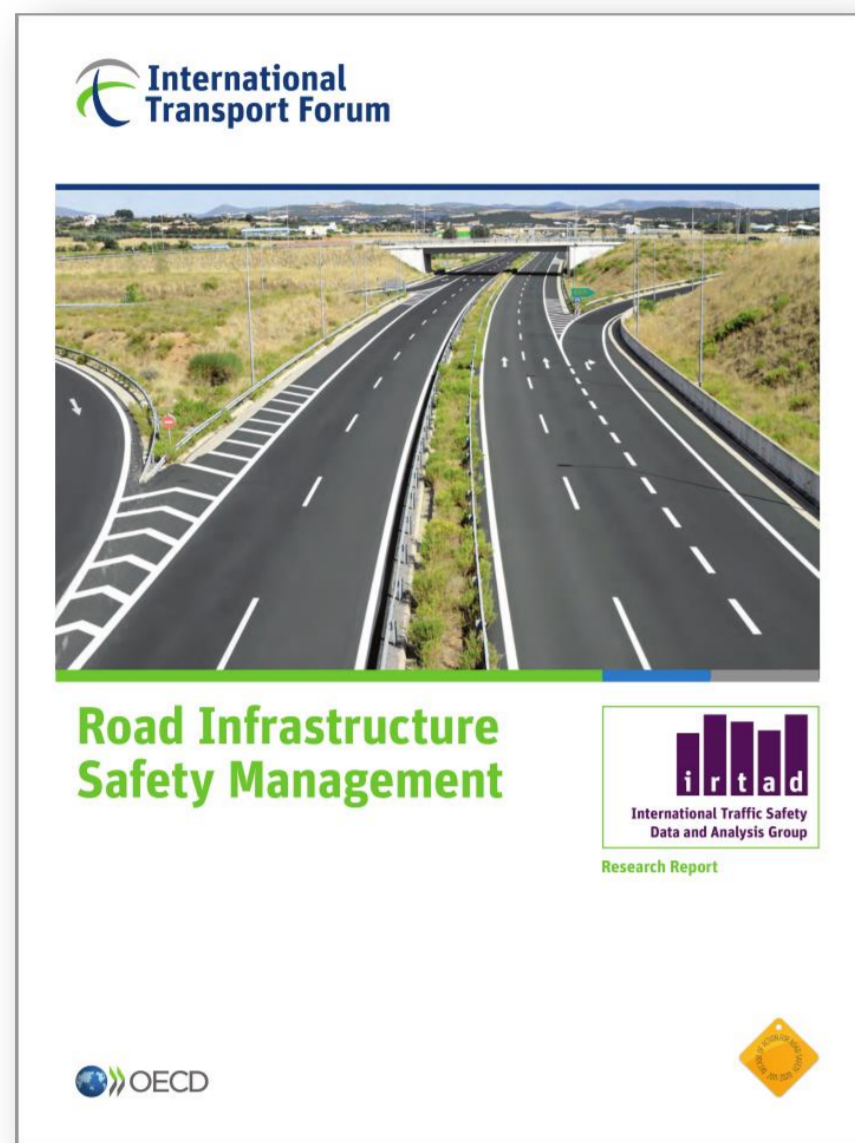


## INTRODUCTION

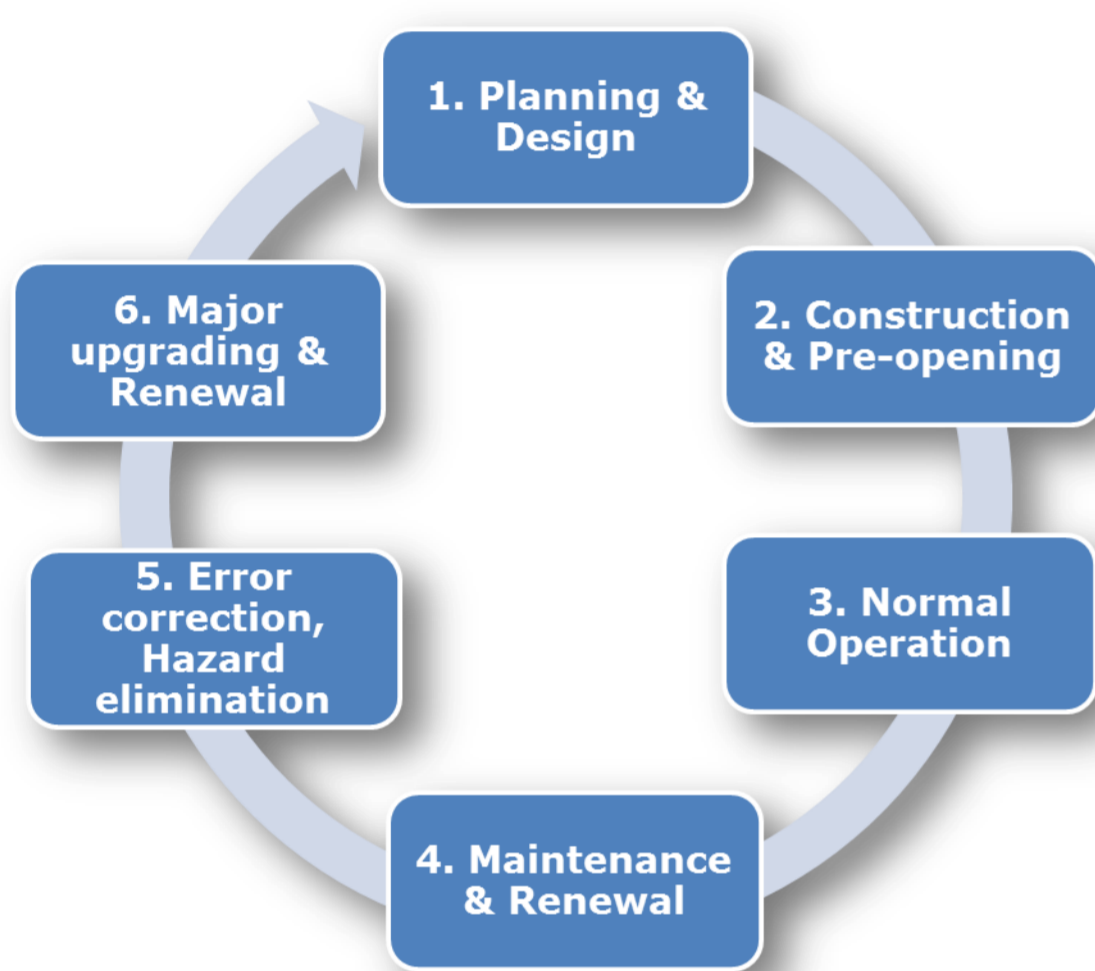
**Road Infrastructure Safety Management (RISM):** a set of procedures that support a road authority in decision making related to the improvement of safety on a road network. Some of these procedures can be applied to existing infrastructure, thus enabling a *reactive* approach; and other procedures are used in early stages of a **project's life-cycle** allowing a *proactive* approach.



Aims of IRTAD sub-working group on Road Infrastructure Safety Management:

1. To describe the most consolidated RISM procedures.
2. To analyse the use of RISM procedures worldwide and to identify possible barriers to their implementation.
3. To provide example of good practices.
4. To provide recommendations for the implementation of RISM procedures

