

Standard Summary Project Fiche – IPA centralised programmes

Project number 24: System for the analysis of track conditions

1 BASIC INFORMATION

- 1.1 CRIS Number:** [2008/020-406](#)
- 1.2 Title:** **System for the analysis of track conditions Survey System**
- 1.3 ELARG statistical code:** 03.14
- 1.4 Location:** Republic of Serbia

Implementing arrangements:

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

Project Manager: Assistant Minister for Infrastructure.

Members of the Steering Committee (SC) will be:

- Representative of Ministry of Infrastructure (Project Manager-Chair)
- The EC Delegation Programme Manager for Infrastructure
- Project Team Leader
- PE „Serbian Railways“
- Railway Directorate
- Other representatives as required

The SC will provide continuous guidance and advice on policy matters. It will be responsible for monitoring and evaluation of achieved results. The SC will meet at least every 3 months.

An operational working group will be established if required to assist guidance of project implementation. Members of the working group will be delegated by the key institutions included in the project implementation. Regional and municipal institutions may also participate in project implementation.

Financing:

- 1.8 Overall cost:** **3.000.000 EUR**
- 1.9 EU contribution:** **3.000.000 EUR**
- 1.10 Final date for contracting:** 3 years after the signature of the Financing Agreement
- 1.11 Final date for execution of contracts:** 5 years after the signature of the Financing Agreement
- 1.12 Final date for disbursements:** 6 years after the signature of the Financing Agreement

2 OVERALL OBJECTIVE AND PROJECT PURPOSE

2.1 Overall Objective:

To contribute to improved performance and reliability of the railway transport sector in Serbia, in pursuance of EU requirements.



2.2 Project purpose:

To develop and introduce a track infrastructure survey and information system as an assistance in planning of railway line maintenance and reconstruction and accurate monitoring of train movement, in accordance with EU standards.

2.3 Link with AP/NPAA / EP/ SAA

AP and NPAA are not applicable.

European Partnership

The Council Decision of 14 June 2004 P 31, Medium-Term Priorities: *“In S e r b i a : adopt and implement a transport policy strategy (road, rail, aviation and waterways). Strengthen capacity building, including project preparation for large investments. Earmark sufficient resources for the maintenance of transport infrastructures and institutions”*. Application of a modern track survey system and creation of a reference database would create the necessary prerequisites for efficient and cost-effective planning of maintenance, and of investments for rehabilitation of parts of railway infrastructure as well as precise and accurate data required for projects of new railway infrastructure capacity.

The Plan for the Implementation of EP Priorities, point 7.4.3 states *“Adopt and implement a national transport strategy (road, rail, aviation and waterways), with attention to the economic viability of the sector”*. Concerning rail transport, implementation is dependent on basic information such as that which will be provided by the survey system.

The EU White Paper, adopted in 2001 and representing the European Transport Policy to 2010, is a strategic framework for preparation of this project proposal. The White Paper plans for a 20% re-distribution of freight flows in Europe from roads to railways and waterways by 2010 and consequently the necessity of investment in the development of railway infrastructure in respect of railway traffic safety and reliability.

European Agreement on Main International Railway Lines (AGC) and European Agreement on Important International Combined Transport Lines (AGTC) prescribe the required features of infrastructure that are necessary for functioning in line with the international standards and agreed performance parameters.

In accordance with Article 4 of the Directive 2001/16/EC, Trans – European conventional railway systems, their sub-systems and elements must fulfill basic requirements stipulated in Annex III of the Directive which is related to safety, reliability, improved flexibility and technical availability. This project will provide the basis for fulfilling these requirements.

2.4 Link with MIPD

The MIPD page 6, section 1.2, Objectives of pre-accession assistance, European standards, includes *“cross-cutting issues which shall be reflected as horizontal objectives in all activities programmed under IPA”*. As part of these, *“Environmental considerations will be duly reflected in all IPA financed activities....This is particularly relevant where there is a potentially high environmental impact,”* In laying the basis for a modern rail system in Serbia, this project will make a serious contribution to environmental improvements by assisting efforts to shift transport from road to rail at a key section of the entire regional network.

