

Leading on the north-south axis

Quality in motion

Challenges of the railway sector in corridor A



Agenda

International, Intermodal, Interoperable,

1 Introduction to SBB Cargo International

2 Interoperability

- The world is networked



3 Intermodal market challenges from the point of view of the railway

- Sustainability
- Market Environment Europe
- Corridor A
- Currency



4 International solutions

- GBT
- Stable train path pricing



5 Summary

SBB Cargo International

In figures

Year founded: 2010

Share capital: CHF 25 Mio.

Shareholders: SBB Cargo AG (75%)
Hupac AG (25%)

Headquarters: Olten, Switzerland

Subsidiaries: SBB Cargo Deutschland GmbH
SBB Cargo Italia S.r.l.

Employees: ca. 670

2014 Revenues: CHF 275 Mio.

Locomotives: 115

Traffic capacity: 9,0 BIL net-tonne kilometres

Market share (2014): 30 % market share of
transalpine rail freight



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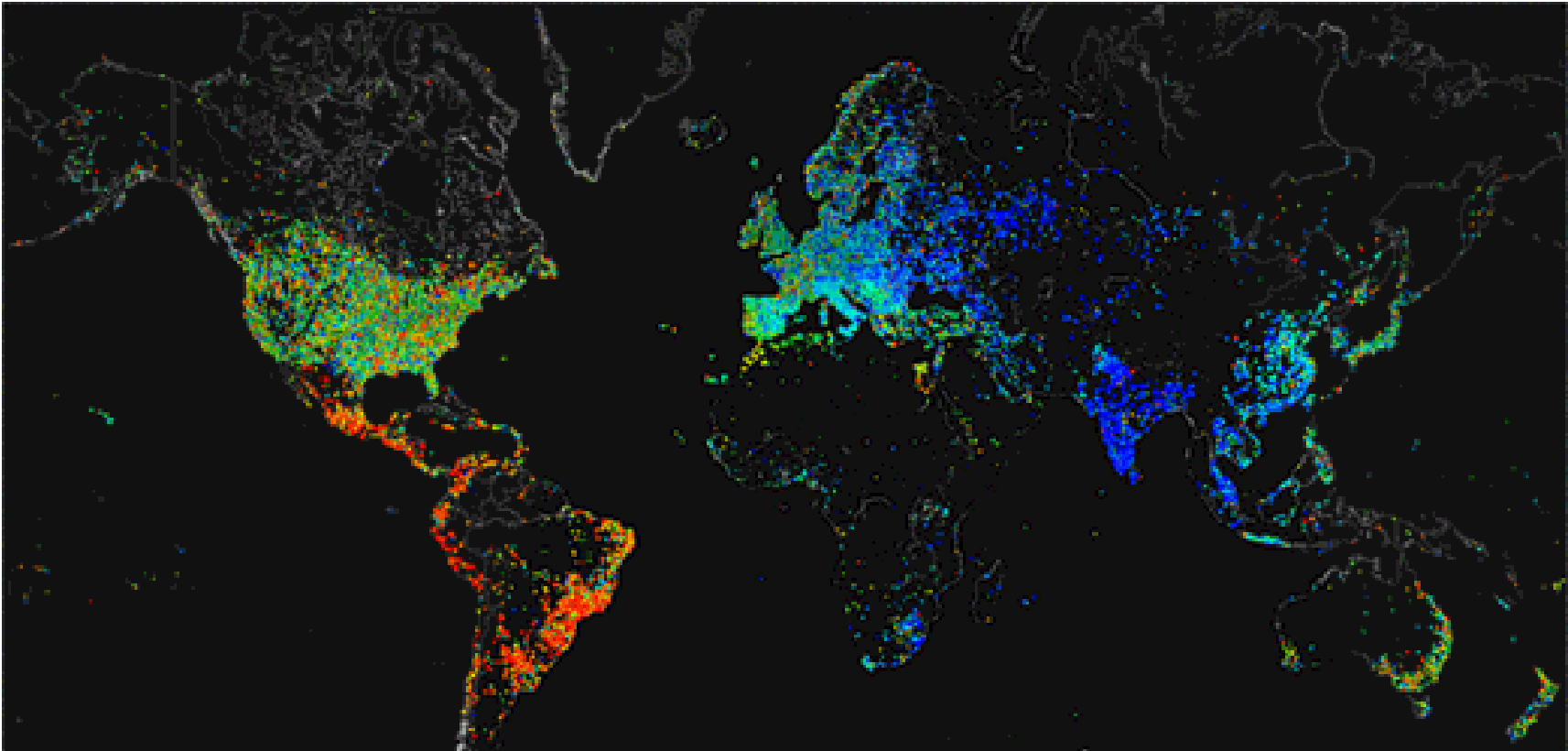
- Italy: Agente Solo (single agent) - for a better competition
- GBT
- Stable train path pricing



5 Summary

Interoperability I

Global communication: 50% of the people are connected via Internet



Findings:

1. The world is getting smaller
2. 460 million IP addresses work / communicate networked
3. The information exchange is done in real time

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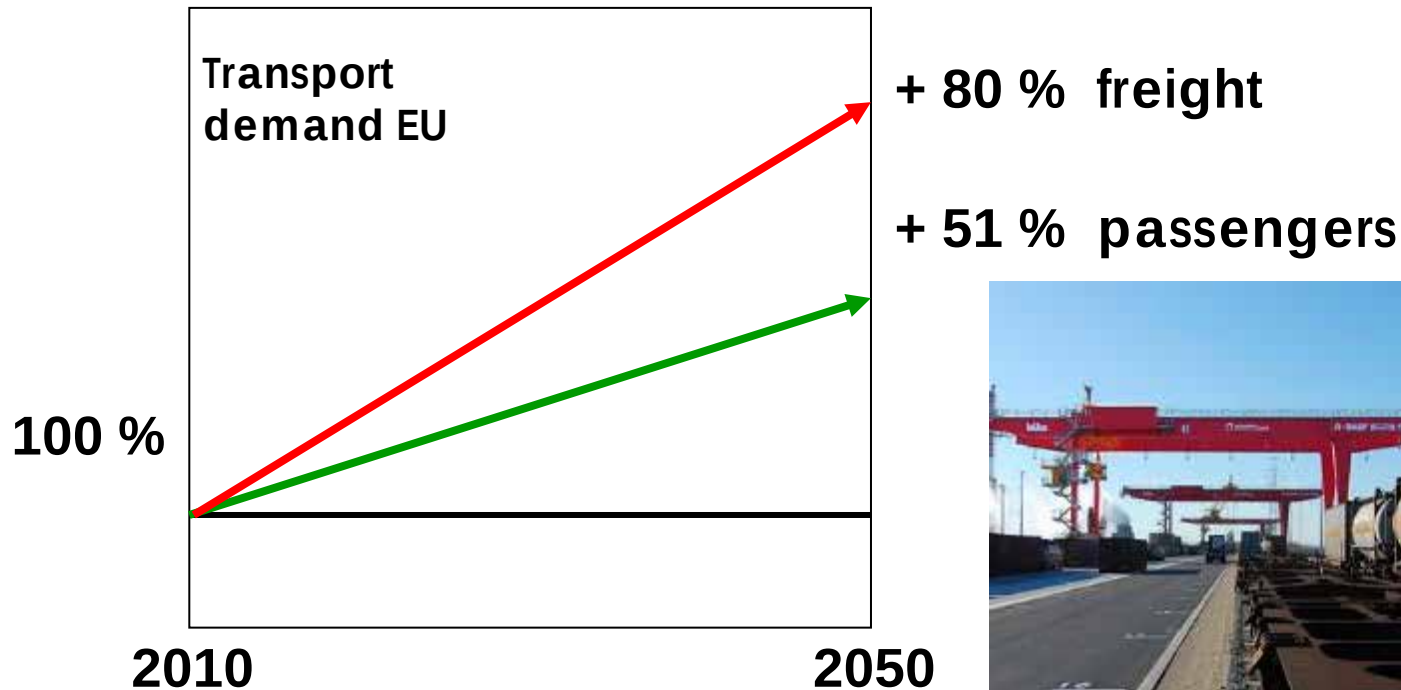
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EU Transport White Paper 2011 – the objectives

