Keeping climate change solutions on track

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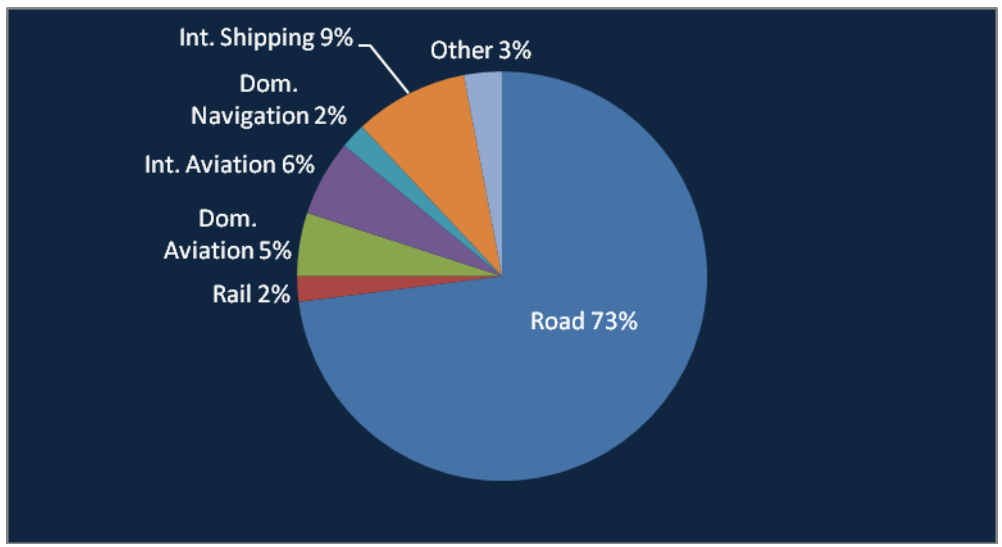
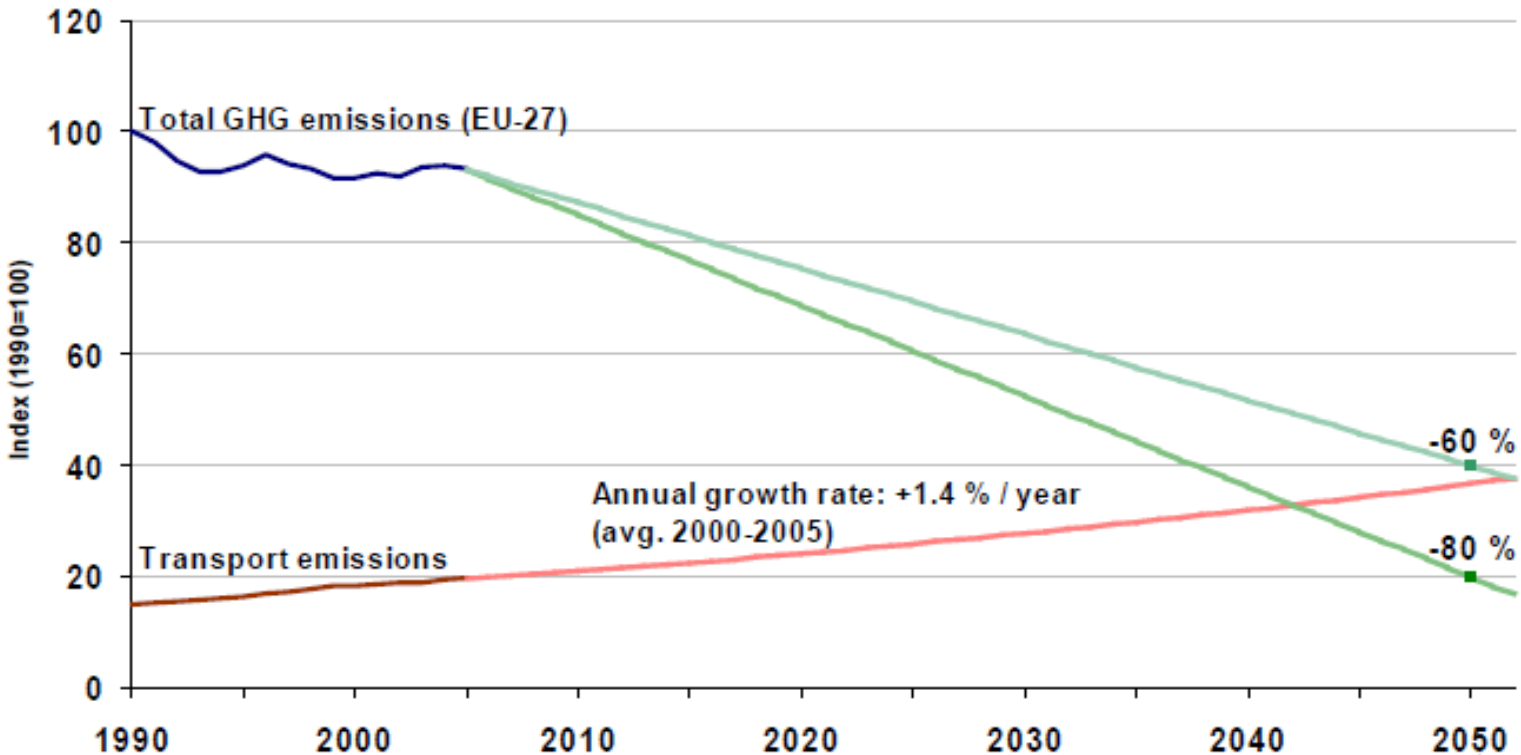
Transport CO_2 emissions