The MIPD section 2.2.2.,1 Main priorities and objectives, states: *“Improving infrastructures in order to promote business related activities and public services and to facilitate economic and cultural links within Europe. The areas of energy, transport, tourism, environment, health, information and communication technology, education, etc. have to be developed as cornerstones of future economic growth”*.

Section 2.2.3.1 Main Priorities and Objectives contains the following: *“Transport: Support Transport Authorities to meet demands of EU legislation; Implement the Memorandum of Understanding on the Core Regional Transport Network and support regional infrastructure investments (SEETO Multi-annual Plan 2006-2010), multi-modal transport network and*

transshipment facilities; facilitation of IFI investment through project preparation / implementation in Euro-Corridors.

This project will address these issues by enabling the Serbian railways to establish a permanent monitoring and thus improvement of a central element in improving key European transport corridors.

2.5 Link with National Development Plan (where applicable) n/a

2.6 Link with national / sectoral plans

The National Strategy for Economic Development envisages investment into transport corridors to achieve the integration of Serbia's transport system into the European system and therewith the creation of conditions for Serbia's economy to participate more efficiently in the European market.

With the aim of satisfying European standards, market requirements and competitive performance, the Serbian EU Accession Strategy emphasizes that it is necessary to stimulate the development of railway infrastructure to enable faster fulfilment of accession requirements in the transport sector.

Within the Memorandum on the Budget, Economic and Fiscal Policy for 2007 with 2008 and 2009 projections, one of the basic aims of transport policy is to increase traffic safety as well as technical and technological modernization of the railway infrastructure and transport capacities.

This project proposal is directly linked with the implementation of the Strategy of Serbian transportation development which emphasizes quality of transport services by creating a database on infrastructure capacities as a basis for modernization of railway infrastructure. The Strategy of Serbian Transport Development emphasizes the need for a reliable digital system for the real time capacity of railway infrastructure.

PE "Serbian Railways" 2006-2010 Strategic Business Plan envisages further modernization of Serbian Railways business system and the introduction of modern systems for identifying and monitoring of railway infrastructure condition.

This project will respond to each of these strategies by laying the basis for quality assurance in the rail track infrastructure.

3 DESCRIPTION OF PROJECT

3.1 Background and justification:

The first railway line in Serbia was opened to traffic in 1884, and more than 55% of all Serbian lines were constructed in the nineteenth century. The Serbian railway network has 276 km of double-track line, 1,247 km electrified, 865 bridges, 3,803 cuttings, 311 tunnels, 697 stations and halts. Electrical and technical equipment is from the period 1969 - 2000. On 52% of the line length the speed is less than 60 km/h, and only on 3.2% over 100 km/h; carrying capacity is less than 18t on 39% of line length.

The position of Serbia in the European railway network is such that it forms part of the shortest traffic line between West and South-East Europe. Serbian Railway lines are therefore included in the axis of high performance railway networks in South-East Europe (SEECF agreement) Pan-European Corridor X. However, as we can see from the figures above, high performance has yet to become a reality.

As Europe moves away from national operator models towards the separation of infrastructure and operator functions, the quality and reliability of the track infrastructure takes on an ever-increasing importance. Furthermore, given Serbia's central geographical location in the Balkan region, the need for quality infrastructure may be seen to be essential for rail transport throughout the region. This is additionally emphasised by initiatives to limit unnecessary road freight transport and the establishment of a flexible inter-modal transport



system in the Balkans that can reduce environmental damage and assure the most efficient modes of transport within the region and across it in a wider EU context.

In planning its maintenance functions, the Serbian Railways urgently needs to map the existing conditions in a modern system and establish a permanent monitoring of their condition. The parameters of Serbian Railway lines should be harmonized with the parameters of European railway networks to facilitate interoperability and raising capacity to higher technical levels.

