

Presentation to the European Parliament
Brussels, November 9, 2005



The Future of Rail Freight in Europe

A perspective on the sustainability of Rail
Freight in Europe

Preamble

- This work has been commissioned by the Community of European Railways and Infrastructure Managers (CER) on behalf of its members
 - Its purpose is to provide an independent and quantified perspective on the future of the rail freight sector, particularly in context of the railroad competitive framework
 - Methodologically, this work is based upon
 - A proprietary industry-wide profitability model developed by McKinsey&Company
 - A customer choice and volume data model
 - Hypotheses on rail freight/road freight cost structure, based on McKinsey's work in the sector
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Five years after the White Paper – Real progress achieved?

Rail freight in Europe –
Still a fragile system

Rail-road competitive framework –
Critical for sector revival

Rail freight in Europe is a key pillar of the European transport sector

KEY FIGURES, 2003



	EU-15	EU-10
Share of transport	14% (242 bn tkm)	39% (122 bn tkm)
Revenue	EUR ~10 billion	EUR ~3 billion
Employment**	> 200 thousand	
Aggregate loss	EUR ~0.8 billion p.a. (EU-15)	
Major markets	<ul style="list-style-type: none"> • Heavy industry transports: e.g., coal (~70%), steel (~35%) • Port-hinterland flows: e.g., Hamburg harbor (~40%) • Selected geographies: e.g., Frejus-Brenner arc (~65%) 	

* tkm = ton-km ** As declared by railway undertaking as dedicated rail freight employees, extrapolation based on available data

Source: Websites, UIC, Annual reports, Eurostat, ARE, HHLA, team analysis

White Paper initiatives have focused on intra-modal competition

WHITE PAPER OBJECTIVES, INITIATIVES AND IMPACT

Objectives for 2020*

- Increase *share of rail freight* to 25% from 15%
- Build up *infrastructure* to enable growth
- Improve rail *competitiveness vis-à-vis road* by efficiency increase

Key initiatives for rail freight growth

- *Opening* of rail freight markets
- Align national rail *safety regulations*
- Increase *interoperability*
 - *Locomotives*
 - *Infrastructure*
- Provide *dedicated freight corridors*
- Revise *road infrastructure charges*
- Reinforce *social/safety regulations* in road sector

Impact in 2005

- Market opening (will be completed in 2006/07) ✓
- Regulatory agency established (✓)
- Available at much higher cost ✓
- In pilot stage, but financing issues ✗
- Financing unclear ✗
- Only in some countries, no clear EU policy ?
- Limited implementation/control schemes ✗

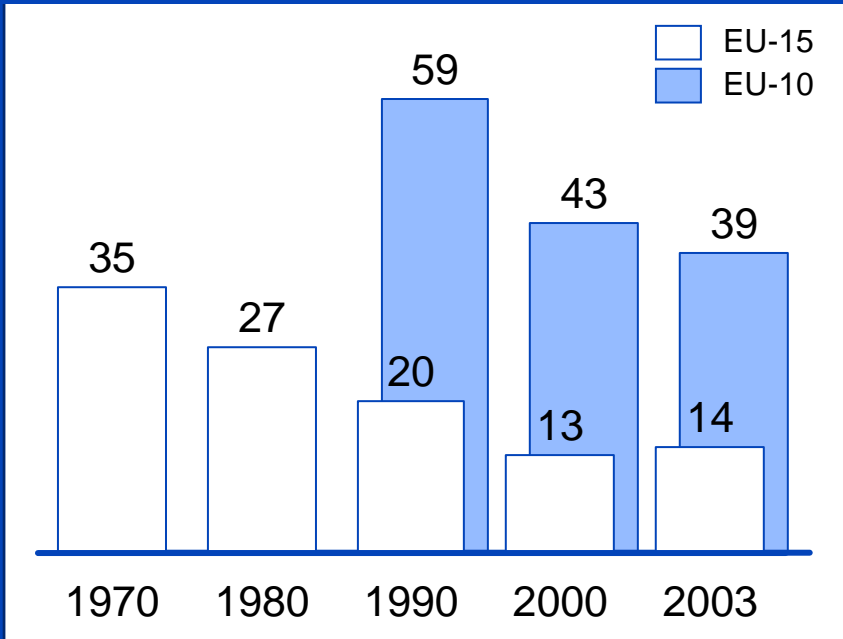
* Based on joint statement by UIR, CER, IUPT, UNIFE

Source: EU Commission, press clippings

Rail freight market share in EU-15 has stabilized – but further decline is likely in EU-10

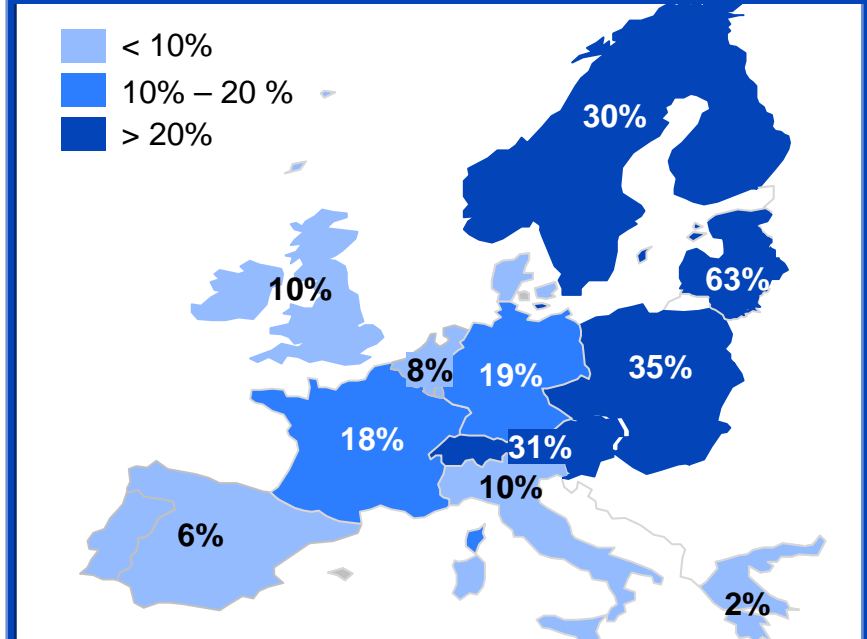
SHARE OF RAIL FREIGHT IN THE EUROPEAN SURFACE TRANSPORT*
Percent

