

# SEE Modal Shift – CoModality 2016 Conference

## INTERMODAL TRANSPORT: A EUROPEAN SUCCESS STORY



Ralf-Charley SCHULTZE  
President



1. **Introduction of UIRR**, the industry association of Combined Transport
2. Properties of Combined Transport
3. The challenges of longer distance freight transport
4. The European solution to the problem
5. Intermodal freight transport to facilitate modal shift

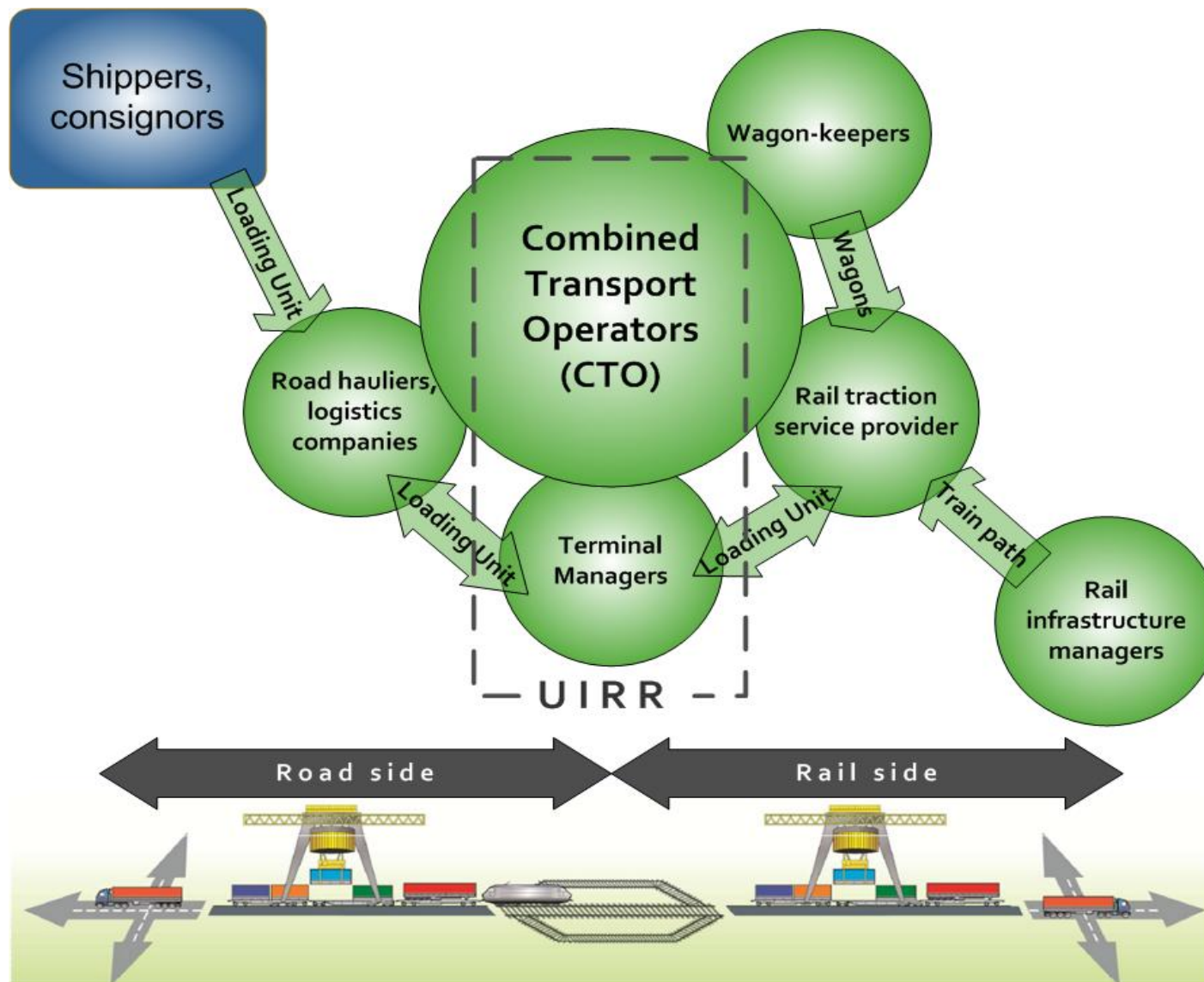


- **Members:** Combined Transport Operators and Terminal Managers, who create the link between road and rail
- **Homogeneous interest of all members:** modal shift from road to rail,
- **Logistics companies:** customers as well as shareholders of UIRR Members
- **Performance:** UIRR Members handled about 50% of European Combined Transport in 2015
- **The Industry Association:**  
UIRR founded in 1970  
- seat in Brussels since 1988

