Outline

- Introduction SP5
- Roadmaps to 2050
- Scenarios and Assessment
- Migration

Partner

ADIF
DB
University of Lisbon
University of Sheffield
TRL
TCDD
COMSA
NR
UIC
IK
C4R breakdown structure

**SP1 - Infrastructure**
Transversal approach for infrastructure solutions for conventional mixed traffic and VHS, integrated monitoring and power supply, reduced maintenance, highly reliable S&Cs

**SP2 - Freight**
Longer trains, lower tare loads, automatic coupling, enhanced braking. Modern, automated, intelligent, fully integrated system for efficient, reliable, freight operations

**SP3 - Operation and capacity**
Traffic capacity computation for freight and passengers, models and simulators for planners: capacity generation, traffic flow, resilience to perturbations, ability to recover from disturbance, computerized real time info to customers and operators at any time.

**SP4 - Advanced monitoring**
Integration of Advanced Monitoring Technologies in the design and built-in process for an easier-to-monitor (self monitoring) infrastructure with low cost and low impact inspection.

**SP5 - Migration**
State of art

Scenarios for smooth migration from now to 2050

Assessment of the full sustainability of the developed solutions

Demonstration

Recommendations

Capacity for Rail
Visions and the steps to reach

Vision 2050 (SP5)

How does the railway system look like?

Demonstration or detailed analysis on real corridors

TR levels
Quick wins, mid- and long-term

Steps - SP1-SP4
Extraction of visions

- **24h/7day - Infrastructure**
- **Modular infrastructure** which is adaptable to further requirements (I)
- **Adaptable and predictive maintenance strategies** (M,I)
- **High speed freight trains** with up to 200 km/h (F, I)
- **Each 15 minutes runs a passenger train** on more than 30 % of the network (I, O)
- **Cross-border interoperability** across Europe through the creation of a single standard for railway signalling (S)
- **Reduced complexity - No catenary** – power supply by conductor rails and fuel cells (I, F, P)
- **Long trains with up to 1400 m** with a single or two locomotives (F,I)
- **Trains know and report their parameters** like length or axle load (M,O)
- **50 % shift** from road to rail (O,S)
The work of SP5 - overview

SP5 presentation will focus on

- **Roadmap towards 2050** - Vijay Ramdas (TRL)
- **Scenarios and assessment** - Paulo Teixeira (IST)
- **Migration of infrastructure** - Burchard Ripke (DB Netz)
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