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Introduction of TC C.1, The System Approach to Safer Road Infrastructure

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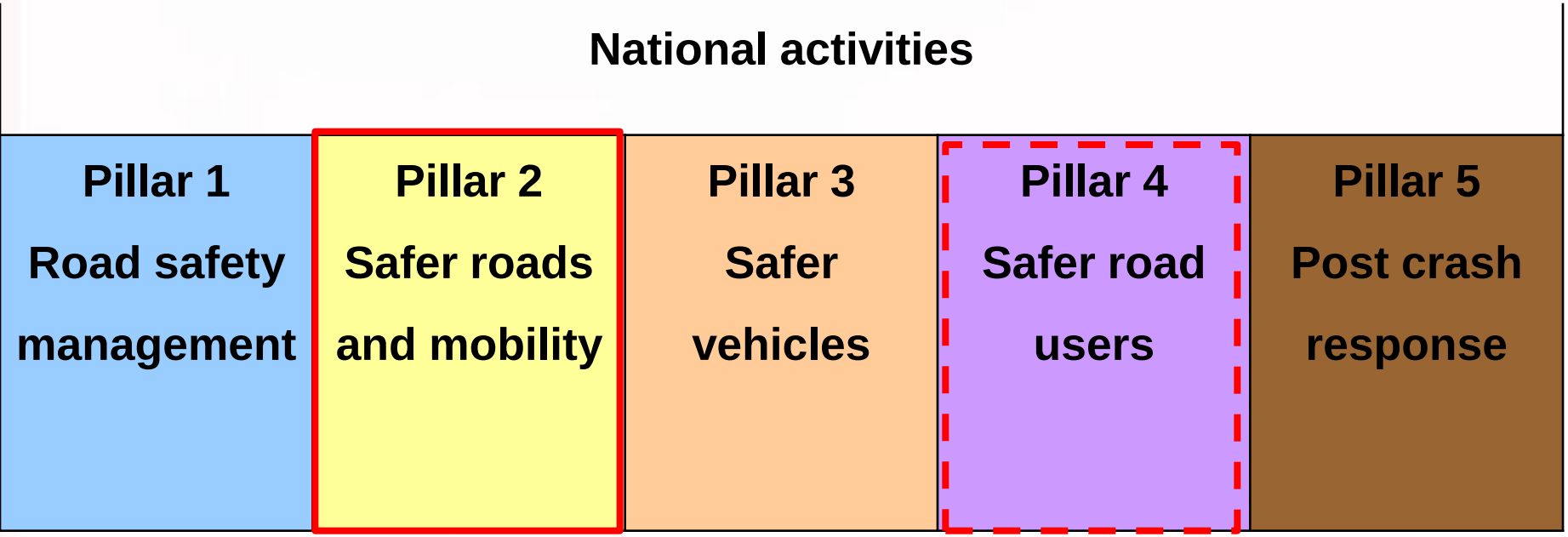
WORLD ROAD ASSOCIATION MONDIALE DE LA ROUTE
AIPCR PIARC

The UN Global Plan for the Decade of Action for Road Safety



PIARC TC C.1 was working intensively on the tools for achieving the UN – objectives of Pillar 2 on safer roads, this needs a multi dimensional system approach