This project proposal is directly linked with the Transport Master Plan in Serbia. Furthermore the European agreement on the most important international railways (AGC), the European agreement on important international lines for combined transport (AGTC) and SEECF agreement define the necessary international infrastructure standards and agreed performance parameters. When the planned system for line condition analysis is introduced, data on the Serbian Railway network will be constantly available and updated, which will create conditions for regular maintenance and the assurance of parameters at the required level.

The project is also based on the implementation of the Strategy of Serbian Transport Development which emphasizes quality of transport services by creating a GIS database on infrastructure capacities as a basis for modernization and reconstruction of railway infrastructure.

The Serbian Railways lack a reliable and quality geodetic survey of railway infrastructure – lines, stations, structures, overhead lines, signals, cables, platforms, bridges and tunnels. It does not dispose of a contemporary geodetic system so that present geodetic surveys are realized in a classic and inaccurate manner. This methodology of diagnostic recording and identifying of infrastructure condition is costly and time-consuming, and results in reduced efficiency of design, implementation of projects and maintenance of capacities. To secure the conditions for safe, regular and reliable traffic on the Serbian Railway network, it is necessary to obtain real, precise, and systematized data for designing infrastructure facilities and management. This project for the introduction of a modern railway track infrastructure survey system is therefore proposed.

The modern introduction of precise and efficient satellite geodetic measuring methods has brought a need to redefine the methodology of all geodetic surveying activities, and the design of associated regulations. The reason for this is not only the high-precision that can be achieved but also the fact that these results are global in character and relate to a uniform coordination system.

With regard to specificity of designing, works realization and infrastructure maintenance, the System for the Analysis of Track Condition should provide solutions for:

- Insufficient and unreliable data on infrastructure condition
- Slow infrastructure condition recording
- Limited options to use the collected data
- Insufficient data unity on infrastructure condition on the network
- Slow and inefficient monitoring of performed infrastructure works
- Limited options of data exchange on infrastructure condition with neighbouring countries and integration into the European railway network
- High maintenance costs.

Suitable GIS-based systems for the management of all track infrastructure exist in several EU countries. Rather than developing its own unique system, the Serbian Railways expects to hire a contractor that has designed one of the best existing European ones, and develop a system on this basis, adapted to the particular needs of Serbia. This will save costs, make the system much more rapidly deployable, ensure reliability through a system that has already been tested, and enhance regional integration and standardisation.

A working group for data intelligence, analysis and database updating on infrastructure conditions will be formed to collaborate with experts who install and adapt the system. The

Working Group will subsequently manage further regular recording and maintenance of the system.

Railways of Serbia already possess good rolling stock for track and Overhead Contact Line (OCL) recording. The track recording coach is a recent purchase that is fully up to date. For the OCL recording, some minor upgrading is required. This will be carried out in parallel by Railways of Serbia so that full use can immediately be made of the new system.

3.2 Assessment of project impact, catalytic effect, sustainability and cross border impact

Implementation of this project would enable a reliable identification and monitoring of civil and electrical infrastructure on all lines and stations on the railway network in Serbia, allowing objective determination of future investment projects and providing the necessary conditions for reliable exploitation of infrastructure capacities. It will enable the reconciliation of line parameters with those of European networks, and have a positive impact on the implementation of other related systems, such as the system for tracking train movements.

With regard to specificity of design, works and infrastructure maintenance, the System for the Analysis of Track Condition, provides solutions enabling the following:

- Recording and marking of railway infrastructure is at least 3 to 5 times faster in relation to classical methods
- A wide spectrum of precision is possible, ranging from centimetre to millimetre precision
- Homogeneous data precision on the whole region covered by the network
- Fast and efficient control of performed construction works
- Improvement of connections with neighbouring countries and integration into the European railway network
- Reduced maintenance costs .

