

Schienen-Control-Symposium

Standardisation and Interoperability

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Tuesday 04 October 2022



EUROPEAN
UNION
AGENCY
FOR RAILWAYS



The European Union Agency for Railways (ERA)

- Founded in 2004 by the Regulation (EC) 881/2004
- Tasks defined in the new Regulation (EU) 2016/796
(**4th Railway Package**)
- Approximately 200 staff members
- Headquarters in Valenciennes (FR) – (meeting facilities in Lille)
- **Railway Interoperability (TSIs), Safety**
- Since June 2019, **European authority** for Vehicle Authorisation, Safety Certification, ERTMS Trackside Approval



CROSS-BORDER RAIL IN EUROPE

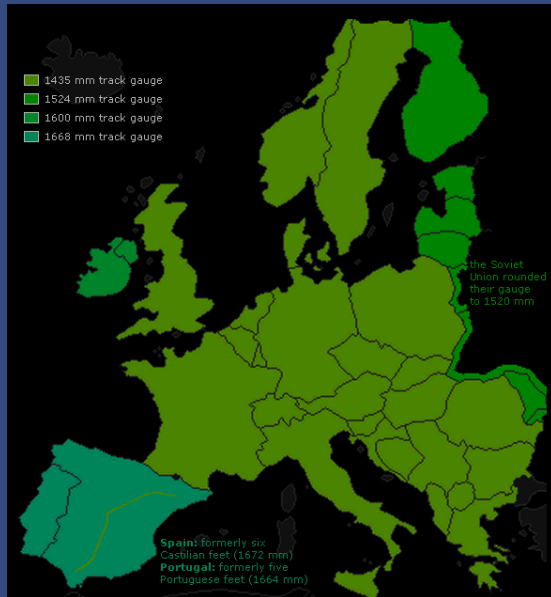
Fragmentation impairs attractiveness
and competitiveness of rail.



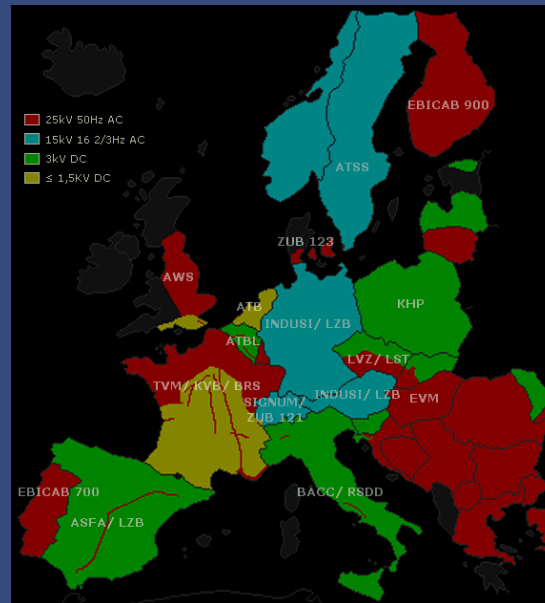
- Operational link: regular passenger services
- Operational link: only freight or touristic services
- Non-operational (historic) link
- Redundant historic link for public rail transport
- △ Proposed or projected new infrastructure link

Source: European Commission, Comprehensive analysis of the existing cross-border rail transport connections and missing links on the internal EU borders, Final report, March 2018

