

Road Asset Management
The European experience
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The ERF Members (64)

➤ Major stakeholders in the global road infrastructure sector:

- National road organisations
- Road users' associations
- Professional business organisations
- Industry and private sector
- Research and test centres
- Academics

➤ A unique structure and positioning

The ERF activities

- European policy (follow-up and actions)
- Information to the members (Newsletters)
- Working groups
- Liaison with other international organisations (e.g. PIARC, OECD...)
- Events: organisation and participation
- Publications (European Road Statistics, technical brochures, position papers)

The importance of transport in Europe

- Major support to our socio-economic model (EC)
- Driver for economic growth and job creation (EC)
- Fosters mobility, trade and exchange (EC)
- Essential role of the road in the global transport framework
 - Accessibility
 - Mobility
 - Economic development

The road sector in Europe: facts and figures

➤ Length:

- European road network = +/- 5,5 million km

➤ Contribution to the economy:

- Direct: 5 million jobs or +/- 5% of the EU GDP *
- Indirect: 14 million jobs of +/- 11% of the EU GDP **

➤ The major community asset:

- Estimated reconstruction value > 8 trillion € ***

* Source: CE

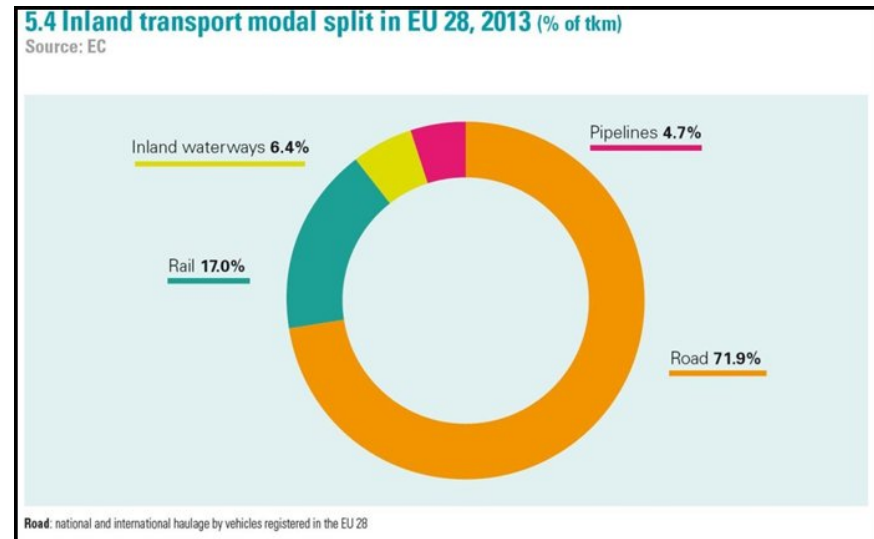
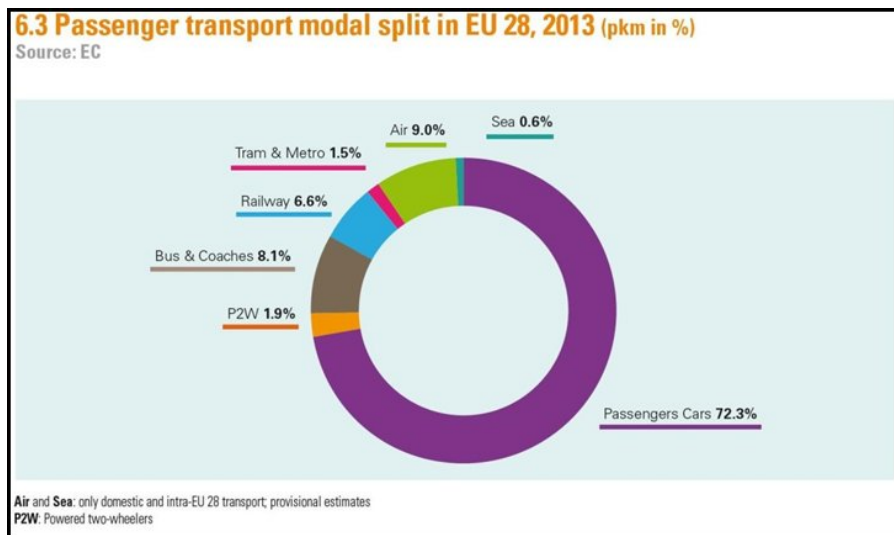
** Source: ERTRAC

