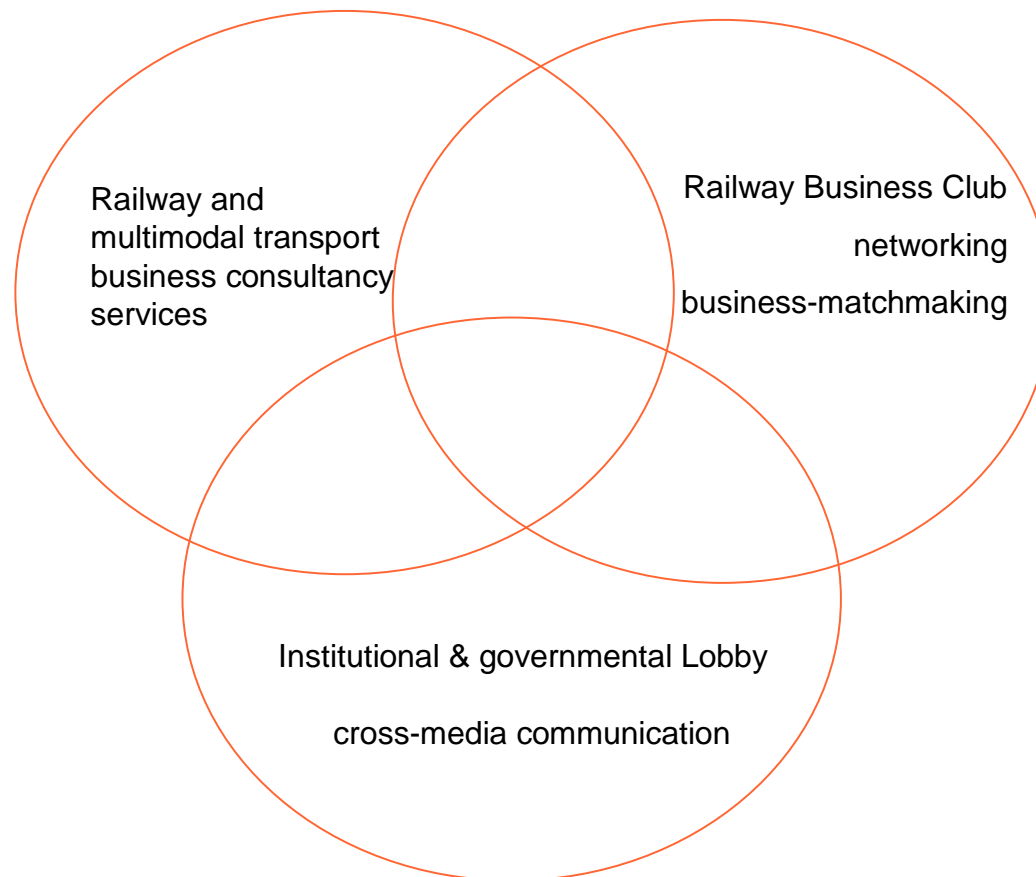


Challenges of the 21st century for the railway business environment

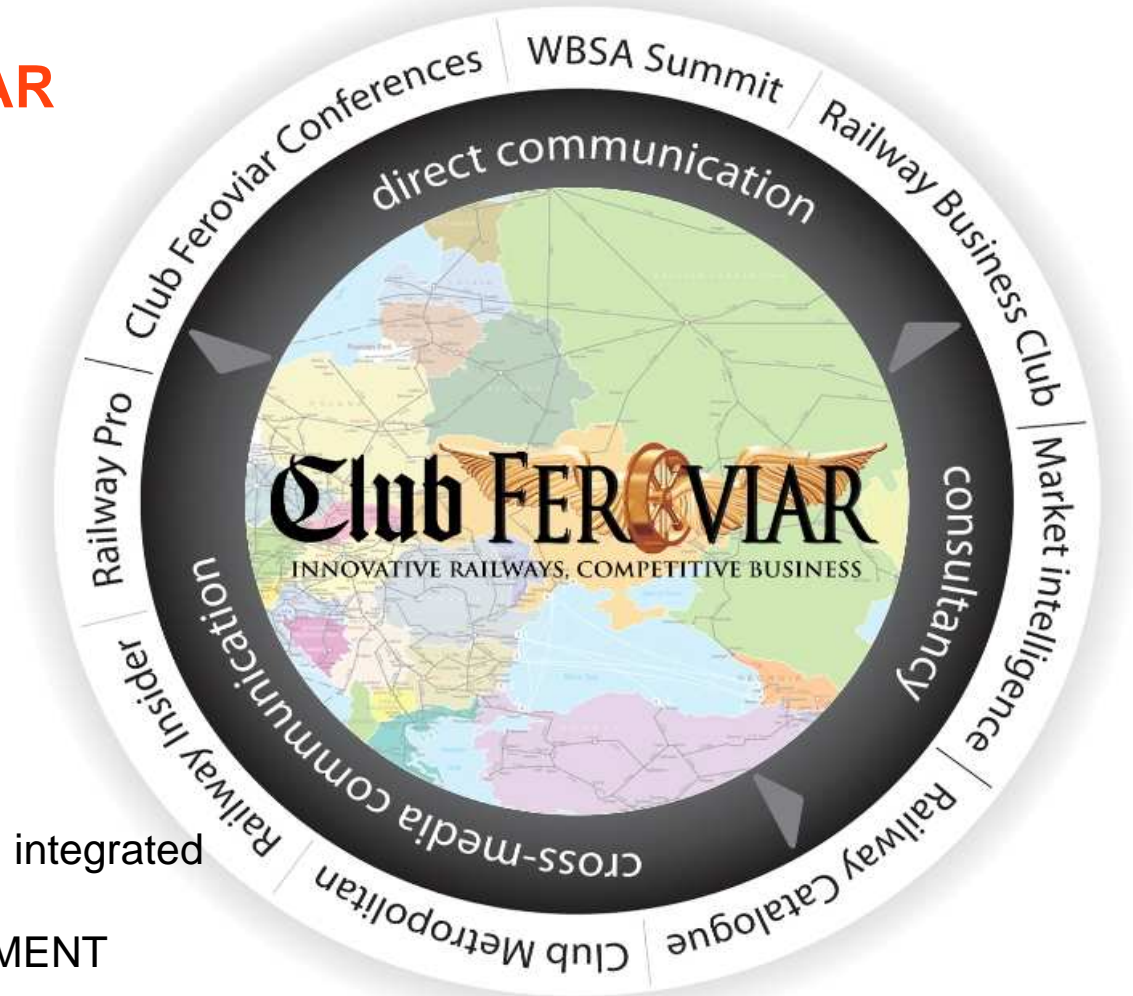
Content

- 1. About Club Feroviar**
- 2. Global trends in manufacturing and trade**
- 3. The social and economic costs of transport**
- 4. The place of railways on public agenda**
- 5. Conclusions**

1. About CLUB FERVIAR



1. About CLUB FERVIAR



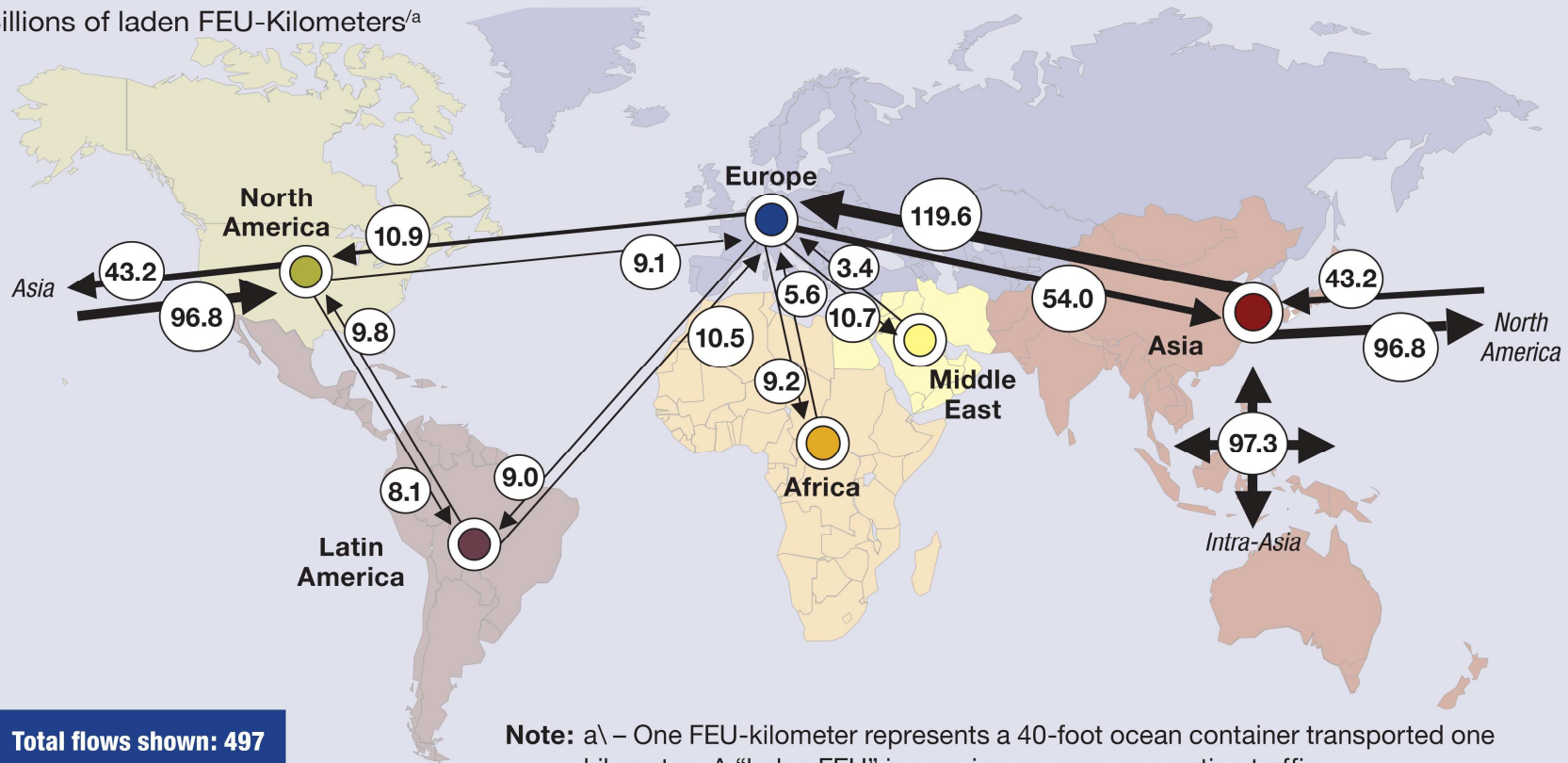
Objective:

The development of strong, competitive, integrated regional and Eurasian RAILWAY BUSINESS ENVIRONMENT

2. Global trends in manufacturing and trade

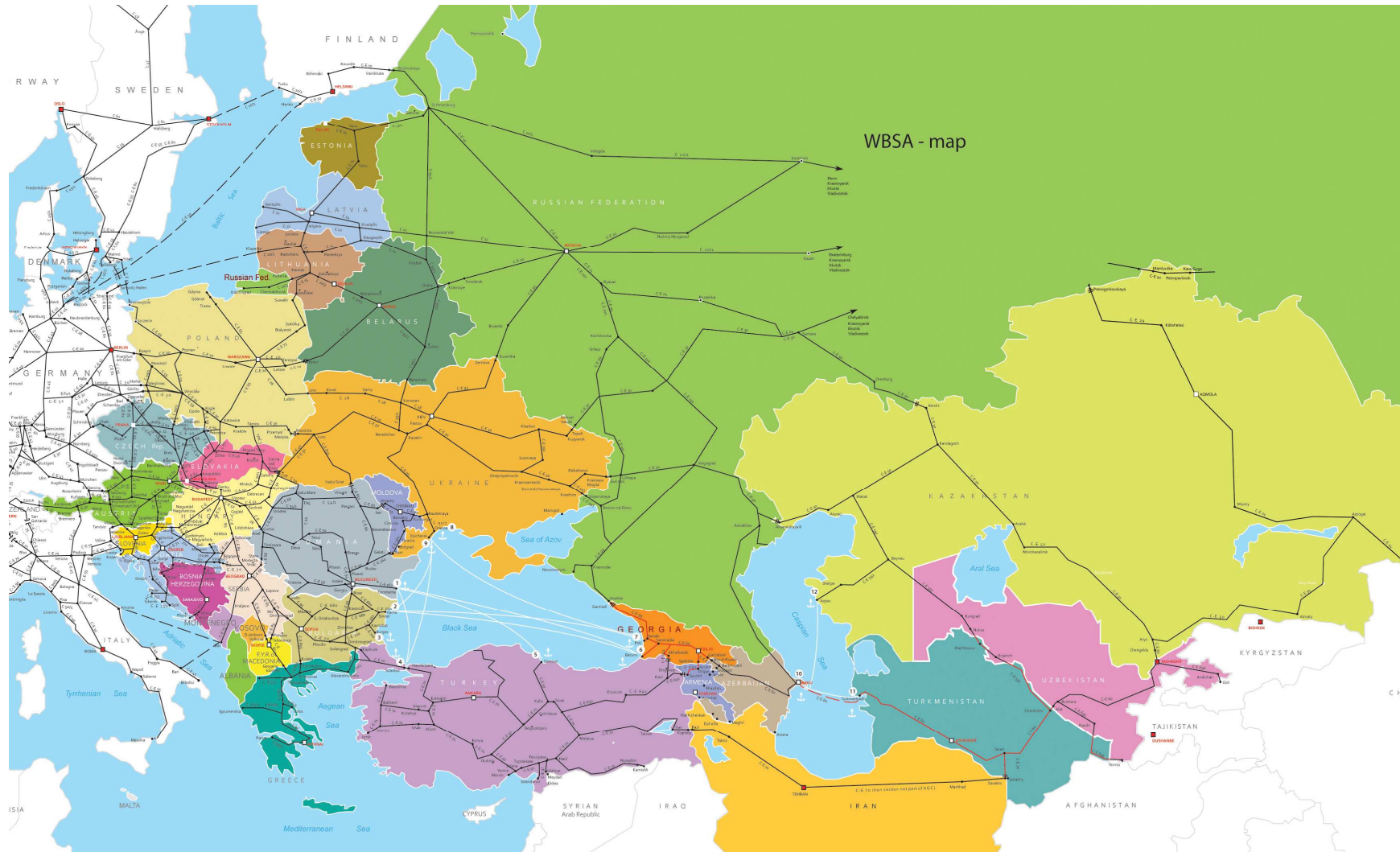
Primary containerized ocean freight flows in 2007

Billions of laden FEU-Kilometers^a

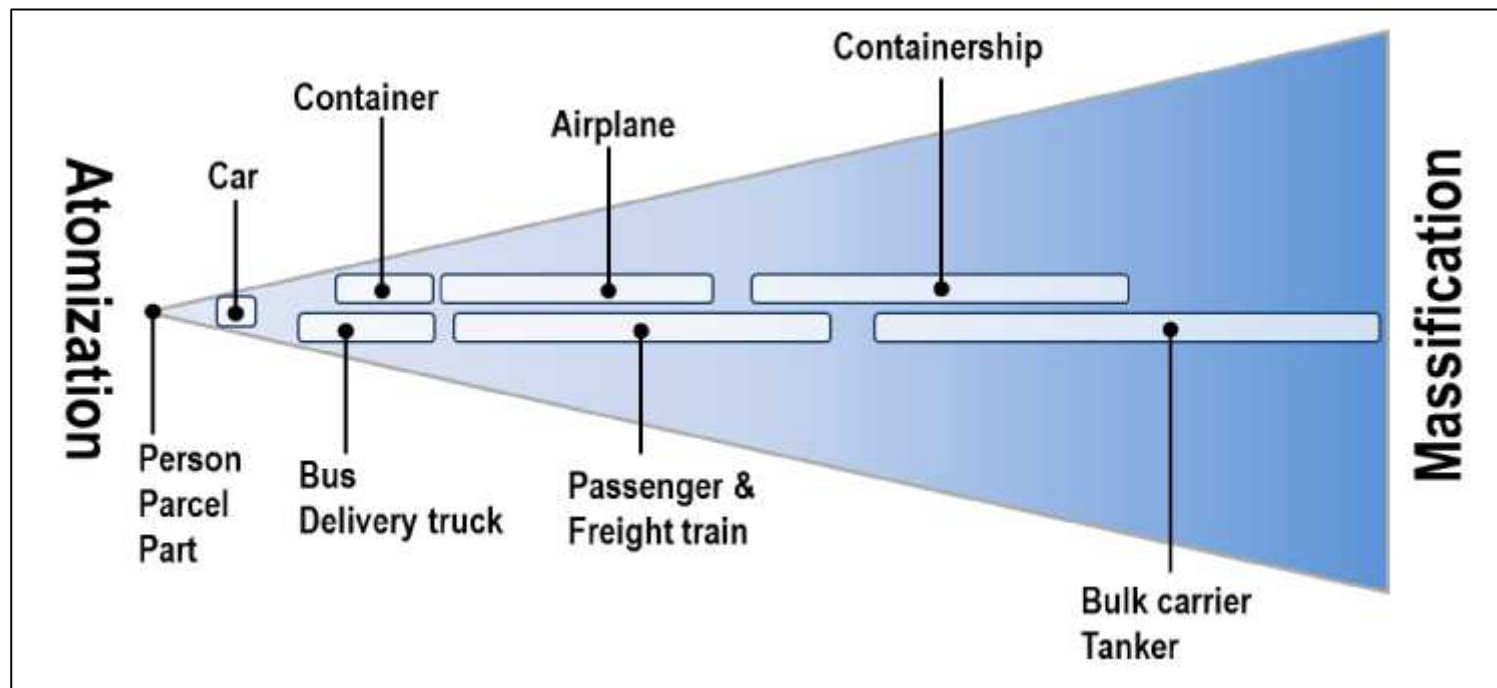


Source: MergeGlobal Value Creation Initiative, *Insomnia. Why challenges facing the world container shipping industry make for more nightmares than it should*, American Shipper, 2008