Data will be collected on the existing condition of railway infrastructure. On this basis a reference database of railway infrastructure facilities compatible with other bases of the European railway network will be formed.

Placing existing track status data projected solutions and the process of project implementation within a GIS will enable insight into the needs, scope, and dynamics of interventions in railway infrastructure. This will be of great use for all future designs and definitions of priority activities connected with reconstruction and revitalization of railway infrastructure in the region of Serbia.

3.3 Results and measurable indicators

1. System procedures defined and GIS reference database developed and tested

Measurable indicators for reviewing progress include:

- No. of procedures and instructions defined
- Stage of software development

2. Key track data recorded and entered to bring the system into service.

Measurable indicators for reviewing progress include:

- No. of km of track surveyed

3. Additional hardware needs defined

Measurable indicators for reviewing progress include:

- stage of preparation of each type of required hardware



4. Personnel trained

Measurable indicators for reviewing progress include:

- Skills of personnel
- No. of training events held
- No. of participants at training events

3.4 Activities:

Activities related to result 1 - System procedures defined and GIS reference database developed and tested

- 1.1 Cooperation between contractor and working group to define all aspects of the information system, and how the software should be adapted to Serbian conditions.
- 1.2 Defining instructions and procedures for creating the database and regular updating, regarding
 - a) tracks and OCL
 - b) installations (railway, public utilities and others) on railway land, linked to the track
 - c) other facilities on railway land
- 1.3 Adapt the software for line condition analysis and create the database

Activities related to result 2 - Key track data recorded and entered to bring the system into service.

- 2.1 Record basis information of 1,895 km of main lines to initiate the database
- 2.2 Enter the data in the database and perform tests to ensure full functionality

Activities related to result 3 – Hardware analysed for procurement

- 3.1 Define characteristics of any hardware required for full utility of the system
- 3.2 Procure hardware (to be carried out by PE Railways of Serbia)

Activities related to result 4 – Personnel trained

- 4.1 Conduct Training Needs Analysis
- 4.2 Design training programme
- 4.3 Conduct training
- 4.4 Evaluate training and design permanent training plan.
Types of training to be envisaged:
 - Training for experts who will be performing analyses
 - Training for the enterprise management
 - Training for other users in the enterprise

Contracting Arrangement:

The project will be implemented through one service contract for Technical Assistance.

3.6 Conditionality and sequencing:

Serbian Railways is intending shortly to construct a system of stationary GPS station networks for permanent monitoring of infrastructure conditions, in order to realise this project and others. This must occur rapidly enough to interlock with the project.

Serbian Railways will procure the necessary IT hardware and other missing hardware as defined by this project, at the appropriate times.

3.7 Linked activities

During the previous period of time Serbian Railways have realized a range of projects and activities in order to revitalize and modernize infrastructure capacities. Serbian Railways have realized their activities in the fields of construction, modernization and reconstruction of railway infrastructure and rolling stock mostly through the Railways Rehabilitation Project I and Railways Rehabilitation Project II which are financed from the proceeds of the loans granted by the European Investment Bank and the European Bank for Reconstruction and Development.

Within the Railway Rehabilitation Project I which is financed from the loan granted by the European Bank for Reconstruction and Development (EBRD) were procured track examination vehicles M-80 and M-SAT for recording of data on tracks and track elements.

Realization of the project Track Condition Survey System is a logical upgrading of the previous activities and will help the realization of all the infrastructure projects to come.

3.8 Lessons learned

The entire project Track Condition Survey System has a developing character for the Serbian railway because it increases the level of knowledge of railway engineers, it increases the level of the railway process technology and there are expectations that, after the project realization, the efficiency of the railway will be increased, i.e. its competitiveness in the transport market.