- Transport responsible for **20% of global energy demand**, of which 80% derived from fossil fuels
- Consequently, the sector is responsible for **23% of global CO_2 emissions** from fuel consumption
- **Rail is responsible for 2%** global transport CO_2 emissions

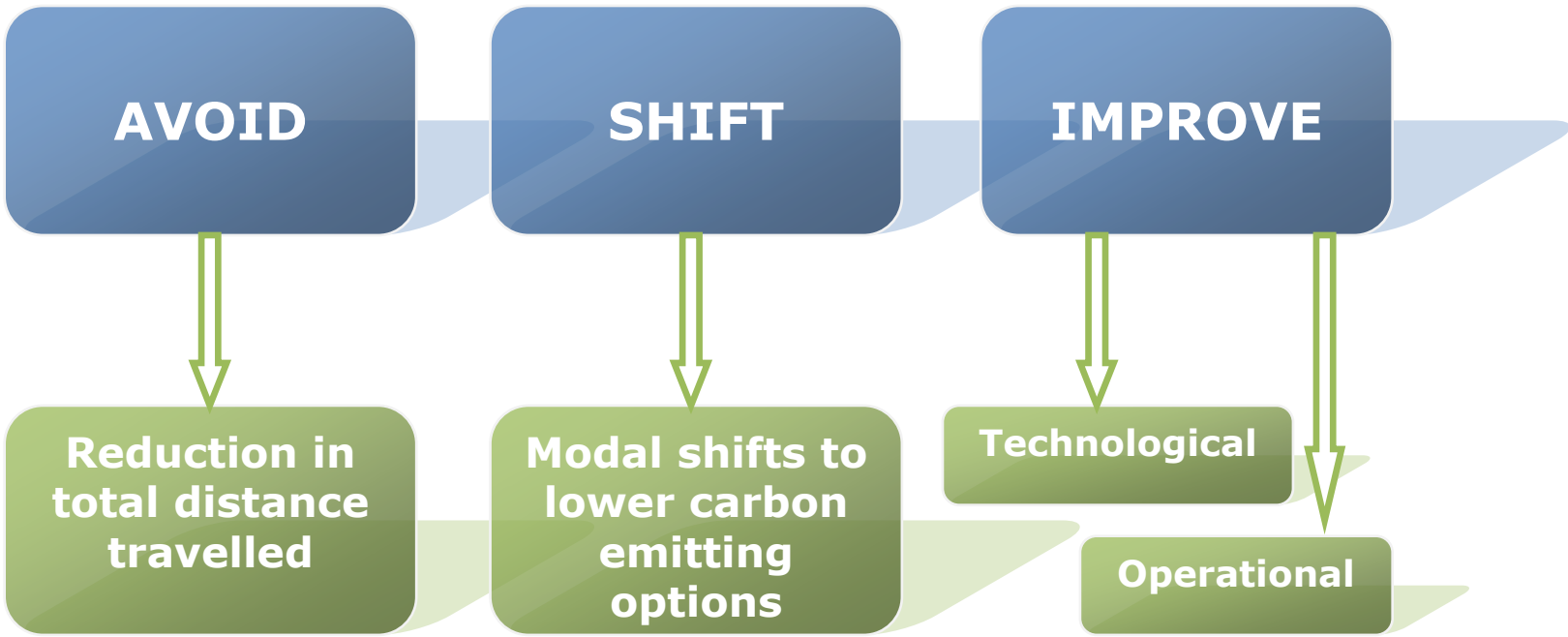


The emissions challenge



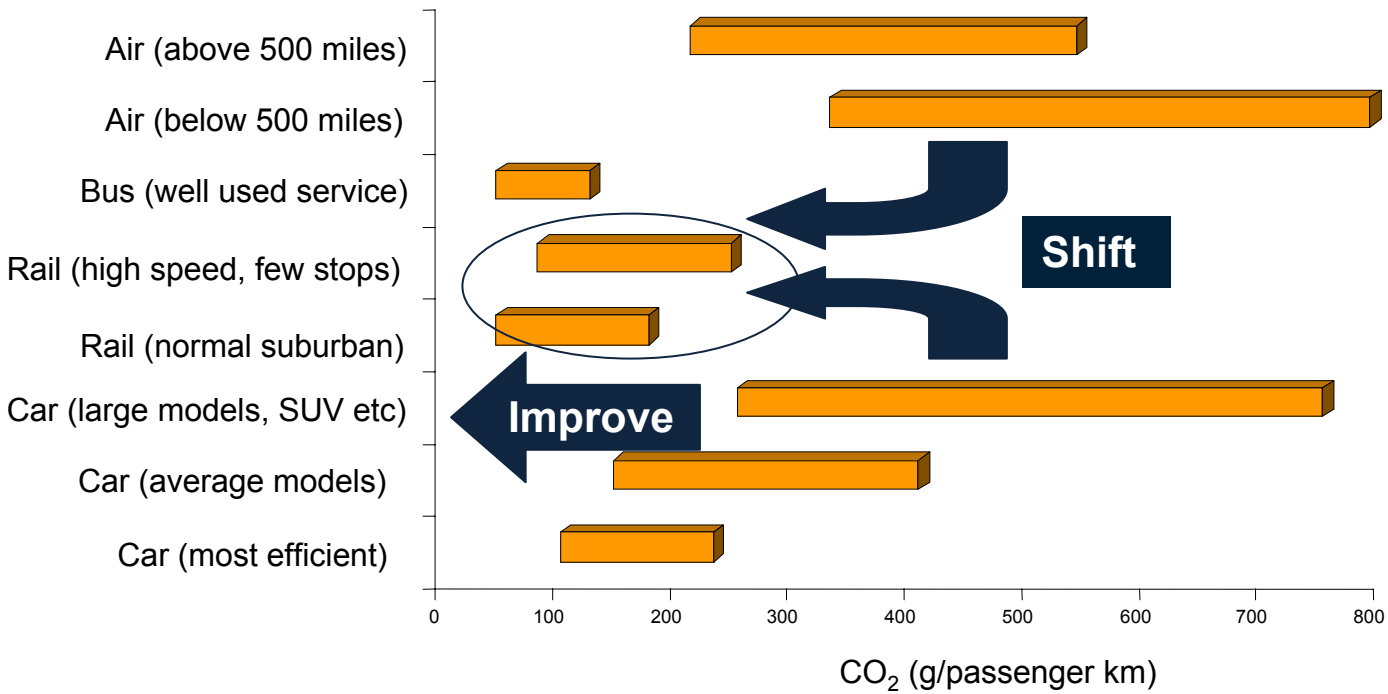
(Source: EEA)

