



Actions of the inland transport sector to
join the global fight against climate change

118th Session

WORKING PARTY ON ROAD TRANSPORT

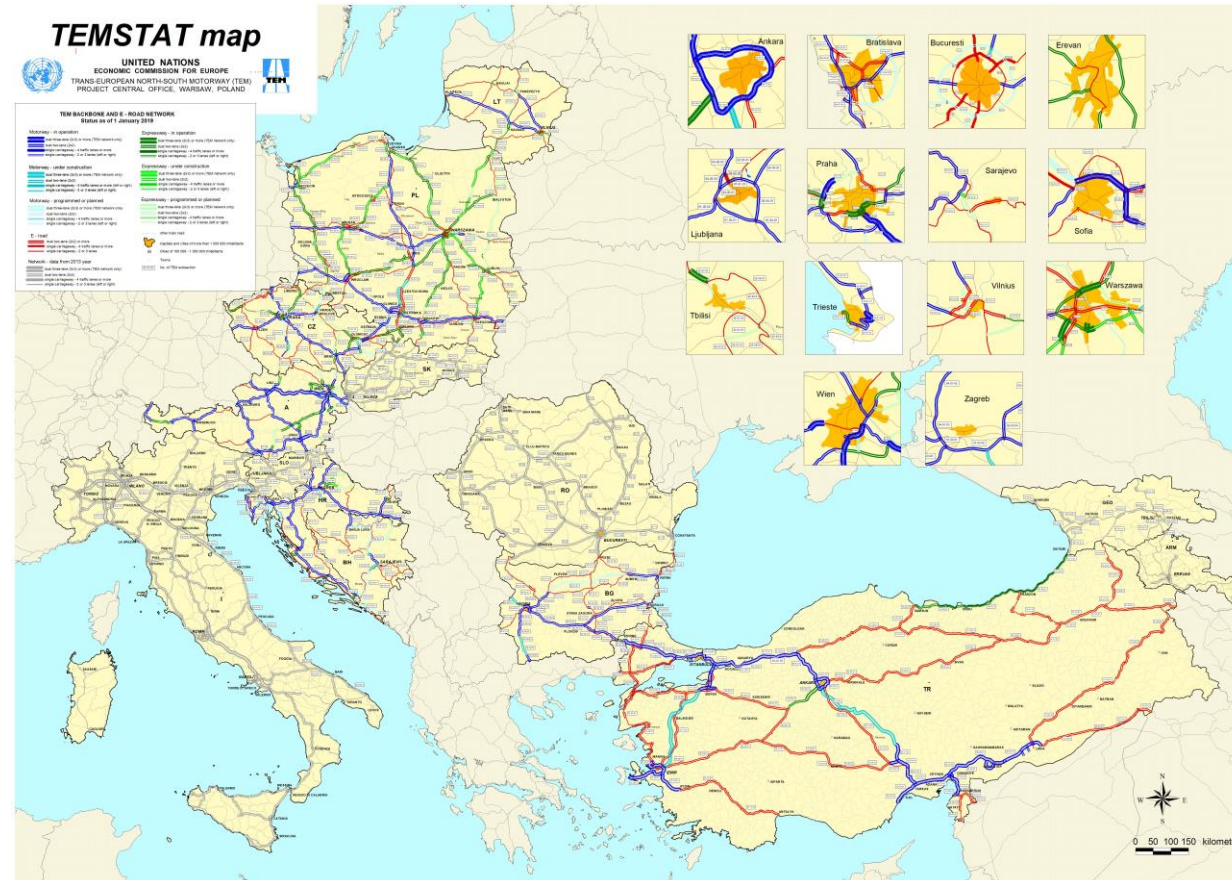


UNECE

**Trans-European Motorway
UNECE TEM Project**

TEM Project

TEM Backbone Network



TEM Project

Mission & Vision



- **The TEM Project Mission:**

- The TEM Project monitors the services demand and infrastructure supply relations for the TEM Backbone Network and concurrently creates standards, good practices and guidelines to tackle systemic and strategic issues related to the road infrastructure management for both the TEM Member States and all UNECE region