*** ERF estimation

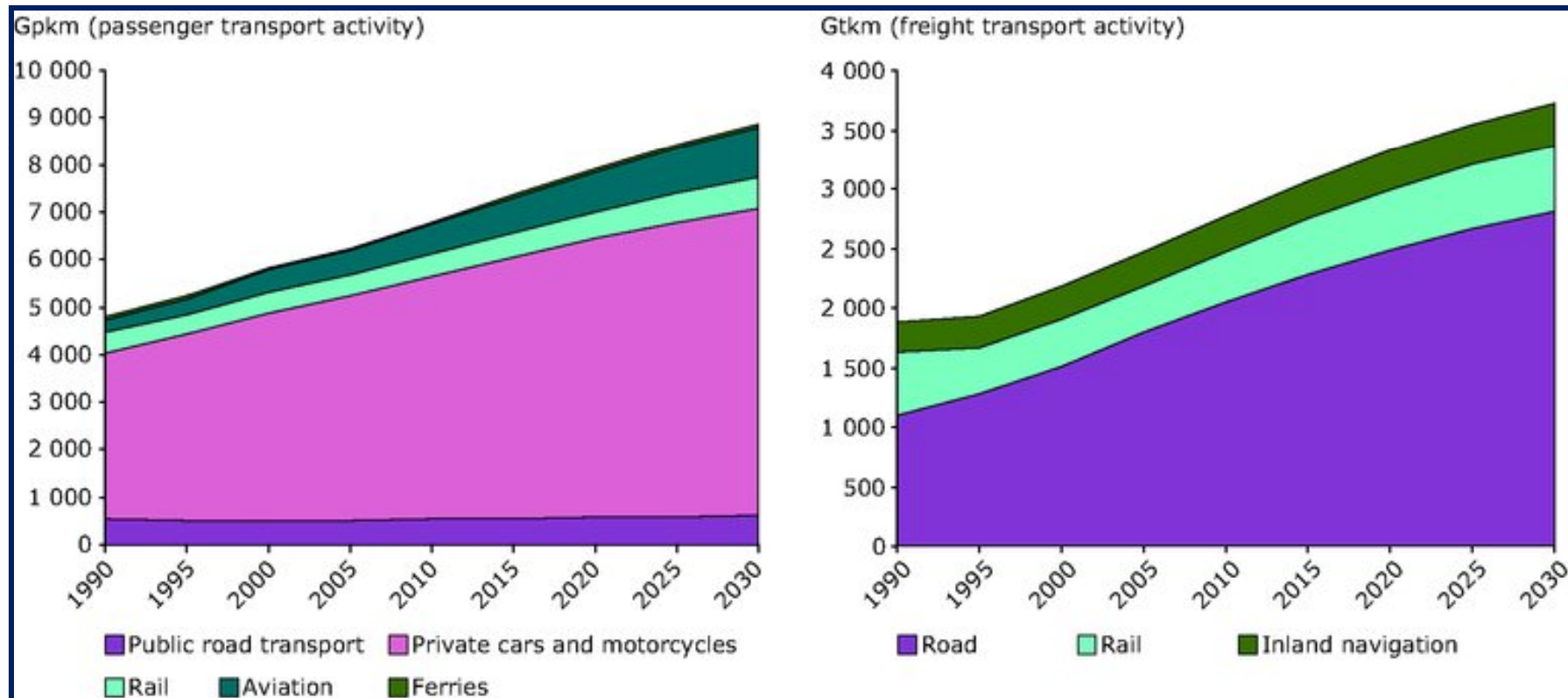
Roads are the backbone of the economy

82,3% of EU inland passenger transport

71,9 of EU inland freight transport



Evolution forecasts



Financing the transport infrastructures

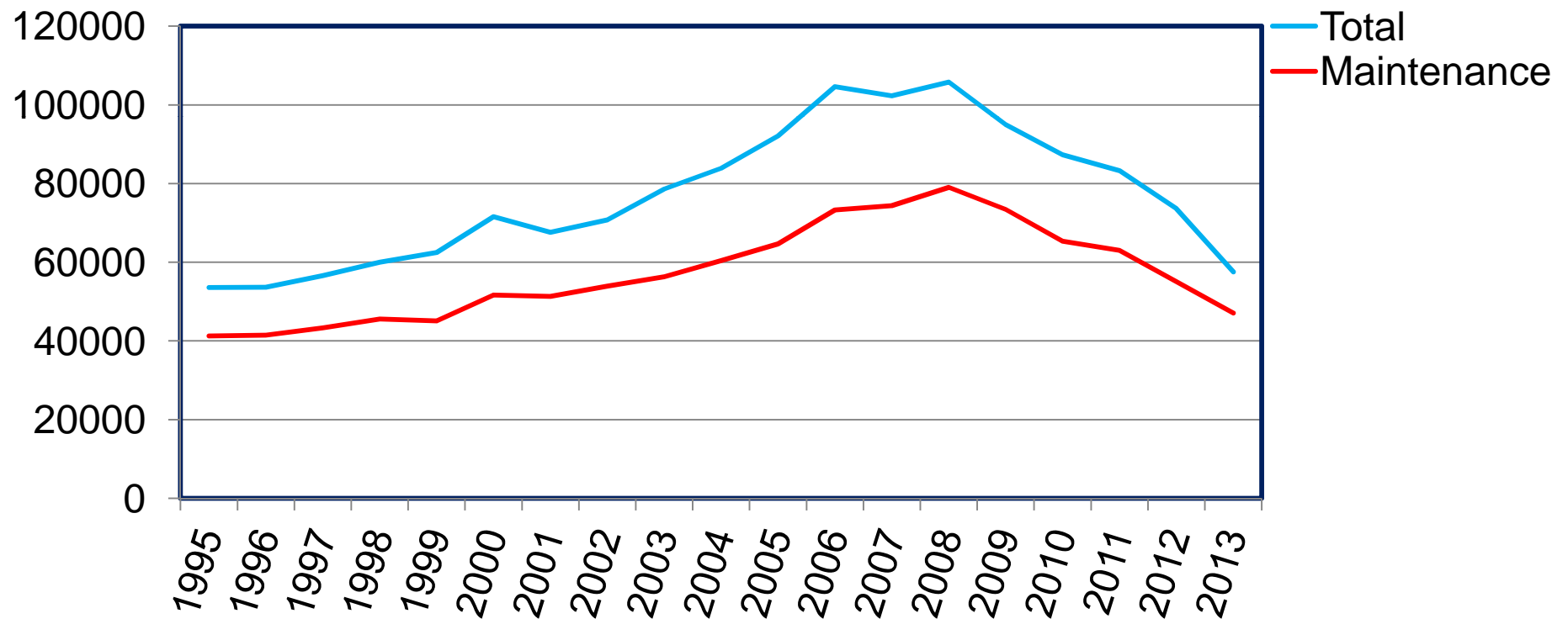
- All modes of transport:
 - Lowest level since the 70's
 - 1,5% of the GDP in the 70's
 - 0,8% of the GDP between 2000 and 2008
 - What about now and tomorrow?

- Investing in transport infrastructure has a very positive return (particularly in roads)
 - Example of Bosnia: ratio 1:3 *

* 4th Road Congress of B&H – Sarajevo, September 2014

Financing the road infrastructures

Evolution of road infrastructure investments in 26 EU countries – total and maintenance (in M €)



Consequences of the backlog in road maintenance (1)

