for modernization of the railway line Niš (including any additional geotechnical and geological surveys that may be required).</p> <p>2.1.2 Carry out the Feasibility study for the construction of the Niš railway bypass in accordance with relevant standards</p> <p>2.1.3 To undertake the Environmental impact assessment and prepare the EIA study relevant to construction of the single track Nis railway by-pass</p> <p>2.1.4 To prepare Preliminary design for construction of the single rail Nis bypass in accordance relevant standards.</p> <p>Activities related to result 2.2:</p> <p>2.2.1 Prepare technical specification for construction of single track Niš railway bypass.</p> <p>2.2.2 Prepare the bill of quantities on the basis of technical specification for construction of the Niš railway bypass.</p> <p>2.2.3 Preparation of drawings for the future single tract electrified railway line Niš</p> <p>2.2.4 Prepare tender documents and specimen FIDIC contract for the proposed modernisation works.</p> <p>Activities related to result 2.3:</p> <p>2.3.1 Preparation of the Major project request for confirmation of rate of assistance (Application for IPA intervention) according to the DG REGIO requirements</p>	<p>One service contract for preparation of the technical documentation for construction Nis railway – bypass</p> <p>EUR 1,500,000</p>	

Pre-conditions: General Design for the modernisation of the Stara Pazova-Subotica railway line has been approved by the State Revision Committee. PERS has drafted and submitted the Detailed Regulation Plan.

ANNEX II: Indicative amounts (in EUR million) Contracted and disbursed by quarter for the project

Contracted	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Total
Service contract 1				6.8									6.8
Service contract 2				1.5									1.5
Cumulated				8.3									8.3
Disbursed	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Total
Service contract 1				4.08								2.72	6.8
Service contract 2				0.9						0.6			1.5
Cumulated				4.98	4.98	4.98	4.98	4.98	4.98	5.58	5.58	8.3	8.3

ANNEX III Description of Institutional Framework

The transport sector is administered by the Ministry of Infrastructure (MoI) itself and through Directorates that deal with the relevant sector as road, railways, including intermodality, inland waterway transport and air. MoI performs public administration duties in these spheres, which includes:

- ✓ obligation and ownership rights relations;
- ✓ monitoring;
- ✓ safety and technical-technological system structure;
- ✓ status of foreign carriers in transport of goods and passengers on the territory of the Republic of Serbia;
- ✓ navigable waterways where international and multinational navigation regime is valid;
- ✓ development strategy of transport system;
- ✓ development plans and other plans in relation to structure, system organization, and relations in transport of passengers and goods;
- ✓ approval of construction and usage of transport infrastructure and equipment, and capacities which are in the function of utilization of traffic infrastructure;
- ✓ financial and technical control organization.

MoI consists of the following organizational units:

- Secretariat of the ministry
- Cabinet of the minister

- Sector for Road Transport
- Sector for Roads and Road Safety
- Sector for Railways and Intermodal Transport
- Sector for Air Traffic
- Inland Waterway Transport and Navigation Safety Sector
- EU Integration Sector

MoI is responsible for the public administration affairs in the area of railway, road, water and air traffic; specifically these pertain to:

- ✓ the organisation and establishment of the traffic system; realisation of the traffic infrastructure construction projects;
- ✓ inner and international transport and intermodal transport; organisation and safety of the technical and technological traffic system;
- ✓ obligations and proprietary legal relations; inspection control; strategy for traffic development, development plans and plans related to the organisation of the traffic system and organisation of transport;
- ✓ issuance of the certificate to use traffic facility or infrastructure;
- ✓ certification of approval to use vehicles, equipment and vehicle parts; organisation of financial and technical control;
- ✓ international affairs in the area of traffic; and
- ✓ incentive measures for research and development in the area of traffic, as well as other affairs specified by the law.

Public enterprise Serbian Railways: 6 Nemanjina st., 11000 Belgrade, Serbia; tel: +381 11 3614 811; +381 11 3616 722

Basic activity: carriage of passengers and goods, hauling the trains and maintenance of traction units, trains and rolling stock, track maintenance and inspection, inspection of other

permanent way and station structures and installations, maintenance and assembling of devices, plants and installations, etc.