Historical evolution



- Historical downward trend since the 1970s (EU-15)/1990s (EU-10)
- EU-15: Downward trend stopped
- EU-10: Downward trend slowed

Geographical profile, 2003



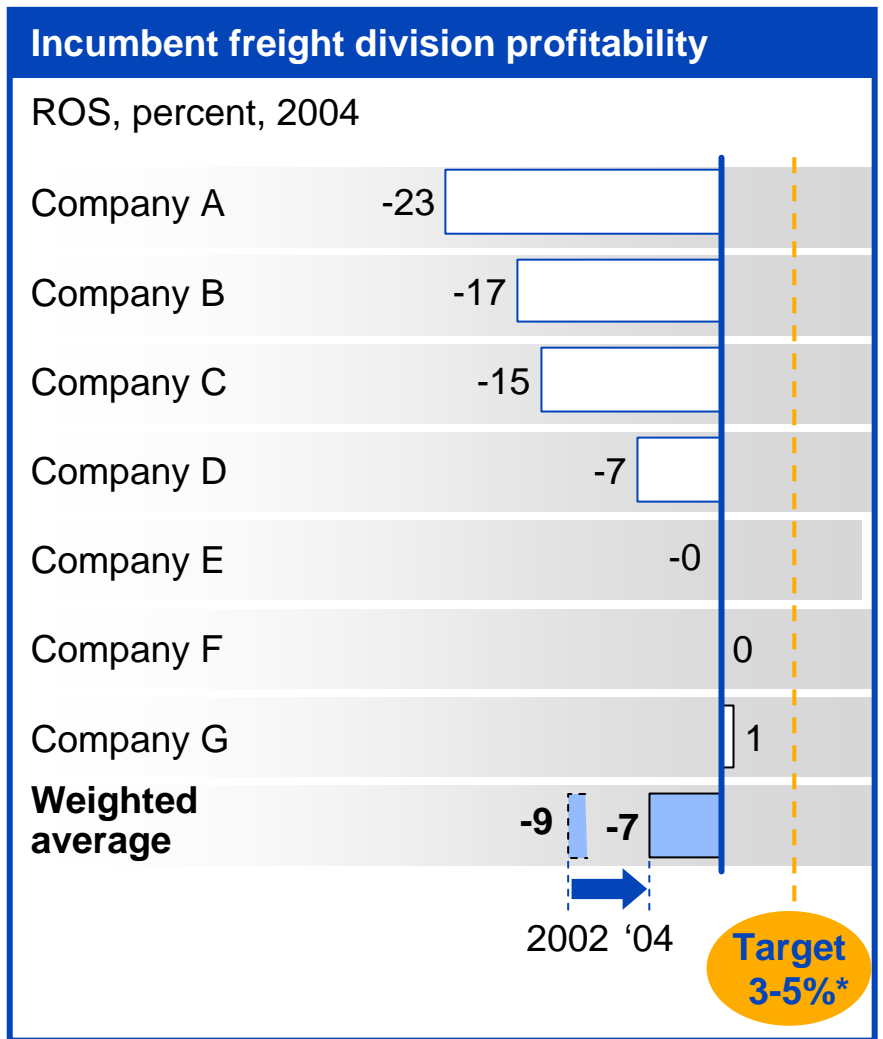
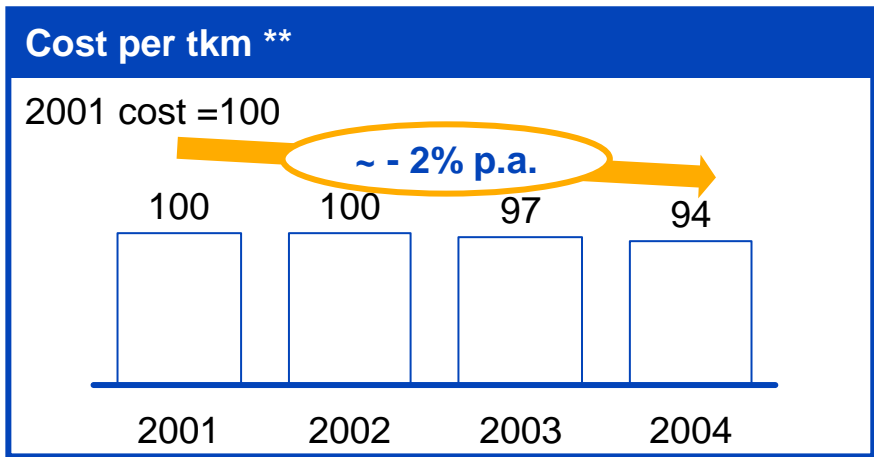
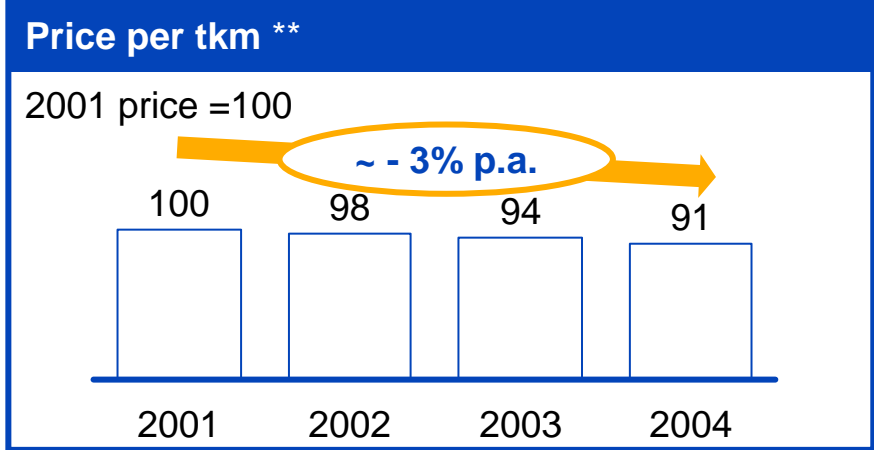
- Central/Eastern countries with >15% market share (DE, F, CH, AT, PL, CZ, SE)
- Peripheral countries with substantially lower market share (UK, ES, IT, GR)

* Includes rail, road and inland waterways excludes pipelines and short sea shipping

Source: EU Commission, Eurostat 2003

Incumbents financial situation remains fragile due to price/cost squeeze

EFFECTS OF RAIL LIBERALIZATION



* Required to earn weighted average cost of capital

** Based on DB, SNCF, Green Cargo and SBB, SNCF and SBB figures were adjusted for non freight, corrected for inflation

Source: UIC, annual reports, press clippings, company websites, team analysis

Content



Five years after the White Paper –
Real progress achieved?