➤ Impact on the economy

- Loss of value
- Reduced mobility



➤ Impact on road safety

- Degradation
- Risks of accidents and dangerous situations



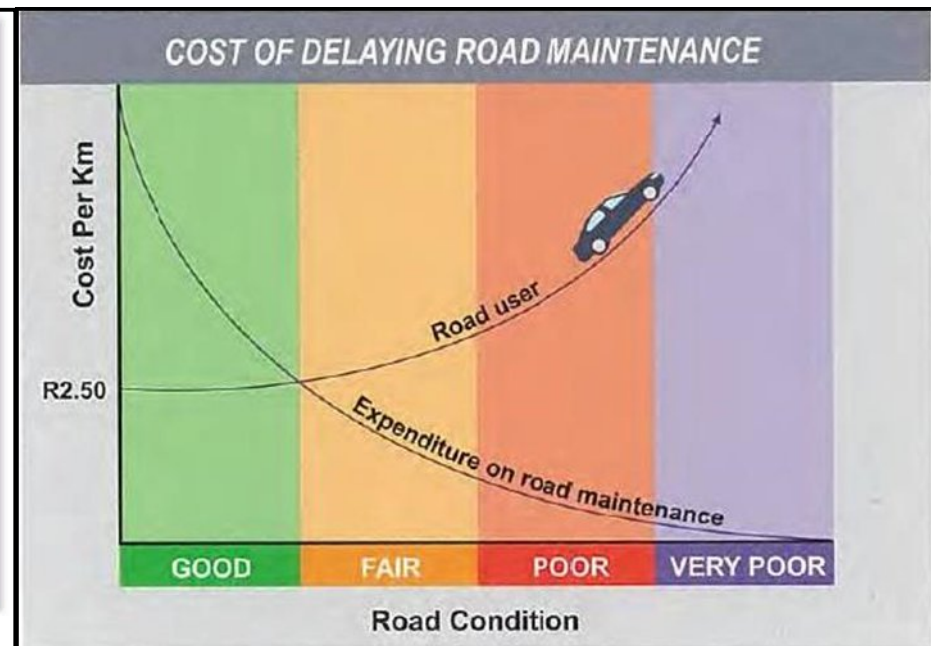
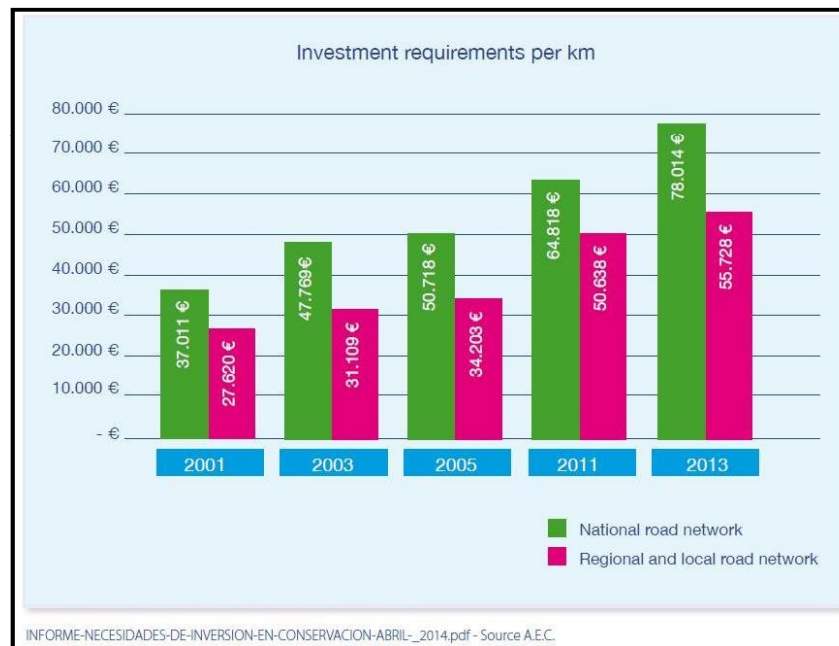
➤ Impact on the environment

- Traffic jams, congestion
- Increased emissions



Consequences of the backlog in road maintenance (2)

Management costs for the road owners and usage costs for road users



German example: Leverkusen bridge (A1)

- Very dense industrial area (chemical industry)
- Important traffic (high percentage of HGVs)
- Ageing structure – maintenance backlog
- Closed to traffic > 3,5 T from December 2012 to march 2013
 - Estimated social cost (loss of time, additional fuel consumption,...)
80 million €
 - Closed again to heavy traffic from June 2014, until... ?



Italian example: Lecco and Ancona

➤ Lecco bridge collapse (October 2016)

- 1 dead
- 5 injured



➤ Ancona bridge collapse (March 2017)

- 2 deaths
- 3 injured



The ERF Working Group on RAM

- Started in 2011, initiated by ERF members
- Concern about the current situation
- Experts (members and non-members of the ERF)
- Initial objective:
 - Estimate value of the European road asset
 - Reconstruction value
 - Different road categories
 - Figures of yearly expenditures for maintenance
- Next step: INFORM !

