



***Welcome! Webinar to start soon!***

*Happy Railways in 2023!*

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**5x**

less gCO<sub>2</sub>e / **TON KM**  
emitted by the average rail freight load compared to its counterpart on the road

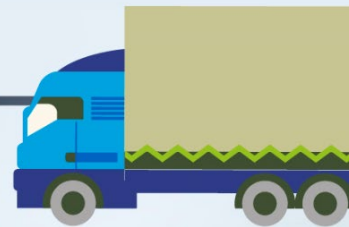
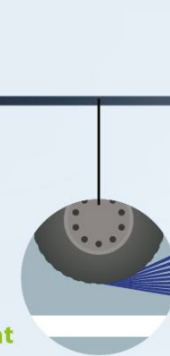
EU average GHG emissions for freight transport  
(gCO<sub>2</sub>e per tonne-km, 2018)



**3x**

less friction

for a wheel on rail compared to rubber on road, making rail 3x more energy efficient



**Benefits of Rail:**

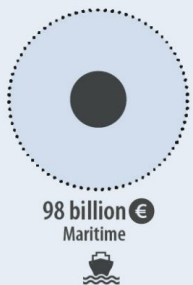
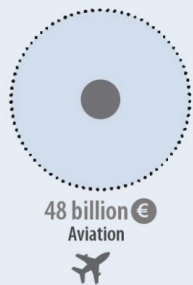
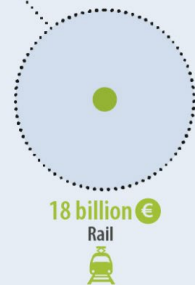
The greenest mode of transport

*Numbers talk...*

**45x**

less external costs compared to road transport

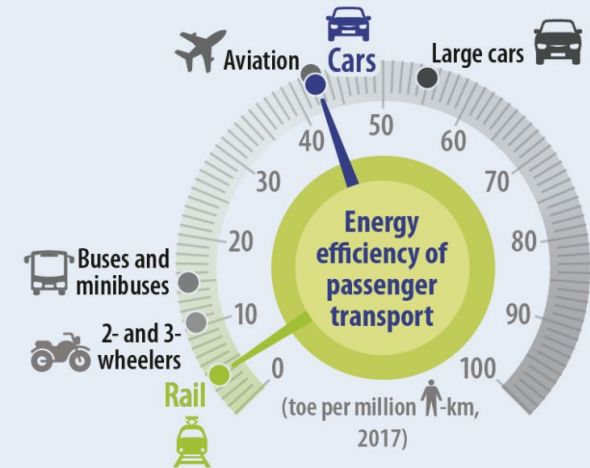
Total external cost of transport in the EU  
987 billion €



External cost of transport include:  
• Accident costs  
• Congestion costs  
• Environmental costs

**10x**  
less energy consumption

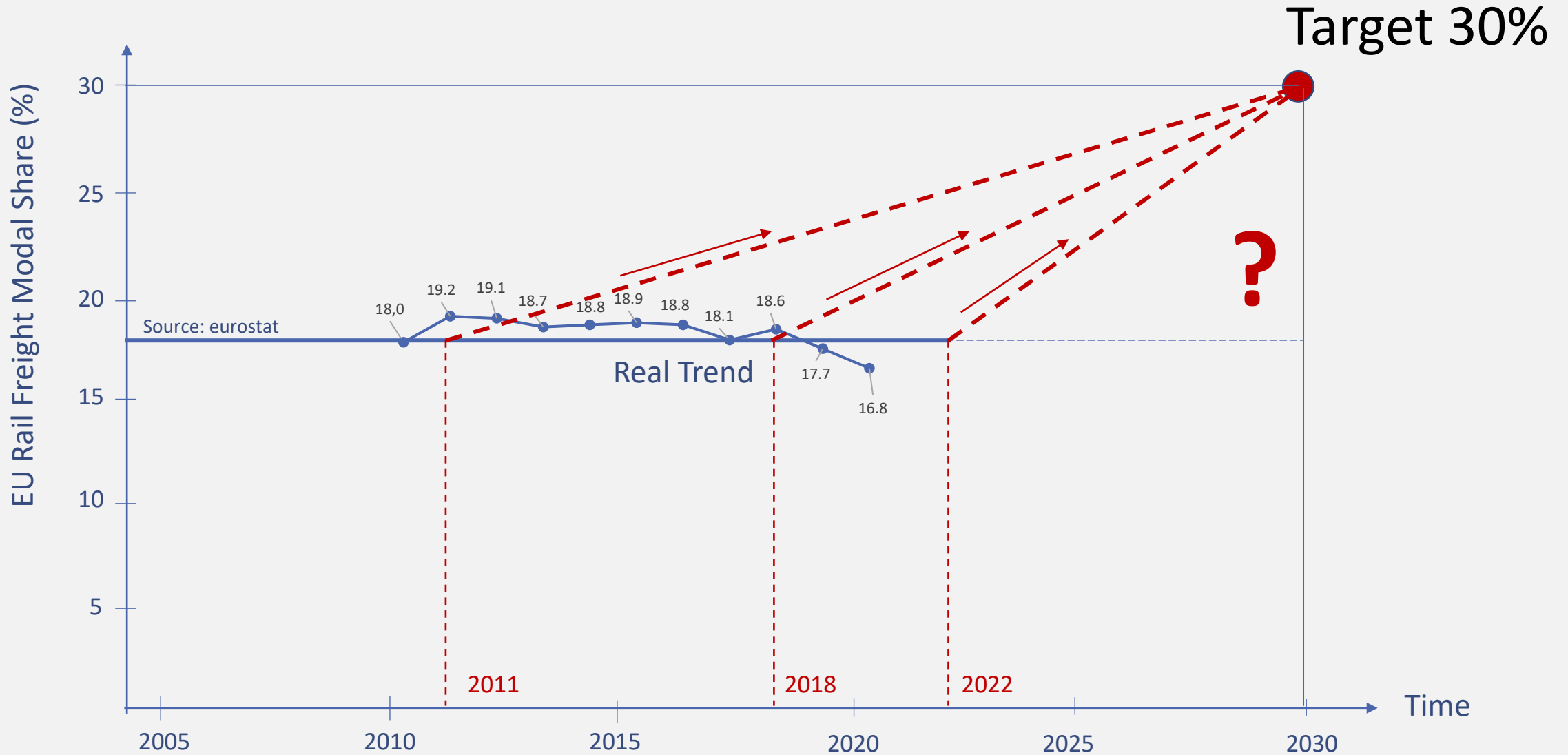
Rail transport is 10 times more fuel efficient than a private car per 100 km



