

EU-Rail

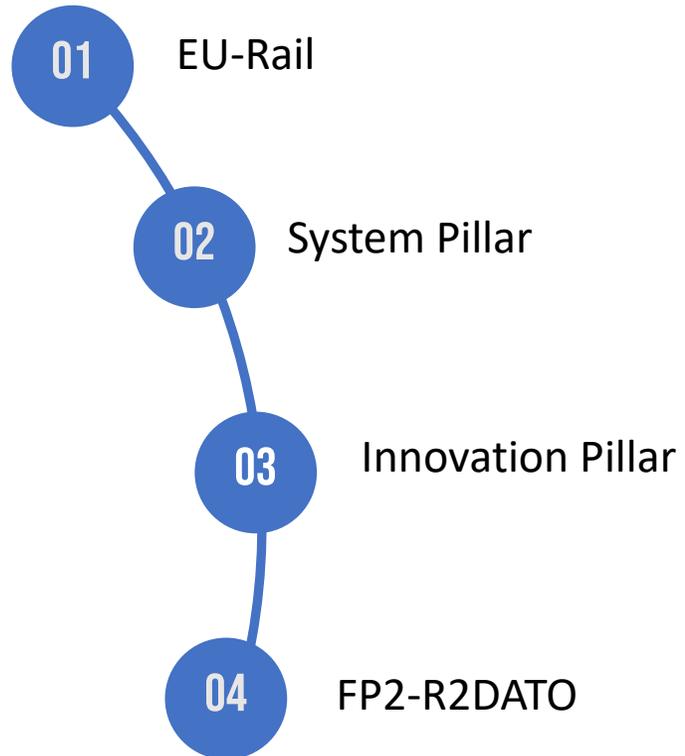
System Pillar – Innovation Pillar

FP2 R2DATO

Contact at SNCF

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Cédric GALLAIS – SNCF SA DTIPG - R2DATO Coordinator



EU-Rail

A European Joint Undertaking for the railway sector



Founding Members



Towards a green and digital Europe



EUROPEAN GREEN DEAL
climate neutrality by 2050



SUSTAINABLE AND SMART MOBILITY STRATEGY
articulating the pathways towards digitalisation and greening the transport sector

