The framework for rail transport in the European Union

12 October 2023

Directorate-General for Mobility and Transport / Climate Action

Wider political context

- Issued end-2019, the **European Green Deal calls** for a 90% reduction in greenhouse gas emissions from transport by 2050, to help the EU become the first climate neutral continent.

- To this end, the Commission announced a **Strategy for Sustainable and Smart Mobility** adopted in 2020.

THE TRANSPORT AND MOBILITY SECTOR

is the **second-largest area** of expenditure for European households

contributes **5%** to European GDP

employs directly around **10 million** workers

OBJECTIVES

1 Sustainable Mobility

2 Smart Mobility

3 Resilient Mobility

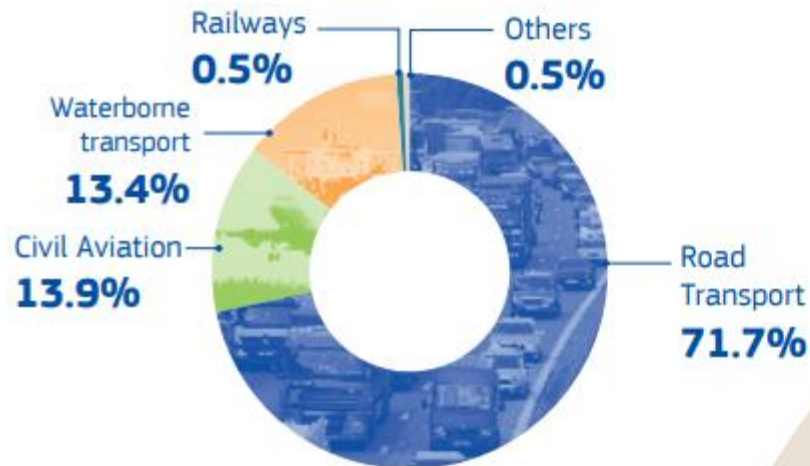# European Green Deal – Sustainable Mobility

Europe must reduce emissions from transport further and faster.

Transport accounts for a quarter of the Union's greenhouse gas emissions and these continue to grow. The Green Deal seeks a **90%** reduction in these emissions by **2050**.

90% reduction greenhouse gas emissions in transport by 2050

Share of Greenhouse Gas Emissions by Mode of Transport (2017)

Railways **0.5%**

Others **0.5%**

Waterborne transport **13.4%**

Civil Aviation **13.9%**

Road Transport **71.7%**

Source: Statistical pocketbook 2019

Go digital

- **Automated mobility and smart traffic management systems** will make transport more efficient and cleaner.

- **Smart applications** and **'Mobility as a Service'** solutions will be developed.

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SSMS Milestones – 2030/35/50

By 2030

- Min. 30 million zero-emission cars and 80 000 zero-emission lorries in operation
- Min. 100 climate neutral cities
- **Scheduled collective travel under 500 km should be carbon-neutral within the EU**
- **Doubled high-speed rail traffic, rail freight traffic increases by 50%**
- Transport by inland waterways & short sea shipping increases by 25%
- **Rail & waterborne-based intermodal will be able to compete on equal footing with road-only transport in the EU**
- **Paperless freight transport**
- Automated mobility deployed at a large scale
- **Integrated electronic ticketing**
- **Operational multimodal Trans-European Transport Network equipped for sustainable and smart transport with high speed connectivity (core network)**
- Zero-emission ocean-going vessels ready for market