2. Global trends in manufacturing and trade

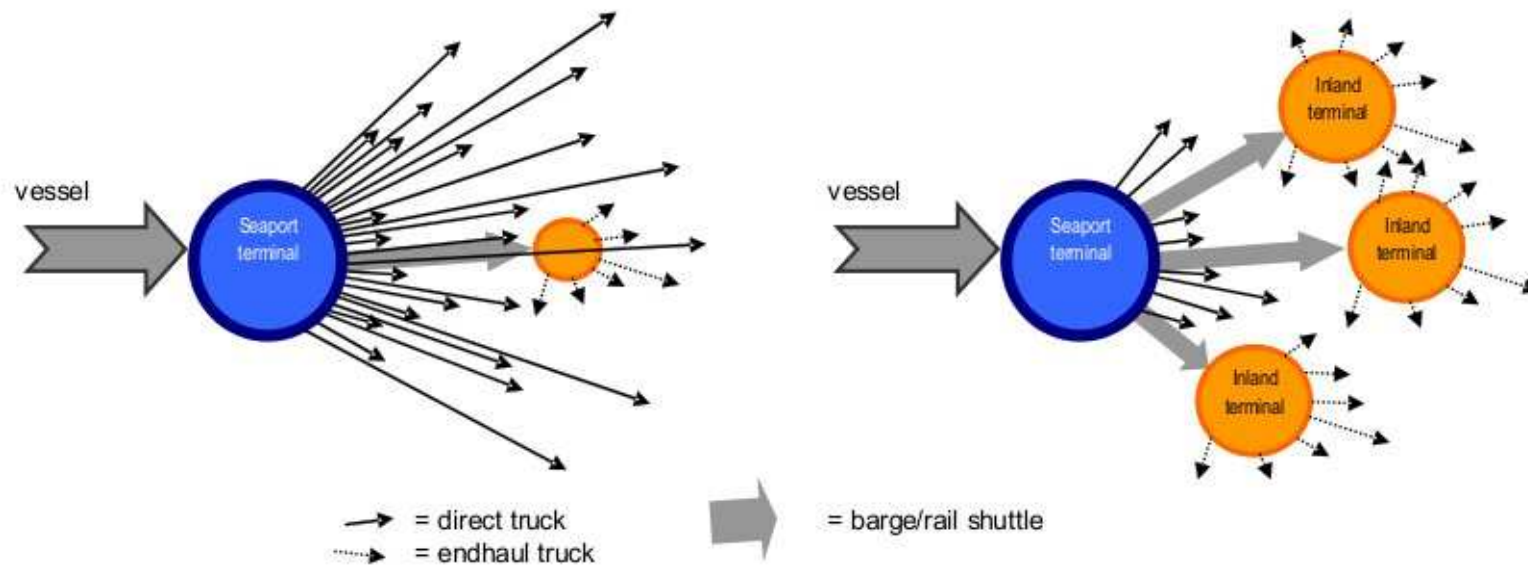


2. Global trends in manufacturing and trade



Source: Rodrigue, J-P *et al.* (2009), *The Geography of Transport Systems*, Hofstra University, Department of Global Studies & Geography, <http://people.hofstra.edu/geotrans>.

2. Global trends in manufacturing and trade

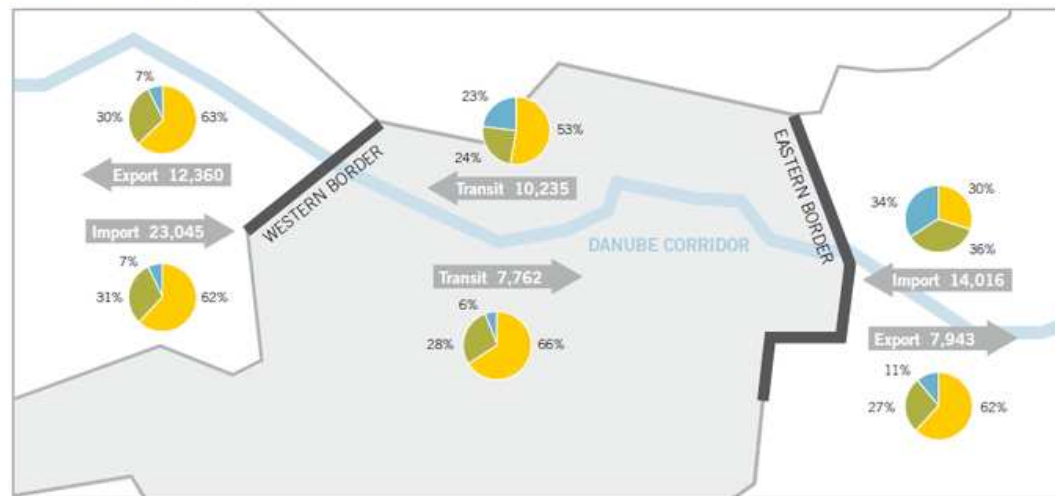


Source: Prof. dr. Theo Notteboom, *The Future of Rail Freight in Europe*, Rail Freight Conference, Anwerp, February 2010

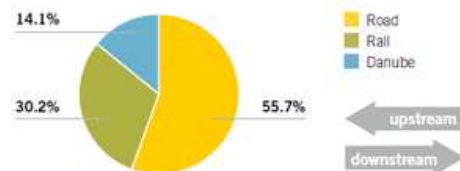
2. Global trends in manufacturing and trade

CROSS-BORDER FREIGHT TRANSPORT IN THE AUSTRIAN DANUBE CORRIDOR 2010

FREIGHT TRANSPORT IN 1,000 TONS/YEAR



Total: 75,359 (+15.9% over 2009)



Western border

Danube: Passau
Road: Suben, Neuhaus, Simbach
Rail: Passau

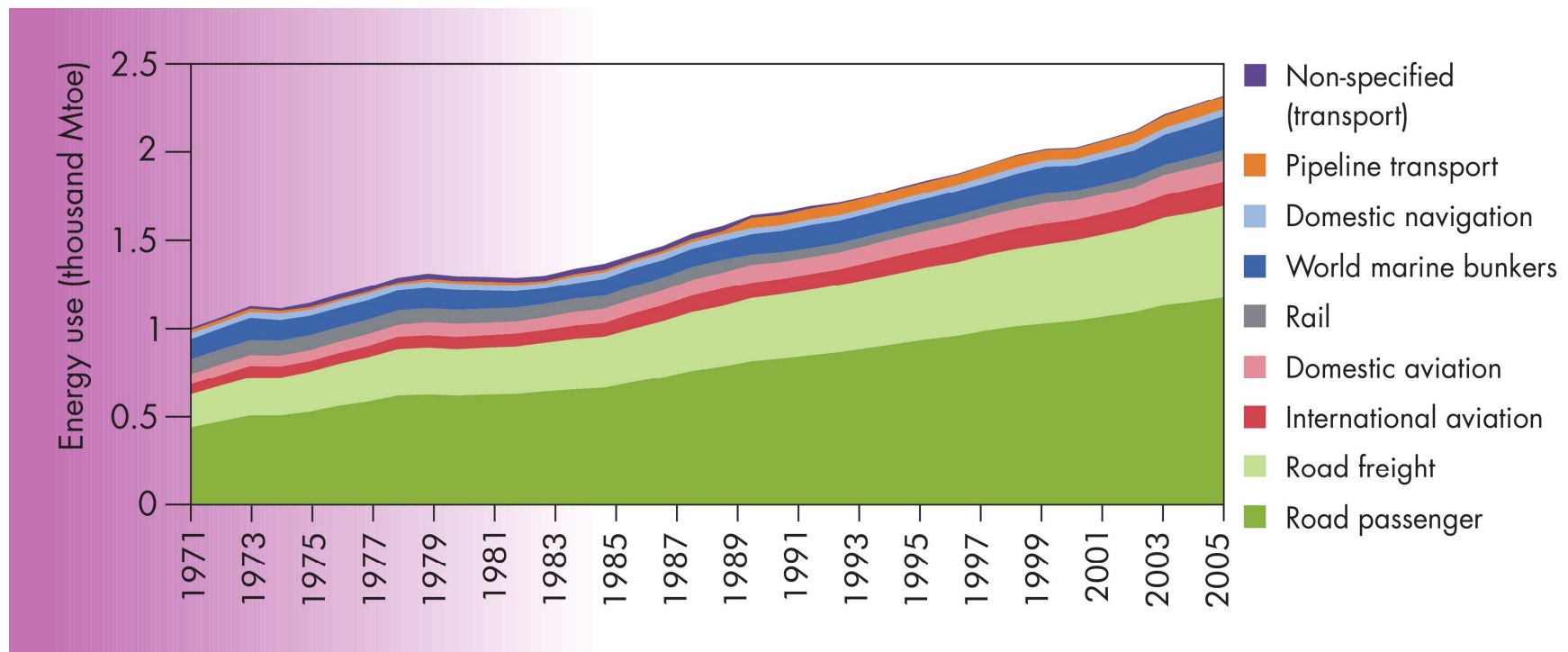
Eastern border

Danube: Hainburg
Road: Berg, Kittsee, Nickelsdorf, Klingenbach, Deutschkreutz
Rail: Marchegg, Kittsee, Hegyeshalom, Sopron, Deutschkreutz

