

Global transport outlook to 2050

Costs of the transport sector under low carbon scenarios

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Content



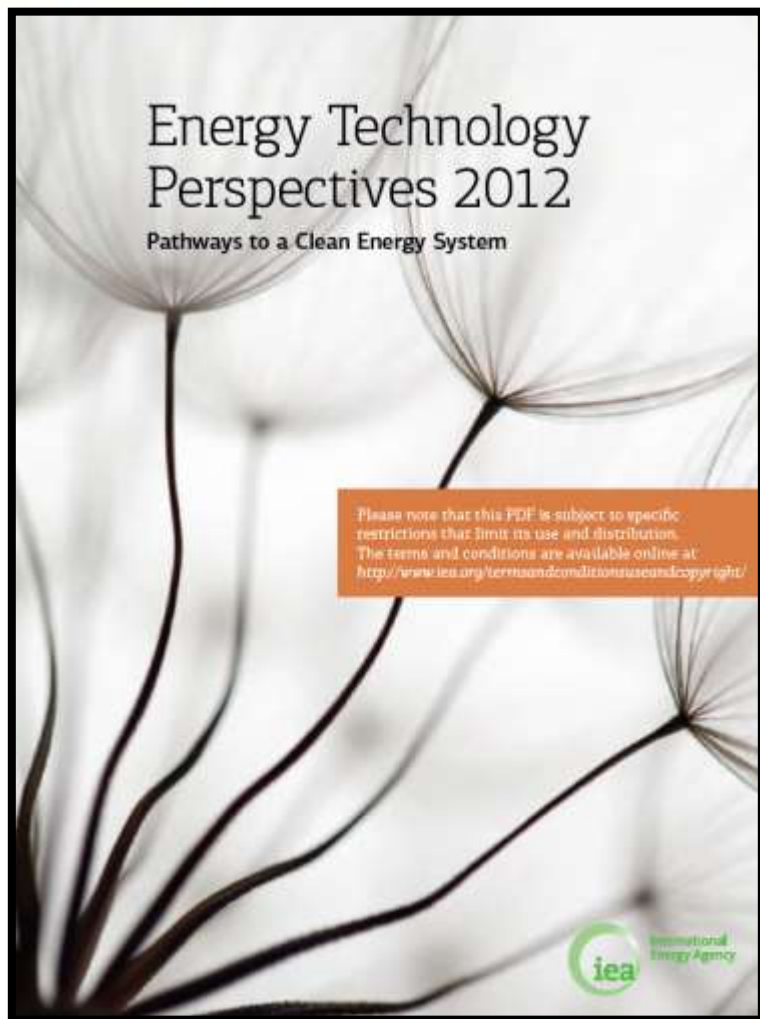
- IEA mobility model (MoMo)
- ETP 2012 analysis
 - CO₂ mitigation potential
 - Costing out the scenarios
- Infrastructure insights
 - Road and rail infrastructure requirements to 2050
 - Investment needs for a low carbon future
- Conclusions

IEA Mobility Model (MoMo)



- Global transport energy use, emissions and materials
- 29 regions
- Significant data on technologies and fuel pathways
- Robust historic data, including
 - Historic stock, sales and fuel economies for 33 individual countries (expansion to 68 countries in progress)