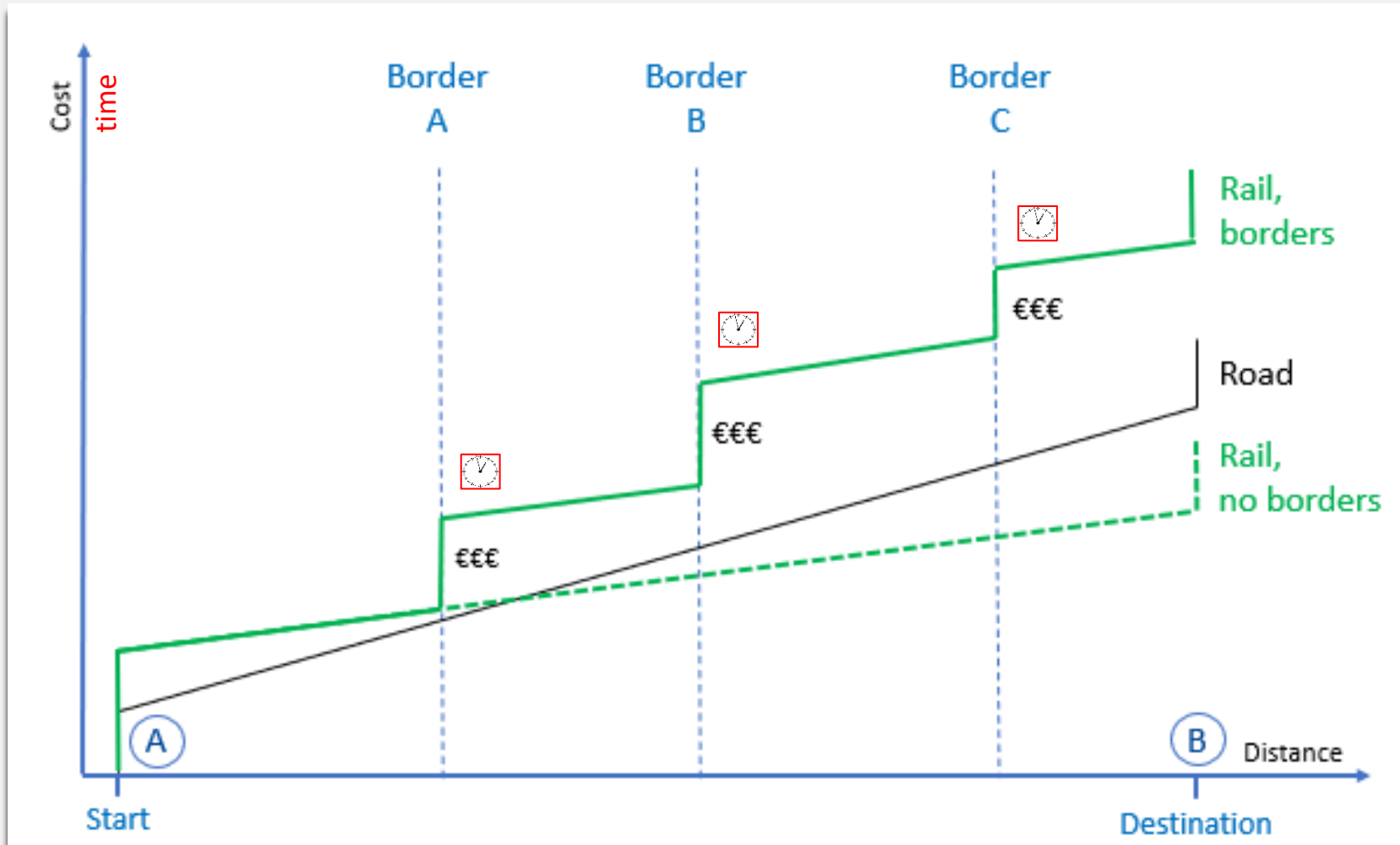
# TRANSPORT AND ENVIRONMENT



# MODAL SHIFTS – TARGETS AND REALITY



# CROSS-BORDER RAIL



National Rules

Timetable mismatch

Capacity mismatch

Priority mismatch

Change of train number

No real-time  
communication

Works not coordinated

# FACTS AND FIGURES

## Facts & Figures December 2022

Vehicle Authorisations	Single Safety Certificates	ERTMS Trackside Approvals
<p><b>4 420*</b> delivered representing in total <b>47 636</b> vehicles</p>	<p><b>131</b> Delivered</p>	<p><b>4</b> Delivered</p>
<p><b>78</b> projects ongoing</p>	<p><b>34</b> projects ongoing</p>	<p><b>84</b> projects ongoing</p>
<p>Delivery for conformity-to-type with median of 3.89 working days in December 2022</p>	<p>Delivery within an average time of 5,4 months</p>	

