



# Maintenance Plan in Western Balkans 6

Transport Facilitation Working Group (TFWG)  
28<sup>th</sup> April, Podgorica



**Nerejda Hoxha, Transport Planning Manager**  
**Nedim Begovic, Transport Planning Manager**



## Western Balkans Transport Network Connectivity Reform Measures

Medium-term Regional Actions (2020 Goals)	Short-term Regional Actions (2016 Goals)
<b>1. Opening of the transport market</b>	
1.1 Implementation of rail reform strategy	<ul style="list-style-type: none"> <li>Rail market opening on the pilot basis on the Orient/East Med Corridor</li> <li>Definition of a framework for implementation of EU Freight Corridors, extended to the Western Balkans</li> </ul>
<b>2. Establishment of competitive, reliable and safe transport system</b>	
2.1 Improvement of road safety <ul style="list-style-type: none"> <li>Targeting the reduction of fatalities by 20% compared to reference year 2014</li> </ul>	<ul style="list-style-type: none"> <li>Adoption of Road Safety Inspection (RSI) guidelines and curriculum and delivering of trainings</li> </ul>
2.2 Trade and Transport Facilitation	<ul style="list-style-type: none"> <li>Development and implementation of <i>System of Exchange Excise Data (SEED) Plus</i> to support the CEFTA Framework Agreement on exchange of data and simplification of inspections                             <ul style="list-style-type: none"> <li>Signature of a legally binding document – protocol on an exchange of transport data in cooperation with CEFTA</li> </ul> </li> </ul>
2.3 Intelligent Transport System (ITS) deployment on the Core Network	<ul style="list-style-type: none"> <li>Definition of strategic framework for implementation of ITS on the Core Network</li> </ul>
2.4 Establishment of functioning maintenance system ensuring no section in poor/very poor condition by 2020	<ul style="list-style-type: none"> <li>Adoption of Maintenance plan for 2016-2020 for the entire Core Network</li> </ul>



## Scope of services- Road component

### Activity 1

Review and analysis of the TEN-T Road Core/Comprehensive Network to Western Balkans maintenance current practices and needs for the period 2018 – 2022

### Activity 2

Development of common (pavement and structural) maintenance guidelines for the whole region by identifying common ground among existing practices and aiming at harmonization with EU best practices, including unified definitions of routine, periodic maintenance as well as seasonal (winter) maintenance and ad hoc repairs.

### Activity 3

Support to regional participants (RPs) in preparation of their Maintenance Plans that reflect the specific development characteristics/plans of each RP and in accordance to the regional context. If during the initial assessment of the project, it is evident that additional inputs to RPs are required to complete the activity such additional resources will be made available

### Activity 4

Financial Analysis under different budget scenarios including cost breakdown by road category (Corridor, Route)

### Activity 5

Provide analysis and recommendations for setting Road Asset Management Systems (RAMS) and Performance Based Contract (PBMC) in the WB6 region



## Deliverables and duration- Road component

Deliverables under Road Maintenance component	Due date (from mobilization)
Inception Report: Will include assignment methodology, staffing and time schedule, and summary of the review of existing documents/studies (no missions foreseen during inception period) – Separate IR for road	4 weeks
Report 2 : - Assessment Report for Road Maintenance Needs in WB6 (based on missions)	6 months
Report 3: Guidelines for pavement and structural maintenance for the whole region	8 months
Report 4 : Road Maintenance Plan Core/Comprehensive Networks for 2018 - 2022, for different budget scenarios	10 months
Report 5: Analysis & Recommendations for setting up RAMS and PBMC in region-	12 months
Draft Final Report containing key findings of the previous reports	14 months
Final Report (including revisions of Reports 3, 4 and 5)	16 months
Monthly Progress reports	monthly

## ***Scope of services- Rail component***

### **Activity 1**

Review and analysis of the TEN-T Rail Core/Comprehensive Network to Western Balkans maintenance current practices and needs for the period 2018 – 2022. This analysis should be based on data provided by the asset register (see below) and a realistic valuation method. This activity should include an inventory of consultation exercises and recommendations on ways to base maintenance plans on the needs of the users.