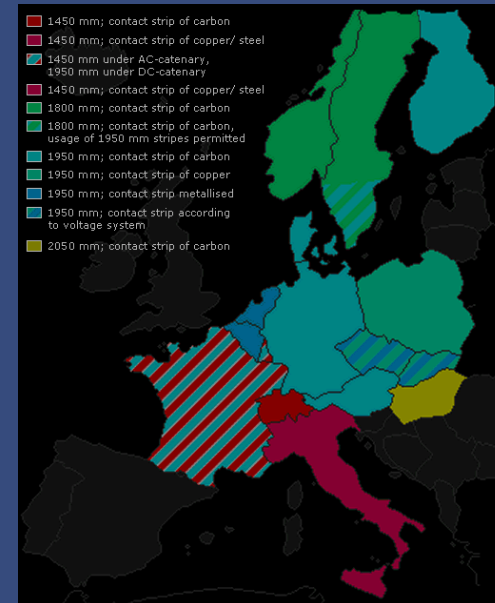
Interoperability Issues in Europe



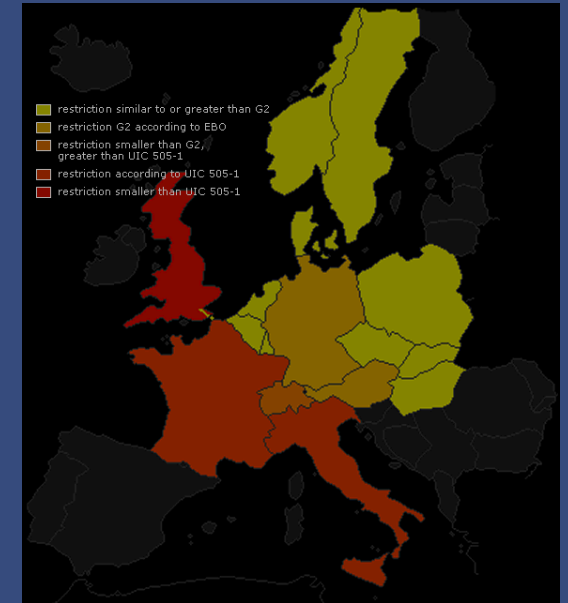
Track gauge



Catenary voltage
Signalling systems



Pantograph width



Clearance profiles

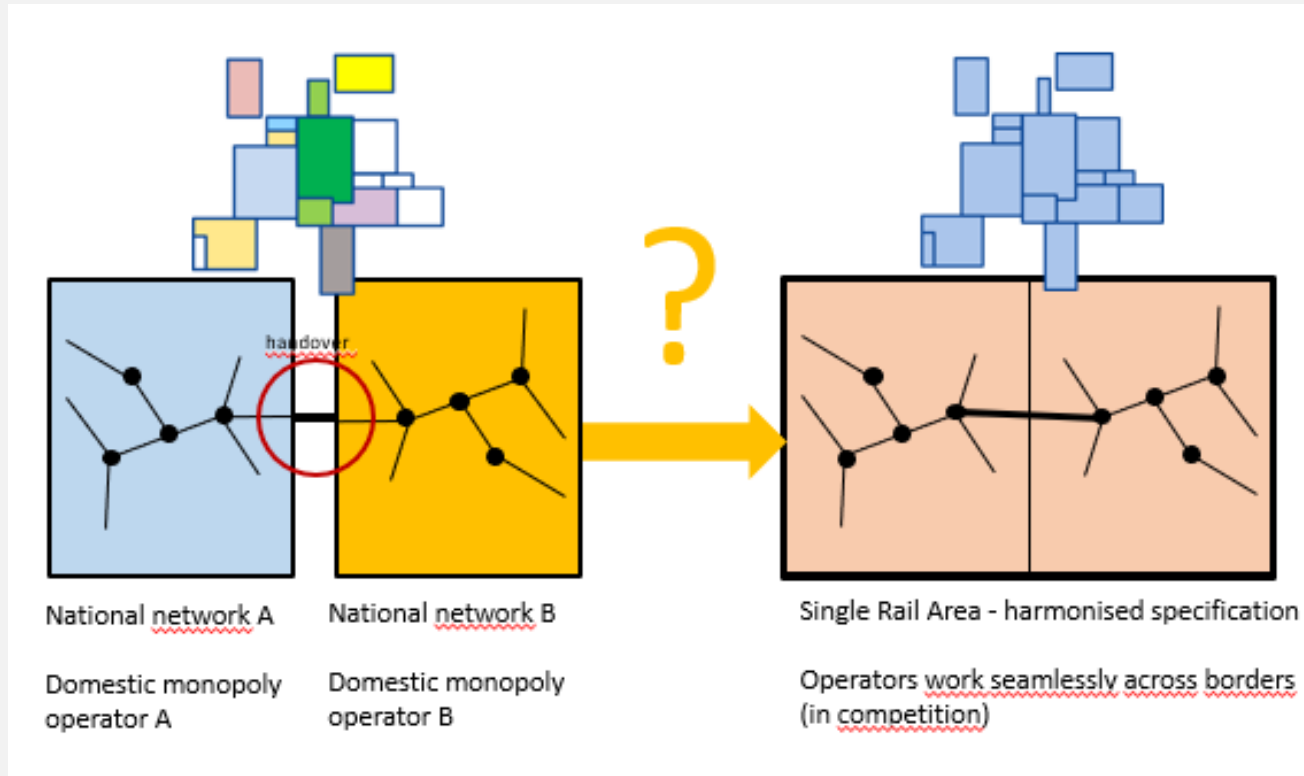


OUR MISSION

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

SERA

The Single European Railway Area



93%

More than 93 % of our
traffic is domestic

THE MANDATE OF ERA

Recommendations to the Commission

Technical Specifications for Interoperability (TSIs)
Common Safety Methods (CSMs)
Registers (Infrastructure, Vehicles, National Rules, ...)

Technical development in Railway Safety

Risk management and safety management systems
Monitoring Safety culture and safety leadership
Human and organisational factors
Accident investigation methodologies

Assistance to Member States and the EC

Dissemination on railway safety and interoperability
Training courses
Interface between NSA Supervision and Agency
Authorisations and Certifications
Other support activities on request of the stakeholders



NEW ERA TASKS UNDER THE 4th RAILWAY PACKAGE

Transposition completed 31.10.2020

Authorisation and Certification

Safety Certification for Cross-border operation (mandatory)
Safety Certification for national operation (voluntary)
Vehicle Authorisation

Approval

ERTMS trackside approval

Monitoring

National Safety Authorities, against a compliance
scheme or a maturity model
Notified Bodies (audits and inspections)