\*4086 Vehicle Authorisations in Conformity to Type, 251 Vehicle Authorisations and 83 Pre-engagement opinions





# 2023-2025 PROGRAMMING PERIOD

**Full-fledged performance of the Agency's tasks** as EU-wide authority for safety certification, vehicle authorisation and ERTMS trackside approval, along with other tasks in the field of railway safety and interoperability as foreseen in the Technical Pillar of the Fourth Railway Package

**Policy tasks** contributing to the implementation of Union legislation by developing a **common approach to safety** on the Union rail system and **by enhancing the level of interoperability** on the Union rail system



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# 2023 HIGHLIGHTS

## Efficient authorization

- Further process improvements (forecasting their volume to the best extent possible)
- OSS improvements

## TSI Package and National Rules

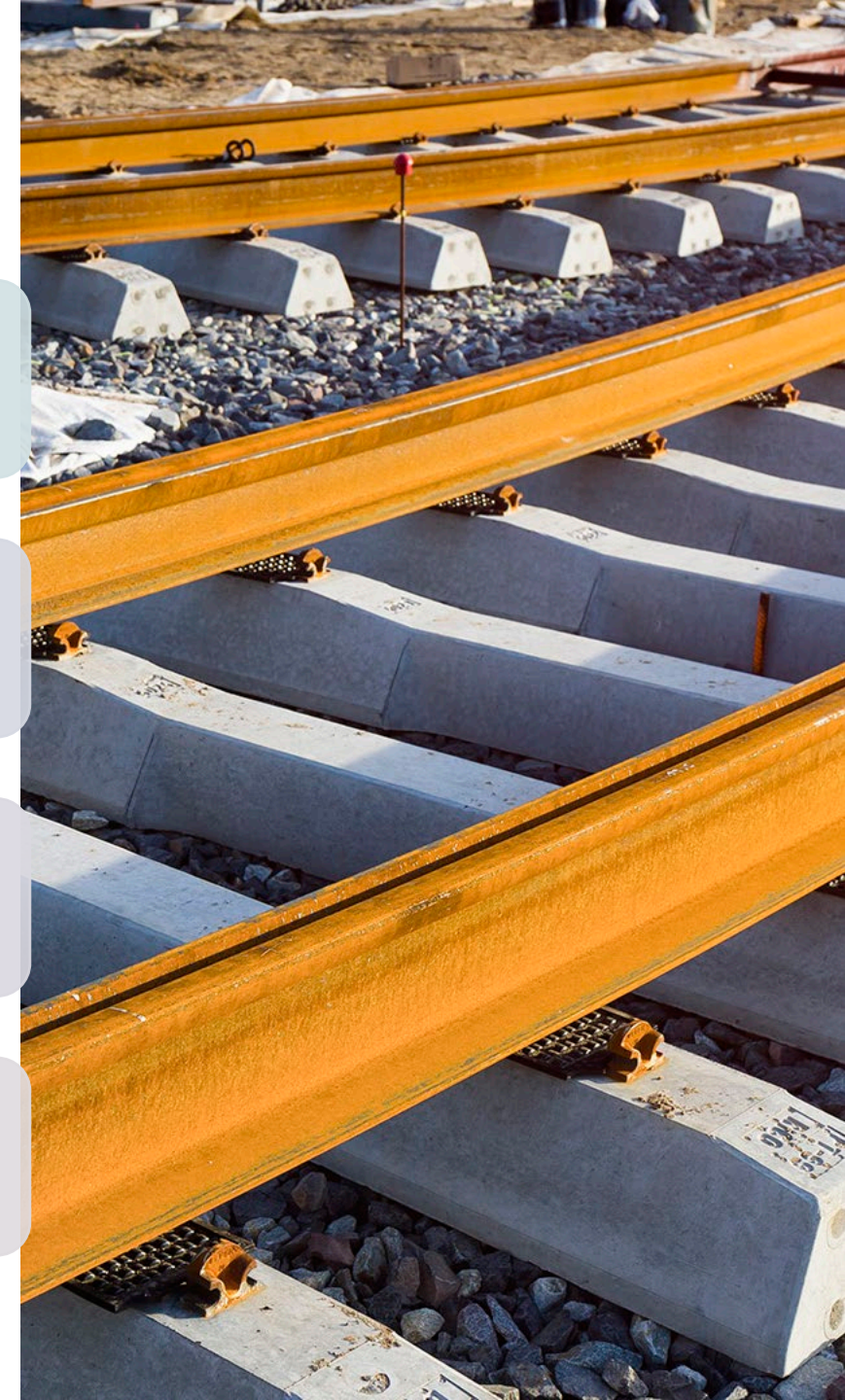
- Achieve vote on TSI Package 2022/2023
- Finalise the cleaning-up of National Rules for VA
- Finalise the cleaning-up of National Safety Rules
- From 2023 onwards use the newly to be developed “NSR assessment framework”

## Data and Digitalisation

- Ensure right framework for **data and information exchange related to assets and services** based on linked data, universal data identifiers and more and better data exchanged between operators and customers
- Ensure sustainable development of railways in Europe as competitive mode of transport and facilitating the **multi-modal data exchange and queries**

