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 IRMAD 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.

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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 IRMAD 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, RAs, 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, HRs and EAs. Lack of know-how is a frequent issue found for RAs and RSAs.

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 messages
- Road authorities are key players for improving road safety
- Road Infrastructure Safety Management (RISM) procedures are effective and efficient tools to help road authorities reduce the number of accidents and casualties
- Design standards alone cannot guarantee road safety in all conditions
- Successful implementation of RISM procedures requires an adequate level of investment, supporting regulations, and availability of relevant road safety data, and adequate institutional management capacity
- Making RISM procedures compulsory is preferable, as awareness of RSI alone is rarely sufficient for success
- To identify the best way of making road infrastructure safer, road authorities also need good road accident data
- Road safety performance monitoring with appropriate indicators help to achieve safety targets
- Tools to support RISIs are already available
- 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
- The exchange of experiences with RSIMs among countries can be highly effective in finding the best solutions
- One of the main tools to help driven to adopt appropriate behaviour are self-explaining roads

Recommendations
- Benchmark road infrastructure against good practices in other countries
- Implement new minimum safety standards for road infrastructure
- Continue education and research to quantify safety impacts of planning decisions
- Implement suitable Road Infrastructure Safety Management procedures for each stage of road development
- Ensure adequate institutional management capacity and investment levels
- Use existing tools and guidelines; adopt second-best solutions where state-of-the-art solutions are not feasible
- Identify the Road Infrastructure Safety Management procedures that fit specific needs and understand barriers to implementation
- Share good practices of Road Infrastructure Safety Management procedures and intervention measures
- Monitor the safety performance of road infrastructure
- Develop self-explaining roads

REFERENCES