**Rail freight in Europe –
Still a fragile system**

Rail-road competitive framework –
Critical for sector revival

Liberalization has been successful, with strong intra-modal competition emerging

NEW ENTRANTS SEGMENTS AND THEIR SUCCESS

Business models of new entrants

Large customer backed



- Focus on price cuts/quality
- Not exclusively focused on rail profit

Incumbent backed



- International growth
- Primarily volume game
- Direct price competition

County/city backed



- Provide feeding for local region
- Focus on service

Private ownership

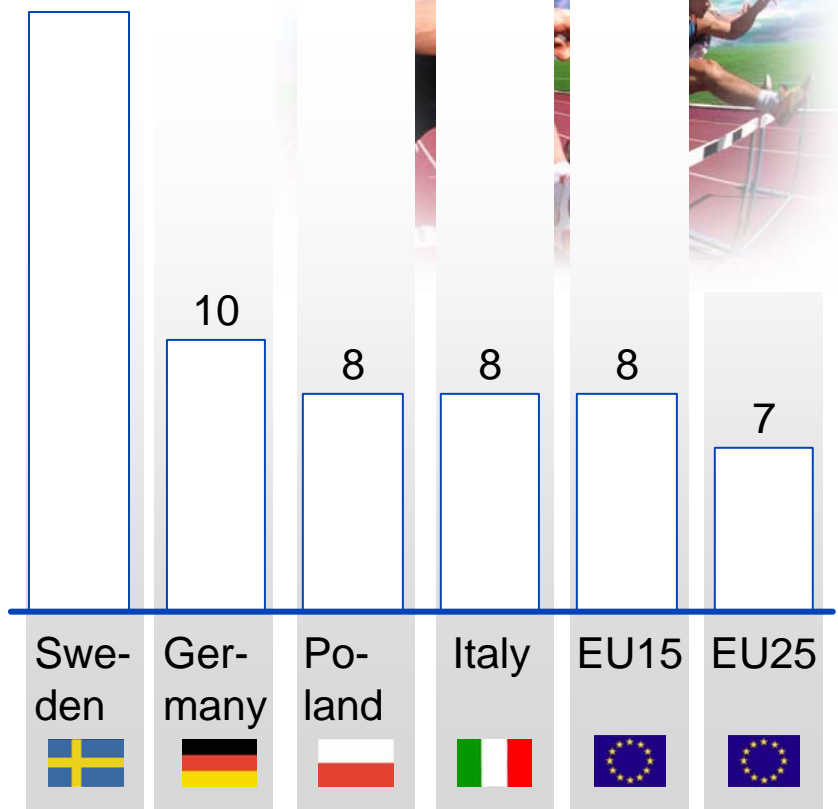


- Focus on most profitable pockets of business

Shares of new entrants




Percent of tkm, 2004

20-24



New entrants focus on the attractive Full Train business

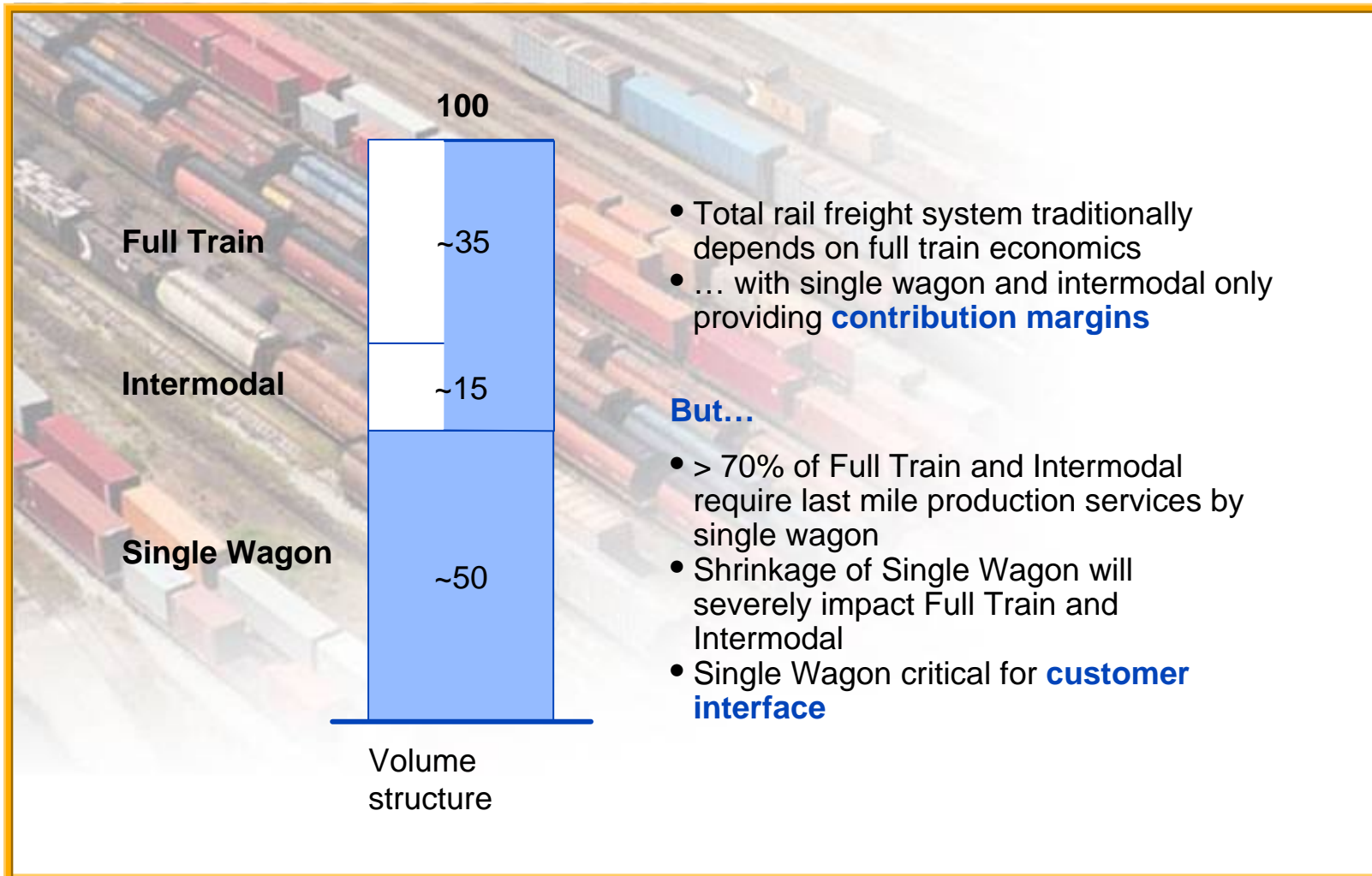
RAIL FREIGHT SEGMENTS

<u>Segments</u>	<u>Commodities</u>	<u>Share of volume</u>	<u>Competitive environment</u>
Full Train 	Coal, Steel Construction materials	~ 35%	<ul style="list-style-type: none"> • Traditionally barge competition • Focus of intra-modal rail competition • Price decline
Single Wagon 	Chemicals Vehicles and machinery	~ 50%	<ul style="list-style-type: none"> • Focus of road competition • Complex production process, high barriers to entry