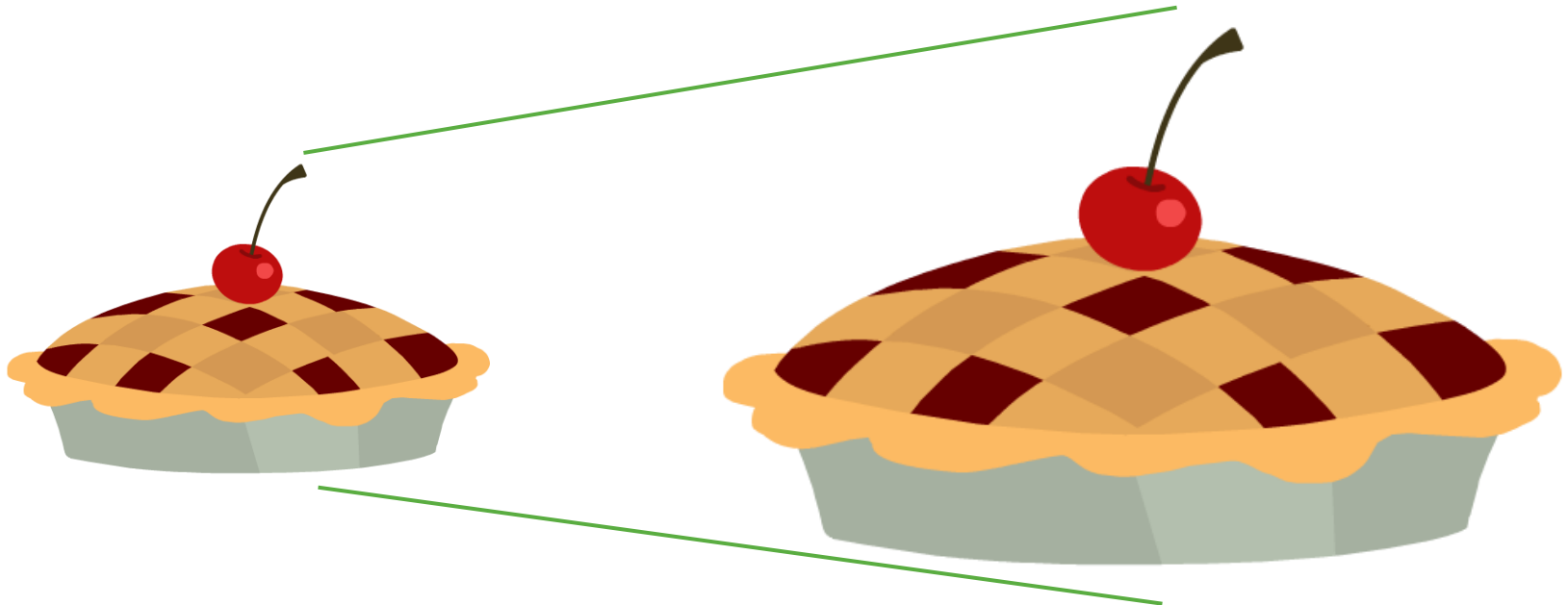


# Position of UIRR Members within value-chain

4



## Grow the pie for Combined Transport



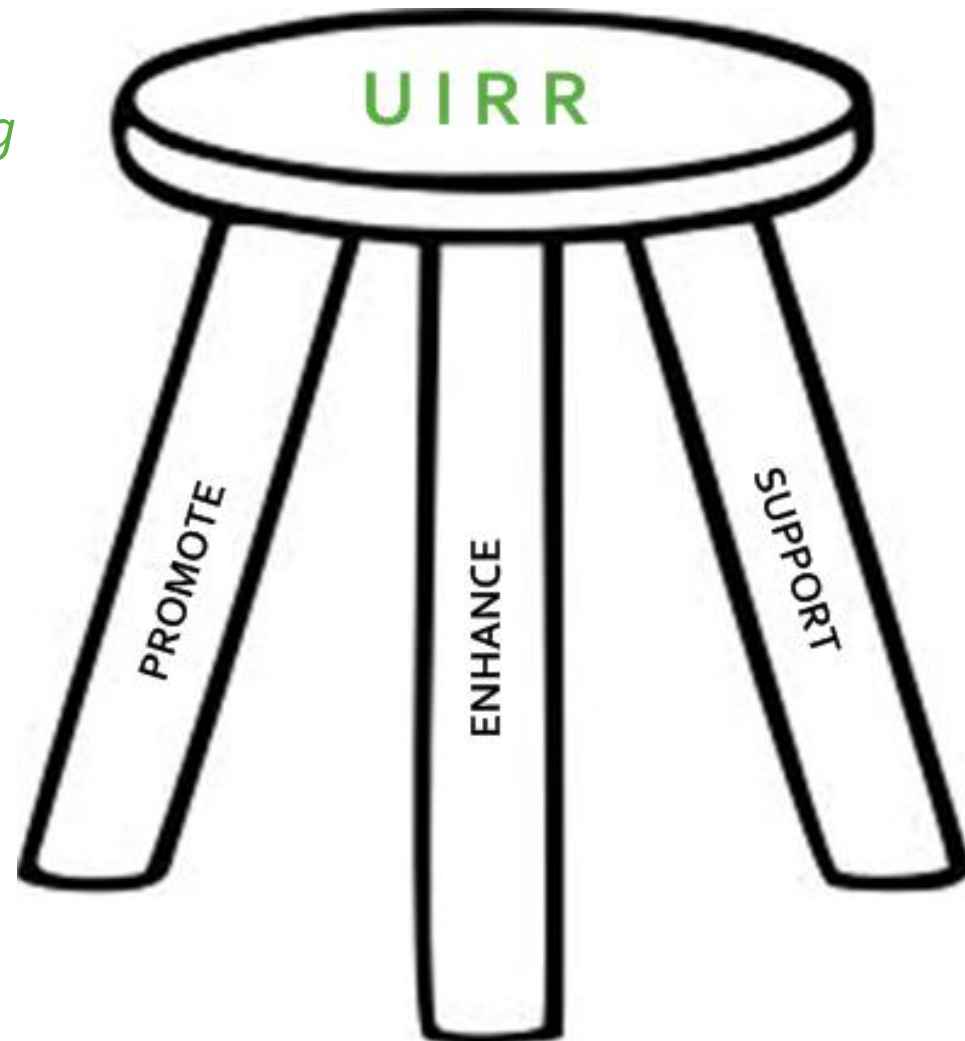
through **fair competition** on the basis of

- 1) technical merit**
- 2) management competence**



*UIRR is an **industry association** which*

- **PROMOTES** the public understanding and appreciation of Road-Rail Combined Transport,*
- **ENHANCES** its development and the proliferation of industry best practice,*
- **SUPPORTS** the daily operation of European Combined Transport with a series of services*



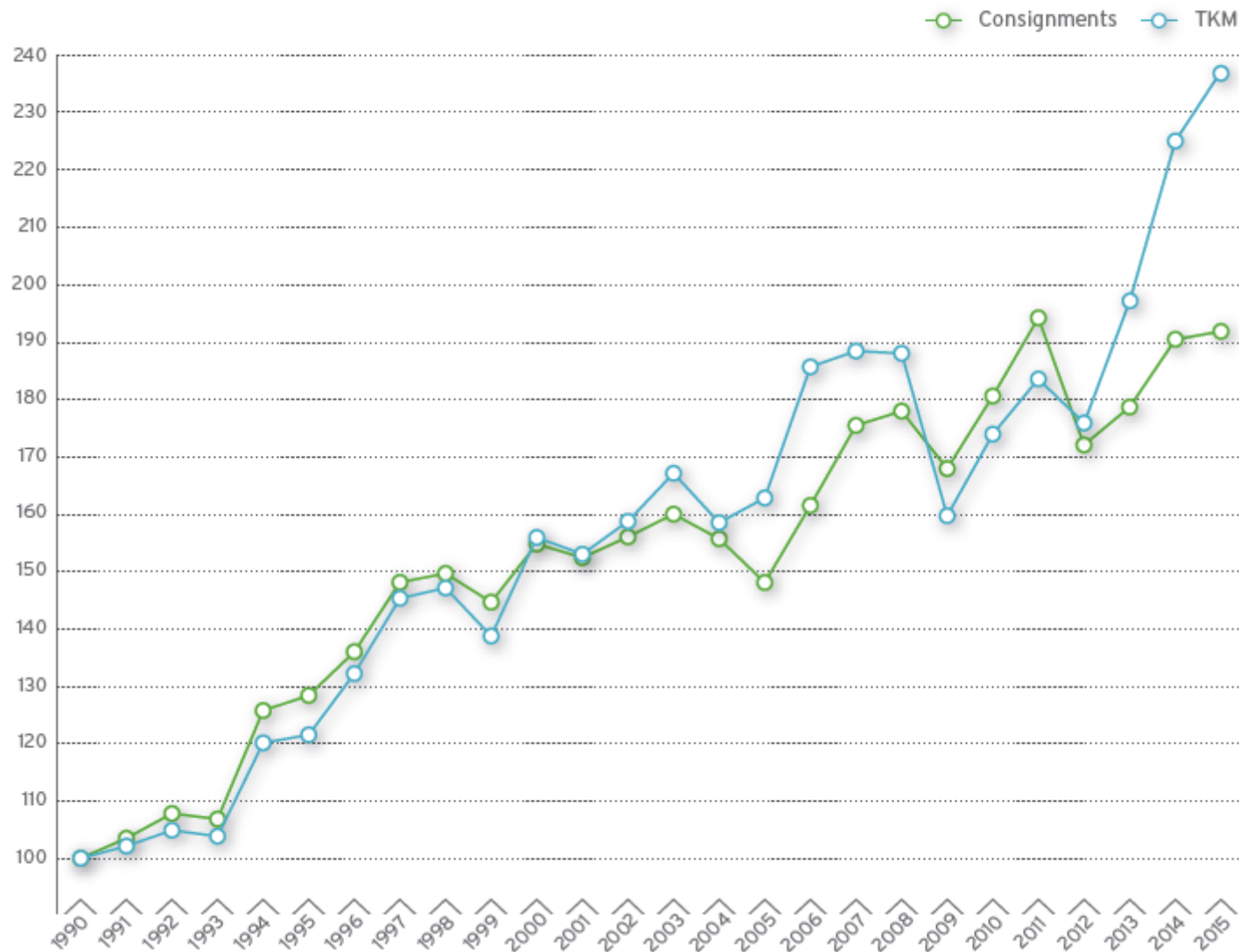
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# UIRR – Growth index of Members 1990 – 2015

