



REGIONAL WORKSHOP ON ADVANCING
ROAD SAFETY: RSA and RSI



UNECE

Trans-European Motorway Project

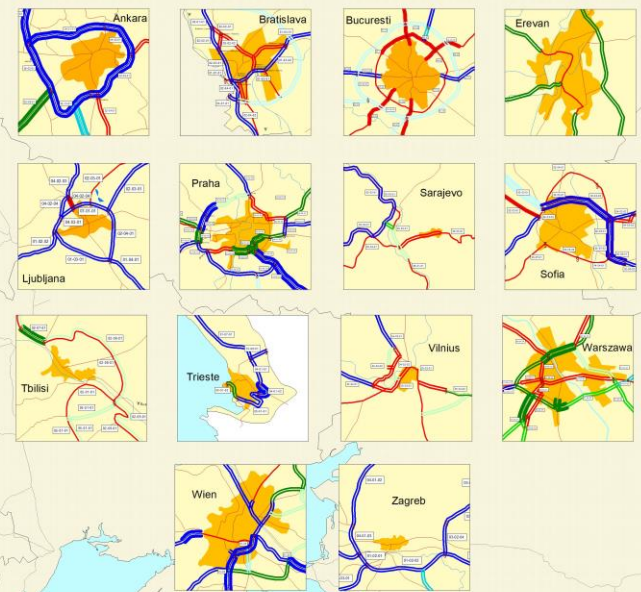
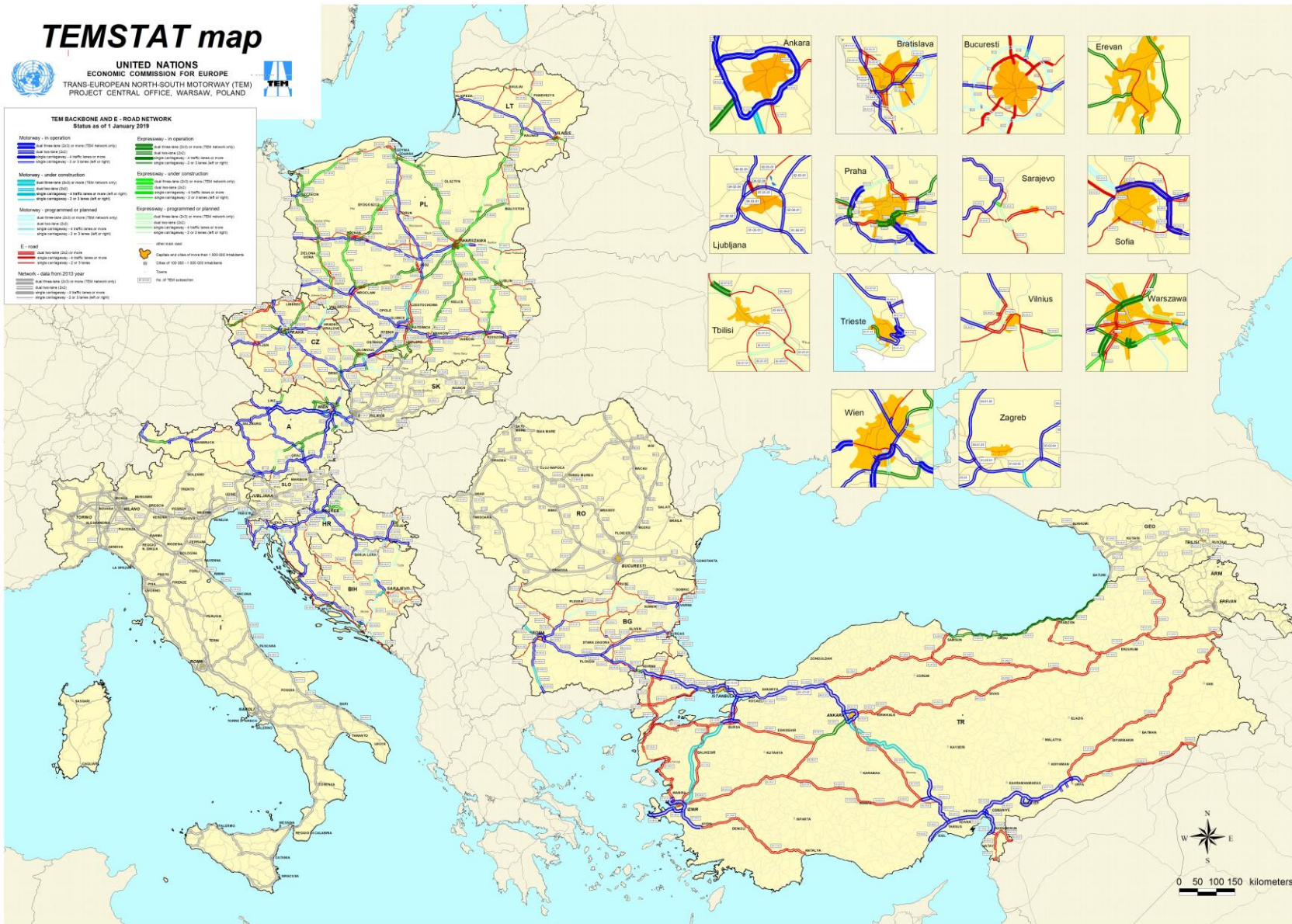
Implementation of the RSA/RSI on the TEM Backbone Network

