

LISBOA 2010 16th World Meeting

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RESEARCH AT THE NATIONAL AND EUROPEAN LEVELS ON THE MAIN FIELDS OF INTERVENTION COVERED BY THE EU DIRECTIVE ON ROAD INFRASTRUCTURE SAFETY MANAGEMENT

The Experience of a National Research Laboratory (LNEC)

António Lemonde de Macedo

Director of the Transportation Department

João Lourenço Cardoso

Head of the Planning, Traffic and Safety Division

- 1. Introductory Background**
- 2. The EU Directive on Road Infrastructure Safety Management**
- 3. Road Safety Research Contributions – The role of LNEC**
- 4. Final Remarks**

Background topics

- **The influence of road infrastructure characteristics on the occurrence of accidents**
- **Road safety research– first studies (after WW II) on each physical element of the road (geometric layout, pavement surface, roadside equipments, etc.)**
- **The concept of “road safety management” (last decades of the XX Century) – integration of road safety measures, priority ranking, resources optimization**
- **Road infrastructure and traffic operations as an integrated, dynamic and open system**

Background topics

- **Road safety interventions required at all the life cycle stages of road infrastructures (from conceptual design to operations)**
- **Road safety in the EU agenda; In the “European Road Safety Action Programme” (2003) road infrastructure was identified as one of the three main pillars of road safety policy**
- **Joint research on road safety, namely within the scope of EU R&TD Framework Programmes (SAFESTAR, RIPCORDER-ISEREST, etc.)**
- **The Directive 2008/96/EC on “road infrastructure safety management”**

The EU Directive on Road Infrastructure Safety Management

(Directive 2008/96/EC)

- Road safety impact assessment for infrastructure projects
- Road safety audits for infrastructure projects
- Safety ranking and management of the road network in operation
- Road safety inspections
- Data management (fatal accident report; social costs of accidents)

The EU Directive on Road Infrastructure Safety Management

Road safety impact assessment for infrastructure projects

“a strategic comparative analysis of the impact of a new road or a substantial modification to the existing network on the safety performance of the road network”

To be carried out at the planning or initial stage of the project, giving indications for the choice of adequate solutions and providing relevant information for cost-benefit analysis at this level.

The EU Directive on Road Infrastructure Safety Management

Road safety audits for infrastructure projects

“an independent detailed systematic and technical safety check relating to the design characteristics of a road infrastructure project and covering all stages from planning to early operation”

To constitute an integral part of the design process (draft design, detailed design, pre-opening and early operation), carried out by auditors qualified with the necessary competence and training.

The EU Directive on Road Infrastructure Safety Management

Safety ranking and management of the road network in operation

Ranking of high accident concentration sections – “a method to identify, analyse and rank sections of the road network which have been in operation for more than three years and upon which a large number of fatal accidents in proportion to the traffic flow have occurred”;

Network safety ranking – “a method for identifying, analysing and classifying parts of the existing road network according to their potential for safety development and accident cost savings”.

The EU Directive on Road Infrastructure Safety Management

Road safety inspections

“an ordinary periodical verification of the characteristics and defects that require maintenance work for reasons of safety”

Undertaken by the competent entity over the roads in operation, safeguarding adequate safety levels and calling upon interventions when necessary for preventing accidents

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Participation in joint European Research

- **SAFESTAR (4th FP)** : *Safety Standards for Road Design and Redesign*
- **COST Transport ACTION 329** : *Models for Traffic and Safety Developments and Interventions*
- **RIPCORDER - ISEREST** : *"Road Infrastructure Safety Protection – Core Research Development for Road Safety in Europe" and "Increasing Safety and Reliability of Secondary Roads for a Sustainable Surface Transport (6th FP)*
- **RISMET** : *Road Infrastructure Safety Management Evaluation Tools (ERANET)*

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Participation in joint European Research (6th FP)