è Efficient transport is key for a **competitive Europe**

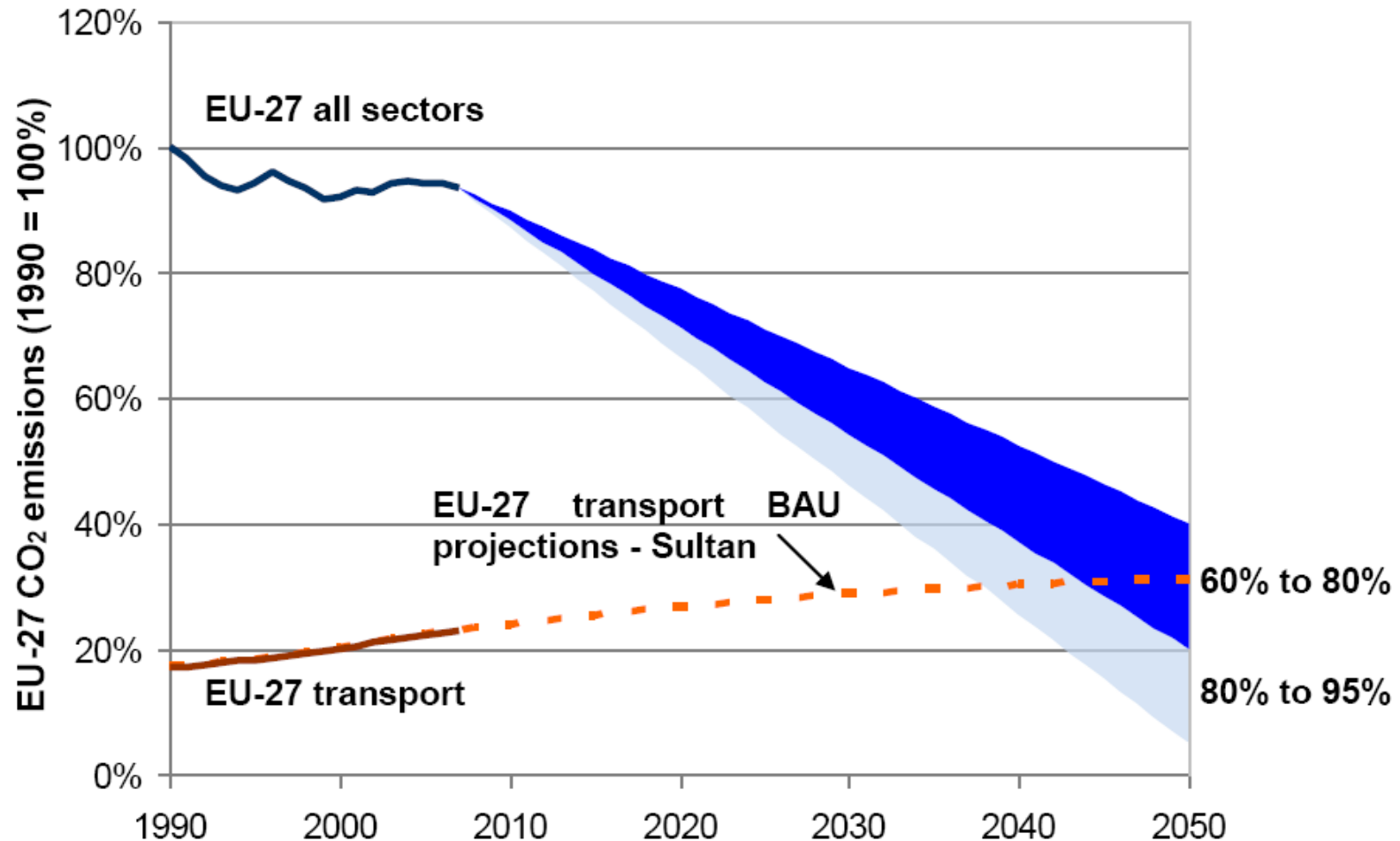


- è Climate: 60 % less CO₂ emissions from transport sector by 2050
- è Safety: reduce death toll from 40'000 p.a. to near zero
- è Measures: network investments, innovation, multimodal, price mechanism