8



(REFERENCE YEAR: 1990 = 100)

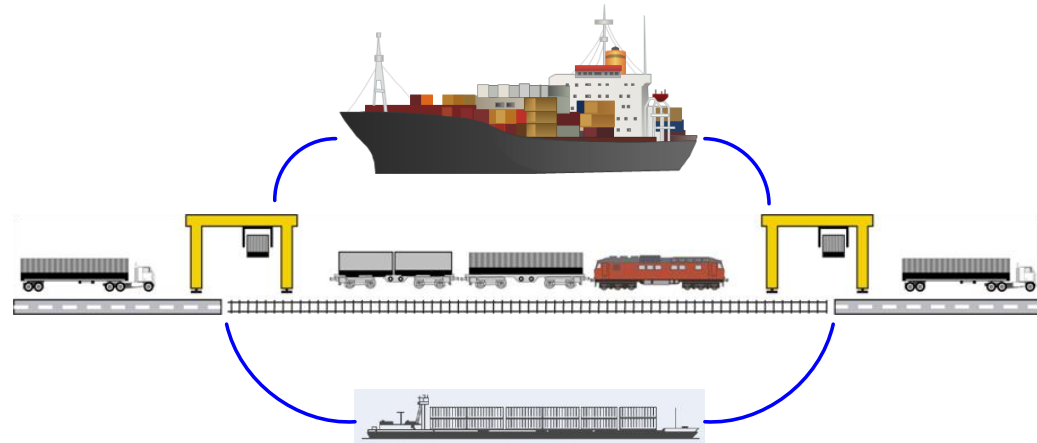




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## Intermodal Transport:

The most efficient way to insert ecologically sustainable modes of transport – like electric rail, inland navigation and short sea shipping – into long(er) distance transport-chains