The System Approach to safer roads

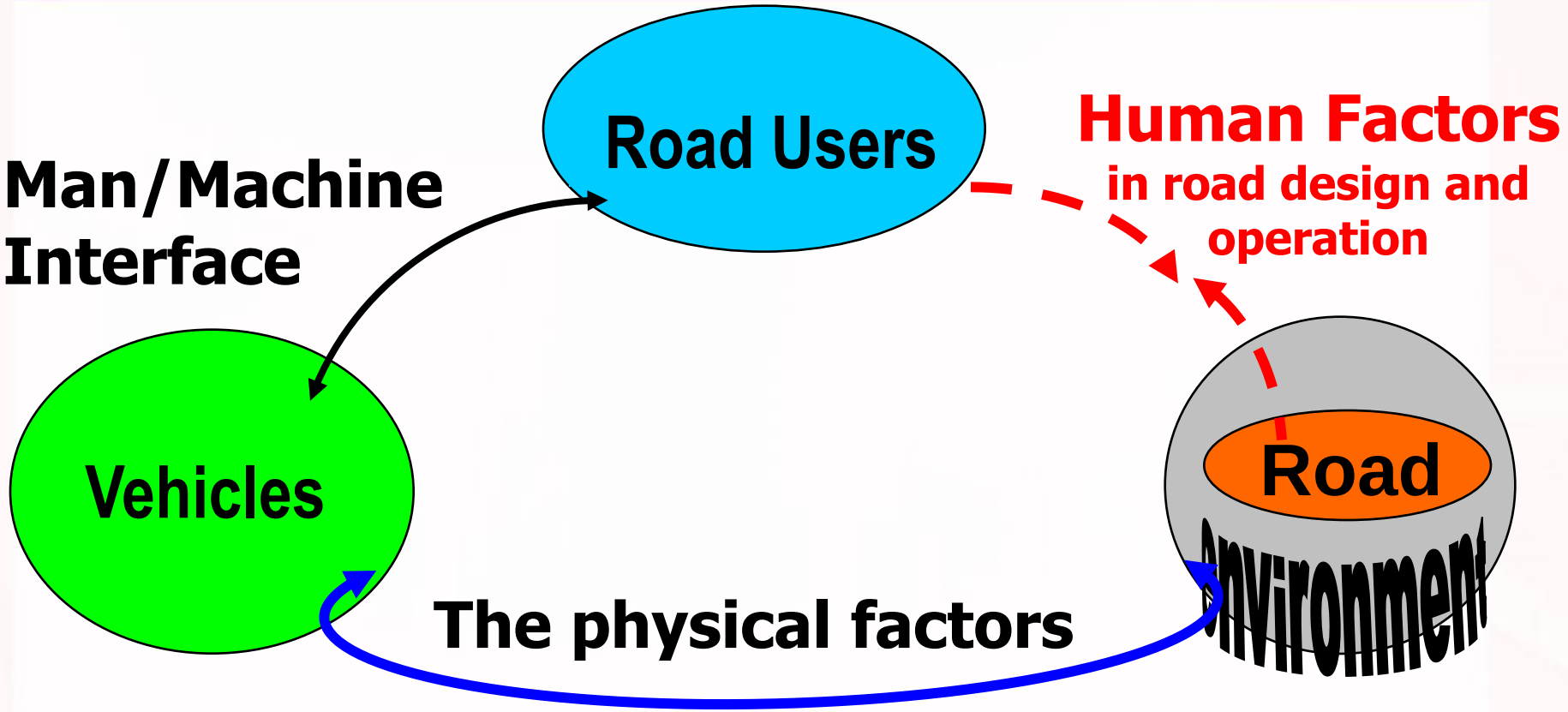
At the World Road Congress Durban in 2003 PIARC has spread the key to safer roads in the session of innovations:

The problem is not simply the unsafe road user but the unsafe system. The three key components users, vehicles and roads can contribute individually to traffic accidents and accidents are most often the result of complex combinations and interactions between them.

The PIARC Technical Committees on Road safety have been focusing especially the interfaces between Road Users and Roads with their surrounding, the Human Factors (HF), since the session 1999 -2003.

The technical Sheet on Human factors from the PIARC Road Safety Manual has been further developed to a guideline.