## GOOD ROAD INFRASTRUCTURE SAFETY MANAGEMENT

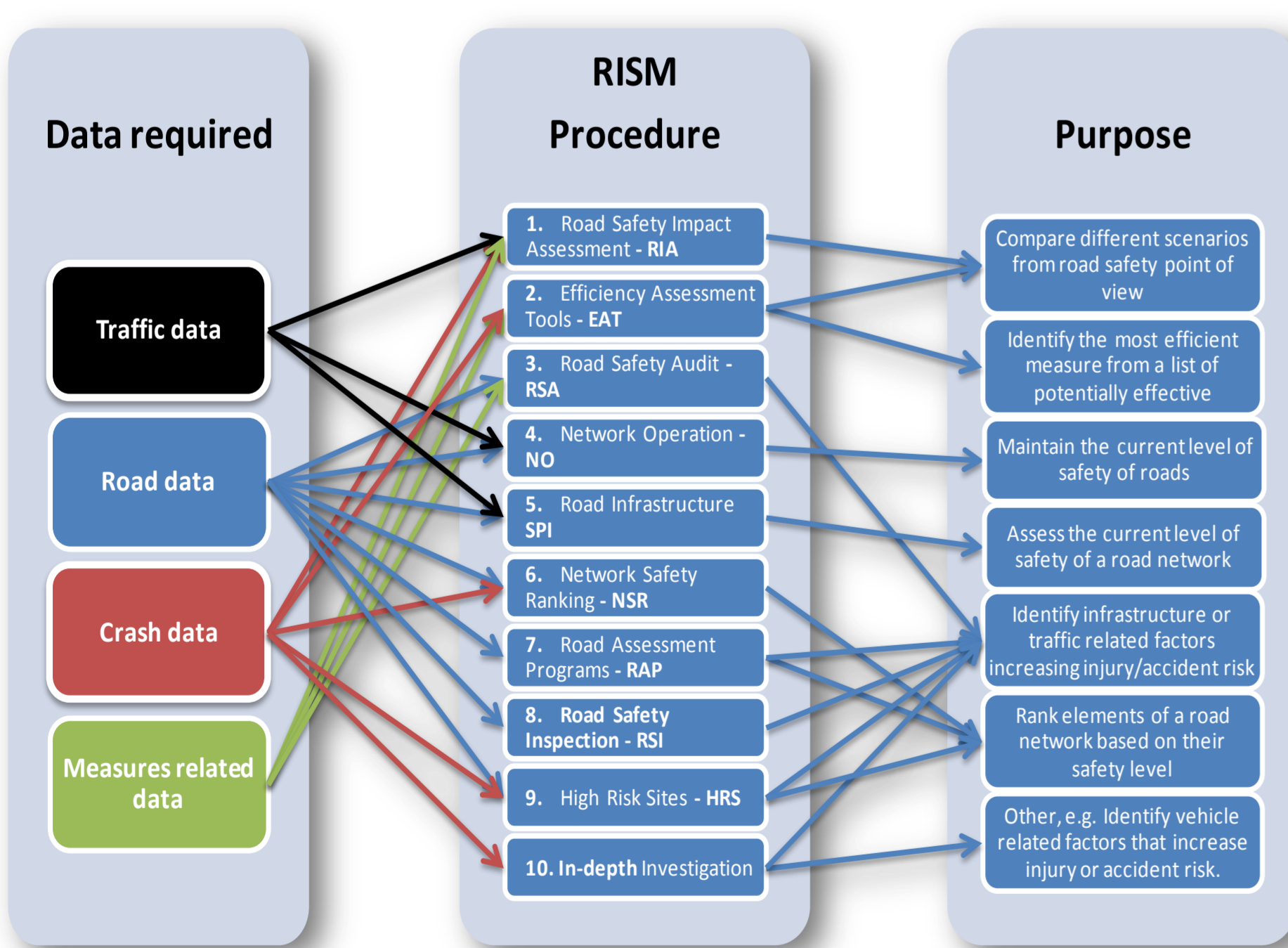
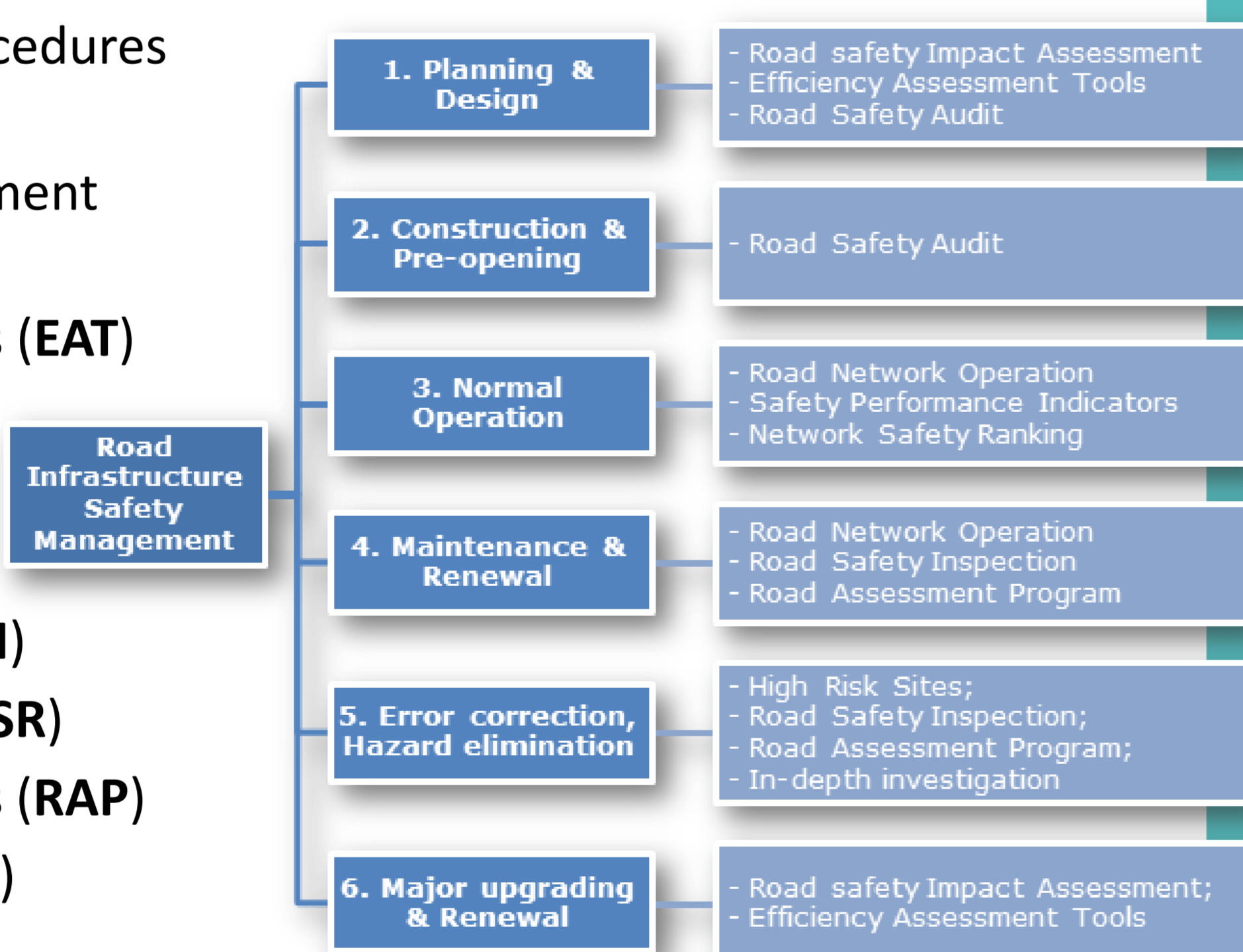


