

IPX: HYPERNEX

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HYPERNEX Final event, 23 February 2022



28
MEMBERS



493
PARTICIPANTS



29
COUNTRIES



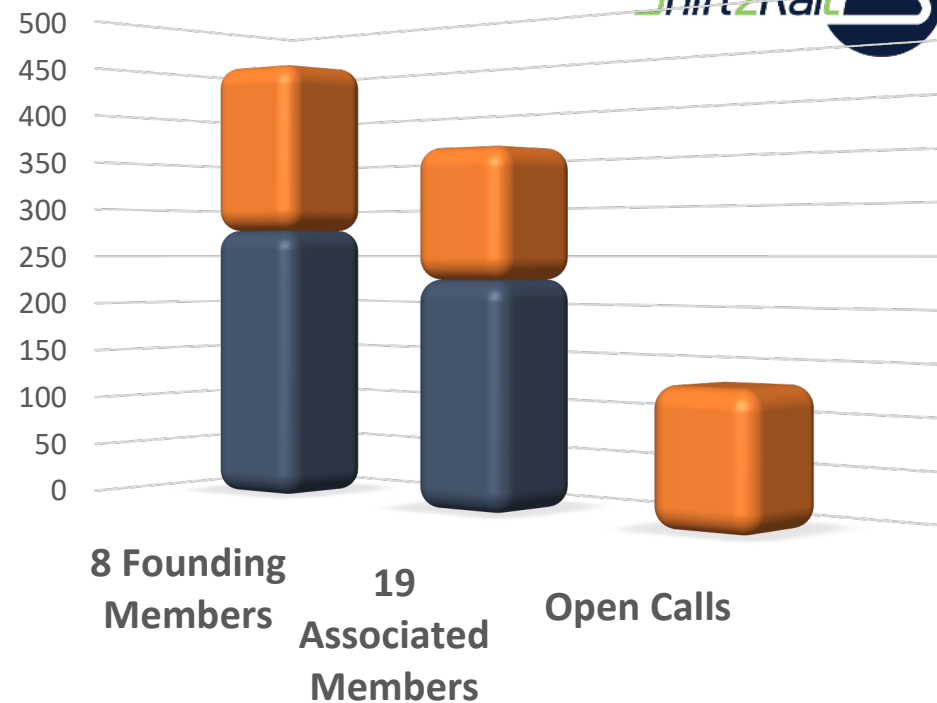
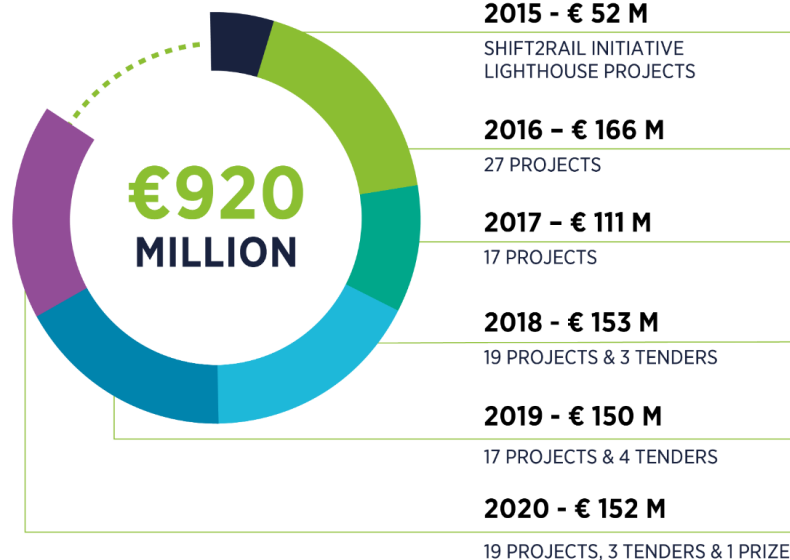
127
SMEs