ERF WG on RAM: first step

➤ Questionnaire:

- Road authorities and administrations
- Selection of EU and non-EU countries (some 12)
- Selection criteria (where most likely to obtain valid information)

Example of data collected

CROATIA			
Road Network (km)		Average construction cost / km (M €)	Estimated value (M €)
Motorways	1250	8,5 (M €)	10625 (M €)
National Roads	6810	1,42 (M €)	9670 (M €)
Regional Roads	10820	1,1 (M €)	11902 (M €)
Rural Roads	10280	0,95 (M €)	9766 (M €)
Urban Roads	Included in rural roads		
TOTAL KM	29160	TOTAL VALUE	41963 (M €)
Annual expenditure in road maintenance			427 (M €)**
Annual loss of value			ND

First findings

- Long and time-consuming process (> 15 months)
- Difficulty to obtain (good) data
- Differences between road classifications
- Fragmentary information
- Virtually no data available on maintenance investments
- Generally speaking, authorities have no clue about the clue of their network
- Lack of knowledge on maintenance expenditure

The ERF Manifesto on RAM (1)



The Roads in the European Union Facts and Figures

- Goods inland transport: **75% by roads**
- Passenger inland transport: **80% by roads**
- Total length: **5 million km**
- Total value: **over € 8,000 billion***
- Minimum maintenance required: **1.5% of the value**
- Current average maintenance level: **< 1% of the value**
- **1 € spent on road maintenance** prevents spending up to **15 € in rehabilitation or reconstruction**



European Union Road Federation (ERF)

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KEEPING EUROPE MOVING

A Manifesto for long-term, effective management of a safe and efficient European road network



Roads
an asset society
cannot live without

* based on reconstruction value

The ERF Manifesto on RAM (2)

➤ Facts and figures

- Importance of the road (network, volume...)
- Asset value
- Maintenance requirements

➤ Identification of the problem

- Lack of knowledge of the value of the road asset
- Regular insufficient investment for its maintenance
- Systematic deterioration

The ERF Manifesto on RAM (3)

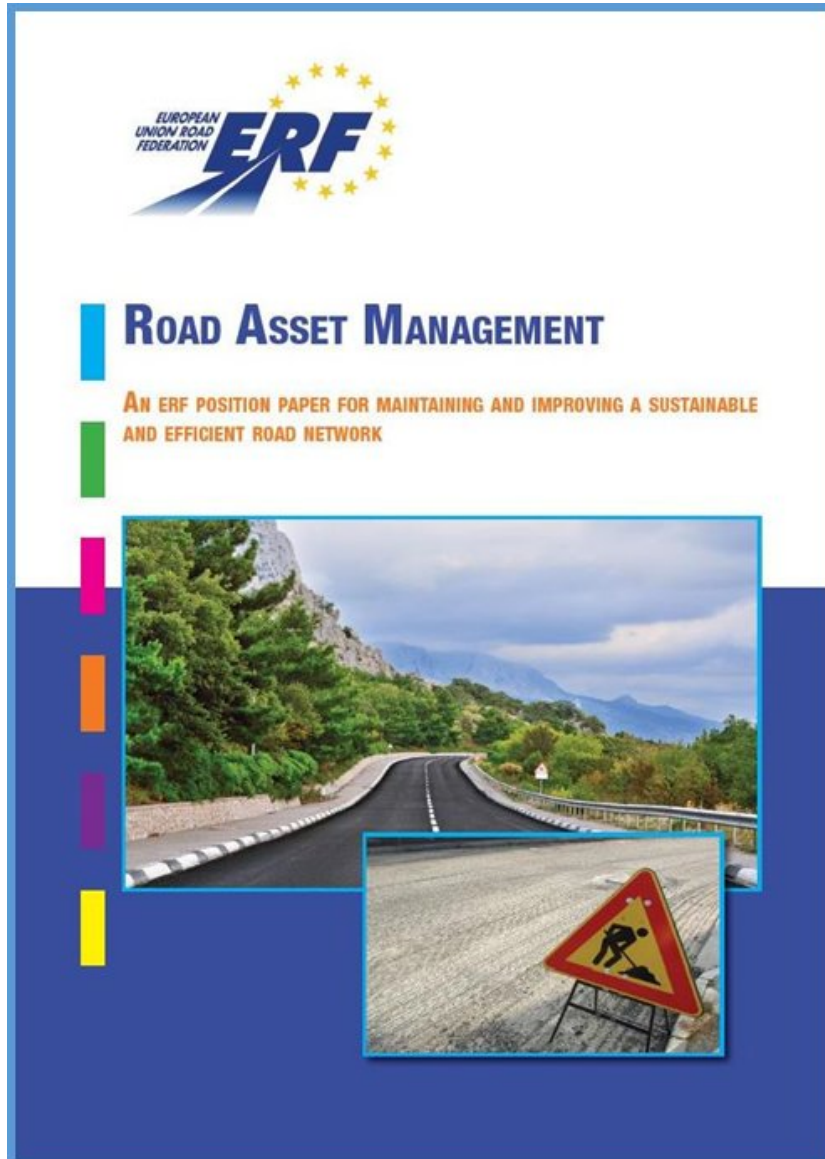
➤ Description of the solution

- Principles of Road Asset Management
- Inventory and estimation of maintenance requirements
- Prioritisation of interventions & establishing scenarios for timely, efficient and regular maintenance
- Improved programmes in terms of cost / benefit