### **Activity 2**

Assessment of the Business Plans of Infrastructure Managers in the region as regards the requirements in accordance with Article 8(3) of Directive 2012/34/EU and recommendations for reviewing, preparing and monitoring compliant Business Plans. The assessment includes at least the identification of the completeness and the consistency of the Business Plans with the State's rail infrastructure development strategy.

## ***Scope of services- Rail component***

### **Activity 3**

Design and implementation scenario for an Infrastructure Manager's asset register in accordance with Article 30(7) of Directive 2012/34/EU and inventory of data available in the region. The purpose of the asset register is to assess the finance needed to repair and replace the assets. Legal requirements include as a minimum the recording in the asset register of expenditure for purchase, upgrading, renewal and maintenance as well as the useful lifetime for each piece of asset. The definition of the asset register includes a clear interface with the external and internal accounting systems of the Infrastructure Manager. The design has to address the issue of the appropriate level of aggregation of asset elements, trading off the information needs and the administrative burden. Furthermore, information is needed about transferring the available assets data into a revised asset register.

### **Activity 4**

Financial Analysis under different budget scenarios including cost breakdown by rail category (Corridor, Route). This analysis should be based on the asset register of the Infrastructure Managers that provide the corridor, where available (see above).

### **Activity 5**

Analysis of present contracting strategies of regional Infrastructure Managers and recommendations to decide on in-house maintenance and outsourcing and the most appropriate contract award procedure and contracting strategy (e.g performance based contracts)



## Scope of services- Rail component

### Activity 6

Comparative analysis of at least two different contractual arrangements between the State and the Infrastructure Manager in accordance with Article 30 (2) of Directive 2012/34/EU, in particular as regards their compliance with the basic principles laid down in Annex V of that Directive.

### Activity 7

Analysis and recommendations for setting Rail Asset Management Systems in the region: Predictive maintenance based on minimum life cycles costs is the preferred asset management strategy. The TA should take stock of progress, including the necessary monitoring and measurement of assets condition in the region.

### Activity 8

Support to preparation of the Maintenance Plan 2018-2022 that reflects the specific development characteristics and plans of each regional participant. This activity synthesises the analysis and recommendations developed under the previous activities. Again, a coordinated consultation procedure, including feedback, should be designed. If during the initial assessment of the sub-project, it is evident that additional inputs to RPs are required to complete the activity such additional resources will be made available.



## Deliverables and duration- Rail component

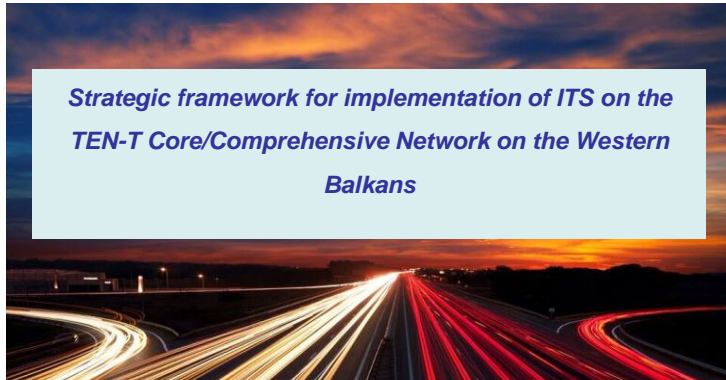
Deliverables under Rail Maintenance component	Due date (from mobilization)
Inception Report: Will include assignment methodology, staffing and time schedule, and summary of the review of existing documents/studies (no missions foreseen during inception period) – Separate IR for both road and rail	4 weeks
Report 2: Assessment Report on Rail Maintenance Needs in WB6 (based on missions)	6 months
Report 3: Analysis of present contractual relations and recommendations for contracting strategies (e.g. performance based contracts)	8 months
Report 4 : Recommendations for setting Rail Asset Management Systems in the region	10 months
Report 5: Rail Maintenance Plan for Core/Comprehensive Networks for 2018 -2022, for different budget scenarios	12 months
Draft Final Report containing key findings of the previous reports	14 months
Final Report (including revisions of previous Reports)	16 months
Monthly Progress reports	monthly

## Discussions

Anything else to add ?