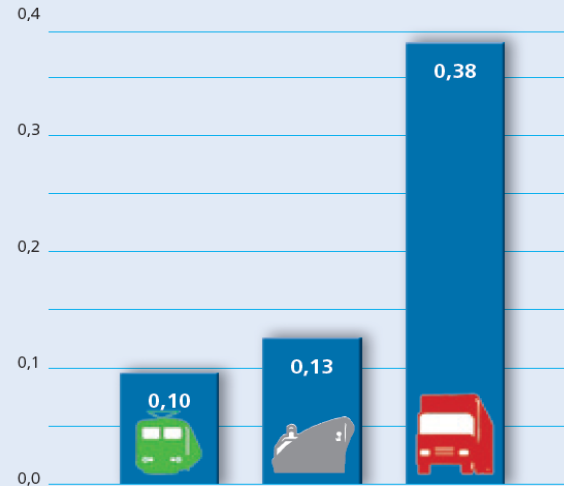
Intermodal/Combined Transport in Europe



# Primary energy need and CO<sub>2</sub> performance of modes

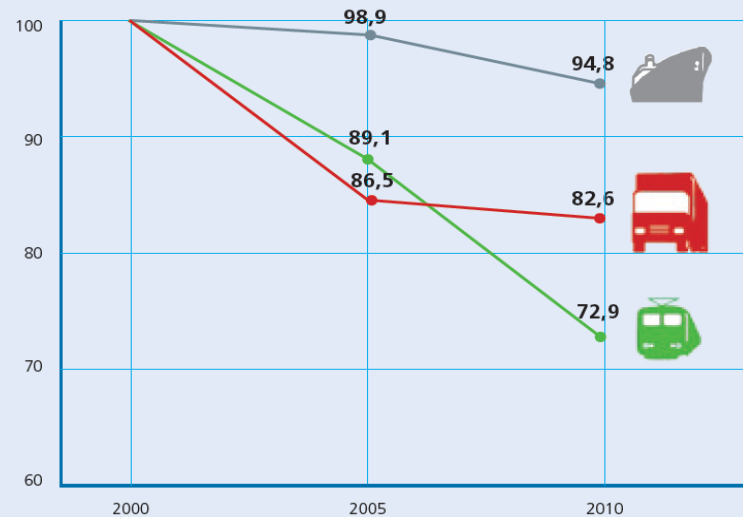


Spezifischer Energieverbrauch in kWh/tkm; Bahn, Lkw, Schiff; Bezugsjahr 2010



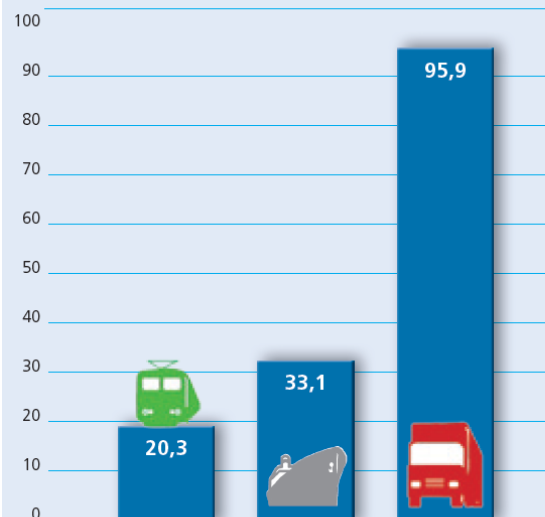
ifeu 2011, Datenbank Umwelt & Verkehr

Spezifischer Energieverbrauch seit 2000; in Prozent; Bahn, Lkw, Schiff



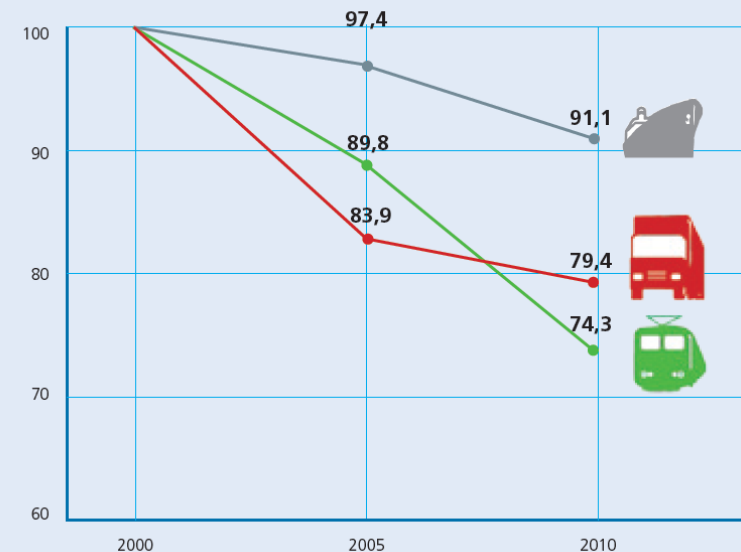
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Spezifische CO<sub>2</sub>-Emissionen in g/tkm; Bahn, Lkw, Schiff; Bezugsjahr 2010



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Spezifische CO<sub>2</sub>-Emissionen seit 2000; in Prozent; Bahn, Lkw, Schiff

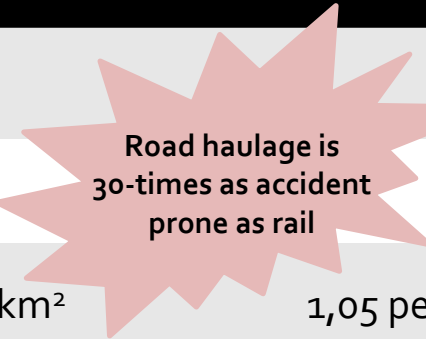


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# Safety performance comparison



Safety category	Road	Rail
Fatalities in 2009 <sup>1</sup>	35 000	34
Accident occurrences: (i) road <sup>1</sup> and (ii) rail <sup>2</sup>	1 200 000	1152
Accident occurrences: (i) HGVs, (ii) freight trains	31 per 100M vkm <sup>2</sup>	1,05 per 100M vkm <sup>3</sup>
Accident externality cost of (i) HGVs on motorways, and (ii) trains	€68 667 per 100M tkm <sup>4</sup>	€238 per 100M tkm <sup>5</sup>



<sup>1</sup> Source: EC EU transport in figures [2011]

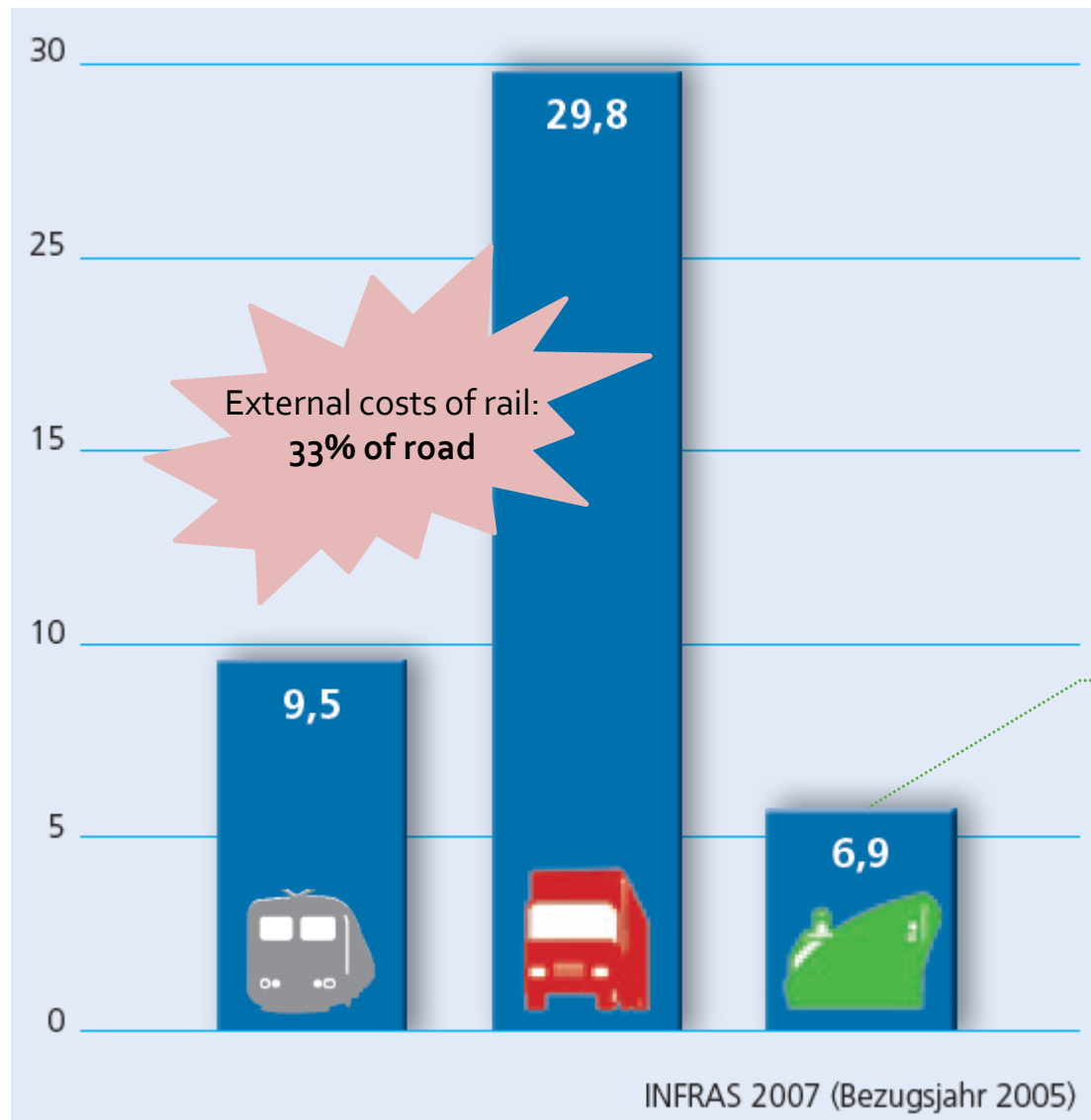
<sup>2</sup> Source: Alan C McKinnon at 2<sup>nd</sup> IRU/EU Road Transport Conference: "31 per 100M vkm" [2012]