- **The TEM Project Vision:**

- The TEM Project is a key partner for the UNECE and the Inland Transport Committee on the road infrastructure management, thus supporting the UN and the TEM Member States in achieving the Sustainable Development Goals by implementing the strategic initiatives, which are designed and aligned with the UN sustainable development agenda

TEM Project outcomes

Publications



TITLE	IMPACT
<p>Business models for road sector: considerations and recommendations</p> <p>https://unece.org/info/Transport/TEM-and-TER/pub/356466</p>	<ul style="list-style-type: none"> • Enables reforms of the road sectors and road authorities • Facilitates ensuring of an adequate financing mechanisms • Improves multi-service delivery
<p>Tools for the Road Asset Management: TEM recommendations for the road operators</p> <p>https://unece.org/info/Transport/TEM-and-TER/pub/356467</p>	<ul style="list-style-type: none"> • Strengthens the capacity of road authorities in RAM • Decrease the costs of the RAMS implementation • Improves customer-oriented and data-based management
<p>BIM for road infrastructure: TEM requirements and recommendations</p> <p>https://unece.org/info/Transport/TEM-and-TER/pub/356919</p>	<ul style="list-style-type: none"> • Improves the capacity of road authorities • Provides rationale for BIM • Decrease the costs of IT resources development and maintenance
<p>Safety standards in work zones</p> <p>https://unece.org/unece-publications/publications/tem-guidelines-workzone-safety</p>	<ul style="list-style-type: none"> • Strengthens the capacity of road authorities in RISM • Decrease internal and external costs of road authorities • Improves safety level for the road users and employees

