

EU-Rail: AB4Rail project

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Programme Manager
Europe's Rail Joint Undertaking

AB4Rail online workshop, 21 March 2022:
“Aerial technologies as Alternative Bearers for railway”



28
MEMBERS



493
PARTICIPANTS



29
COUNTRIES



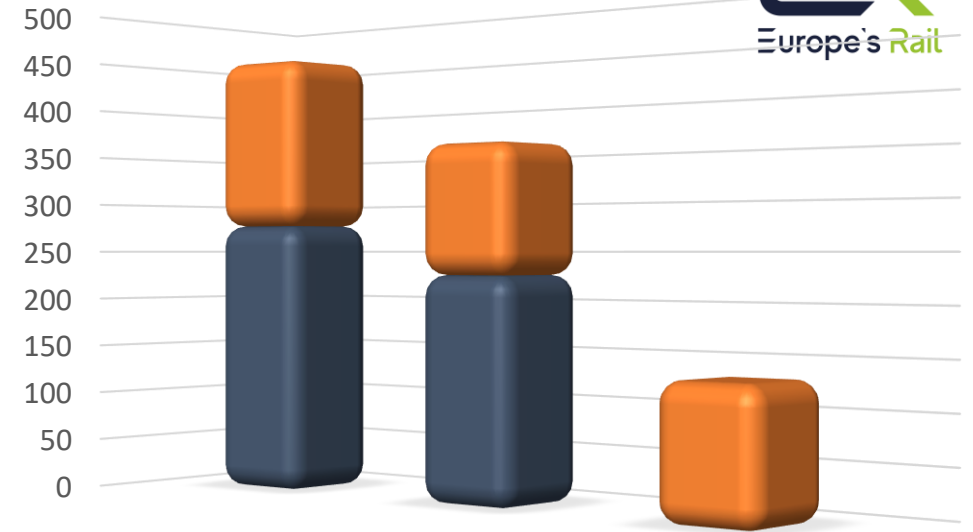
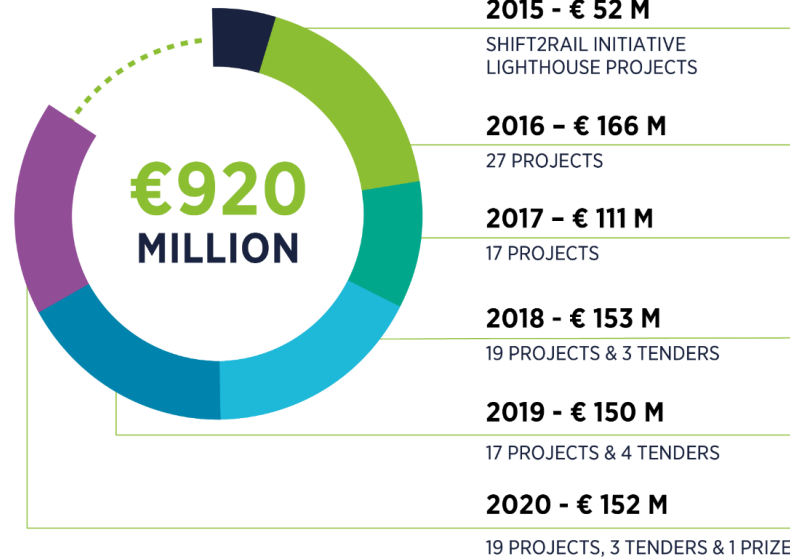
127
SMEs