Source: Austrian Institute for Regional Studies and Spatial Planning (ÖIR); chart created by via donau

Source:
http://www.donauschifffahrt.info/en/facts_figures/statistics/corridor_analysis/modal_split/

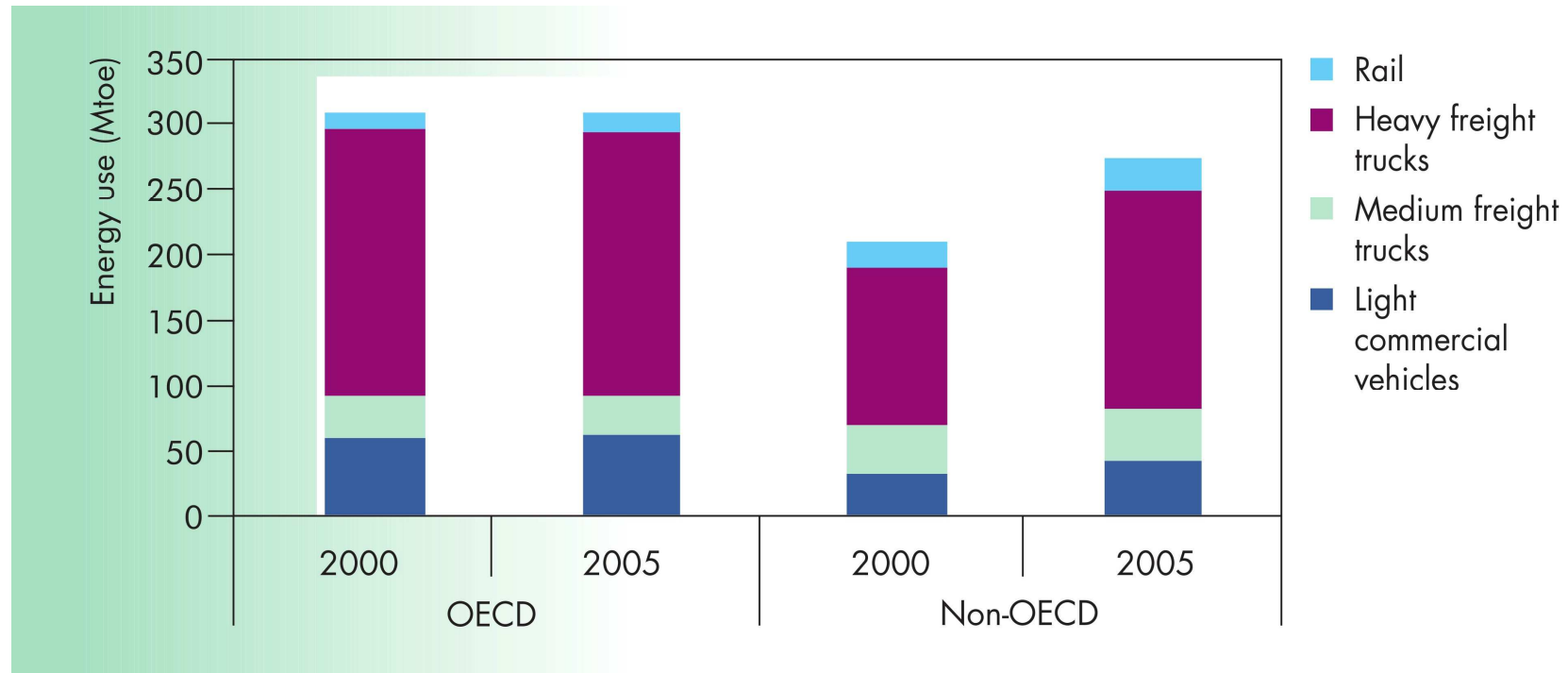
3. The social and economic costs of transport



World transport use of energy by mode. 1971-2005

Source: *Transport, energy and CO2. Moving toward Sustainability*, IEA/OECD, 2009

3. The social and economic costs of transport



Energy use by freight category. 2005

Source: *Transport, energy and CO2. Moving toward Sustainability*, IEA/OECD, 2009

3. The social and economic costs of transport

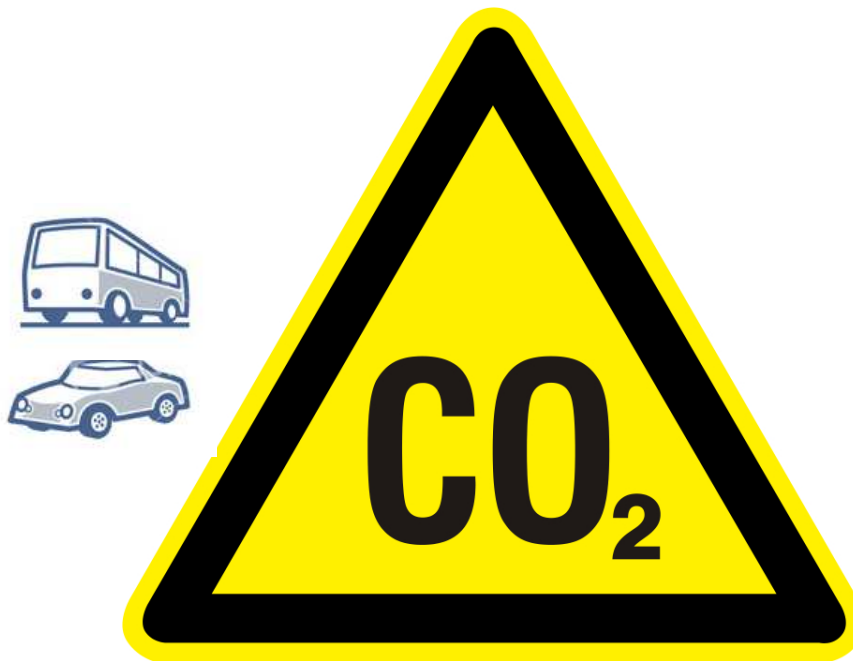


Transport generates around **1/4** of all **EU CO2 emissions**.

During 1990 - 2005, EU-15 GHG emissions from domestic transport (within EU only) increased by 26%.

(Source: Rail Transport and Environment, Facts & Figures, CER, UIC)

3. The social and economic costs of transport



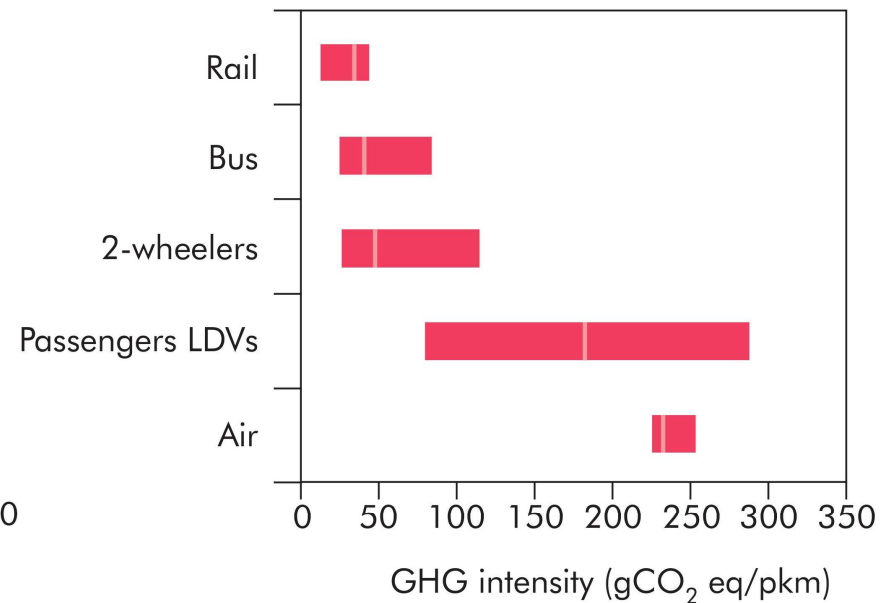
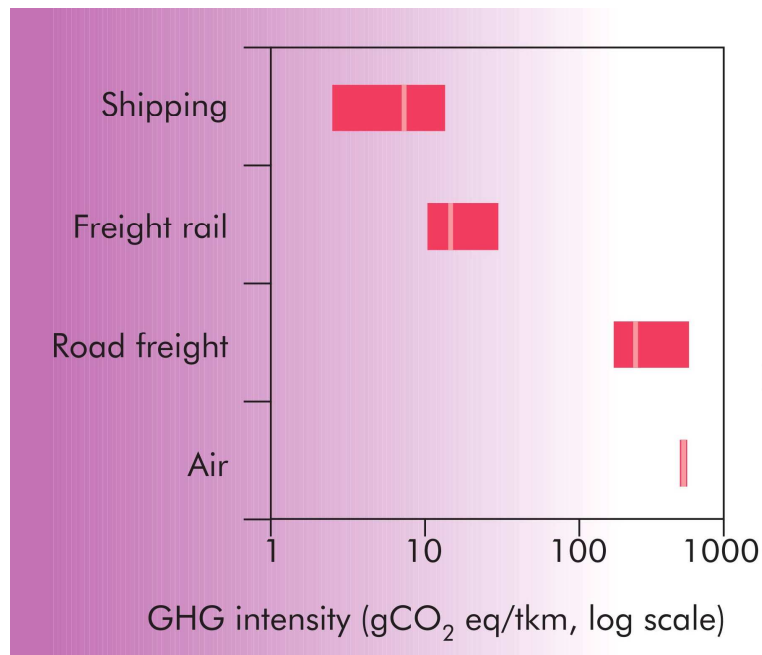
More than 90%
of total domestic transport
emissions are due to
road transport.