4. INDICATIVE BUDGET (AMOUNTS IN €)

			SOURCES OF FUNDING									
			TOTAL EXP.RE	IPA COMMUNITY 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)
Activity 1												
contract 1.1	X		3,000,000	3,000,000	100							-
TOTAL IB			3,000,000	3,000,000	100							
TOTAL INV												
TOTAL PROJECT			3,000,000	3,000,000	100							

NOTE: DO NOT MIX IB AND INV IN THE SAME ACTIVITY ROW. USE SEPARATE ROW

Amounts net of VAT

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



5.INDICATIVE IMPLEMENTATION SCHEDULE

Contracts	Start of Tendering	Signing the contract	Project Completion
Contract 1.1	T + 1Q	T + 4Q	T + 12Q

6.CROSS CUTTING ISSUES

6.1. Equal Opportunity

Efficient functioning of traffic in general and therefore railway traffic itself enables better accessibility and greater mobility of the population, which has a positive effect on gender equality by creating new economic possibilities for women.

In all the phases of design and implementation of the project, gender equality will be present. By having equal opportunities for participation in the design of project documentation, realization of the project and exploitation of capacities, economically independent women means improvement of the economic status of families, which also affects the total economic growth.

6.2. Environment

Railway traffic, after inland waterway traffic, has the least negative impact on the environment. It has an important comparative advantage I transport of goods and people, and will come to play an increasing role in the future. Developing the railways is an essential part of improving inter-modal transport.

Realization of this project will have many positive impacts on the environment.

6.3. Minority and vulnerable groups

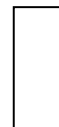
This project will speed up the development of the integrated transport network that will contribute to the improvement of socio economic growth in the region, as well as facilitate the movement of people and goods at lower cost. Minorities and vulnerable groups are always the first to suffer from poor services and environment, and will gain non-proportionately from the kind of improvement that this project will bring.



ANNEX I: LOGICAL FRAMEWORK MATRIX

ANNEX I: Logical framework matrix in standard format		System for the analysis of track conditions	
		Contracting period expires 3 years after the signature of the Financing Agreement	Disbursement period expires 6 years after the signature of the Financing Agreement
		Total budget: 3 MEuro	IPA budget: 3 MEuro
Overall objective	Objectively verifiable indicators	Sources of Verification	
To contribute to improved performance and reliability of the railway transport sector in Serbia, in pursuance of EU requirements.	<ul style="list-style-type: none"> ▪ Journey times ▪ Accident / incident statistics 	<ul style="list-style-type: none"> ▪ Railway company reports ▪ Maintenance statistics ▪ Report on PE Serbian Railways Business Plan Implementation 	
Project purpose	Objectively verifiable indicators	Sources of Verification	Assumptions
To develop and introduce a track infrastructure survey and information system as an assistance in planning of railway line maintenance and reconstruction and accurate monitoring of train movement, in accordance with EU standards.	<ul style="list-style-type: none"> ▪ Frequency of unforeseen maintenance works ▪ Execution time of maintenance works ▪ Speed and precision of recording and marking of railway infrastructure 	<ul style="list-style-type: none"> ▪ Maintenance reports ▪ Project reports 	Railway company performs the required associated technical investments
Results	Objectively verifiable indicators	Sources of Verification	Assumptions
Result 1 - System procedures defined and GIS reference database developed and tested	<ul style="list-style-type: none"> ▪ No. of procedures and instructions defined ▪ Stage of software development 	<ul style="list-style-type: none"> ▪ Project reports 	Continuous support by the competent ministries and enterprise management for the project implementation
Result 2 - Key track data recorded and entered to bring the system into service.	<ul style="list-style-type: none"> ▪ No. of km of track surveyed ▪ No. of items recorded in database 	<ul style="list-style-type: none"> ▪ Project reports 	
Result 3 - Additional hardware needs defined	<ul style="list-style-type: none"> ▪ stage of preparation of each type of 	Project reports	
Result 4 - Personnel trained	<ul style="list-style-type: none"> ▪ Skills of personnel ▪ No. of training events held ▪ No. of participants at training events 	<ul style="list-style-type: none"> ▪ Project reports ▪ Post-training evaluations 	