FACTS AND FIGURES

As of 27 September 2022

Facts & Figures 01 September 2022

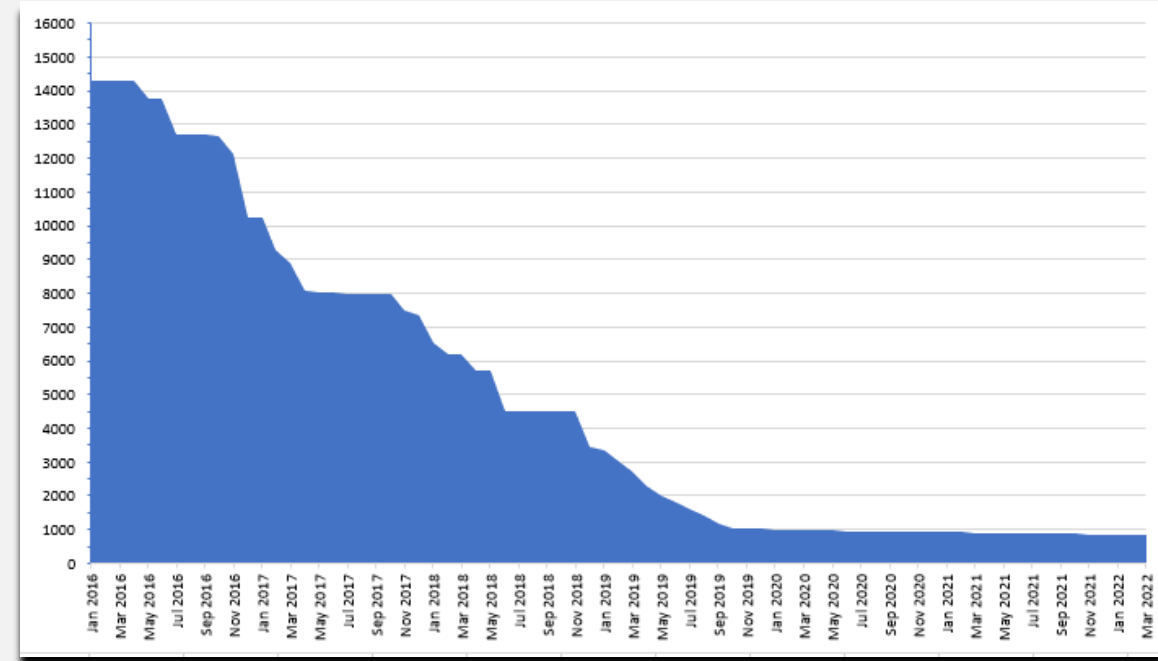
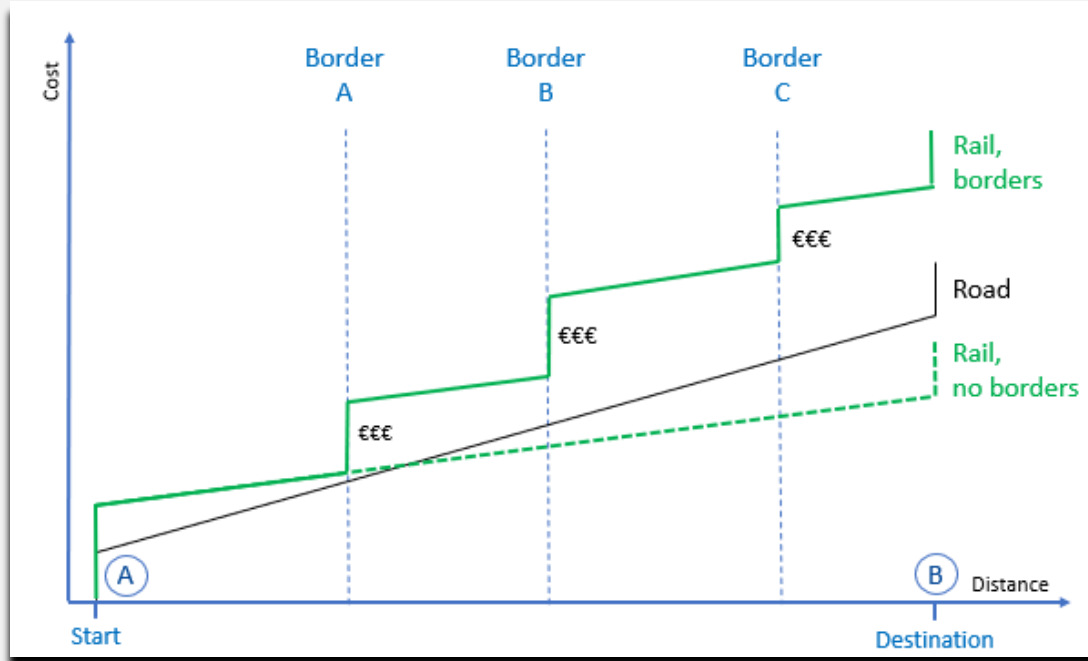
Vehicle Authorisations	Single Safety Certificates	ERTMS Trackside Approvals
3 718 delivered* <small>representing in total</small> 42 984 vehicles	106 Delivered	3 Delivered
123 projects ongoing	32 projects ongoing	78 projects ongoing
<small>Delivery for conformity-to-type with median of 2.70 working days in August 2022</small>	<small>Delivery within an average time of 5,6 months (including extensions of timeframe)</small>	

* 3400 conformity-to-type decisions; 318 pre-engagement baseline opinions and other authorisation case decisions



The strategic role of ERA

- ERA has a strategic contribution within the field of National Rules (NR) in order to make cross-border freight trains (also carrying military assets) faster
- National Rules cause delays and additional costs
- Vehicles: from 14 312 NR in Jan 2016 to 849 NR in March 2022



TSI REVISION PACKAGE 2022

The tool for sustainable railways.