Emissions reduction strategies



Sustainable low carbon transport systems

- Fundamental role for rail as a low carbon mode of transport
- Shift transport demand from air and road to rail
- Improve energy efficiency of rail



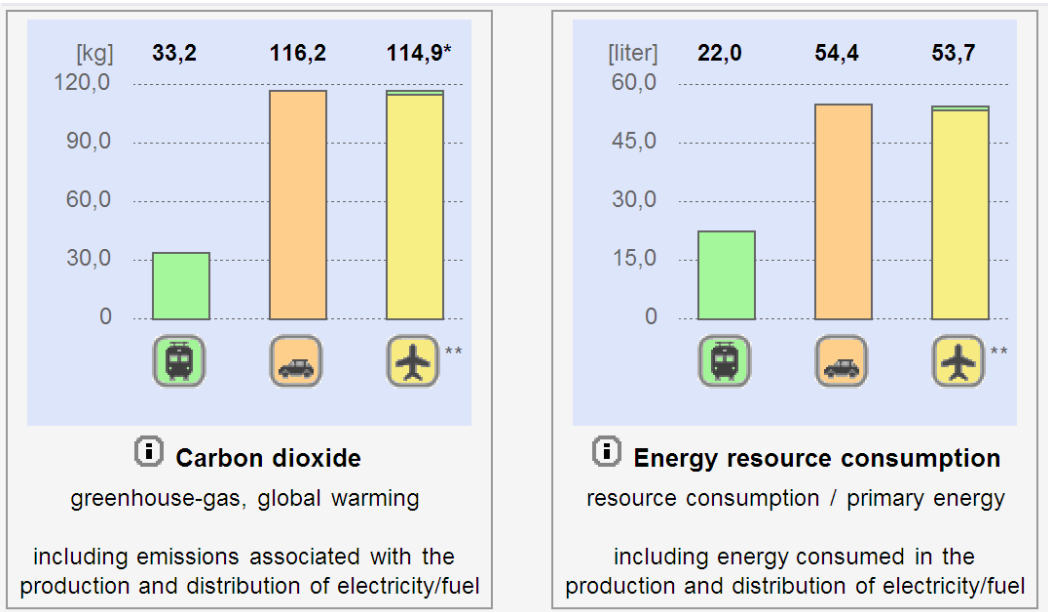
Increase modal share of rail

- Investments in technology and infrastructure
- Strong policy measures
- Behaviour change

Influencing modal choice

Clearly communicate the role of rail as a low carbon transport option

- Internet tools such as EcoPassenger and EcoTransIT



(EcoPassenger calculation for the Brussels to Copenhagen route)

Influencing modal choice

Urban transport demand – London case study

- upgrading and extension to Underground
- congestion charge and low emission zones

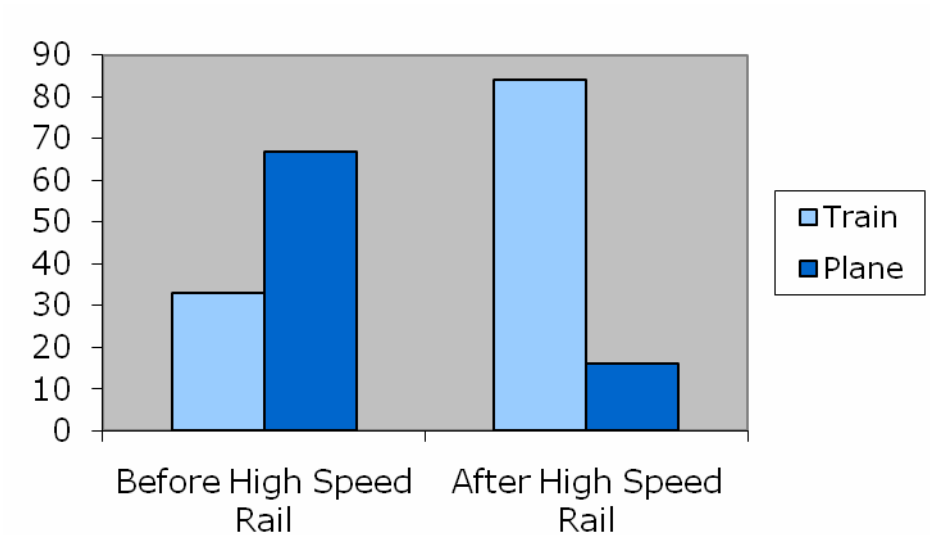
Impact on modal share
Cars 5% decrease
Underground & Docklands rail 7% increase