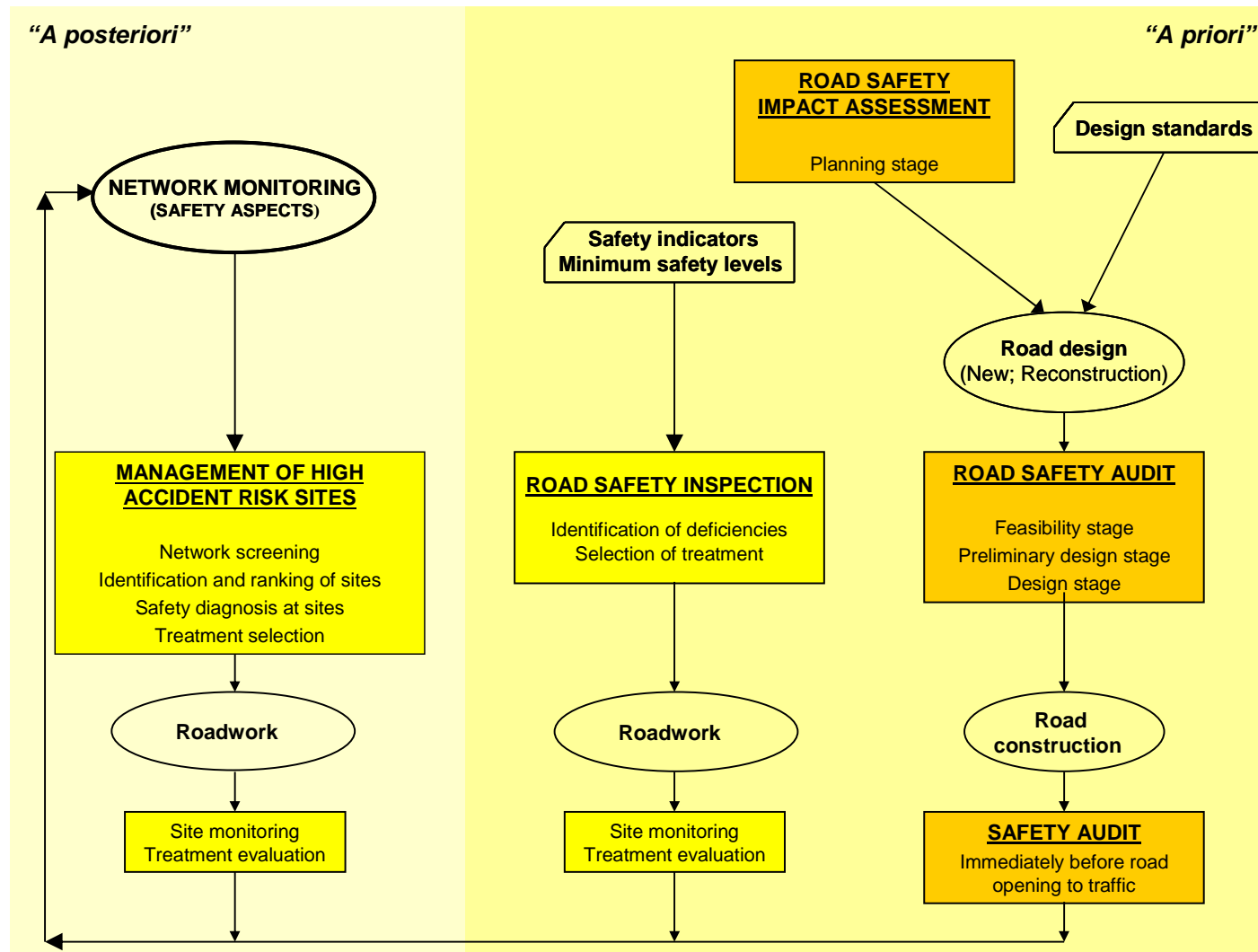
RIPCORDER – ISEREST – *"Road Infrastructure Safety Protection – Core Research and Development for Road Safety in Europe"* and
"Increasing Safety and Reliability of Secondary Roads for a Sustainable Surface Transport"



Participation in:

- WP2 – Road Safety Impact Assessment
- WP3 – Best practice on Road Design and Road Environment
- WP4 – Best practice on Road Safety Audits
- WP5 – Best practice on Safety Inspection
- WP6 – Best practice on Black Spot Management and Safety Analysis of Road Networks

A framework for road infrastructure safety management in Portugal





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Manuals for good practice in road safety

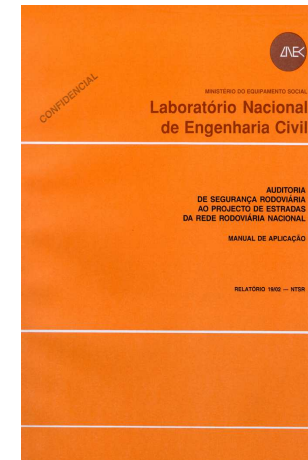
- **Road Safety Audits**

Manual for application on the National Road Network, at the road design stage

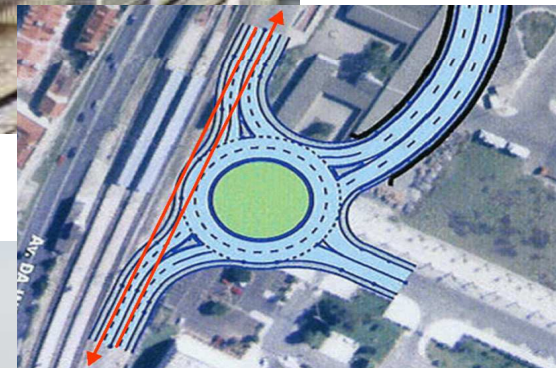
- **Low-Cost Engineering Measures for casualty reduction**

Manual for application on the National Road Network

- **Roadside Characteristics and Road Accidents in Rural Roads**



Example taken from a Road Safety Audit at the pre-opening stage



Conclusive Remarks

- **The Directive 2008/96/EC, has set the necessary provisions for the implementation of a much needed policy for the rational management of safety interventions on the road infrastructure, having a direct application to the trans-European road network.**
- **The EU Member States should also apply those provisions, duly adapted, as a set of good practices, to other national or regional road networks.**
- **All relevant stakeholders, such as governments, traffic management agencies, road administrations and technical entities, play an important role towards the successful application of this Directive, within the common goal of a steady and widespread improvement of road safety levels.**

Conclusive Remarks

- Road safety research activities, directed to the infrastructure component of the traffic system, undertaken over the past decades, have given a scientific and technical support to the definition and operational requirements of the procedures covered by this Directive.
- This research effort should continue, as a means of improvement and validation of the available tools, and as a prerequisite for new developments.
- The dissemination of research projects results and new findings in this area should, therefore, constitute a permanent concern.