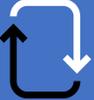


INDUSTRIAL STRATEGY
enhancing Europe's rail supply industry competitiveness

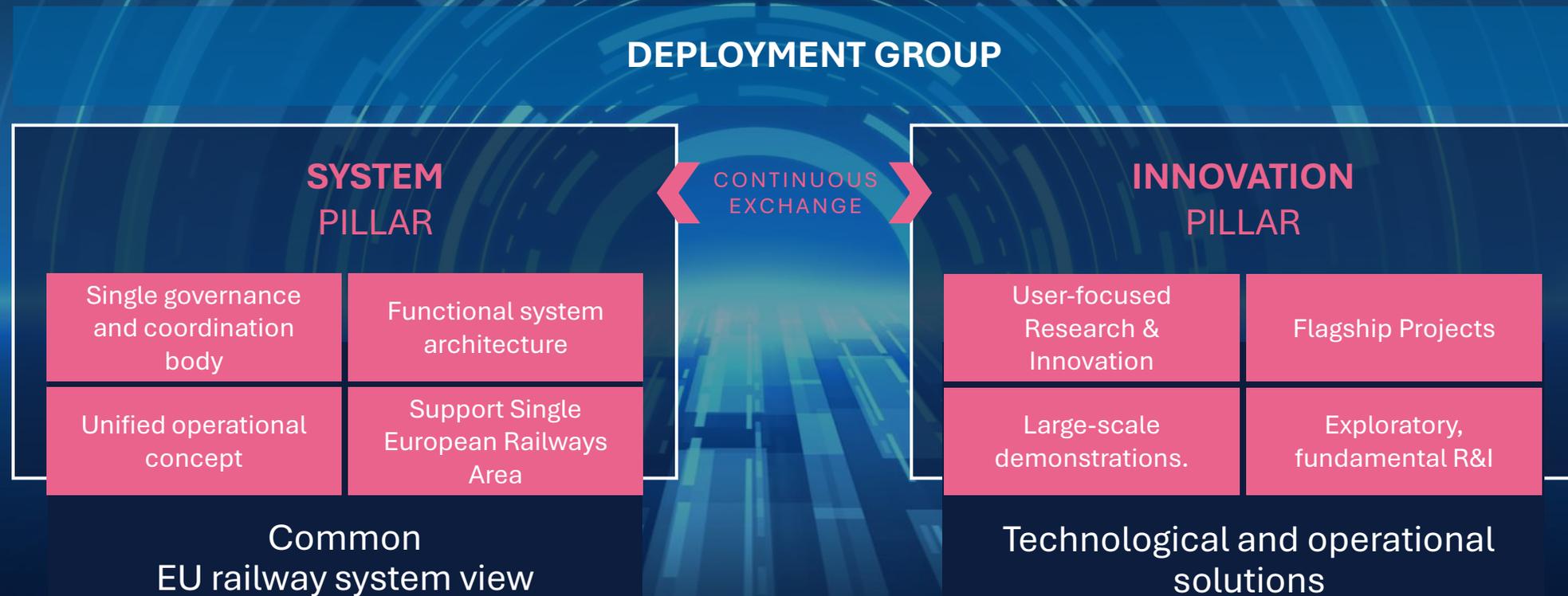


DIGITAL DECADE
bringing Europe to the forefront of digitalisation and automation

Common Business Objectives

<p>High capacity</p> 	<p>Flexible</p> 
<p>Interoperable</p> 	<p>Multimodal</p> 
<p>Sustainable</p> 	<p>Reliable</p> 
<p>Competitive</p> 	<p>Inclusive</p> 

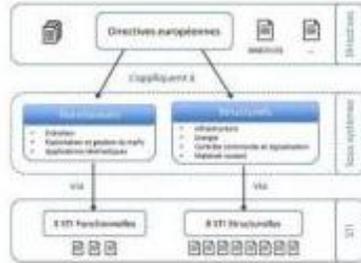
Single R&I Programme based on a system view



System Pillar

A fragmented European landscape

A system of TSIs



European initiatives



Innovation projects funded by the European Commission



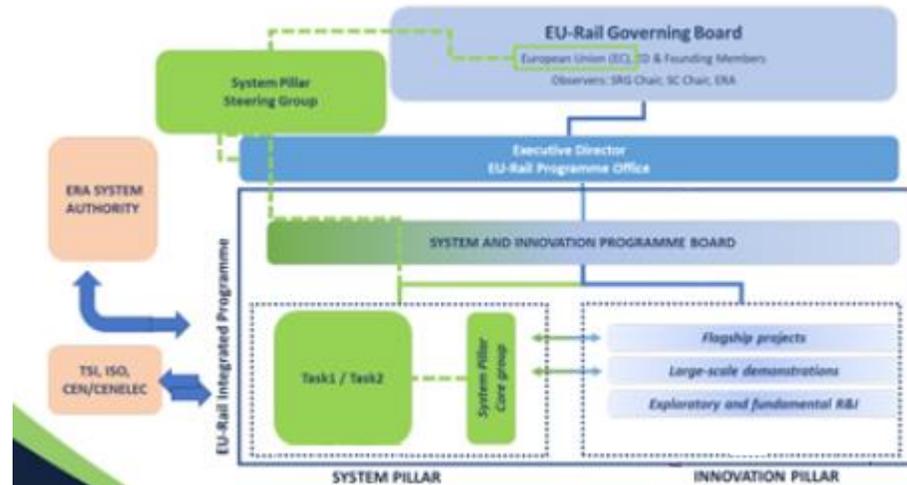
The European Commission notes a profusion of projects with a variety of application level, with the following consequences :

- Slow and expensive deployment of innovations
- Limited potential market and return on investment
- Limited railway system performance and competitiveness of the railway supply industry for the global market