The System Approach to safer roads has many dimensions



1. Look at the interfaces and adapt the technical parts of the road transport system to our abilities and limitations!

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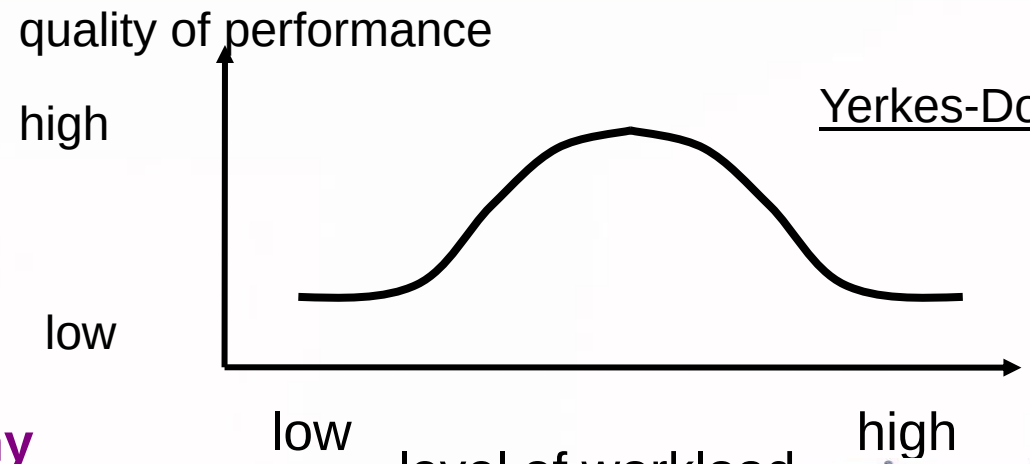
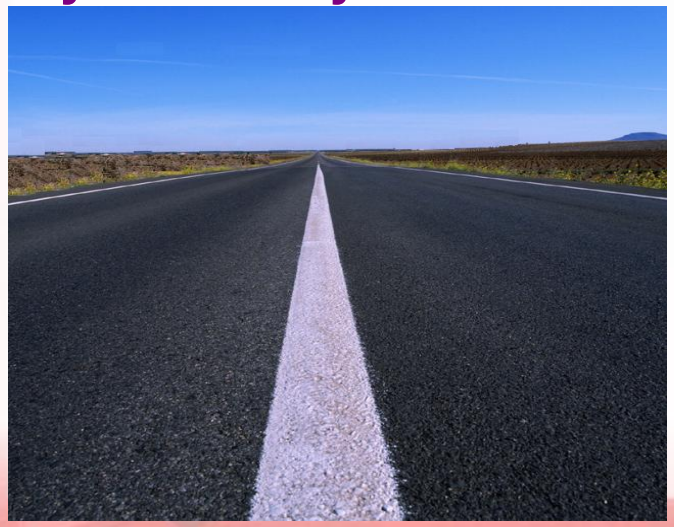
(one example from the special session in Durban)



Sleepiness by Monotony



Overloaded by information

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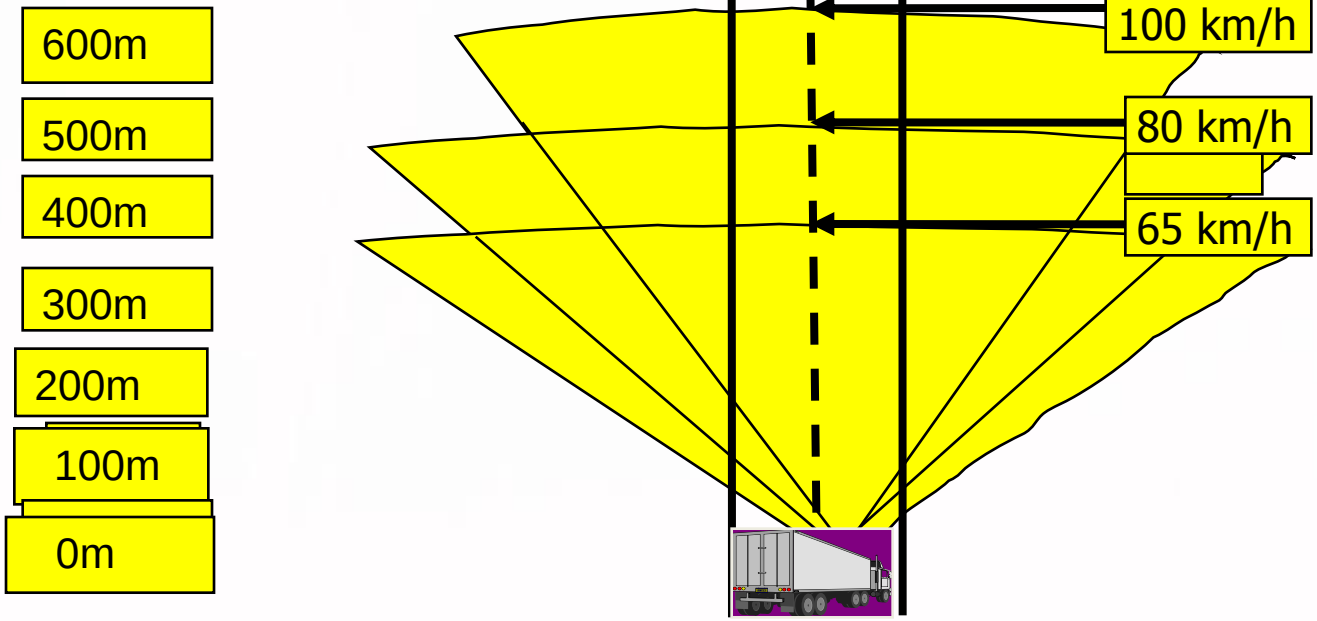
The relation between speed management and sight distance