ETP 2012



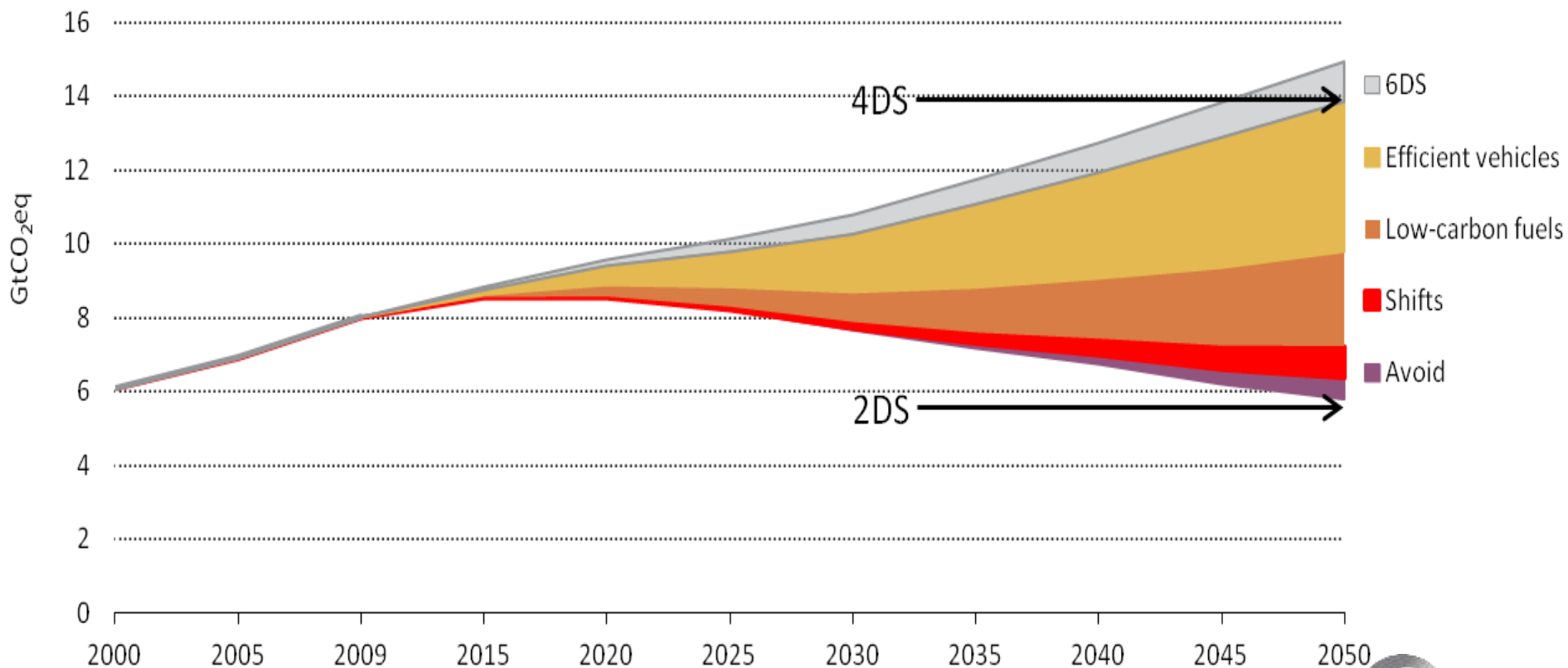
Scenarios to 2050

- 6°C (6DS): business-as-usual
- 4°C (4DS): expected 'normal' policies
- 2°C (2DS): pathways to a clean energy system

