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 FEROVIAR

- Railway and multimodal transport business consultancy services
- Railway Business Club networking business-matchmaking
- Institutional & governmental Lobby cross-media communication
1. About CLUB FEROVIAR

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

Note: a – One FEU-kilometer represents a 40-foot ocean container transported one kilometer. A "laden FEU" is carrying revenue-generating traffic.

Total flows shown: 497
2. Global trends in manufacturing and trade
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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

3. The social and economic costs of transport

Transport generates around \(\frac{1}{4}\) 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)

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3. The social and economic costs of transport

Rail only accounts for 0.6% for diesel emissions and for less than 2% including emissions for electricity production.

More than 90% of total domestic transport emissions are due to road transport.
3. The social and economic costs of transport

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

Freight transport – CO2 comparison total CO2 produced during the transport of 100 tonnes of freight from Basel to the port of Rotterdam.

<table>
<thead>
<tr>
<th>Mode</th>
<th>CO₂ (tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Road</td>
<td>4.7</td>
</tr>
<tr>
<td>Inland waterway</td>
<td>2.4</td>
</tr>
<tr>
<td>Rail</td>
<td>0.6</td>
</tr>
</tbody>
</table>

Source: Ecological Transport Information Tool (EcoTransIT) 2008
3. The social and economic costs of transport

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

<table>
<thead>
<tr>
<th>Mode</th>
<th>NOx</th>
<th>PM₁₀</th>
</tr>
</thead>
<tbody>
<tr>
<td>Car</td>
<td>369</td>
<td></td>
</tr>
<tr>
<td>Train</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Plane</td>
<td>283</td>
<td></td>
</tr>
</tbody>
</table>

Source: www.ecopassenger.org 2008
3. The social and economic costs of 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: Rail Transport and Environment, Facts & Figures, CER, UIC)

Percentage of citizens who are ‘highly disturbed’ when exposed to night-time noise emissions from transport.
3. The social and economic costs of transport

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

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**.
3. The social and economic costs of transport

Rail land requirements are smaller than highway requirements.
### 3. The social and economic costs of transport

<table>
<thead>
<tr>
<th>Mode</th>
<th>Fuel Consumption</th>
<th>Infrastructure Capacity</th>
<th>Cost (to users)</th>
<th>Safety</th>
</tr>
</thead>
<tbody>
<tr>
<td>Railways</td>
<td>0.51 litres per 100 ton-km</td>
<td>216 million annual tons per mainline</td>
<td>1.68 USD cents per ton-km</td>
<td>0.38 fatalities per billion ton-km; 7.75 incidents per billion ton-km</td>
</tr>
<tr>
<td>Roads</td>
<td>3.6 litres per 100 ton-km</td>
<td>37.8 million annual tons per lane</td>
<td>3.12 USD cents per ton-km</td>
<td>0.90 fatalities per billion ton-km; 22.5 injuries per billion ton-km</td>
</tr>
</tbody>
</table>

4. The place of railways on public agenda


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

4. The place of railways on public agenda

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

4. The place of railways on public agenda

Freight transport by truck and rail. 2005


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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

![Bar Chart: Rail freight 2008 & 2009 (billion ton-km)]

4. The place of railways on public agenda

Frequency of journeys by rail

- Most days: 77
- 1-3 times per week: 14
- 1-3 times per month: 4
- Less than once a month: 4
- DK/NA: 15

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

Most frequent purpose of journeys by rail

- Leisure: 0
- Business trips: 21
- Travelling to work/school/university: 11
- Other: 12
- DK/NA: 56

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.

Thank you for attention!

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