Goals of RISM procedures:

- Help to **estimate** the likely effects of specific road safety measures or programmes.
- Help to **detect** emerging safety problems early.
- Help in **locating** the most hazardous parts of the road system.
- **Identify** the most important factors contributing to road accidents and injuries.

Ten consolidated RISM procedures have been examined:

1. Road Safety Impact Assessment (RIA)
2. Efficiency Assessment Tools (EAT)
3. Road Safety Audit (RSA)
4. Network Operation (NO)
5. Road Infrastructure Safety Performance Indicators (SPI)
6. Network Safety Ranking (NSR)
7. Road Assessment Programs (RAP)
8. Road Safety Inspection (RSI)
9. High Risk Sites (HRS)
10. In-depth Investigation.



A good RISM approach is one considering these three aspects:

- all the various stages of development of roadways,
- the context of application of RISM procedures
- the calibration of the procedures to the specific needs of the country.

## ACKNOWLEDGEMENTS

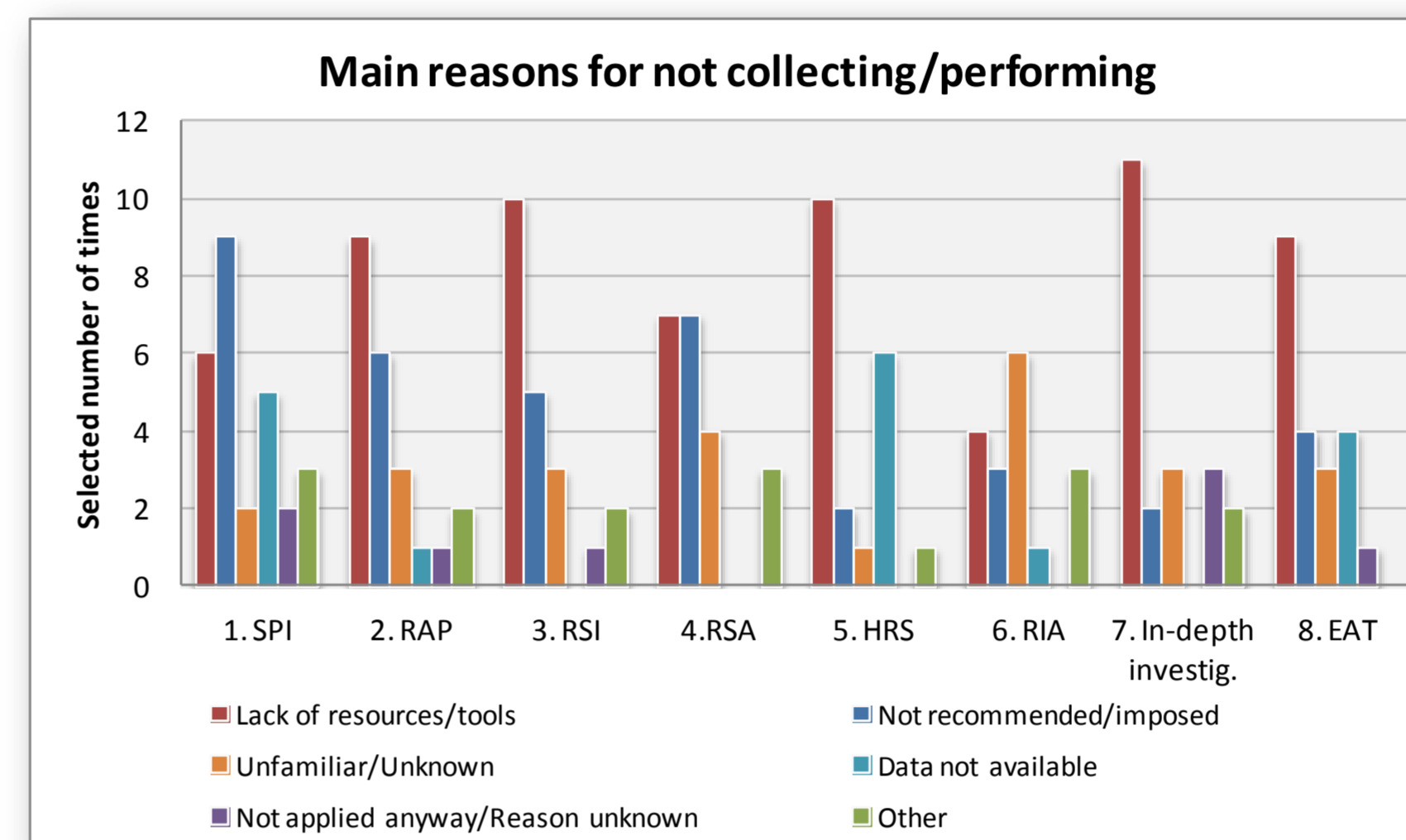
The authors would like to address special thanks to all the experts of the countries analysed, for filling in the questionnaire and especially the experts participating actively to the IRTAD Working-Group on Road Infrastructure Safety Management activities.