ETP 2012 2DS scenario for transport



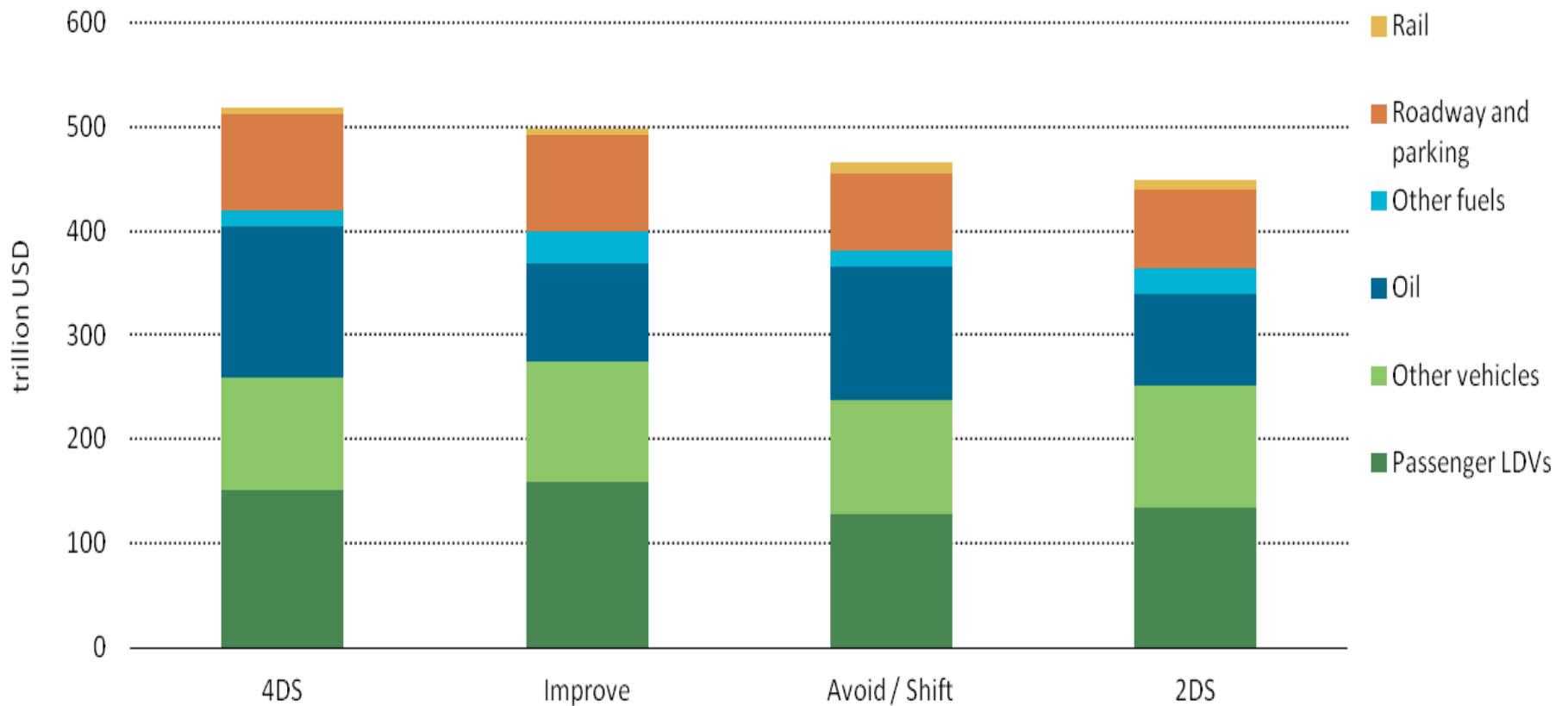
An 'avoid, shift and improve' approach is the most cost effective strategy to reach 2DS objectives



Mitigation strategies cost comparison



Global transport expenditure estimates to 2050



Focus on infrastructure



■ IEA partnerships:

- UIC (rail)
- IRF (roads)
- UITP (public transport)
- WRI EMBARQ (BRT)

■ Structured analysis

- Historic relationship: travel to infrastructure ratio
- Investments as a portion of GDP
- Global analysis and regional limitations (*e.g.* congestion)

■ Infrastructure insights (2013)

