



External cost of transport

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Introduction

- CE Delft
- Independent policy consultancy company, 60 employees
- Specialised in policy development and environmental, technical and economic assessments
- For various sectors : transport, energy, industry, (bio) materials
- Key expertise in transport:
 - All transport modes; EU, national and local policies
 - Passenger and freight transport and urban mobility
 - Climate policy, air pollution and sustainable transport
 - External cost, internalisation and economic assessments
 - Eco-scoring and carbon footprinting methodologies and data



Outline

- External costs and the concept of internalisation
- Environmental performance data: different types of application
- External cost for environmental reporting: benefits and limitations



External cost of transport



**Costs of transport not borne by the transport user
and hence not taken into account
when they make a transport decision**

- Environmental and health impacts:
 - Climate change
 - Air pollution
 - Noise
 - Fragmentation of habitats
- Traffic accidents and risks
- Road congestion



Applications of external cost

- Internalisation (transport pricing):
 - Introducing taxes/charges reflecting cost to make transport users account for the costs they induce on others
 - External costs can also be reduced in other ways, e.g. by regulation
- For reporting or assessing environmental/societal performance



Potential of internalisation of external cost

- More efficient road use and improved accessibility (congestion pricing)
- Contribution to decarbonisation by providing relative advantages to low carbon transport modes, vehicles and energy
- Generating revenues for investments in sustainable transport system