TEMSTAT map



TEM BACKBONE AND E-ROAD NETWORK
Status as of 1 January 2019

Motorway - in operation	Expressway - in operation
<ul style="list-style-type: none"> Blue line: 4 lanes (2 left, 2 right) Blue line: 3 lanes (2 left, 1 right) Blue line: 2 lanes (1 left, 1 right) 	<ul style="list-style-type: none"> Green line: 4 lanes (2 left, 2 right) Green line: 3 lanes (2 left, 1 right) Green line: 2 lanes (1 left, 1 right)
Motorway - under construction	Expressway - under construction
<ul style="list-style-type: none"> Blue line: 4 lanes (2 left, 2 right) Blue line: 3 lanes (2 left, 1 right) Blue line: 2 lanes (1 left, 1 right) 	<ul style="list-style-type: none"> Green line: 4 lanes (2 left, 2 right) Green line: 3 lanes (2 left, 1 right) Green line: 2 lanes (1 left, 1 right)
Motorway - programmed or planned	Expressway - programmed or planned
<ul style="list-style-type: none"> Blue line: 4 lanes (2 left, 2 right) Blue line: 3 lanes (2 left, 1 right) Blue line: 2 lanes (1 left, 1 right) 	<ul style="list-style-type: none"> Green line: 4 lanes (2 left, 2 right) Green line: 3 lanes (2 left, 1 right) Green line: 2 lanes (1 left, 1 right)
Other roads	
<ul style="list-style-type: none"> Red line: 4 lanes (2 left, 2 right) Red line: 3 lanes (2 left, 1 right) Red line: 2 lanes (1 left, 1 right) 	<ul style="list-style-type: none"> Yellow line: 4 lanes (2 left, 2 right) Yellow line: 3 lanes (2 left, 1 right) Yellow line: 2 lanes (1 left, 1 right)



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 the overall UNECE region

- **The TEM Project Vision:**

- The TEM Project is a key partner for the UNECE 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

The Report



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Road Safety Audits and Road Safety Inspections

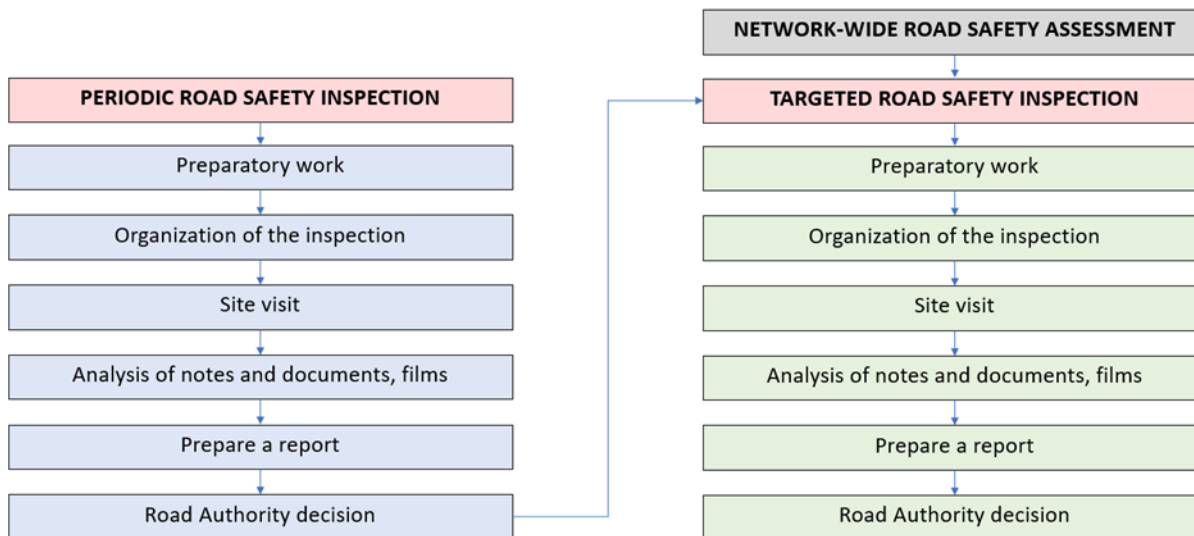
Analysis of the current practices and tools in the TEM region countries and recommendations