www.iea.org/publications/freepublications/publication/name,34742,en.html

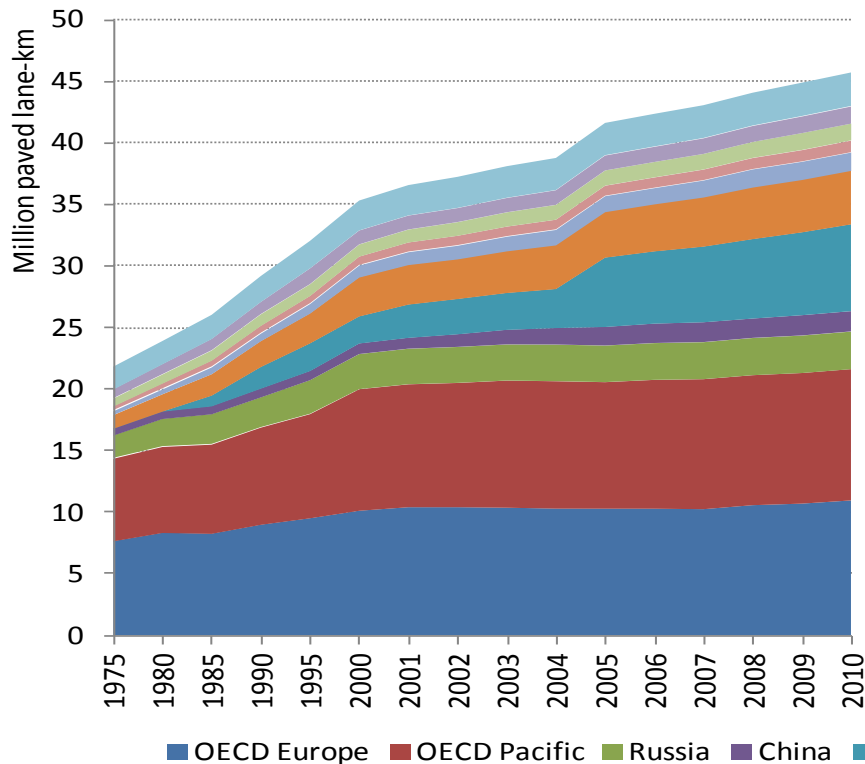


Historic trends

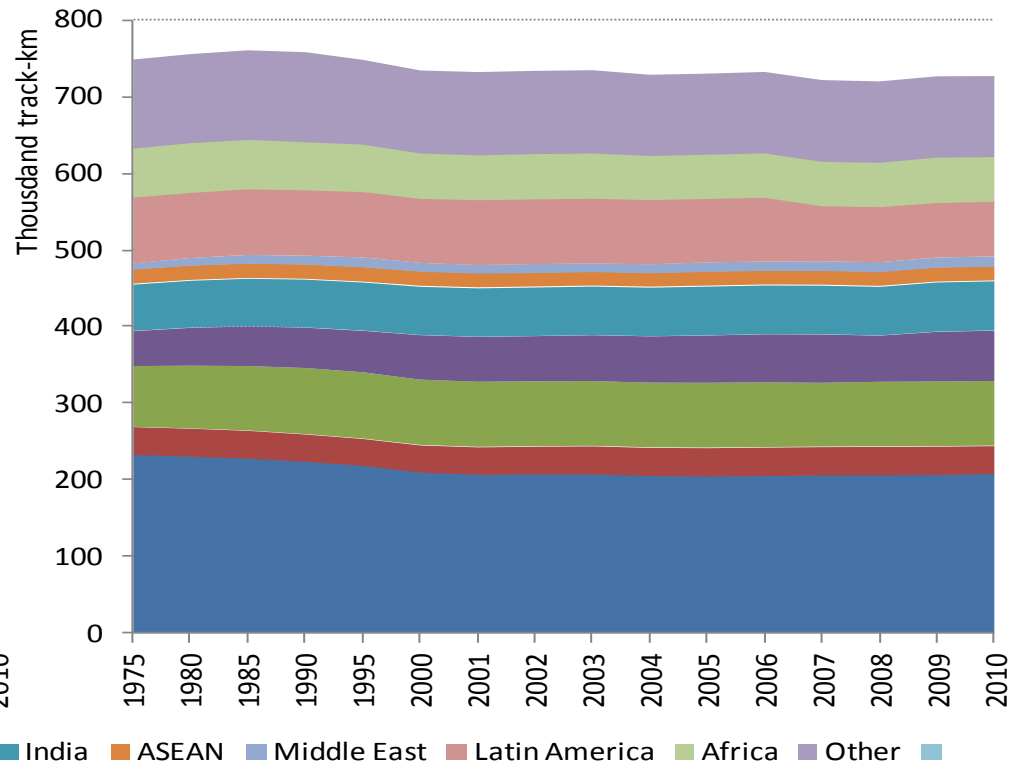