128
RESEARCH CENTRES
AND UNIVERSITIES

*Data extracted from CORDA database in August, 2020

AN OPEN and ACTIVE ORGANISATION

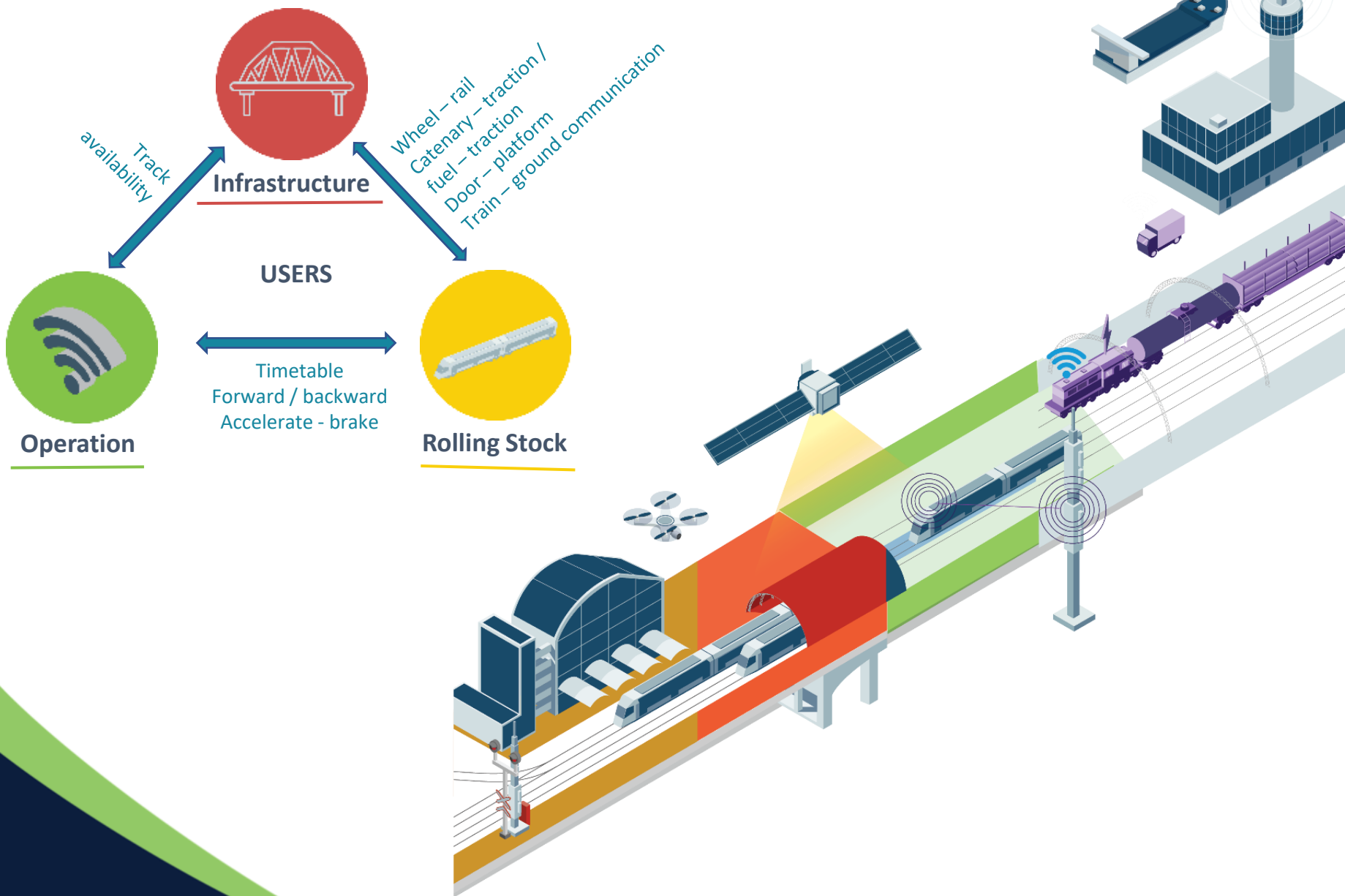


8 Founding
Members

19
Associated
Members

Open Calls

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)

S2R-OC-IP2-02-2020: Study on alternative bearers and on communication protocols

- Research and Innovation action (RIA) call for proposals
- Budget of 350.000 EUR
- Awarded project: AB4Rail
- 3 partners from Italy
- Start on 01/01/2021, until 31/12/2022 (24 months)
- TRL 4/5
- Complementary (“contributing to”) S2R-CFM-IP2-01-2020: Completion of activities for Adaptable Communication, Moving Block, Fail safe Train Localisation (including satellite), Zero on site Testing, Formal Methods and Cyber Security (X2Rail-5)

S2R-OC-IP2-02-2020: Study on alternative bearers and on communication protocols

CHALLENGE

- Investigate **alternative communication means and solutions**, which can be used in addition or for complementing the current standards for specific needs and/or for being implemented in well-defined and restricted areas
- Objective: improve the system adaptability in view of the application of full bearer independency defined in the framework of TD2.1 (Adaptable communications for all railways)
- Identifying the best use the current communication protocols in view of streamlining the application according to the needs

S2R-OC-IP2-02-2020: Study on alternative bearers and on communication protocols

IMPACT

- Identification and analysis of new alternative communication bearers => for ACS, to achieve an estimated 50% reduction of lifecycle costs)
- Increased possibility of bearers to be used by the new communication system => Increased operational flexibility

Europe's Rail Joint Undertaking

- Successor of Shift2Rail
- Established end of November 2021
- Europe's Rail Master Plan and Multi Annual Work Programme
 - <https://shift2rail.org/about-europes-rail/europes-rail-reference-documents/europes-rail-key-documents/>
- 7 Flagship Areas (“Innovation programmes”)
- 2022 Call for proposals: <https://shift2rail.org/participate/call-for-proposals/ongoing-call-for-proposals/>