Intermodal 	Finished goods Containerized goods	~ 15%	<ul style="list-style-type: none"> • Strong road competition • Subsidized in several geographies

Both Full Train and Intermodal require “last-mile” services by Single Wagon

Shared production system

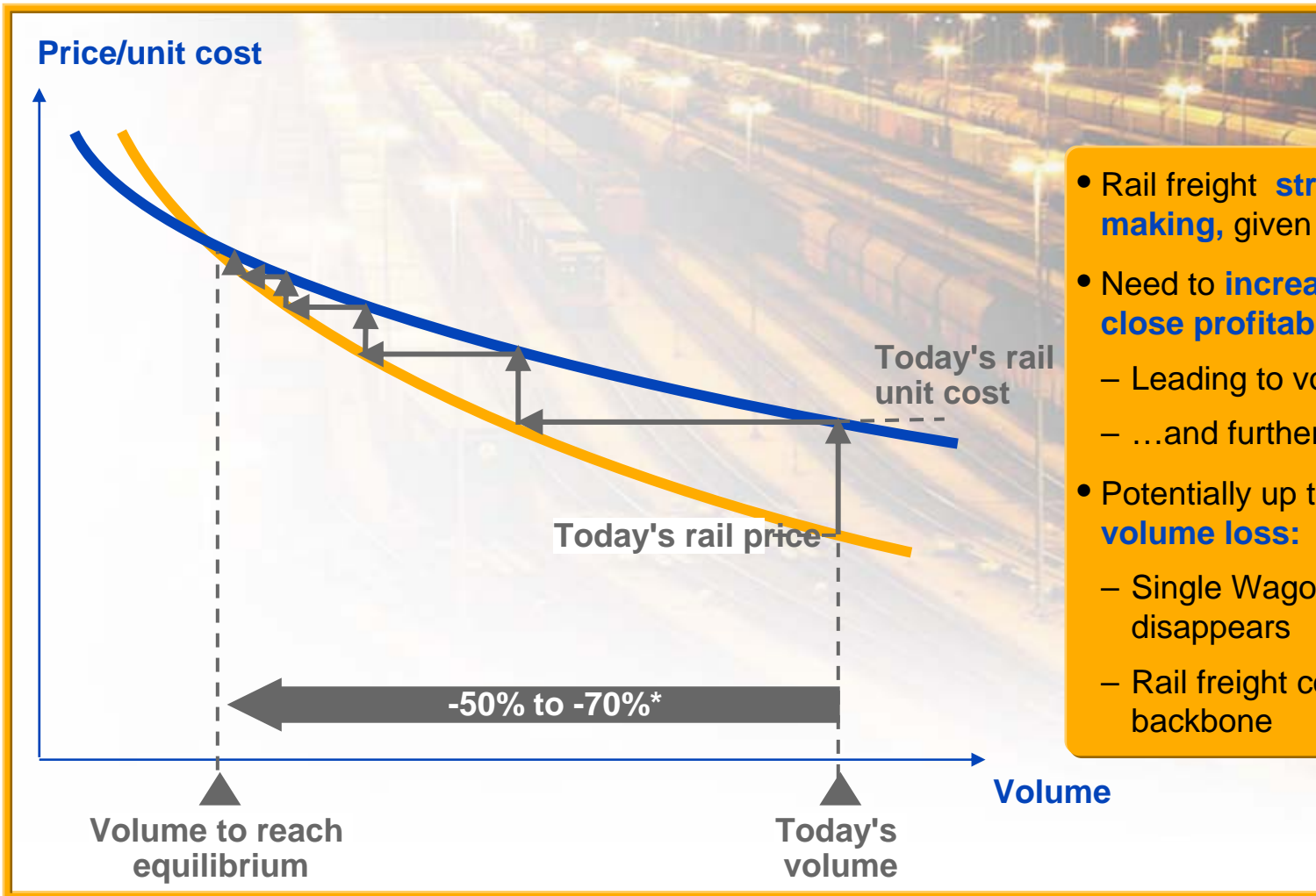
LINKS RAIL FREIGHT SEGMENTS



Rail freight cannot sustain its broad regional coverage under current conditions

RAIL FREIGHT INDUSTRY COST AND DEMAND CURVES – TODAY

— Rail cost curve
— Rail freight demand curve (at road prices)



- Rail freight **structurally loss making**, given fixed cost
- Need to **increase prices to close profitability gap**...
 - Leading to volume losses ...
 - ...and further price increases
- Potentially up to **50 - 70%* volume loss**:
 - Single Wagon load largely disappears
 - Rail freight consolidates into backbone

* 120 to 170 billion ton-km in EU-15; implies 35 to 50 thousand additional trucks on EU-15 roads

Source: EuroSimu, McKinsey analysis

Content

The background of the slide is a composite image. On the left, there is a white truck with a tall exhaust stack. In the center and right, there is a map of Europe. Overlaid on the map is a train engine, with the number '09 132-3' visible on its side. The overall theme is transportation and infrastructure.

Five years after the White Paper –
Real progress achieved?