## Safety Culture

- All railway operators (IM, RU, ECM, ...) understand and accept their responsibility and actively implement an SMS to control the risks of operational activities
- Increased performance of and trust in the different safety related control levels in the system - ERA, MS, NSA, ASBO, ECM CB, accreditation, recognition, NIB
- Safety and safety management/performance related data is shared in an open and transparent way





# 2023 HIGHLIGHTS

## Management Board

### Strengthening Action Plan

- Decision of the Management Board to integrate the Strengthening Action Plan (SAP) in the SPD 2023

### Challenge

- Deploying a too limited number of posts as compared to its needs to cope with the simultaneous pressure from the policy and the authority tasks

### Objective

- Ensure that the Agency has the right level of resources to perform the most adding value activities in an effective and efficient manner, in line with its ambition level

### Task for the MB

- Prioritisation exercise (arbitration), focusing on multiannual planning, and allocating resources in the most efficient manner, based on the value for money for the EU citizens

### Focus on targeting 3 areas

- Budget execution
- Level of Overheads
- Increasing the resources deployed on Policy work





# COOPERATION WITH THE SECTOR

**Building knowledge:**  
to build ERA/sector  
knowledge on how to  
achieve the desired  
outcome

**Regulating:**  
to regulate via EU  
legislation the  
desired outcomes

**Sharing knowledge:**  
to share knowledge  
on how to achieve  
the desired outcomes

**Monitoring:**  
to monitor the actual  
status of achieving  
the desired outcomes  
and understanding  
the difficulties the  
sector is  
encountering



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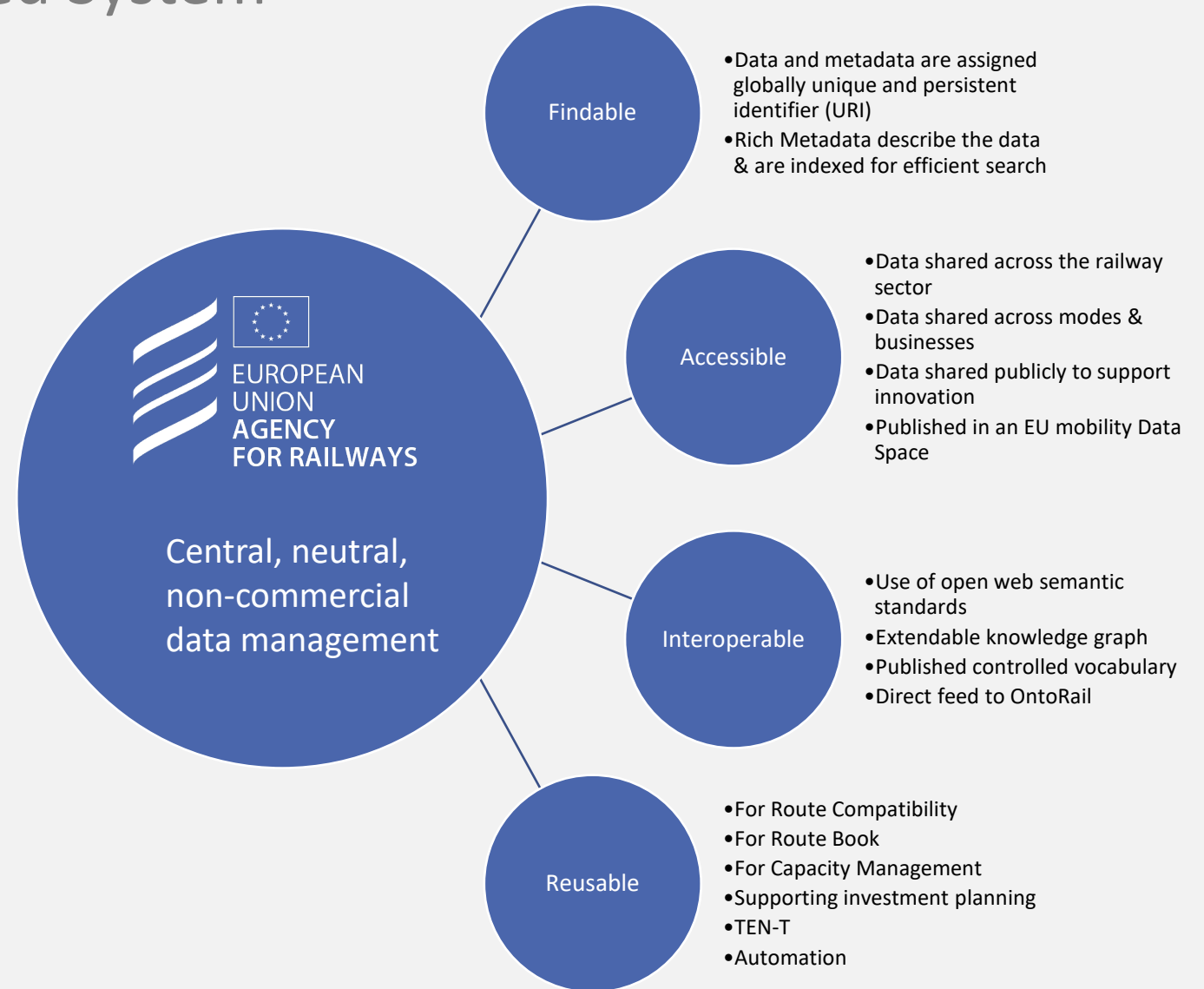
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# DATA MANAGEMENT in a Shared System

