

Making the case for road preservation to meet social expectations

JEAN-FRANÇOIS CORTÉ

Past Secretary General of the World Road Association



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- ❑ Placing Transport back on the agenda
 - ❑ Where are we now?
 - ❑ Making the case for maintenance
 - ❑ Acting for preservation of the assets
 - ❑ Climate change adaptation – Resiliency

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UN Millenium Development Goals (2000)

No reference to transport in the UN declaration except one single mention of the word “transport” in relation to land-locked developing countries.

A change in mind-set

“We note that transportation and mobility are central to sustainable development. Sustainable transportation can enhance economic growth and improve accessibility. Sustainable transport achieves better integration of the economy while respecting the environment.”

The Future We Want UN Report (Rio +20) - 2012

Commitment of the Multilateral Development Banks (*Rio +20 – 2012*)

- **\$175 billion** of loans and grants for more sustainable transport in developing countries by 2022



Sustainable Transport essential to achieving the SDGs



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Where are we now?

- ❑ Large investments made in high income countries from the 60ies (*and going on now in emerging countries and countries in transition*) to develop a modern road transport system (highways and up-grade to new standards of existing main roads).
- ❑ Pavements are built for a service life of 20 to 40 years, and need for major maintenance work appear only after 7 to 12 years or more.

A large and neglected ageing stock, ...

No anticipation as no immediate resource was necessary for some time.

Resources for maintenance have not been increased in relation to the growth of the assets and ageing of the stock.

U.S.

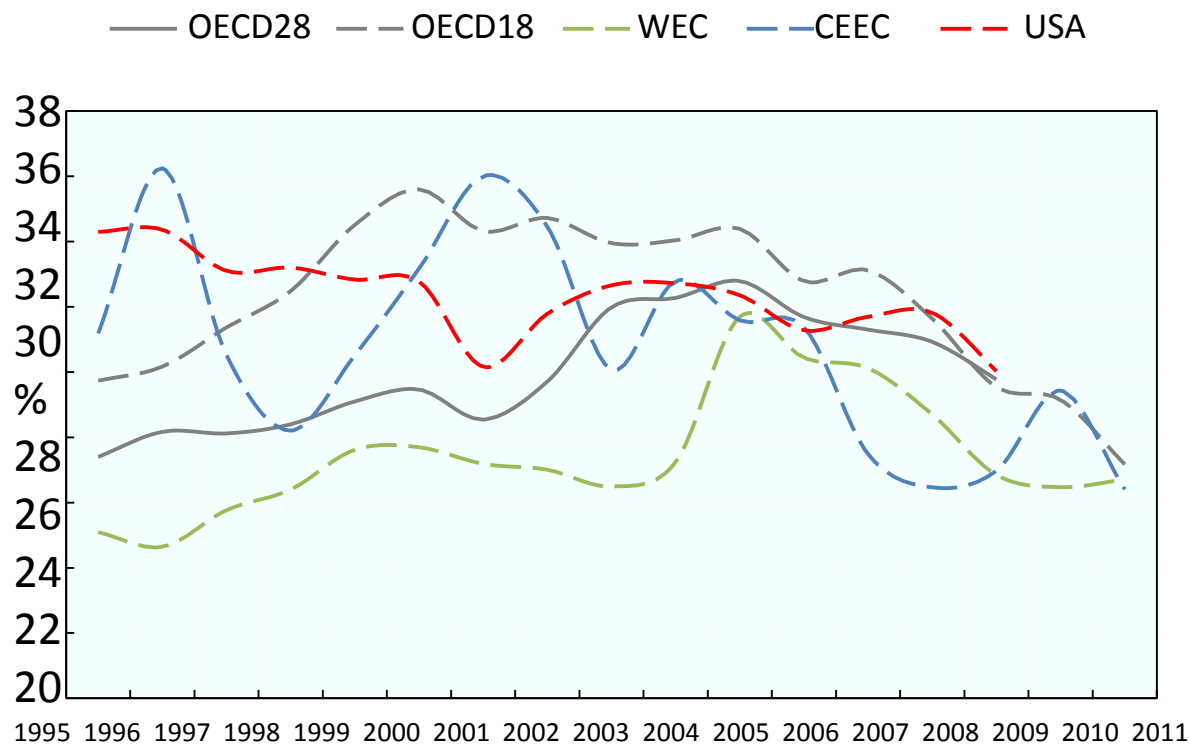
- ❑ 4 million miles of roads, and 65% of major roads rated in less than good condition
- ❑ 600,000 bridges and 1 in 4 need significant repair