## USE OF ROAD INFRASTRUCTURE SAFETY MANAGEMENT PROCEDURES

Do countries adopt a good approach to Road Infrastructure Safety Management?

- a survey has been carried out to investigate the diffusion and the main difficulties to the use of RISM procedures.
- A total of 23 countries belonging to IRTAD network responded to the questionnaire, 15 from Europe and 8 from other continents.
- Topics explored: the presence of a national law regulating an RISM procedure; the road network coverage; the party responsible for the application; availability and adequacy of tools supporting the application of an RISM procedure; the main barriers to the implementation of an RISM procedure.

What are the main barriers that may prevent the use of RISM procedures?



Lack of resources or tools is the most commonly stated reason for not applying a RISM procedure. This has been found frequent mainly in European countries. Another frequent reason is the absence of recommendations / impositions, especially for: SPIs, RAPs, RSIs and RSA.

This highlights the importance of the presence of some legislation regulating the application of the procedures. A lack of data has been found important mainly for SPIs, HRSs and EATs. Lack of know-how is a frequent issue found for RIAs and RSAs.

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## CONCLUSION AND RECOMMENDATIONS

The improvement of road infrastructure safety management is a key component for the improvement of road safety. Good practices of road infrastructure safety management provide examples on how to overcome the related issues that stood out in the survey: data, legal framework, funding, knowledge and tools. On the basis of the analysis carried out, a number of key messages and recommendations are outlined below:

Key message	Recommendation
• Road authorities are key players for improving road safety .	• Benchmark road infrastructure against good practices in other countries
• Road Infrastructure Safety Management (RISM) procedures are effective and efficient tools to help road authorities reduce the number of accidents and casualties	• Implement new minimum safety standards for road infrastructure
• Design standards alone cannot guarantee road safety in all conditions.	• Continue evaluation and research to quantify safety impacts of planning decisions
• Successful implementation of RISM procedures requires an adequate level of investment, supporting regulation, availability of relevant road safety data and adequate institutional management capacity .	• Implement suitable Road Infrastructure Safety Management procedures for each stage of road development including planning design, pre-opening and full operation
• Making RISM procedures compulsory is preferable, as awareness of RISM alone is rarely sufficient for success .	• Make Road Infrastructure Safety Management procedures legally binding
• To identify the best ways of making road infrastructure safer, road authorities also need good road accident data. Road safety performance monitoring with appropriate indicators helps to achieve safety targets.	• Involve both road and health authorities when developing road accident data bases
• Tools to support RISM are already available	• Assure adequate institutional management capacity and investment levels
• A more pro-active approach to road infrastructure design and management is desirable, with road safety taken into account in all stages of the road life cycle.	• Use existing tools and guidelines; adopt second-best solutions where state-of-the-art solutions are not feasible
• The exchange of experiences with RISM among countries can be highly useful for finding the best solutions.	• Identify the Road Safety Infrastructure Management procedures that fit specific needs and understand barriers to implementation
• One of the main tools to help drivers to adopt appropriate behaviour are self-explaining roads	• Share good practices of Road infrastructure Safety Management procedures and intervention measures
	• Monitor the safety performance of road infrastructure
	• Develop self-explaining roads