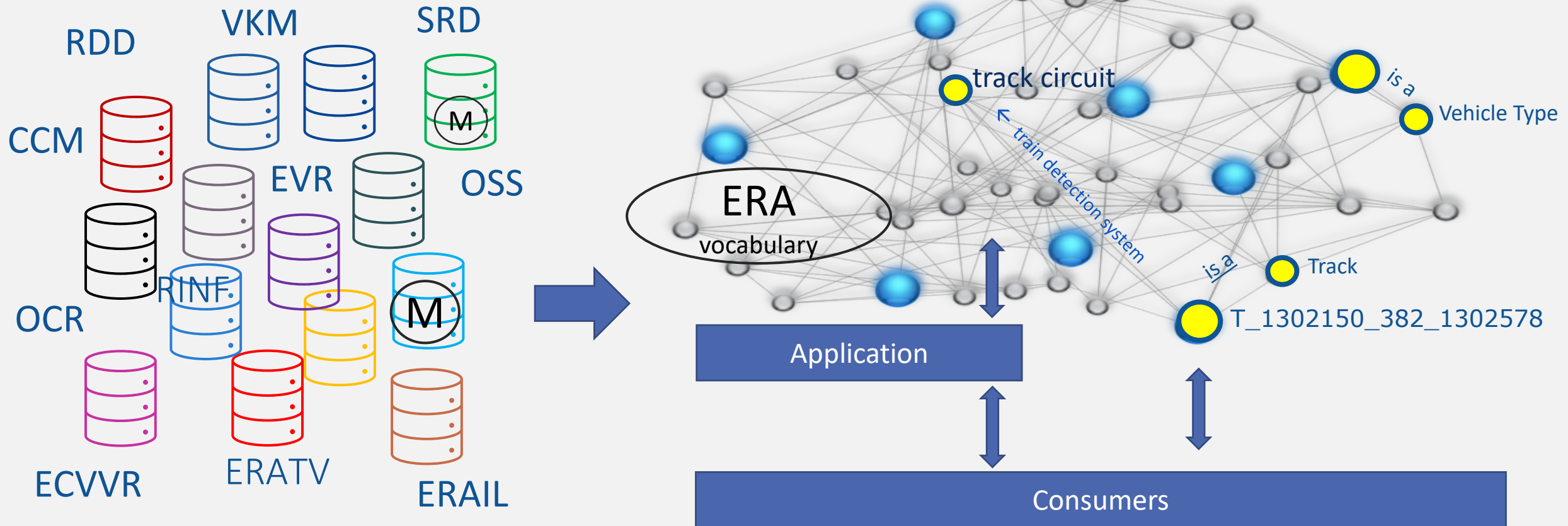
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# CHANGES

## Changing the Technology

Merging the current databases into a single knowledge graph, separating data from applications:





# CHANGES

## Changing the Organisation

- Management Board adopt the ICT Strategy and Data roadmap
- Moving towards a Datacentric Organisation
- Creation of an Operational Data Unit to combine:
  - Registers
  - TAF/TAP
  - Interoperable Data Work



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# Cross-border rail transport potential

17 January 2023

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EUROPEAN  
UNION  
AGENCY  
FOR RAILWAYS

## PURPOSE:

Estimate the growth potential of cross-border rail traffic and other benefits that would derive from further removing technical and operational barriers.

### Main objectives:

1. Understanding cross border rail transport and mapping related barriers for passengers and freight
2. Considerations on current and potential transport demand
3. Extrapolation of the findings and recommendations





## CONCRETE CASES

Work done. Passenger and freight rail. High Speed Rail services.

### Cross-border freight transport

- Rail freight connection Innsbruck – Brennero
- Rail freight connection Giurgiu Nord - Ruse Razpredel

### Cross-border passenger transport

- Rail passenger connection Vienna – Győr
- Rail passenger connection Berlin – Kostrzyn

### Cross-border/international High Speed rail services



# MAIN FINDINGS

Potential. Recommendations.

- High potential for time savings at cross-border sections by solving technical and operational issues
- Recommendations: further cleaning / reduction of the national rules and further harmonisation and revision of the TSIs (Technical Specifications for Interoperability).





# 1<sup>st</sup> freight case study

Cross-border section Brennero - Staatsgrenze nächst Steinach in Tirol  
Possible time savings of at least 50 minutes

Issue	Annual number of trains concerned	Time loss per train	Annual hours saved	Cost per train	Annual costs [M€]
Train braking rules and documents (ILB issues 1 and 2)	19 960 (100%)	20 min	6 653	66€ - 100€	1,32-1,98
Technical checks at border stations and mandatory checks in MSs (ILB issues 8 and 9)		30 min	9 980	86€ - 122€	1,72-2,42
Real-time communication (ILB issues 15)		116 min	38 752	258€ - 313€	5,14-6,24
New train number (ILB issue 11)	-	118 min	-	-	-
Two-people cabin crew (ILB issue 13)	N/A. Only total values per country are estimated				
Equipment of border stations with commutable electric power supply (ILB issue 14)	5 988 (30%)	40 min	-	-	-
Restrictions for the train length (and/or weight)	-	75 min	-	-	-