Speed-related point of focus:

- **100km/h = 600 m**
- **65km/h = 350 m**

Roth, 1973 in: Cohen, 1984



What has been developed by TC C.1.1?

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1st Topic: Incorporating human factors in road design for influencing driver behaviour and avoiding his errors

- **Dr. Sibylle Birth**, Intelligenz System Transfer Potsdam, Germany in cooperation with Mr. Emilio Francisco (Mexico)
- **Mr. Daniel Aubin**, Dessau inc., Quebec, Canada
- **Mr. M. Hughes/J. Yerpez** French Institute of Science and Technology for Transport, Development and Networks, France (135)
- **Mr. Eric Locquet,** France (481)

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Work zone safety

Work zones are surprizing events in many emerging countries such as Vietnam,

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Work zone safety

.. .. Egypt and many others. They are dangerous for road users and workers as well. PIARC TC C.1.4 did create a guideline espacially for emerging countries

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2nd Topic: Work Zone Safety: A Growing Issue for Emerging Countries

- **Mr. Mike Greenhalgh,** Amey Consulting, United Kingdom
- **Ms. Elizabeth Alicandri,** United States of America
- **Mr. Aditya Bahadur,** India

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3rd topic : Urban Development and Land Use!

False settlement policies and endless linear settlements may be…

…the most crucial disaster for road safety in emerging countries

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has to solve the land use disaster...

These land use problems have been described in two articles in Routes and Roads Nr 347:

1. “Roads that serve the neediest users, yet all to often kill them in the process” by the leader of our work group TC C.1.3, by Mr Boubacar Diallo, Mali

2. “They call them coffin roads” by the Chairman of TC C.1

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….needs different design principles and standards for different functions of interurban and urban roads.

Mixed functions like those in linear settlements or along urbanized highways are the reason for the dramatic losses of lives among vulnerable road users in many low and middle income countries.

TC C.1.2 had a special focus on the design and the Infrastructure Management of urban roads

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The speakers of the 3rd topic about land use planning and urban roads are:

- **Mr. Abou Ayash,** Public Establishment for Road Communications, Syria
- **Prof. Dr. Md. Mazharul Hoque,** Bangladesh University of Engineering & Technology represented by Mr.Rob McInnerney, CEO, iRAP Asia Pacific.
- Min. Dirig. **Hans Joachim Vollpracht** Germany
- **Prof. Marion Doerfel,** Bern University of Applied Sciences, Switzerland

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Example: the **EU - Road infrastructure safety management directive**

Road infrastructure safety management

1. **Network Safety Management**
2. **Road Safety Audits**
3. **Road Safety inspection**
4. Road Safety Impact Assessment