By 2035

- Large zero-emission aircraft ready for market

By 2050

- Nearly all cars, vans, buses as well as new heavy-duty vehicles will be zero-emission
- **Doubled rail freight traffic, tripled high-speed rail traffic**
- Transport by inland waterways & short sea shipping increases by 50%
- **External costs of transport within the EU will be covered by the transport users**
- Death toll for all modes of transport in the EU close to zero
- **Operational multimodal Trans-European Transport Network equipped for sustainable and smart transport with high speed connectivity (comprehensive network)**
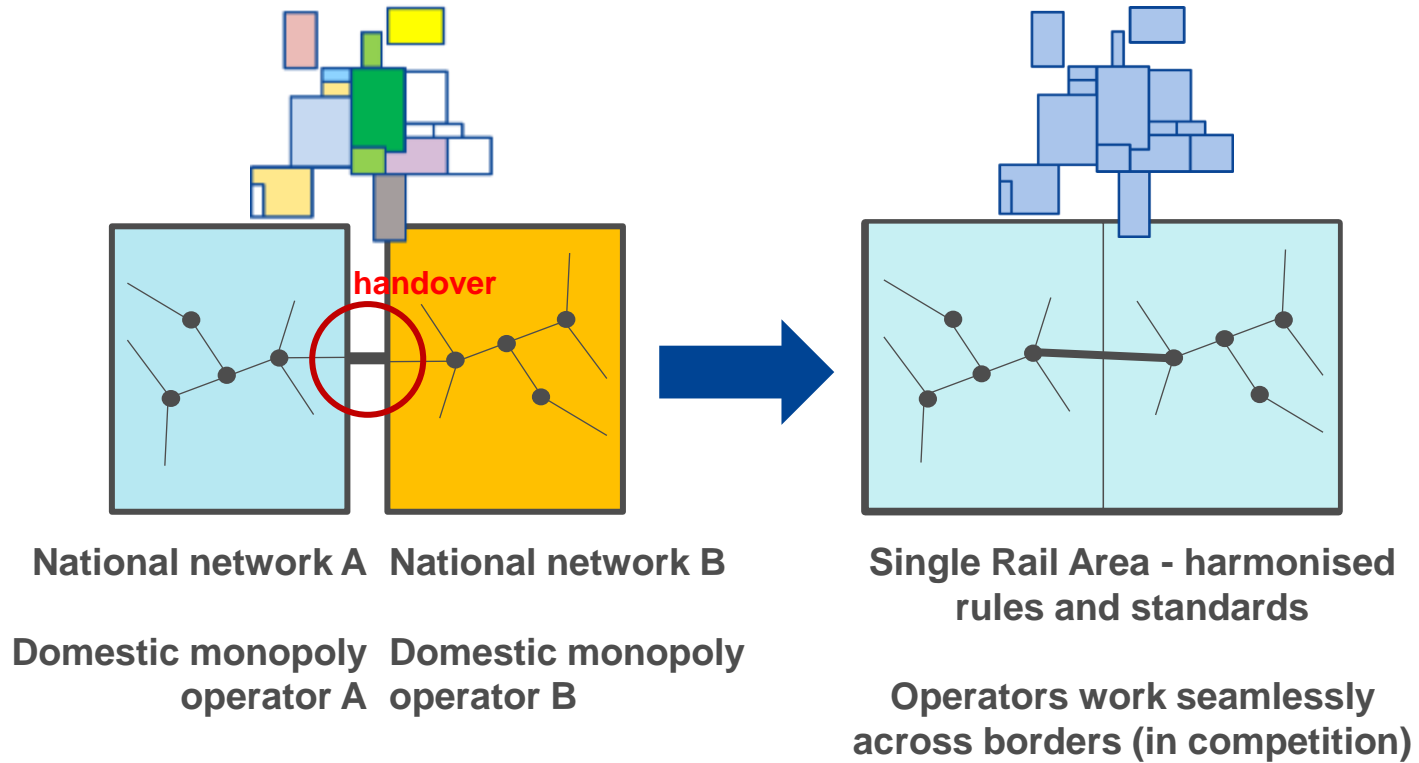
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The railway sector in the European Union

- Length of railway network = over 200 000 km (including 11 526 km of high-speed lines)

- 81,6% of total train*kilometres powered by electricity

- 0,4% of EU GHG transport emissions

- Land transport modal share
- 7,9% passenger
- 16,7% freight

- Use of railway network (of total train*kilometres)
- 79% passenger services
- 21% freight services

Density (length of network per million people)

(source: draft Rail Market Monitoring Survey Report, data 2020)