**Rail only
accounts for
0.6%**

for diesel emissions and for less
than 2% including emissions for
electricity production.



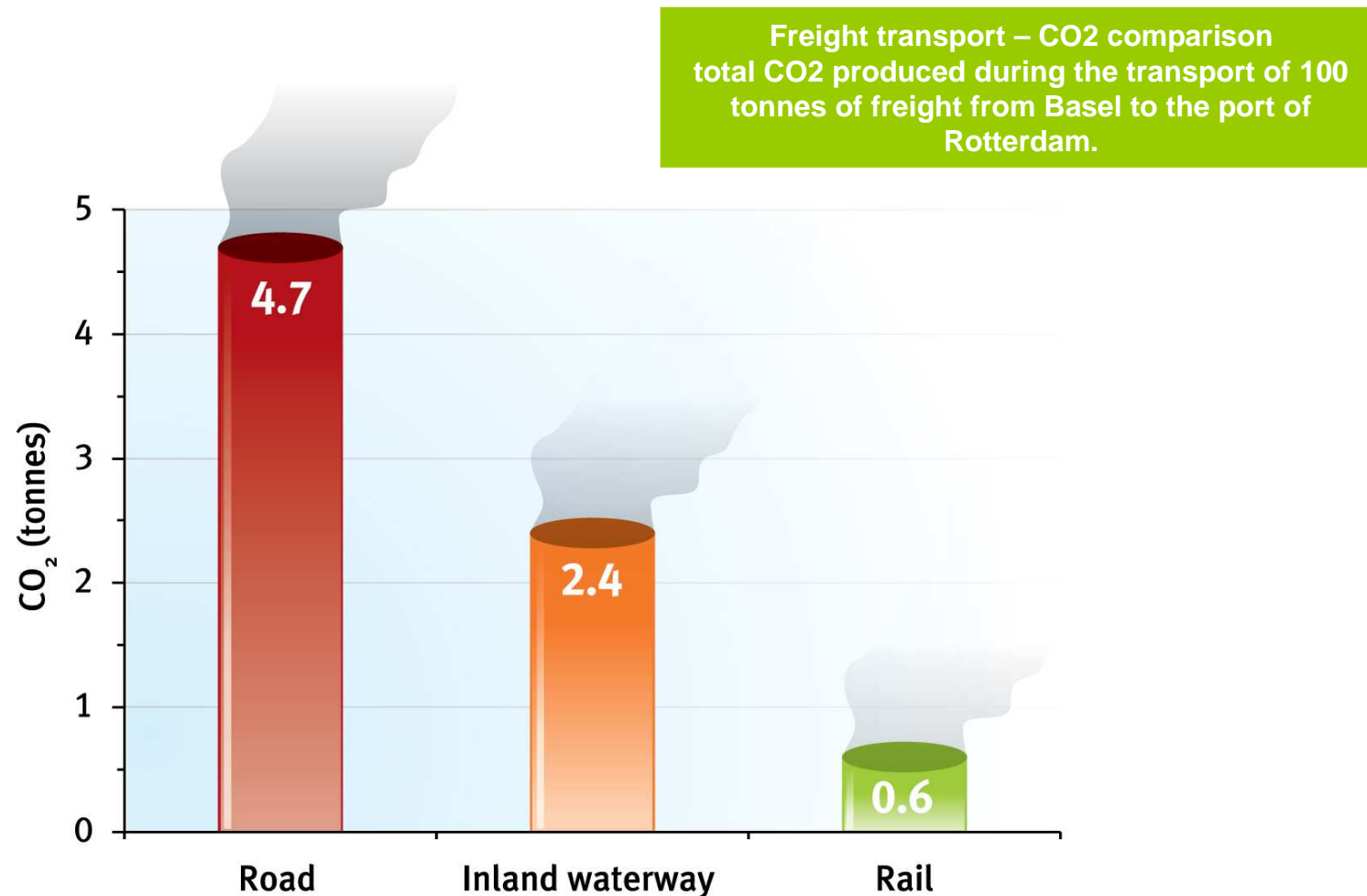
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GHG efficiency of different modes, passenger and freight. 2005

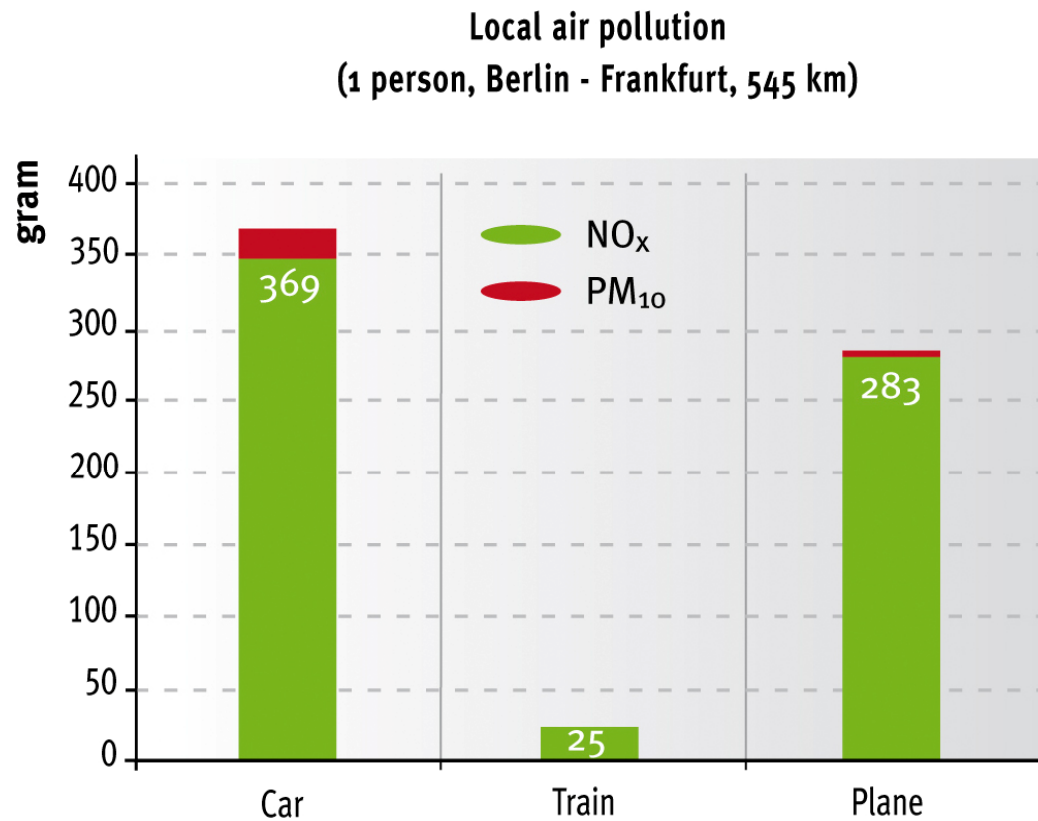
Source: *Transport, energy and CO2. Moving toward Sustainability*, IEA/OECD, 2009

3. The social and economic costs of transport



Source: Ecological Transport Information Tool (EcoTransIT) 2008

3. The social and economic costs of transport



Local air pollution
(1 person, Berlin - Frankfurt, 545 km)

Source:
www.ecopassenger.org
2008

Source: www.ecopassenger.org 2008

3. The social and economic costs of transport



Percentage of citizens who are 'highly disturbed' when exposed to night-time noise emissions from transport

Noise is one of the key concerns

for people living near transport infrastructure

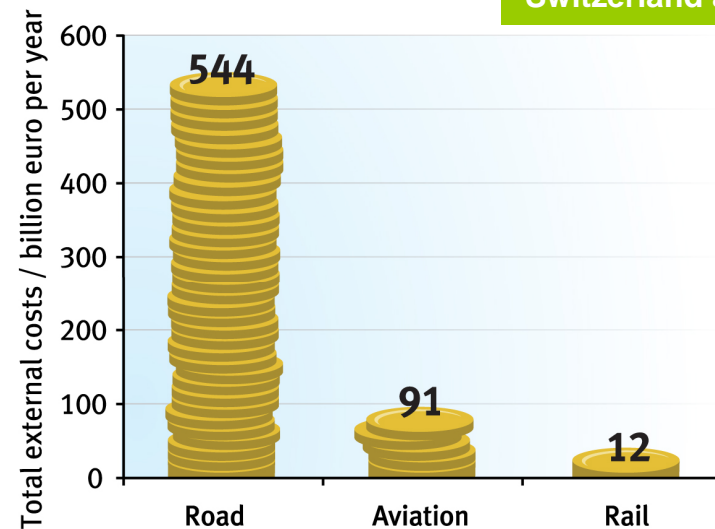
The perceived **noise annoyance** is much **higher for air and road traffic than rail.**