The Report

Understanding of the RSA and RSI



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)

The Report

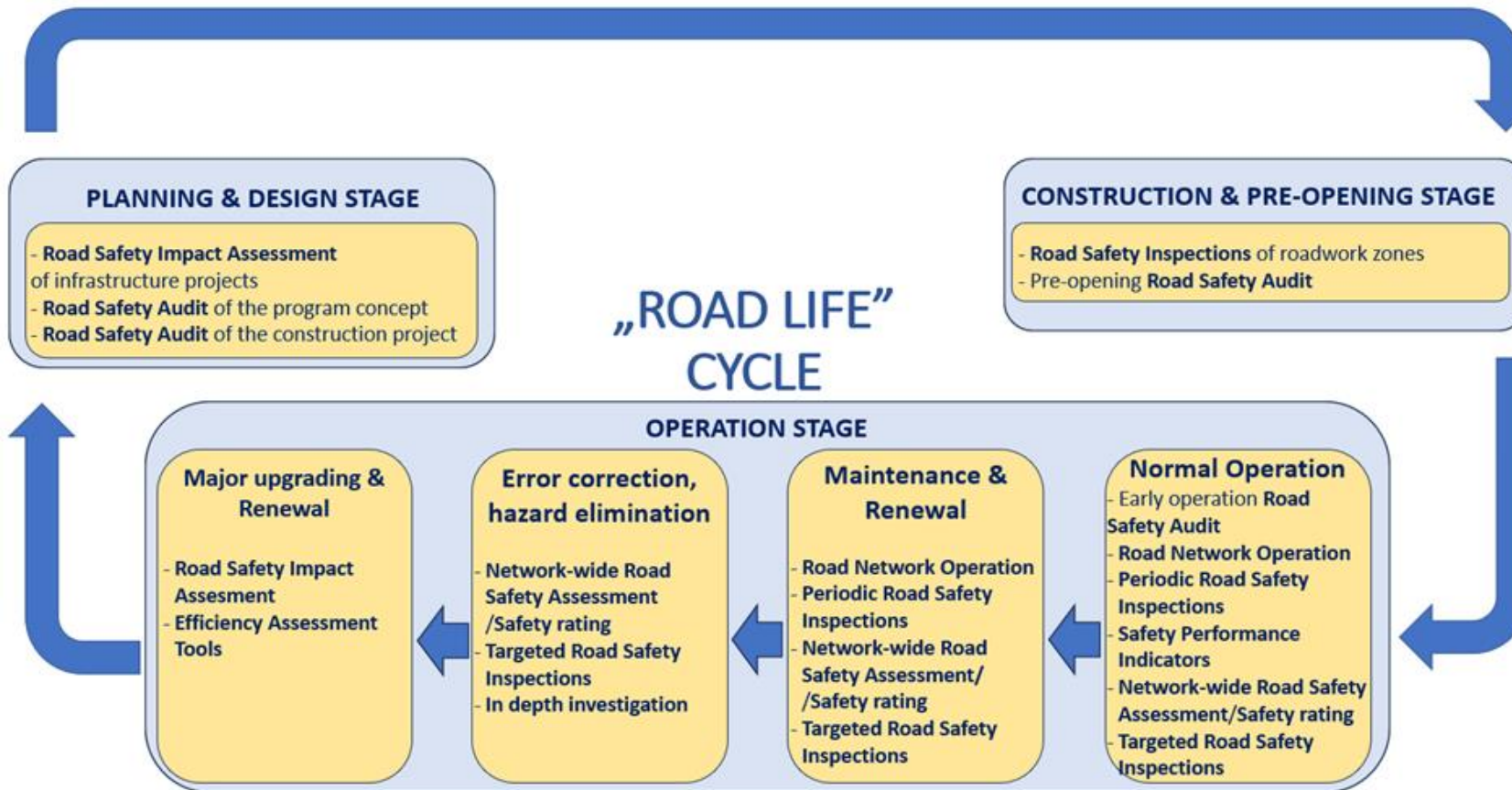
Understanding of the RSA and RSI



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 CONSTRUCTION, 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