Towards a Single European Rail Area

Integrated approach

National network A   National network B

Domestic monopoly operator A   Domestic monopoly operator B

Single Rail Area - harmonised rules and standards

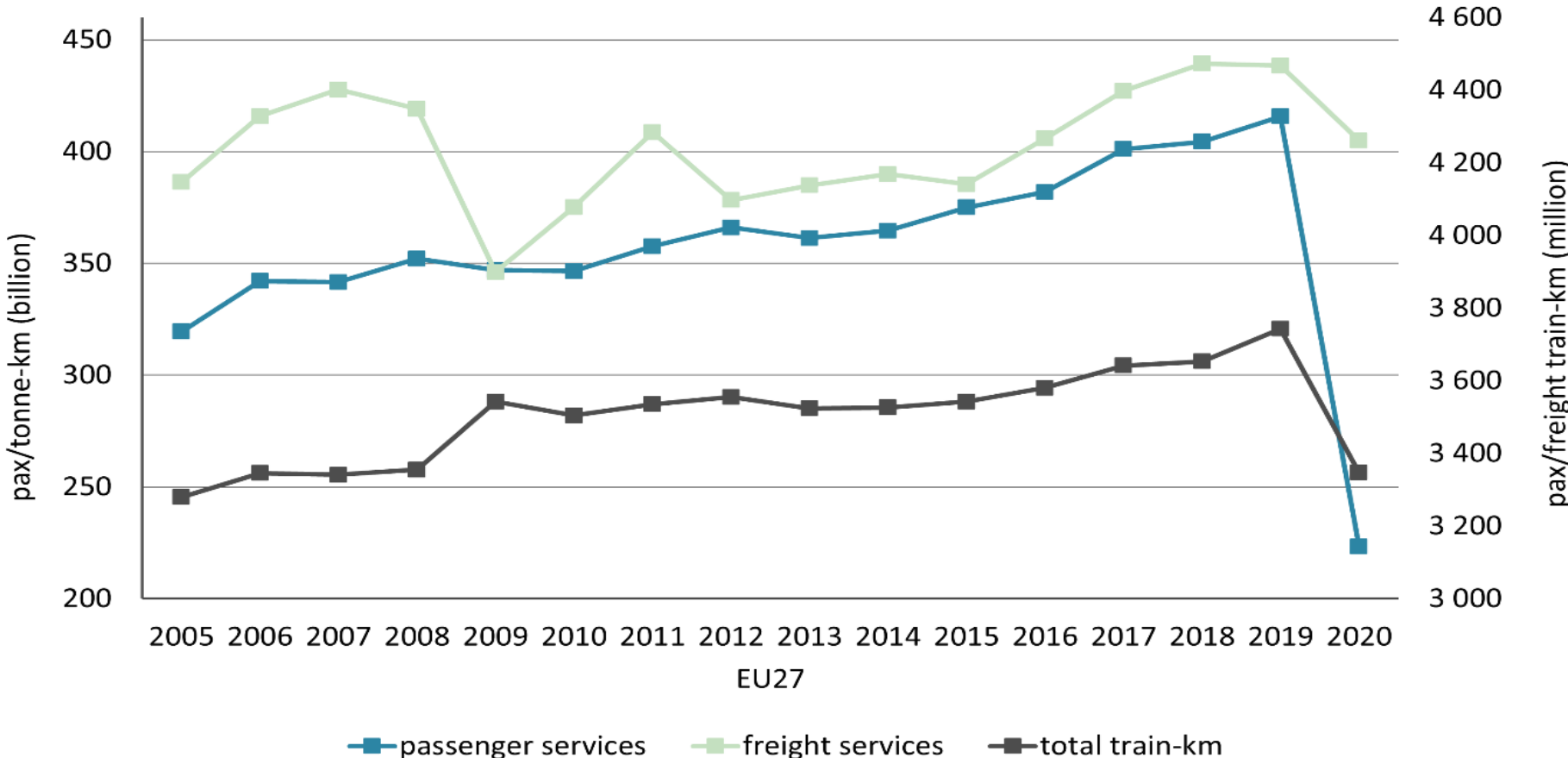Operators work seamlessly across borders (in competition)

