

R&D PROJECT



Title of the project

Europe's Rail Flagship Project 3 - Holistic and Integrated Asset Management for Europe's RAIL System

Acronym

IAM4RAIL

Project Content

The IAM4RAIL project focuses on seven (7) different integrated demonstrators for rail assets which are key for research and innovation (R&I) in the rail sector. Integrating asset condition information obtained via advanced monitoring with decision-making tools and into the traffic management system (TMS), combining available information with artificial intelligence (AI) and digital twins are covered as key topics for R&I in IAM4RAIL. Other topics such as interventions using cutting-edge technologies as robotics or additive manufacturing are seen as relevant for improving asset management in the rail sector. An European cross-border, interoperable and holistic integrated approach is needed for those topics and others in the asset management framework, that are to be transferred once developed crucial to harmonise European Rail System.

General objectives

The expected result achieved by FP3 – IAM4RAIL will be a common European asset management framework composed by a green, digital, and safe set of solutions for the rail sector,

Work packages

- WP1 Project Coordination
- WP2 System Vision, Architecture & Validation
- WP3 Wayside Monitoring and TMS Design and Deployment
- WP4 Wayside Monitoring and TMS link: test and Validation
- WP5 Rolling Stock (on-board): Data acquisition and monitoring
- WP6 Rolling Stock (on-board): Asset prognosis and feedback
- WP7 European Railway Checkpoint for mixed traffic
- WP8 Long term asset management and LCC
- WP9 Track infrastructure
- WP10 Multi-purpose IAMS application scope refinement
- WP11 Multi-purpose IAMS application: development
- WP12 Vision, Requirements and Data Collection
- WP13 Implementation and Demonstration
- WP14 Use of Digital Twin (DT) Technologies for assets
- WP15 Use of DT Technologies for assets management
- WP16 Sustainable and cost-efficient eco-design for rail assets
- WP17 Repair metallic assets and spare parts for vehicles using
- WP18 Robotics Platform
- WP19 Exoskeleton and Augmented Reality for railway
- WP20 Communication, dissemination and exploitation of results
- WP21 Ethics requirements

PARTNERS

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|--------------|----------|
| ENYSE | TRV |
| ADIF | TEKNIKER |
| ATSA | FT |
| MERMEC | FS |
| AZD | ITALFERR |
| CAF | STS |
| CEIT | INDRA |
| DB | TALGO |
| DLR | NRD |
| CEMOSAKB | |
| COMSA OBB TS | |
| PKP | PRORAIL |
| NSR | SMO |
| SNCF | SRNL |
| GTSD | |
| vaRS | |

BUSINESS AREA

Technical and Innovation R&D
COMSA

DURATION

2022-2026

BUDGET CONSORTIUM:

106.900.000 €

BUDGET COMSA:

374.000 €

KEYWORDS

Rail infrastructure-Rail projects-
Sustainable transport
Rail Robotics

COORDINATOR

Miquel Morata (COMSA)

