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AB4RAIL NEWSLETTER

Alternative Bearers for Rail

www.ab4rail.eu



THE OTHER TOPICS

- AB4Rail Challenges and Impact
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- AB4Rail First published results



AB4RAIL

co-funded by the Shift2Rail and Horizon European Programmes

The AB4RAIL project is a two years project started in January, 2021 centered on the study and the assessment of the Adaptable Communication System (ACS) in terms of Alternative Bearers and Communication Protocols for railways applications.

The AB4Rail project is organized into two main workstreams:

- Alternative bearers (workstream 1)

AB4Rail project has the aim of studying and assessing the alternative bearer technologies for enhancing train-to-ground communications so to enrich the pool of access network options for the Adaptable Communication System (ACS)

- Communication protocols (workstream 2)

In Workstream 2, AB4Rail has the aim of investigating the operations of ACS on the application side focusing on the proper usage of (secure/un-secure) transport and application protocols for improving end-to-end performance.



Co-funded by the Horizon 2020 programme of the European Union



AB4RAIL CHALLENGES AND IMPACT

Increasing competitiveness in European transportation systems

The results of AB4Rail are important to increase competitiveness of the European transport systems. From the ACS point of view, the possibility to use more communication technologies (bearer independent) and transport/application protocols is of paramount importance to reduce the operational costs. Furthermore, industries and service providers can exploit new business opportunities in other sectors such as the urban mobility where new Trams with automatic driving capabilities are envisaged.

Environmental and social impacts

AB4Rail project provides important impacts from an environmental and social perspective. Regarding the climate change, a smart digital environment is characterized by a strong presence of rail infrastructures and technologies. The possibility to have important innovative features on ACS (e.g., alternative and traditional bearers, and innovative transport/application protocols) is crucial to realize more efficient, cost-effective railway infrastructures in the next years.

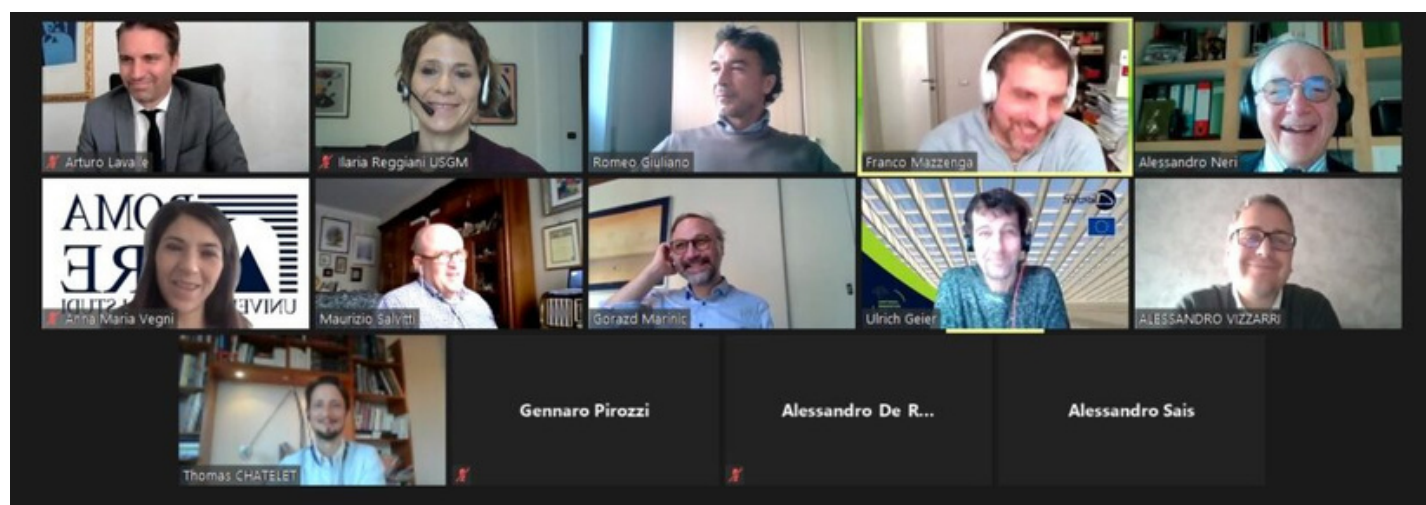
From a social point of view, AB4Rail concurs to make the rail technologies more interoperable, efficient and high-performing across the digitalization process for the European citizens.

First AB4Rail Dissemination Event

The official start of the European Project AB4Rail was held in February, 2021 with the participation of relevant stakeholders of the Rail sector.

The project partners, Radiolabs (Coordinator), Guglielmo Marconi University, University of Roma 3 and University of Rome TorVergata contributed to the success of the event. It had the main scope to introduce the core activities, goals and to gather the expectations and remarks from the most important stakeholders of the Rail sector invited to the event.

Thomas Chatelet on behalf of the European Union Agency for Railways, Gorazd Marinic representative of the Shift2Rail programme and Ulrich Geier as representative of X2Rail-5 and Kontron Transportation, enriched the debate pointing out the most important needs and trends related to the different Rail contexts.



This project has received funding from the Shift2Rail Joint Undertaking (JU) under grant agreement No 101014517. The JU receives support from the European Union's Horizon 2020 research and innovation programme and the Shift2Rail JU members other than the Union.

AB4RAIL HOPPED ON THE CONNECTING EU EXPRESS



The Rail as a sustainable and innovative mode of transport worldwide

AB4Rail hopped on the train Connecting Europe Express, stopped in Rome in September, 8th for one day. Criss-crossing 26 countries, it traced many of the routes that bind us together, connecting countries, businesses and people. It showcased the unifying force of rail.

Its role was to make us better understand the challenges that European rail has to overcome in order to become the mode of choice for passengers and businesses alike.

AB4Rail aim is investigating the innovative wireless technologies for the signaling between train and trackside as well as the most promising transport and application protocols for communication services.

AB4Rail is also cooperating with X2Rail projects for combining individual technologies for implementing new signaling and automation functionalities in the rail transport at system level. Through the identification and testing of possible alternative communication technologies AB4rail will support the rail as a sustainable and innovative mode of transport worldwide, thus contributing to the EU Green Deal goal.

AB4RAIL FIRST RESULTS

Right on schedule, the AB4Rail scientific team has assessed the candidate ABs and their impact on existing infrastructure in deliverable D22: Free Space Optics (FSO), High-Altitude Platform System (HAPS) and Low-Earth Orbit (LEO) satellite.

Deliverable D33 details the features of the AB4Rail emulator, which will be used for transport/application protocol assessment to be carried out in the next Task 3.4.



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Moving the
European Railway
Forward

AB₄RAIL CONSORTIUM

Radiolabs (Coordinator)
www.radiolabs.it

Guglielmo Marconi University
www.unimarconi.it

University of Rome Tor Vergata
web.uniroma2.it

University of Roma 3
www.uniroma3.it



AB₄RAIL CONTACTS

Project Coordinator/Scientific Supervisor
Franco Mazzenga,
franco.mazzenga@radiolabs.it
+39-06-72597441

Radiolabs Partner Coordinator/Scientific reference
Alessandro Vizzarri
alessandro.vizzarri@radiolabs.it

USGM Partner Coordinator/Scientific reference
Romeo Giuliano
r.giuliano@unimarconi.it



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