From the "Patchwork System" to a European Network

Integration and opening up to competition
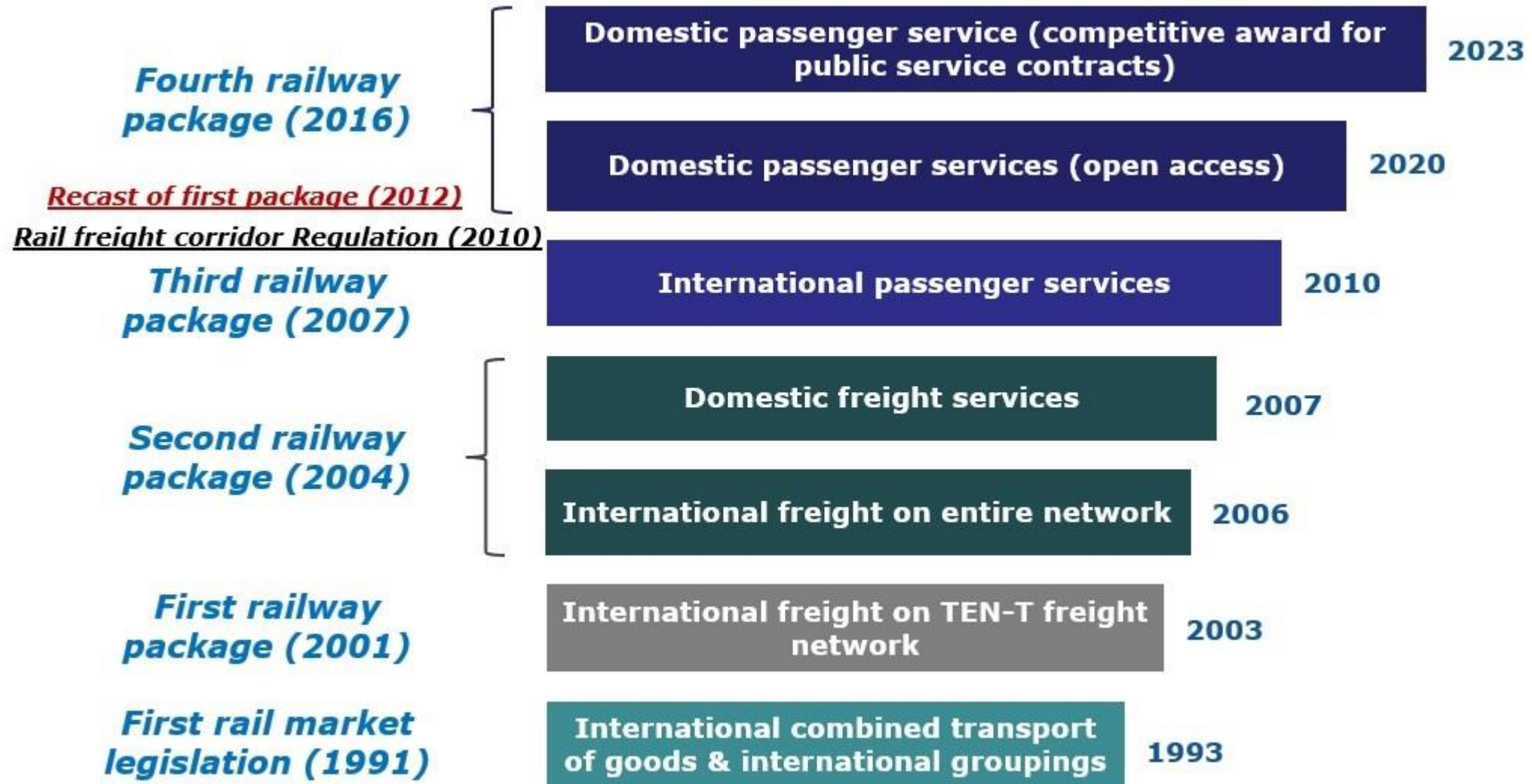
Evolution of passenger and freight volumes (2005-2020)