The Agency prepares Technical Specifications for Interoperability under a mandate from the European Commission, received by ERA on 24 January 2020. It covers 74 topics and will be delivered in June 2022.

Game changers

- modularity
- introduction of ATO (GoA2)
- provision for future FRMCS capability

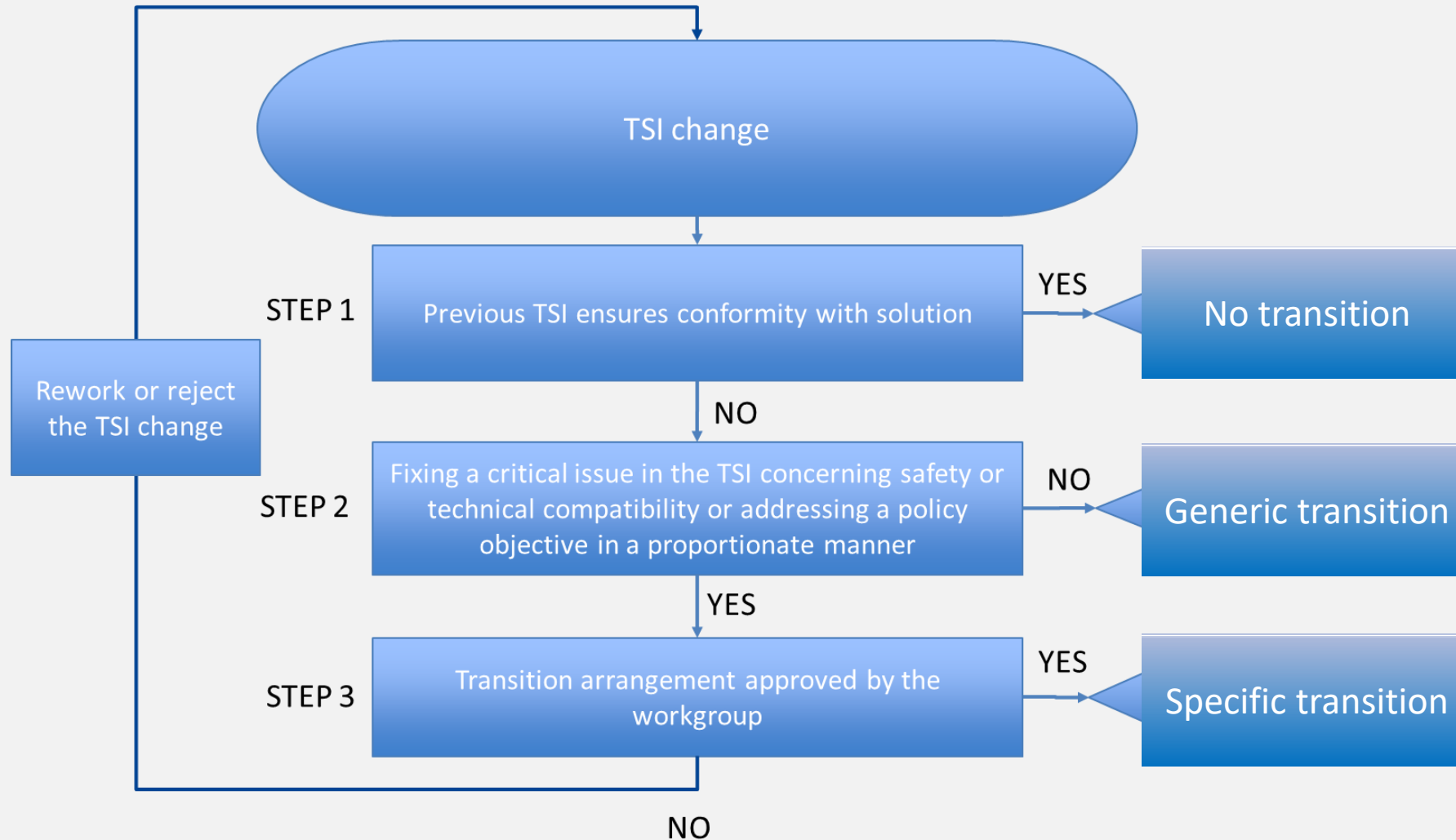
Error corrections

Stronger and more clear obligations on ERTMS deployment



TSI transition regime for rolling stock TSIs