Rail freight in Europe –
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**Rail-road competitive framework –
Critical for sector revival**

Rail freight incumbents engaging in substantial restructuring efforts

RESTRUCTURING PROGRAMS IN RAIL FREIGHT

Percentage increase in tkm/employee



Restructuring effort by national railways

- Most railways are in the process of heavy restructuring
 - Different starting points
 - Different pace
- Front runners with 30% productivity increase over the last 5 - 10 years
- Key areas
 - Network restructuring
 - Asset utilization
 - Personnel productivity

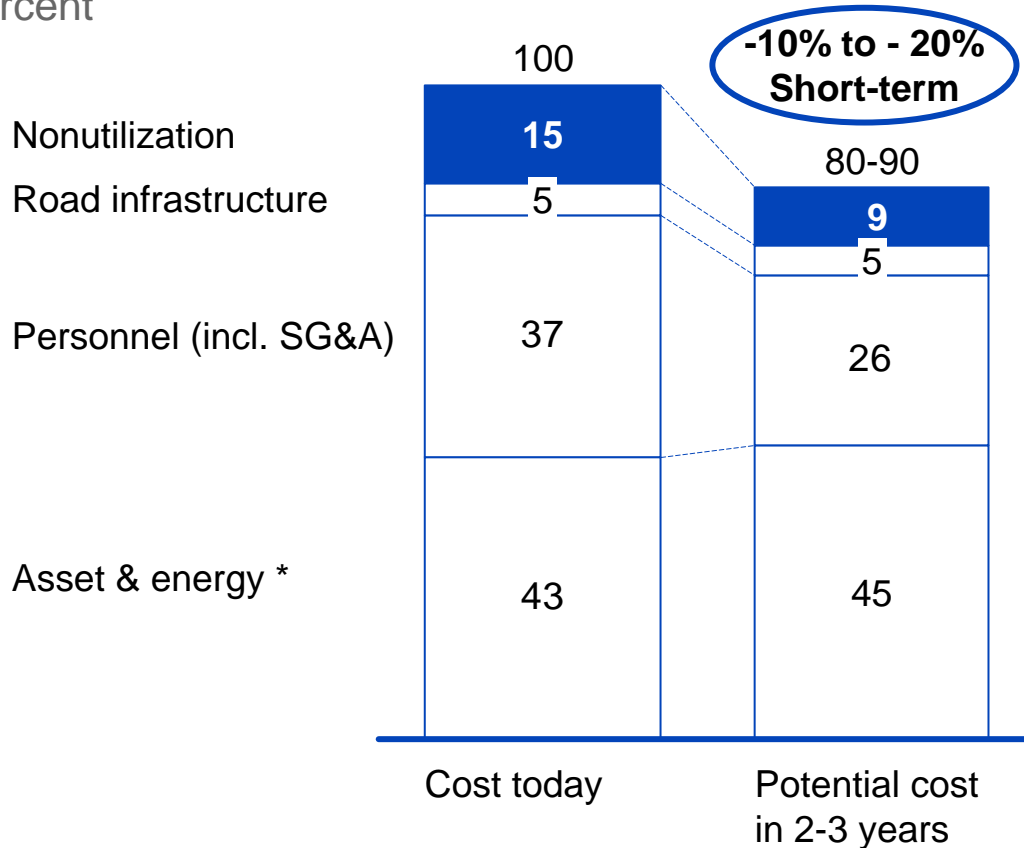
* EU-15

Source: McKinsey

Road can still mobilize cost reduction potential *short-term* – rail rather *mid-term*

COST RESERVES FOR ROAD

Percent



Key levers

- Penetration of East European labor
- Higher utilization (return loads, etc.)

Observations:

- Road still has short-term cost reduction potential (~ 10 - 20%)
- Rail has mid-term cost reduction potential (~ 20 - 30%)
- Railways struggle to mobilize these reserves short-term, because of:
 - Long-life assets
 - Labor regulations/ social constraints
 - More complex network
 - Higher infrastructure costs (incl. ETCS, GSM-R)

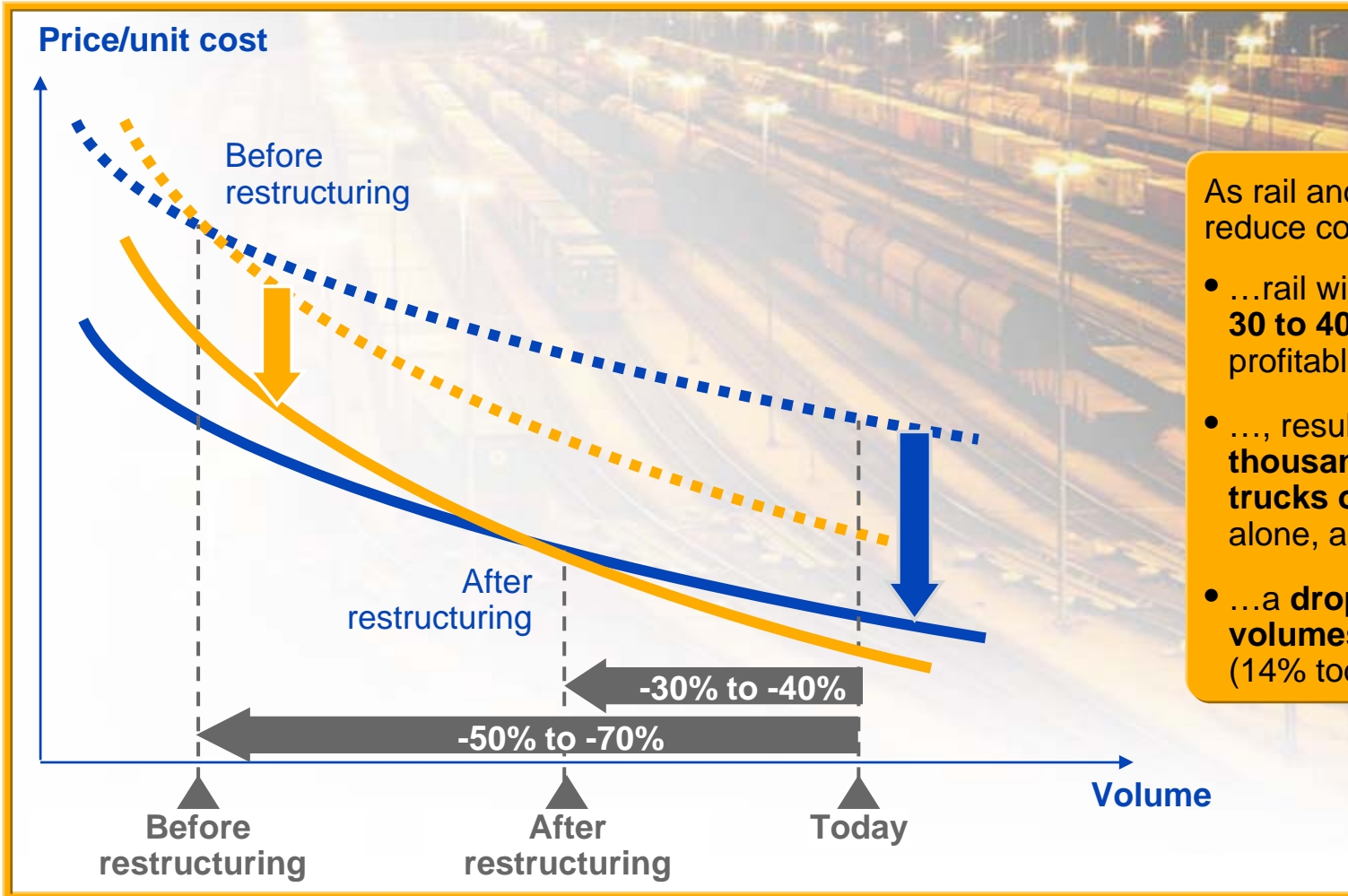
* Assumes no change in diesel taxes but annual fuel price increases of 2 to 3% above general inflation