Challenge: Sustainability

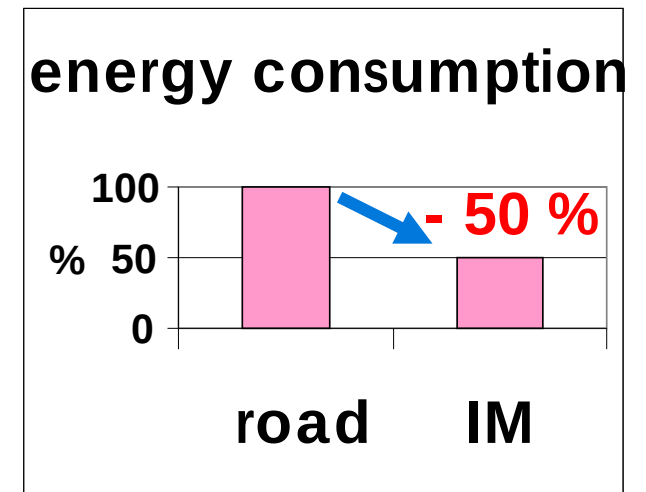
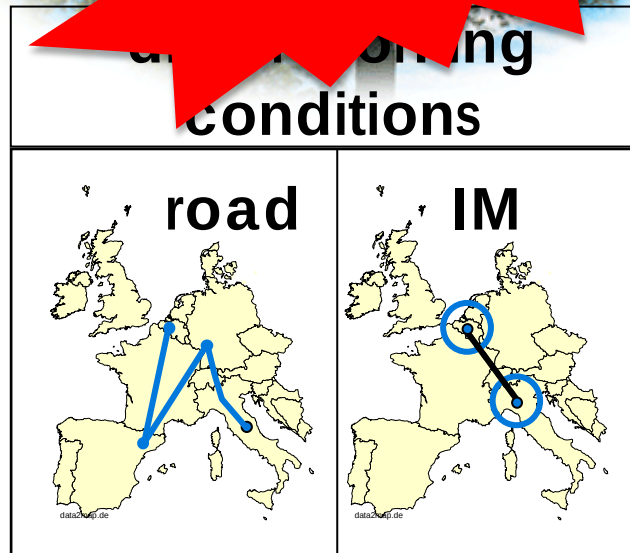
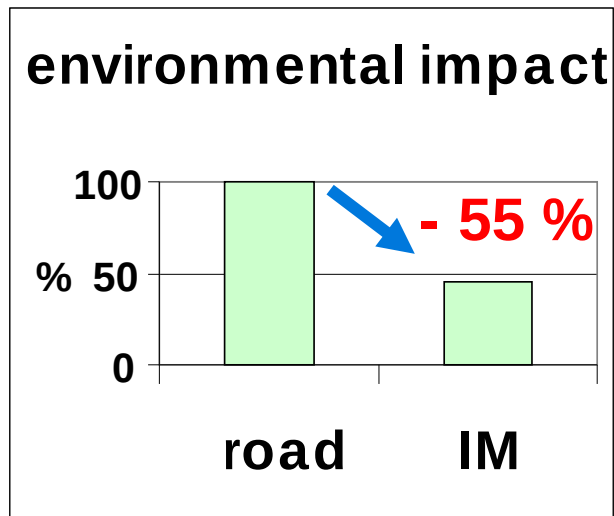
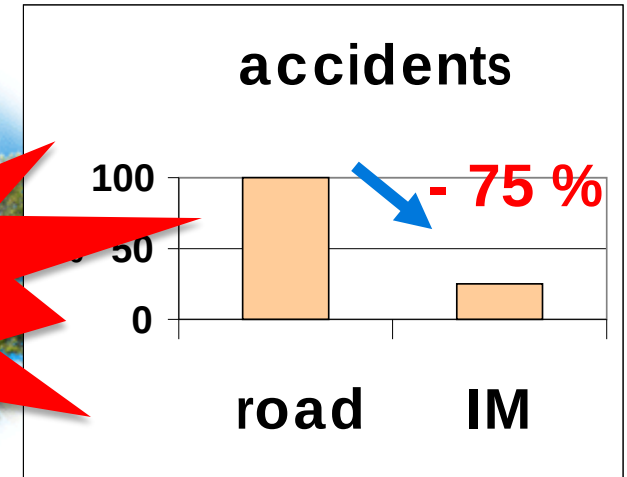
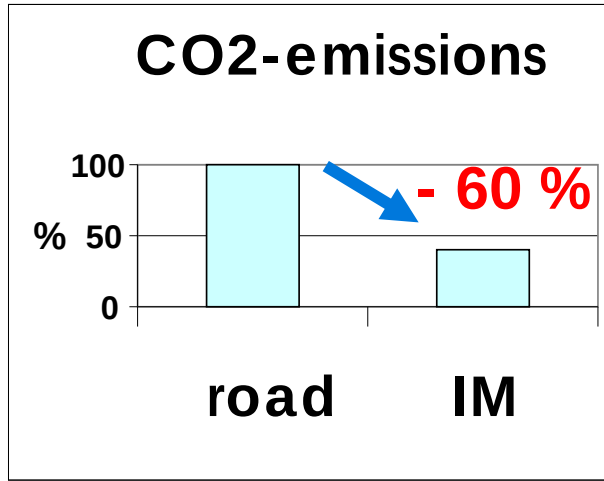
Transport sector under pressure

Figure 1: EU overall emissions trajectories against transport emissions (indexed)²