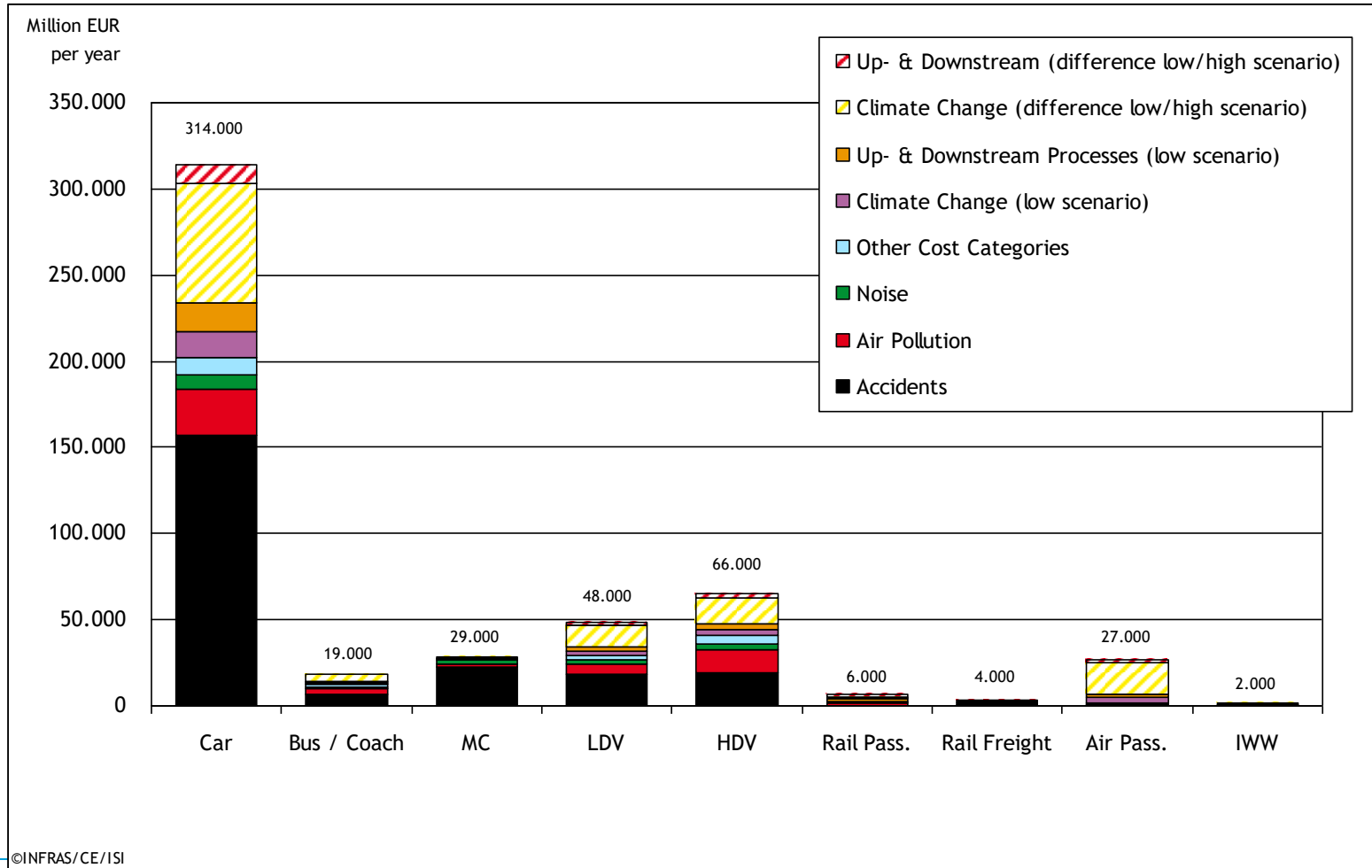


Objective/scope of ongoing study DG MOVE

- Collect data on:
 - infrastructure expenditures/costs
 - external costs
 - internalisation measures (taxes and charges and non-pricing at EU)
- All transport modes (including airports and maritime ports)
- All EU Member States, Norway, Switzerland, Japan, states in US/Canada
- Comparisons of costs and taxes/charges between modes and countries:
 - Total cost coverage ratios for whole EU
 - Average and marginal cost coverage ratios (also for countries)
 - Including infrastructure costs, external costs and both



Comparison of modes on total external cost EU per mode (2008)



Applications of external cost

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Environmental performance data: different types of application

- **To know:** assessing your own environmental performance
- **To communicate:** communicating your own environmental performance
- **To improve:** reducing your footprint
- **To invest:** assessing the most environmental product or investment
- **To compensate:** climate off-setting



Different target groups: different needs

- Clients of companies
 - Consumers: easy to understand
 - Business: easy to use for their own reporting or consumer information and also certifications, eco-labels, legal requirements, etc.
- Shareholders and investors: complete, sound, consistent, linked to investment
- Public policy makers: societal impacts and cost benefit ratio

External costs:

- Widely used for public policy/investment assessments (e.g. Cost Benefit Analysis and External cost calculator for EU Marco Polo program)
- Potential for other applications (e.g. building on UIC External Cost Tool for logistics, environmental/sustainability assesement of investments)



Different target groups: similar challenges

- What scope?
 - Climate change (e.g. carbon footprinting)
 - All environmental impacts
 - All societal impacts (people, planet, profit)
- How to define and measure (environmental) performance: based on input, output or outcome?
- How to add up very different impacts to one score?
- (how) to link performance to costs or investments?
- How to link performance to options for improvement?
- Complete and consistent versus low data needs and comprehensive



Benefits of using external costs

- A scientific sound and uniform way to add up different impact:
 - Climate change
 - Air pollution
 - Noise
 - Fragmentation of habitats
 - Accidents
 - Road congestion
- Indicator can be linked to other costs, financial benefits and investments