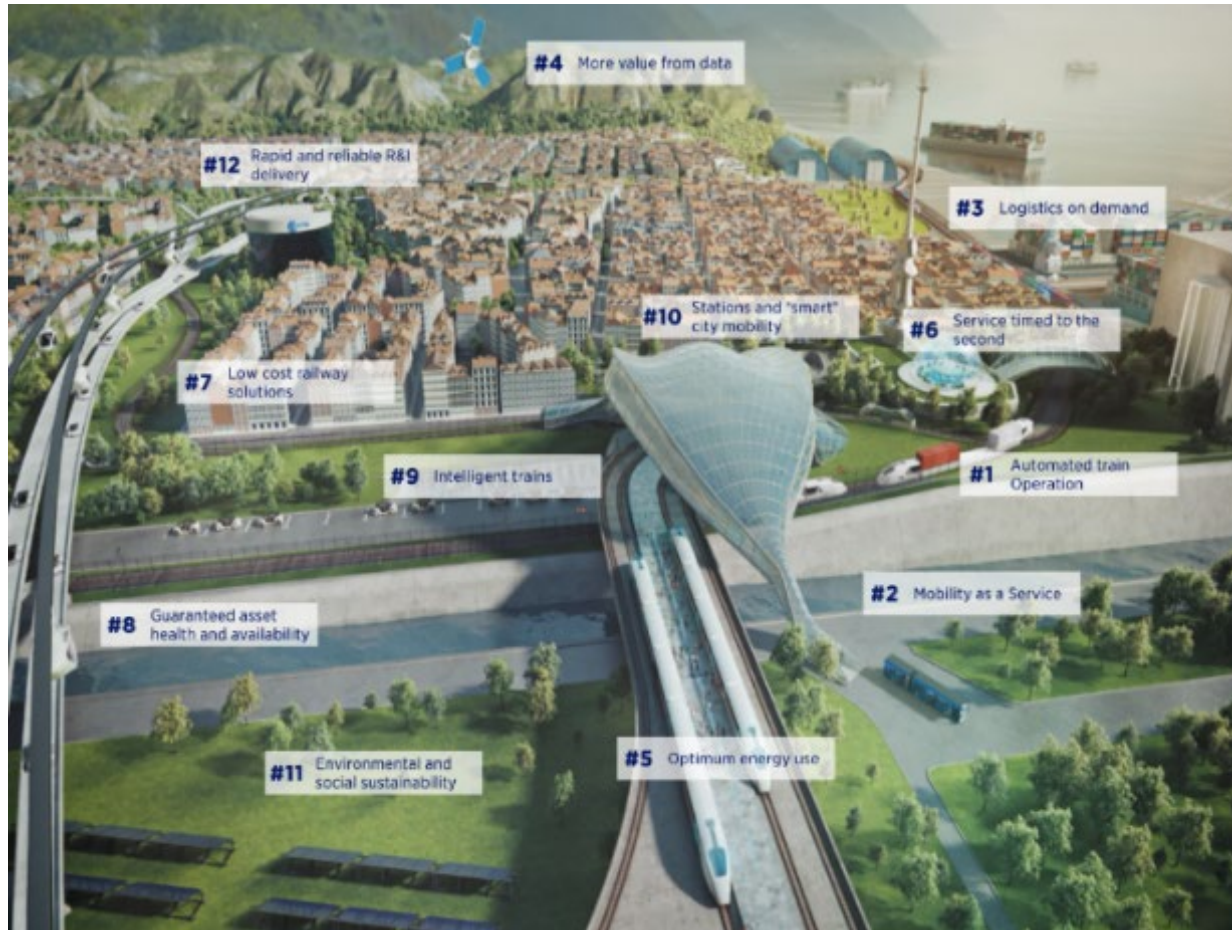
128
RESEARCH CENTRES
AND UNIVERSITIES

*Data extracted from CORDA database in August, 2020

AN OPEN and ACTIVE ORGANISATION

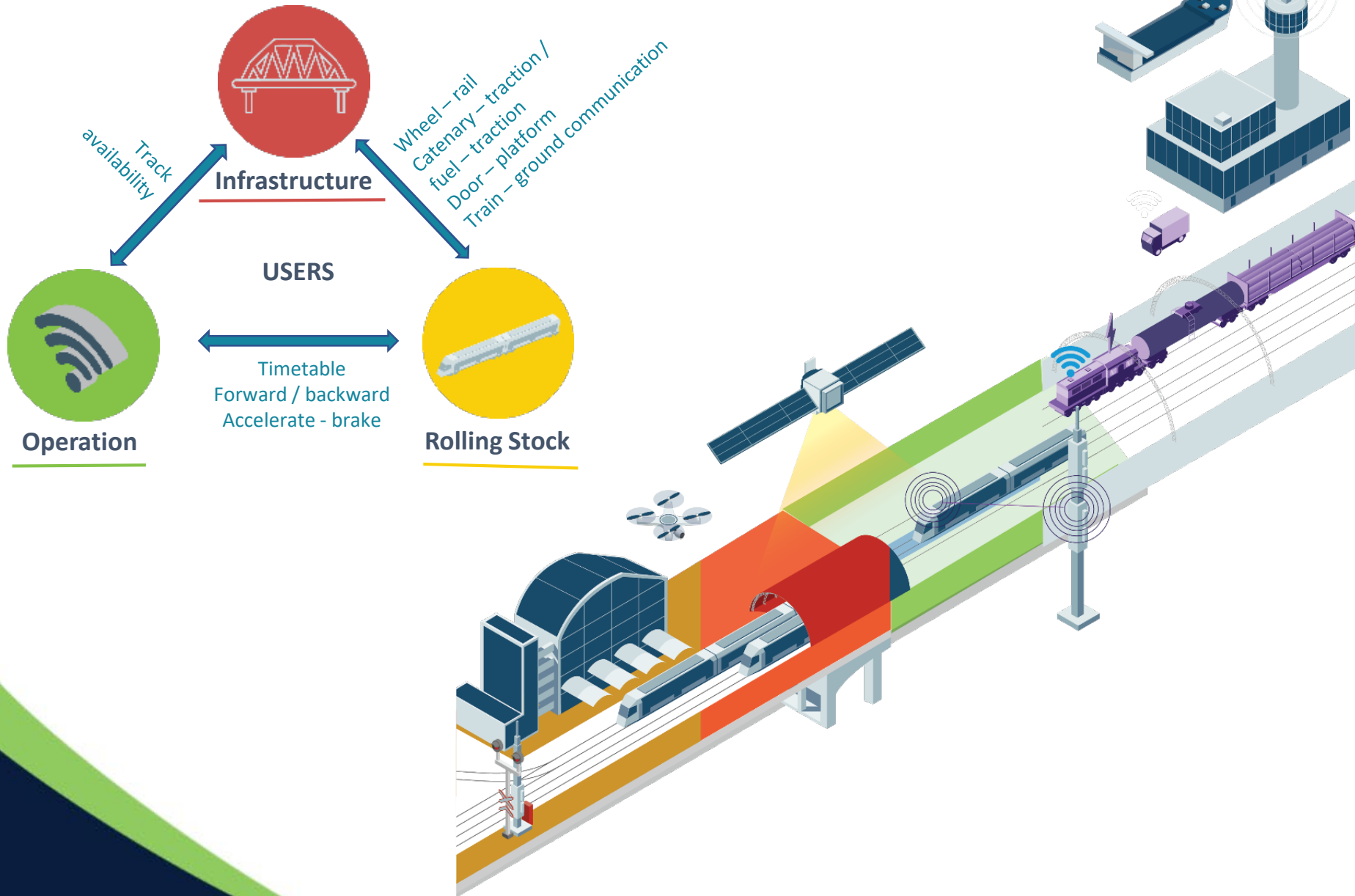


Values as at 1 Sept 2016 in Million EUR



...opening up new
Capabilities coming from
emerging technologies or
concepts!

Railway - System of Systems



IP1 Cost-efficient and Reliable Trains, including high-capacity trains and high speed trains