Solution: Intermodal transport

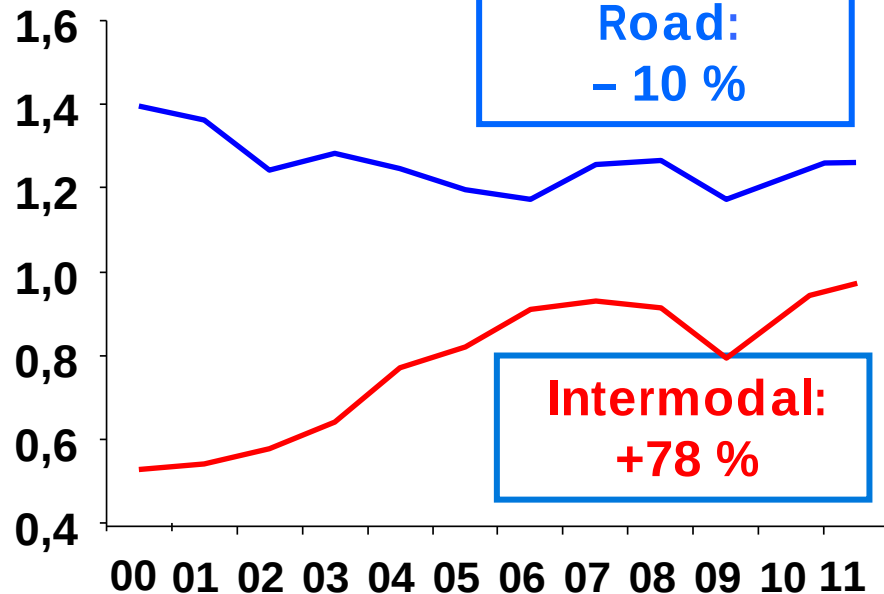
Key to sustainable transport solutions



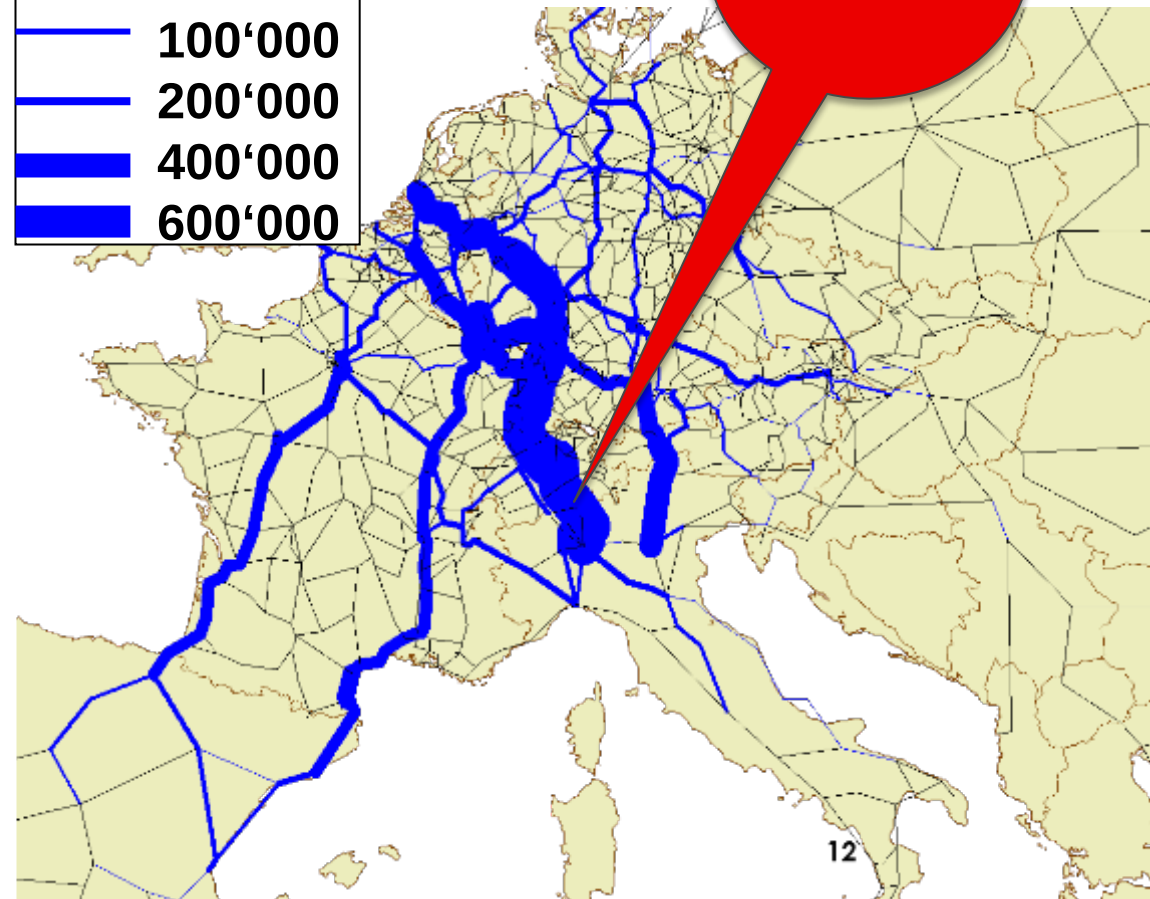
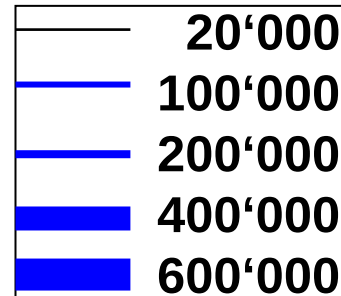
Intermodal nucleus: traffic across the CH-Alps

success story

in Mio
trucks



Legende



12

Chances in the corridor are huge

Corridor A – is the lifeline for the North-South freight traffic



- Ø **Corridor A "Rotterdam and Genoa"** (1400 km, 4900 km rail network)
- Ø **Inhabitants:** 80 million people
- Ø **GDP:** 2700 Billion Euro
- Ø **Tonnage:** 378 million t / year
- Ø **Performance:** 28.5 billion tkm (2010) all transport modes.
- Ø **1500 int. trains / week** with a border crossing, 55% are CT trains

- Ø **Modal split:**
 - § **Total:** 378 million t
 - § **Inland waterways:** 54% (calculated: 204 million t)
 - § **rail:** 12% (calculated: 45 million t)
 - § **road:** 34% (calculated: 128 million t)

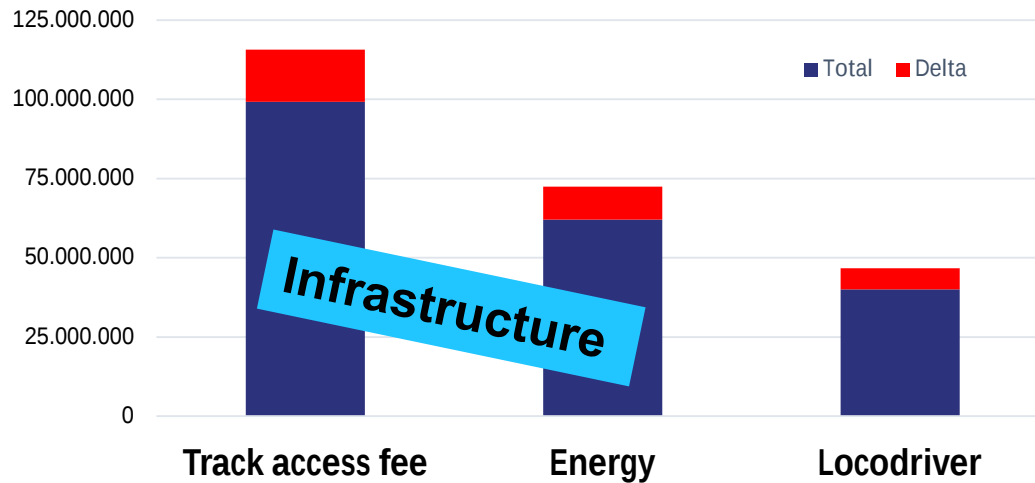
- Ø The **Gotthard Base Tunnel** arrives for Fpl 2016/17
- Ø high cube **trailer traffic** can be brought on track, volume: up to 8 million tons: Railmarket is facing an increase by up to 20%

A higher modal split of **RAIL** is possible.
More capacity and **better performance of the infrastructures** is necessary

Challenge: Currency

16 MIO trainkm (wo ROLA) total volume of CH-transit

Currency impact
in total transalpine rail sector



Cost impact:
Rhine/Area – Milano/Area



The Corridor A with its Swiss Transit has to cover **currency risks**.
Minimum at about **35 MIO €**. Most of it are **infrastructure** driven.
Impact on international transport is >10%.