Global road growth vs. rail status quo

Road



Rail

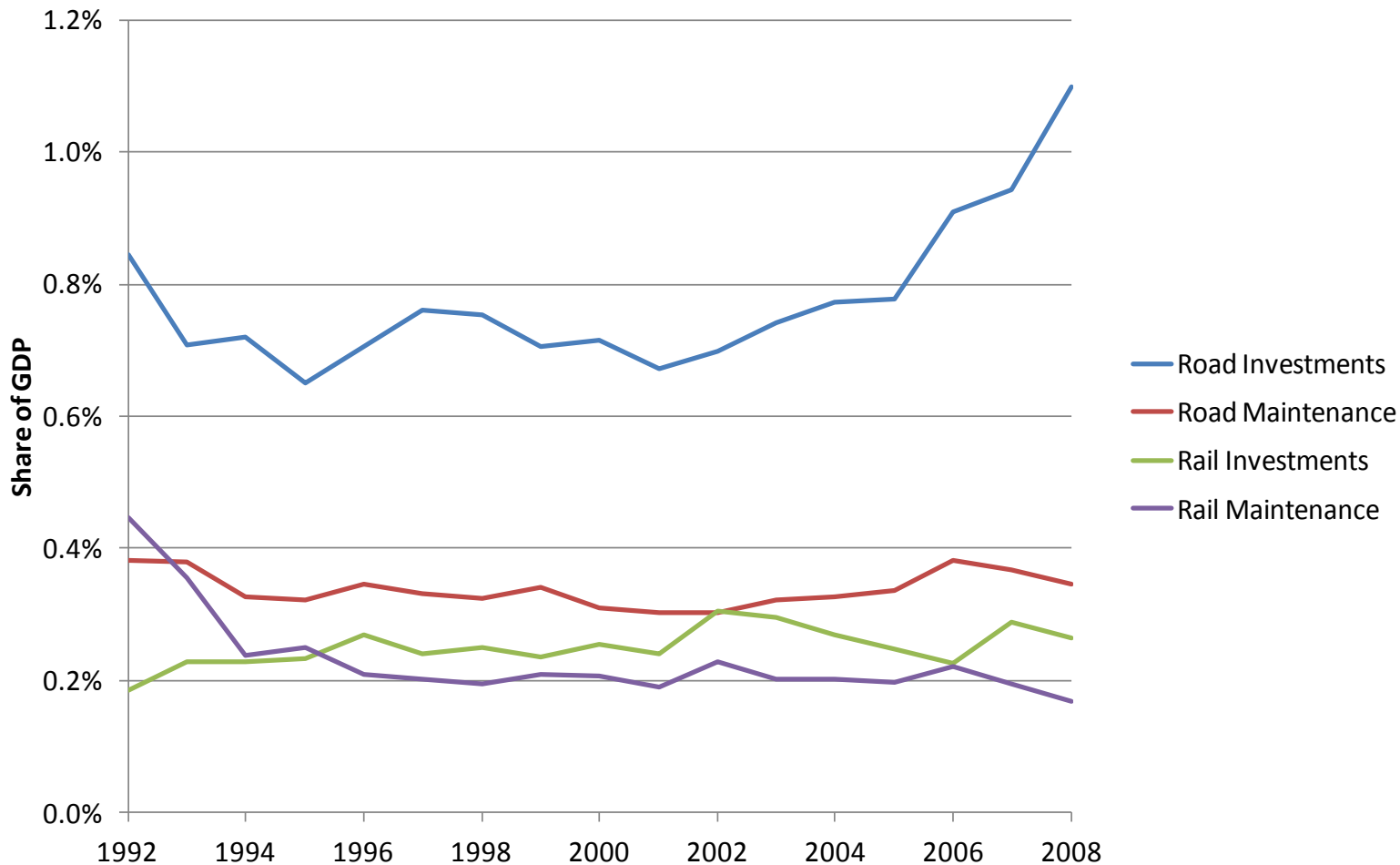


Sources: IEA analysis based on IRF (2012) and UIC (2012)