The Report

Rationale for the RISM 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

Analysis of the current practice

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								
B & H								
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								

Analysis of the current practice

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										

Analysis of the current practice

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
B & H	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

The Reality

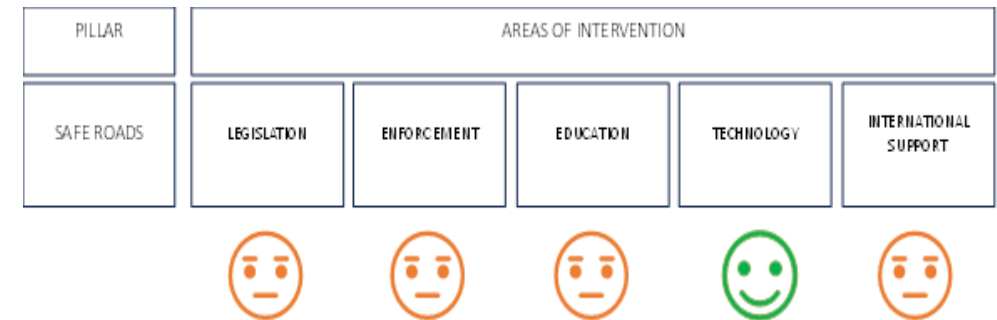
Outcome of the analysis



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.

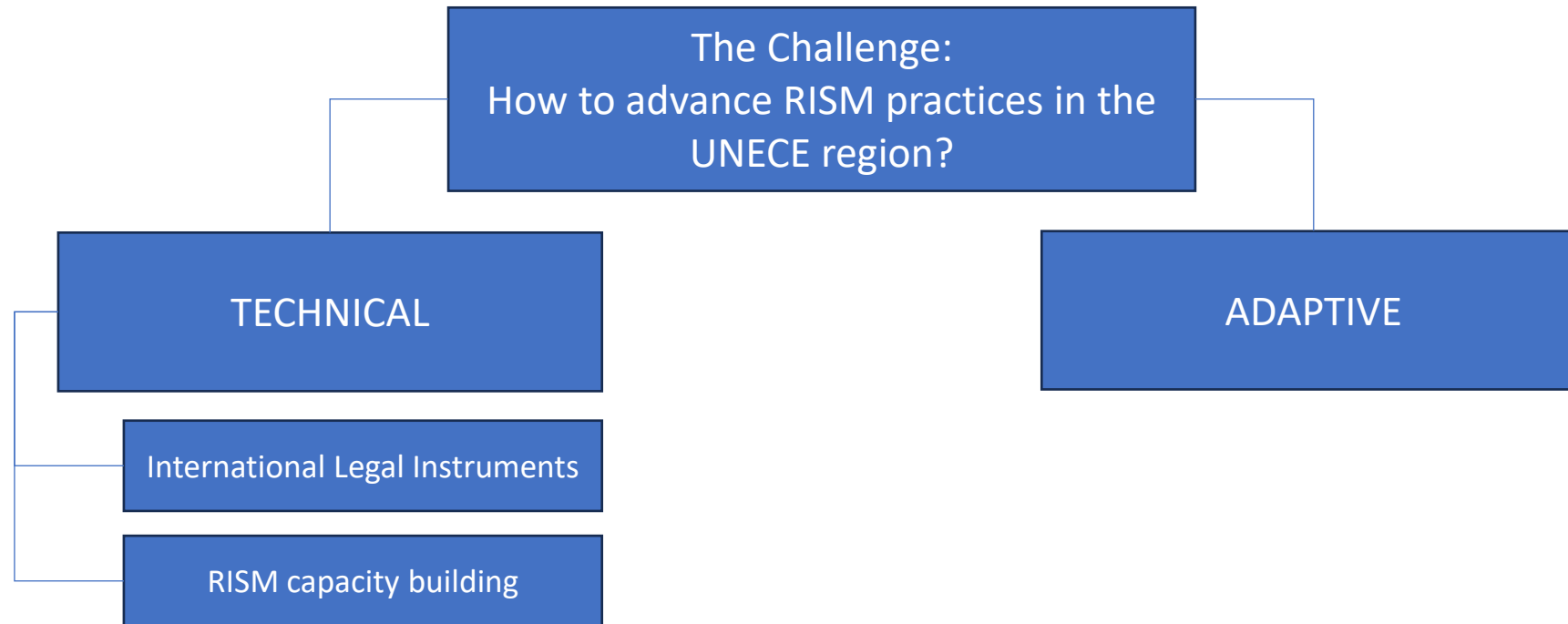
While there are plenty of mechanisms and international support to finance or co-finance implementation of road networks development or rehabilitation, there is a need to strengthen the efforts of the international community in respect to the globally recognized road safety related legislation and regulations.