White House. An economic analysis of Transportation Investment. July 2014

A lack of anticipation

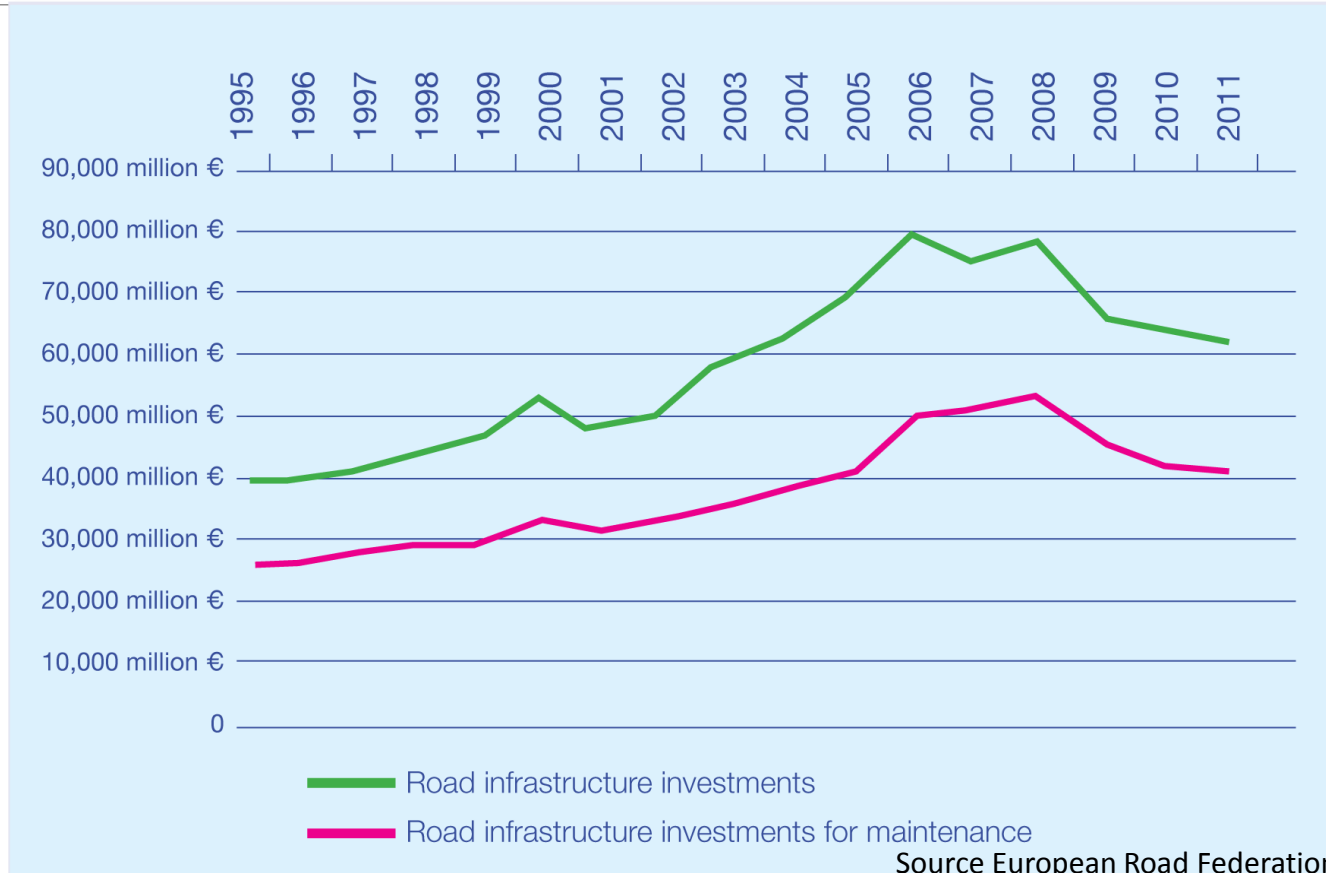
Public road maintenance share of total road expenditure