1 – TSI change categorisation





THE OPPORTUNITY

Rail can become the most relevant mode of transport of the 21st century

CUTTING COST

- Standardisation
- ERTMS
- Common and simplified operational procedures
- Swift implementation of Fourth Railway Package

INCREASING QUALITY

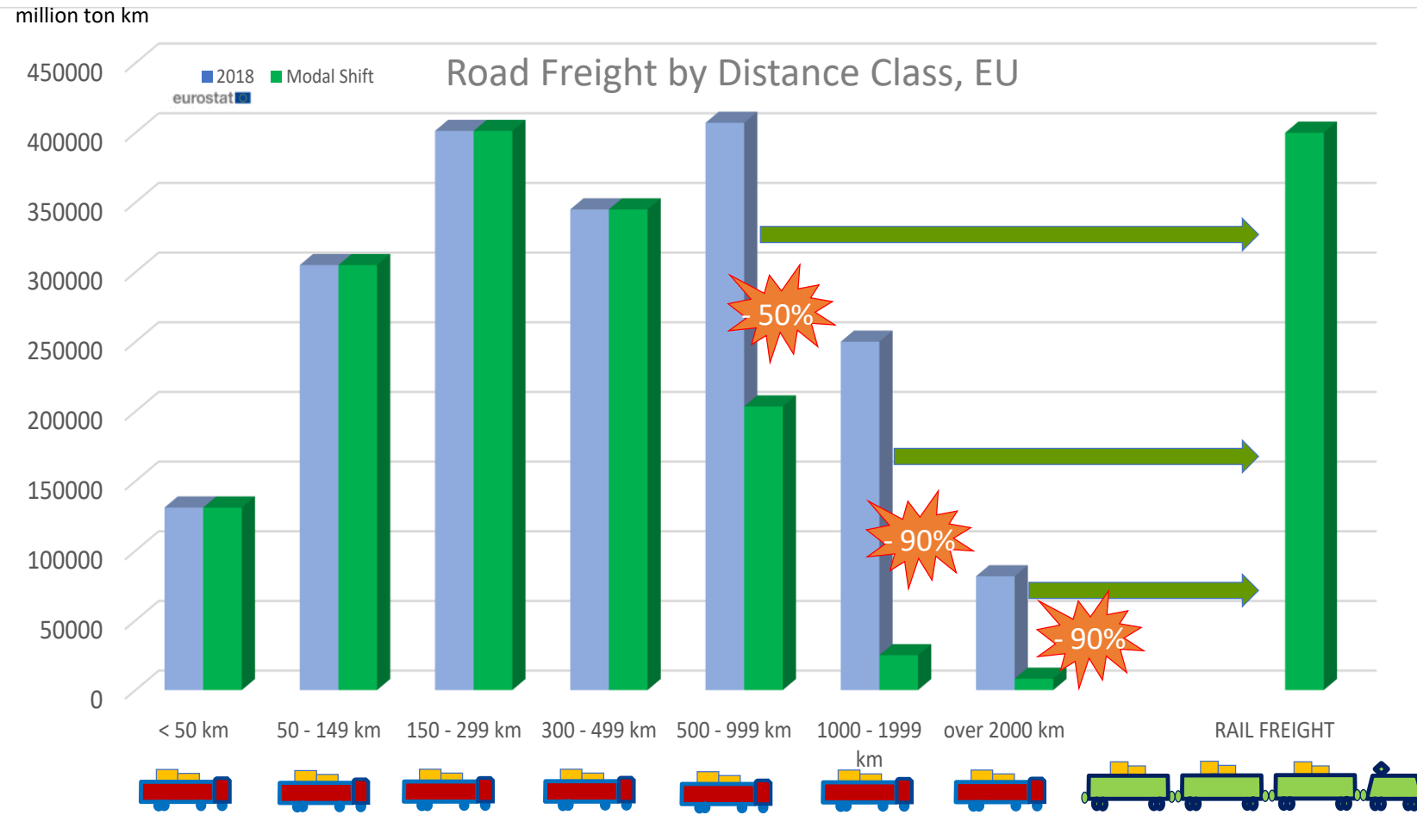
- Putting the customer first
- Network resilience and flexibility
- Environmentally friendly, optimised use of urban spaces and development