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 projects only when the external fundings appears and the IFIs require road safety audits.



The Future

Challenge understanding



The Challenge

Technical work



International legal instruments

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 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.

The Challenge

Technical work



RISM capacity building

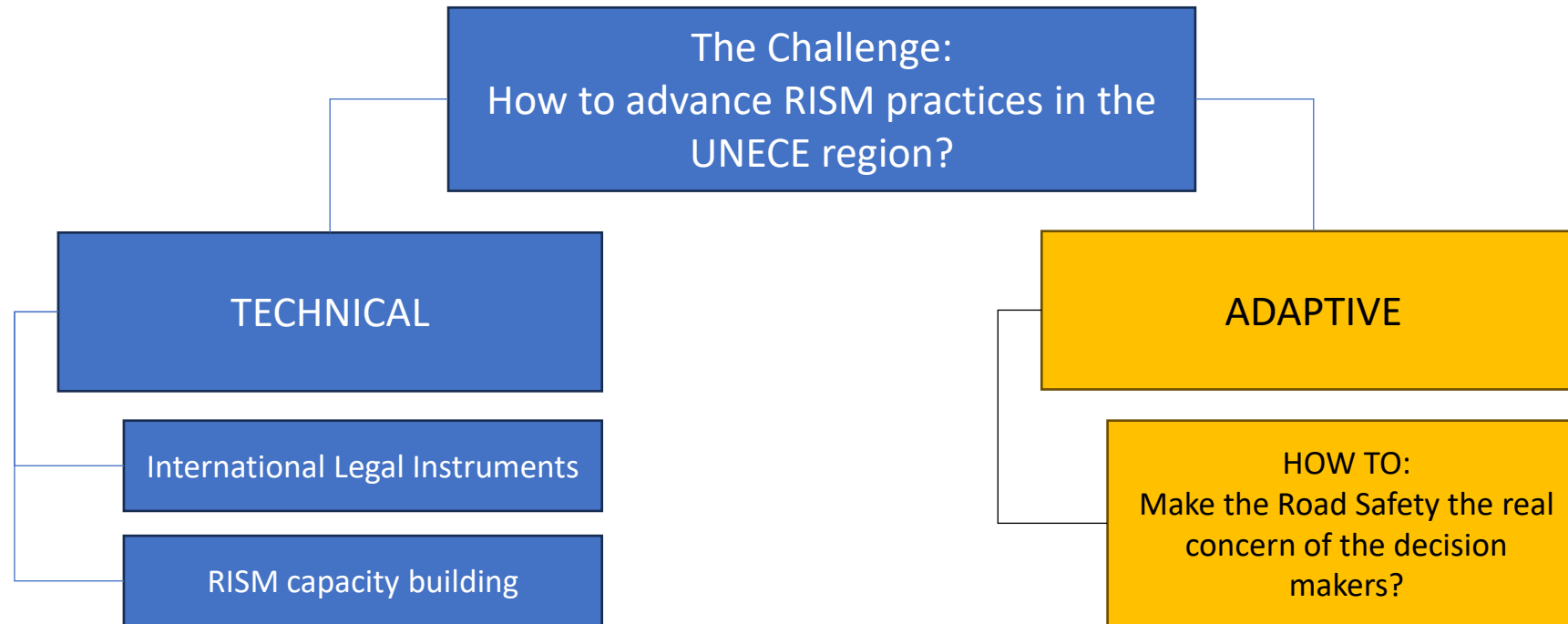
In a few countries courses for the training of Auditors and Inspectors are not available at current state. Institutional aspects like who is offering courses, which institution is issuing certificates etc. can only be decided by those countries. Minimum standards for training courses are available.

It is recommended that courses should contain a theoretical part and a practical part in which candidates must 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.

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

The Challenge

Adaptive work



The Challenge

Way Forward



SC.1: Informal group of experts

At the 118th session of SC.1 decided (para 37 of the report) as follows:

“SC.1 decided to create an informal group of experts on road infrastructure good practices comprising of Latvia, Türkiye, Ukraine and other interested participants. The informal group of experts was invited to work with the TEM Project Manager and the secretariat on the development of a proposed capacity building collaboration between SC.1 and the TEM Project with an initial focus on RSA and RSI for the ECE region.”



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ROAD SAFETY: RSA and RSI



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Thank you!

Andrzej Maciejewski
TEM Project Manager

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Date 08 | 04 | 2024, Belgrade