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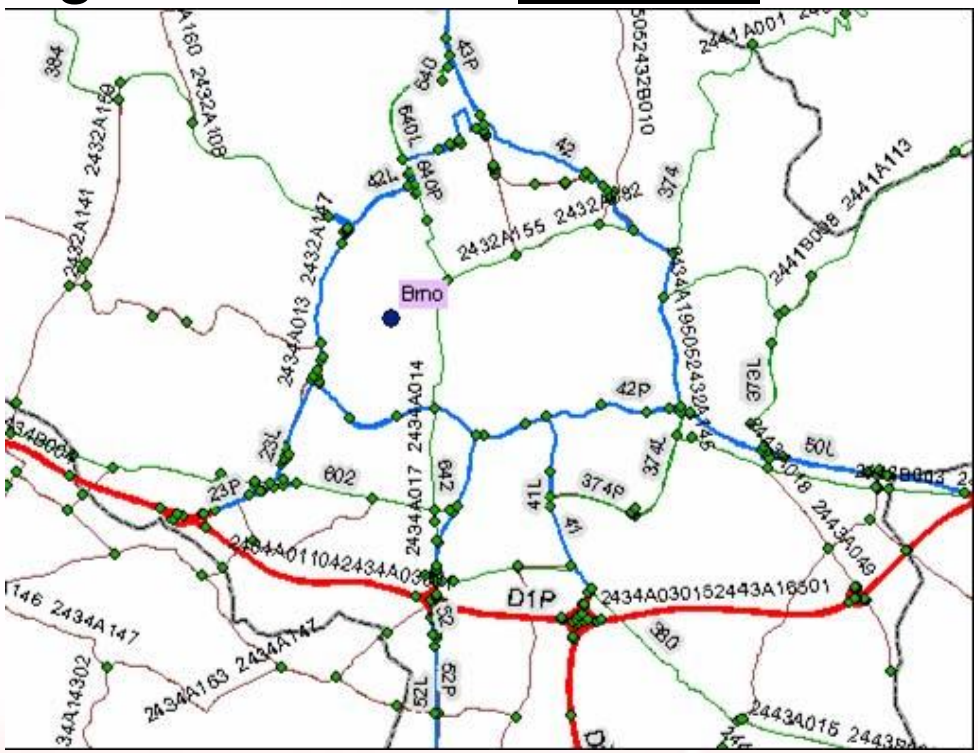
and the Infrastructure Safety Management

The PIARC Road Accident investigation guideline for road engineers for the reactive Network Safety Ranking



was introduced at the World Road Congress in Paris 2007

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needs also systematic pro active approaches.

Road Safety Audit *is a*

- ***formal systematic road safety assessment of road design***
- ***carried out by an independent, qualified auditor or team of auditors***
- ***who report on the projects accident potential***
- ***for all kinds of road users.***

The definition of TC 13 Kuala Lumpur 1999

The System Approach to safer roads

needs systematic pro active approaches.

A Road Safety Inspection is

- ***A formal systematic road safety assessment of road our road networks***
- ***carried out by an independent, qualified inspector or a team of Road Safety Inspectors***
- ***who report on the existing roads accident potential for all kinds of road users.***