TEM Project for the SC1

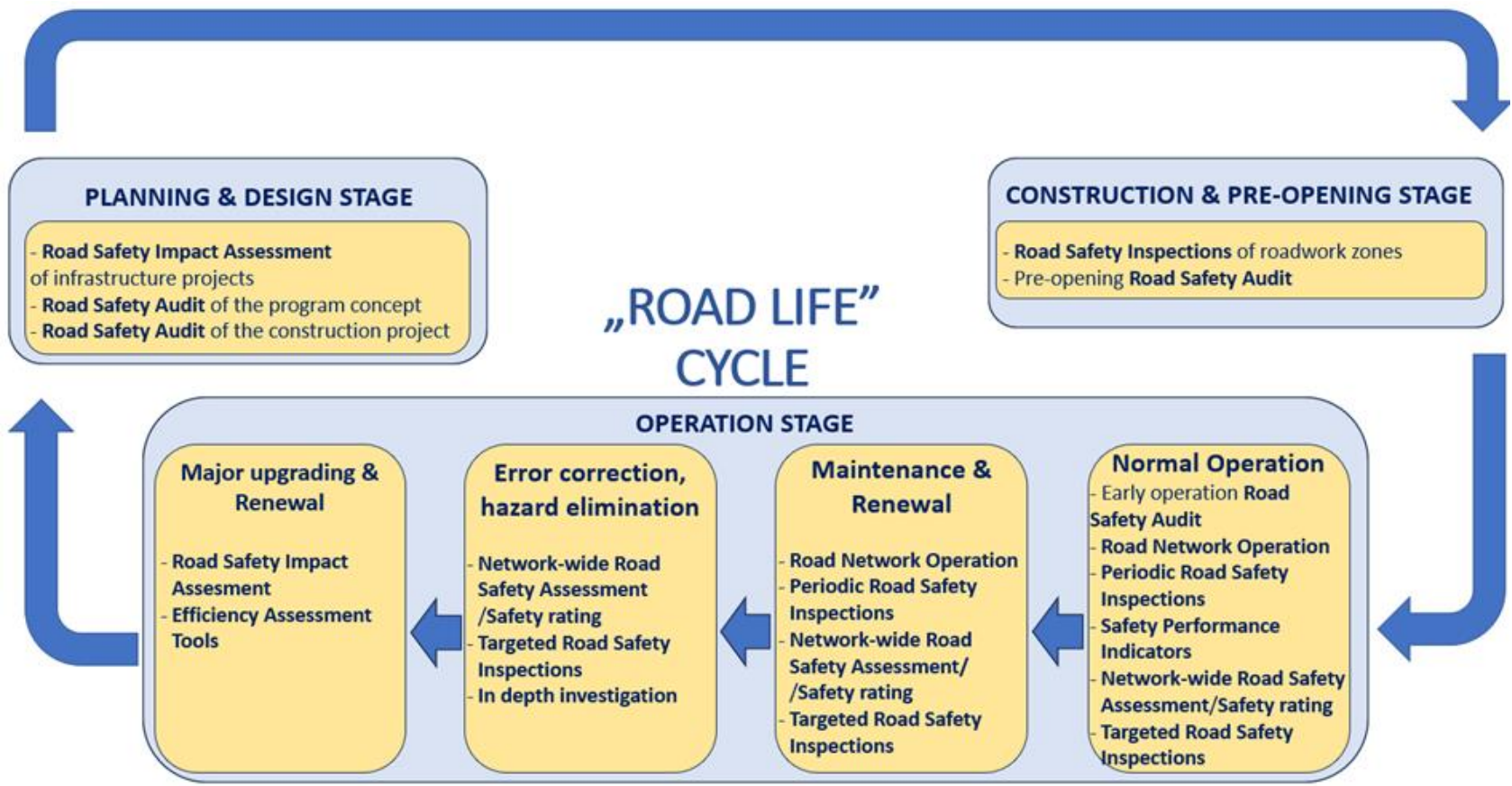


Road Safety Audits and Road Safety Inspections

Analysis of the current practices and tools in the TEM region countries and recommendations

Road Infrastructure Safety Management

Rationale for the procedures



- Applying the road safety at each stage of the road's life
- Presenting overall international experiences
- Including road safety factors in the overall decision-making processes

TEM Project for the SC1

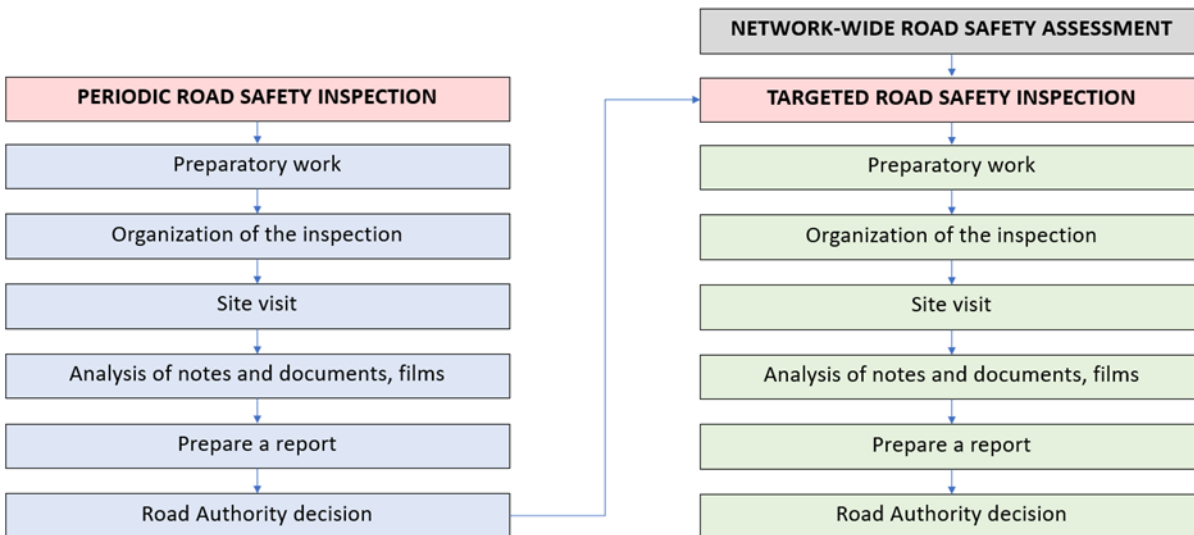
Understanding of the RSA and RSI



RSI

RSA

ROAD SAFETY INSPECTIONS PROCEDURE



- Stage I - Feasibility stage (before a decision on the definitive routing; interface with Road Safety Impact Assessment)
- Stage II - Preliminary design (before land acquisition)
- Stage III - Detailed design (before construction starts)
- Stage IV - Pre-opening (after construction is completed)
- Stage V - Early operation (within 12 months from the road's opening for traffic)