passenger services ▪ freight services ▪ total train-km

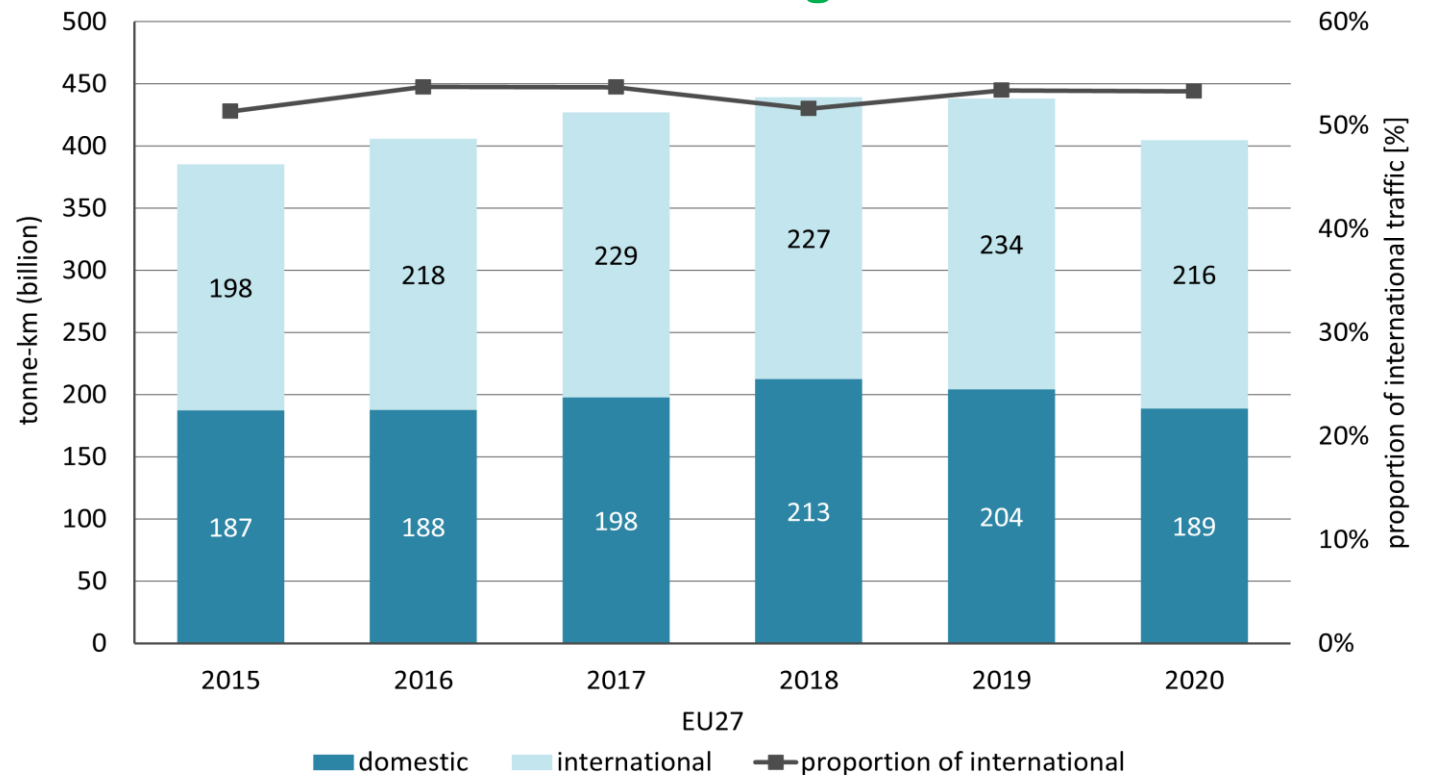# Proportion of cross-border traffic

3,6% **Passenger traffic**

2020 data. Prior to the COVID outbreak, the proportion of cross-border rail passenger traffic was **7%**

53% **Freight traffic**

	2015	2016	2017	2018	2019	2020
international	198	218	229	227	234	216
domestic	187	188	198	213	204	189

tonne-km (billion)

proportion of international traffic [%]

EU27

domestic   international   proportion of international

Market share of incumbents vs. new entrant companies

Freight market

- Market share of alternative operators
- Market share of the incumbents

46%
↑ 12 p.p. since 2015

Alternative operators
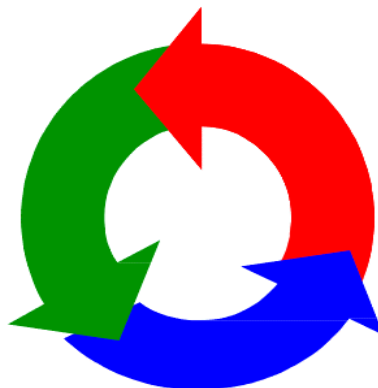**Incumbents**

National passenger markets

14%
↑ 2 p.p. since 2015

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Development of the EU railways

System approach

Interoperability

European Commission
EU Agency for Railways
National Safety authorities (NSAs)
Conformity assessment bodies

Safety

European Commission
EU Agency for Railways
National Safety Authorities (NSAs)
National Investigating Bodies (NIBs)
Entities in charge of maintenance (ECMs)
Assessment Bodies (AsBo)

Competitive Market

European Commission
National Regulatory Bodies
Platform of Rail Infrastructure managers in Europe (PRIME)

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Structure of the EU rail transport acquis

- *Market pillar (economic regulation, market access, public service contracts)*

- *Technical pillar (safety, interoperability)*

- *European Union Agency for Railways (ERA)*

- Technical specifications for interoperability (TSIs) and Common Safety Methods (CSMs)

- Train driver licensing

- Rail Freight Corridors

- Transport of dangerous goods

- Passenger rights, ticketing

- Social field - working time / hour

- Trans-European Network & Connecting Facility

Regulatory framework of the 'market pillar'

Directive 2012/34/EU (as amended)

- **Independence of infrastructure managers from railway undertakings**
- Transparency of financial flows / accounting separation
- Financing infrastructure managers activities
- Non-discriminatory and affordable track access charges
- Non-discriminatory and transparent capacity allocation process
- Access to service facilities
- EU-wide licensing of railway undertakings (process, requirements, validity)
- Independent National Regulatory Body with appropriate competences and resources

Regulation (EU) 1370/2007 (as amended)

- Competitive tendering of public service contracts

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Regulatory framework of the 'technical pillar'

Safety Directive (EU) 2016/798

- Rail safety responsibilities of rail sector actors
- Common Safety Methods (CSMs)
- Reduction of national rules
- Safety management system (SMS)
- Safety certification
- Safety authorisation
- Vehicle maintenance
- Accident investigation

Interoperability Directive (EU) 2016/797

- Essential requirements
- Technical specifications for interoperability (TSIs)
- Reduction of national rules
- Vehicle authorisation + concept of area of use
- Authorisation of fixed installations
- Registers
- Harmonised ERTMS implementation