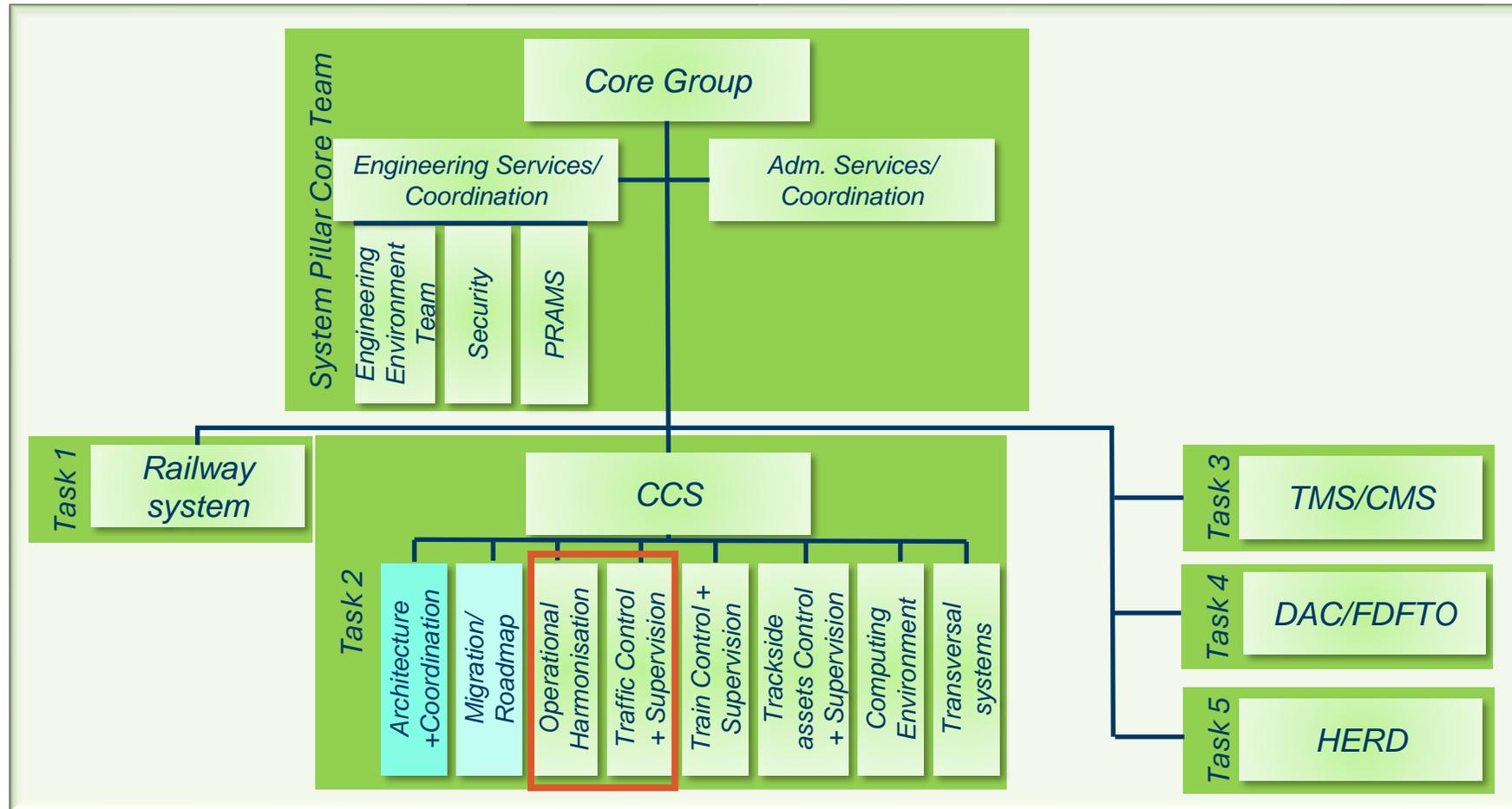


A pool of European experts, funded by Europe’s Rail and coming from the Railway Supply Industry as well as Railway Operating Companies, is in charge of harmonising the European railway system at a high level, to enable the faster deployment of digitalisation and innovations, and guide the evolutions of the regulation and standards.

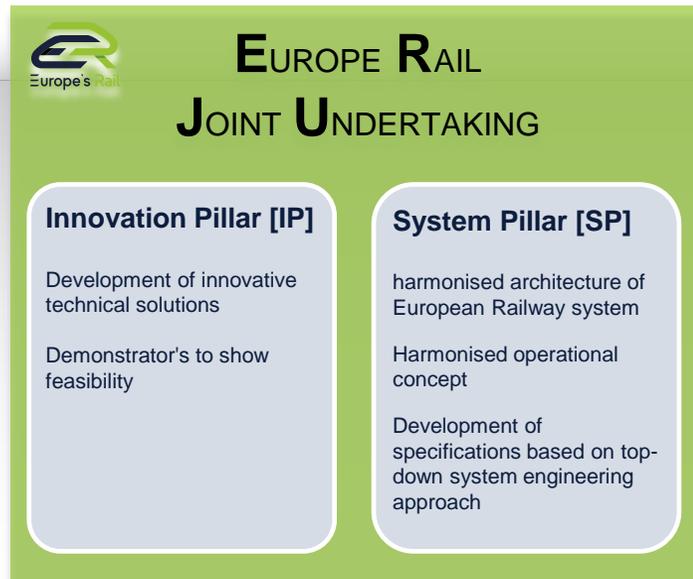


Its aim is to:

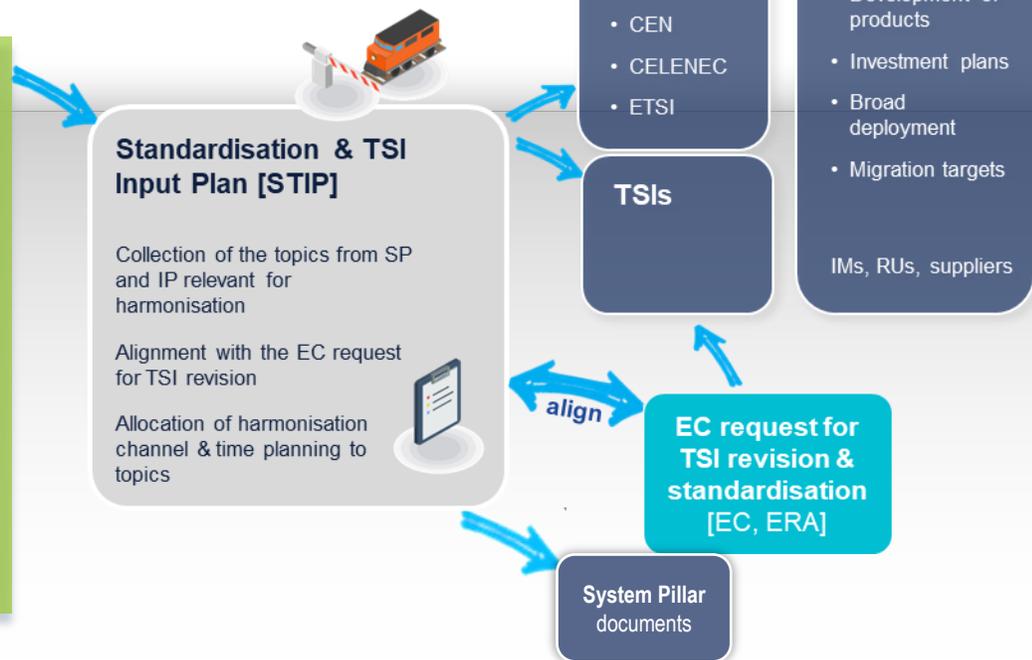
- Harmonise operating concepts within the single European railway area
- Define and agree on a functional architecture for the rail system to guide developments in the sector: regulatory requirements, particularly TSIs, are intended to be refinements of this common architecture.
- In the long term, to optimise demonstrations of conformity, and to manage and accelerate the performance and maturity of standardised and interoperable solutions.