(Euros, current prices, current exchange rates)



Source: International Transport Forum at OECD

Evolution of Road Infrastructure Investments and Road Maintenance Investments in a selection of Western European Countries*



* Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Poland, Portugal, Romania, Slovak Republic, Slovenia, Sweden and United Kingdom

It's hard to drive the change!

←

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https://smartgrowthamerica.org/resources/repair-priorities

Repair Priorities 2014: Transp...

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Repair Priorities 2014
Transportation spending strategies to save taxpayer dollars and improve roads

March 2014

REPAIR PRIORITIES 2014: TRANSPORTATION STRATEGIES TO IMPROVE ROAD CONDITIONS AND STATE FISCAL OUTLOOKS

State departments of transportation (DOTs) are spending more money building new roads than maintaining the ones they have—despite the fact that roads are crumbling, financial liabilities are mounting and conditions are not improving for America's drivers.

Between 2009 and 2011, the latest year with available data, states collectively spent \$20.4 billion annually to build new roadways and add lanes to existing roads. America's state-owned road network grew by 8,822 lane-miles of road during that time, accounting for less than 1 percent of the total in 2011.

During that same time, states spent just \$16.5 billion annually repairing and preserving the other 99 percent of the system, even while roads across the country were deteriorating. On a scale of good, fair or poor, 21 percent of America's roads were in poor condition in 2011. Just 37 percent of roads were in good condition that year—down from 41 percent in 2008.

These spending decisions come with serious implications for DOT finances and taxpayers. In 2008, states would have needed to spend more than \$43 billion every year for 20 years to bring roads in poor condition into a state of good repair while also maintaining their existing systems. By 2011, that figure increased to \$45.2 billion per year—nearly three times the amount states currently spend on repair.

If states spent \$20.4 billion annually on repair rather than expansion, they could have cut the number of roads in poor condition in half by 2011—and been on target to eliminate the

Between 2009 and 2011, ...

The US States spent

- ❑ \$ 20.4 billion annually to build new roads or add lanes, representing less than 1% of the total lane-miles
- ❑ \$ 16.5 billion annually to maintain the other 99%

The % of roads in “good condition” dropped from 41% to 37%

In Washington State,

- ❑ 84% of spendings on new road infrastructure,
- ❑ The share of roads in “poor condition” rose from 12 to 27%.

The road network, generally the first public assets (in value).

France

□ Total road network (1 million km):

\$2,250 billion = 0.9 * France GDP

□ National road network (20,000 km):

\$ 250 billion, i.d. 2/3 of the State tangible assets

A large public asset to maintain, but...

Very few local politicians hear the importance of preservation of the road assets



OK there are some more cracks but you can still ride on the road let's see later.



The cut the ribbon and run problem

“Deferring maintenance is a handy expedient for public officials faced with problems in balancing their budgets (...) there are significant fiscal and political incentives for public officials to defer maintenance—in good times as well as bad. These benefits lead them to overlook basic common sense and responsible management.”

Edward V. Regan, “Holding Public Officials Accountable for Infrastructure Maintenance,” *Proceedings of the Academy of Political Science* (1989)

quoted by Scott G. Knowles "A Slow Disaster and the Politics of Infrastructural Decay" (2016)

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Speak to the public, address social expectations to influence politicians...

Make it a socio-economic case

“Why roads matter

Our road network supports all our daily lives, and everyone in the UK has benefited from the investment made since the 1950s.