<sup>3</sup> Source: ERA 2011 Rail Safety report figure (tkm) converted to (HGV) vkm @ 30t/vehicle rate [2011]

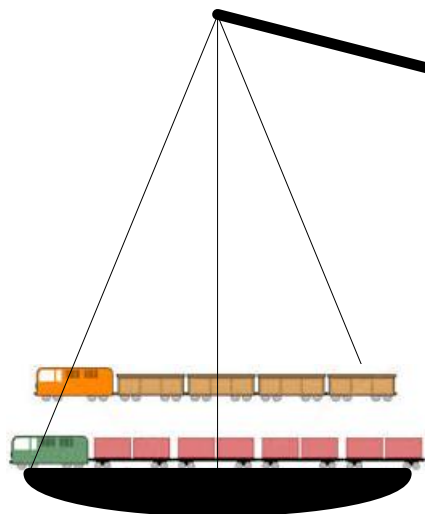
<sup>4</sup> Source: CE Delft IMPACT Study (internalisation handbook) converted into tkm @ 30t/vehicle rate [2008]

<sup>5</sup> Source: CE Delft IMPACT Study (internalisation handbook) converted into tkm @ 800t/train rate [2008]

# External costs of modes



# The relative competitive situation of modes



## "Subsidies" to rail freight:

### **(i) Track access charges:**

- based on distance travelled on the entire network

### **(ii) Internalised externalities:**

- renewable energy surcharge
- infrastructure scarcity surcharge
- railway noise



## Subsidies to trucks:

### **(i) Inadequate road tolls**

- No tolling: 6 Member States
- Time-based: 12 Member States
- Distance-based: 10 Member States charging a limited network only.

### **(ii) Non-internalised externalities**

- air- and noise-pollution, accidents, congestion, land-rent, oil-dependency
- Limited internalisation of CO<sub>2</sub> emissions and climate-change

*Two principles should be equally upheld:*

*- user-pays*

*- polluter-pays*

*The de-politicisation of transport - no more budget transfers - would be needed to make transport truly market based and competitive in a fair manner.*