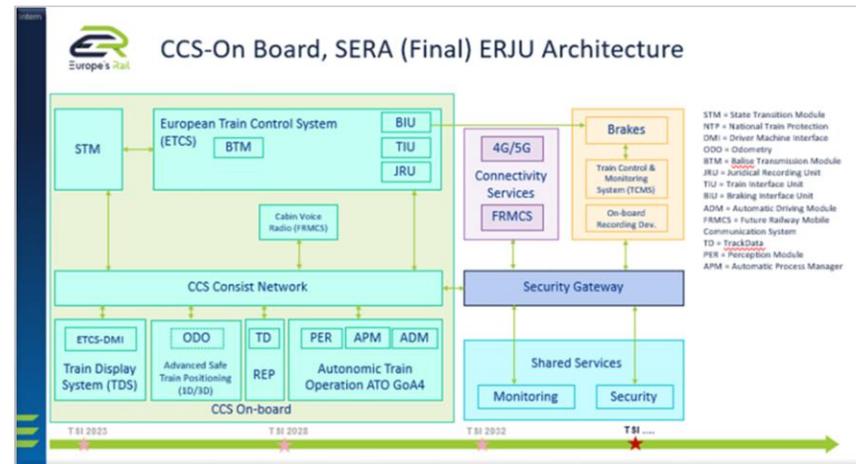
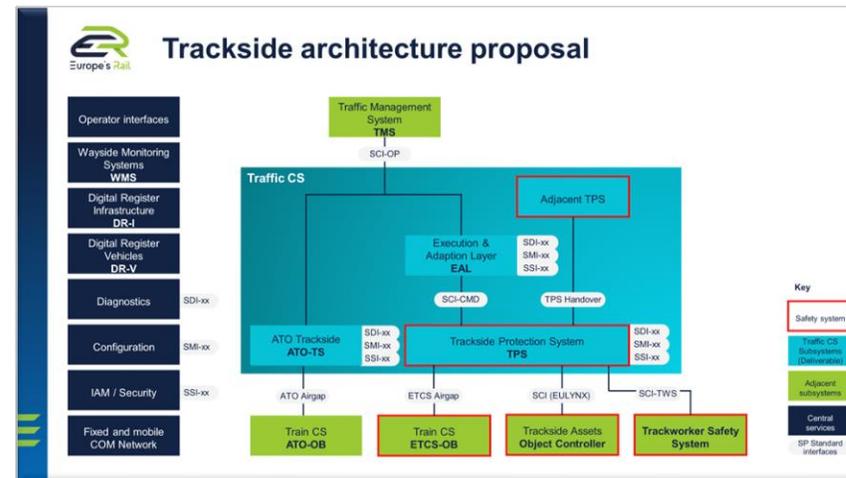
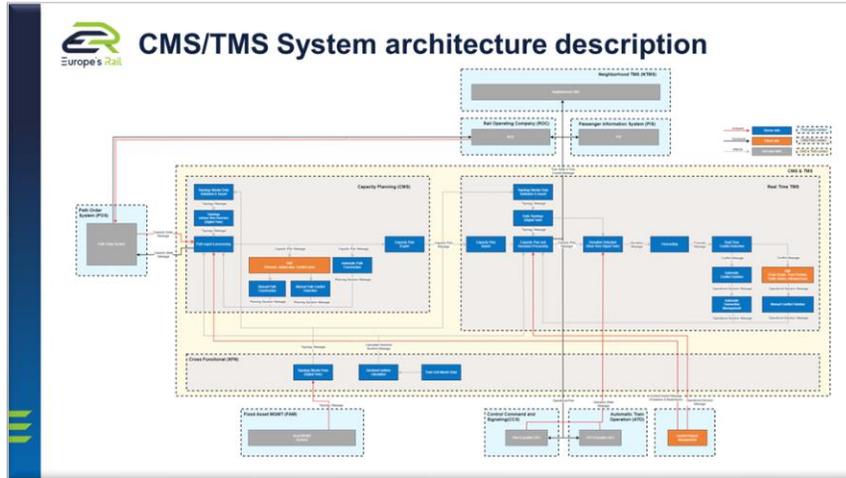
Innovation & Development Activities