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I: GBT – Europa becomes smaller

Europe becomes more permeable - Change in railway transport times



	Top	1950	2000	2020
1	Border	+++	++	+
2	Systems	+	+++	+
3	Infra Standards	+	+++	+++
4	Languages	+	++	+++
5	Traction	+++	++	+
6	IT	+	+++	++
7	Networking / automation	+	++	+++
	Travel time in h	40-50	20-25	15-20

Findings:

- Ø The human behaviour leads to the development of transport infrastructures
- Ø Improvement and acceleration of the passenger and freight transport time is:
 - § Increasing driving distances
 - § Increase in traffic capacity

I: GBT increases efficiency

Gotthard Base Tunnel: big opportunities for Alpine transit

4-m corridor

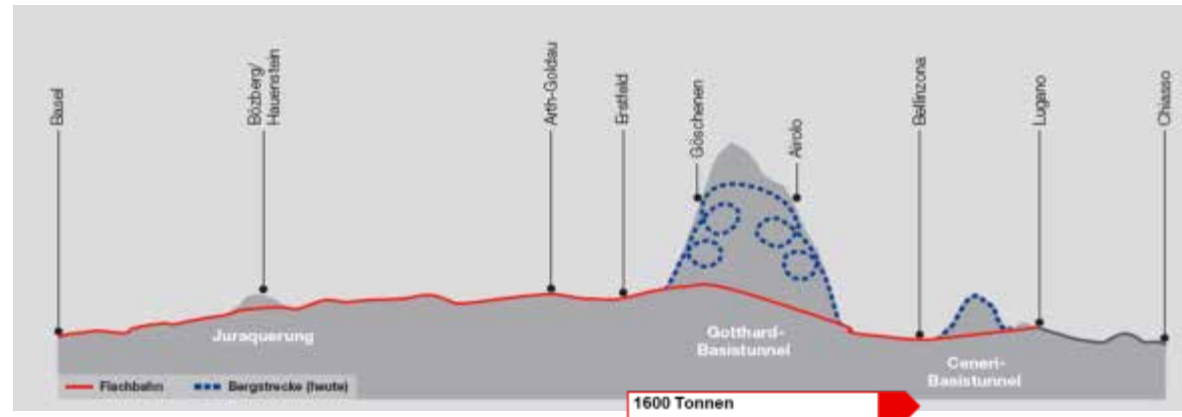
Min. 200,000 truck trips can be avoided

Heavier and longer trains

1600t with one loco

2000t as a challenge + capacity 25%

750 m increases train + capacity 27%



More safety with ETCS Level 2

- Shorter headways
- Simplification of network access
- **BUT**: Infrastructure Onboardunit on the locomotives, efficiency profit by the infrastructure

Competitiveness for road increases due to flat track

- Decreases energy costs
- Shorter distance, faster at the destination
- Higher transport capacity

Solution I: GBT - Europe is becoming smaller

The Alps becomes a flat track

- Ø An improvement of the rail transit in north-south direction to achieve a shift in the heavy traffic on the rail
- Ø The new railway connection leads through the Alps with **a minimum** of slopes and wide curves.
- Ø **Shorter travel times** - The flat track allows the efficient transport of goods by rail and shorten travel times
- Ø **Shifting from the road to the rail** – with higher tunnel height (4m)
- Ø longest **railway tunnel** of the world: 57 km
- Ø Opportunities for the market



Higher productivity:

*Up to 30% by longer and heavier trains
on **CH** passage
border 2 border*

Solution II: supervise monopoly area

Performance and prices must be right

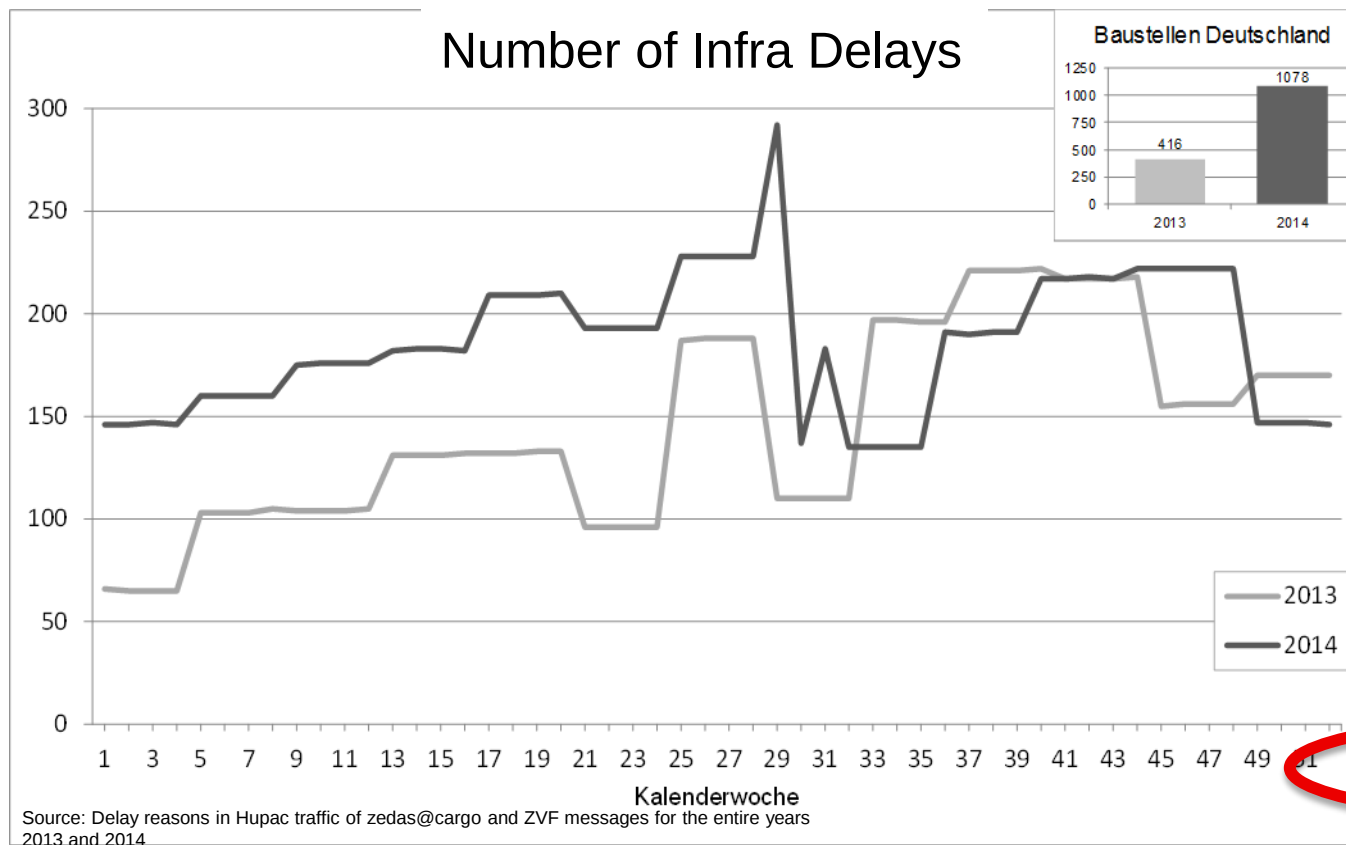
- Ú Economical chances and challenges need **the best** infrastructure
- Ú Logical conclusion: **WE HAVE TO REBUILD EUROPE!**
- Ú Thereby **performance** could **drop**
- Ú **RU increase resources** as a compensation path
- Ú On corridor A for all RU about **ca. 10 M €**
- Ú Prices **MUST** remain stabil
- Ú F.E. max. **Inflation** can be used as a monopoly (infranetworks) **price benchmark**