## 2<sup>nd</sup> freight case study

Cross-border section Giurgiu Nord - Ruse Razpredel

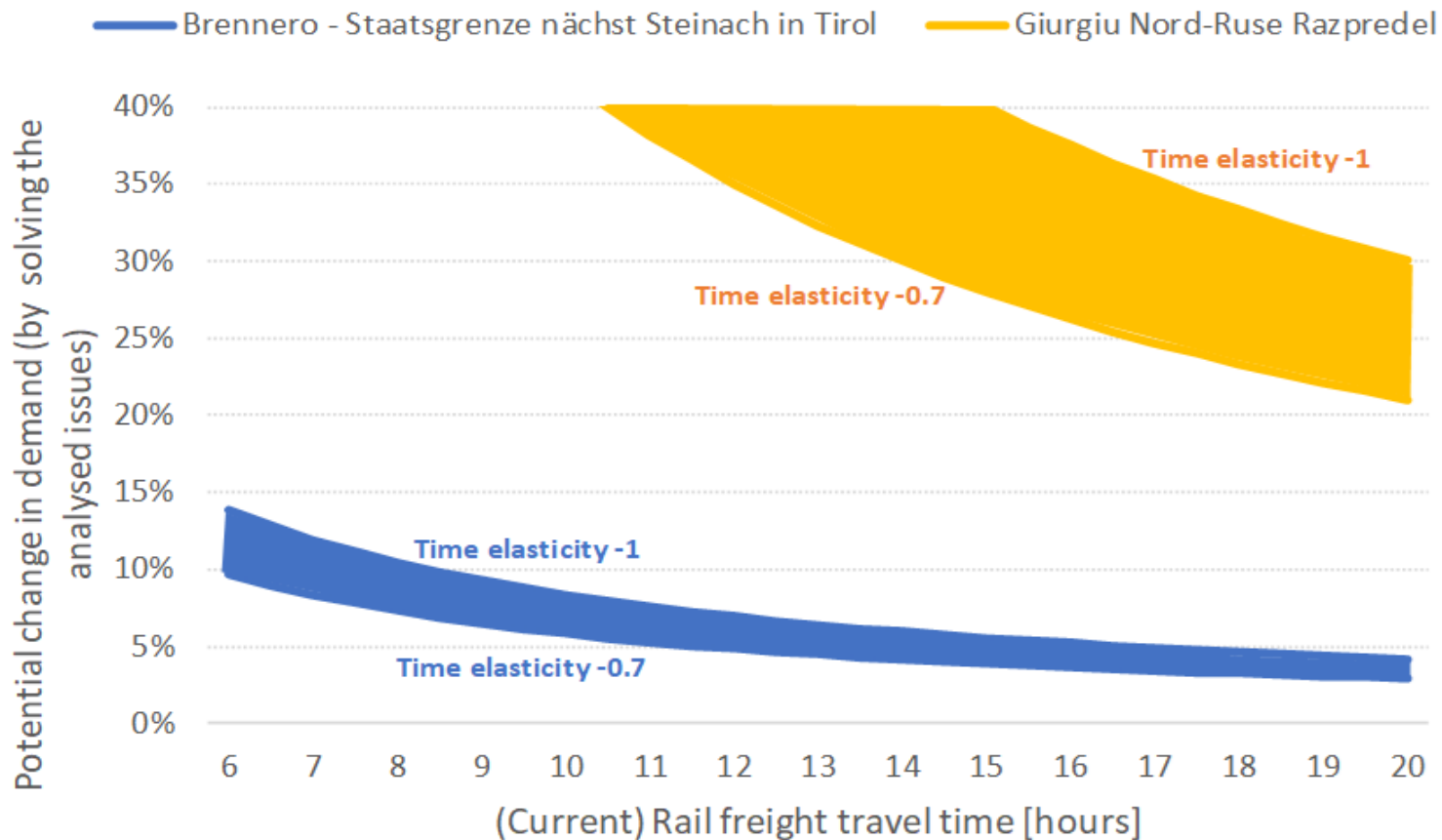
Possible time savings of at least 6 hours

Issue	Annual number of trains	Time loss per train	Annual hours saved	Cost per train	Annual costs [M€]
Train braking rules and documents (ILB issues 1 and 2)	5232-5908 (100%)	20 min	1744-1969	64€ - 117€	0,34-0,69
Technical checks at border stations and mandatory checks in MSs (ILB issues 8 and 9)		384 min	33485-37811	405€ - 478€	2,12-2,81
Real-time communication (ILB issues 15)		222 min	19376-21880	254€ - 316€	1,33-1,87
Working handbrake in the last wagon (ILB issue 5)	2616-2954 (50%)	45 min	1962-2216	67€ - 120€	0,35-0,71
No push 6 axles wagons (ILB issue 6)	5232-5908 (100%)	75 min	6540-7385	116€ - 171€	0,61-1,01
New train number (ILB issue 11)	4186-4726 (80%)	118 min	8232-9294	134€ - 190€	0,70-1,13
Two-people cabin crew (ILB issue 13)	N/A. Only total values per country are estimated				
Cross border section not electrified (linked to ILB issue 14)	-	120 min	-	-	-
Restrictions for the train length (and/or weight)	-	75 min	-	-	-





# FREIGHT CASE STUDIES



Very rough estimation of the potential change in travel demand by solving the technical and operational issues on the analysed freight corridors /sections (per duration of rail freight transport).