Annex IV. Reference to laws, regulations and strategic documents:

The **European Partnership** document emphasizes the importance of the implementation of the Memorandum of Understanding (MoU) on the Development of the South East Europe Core Regional Transport Network.

The **Stabilisation and Association Agreement** (under the Title VIII, section Cooperation policies, Transport, article 108 see extract in Annex IV) stipulates: **Cooperation may notably aim at restructuring** and modernising the Serbian transport modes, improving the free movement of passengers and goods, enhancing the access to the transport market and facilities, including ports and airports. Furthermore cooperation may support the development of multi-modal infrastructures in connection with the main Trans-European networks, notably to reinforce regional links in South East Europe in line with the Memorandum of Understanding on the development of the Core Regional Transport Network. The objective of the cooperation should be to achieve operating standards comparable to those in the EU as well as to develop a transport system in Serbia compatible and aligned with the EU system and improving protection of the environment in transport.

The **National program for the Integration of the Republic of Serbia into the EU (Page 158)** envisages that the following activities will be particularly significant for the development of the Serbian economy in 2011 and 2012:

- Implementation of large infrastructure projects of special interest for the economic growth of the country (Corridor 10 and other projects).

The **Needs Assessment Document 2009-2011**, Transport section, (Page 28), stipulates following: „Starting from European Transport Policy and Strategy of Transport Development in the Republic of Serbia from 2008-2015 (hereinafter the Strategy), priority of the Government is to, with financial support from the EU, continue construction of road and railway infrastructure in the Republic of Serbia, as well as to establish necessary conditions for unhindered navigation in internal navigation routes, and especially on Danube and Sava.“

The **National Strategy for Sustainable Development** (Page 109, paragraph 2 and 4) emphasises that reconstruction, maintenance and development of transport infrastructure is one of the main priorities of Republic of Serbia.

Law on planning and construction (Official Gazette RS 72/2009)

Annex V. Details per EU funded contract (where applicable):

The project will be implemented through two service contracts, tendered on the global price basis.

Activities to be done through first service contract:

- Thoroughly assess General design and pre-feasibility study for the modernization of the railway line Stara Pazova–Subotica approved by the State Revision Committee.
- Collect all the data necessary for preparation of the Feasibility study for modernization of the railway line Novi Sad–Subotica-Hungarian border (including any additional geotechnical and geological surveys that may be required).
- Carry out the Feasibility study for the modernization of the railway line Novi Sad – Subotica-Hungarian border in accordance with relevant standards.
- To undertake the Environmental impact assessment and prepare the EAI study relevant to modernization of the railway line Novi Sad – Subotica-Hungarian border .
- Preparation of technical specification for modernization of the railway line Novi Sad – Subotica in accordance with the European standards for TEN-T, including those relevant for interoperability related to the signalling system, electric traction system, and permanent way and civil engineering standards.
- To prepare the bill of quantities on the basis of technical specification for the modernization of the railway line Novi Sad – Subotica - Hungarian border.
- Preparation of drawings for the future double track electrified railway line Novi Sad – Subotica-Hungarian border
- Prepare tender documents and specimen FIDIC contract for the proposed modernisation works.
- Preparation of the Major project request for confirmation of rate of assistance (Application for IPA financing) according to the DG REGIO requirements

Activities to be done through second service contract:

- Collect all the data necessary for preparation of the Feasibility study for modernization of the railway line Niš (including any additional geotechnical and geological surveys that may be required).
- Carry out the Feasibility study for the construction of the Niš railway bypass in accordance with relevant standards
- To undertake the Environmental impact assessment and prepare the EAI study relevant to construction of the single track Nis railway by-pass
- Prepare technical specification for construction of single track Niš railway bypass.
- Prepare the bill of quantities on the basis of technical specification for construction of the Niš railway bypass.
- Preparation of drawings for the future single track electrified railway line Niš
- Prepare tender documents and specimen FIDIC contract for the proposed modernisation works.

- Preparation of the Major project request for confirmation of rate of assistance (Application for IPA intervention) according to the DG REGIO requirements

Annex VI-Railway network of Serbia