Source: Interviews; McKinsey, Broker reports, Eurostat, SES, Press

Even after restructuring, railfreight would still decline

RAIL/ROAD INDUSTRY COST AND DEMAND CURVES – SCENARIOS I

— Rail cost curve
— Rail freight demand curve (at road price)

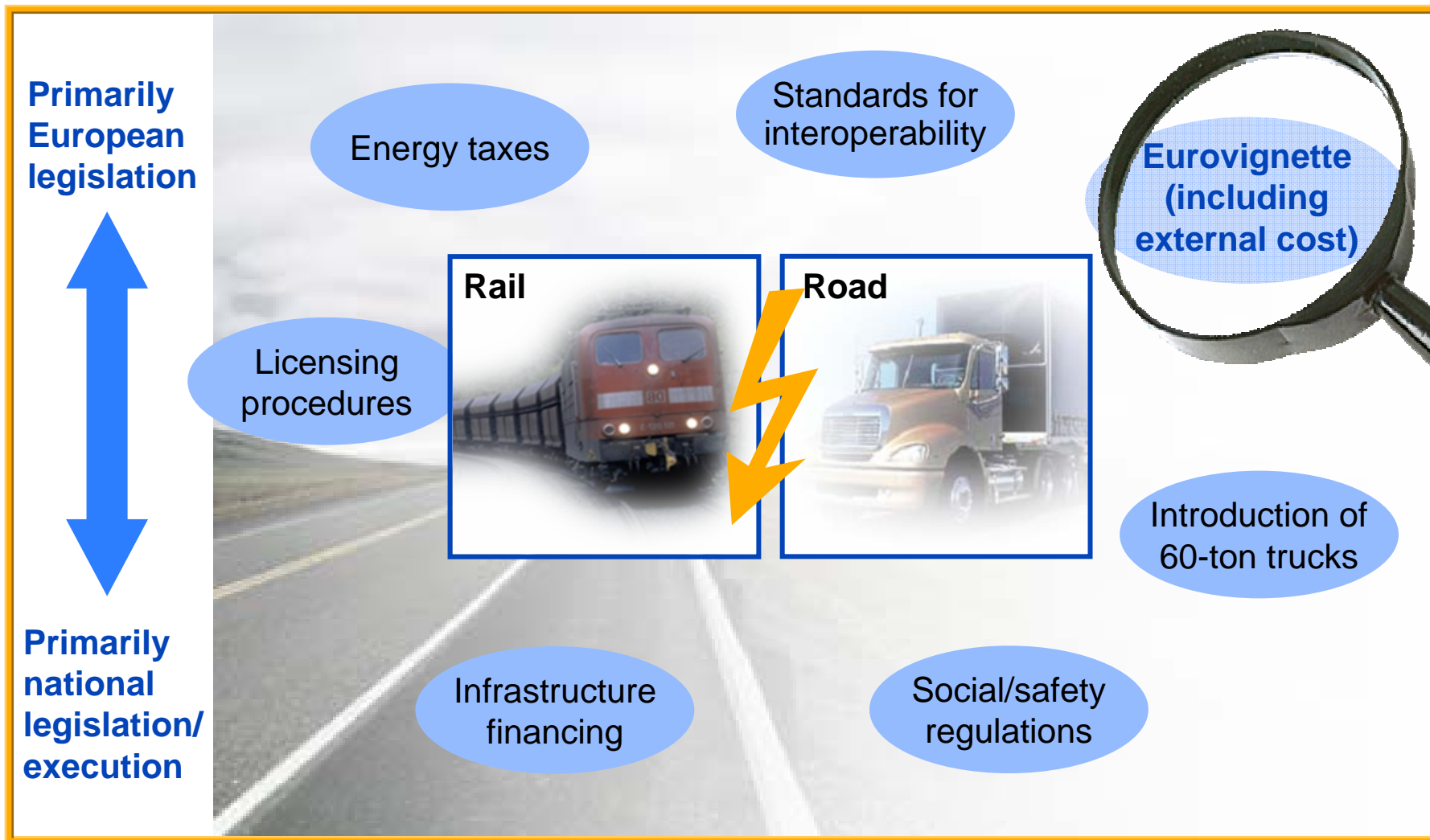


As rail and road continue to reduce cost...