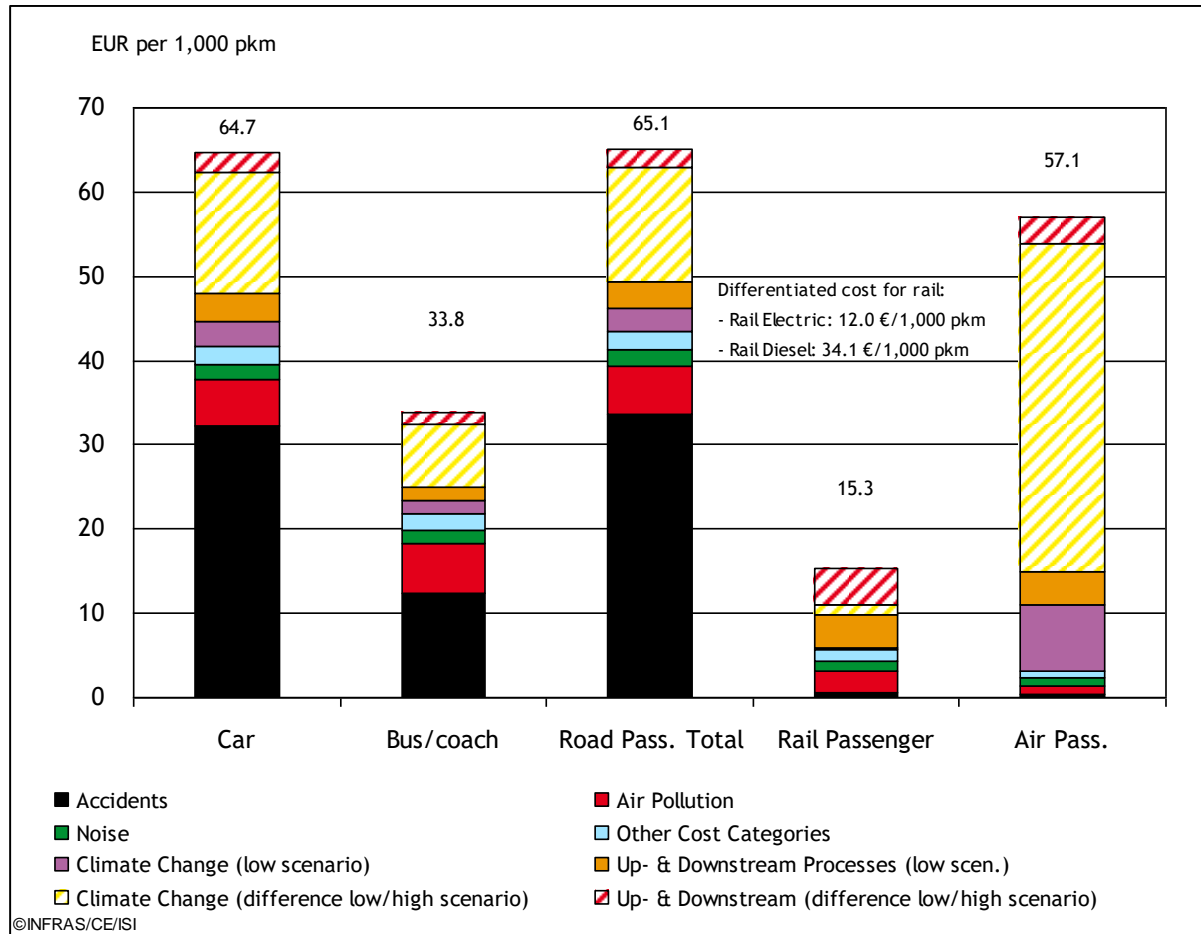


Limitations/disadvantages of using external costs

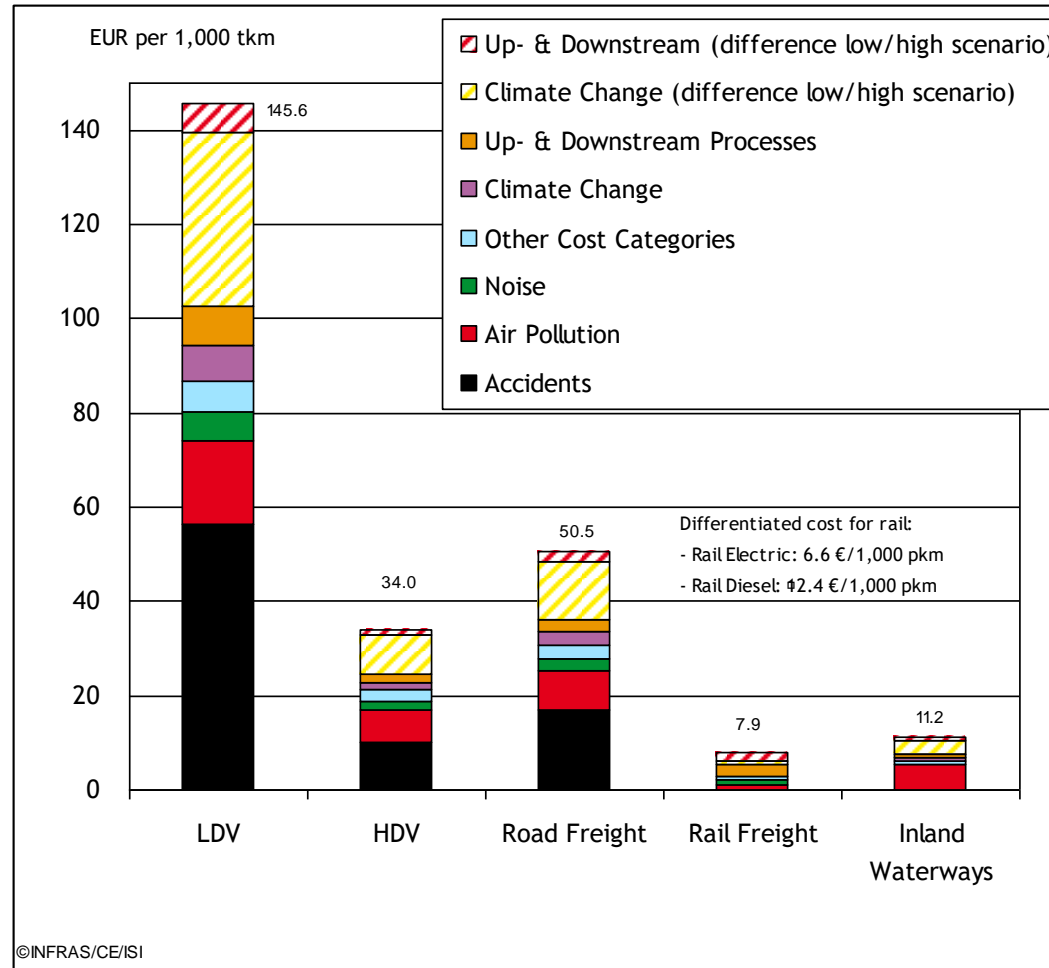
- Data needs can be higher; depending on:
 - how many external effects are included
 - whether default data or specific data are used
- More difficult to understand and communicate than the performance of a single impact (such as carbon footprint)