- *Roads get us to work.*
- *Roads give us access to the goods and services*
- *Roads connect us with family and friends.*

Our road network is also the life-blood of the economy,

- *Roads provide critical connections*
- *Roads support job creation and unlock new development.*
- *Roads help the UK compete internationally.*
- *Roads support business travel. “*



From a functionality perspective

Deferral of maintenance works leads to:

- ❑ Less availability of the transport system resulting from reduced capacity, a more fragile and less resilient network

*increased congestion, delays, less travel-time reliability,
degradation of road safety...*

FAILURE TO ACT
THE IMPACT OF
CURRENT INFRASTRUCTURE
INVESTMENT ON AMERICA'S
ECONOMIC FUTURE ★★★★★



In 2010, it was estimated that deficiencies in America's surface transportation systems cost households and businesses nearly **\$130 billion**:

- approximately **\$97 billion** in vehicle operating costs,
- **\$32 billion** in travel time delays,
- **\$1.2 billion** in safety costs, and
- **\$590 million** in environmental costs.

If present trends continue, by 2020 the annual costs imposed on the U.S. economy from deteriorating surface transportation infrastructure will increase to **\$210 billion**, and by 2040 to **\$520 billion**.

England and Wales:

poor condition local roads are costing Small and Medium-sized Enterprises (SMEs) approximately £5bn each year through operational inefficiencies, production delays, raw material and end product delivery delays, and vehicle repair costs (*YouGov survey*)

Scotland:

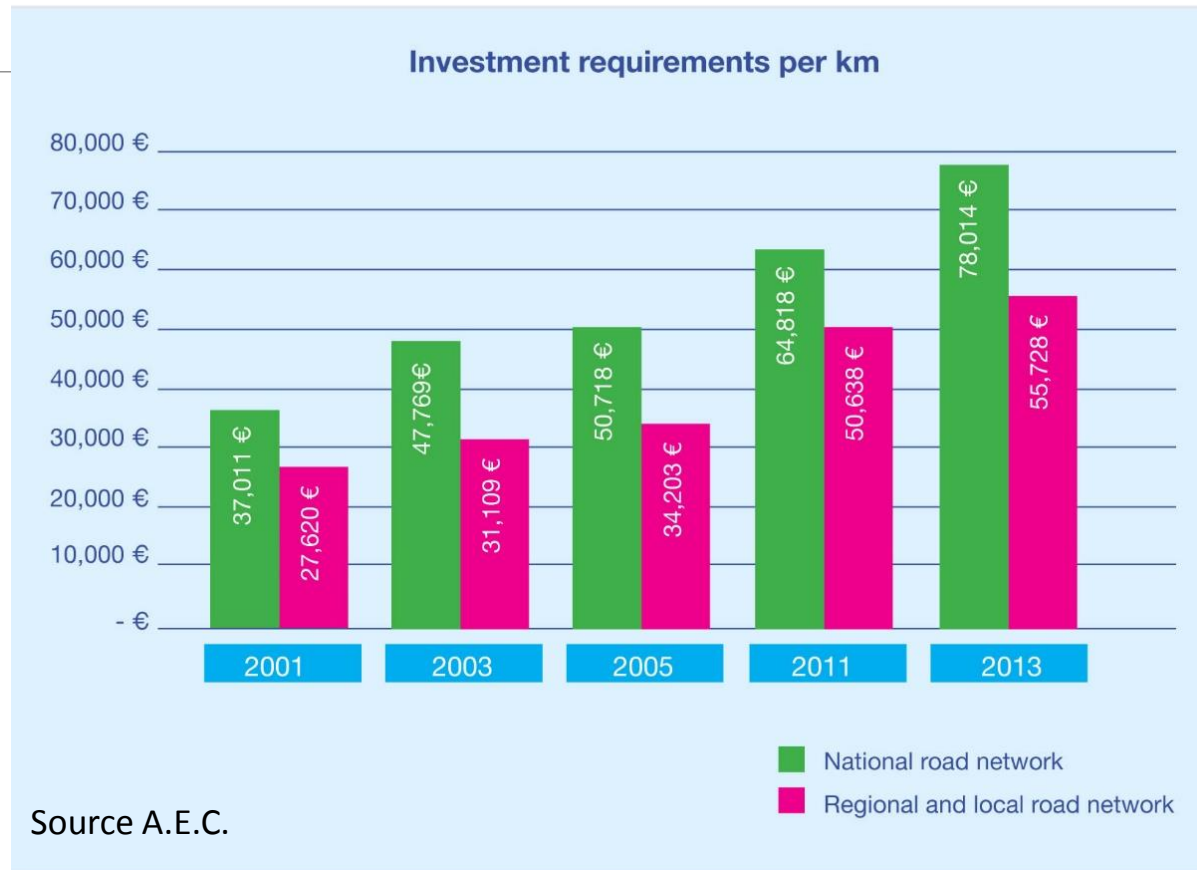
for a 40% maintenance reduction scenario, every £1 of reduction led to £1.50 in quantifiable costs to society (*Transport Scotland*)