Influencing modal choice

High speed passenger services – Madrid to Seville case study

The new high speed line saw a move from air travel to rail

market share of rail **increased from 33% to 84%**



Source: UNIFE

Influencing modal choice

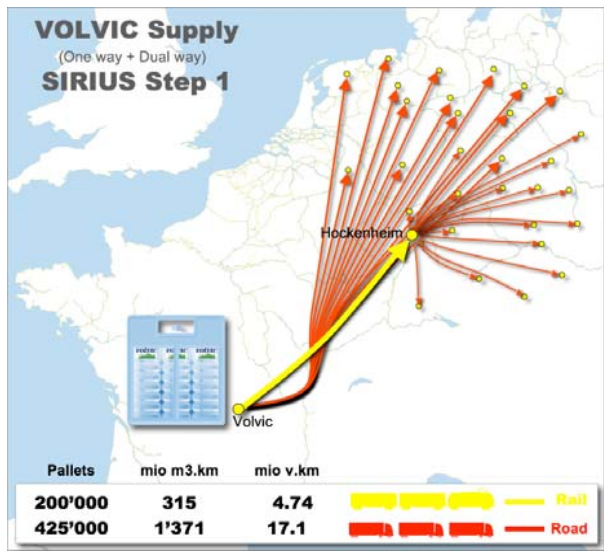
Freight movements – Danone case study

The project studied the removal of 10,000 trucks by replacing the road transport of 200,000 pallets for supply and 100,000 pallets for return, with rail between Volvic and Hockenheim

Using the Estia-VIA®1 method, estimated modal shift saved;

11,818 tons of CO_2 eq. per year

55,636,000 kWh of non renewable energy per year



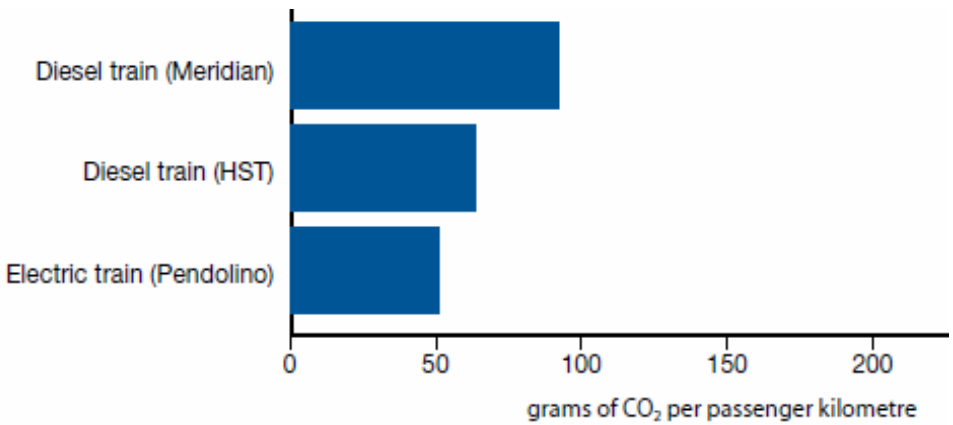
Increase energy efficiency

Technology – hybrid, hydrogen, regenerative braking, electrification

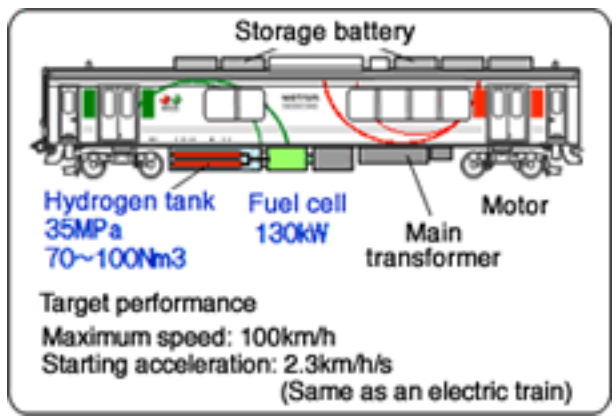
Operations – efficient driving, signalling, network management