Activities	Means	Costs	Assumptions
<p>Activities related to result 1 - System procedures defined and GIS reference database developed and tested</p> <p>1.1 Cooperation between contractor and working group to define all aspects of the information system, and how the software should be adapted to Serbian conditions.</p> <p>1.2 Defining instructions and procedures for creating the database and regular updating, regarding</p> <p>1.3 Adapt the software for line condition analysis and create the database</p>	Service contract	3 million euro	Continued management support for the project.
<p>Activities related to result 2 Key track data recorded and entered to bring the system into service.</p> <p>2.1 Record basis information of 1,895 km of main lines to initiate the database</p> <p>2.2 Enter the data in the database and perform tests to ensure full functionality</p>			
<p>Activities related to result 3 Hardware analysed</p> <p>3.1 Define characteristics of any hardware required for full utility of the system</p> <p>3.2 Procure hardware (to be carried out by PE Railways of Serbia)</p>			
<p>Activities related to result 4 Personnel trained</p> <p>4.1 Conduct Training Needs Analysis</p> <p>4.2 Design training programme</p> <p>4.3 Conduct training</p> <p>4.4 Evaluate training and design permanent training plan.</p>			



ANNEX II: AMOUNTS (IN ₪) CONTRACTED AND DISBURSED BY QUARTER FOR THE PROJECT
(IPA contribution only)

Contracted	QR1	QR2	QR3	QR4	QR5	QR6	QR7	QR8	QR9	QR10	QR11	QR12	Total
Contract 1.1				3.000.000									3.000.000
Cumulated				3.000.000									3.000.000
Disbursed													
Contract 1.1				300.000		675.000		675.000		675.000		675.000	3.000.000
Cumulated				300.000		975.000		1.650.000		2.325.000		3.000.000	3.000.000



ANNEX III: INSTITUTIONAL FRAMEWORK – LEGAL RESPONSIBILITIES AND STATUTES

The specific sector of transport is ruled by the Ministry of Infrastructure itself (following the general elections in January 2007 the new Government was installed on 15 May 2007; the Ministry of Capital Investments was restructured - the Sector for Telecommunication was rearranged into a new Ministry, and renamed as Ministry of Infrastructure) and through Directorates that deal with the relevant sector as road, railways including intermodality, inland waterway transport and air.

The Ministry of Infrastructure performs the public administration duties in the sphere of railway, road, waterway, air, and intermodal transport relating to: 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. The Ministry of Infrastructure also performs the public administration activities referring to: spatial and urban planning; setting out conditions for the construction of the facilities; sets out the housing relations and residential business; construction; construction land; geodesy engineering surveying; and other activities stipulated by law.

The Ministry of Infrastructure consists of the following organizational units:

- 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
- Architecture, Construction and Investments Projects Sector
- Urban and Spatial Planning Sector
- Urban and Spatial Planning Agency

Beside of the Ministry of Infrastructure of the Republic of Serbia, the development of railway infrastructure and operations in Serbia is related to other stakeholders including:

1. Ministry of Finance of the Republic of Serbia is governmental body responsible for budget policy, including subsidy for railway infrastructure and operations.
2. Serbian Railways is public enterprise responsible for railway infrastructure management that means reconstruction, modernization and development of railway infrastructure as well as responsible for carrying out of freight and passenger transport.
3. Directorate for Railways is a special organization of the Republic of Serbia for the field of railway transport. Directorate has been established to carry out expert, regulatory and other operations in the field of railway transport defined by the Law on Railway, specially to give opinion of railway infrastructure development plans.
4. Other stakeholders: transport companies, chambers of commerce...

Development of railway transport is related with good cooperation within all stakeholders.