*Strategic framework for implementation of ITS on the  
TEN-T Core/Comprehensive Network on the Western  
Balkans*



Transport Facilitation Working Group (TFWG)  
28<sup>th</sup> April, Podgorica



Nedim Begovic, Transport Planning Manager

# Western Balkans Transport Network Connectivity Reform Measures

Medium-term Regional Actions (2020 Goals)	Short-term Regional Actions (2016 Goals)
<b>1. Opening of the transport market</b>	
1.1 Implementation of rail reform strategy	<ul style="list-style-type: none"> <li>• Rail market opening on the pilot basis on the Orient/East Med Corridor</li> <li>• Definition of a framework for implementation of EU Freight Corridors, extended to the Western Balkans</li> </ul>
<b>2. Establishment of competitive, reliable and safe transport system</b>	
2.1 Improvement of road safety <ul style="list-style-type: none"> <li>◦ Targeting the reduction of fatalities by 20% compared to reference year 2014</li> </ul>	<ul style="list-style-type: none"> <li>• Adoption of Road Safety Inspection (RSI) guidelines and curriculum and delivering of trainings</li> </ul>
2.2 Trade and Transport Facilitation	<ul style="list-style-type: none"> <li>• Development and implementation of <i>System of Exchange Excise Data (SEED) Plus</i> to support the CEFTA Framework Agreement on exchange of data and simplification of inspections                             <ul style="list-style-type: none"> <li>◦ <i>Signature of a legally binding document – protocol on an exchange of transport data in cooperation with CEFTA</i></li> </ul> </li> </ul>
2.3 Intelligent Transport System (ITS) deployment on the Core Network	<ul style="list-style-type: none"> <li>• Definition of strategic framework for implementation of ITS on the Core Network</li> </ul>
2.4 Establishment of functioning maintenance system ensuring no section in poor/very poor condition by 2020	<ul style="list-style-type: none"> <li>• Adoption of Maintenance plan for 2016-2020 for the entire Core Network</li> </ul>

# Scope of services

## Activity 1

Identify user needs and specific objectives on national level for all transport modes

## Activity 2

Assess the ITS (ERTMS, ITS, RIS, VTMS, e-freight etc.) and IT (tracking and tracing, interfaces modes, border authorities etc.) system needs, requirements and priority ITS services in WB region;

## Activity 3

Develop regional ITS vision and key strategic directions to ensure harmonized regional ITS development

## Activity 4

Assess the EU standards and specifications and propose equal standards and technical specifications relevant for ITS implementation in Western Balkans

## Activity 5

Legal approximation of regional ITS legislative acts and further recommendation what still needs to be achieved to be in line with the EU acquis This includes draft proposal of legislative acts which would need to be adopted by RPs.



## Scope of services

### Activity 6

Undertake cost and benefit calculation of the introduction of ITS (ERTMS, ITS, RIS, VTMS etc.) and IT systems in WB, which includes rough cost and benefit estimates for infrastructure, operational and institutional establishment

### Activity 7

Carry out impact assessment of the introduction of ITS (ERTMS, ITS, RIS, VTMS etc.) and IT systems in WB;

### Activity 8

Develop the regional strategic framework together with road maps and deployment plans for each Regional Participant per each transport mode in line with the national strategies.