Source: European Commission 2004

(Source: Rail Transport and Environment, Facts & Figures, CER, UIC)

3. The social and economic costs of transport

Total external costs in 2000 by mode in the EU-15 plus Switzerland and Norway



Source: INFRAS/Institute for Economic Policy Research 2004



rail



3. The social and economic costs of transport

The **cost of road congestion** is estimated to amount to an equivalent of around **1% of EU GDP per year**

This would correspond to **123 billion euros in 2007,**

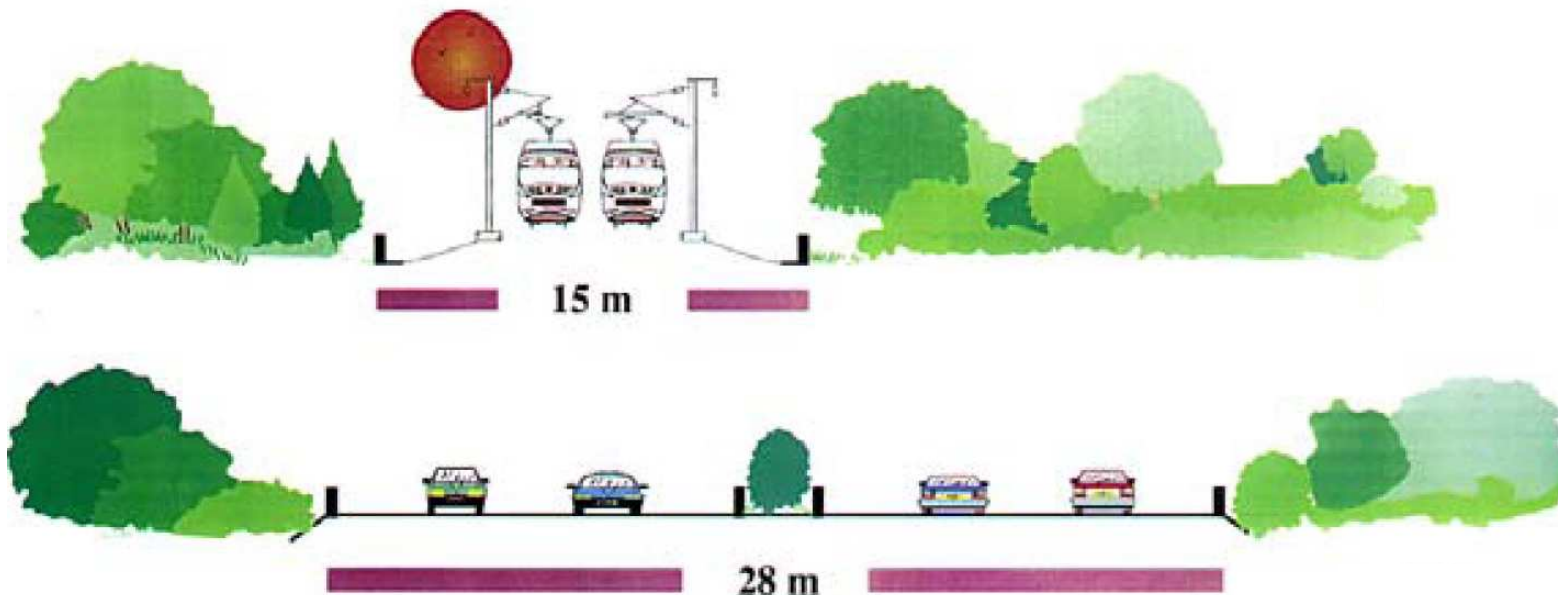
about the same size as **the total EU budget.**



EU budget

Road congestion cost

3. The social and economic costs of transport



Rail land requirements are **smaller**
than highway requirements.

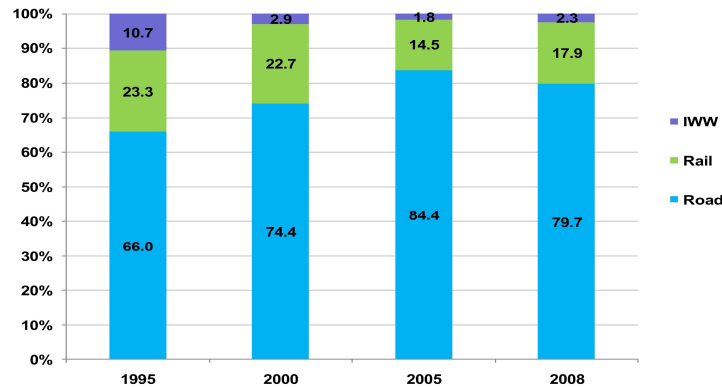
3. The social and economic costs of transport

Mode	Fuel Consumption	Infrastructure Capacity	Cost (to users)	Safety
Railways	0,51 litres per 100 ton-km	216 million annual tons per mainline	1.68 USD cents per ton-km	0.38 fatalities per billion ton-km; 7.75 incidents per billion ton-km
Roads	3,6 litres per 100 ton-km	37.8 million annual tons per lane	3.12 USD cents per ton-km	0.90 fatalities per billion ton-km; 22.5 injuries per billion ton-km

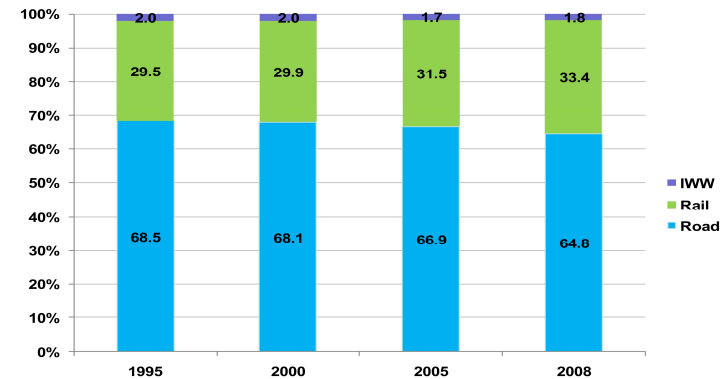
Source: Thomas R. Brown and Anthony B. Hatch, *The Value of Rail Intermodal to the US Economy*, September 2002, <http://www.aar.org/pubcommon/documents/govt/brown.pdf>

4. The place of railways on public agenda

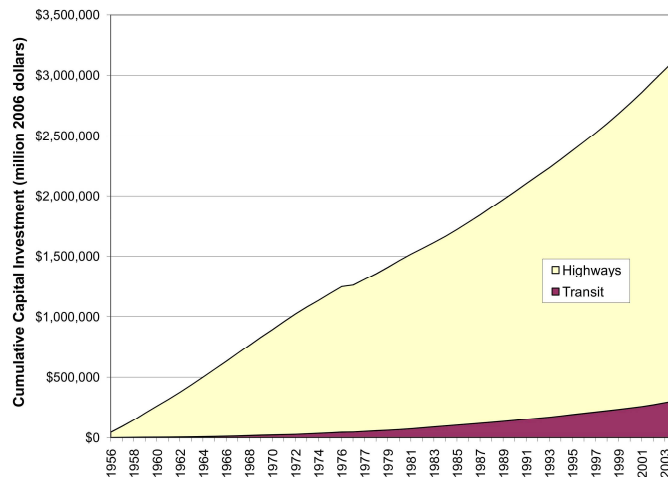
**Transport Infrastructure Investment Modal Split
 Central and Eastern European Countries**
Euros, current prices and exchange rates



**Transport Infrastructure Investment Modal Split
 Western European Countries**
Euros, current prices and exchange rates



Source:ITF Investment in Transport Infrastructure,
<http://www.internationaltransportforum.org/statistics/GlobalTrends/Investment.pdf>

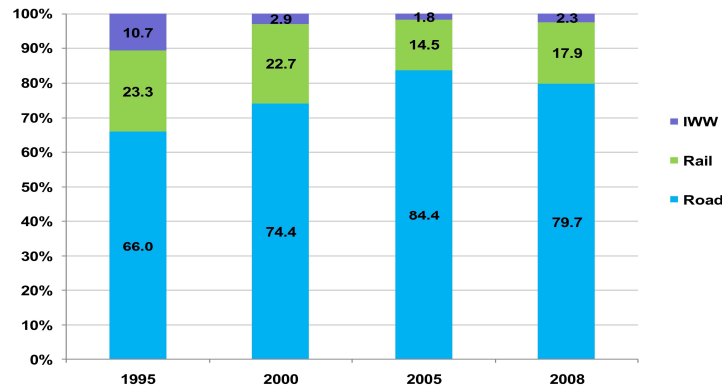


**Cumulative US Government Capital Investment
 in Tranzit and Highway since 1956 (2006 USD)**

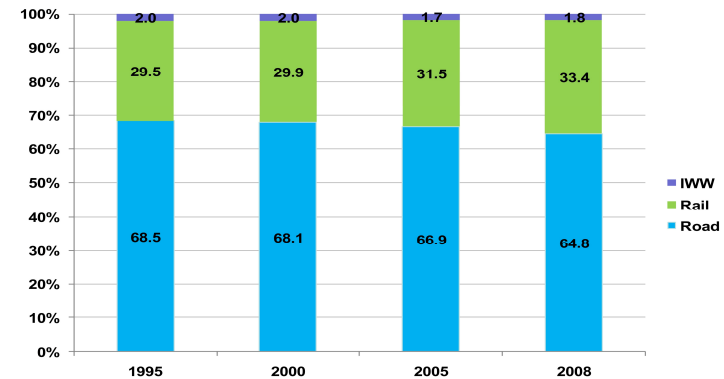
Source:Phineas Baxandall et al., *A Better Way to Go. Meeting America's 21st Century Transportation Challenges with Modern Public Tranzit*, Calpring Education Fund, 2006