# PASSENGER CASE STUDIES

## Rail passenger connection Vienna – Győr

- Good accessibility
- Development of the cross-border economy in the Bratislava–Győr–Vienna triangle
- No major pitfalls; demand continues to grow
- Room for improvement by eliminating the current cross-border barriers (e.g., decreasing the current journey time of 70 - 115 minutes by around 10 - 15 minutes and encouraging language trainings for staff)







## PASSENGER CASE STUDIES

### Rail passenger connection Berlin - Kostrzyn

- The connection serves target groups from both countries and contributes to **cross-border integration**
- Obstacles for its further development range from:
  - ✓ **legal and administrative** ('no common administrative procedures and legal basis')
  - ✓ **technical**
  - ✓ **practical obstacles** ('different language')

# HIGH SPEED RAIL SERVICES

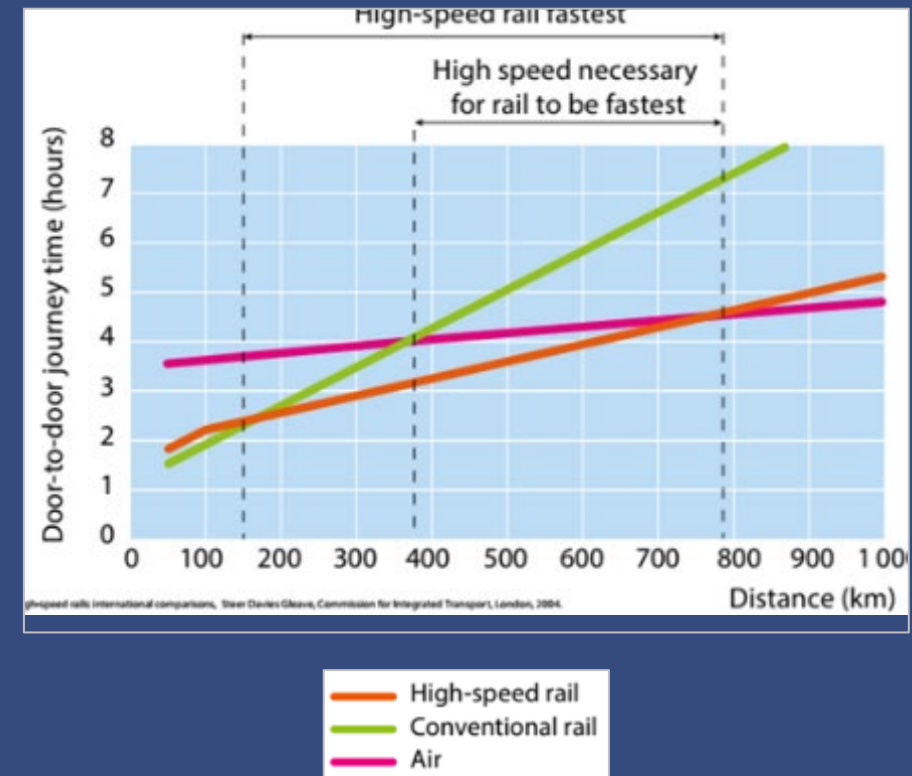
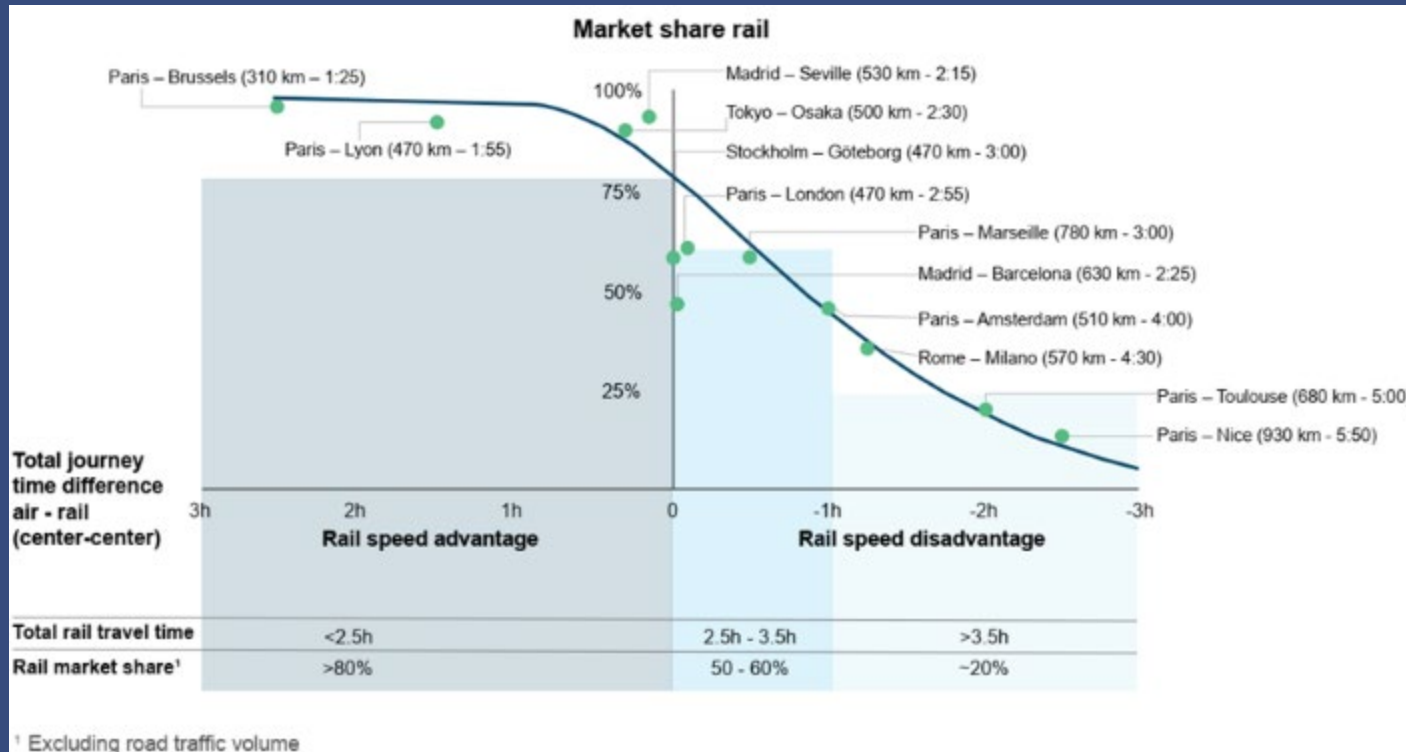
## Considerations.