II - Performance in freight transport

Factor influencing infrastructure: more construction sites and other Infra-effects on average, are 200 min per cause - RU-sector cost Corridor A: € 10 million / a

Explanations

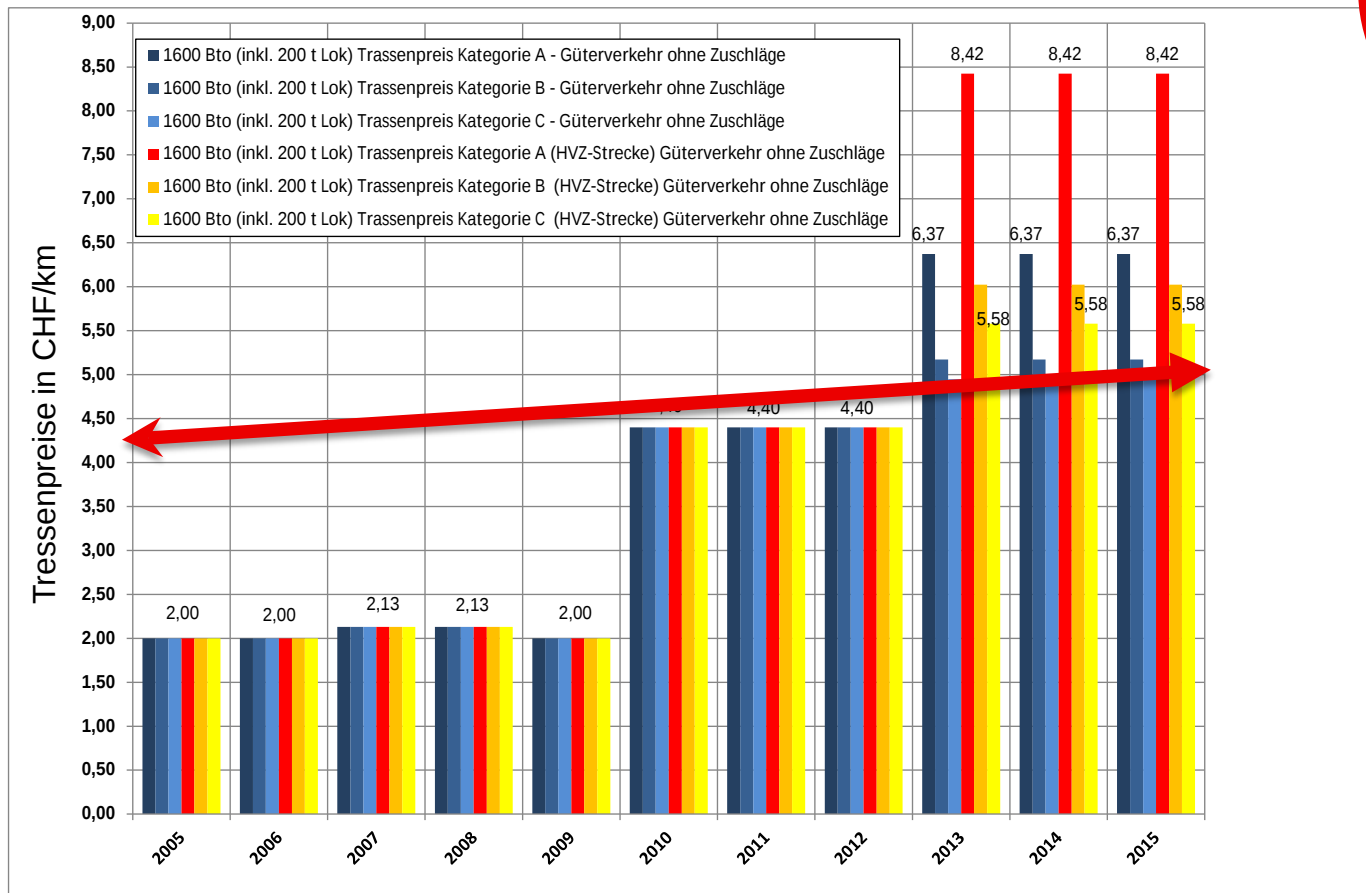


- è Extrapolation of poor performance on COR A equals approx. 20,000 h/a at SBB INT
- è 55% of 1500 trains / week are time-sensitive (KV), SBB Cargo INT handles 50%
- è On the KV, this means that about 15 locomotives and about 40 drivers must be paid for Infra defects of the market.
- è This corresponds to at about € 10 million/a