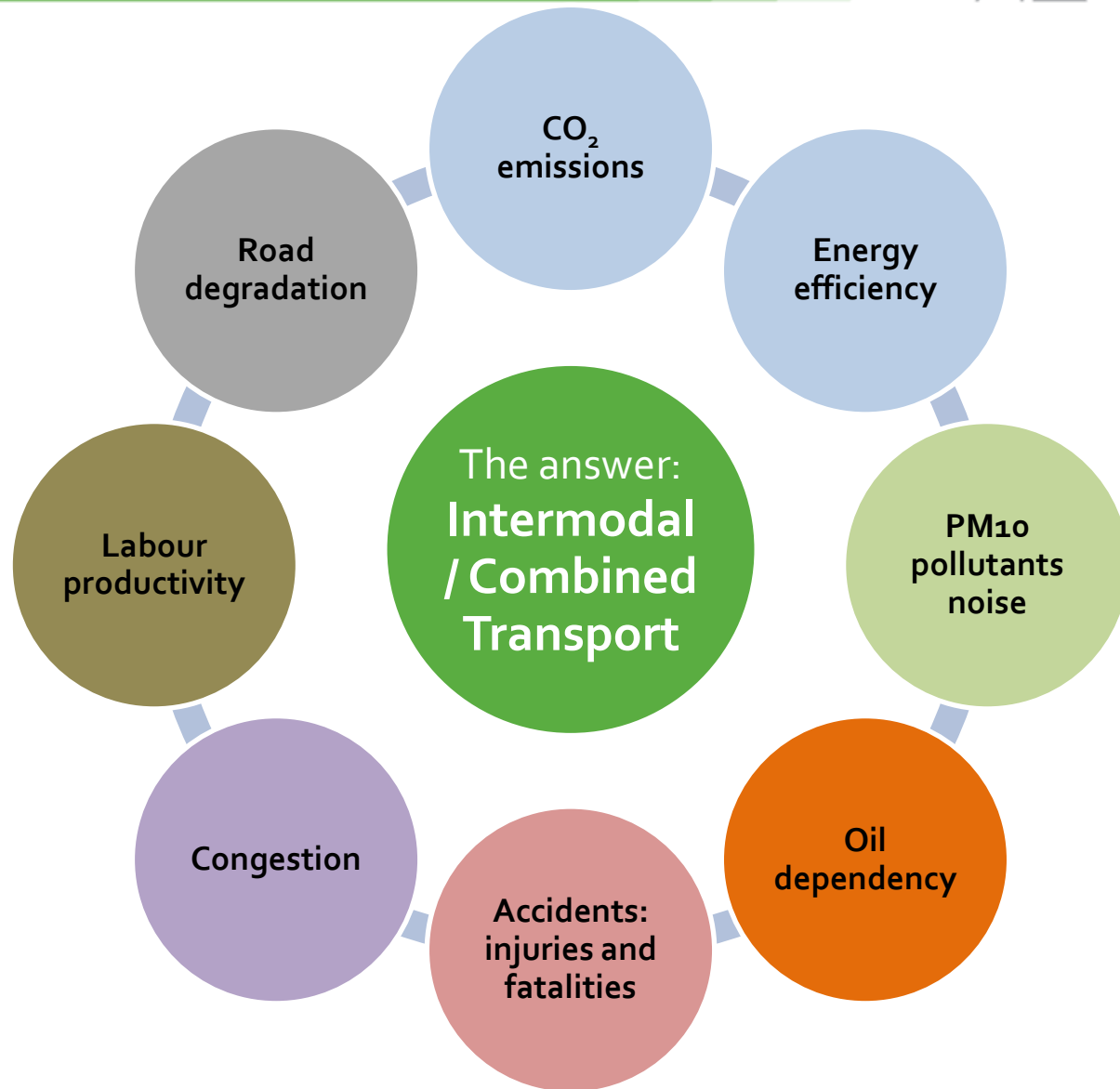


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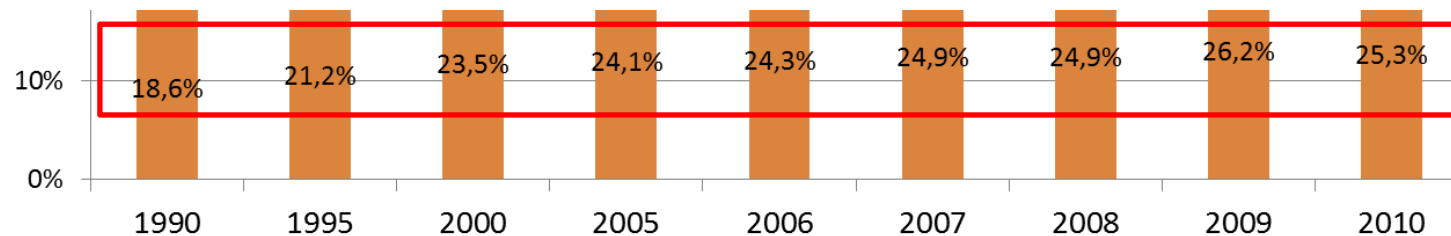
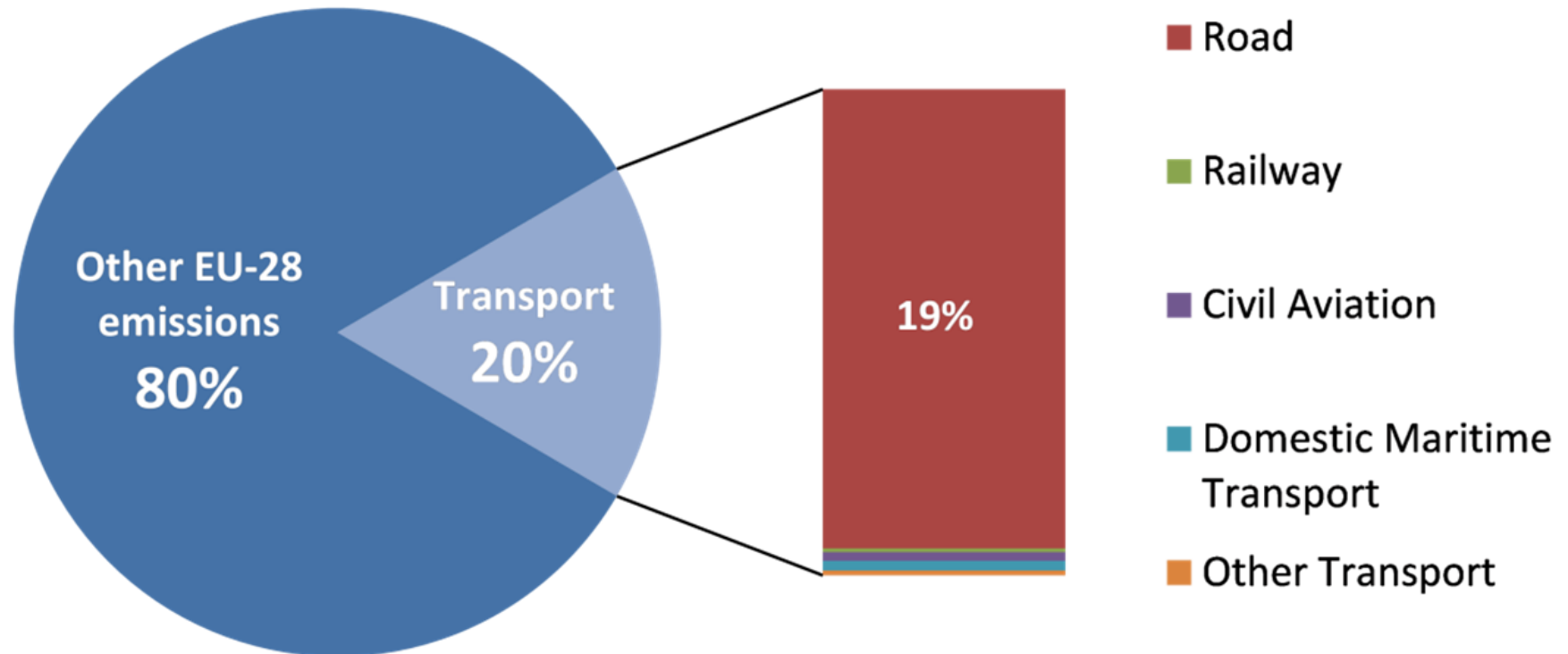
# The challenges of longer distance freight transport



- **Climate**: CO<sub>2</sub> and energy efficiency
- **Environment**: pollution
- **Public security**: oil dependency
- **Safety**: accident injuries/fatalities and material losses
- **The economy**: GDP loss due to congestion
- **Employment**: low productivity and low paying jobs
- **Infrastructure**: increased degradation