ANNEX IV: REFERENCE TO LAWS, REGULATIONS AND STRATEGIC DOCUMENTS:

According to The Strategy of Railway, Road, Inland Waterway, Air and Intermodal Transport Development in the Republic of Serbia, 2008 – 2015 it is planned to make legal framework for development of railway infrastructure and operations through regulations according to EU Directives.

Existing Serbian laws and regulations those are important for railway transport and need to be modified:

- Law on railways (*"Official Gazette of Republic of Serbia", no. 18/2005*)
- Law on safety in railway transport (*"The Official Gazette of FRY", no. 60/98, 36/99, "The Official Gazette of RS", no. 101/2005*)
- Decree on establishment of the public company for public railway infrastructure management and performing the public transportation in railway traffic (*"Official Gazette of the Republic of Serbia", No. 19/05*)
- Law on contracts of transportation in railway traffic (*"Official Gazette of Republic of Serbia", no. 26/1995*)
- The Spatial Plan of the Republic of Serbia until 2010 (*"Official Gazette of the Republic of Serbia", No. 13/96*)
- Regulation on the conditions for issue and the content of the certificate on safety for railway infrastructure management, i.e. for the industrial railways (*"Official Gazette of Republic of Serbia", no. 39/2006*)
- Regulation on railway infrastructure elements, (*"Official Gazette of Republic of Serbia", no. 114/2006*)

Existing international agreements in the railway transport field:

- European Agreement on Main International Railway Lines and - AGC; (*"Official Gazette of SFRY – International Contracts", No .11/89*)
- European Agreement on Important International Combined Transport Lines and Related Installations - AGTC; (*"Official Gazette of SCG – International Contracts", No .7/05*)
- Agreement between the Council of Ministers of Serbia and Montenegro and the Government of the Republic of Bulgaria on border control and procedures for railway traffic (*"Official Gazette of SCG – International Contracts", No .13/05*)
- Agreement on combined transport between Federal Republic Yugoslavia and Republic of Bulgaria (*"Official Gazette of FRY – International Contracts", No .3/03*)
- Agreement on combined transport between Serbia and Montenegro and Republic of Croatia (*"Official Gazette of SCG – International Contracts", No .4/06*)

he **European Partnership**, page 14., Short term priorities: **Transport policy** – para 1 and page 19, medium- term priorities: **Transport policy** – para 1: The document emphasizes the importance of the implementation of the MoU on the Development of the South East Europe Core Regional Transport Network. The realization of short-term priority from the European Partnership, page 14 para 2 - to adopt and implement a national transport strategy - is underway, railway development issue being a significant part of the document. The European Partnership also highlights the implementation of the Law on Rail which refers to

the development according EU Directives and, in the medium term, opening of railway market.

The project fiche is harmonized with **Action plan** of the Republic of Serbia for implementation of priorities from the European partnership, which anticipates adoption and implementation of national strategy in transport field (road, rail, air and water transport) in order to achieve economic feasibility of the sector.

The **SAA**, Protocol IV, part for Rail and Combined Transport (articles 7 to 10) emphasis the mutually coordinated measures necessary for the development and promotion of rail and combined transport as a means of ensuring a more environmentally-friendly mode of transport and the necessary steps that will be taken to adapt the system for combined transport, with particular regard to the development or building of terminals, tunnel gauges and capacity, which require substantial investment.

In the **Serbia 2007 Progress Report** in the chapter Transport Policy it is reported that there is no progress on **railway transport** and inter-modality and that railway transport in Serbia must be improved. Accordingly, the requirements for the operation of more efficient and more environmentally friendly transport systems - which would be able to link modal infrastructure and related services on one side, and the nodes of the national and European economy on the other – should be strengthened. In such a context, intermodal freight transport has been identified as a priority for support by the European Commission

The **White Paper on EU Transport Policy for 2010**, which proposes specific measures to be taken at Community level under transport policy, recognizes a growing imbalance between modes of transport in the European Union. This persisting situation is leading to an uneven distribution of traffic, generating increasing congestion, particularly on the main trans-European corridors and in towns and cities. To solve this problem, two priority objectives need to be attained by 2010:

- a) regulated competition between modes;
- b) a link-up of modes for successful inter-modality.