**Track works are URGENTLY advised. Performance gap must not alone be paid by RU!
One hour delay costs RU 250 €.**

II – Infra CH: Price history regulated by Law

Track price development SBB Network 2005 - 2015



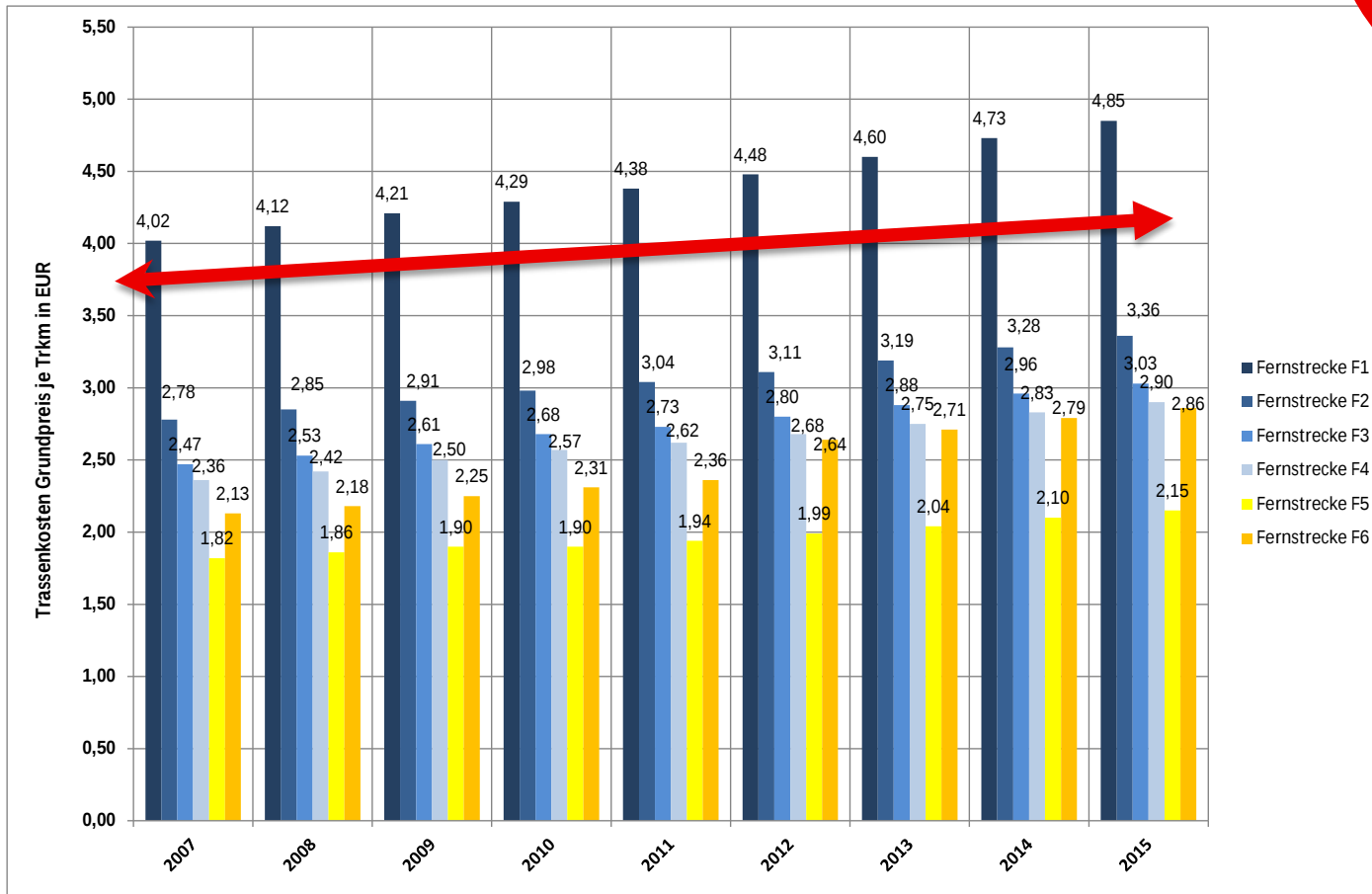
Inflation
0,3%
&
CHF/€=1

- Ø Construction of a complicated track price system starting in 2013
- Ø Traffic control FOT (s. 2010 with no effects to operators)

II - Infra D: Price history is 50% above inflation

Track price development DB Network 2007 - 2015

Inflation
on average
1.6%



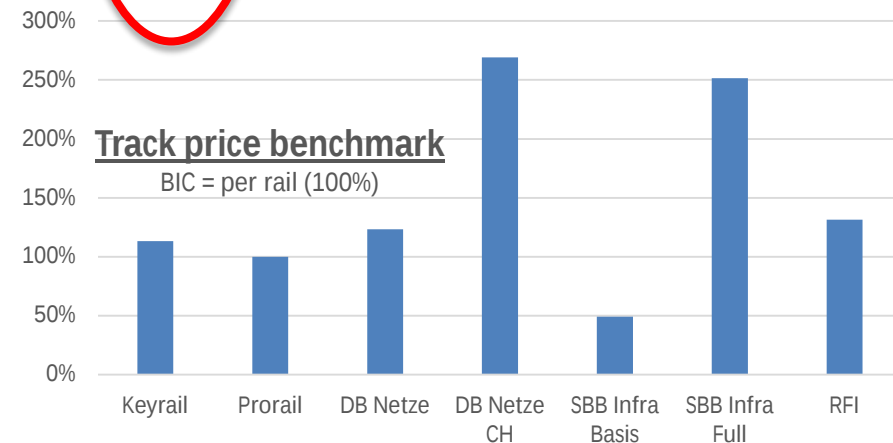
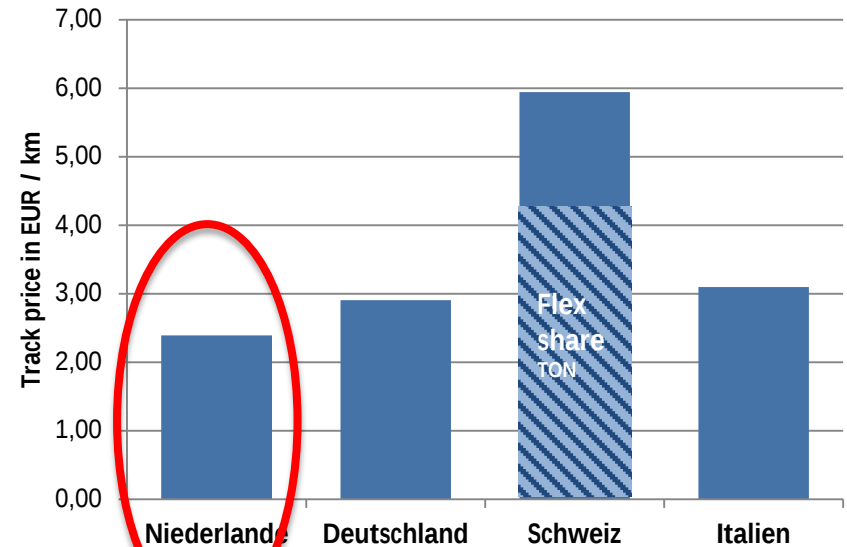
- Ø Track prices increased on average by about 2.5%, stable during the period of 2007-2015
- Ø Specification driven by the desired capital market viability of the DB AG