GHG-emission in EU 27 1990 - 2010



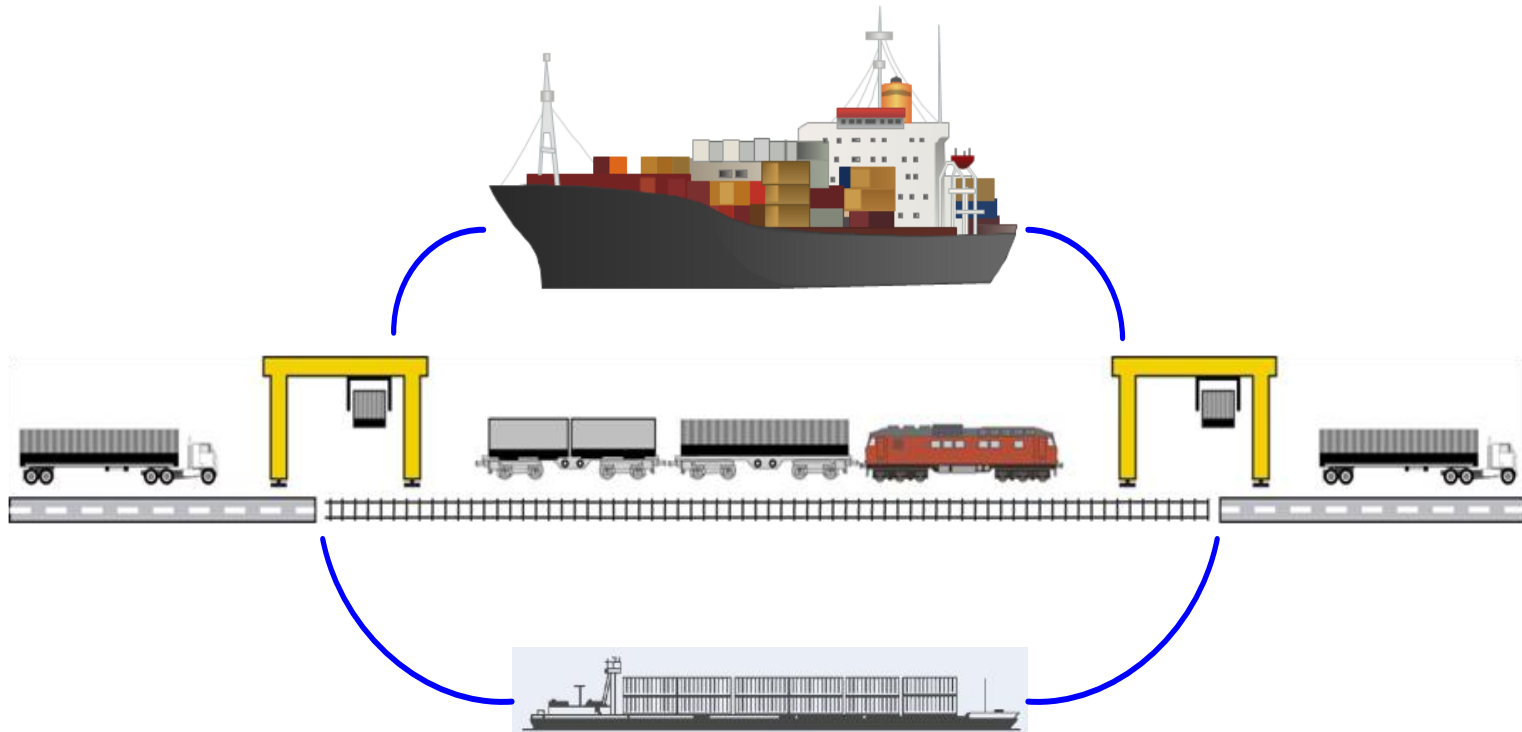


*"...the reduction of greenhouse gas emissions by the transport sector contributes to the achievement of the overall EU target in this area. This should be part of our overall effort to reinforce the sustainability of our growth model."*



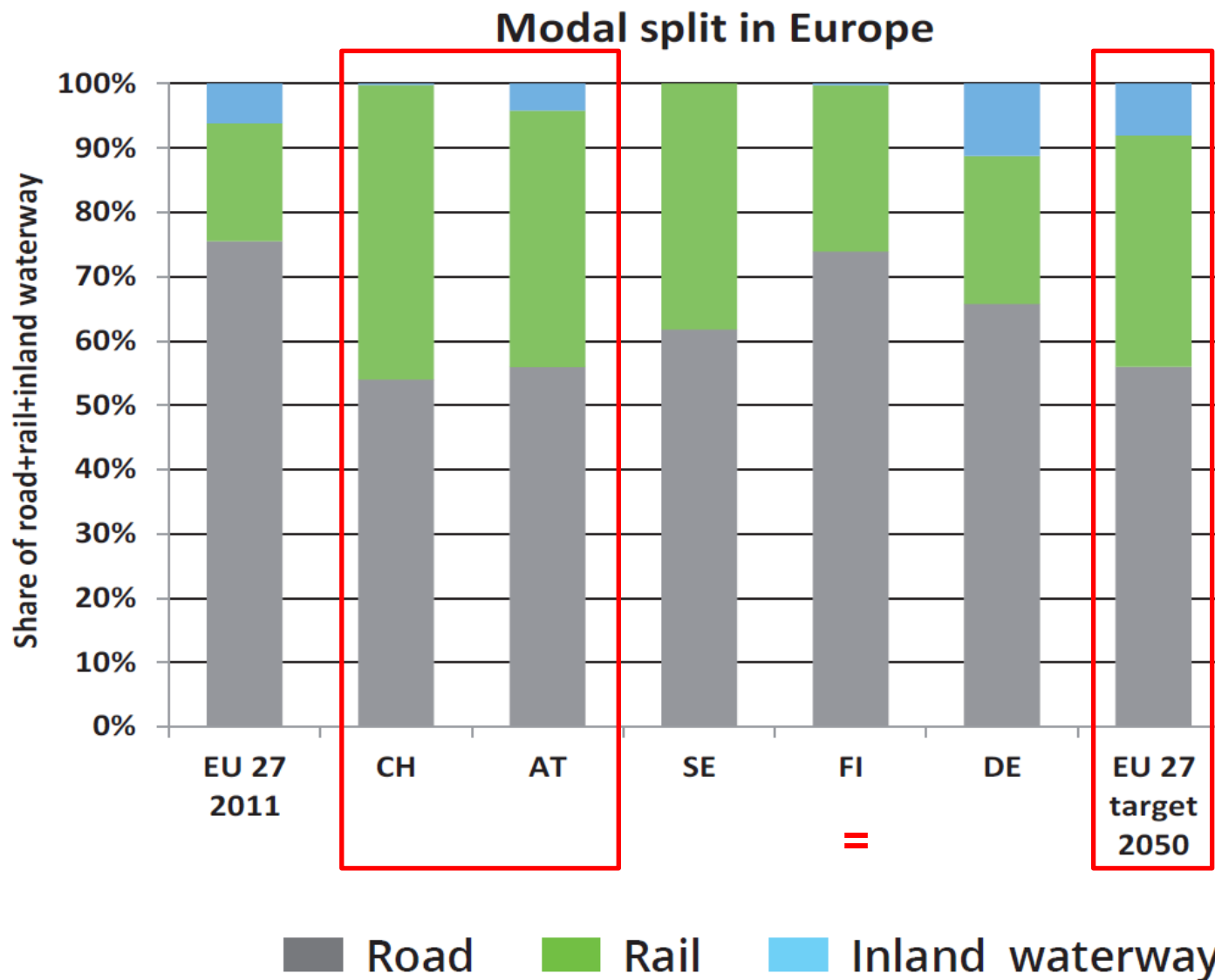
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*Shift 30% of long(er) distance road tonne-kilometres realised over distances of 300km or more by 2030 from trucks to sustainable modes of transport - (electric) rail, inland navigation and shortsea shipping - which ratio should increase to 50% by 2050\**