- ...rail will still **lose about 30 to 40%** before being profitable, ...
- ..., resulting in **20 to 30 thousand additional trucks on roads** in EU-15 alone, and...
- ...a **drop in share of volumes to ~9%** (14% today)

Eurovignette/road fees are a critical lever within the regulatory framework

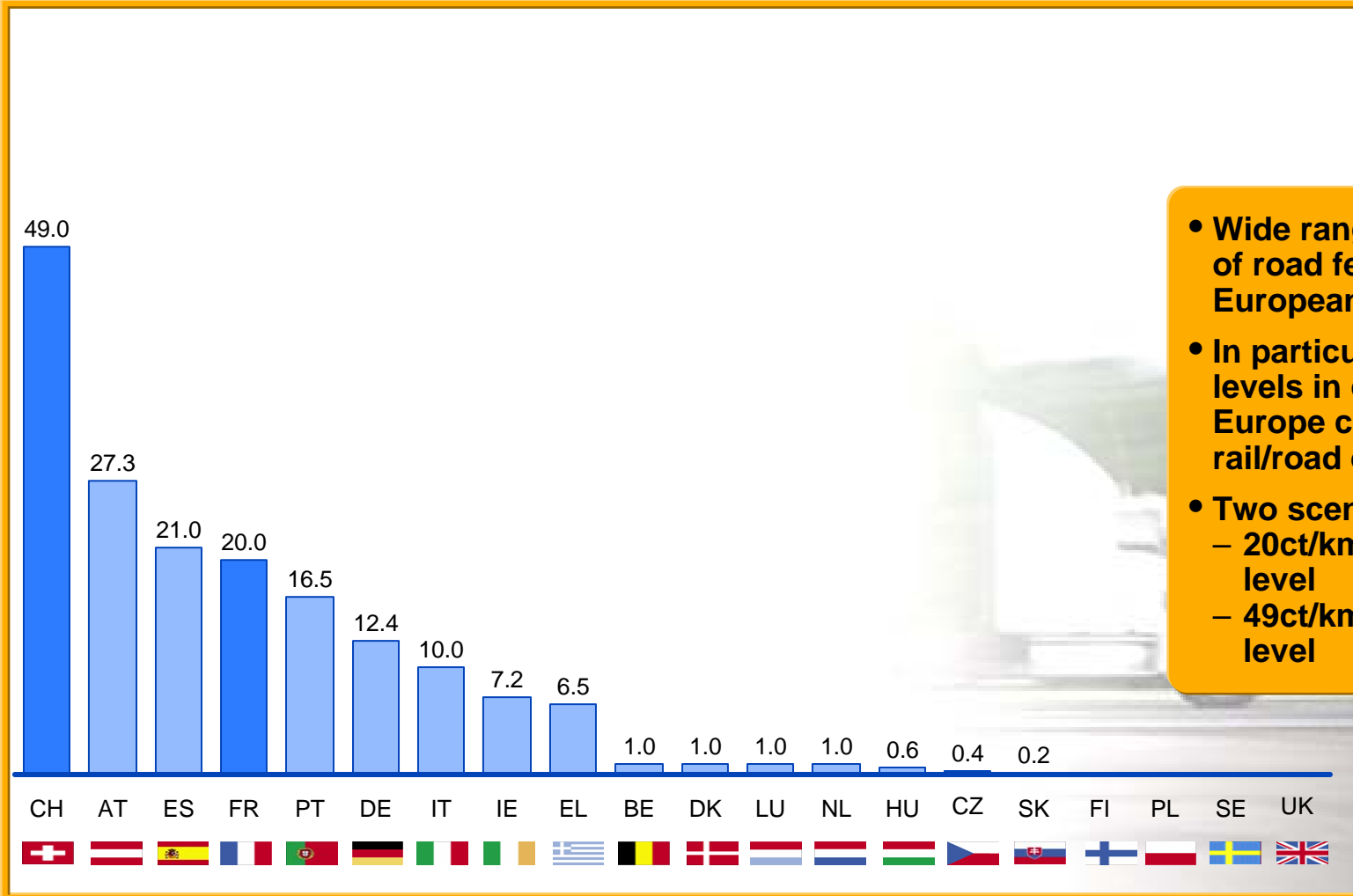
REGULATORY ENVIRONMENT RAIL/ROAD



A wide disparity of road fees across Europe

ROAD FEE LEVEL ACROSS EU-25

ct/km



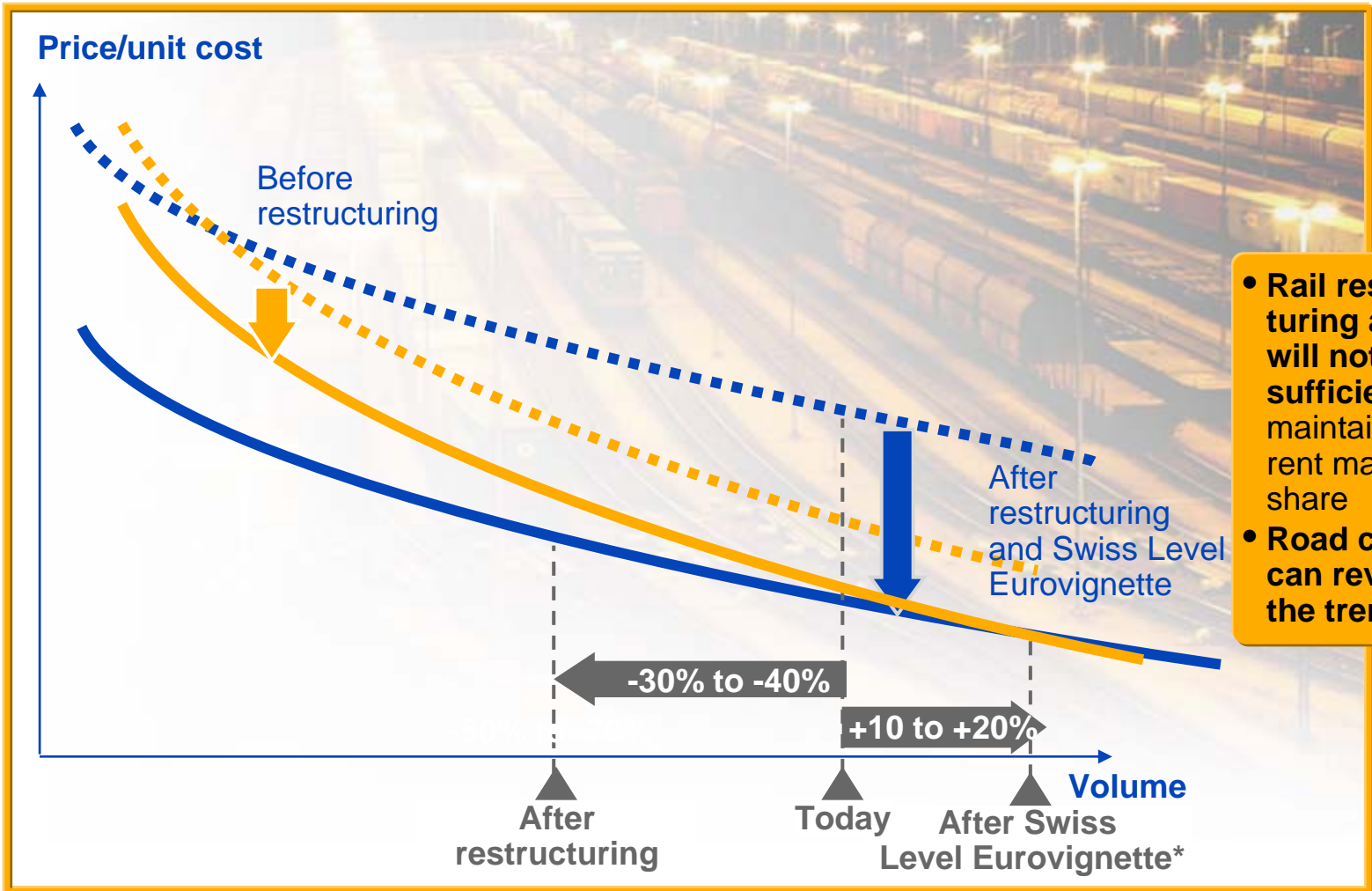
- Wide range of road fees across European Union
- In particular road tax levels in central Europe crucial for rail/road equilibrium
- Two scenarios
 - 20ct/km – France level
 - 49ct/km – Swiss level