4. The place of railways on public agenda

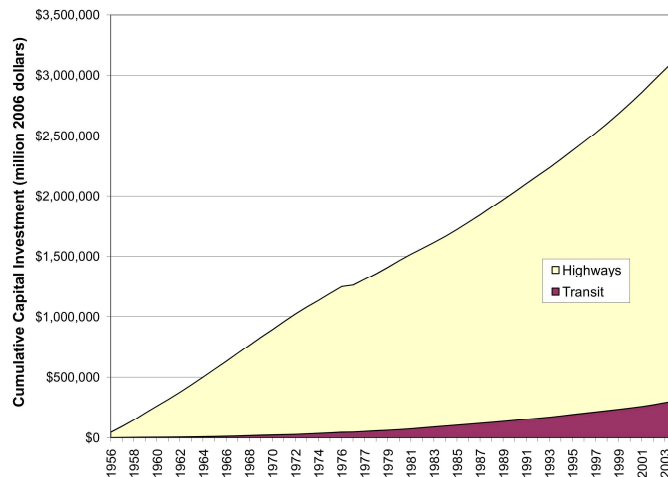
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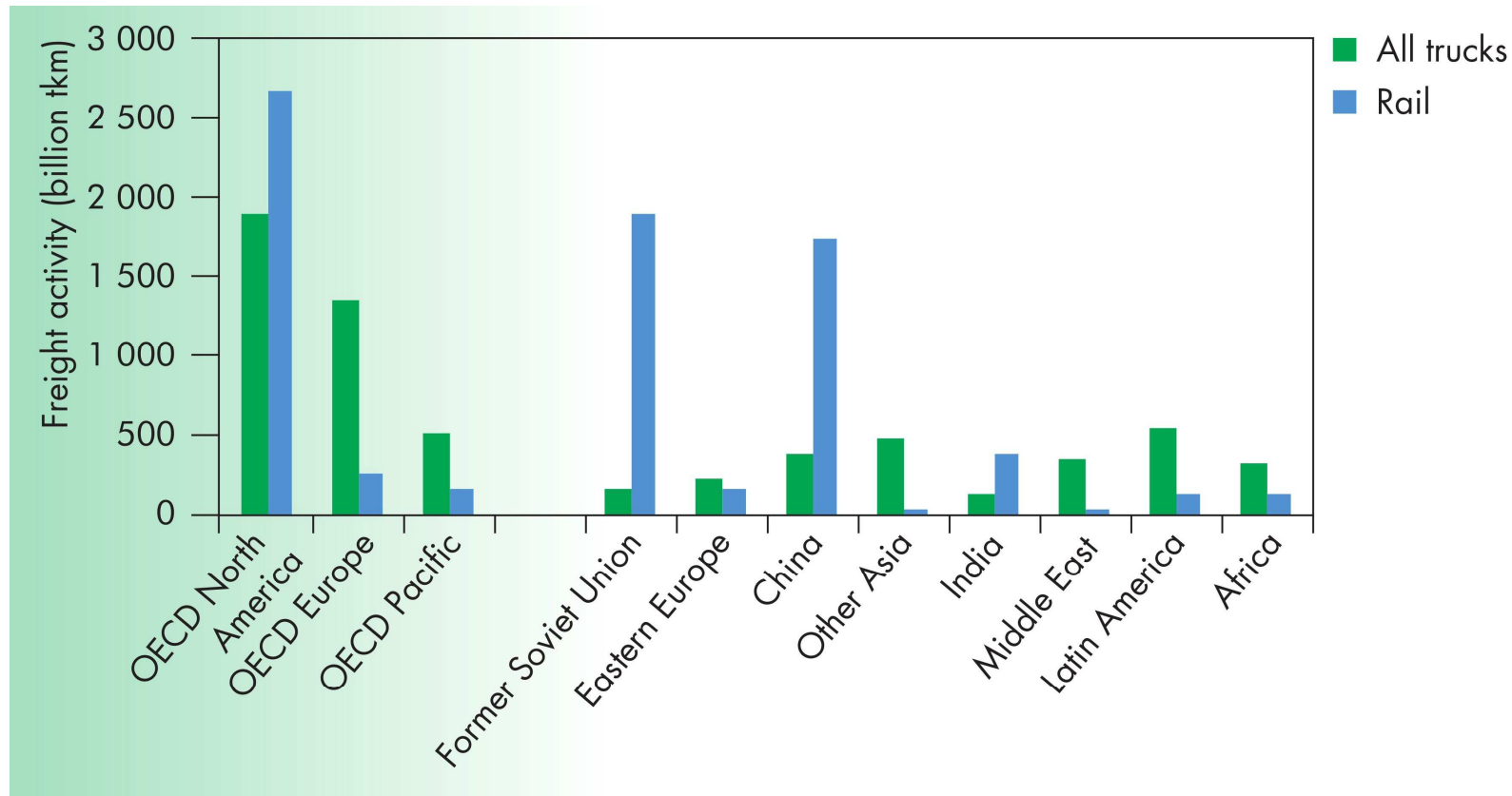
Source: ITF Investment in Transport Infrastructure, <http://www.internationaltransportforum.org/statistics/GlobalTrends/Investment.pdf>



**Cumulative US Government Capital Investment
 in Transit and Highway since 1956 (2006 USD)**

Source: Phineas Baxandall et al., *A Better Way to Go. Meeting America's 21st Century Transportation Challenges with Modern Public Transit*, Calpring Education Fund, 2006

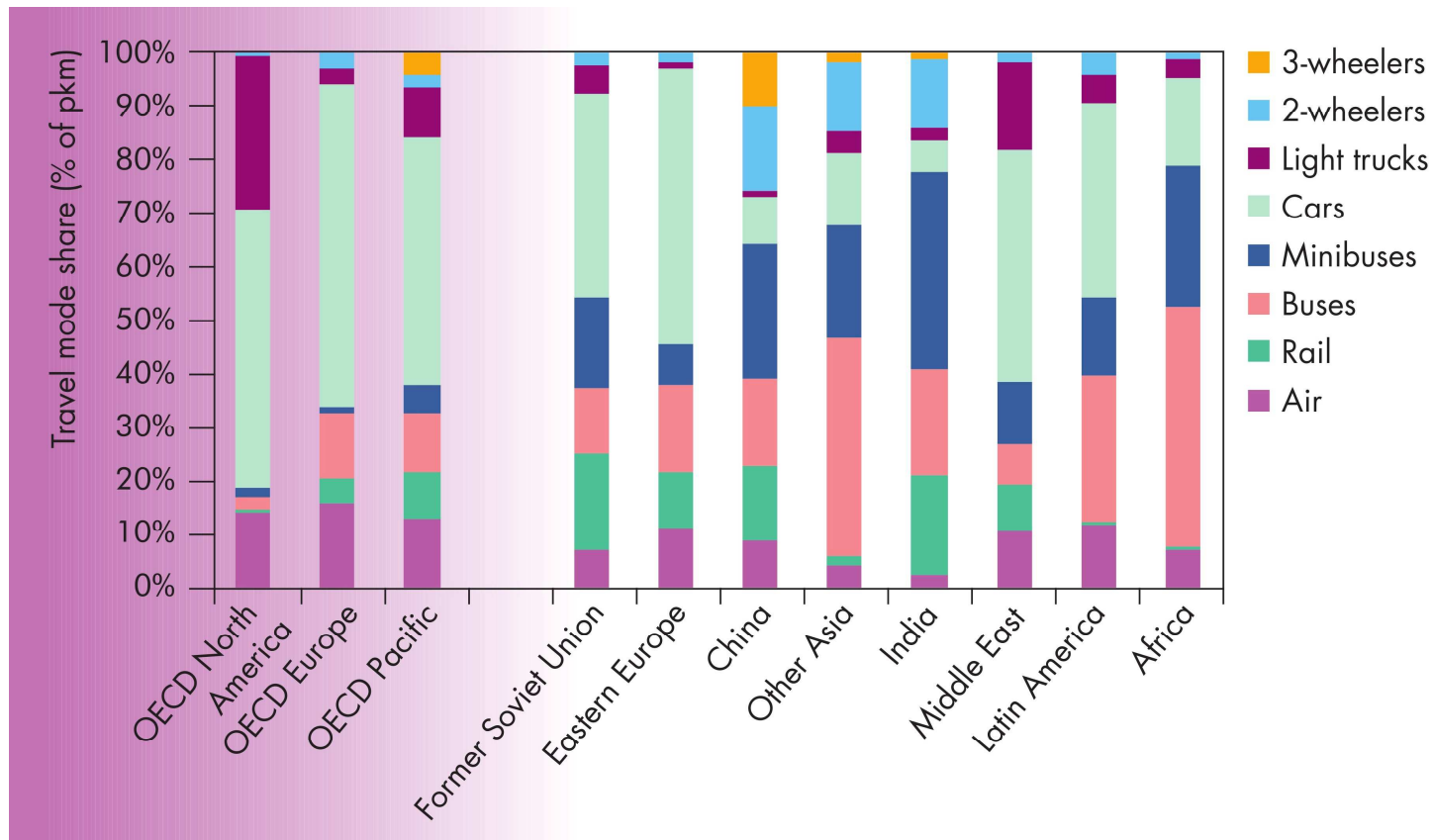
4. The place of railways on public agenda