*\* on the basis of 2010*

# Modal split without SSS (coastal shipping)

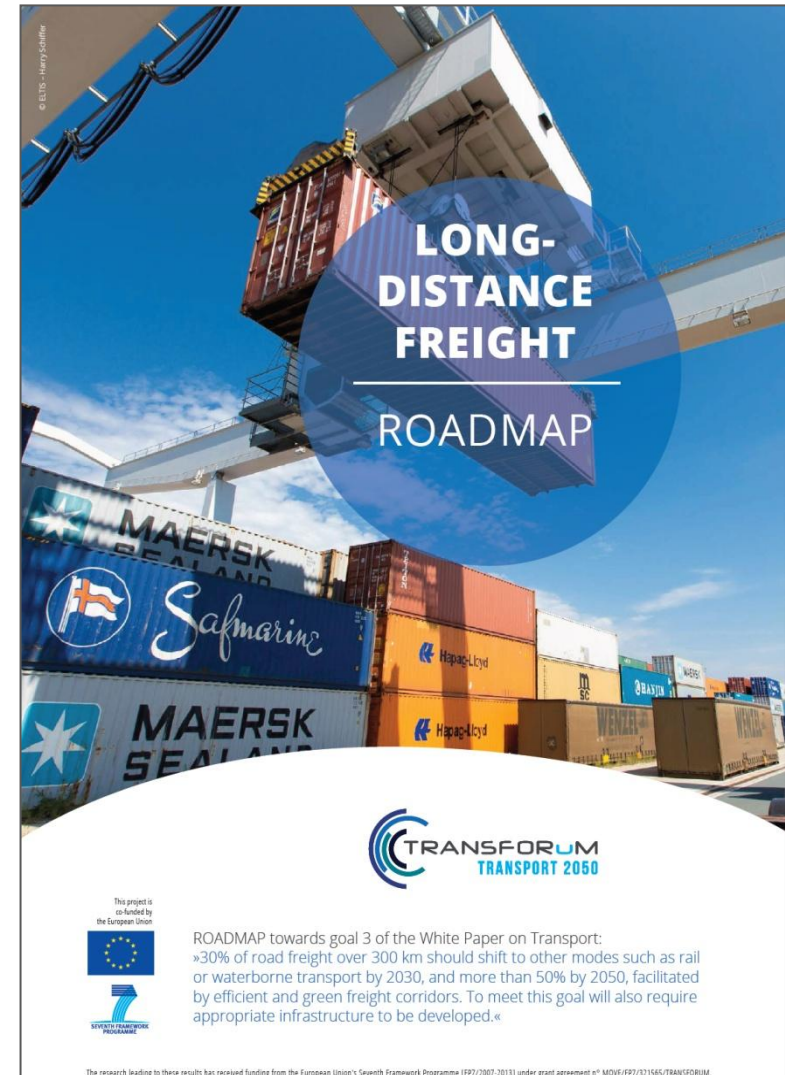


# “Achievable, even if challenging”



A study in the UK (McKinnon and Piecyk, 2010) based on a Delphi survey of 100 logistics specialists suggested that mode shift could potentially decrease roads share of the freight market by 14% (from 64% tkm to 50%) by 2050. A study by den Boer et al. (2011) deals with the shift from road to rail of freight transport in the EU to 2020. One conclusion is that there is a potential to increase the market share for rail from 18 to 31–36% and reduce GHG emissions by 19% where road and rail compete. This is roughly consistent with the modal shift target as exemplified above. Although such studies are always associated with considerable uncertainties, they seem to indicate that the goal is achievable, even if challenging.

*Source: TRANSFORuM Project Report on Long Distance Freight, June 2015*





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## *The Beauty... (?)*



## *and The Beast*



Intermodal/Combined Transport in Europe



# The key to intermodality: switch to using the "box"

25



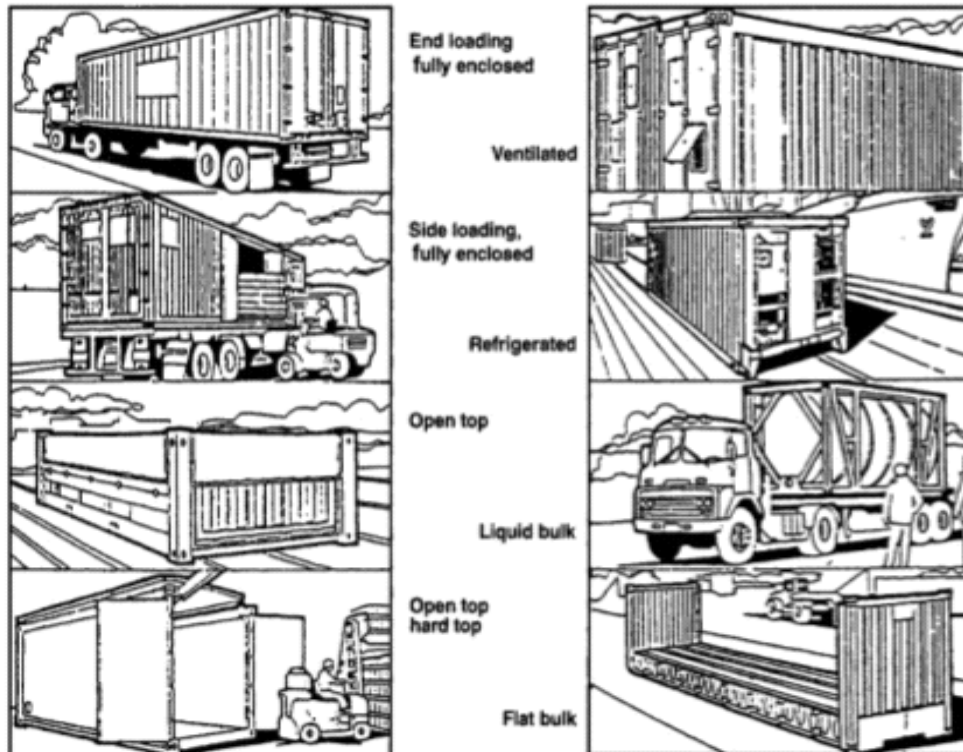
*Containerisation: the pre-requisite to unlock the benefits Combined Transport*

HIGH VALUE

OVERSIZED

DANGEROUS GOODS

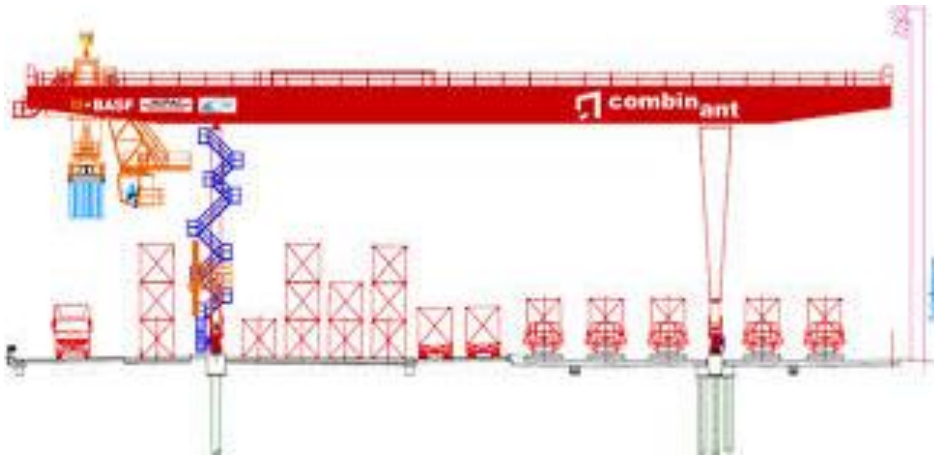
PALLETS



PERISHABLES

LIQUIDS

BULK



**Terminals** provide the connection point to the different freight transport modes that collectively perform a single transport assignment.



INTERNATIONAL UNION  
FOR ROAD-RAIL  
COMBINED TRANSPORT

# THANK YOU

For your attention