Standardisation, Regulation & Deployment



A fragmented European landscape

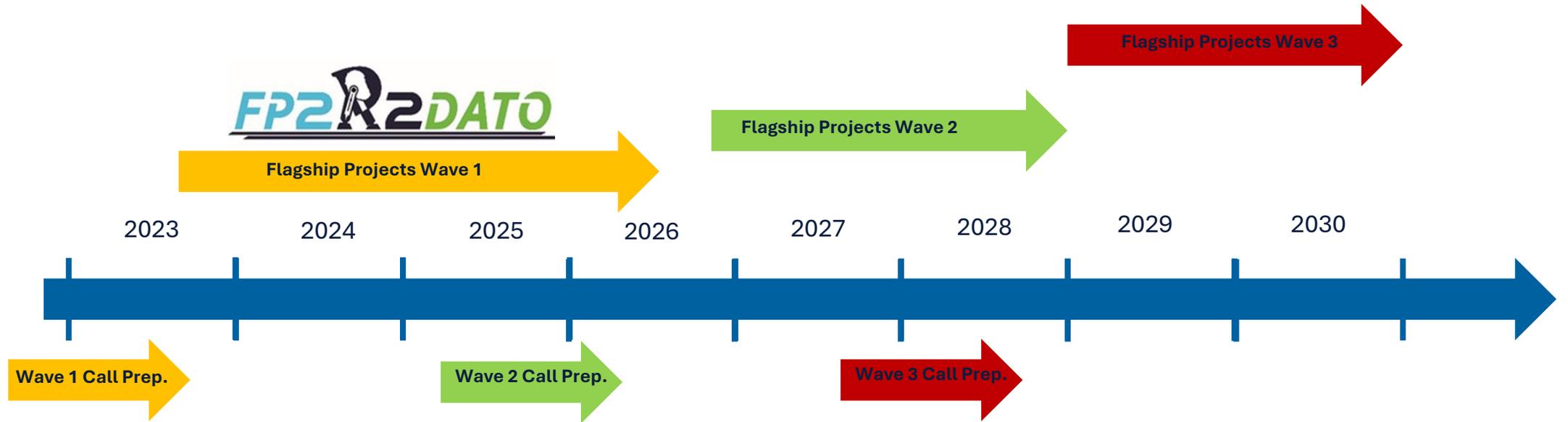


Innovation Pillar

Project ID	Project title	Topic	Period	Project value
	FP1 - MOTIONAL Flagship Project 1 - Mobility management multimodal environment and digital enablers	HORIZON-ER-JU-2022-FA1-TT-01	01/12/2022 - 30/09/2026	€ 92.600.000,00
	FP2 - R2DATO Flagship Project 2 - Rail to Digital automated up to autonomous train operation	HORIZON-ER-JU-2022-FA2-01	01/12/2022 - 31/05/2026	€ 160.800.000,00
	FP3 - IAM4RAIL Flagship Project 3 - Holistic and Integrated Asset Management for Europe's RAIL System	HORIZON-ER-JU-2022-FA3-01	01/12/2022 - 30/11/2026	€ 106.900.000,00
	FP4 - RAIL4EARTH Flagship Project 4 - Sustainable and green rail systems	HORIZON-ER-JU-2022-FA4-01	01/12/2022 - 30/11/2026	€ 95.100.000,00
	FP5 - TRANS4M-R Flagship Project 5 - Transforming Europe's Rail Freight	HORIZON-ER-JU-2022-FA5-01	01/07/2022 - 31/03/2026	€ 95.100.000,00
	FP6 - FUTURE Flagship Project 6 - Delivering innovative rail services to revitalise capillary lines and regional rail services	HORIZON-ER-JU-2022-FA6-01	01/12/2022 - 30/11/2026	€ 32.900.000,00

Project

Flagship Areas: Development in 3 waves



28
Partners

6 Clusters

48 WPs



588
Experts

202
Deliverables

28
Partners

FP2-R2DATO partners together represent the railway sector in Europe :