From an asset preservation perspective

Deferral of maintenance works results in:

- ❑ An increasing backlog between the available resources and the actual needs.
- ❑ Higher costs of rehabilitation (degradations accelerate further degradations).
- ❑ Least efficiency of use of public funds as decisions about road works become largely determined by emergency situations and reconstruction costs often perversely taking up funds slated for maintenance.

Lack of maintenance results in dramatically increasing cost of investments. Ex. of Spain



We must act in a responsible way

Deferred maintenance is a disinvestment

Inadequate maintenance affects not only the present generation but places undue financial burden on future generations.



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Valuation of the road infrastructure assets using accumulated condition based depreciation

“ most useful indicator which has many uses and is the best summary descriptor of the long term performance of the road network”

OECD, Performance Indicators for the Road Sector, 1997.

Among various benefits:

- Facilitates communication
- Helps promoting accountability

Valuation of the road infrastructure assets

Pioneer work made by Australia and New Zealand in the 90s.

Still not generalized but a trend for expanding the use of valuation.

Canada (2008) All municipal governments to record and include all tangible capital assets in financial statements under the care and control of the municipality. Assets are recorded at their historical cost and depreciated to the current period.

A multi-annual vision and approach of road assets management

A trivial statement: The backlog can't be reduced in one-year.

A multi-annual vision, strategy and action plan is necessary for all:

- ❑ For **road owners** to recover control on the evolution of the condition of the network, to rationalize interventions program, to make more efficient use of public money;
- ❑ For the **road industry**, so that they can plan investment in equipment, invest in training of qualified staff; this can't be done without a few years vision.

Requirements:

- ❑ Know & monitor evolution of the condition of the road network (*tools exist, this is more or less in place with quality information*)
- ❑ Value in monetary terms the road assets and upkeep according to evolution (*still not generalized*)
- ❑ Assess the evolution of the condition of the road network in time without interventions and with different scenarios (*difficult issue but some modelling approaches exist and are used in some countries*)

Requirements:

- ❑ Set objectives to the service condition of the roads (with different service levels according to the socio-economic interest of the roads) (*still not generalized*)
- ❑ Establish a pluri-annual strategy and the assessment of the correlated resources (*still seldom done in a rigorous way*)

Burning issues

- ❑ An almost world-wide issue: Securing funding (the problem is getting ever more acute in the current economic situation with budget constraints and competition with social expenditure).

Escaping here the debate on funding

Which taxes, income taxes, earmarked taxes, tolling, distance-based taxes.... and other taxes to be invented

- ❑ The horizon of annual budget is a severe limitation and prevent adoption of an actual multi-annual strategy. “*Why should I care of multiannual planning if the current resources I get are used to face emergency situations.*” Urgent need to change this mind set.

A need for innovation in contracting maintenance

- ❑ Multi-annual performance-based maintenance contracts
Yes, but....
 - ❑ Few experiences and lack of feed-back
 - ❑ Necessity for more cooperation between public and private sector to develop balanced contracts
 - ❑ Financing issue for few years contracts (not the same interest of potential lenders as long term loans)

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Natural disasters expose deferred maintenance.