Historic trends



~2% of global GDP spent on road and rail infrastructure



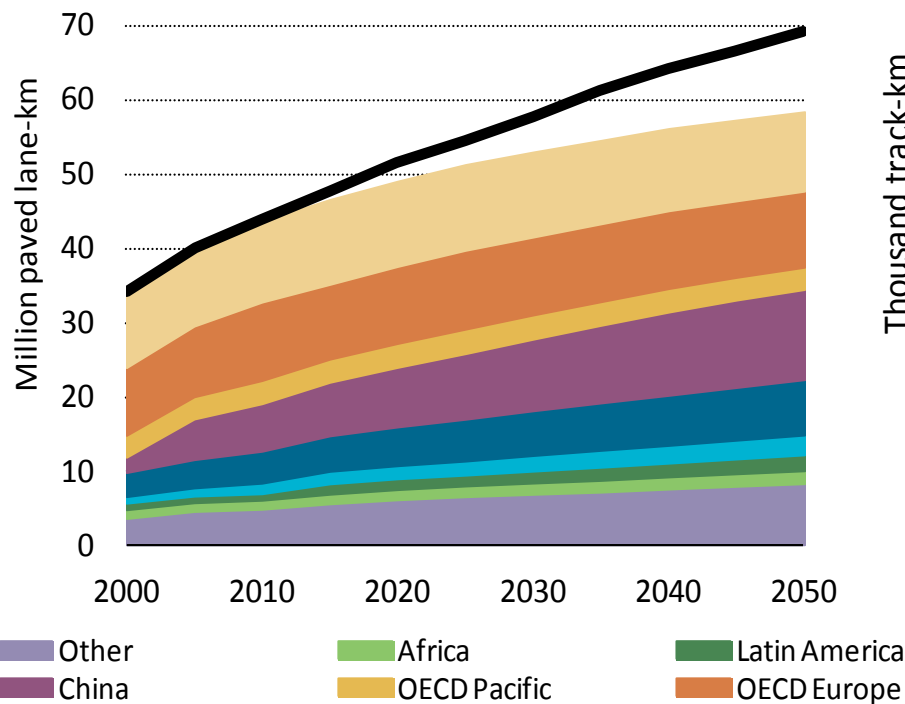
Sources: IEA analysis based on ITF and ADB member country data