Operators & Infrastructure managers



Association



Suppliers

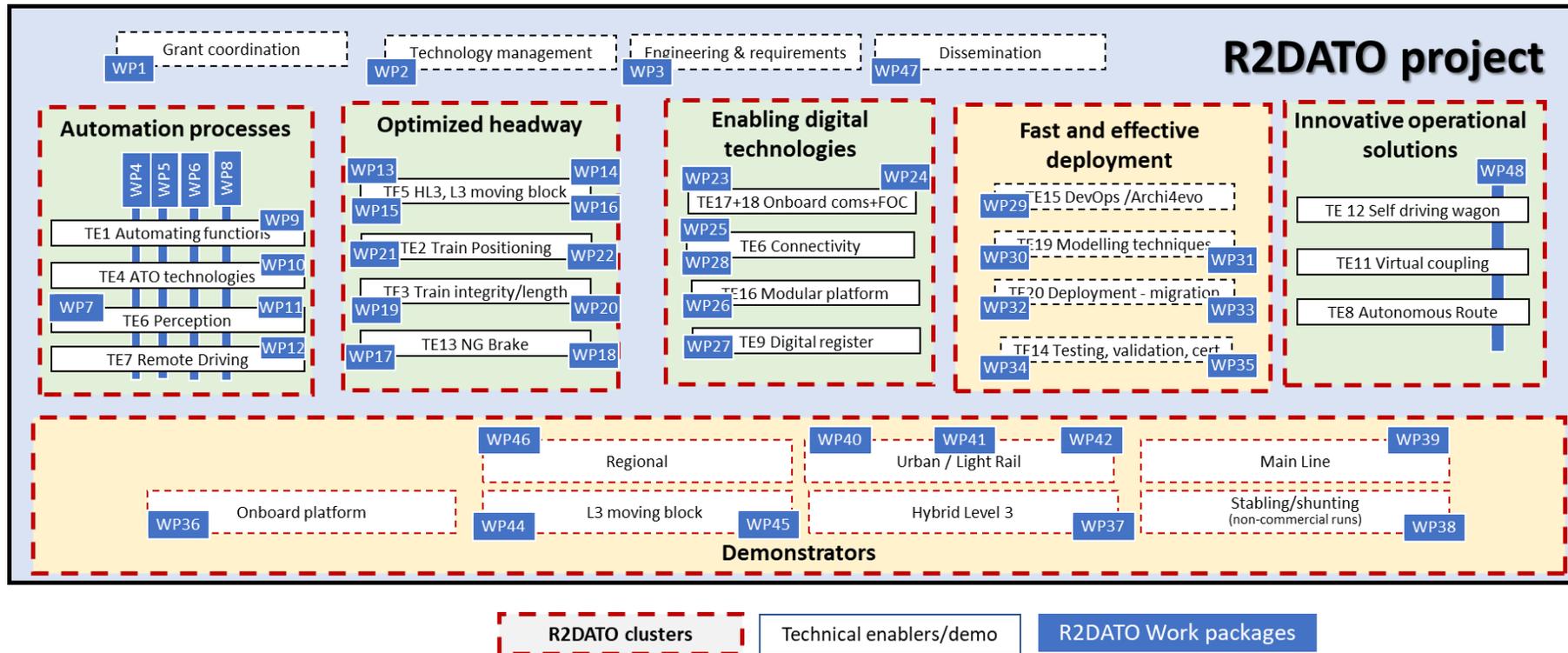


Research Institutes

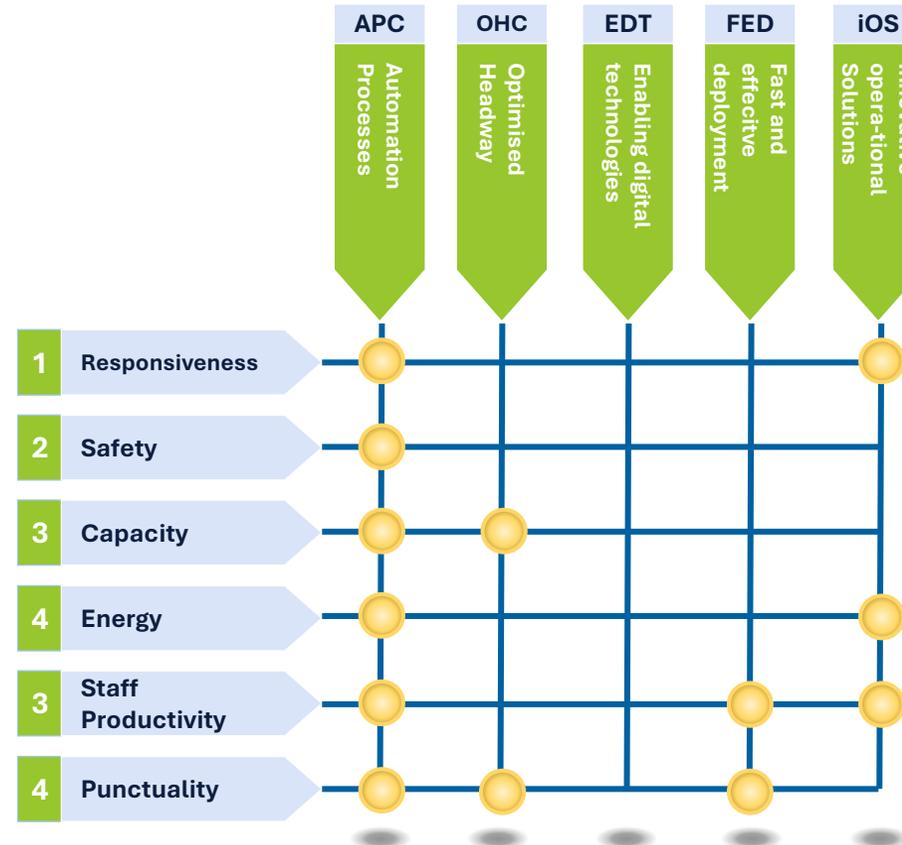


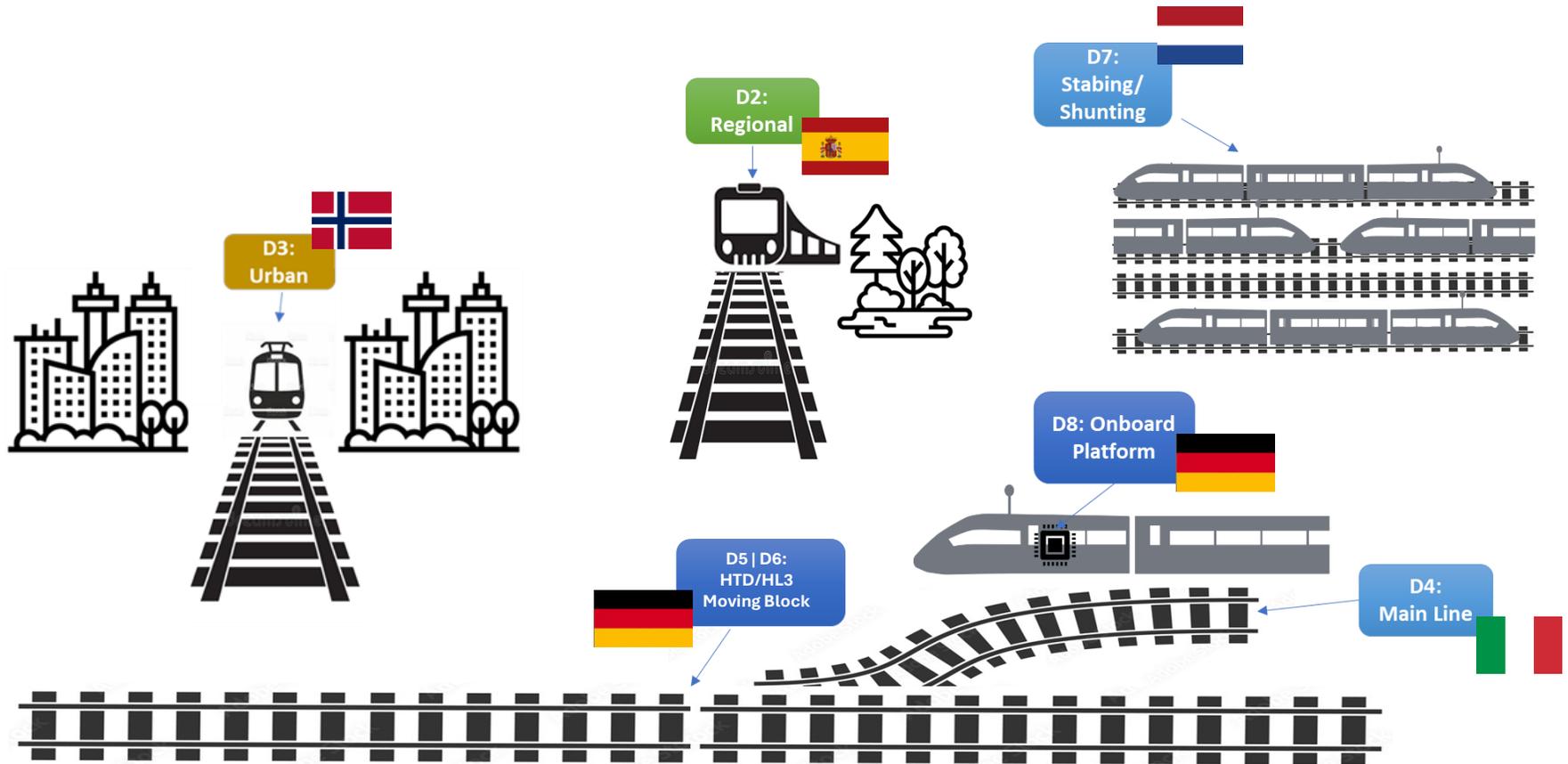
6 Clusters **48 WPs**

FP2-R2DATO is composed of 6 clusters to manage the production of 48 Work Packages (WPs):



- **Key Performance Indicators (KPI) addressed by FP2-R2DATO given in the Grant Agreement (GA):**
- **Responsiveness:** Reaction time on a request from Traffic Management System (TMS) (represented by FA1) to 2 Minutes (from 2 hours)
- **Safety:** 50% decrease of no. of collisions with 3rd parties per 10.000 km travelled (ca. from 0.2 to 0.1)
- **Capacity:** 10% Increase of no. of trains on a line per hour and direction
- **Energy:** 10% decrease of energy consumption in kWh compared to human driver average
- **Staff productivity:** 30% increase of productive hours
- **Punctuality:** 50% decrease in delay Minutes





Thank you for your attention!



www.rail-research.europa.eu