Need to combine preservation and adaptation strategies.

Climate change - Adaptation

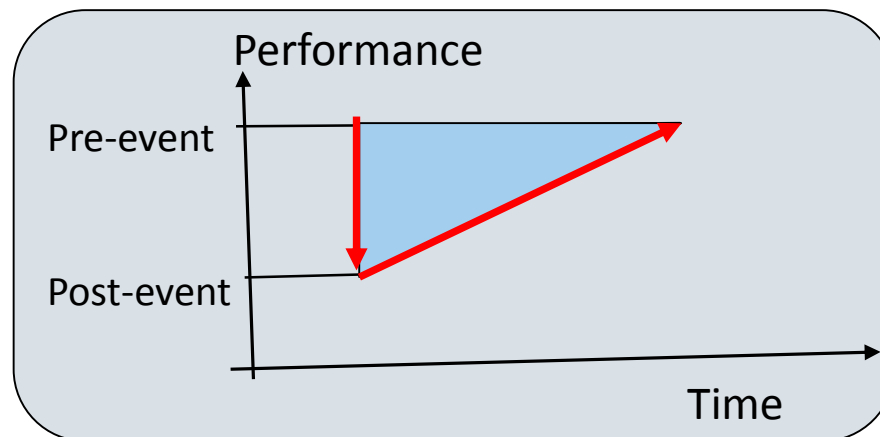
The need for a proactive approach to the hazards of climate change



Climate change - Adaptation

Impossibility to ensure the physical protection of all components of road infrastructure ► we must seek to **improve the resilience** of the road transport system;

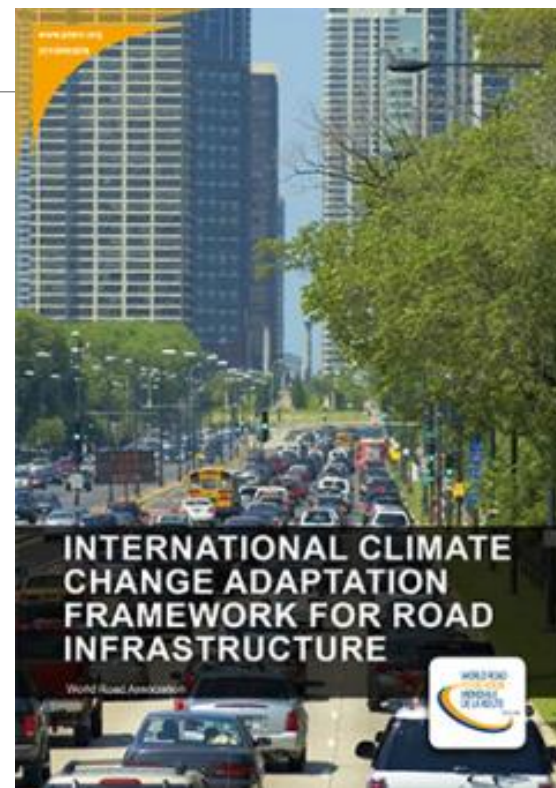
i.e. its ability to absorb disturbances, to reorganize and recover operation as before the occurrence of the disturbance.



Climate change - Adaptation

- Stage 1 – Identifying scope, variables, risks and data
- Stage 2 – Assessing and prioritizing risks
- Stage 3 – Developing and selecting adaptation responses and strategies
- Stage 4 – Integrating findings in decision-making processes

Most countries are still far from Stage 4



Concluding remarks

Continuing the drive for change is

- ❑ Make the case of road preservation as a social issue and encourage citizens to make their voice heard and put pressure on politicians for long term decisions ensuring sustainability for the sake of our children.
- ❑ Reinforce communication to all stakeholders about the condition and the value of the road infrastructure, the economic impact of delayed maintenance and preservation of the roads.
- ❑ Pursue implementation of Road Asset Management (RAM) to improve decision making, provide transparency and promote accountability, advocate for appropriate funding.



Thank you for your attention

jf.corte@piarc.org

www.piarc.org