Freight transport by truck and rail. 2005

Source: *Transport, energy and CO2. Moving toward Sustainability*, IEA/OECD, 2009

4. The place of railways on public agenda

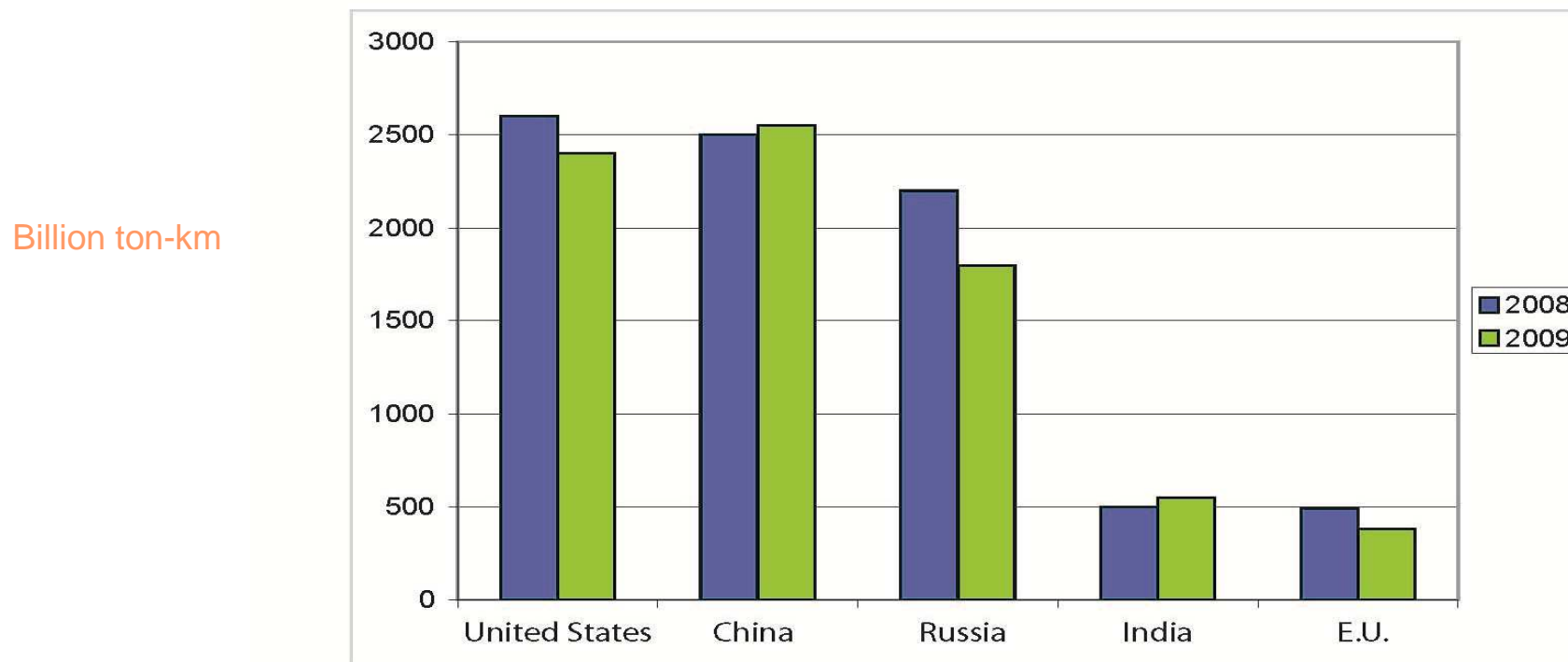


Motorised passenger travel split by mode. 2005

Source: *Transport, energy and CO2. Moving toward Sustainability*, IEA/OECD, 2009

4. The place of railways on public agenda

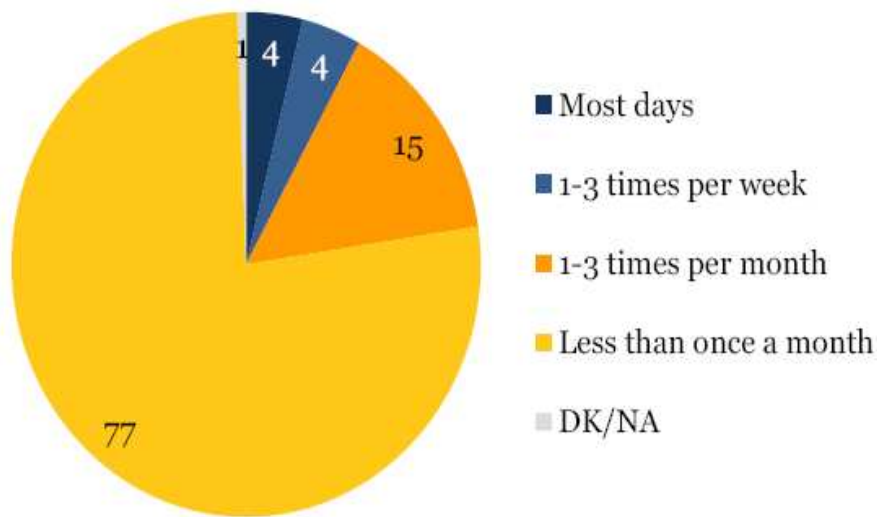
Rail freight 2008 & 2009 (billion ton-km)



Sursa: International Transport Forum, *Trends in the Transport Sector 1970-2009*, 2011

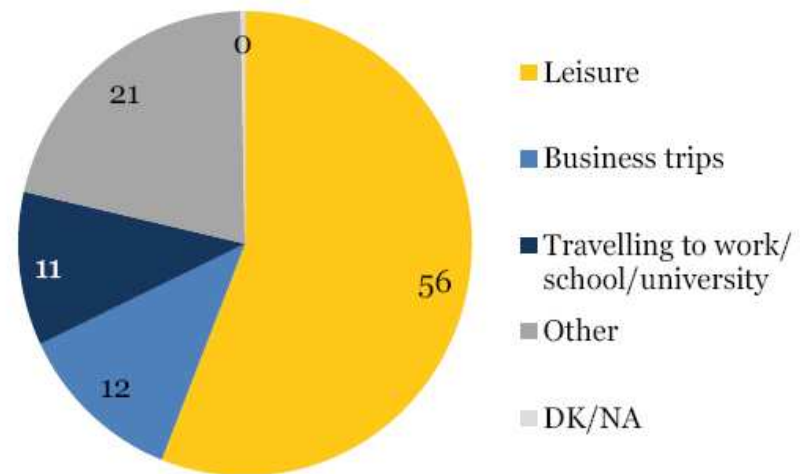
4. The place of railways on public agenda

Frequency of journeys by rail



Q1. How often do you travel by train [IN YOUR COUNTRY]?
 Base: all respondents, %EU27

Most frequent purpose of journeys by rail



Q2. What is the most frequent purpose of your rail trip [IN YOUR COUNTRY]?
 Base: all respondents, %EU27

5. Conclusions

- 1. railway transport is a strong ally in implementing climate-oriented policies**
- 2. last decades were the witness of a low interest in investing in rail infrastructures despite the above mentioned advantages**
- 3. strong policies towards supporting consolidation facilities can boost railway attractiveness**
- 4. soft infrastructure (cross acceptance, border checking facilities, taxation etc.) is mandatory in connecting large transport areas**
- 5. evaluation of the whole image is important in comparing investments in railway infrastructures to the others**
- 6. customer oriented strategy**
- 7. MODAL SHIFT IS A MENTAL SHIFT!**

5. Conclusions

The railroads did not stop growing because the need for passenger and freight transportation declined. That grew. The railroads are in trouble today because the need was filled by others (cars, trucks, airplanes, even telephones) but because it was not filled by the railroads themselves. They let others take customers away from them because they assumed themselves to be in the railroad business rather than in the transportation business. The reason they defined their industry incorrectly was that they were railroad-oriented instead of transportation-oriented, they were product-oriented instead of customer-oriented.

Theodore Levitt, **Marketing Myopia**, Harvard Business Review, 38 July-Aug 1960

Thank you for attention!

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