EU Agency for Railways Regulation (EU) 2016/796

- Recommendations to the Commission (TSI, CSMs,)
- Technical development in railway safety
- Assistance to Member States and the Commission
- Authority delivering Safety Certification and Vehicle Authorisation

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The EU Agency for Railways (ERA)

An enhanced role for the Agency

- The Agency acts as "ONE STOP SHOP"
- It grants safety certificates for Railway Undertakings operating in more than one Member State and, if so requested by the applicant, in one Member State (area of operation)
- It grants vehicle authorisations for placing on the market of vehicles intended to be used in more than one Member State and, if so requested by the applicant, in one Member State (area of use)
- NSAs work in close cooperation with the Agency through cooperation agreements
- A new IT system to ensure an harmonised approach (One-Stop-Shop)
- Authority tasks of the Agency financed by fees and charges
- Examines of national rules with the right to request the removal of unnecessary ones
- Monitors National Safety Authorities and Notified bodies
- System authority for ERTMS and telematics

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4th Railway Package Technical Pillar Implementation

Three steps of implementation:

- 16th June 2019 – light green

- 16th June 2020 – dark green

- 31 October 2020 (Covid-outbreak postponement) - red
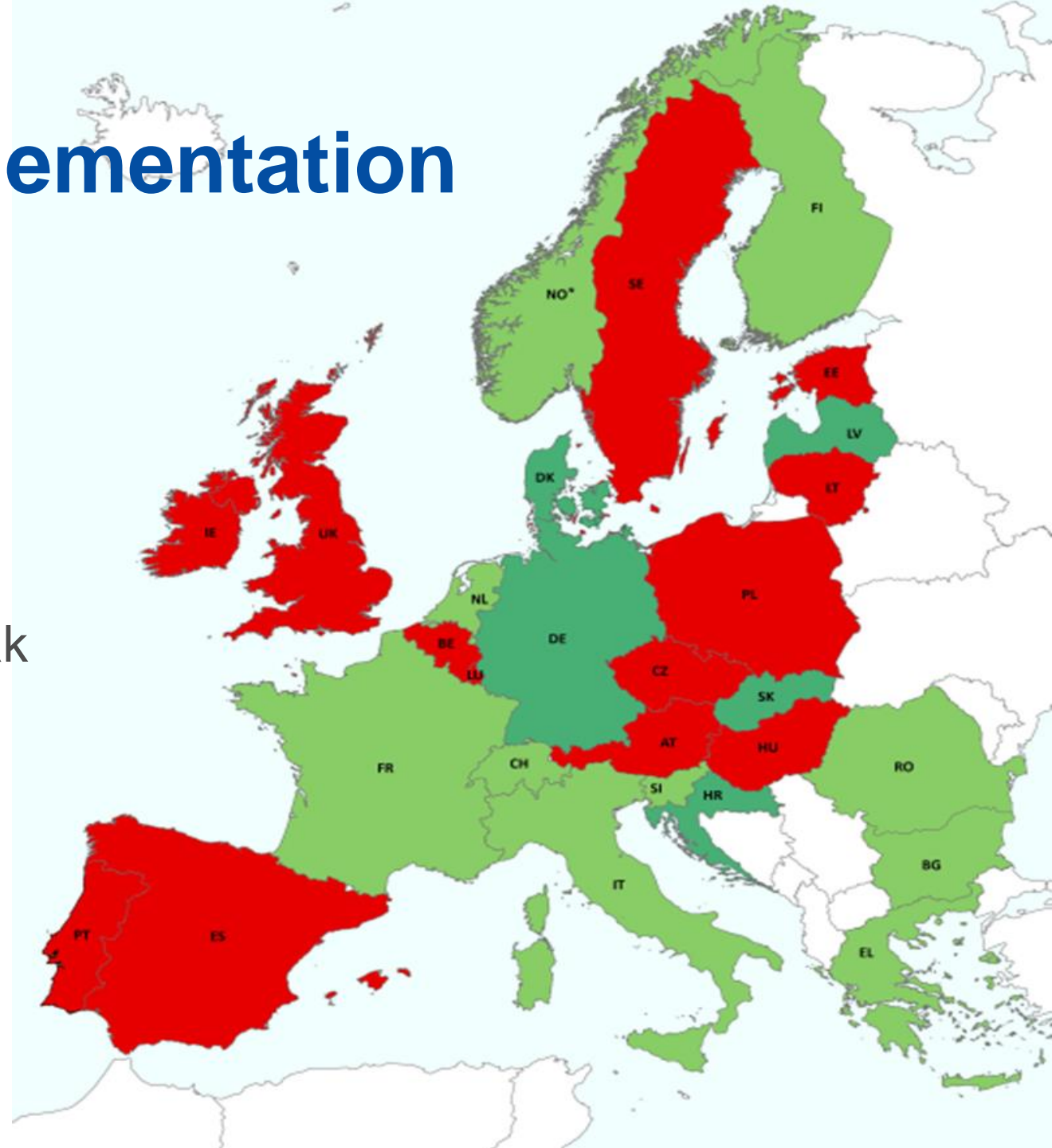
FACTS AND FIGURES