FOSTERING INNOVATION

- Collaborating to make rail more competitive
- Knowing the opportunities and risks of digitalisation

The Potential

Modal shift potential from long-distance
Road to Rail Freight (no Road Freight for > 700 km)



36 %

Rail Market Share –
if long distance road
freight is substituted
by rail

Saving

40 million

tonnes CO₂
per year

5x

less gCO₂e /  TON KM
emitted by the average rail freight load compared to its counterpart on the road

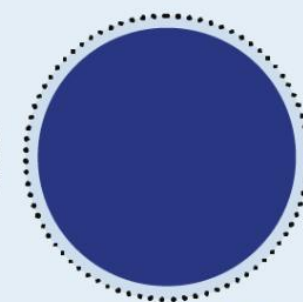
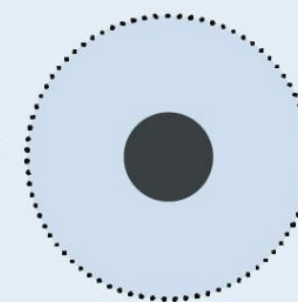
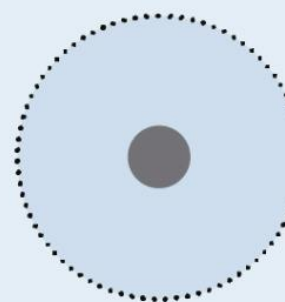


45x

less external costs compared to road transport

External cost of transport include:

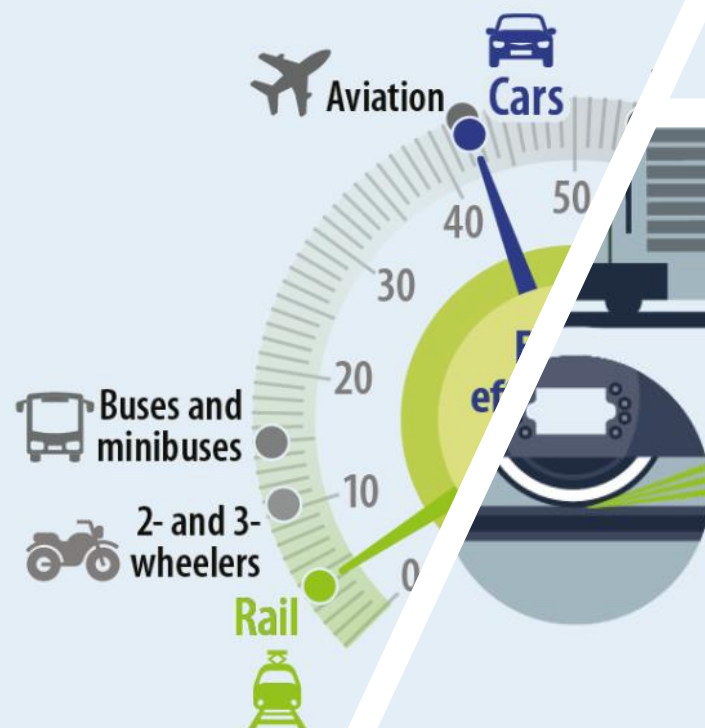
- Accident costs
- Congestion costs
- Environmental costs



10x

less energy consumption

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



3x

less friction





THANK YOU

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

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