IP2 Advanced Traffic Management and Control System

IP3 Cost-efficient, Sustainable and Reliable High Capacity Infrastructure

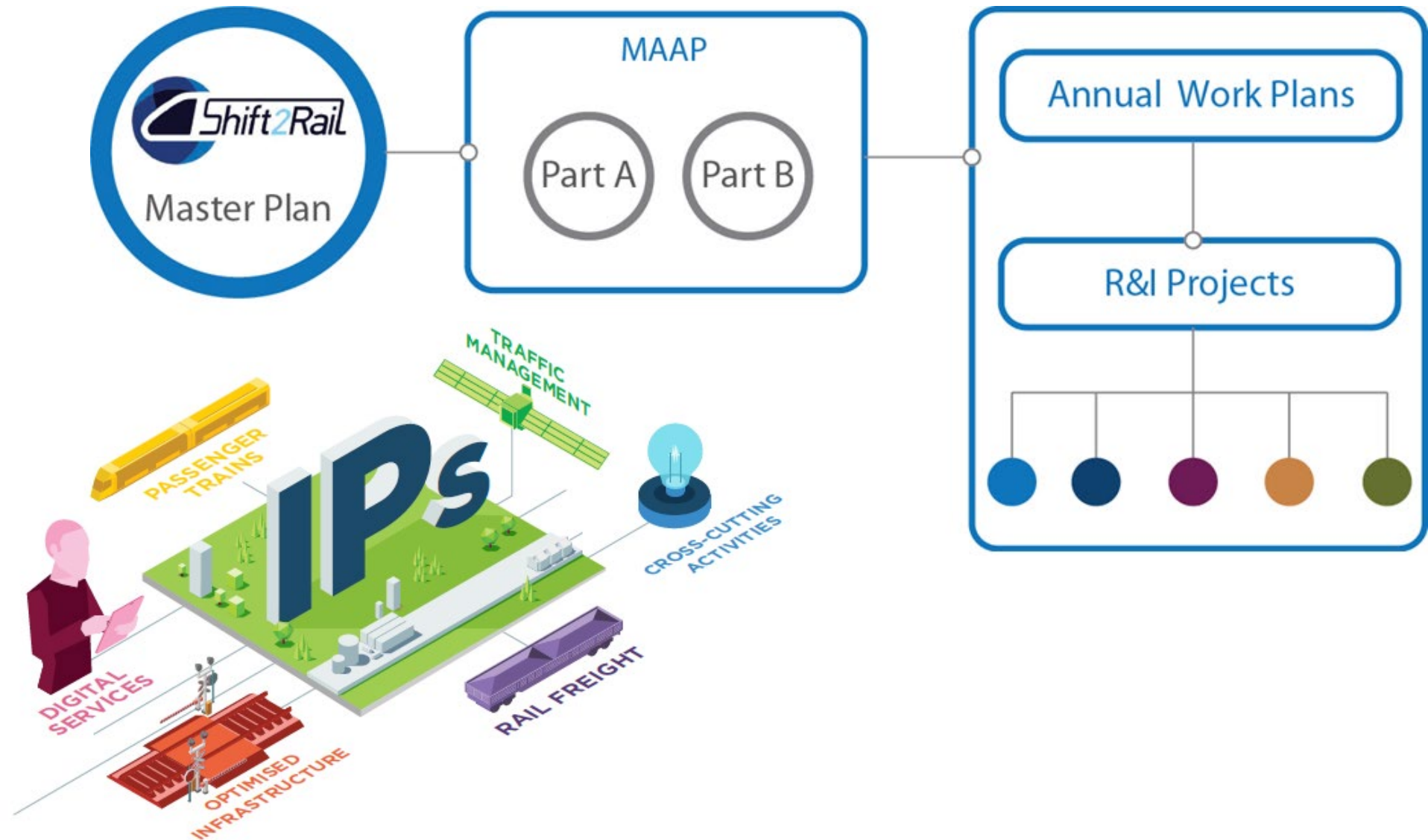
IP4 IT Solutions for Attractive Railways Services

IP5 Technology for Sustainable and Attractive European Rail Freight

CCA Cross Cutting Activities

IPX Disruptive technologies and Exploratory research, System Architecture and Conceptual Data Model (CDM)

The S2R Programme implementation



S2R-OC-IPX-01-2020: Innovation in guided transport

CHALLENGE

- Many activities touching innovation in guided transport across Europe and globally
- Challenge: **channel disperse innovations and technical solutions in a coherent framework**

S2R-OC-IPX-01-2020: Innovation in guided transport

SCOPE

Gather promoters of technologies around hyperloop and together:

- Define the enhanced / innovative modes in terms of:
 - Concept of operations
 - Safety cases
 - Functional specification
 - Operational conditions and testing methodologies / environment.
- Identify the potential transferability and synergies with Railways solutions, processes and procedures in general, and in particular from a technological perspective with Shift2Rail innovations (Technology Demonstrators and IPx activities)

S2R-OC-IPX-01-2020: Innovation in guided transport

IMPACT

- Clarity on operational concepts and standardisation possibilities and also enable a structured discussion with policy-makers around safety/security and transport system(s) integration at European level
- Cross-fertilization of knowledge from other disciplines or from disruptive technologies and innovation (e.g. coming from hyperloop) not yet fully applicable to rail

S2R-OC-IPX-01-2020: Innovation in guided transport

- Coordination and Support Action (CSA) call for proposals
- Budget of 250.000 EUR
- Awarded project: HYPERNEX
- 12 months
- 13 partners from 9 countries
- Start in December 2020

What's next?

- EU-Rail Joint Undertaking: successor of Shift2Rail
- Started in December 2021
- [Europe's Rail Master Plan](#) (22 December 2021)
- [Multi Annual Work Programme](#) (22 December 2021)
- 7 Flagship Areas (“Innovation programmes”)
- Flagship Area 7: Innovation on new approaches for guided transport modes

<https://shift2rail.org/about-europes-rail/>

Founding Members



Associated Members



Virtual Vehicle Austria Consortium (VVAC+)



European Rail Operating community Consortium (EUROC)



Swi'Tracken Consortium



Smart DeMain(SDM) Consortium



AERFITEC



Competitive Freight Wagon Consortium(CFW)



Smart Rail Control (SmartRaCon) consortium