Technology & Operations – High Speed Rail

Complimentary policy measures – Electricity supply generation



Source: DfT (UK)

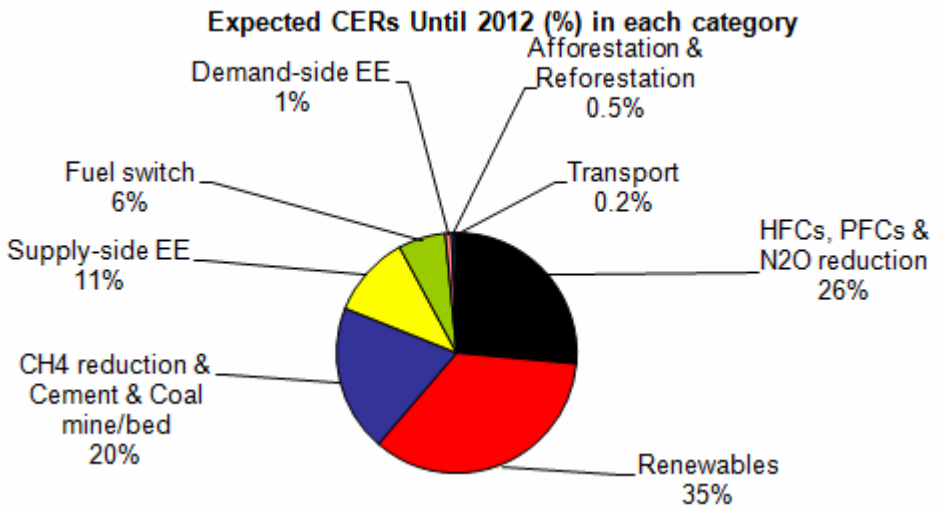


Source: JR East

International agreements

UNFCCC Kyoto protocol mechanisms have not supported transport development.

Only 2 transport projects out of 1873 registered CDM projects, and 0.2% expected CERs until 2012



Source: UNEP Risoe, 01.11.09

Source: DMRC

However, one of the projects is in rail – Delhi Metro

2010 and beyond

A 'Copenhagen Agreement'

- 'Bridging the Gap' initiative and Partnership on Sustainable Low Carbon Transport are engaged in communicating the role of land transport in climate change solutions, including development of
  - 'Key messages for Copenhagen'
  - 'Ten Guiding Principles for Considering Land Transport in a Post 2012 Climate Agreement'
  - suggestions for the AWG-LCA negotiation text

www.sutp.org/bridging_the_gap

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2010 and beyond

A 'Copenhagen Agreement' must empower mitigation actions in all key emitting sectors of the economy, including land transport.

- The transport sector is responsible for 23% of energy-related CO_2 emissions globally, and is predicted to grow rapidly especially in developing countries. Without the inclusion of transport, mitigation targets will not be met.

- Low carbon transport provides many other developmental benefits including better air quality, less traffic congestion, increased accessibility and reduced traffic accidents.

- Mitigation actions for transport have been shown to be effective when local policy makers are enabled and engaged.

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2010 and beyond

Positive implications for the rail sector

A 'Copenhagen Agreement' inclusive of land transport could provide;

- a move from project based to up-scaled programmatic mechanisms
- additional opportunities for infrastructure and energy efficiency developments
- investments from public and private sources
- development of sustainable low carbon transport systems, in which rail can play a key role as a low carbon transport option

Setting the right framework for the development of rail and sustainable low carbon transport systems through;

- fair pricing
- internalisation of external costs
- increase in energy efficiency
- influence on modal shift to rail

Thank you!

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