TEM Project for the SC1

Understanding of the RSA and RSI



PILLAR / AREA	LEGISLATION	ENFORCEMENT	EDUCATION	TECHNOLOGY	INTERNATIONAL REGULATORY SUPPORT
ROAD SAFETY MANAGEMENT – VERTICAL AND HORIZONTAL COORDINATION					
SAFE USER	TRAFFIC RULES FOR DRIVERS, CYCLISTS, PEDESTRIANS	LAWFUL BEHAVIOUR ENSURED BY POLICE AND INSPECTORS	AWARENESS RASING, TRAINING AND EXAMINATION	SUPPORTIVE TECHNOLOGY AND EQUIPMENT, RULES REMINDERS	UN RS LEGAL INSTRUMENTS AND RESOLUTIONS, WORKS OF WP.1, SC.1, WP.15
SAFE VEHICLE	RULES AND STANDARDS FOR ADMISSION OF VEHICLES	CERTIFICATION AND INSPECTIONS BY QUALIFIED INSPECTORS	AWARENESS RAISING FOR USERS, TRAINING FOR INSPECTORS	SUPPORTIVE TECHNOLOGY AND EQUIPMENT, COMPLIANCE REMINDERS	UN RS LEGAL INSTRUMENTS AND RESOLUTIONS, WORKS OF WP.1, SC.1, WP.29
SAFE ROADS	STANDARDS FOR DESIGN AND CONTRUCTION, MAINTENANCE, SIGNAGE	AUDIT, ASSESSMENT AND INSPECTION BY QUALIFIED TEAMS	AWARENESS RAISING FOR ROAD MANAGERS, USERS AND FOR INSPECTORS	FORGIVING AND SELF-EXPLAINING ROAD DESIGN, INTELLIGENT TRANSPORTATION SYSTEMS	UN RS LEGAL INSTRUMENTS AND RESOLUTIONS, WORKS OF WP.1, SC.1, TEM PROJECT
EFFECTIVE POST-CRASH RESPONSE	STANDARDS FOR DATA COLLECTION, POST-CRASH RESPONSE AND INVESTIGATION	OVERSIGHT OF RESCUE SERVICES, INVESTIGATORS INVESTIGATING CRASHES	FIRST AID AND RESUE SERVICE TRAINING, INVESTIGATORS TRAINING	SUPPORTIVE TECHNOLOGY AND EQUIPMENT	CONSOLIDATES RESOLUTION, INTERNATIONAL STANDARDS, WP.1, SC.1

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RSA/RSI improvements in the region



Regulations	National legislation		Guideline RSA		TEM projects audited		Guideline RSI	
	2016	2023	2016	2023	2016	2023	2016	2023
Armenia								
Bosna&Herzegovina								
Bulgaria								
Croatia								
Czechia								
Georgia	N/P		N/P		N/P		N/P	
Latvia	N/P		N/P		N/P		N/P	
Poland								
Serbia	N/P		N/P		N/P		N/P	
Türkiye								

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RSA/RSI improvements in the region



Practices	Independence of auditors		Study phase (RSIA)		Preliminary design		Detailed design		Before opening	
	2016	2023	2016	2023	2016	2023	2016	2023	2016	2023
Armenia				N/A		N/A		N/A		N/A
B&H	N/A		N/A		N/A		N/A		N/A	
Bulgaria										
Croatia										
Czechia										
Georgia	N/P		N/P		N/P		N/P		N/P	
Latvia	N/P		N/P		N/P		N/P		N/P	
Poland										
Serbia	N/P		N/P		N/P		N/P		N/P	
Türkiye										

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RSA/RSI improvements in the region