Facts & Figures December 2022

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

*4086 Vehicle Authorisations in Conformity to Type, 251 Vehicle Authorisations and 83 Pre-engagement opinions
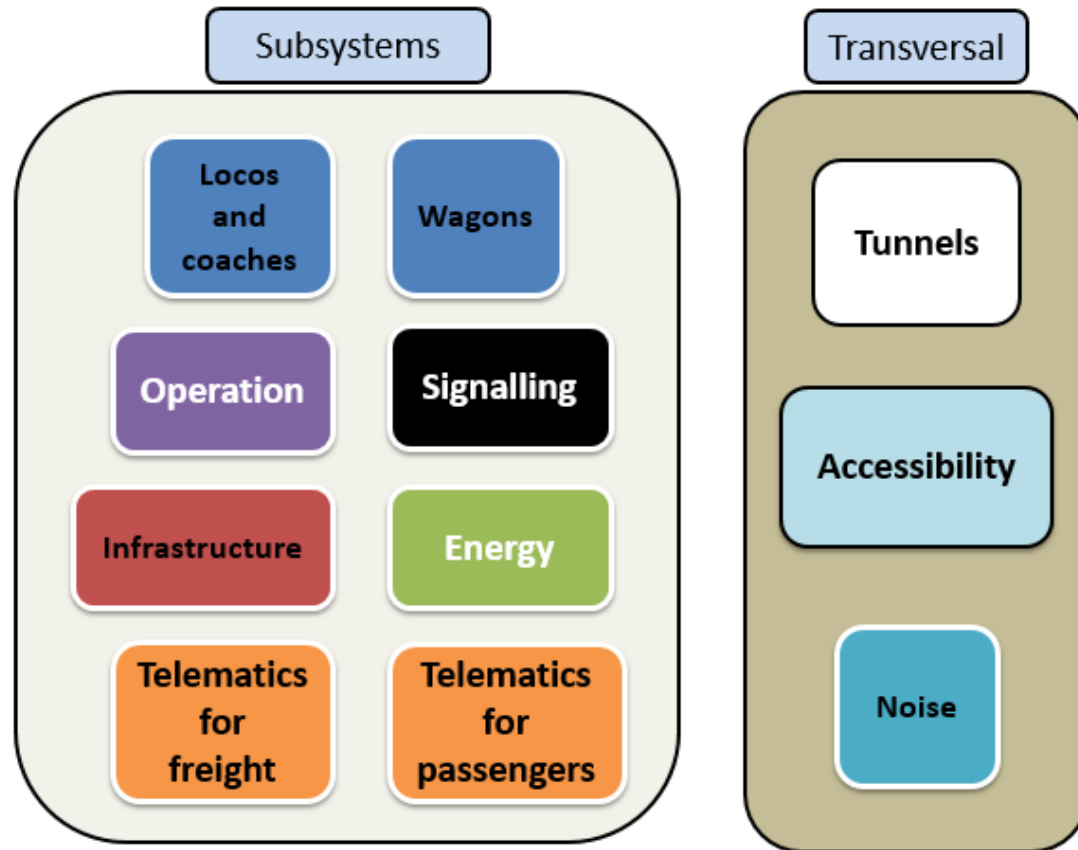
Safety monitoring and supervision
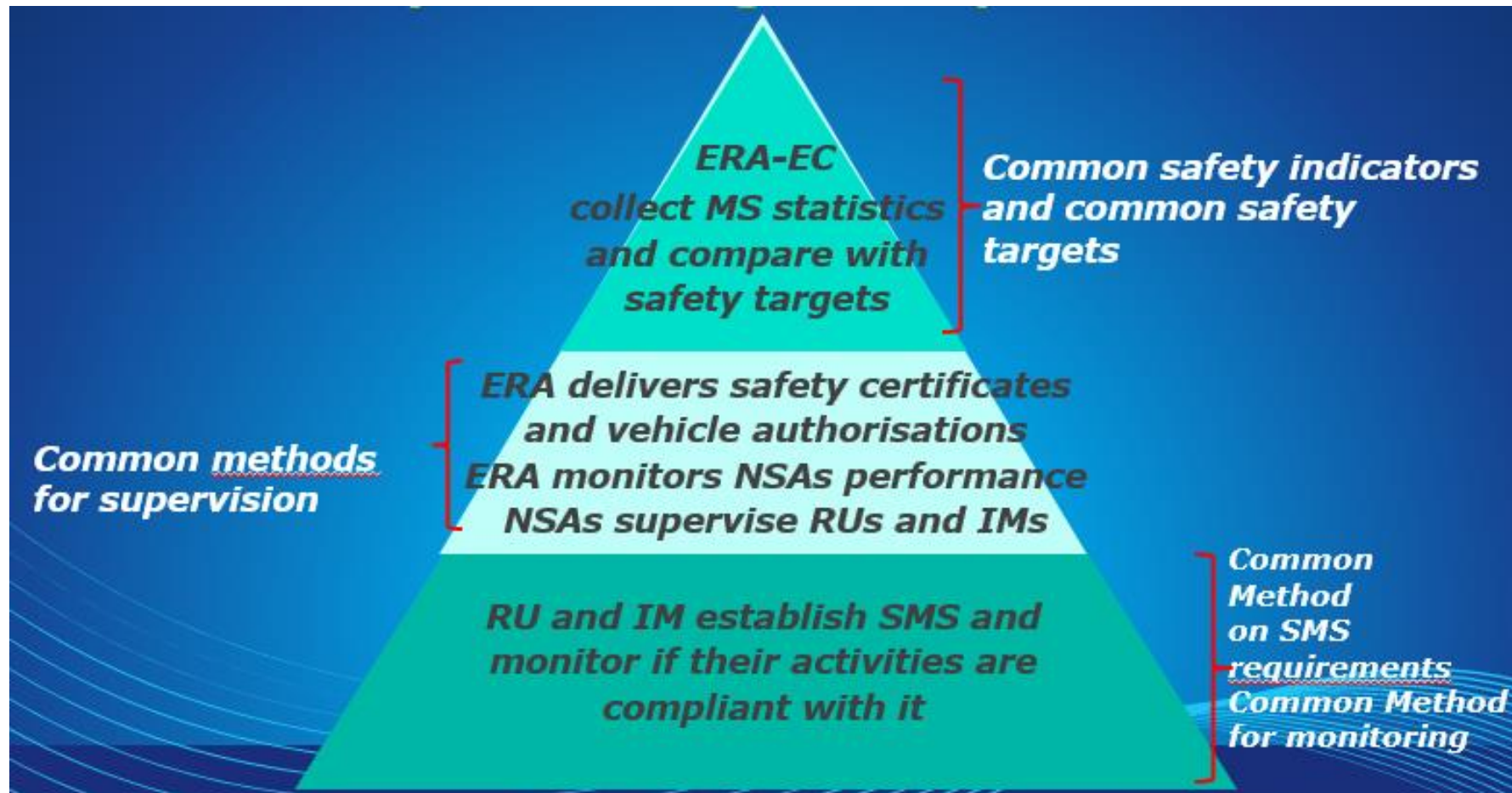
EU harmonized framework vs National rules