The definition of TC 13 from Paris 2007

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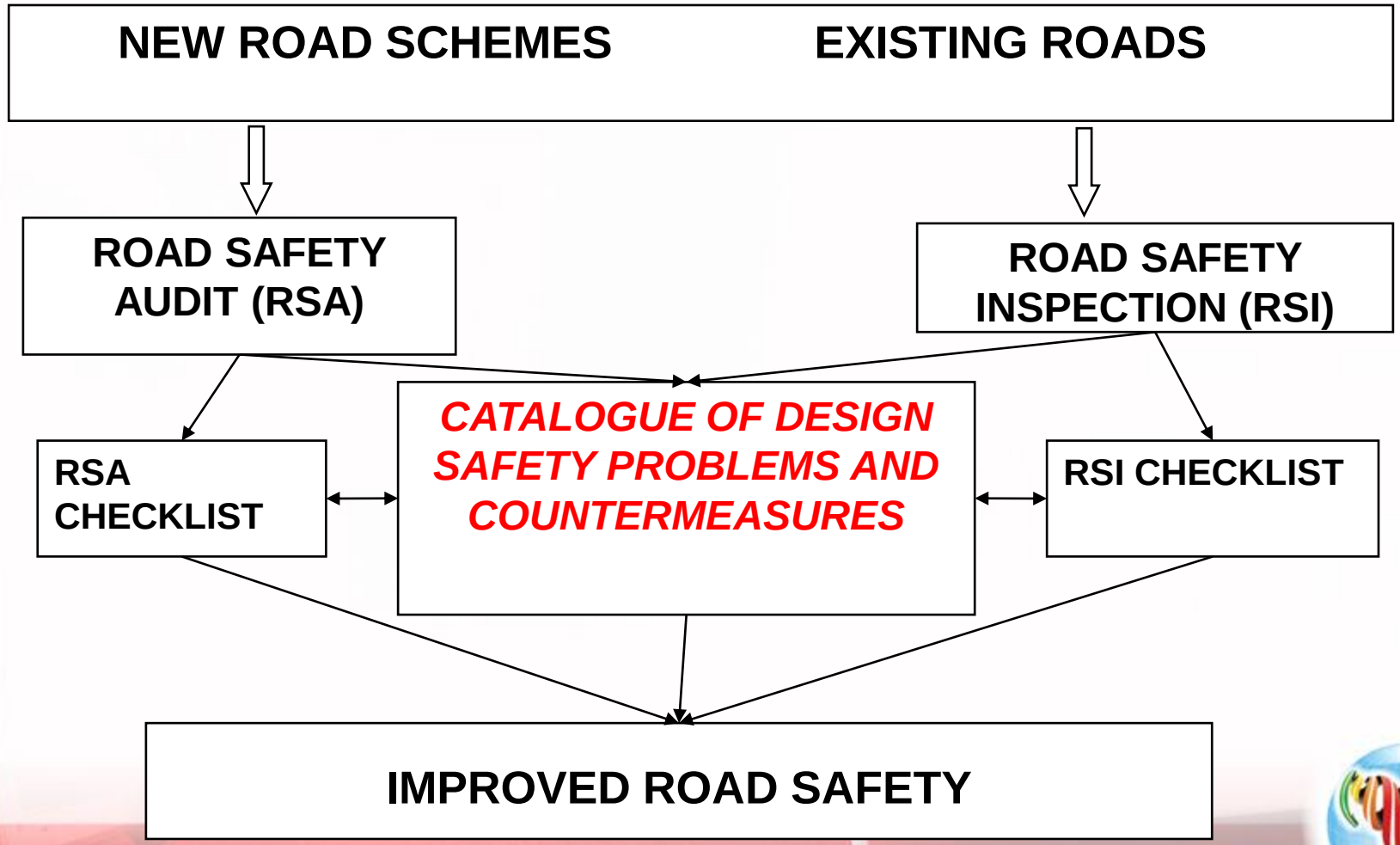
Both guidelines and the catalogue have been upgraded



The System Approach to safer roads needs a new dimension:

- Similar to the environmental impact assesment road safety issues have to be checked allready in the planning phases of all kinds of investments related to road traffic.
- The linear settlement desaster demonstrates clearly that the System Approach to safer roads has to be started together with the planning of land use and urban development.
- The Infrastructure Safety Management is getting an additional Element:
- The Road Safety Impact assessment (RSIA)

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The speakers: of the 4th topic about Road Safety Impact Assessment will be

- **Prof. Jürgen Gerlach**, University of Wuppertal, Germany (029)
- **Engineer Miss. María Guadalupe SAUCEDO ROJAS,** Mexico (267)
- **Mr. Rodolphe Chassande-Mottin**, France (427)
- **Mr. Cumhur Aydin, Atilim**, University, Turkey (691)