The **REBIS study**¹ recommends creating the initial conditions for an efficient development of railway transport in the Balkans, which include, in the short term, improving the knowledge of the market and the creation of a new, adequate and a more efficient regulatory, organizational and institutional framework. This comprises a market and capacity study, an organizational study, a policy study and a long term investment study.

In the **MIPD 2007–2009** for Serbia, within **Component I – „Transition Assistance and Institution Building“**, there are two important points which support development of railway transport:

- **Main priorities and objectives** (page 22, chapter 2.2.3.1. built 8) : Support Transport Authorities to meet demands of EU legislation; multi-modal transport network and trans-shipment facilities;
- **Expected results and time frame** (page 23, chapter 2.2.3.2. built 7): The National Transport Strategy (road, rail, aviation and waterways) prepared and implemented; effective implementation and enforcement of transport legislation, particularly as regards safety aspects; intermodal transport improved.

The National Strategy of Serbia for the Accession to the EU emphasizes that a strategically important place should be reserved for the development of integral transport as a more efficient way of delivering goods to the biggest EU centres.

In the mid- and long-term, the strategy for the Serbian transport system should enable the realisation of at least three strategic goals: 1) faster development and raising to a higher

¹ Regional Balkans Infrastructure Study (REBIS), Final Report 2003, funded by EU Commission/EAR, CARDS Programme 2000, and focusing on the development of a multi-modal Core Transport for the Balkan region.



technical, technological and organisational level of the whole transport system, which creates preconditions for more efficient and rational meeting of transport needs as well as reaching European standards, 2) establishment of such a structure of transport system and a transport services market that correspond to the valorisation of competitive advantages of all transport modes on certain routes and 3) further integration of domestic into international transport tendencies, according to the existing harmonised corridors at the EU level.

The needs of the Republic of Serbia for international assistance 2008-2010 - The track condition survey system is in its infancy. Development of railway infrastructure is a precondition for the development of modern transport network. Therefore, one of the priority transport projects is The track condition survey system (chapter 3.14, page 286).

The project fiche is in accordance with **Strategy of Railway, Road, Inland Waterway, Air and Intermodal Transport Development in the Republic of Serbia, 2008 – 2015** (adopted by the Government of the Republic of Serbia in December 2007)², which defines development and investments in transportation corridors, which contribute to involve our transportation system in European system and create conditions to our economy for more efficient participation on european market.

The Strategic Plan of the Public Enterprise Serbian Railways 2006-2010 takes into consideration reconstruction of priority lines on Corridor X and Belgrade-Bar line and development of contemporary system for diagnostic and infrastructure analyse of railway tracks in the Republic of Serbia.

² The Strategy is based on the Final Report (2006) of the Institutional Capacity Building Project in the Transport Sector, funded by EU Commission /EAR, CARDS Programme 2003.

ANNEX V: DETAILS PER EU-FUNDED CONTRACT (*) WHERE APPLICABLE:

Contract 1.1 - Service contract for Technical Assistance

- Cooperate with PE Serbian Railways working group to define all aspects of the information system, and how the software should be adapted to Serbian conditions.
- Defining instructions and procedures for creating the database and regular updating, regarding
 - tracks and OCL
 - installations (railway, public utilities and others) on railway land, linked to the track
 - other facilities on railway land
- Adapt the software for line condition analysis and create the database
- Record basis information of 1,895 km of main lines to initiate the database
- Enter the data in the database and perform tests to ensure full functionality
- Define characteristics of any hardware required for full utility of the system
- Procure hardware (to be carried out by PE Railways of Serbia)
- Conduct Training Needs Analysis
- Design training programme
- Conduct training
- Evaluate training and design permanent training plan.