Source: Arbö, Autoroutes de France, ARE, ASETA, AKE, Oasis, EIU, SITA, Eurostat, ECMT, FEB

Road fees at Swiss level may sustain today's market share

RAIL/ROAD INDUSTRY COST AND DEMAND CURVES – SCENARIOS II

— Rail cost curve
 — Rail freight demand curve (at road prices)

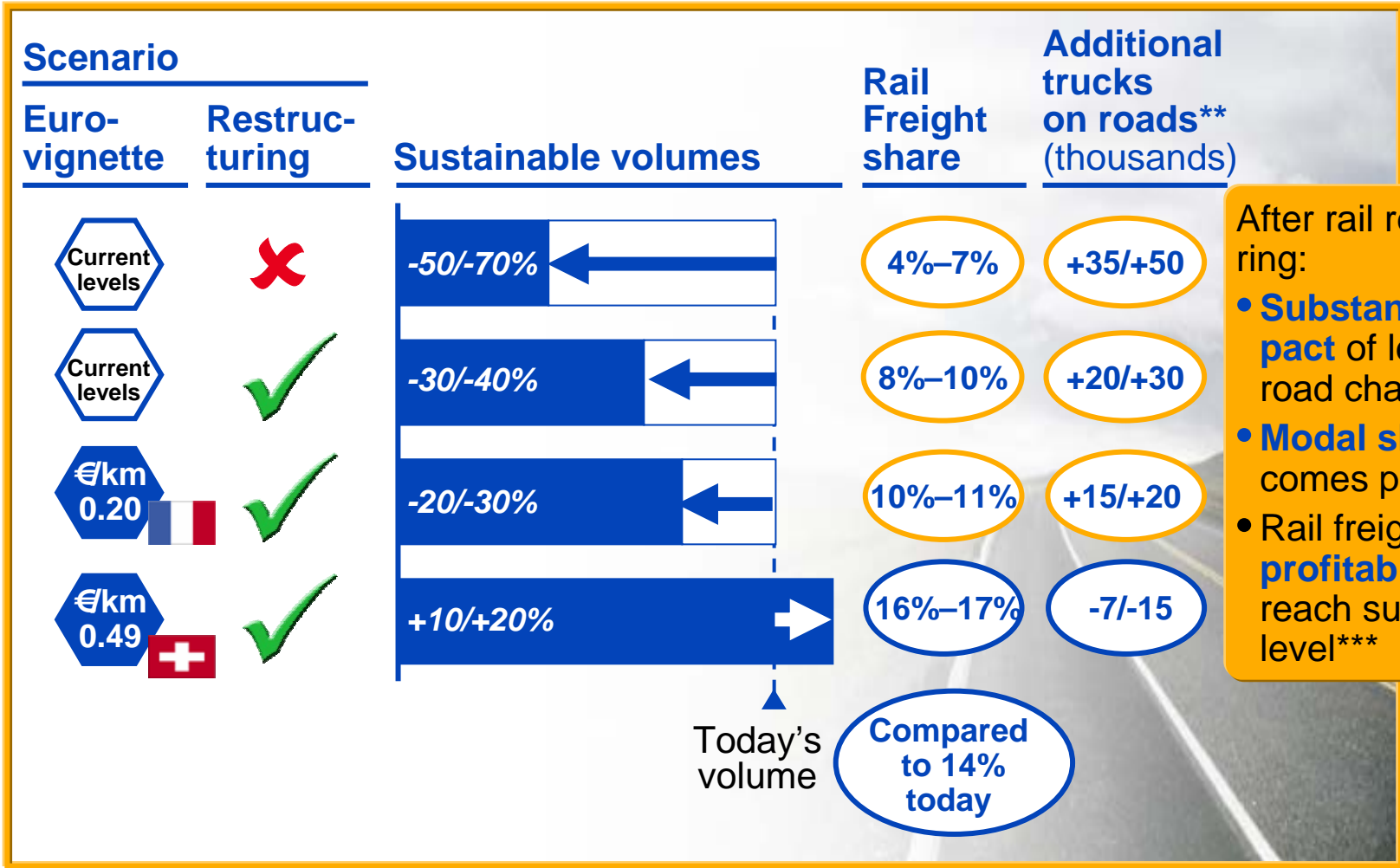


- Rail restructuring alone will not be sufficient to maintain current market share
- Road charges can reverse the trend

* Assuming 60% usage of paying highways on average
 Source: EuroSimu, McKinsey analysis

Adoption of Swiss level road charge will have significant impact on sustainable rail volumes

VOLUME ESTIMATES FOR SELECTED SCENARIOS IN EU-15



After rail restructuring:

- Substantial impact of level of road charges
- Modal shift becomes possible
- Rail freight sector profitability could reach sustainable level***

* Assumes continuation of subsidization for intermodal operations

** Additional 40t trucks, assuming 90% utilization and 125,000 km distance/year

*** Around 3 – 5 % ROS

In conclusion ...

In spite of serious progress after liberalization, the road-competitive part of rail freight is under severe pressure. This may put much of the system at risk.

Under the pressure of market opening, rail freight is restructuring – but even if fully successful, substantial volumes will be lost (30% to 40%).

A large degree of freedom for road tolls would enable Member states to create conditions for modal shift.