Cross border / international High Speed rail services:

- Very competitive (compared to road and air) for distances between 100 and 800 km and for rail travel time up to 4 hours (travel time represents an important factor for choosing rail)
- Rail interoperability is often obtained / guaranteed by specific rolling stock.

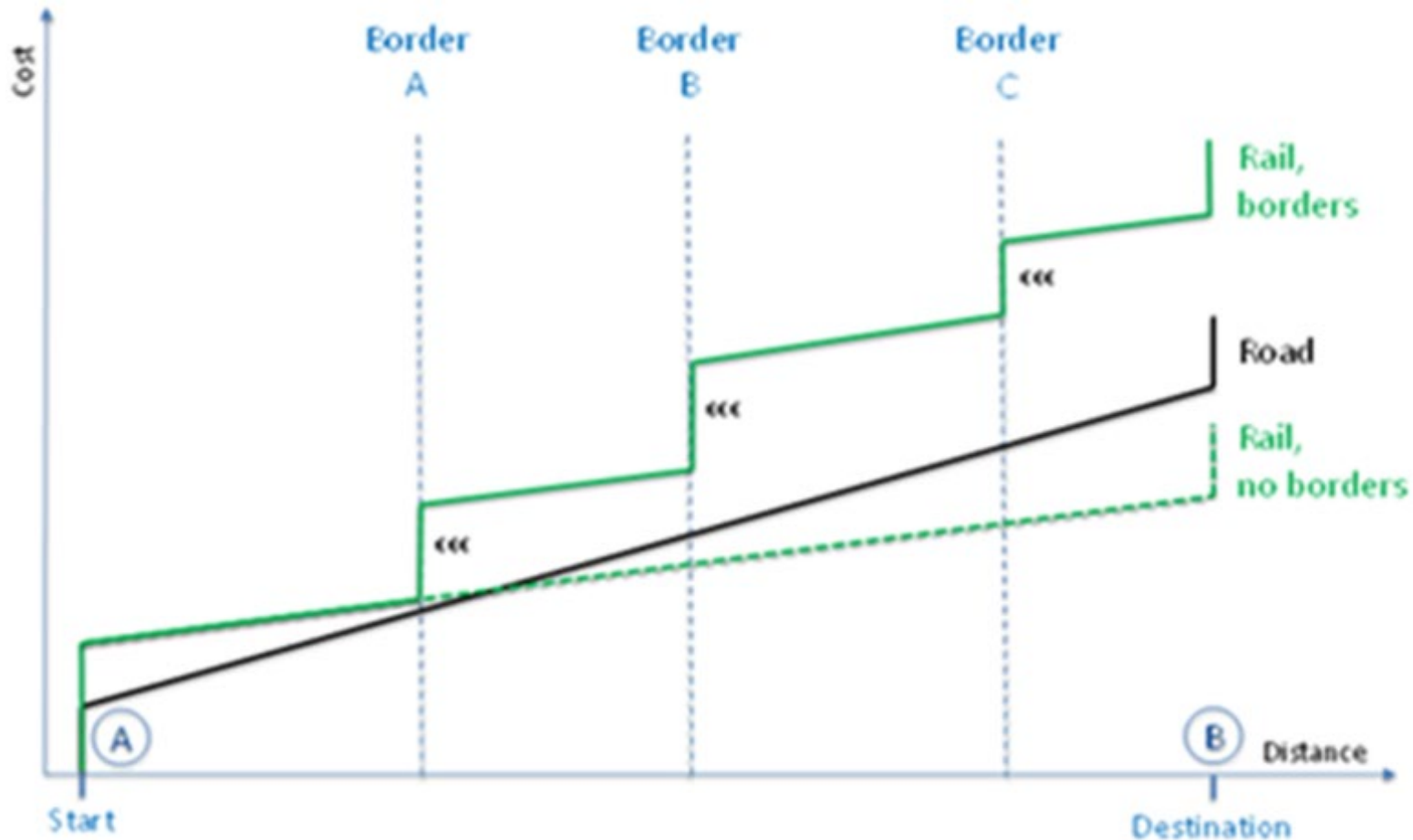








# LIMITATIONS



- The study focuses only on the possible removal of technical and interoperability barriers
- An analysis of the potential growth in demand based only on time elasticities is not fully exhaustive.
- The quantitative analysis of the possible time savings is based mainly on the ILB
- Each case study analyses a single cross-border section, but freight trains may cross several borders along their long-distance trips with additional time savings

# CONCLUSIONS

Possible way forward. ERA's strategic role.

Based on the findings, the report emphasizes the need for the further cleaning of national rules. Moreover, the Technical Specifications for Interoperability can contribute to lowering some barriers by closing open points and reducing, where appropriate, specific cases.



## Current situation

Technical and operational barriers at cross-borders still hamper the seamlessness of international rail connections



## Time savings

High potential in time savings: Solving the technical and operational issues on selected cross-border sections show a high potential



## Cross-border rail competitiveness

The reduction in travel time could contribute to improve the competitiveness / attractiveness of (cross-border) rail transport



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GIVE US YOUR FEEDBACK



# UPCOMING ERA WEBINARS

## February 16

12.00-13.00 (CET)

Cybersecurity

**SAVE THE DATE**

## March 16

14.30-1600 (CET)

Maintenance

Give us your feedback







# THANK YOU

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Moving Europe towards a sustainable and safe railway system without frontiers.

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