II - Offered EU standardization

Example: Train 40201 Rotterdam - Gallarate of 3.6.2014



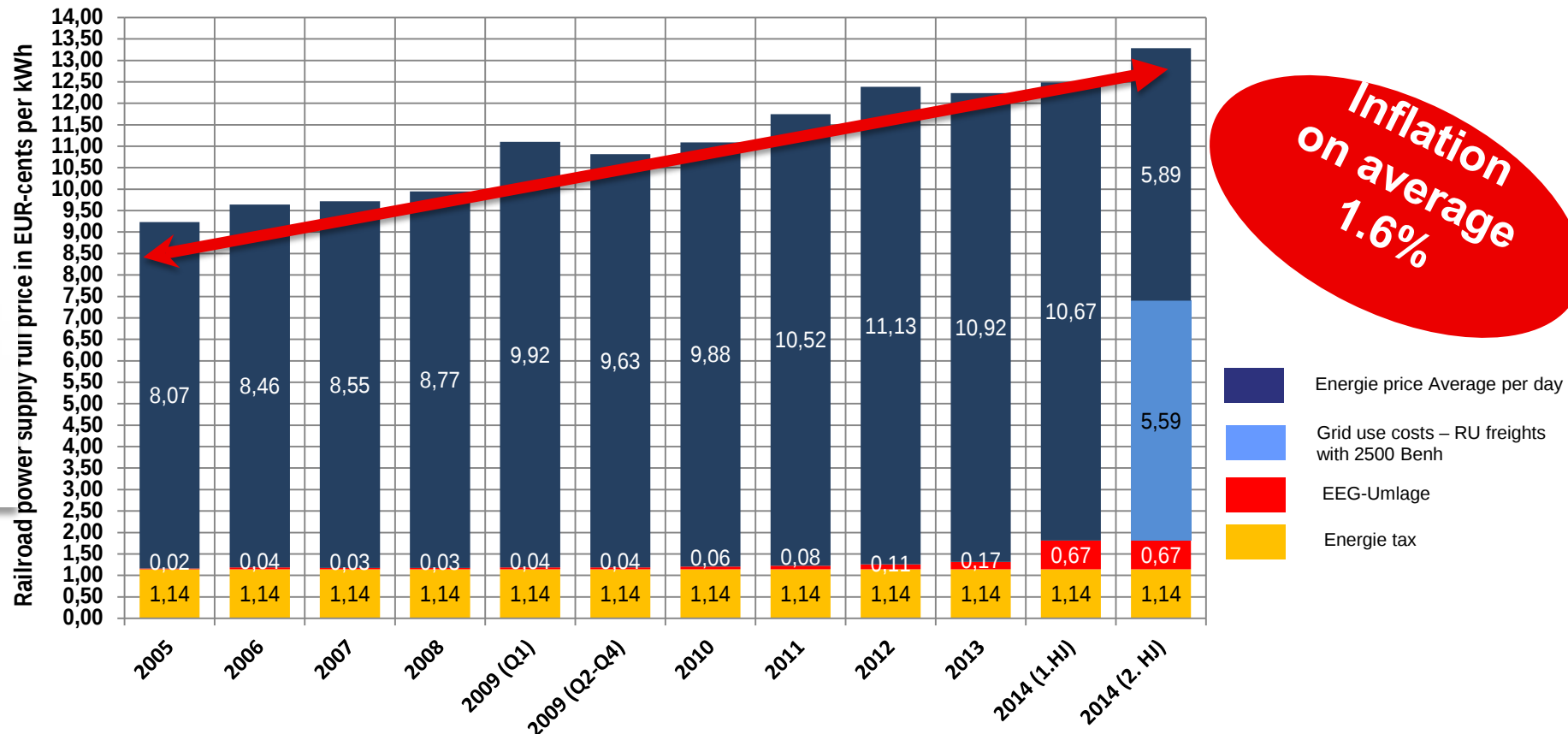
Track price comparison per kilometre



- Ø Offered standardized prices
- Ø Performance oriented track price development necessary

II – Energy costing in D 100% above inflation

Price development in track energy reference DE: 2005 to 2015



- Ø Average price increase of about 4% per annum in the period of 2005-2014
- Ø EEG: All transport modes have to participate in change of energy strategy

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- Global -> Continents in competition



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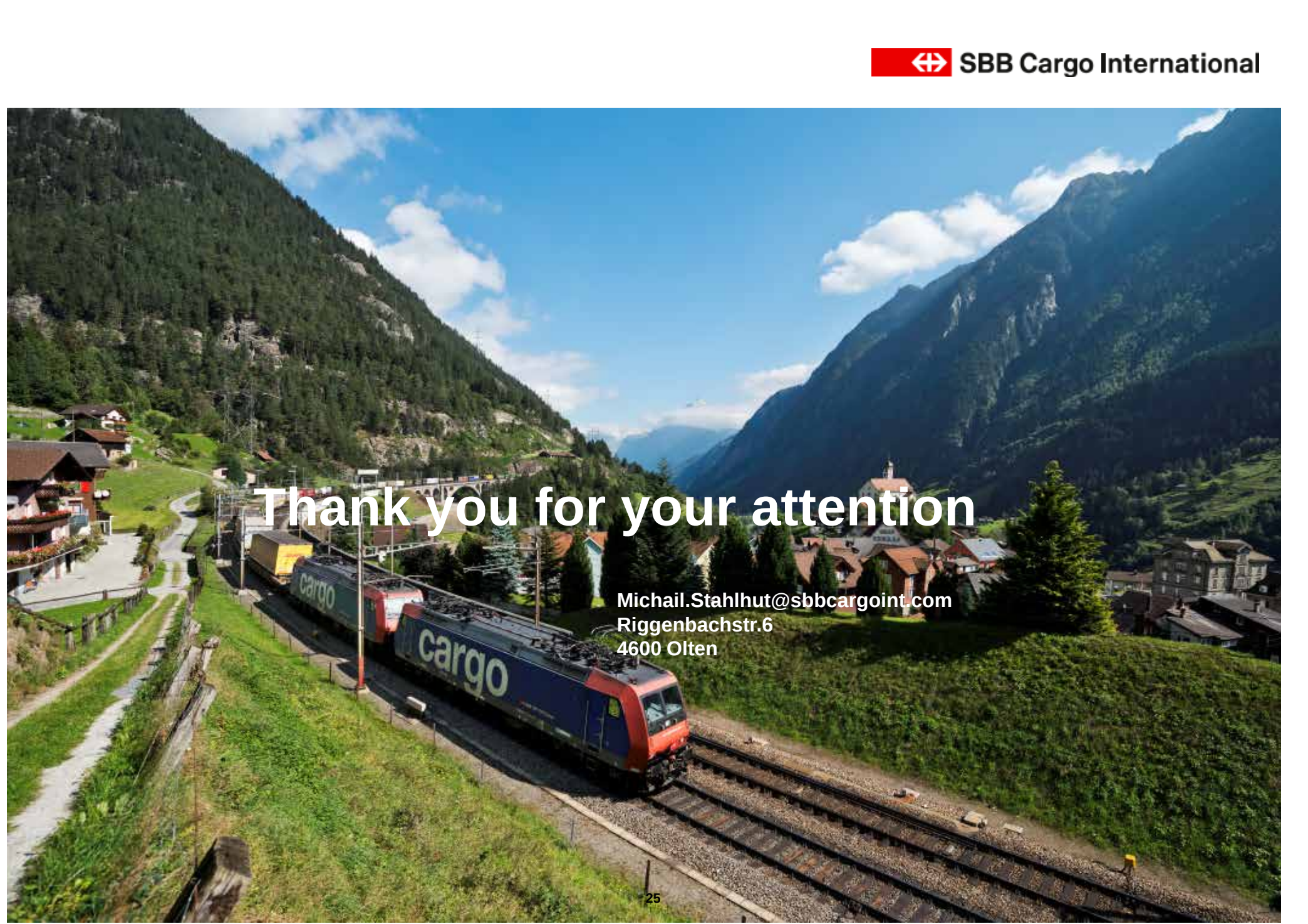
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Summary

Contribution to the development of the internal market - Europe is rebuilt



- Ø Target for a **networked world**
 - § Infrastructure without artificial barriers, stable pricing systems, stable speed
 - § More partners in multimodality
- Ø Europe's **infrastructure must be rebuilt**. The continent can improve with networking.
- Ø Learning from Corridor A means: Offer a **high performance infrastructure** is the key for linked Europe
- Ø Therefore **Infrastructure** and railway energy **need more than only national management**.
- Ø **Goals:**
 - § Ca. 30% cost reduction in Swiss passage
 - § Ca. 10% over all cost reduction to the best in Infracosting



Thank you for your attention

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