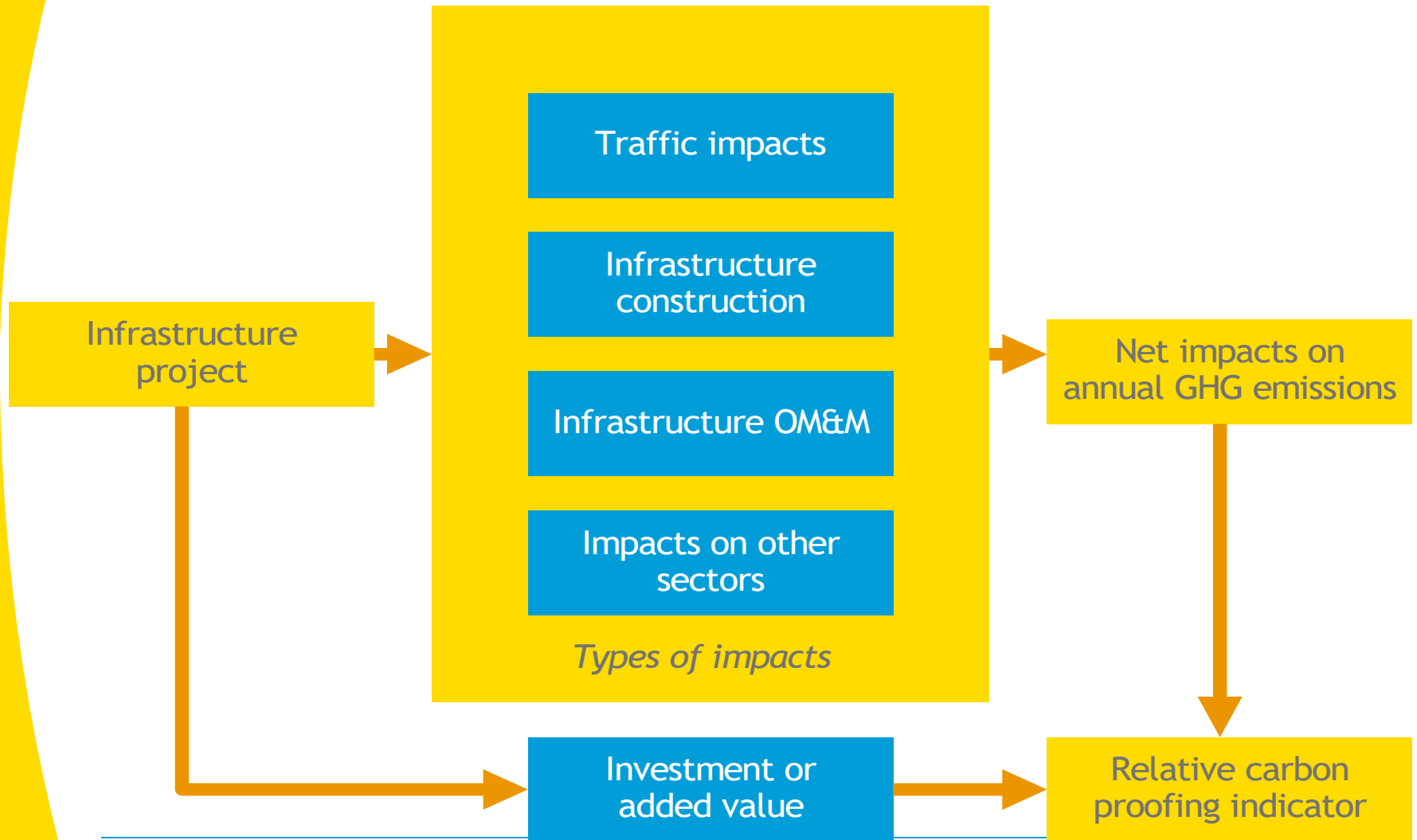
Comparison of average costs passenger transport (2008)



Comparison of average costs freight transport (2008)



Alternative approach focussing on climate: carbon rating of infrastructure investments



Thank you for your attention!

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