### Activity 9

Guidance and assistance to the regional participants in preparation of national ITS strategies (e.g capacity building for the preparation of national strategies)



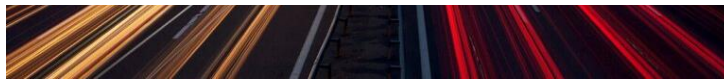
## Deliverables and duration

Deliverable	Due date (from mobilization)
Inception Report: Will include assignment methodology, staffing and time schedule, and summary of the review of existing studies and stock taking (no missions foreseen at inception period).	4 weeks
Report 2 : Evaluation of the needs assessment and ITS requirements with an overview of technical standards and specification suited for the region	5 months
Report3: Legal approximation of regional ITS legislative acts and further recommendation what still needs to be achieved to be in line with the EU acquis	7 months
Report 4: Cost calculation and impact assessment report	9 months
Report 5: Strategic framework and roadmaps for each RP and each mode of transport	11 months
Draft Final Report (containing key findings from all other reports)	13months
Final Report	15 months
Monthly Progress reports (2 pages)	monthly

## Road Safety Connectivity Reform Measures



Transport Facilitation Working Group (TFWG)  
28<sup>th</sup> April, Podgorica



Liljana Cela, Information Resource Manager

## Scope of services – Component 1

### **Activity 1**

Map existing core and comprehensive road network in Western Balkans.

### **Activity 2**

Compile a list of all Road Safety Inspections that have been implemented during the last 3 years (2014-2016), including those that followed the EuroRAP/iRAP inspection methodology. The list should include the recommendations of these inspections.

### **Activity 3**

Prepare a three-year Plan (2018- 2020) for road safety inspection for the core and comprehensive road network. This plan should recommend the use of two methods: i) traditional road safety inspection using SEETO's road safety inspection guidelines, and ii) EuroRAP road survey and star rating methodology. The Plan should include the required inspectors' inputs and an indicative cost to deliver it by consulting firms.

### **Activity 4**

Undertake road safety inspections using SEETO's road safety inspection guidelines on 10% ( about 550 km) of the core and comprehensive road network that is considered highest risk portion of the network based on fatal crash data. SEETO members will prepare a list of their high risk sections and the Consultant should then compile a list of about 550 km of these high risk roads by maintaining a reasonable distribution among all SEETO's members. The decision on the specific sections to be inspected will be taken jointly with SEETO and by also taking into account existing and foreseen TAs for RSI.



## Scope of services – Component 2

### **Activity 1**

Compile a list of all rehabilitation and new construction road projects on the core and comprehensive road network that are currently under preparation. The list should include the following details for every project:

- Engineering Scope and estimated cost
- Current preparation stage of every project (e.g. concept, preliminary design, detailed design or bidding stage)
- Planned implementation schedule.
- Financing sources

### **Activity 2**

Prepare a plan to undertake road safety audits, at various stages as per the Directive 2008/96/EC and SEETO's Road Safety Audit Handbook (COWI, 2014) for the list of projects prepared under Activity 1. Such plan should include the Audit stages that are required, as well as the required Auditors inputs and indicative costs to audit these projects by consulting firms.

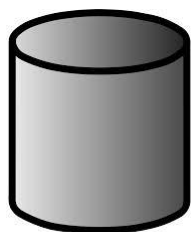
### **Activity 3**

Undertake Road Safety Audits for a sample of 6 projects (one in every SEETO member) to be provided to the Consultant by SEETO's Road Safety Working Group

## Scope of services – Component 3

### **Action 1**

Road map for establishing a national system for continuous road crash data collection.



Database

EU TA in Road Safety (SAFEGE) will provide helpful deliverables on the current model about road crash data collections that will be used as an input for this measure.



## **Deliverables and duration**

<b>Deliverables</b>	<b>Due date (from mobilization)</b>
Inception Report: Will include assignment methodology, staffing and time schedule, and summary of the review of existing documents, studies (no missions foreseen during inception period)	4 weeks
Report 1: Draft Report for Component 1	10 months
Report 2: Draft Report Component 2	10 months
Report 3: Draft Report Component 3	10 months
Final report of all components and responding to comments received.	12 months
Monthly Progress reports (max 2-3 pages)	monthly



**Thank you for your attention !**

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