➤ Recommendations

- Acknowledge contribution of roads to society
- Raise awareness of asset value of the road
- Inform stakeholders and road users
- Encourage authorities to use RAM approach
- Encourage decision makers to make necessary political decisions

The ERF Position Paper on RAM



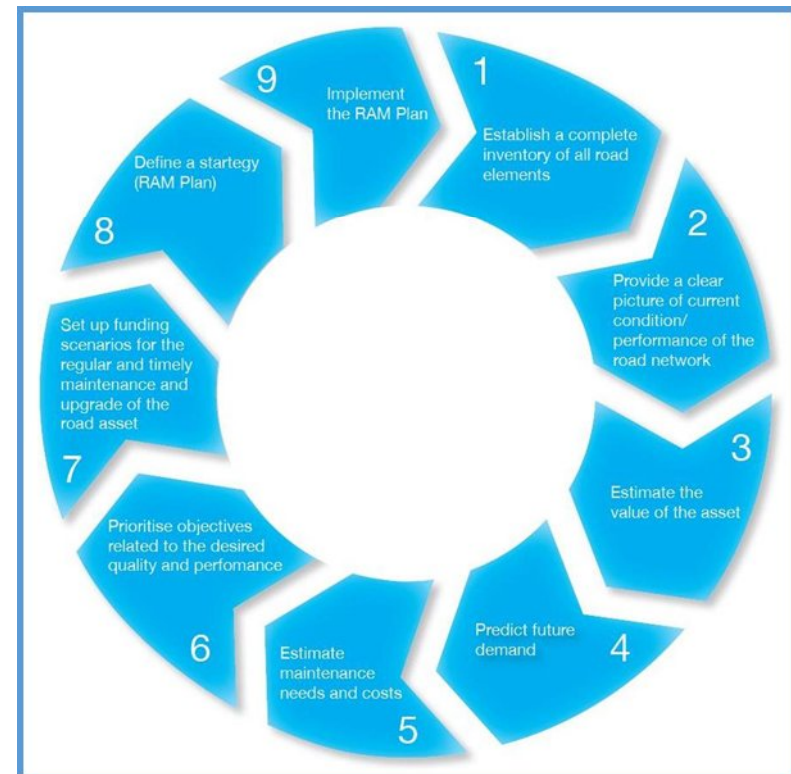
<http://erf.be/images/Road-Asset-Management-2014-07.pdf>

The strategic approach (RAM)

- Consider the road as an asset (capital)
- Systematic and permanent process
- Optimisation of operation costs for maintenance and improvement
- Combination of:
 - Technical principles
 - Governance best practices
 - Economic management
- Provides tools for:
 - Organised and flexible approach
 - Rational decision-making process
 - Provides road users with level of service they expect and deserve

Road Asset Management (RAM)

- Improved knowledge
- Improved prioritisation
- Improved return on investment
- Better and safer roads for each € invested
- Preservation of the asset for the future



By applying RAM principles, the Municipality of Larvik (N) found out they were losing **2.000 €/day** by not maintaining their road network !

Conclusions

- Quality of road network is essential
- Strategic management is a key element
- Knowledge of asset value and investments required
- Non-strategic management = negative consequences
- Long-term sustainable planning of necessary financing is essential

Necessity of informing – role of the ERF

- Disseminate information on RAM principles
 - International, national, local
- Raise awareness on clear benefits of RAM
 - Concrete examples / best practices
- Inform target audiences in cooperation with other organisations
 - Common Working Groups (ITF, PIARC, USIRF, IRF...)
- Also inform road users
 - Traditional media
 - Social media

Next steps

- New ERF WG denomination:
 - 'Open data for better mobility'
- Compilation of road maintenance future investments
- Proactive response to future challenges:
 - New mobility patterns and usages
 - Autonomous vehicles
 - New services
 - Urbanisation
 - Decarbonisation
- ROAD AS A SERVICE (7/24)

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