Technical specifications for interoperability (TSIs)   Common Safety Methods (CSMs)

Subsystems

- Locos and coaches
- Wagons
- Operation
- Signalling
- Infrastructure
- Energy
- Telematics for freight
- Telematics for passengers

Transversal

- Tunnels
- Accessibility
- Noise

- ➡ Common Safety Method for risk evaluation and assessment
- ➡ Common Safety Method for monitoring
- ➡ Common Safety Methods on safety management system requirements
- ➡ Common Safety Methods on supervision
- ➡ Common Safety Method on common safety targets
- ➡ Common Safety Methods for conformity assessment

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Other main responsibilities at EU level (safety, interop)

Safety certification

➢ **Single Safety Certificate** Confirms (1) establishment of railway, (2) undertaking's SMS ability of the railway undertaking to operate safely

➢ **Safety authorization**: Granted by the National Safety Authority to infrastructure managers; Confirms establishment of infrastructure manager's SMS

Vehicle authorisation

➢ **Vehicle placed on the market** only after having received the vehicle authorisation issued by the Agency or national safety authority

➢ **Applicant** sets area of use/authorisation valid for that area;

➢ There is no EU establishment requirement for applicants. Any natural of legal person may apply for the authorisation.

Harmonised implementation of the European Rail traffic Management System (ERTMS)

Registers

Thank you

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