Certification and education for auditors and inspectors	Necessary for RSA		Necessary for RSI	
	2016	2023	2016	2023
Armenia		N/A		N/A
Bosna and Herzegovina	N/P		N/P	
Bulgaria				
Croatia			N/A	
Czechia				
Georgia	N/P		N/P	
Latvia	N/P		N/P	
Poland				
Serbia	N/P		N/P	
Türkiye		N/A		N/A

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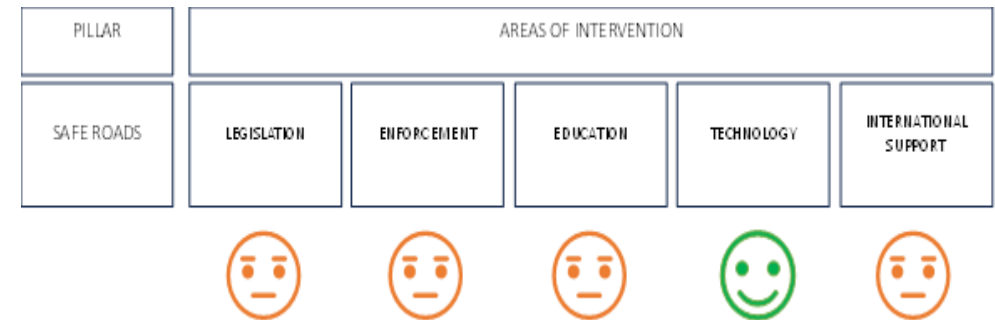
Outcome of the analysis



These analyses shows that although RSA and RSI practices are used more commonly and frequently, the overall development is rather moderate. This leads to the conclusion that there is necessity for constant improvement in respect to the legislative and regulatory frameworks as well as within the enforcement and education practices.

While there are plenty of mechanisms and international support to finance or co-finance implementation of road networks development or rehabilitation, there is a need to strengthen the efforts of the international community in respect to the globally recognized road safety related legislation and regulations.

Currently areas of intervention as legislation, enforcement or education in terms of the Safe Roads pillar have more sub-regional standards. In many countries however they are usually implemented partially or to the particular projects only when the external fundings appears and the IFIs require road safety audits.



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Recommendations



International legal instruments

In order to harmonize Road Infrastructure Safety Management procedures and to set-up the level playing field in all TEM countries, an important step would be to find modalities to amend the European Agreement on Main International Traffic Arteries (AGR) to include Road Infrastructure Safety Management procedures.

In this sense, importance of already proven RSA and RSI procedures will be recognized and basic procedures for the implementation of RSA/RSI will be harmonized not only on the TEM network, but actually in all countries that are contracting parties to AGR.

It is recommended that amendments to the AGR will not only create the legal basis for formal implementation of the RSA and RSI procedures but will provide the necessary rationale for the use of the procedures in the road network life cycle as well as assistance in necessary minimum requirements for the procedures and their scope.

This action will supplement already undertaken actions under umbrella of the UN Road Safety Fund.

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Recommendations



RISM capacity building

Some countries in the UNECE region did not yet implement Road Infrastructure Safety Management procedures like RSA and RSI. Training and certification for safety personnel is not existent in some of them. Thus, further awareness raising on all levels is still necessary to convince relevant decision makers and organisations of the usefulness of the procedures.

Taking into consideration the TEM Project contribution and expertise it is recommended to use the TEM Project in collaboration with SC.1 as a capacity building vehicle on RSA and RSI for the UNECE region.

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Recommendations



RISM facilitation

In a few countries courses for the training of Auditors and Inspectors are not available at current state.

Institutional aspects like who is offering courses, which institution is issuing certificates etc. can only be decided by those countries. Minimum standards for training courses are available.

However, it is recommended that courses should contain a theoretical part and a practical part in which candidates have to conduct the RSA/RSI procedures themselves. Naturally, training courses should cover the latest developments and findings of research in regard of traffic safety issues. Hence, new technologies, like ITS, should be a topic within the courses.

Establishing of RSA/RSI training courses under the TEM umbrella could be the one of the additional possibilities for boosting road safety capacities of TEM participating countries and knowledge sharing.



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WORKING PARTY ON ROAD TRANSPORT



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Thank you!

Andrzej Maciejewski
TEM Project Manager

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