Looking forward: insights to 2050

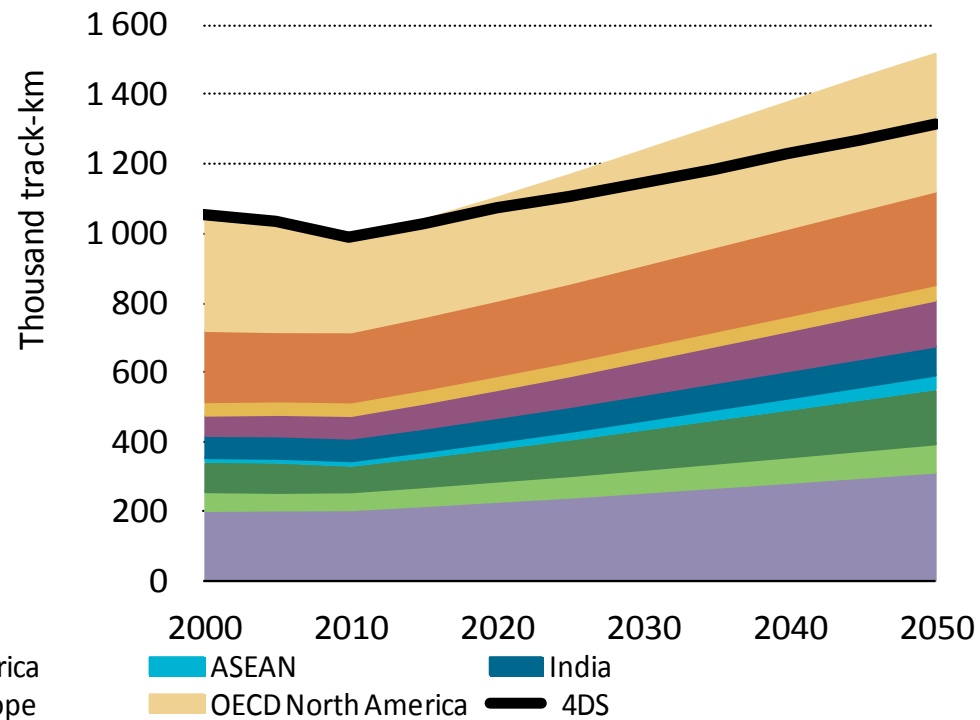


**Potential cumulative savings:
USD 20 trillion (2010 – 2050)**

Road



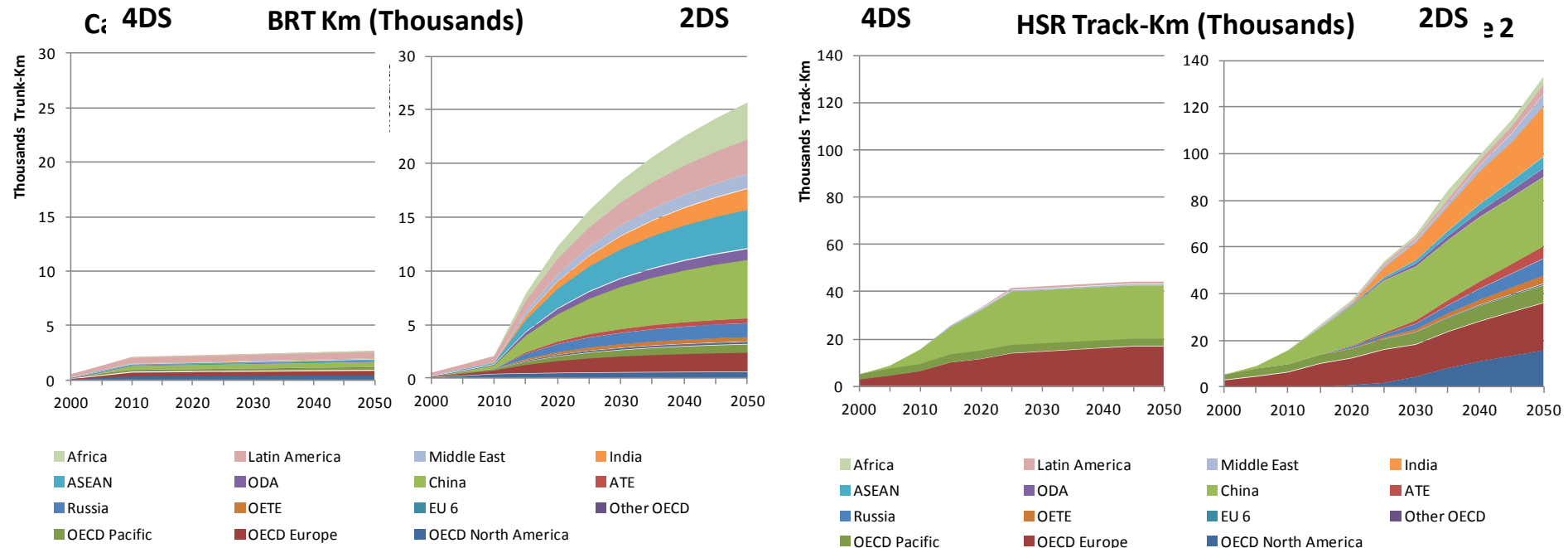
Rail



Role of investments to achieve 2DS



Small investments in BRT & HSR yield large results



Conclusions



- 'Avoid, shift and improve' approach most cost effective to achieve 2DS objectives AND reduces net infrastructure investments (capital and recurring)
- Significant energy savings and emissions reduction possible through marginal increases in bus and rail infrastructure
- BRT/HSR could play a big role in modal shifting strategy

A close-up, soft-focus photograph of several dandelion seed heads. The seeds are light and wispy, creating a dreamy, ethereal background. The stems are dark and thin.

Thanks!

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