

Call for the successor to the Europe's Rail Joint Undertaking in the next European Research Framework Programme

As the greenest transport mode, rail transport is vital for Europe's economy, security, and sustainability. The European Commission's 'Sustainable and Smart Mobility Strategy'¹ sets concrete objectives and milestones towards the digitalisation and greening of the transport sector and rail. Achieving Europe's climate neutrality targets by 2050, including a targeted 90% reduction in European transport GHG emissions, is only possible by attracting more passengers and freight to the rail system (long-distance, regional, suburban and urban rail). Rail therefore needs to increase its efficiency, attractiveness, accessibility and competitiveness.

A coordinated European approach to R&I is vital to accelerate the overcoming of the historic and obstructive fragmentation in the rail system and to deliver harmonised European-wide solutions, making the European rail system more agile, innovative, resilient, capacity-performant, achieve the goals of the Single European Railway Area (SERA) and Trans-European Transport Network (TEN-T, including the comprehensive network) and make Europe more competitive.

With an annual global market growth of 3% (expected value of EUR 240bn by 2029²), and an investment of 3.6% of its annual revenue to R&I activities, the European rail supply industry is a global leader in design, manufacturing and maintenance of rail systems and products, corresponding to over 650,000 jobs in Europe. In 2023, EU rail passenger transport hit its highest level in years, reaching 429bn passenger-kilometres. Rail accounts for 1.8% of the EU's total energy consumption in transport, while carrying 17% of freight and around 8% of passengers of EU27 inland transport. At urban node level and close to citizens' daily needs, light rail, metro and regional/suburban rail have a combined patronage of over 30bn passengers per year in Europe, evenly distributed among them, meaning each local rail mode carries 10 times more passengers than air travel.

CER, EAL, EIM, FEDECRAIL, UIC, UIP, UIRR, UITP and UNIFE call on the European Institutions to ensure a successor to the Europe's Rail Joint Undertaking in the next European Research Framework Programme (FP10 or equivalent). Rail R&I is a key success factor in strengthening the Single Market, delivering a harmonized Single European Rail Area (SERA) and expanding the competitiveness and global market leadership of the European rail supply industry as well as the European economy as a whole. The successor to Europe's Rail must have a sufficient budget for R&I, with a minimum of EUR 3bn, half will come from EU funding and half from sector contributions, and EUR 15bn for pre-deployment to support the needed technological maturity level and accelerate the market uptake. This will allow long-term private investments to be leveraged, increase the competitiveness of the European rail supply industry and contribute to achieving the goals of the Single European Railway Area by increasing the rail market share. This will also ease the daily mobility of EU citizens, thus strengthening and developing our European industry and achieving the EU Green Deal objectives.

¹ EC's Sustainable and Smart Mobility Strategy' - https://transport.ec.europa.eu/transport-themes/mobility-strategy_en

² World Rail Market Study, forecast 2024 to 2029 - <https://www.unife.org/news-resources/wrms/>

Stakeholders from both the European rail supply industry and rail operating community have together, collaborated and benefited from the first two European rail Joint Undertakings (JU), namely Shift2Rail (2014-2021; EUR 450M funding through Horizon 2020), and its successor, Europe's Rail JU (EU-RAIL, launched in 2021; EUR 600M funding through Horizon Europe). The success of Shift2Rail, and now EU-RAIL, in contributing to achieving EU policy by addressing its common objectives outlined below, validates the significance of such public-private collaboration for the future rail system.



The continuation of this work is essential in advancing the Technology Readiness Level (TRL) and maturity of the European innovative solutions initiated and developed within these programmes, and ensuring the next steps in bringing innovations and their benefits to the market faster through targeted pre-deployment and implementation across the EU rail network.

European Rail R&I Joint Undertakings – Key to unlocking the Single European Railway Area

A unified rail R&I approach is essential to overcome the fragmentation of national rail systems, to create coherent solutions for the European rail network and to complete the SERA and TEN-T network. Structuring European rail R&I in the form of a JU has been key in overcoming the divergence and the lack of continuity of R&I in the rail sector, by developing a long-term strategy, in close cooperation with all stakeholders³ (industry, operators, infrastructure managers, academia, regulatory bodies). The benefits of a Joint Undertaking are:

- ▶ **A coordinated EU-level approach:** is essential to align new technology deployment across varying national and local systems, to shape future harmonised rail system architectures, standards and regulations to speed up R&I to market. This requires long-term investment and collaboration among stakeholders within a comprehensive framework. A JU is a stand-alone platform where all relevant rail stakeholders come together, thereby supporting the findings of the Letta report 2024⁴.
- ▶ **Tangible results with real added value:** the consistency and long-term nature of the programme allows for the development of technologies from low TRL to pre-deployment and market uptake. Success stories include sector support for the development of the Future Railway Mobile Communication System (FRMCS), the Digital Automatic Coupling (DAC), evolution of European Rail Traffic Management System (ERTMS), Digital Twin technologies, solutions supporting the use of zero-emission propulsion engines or low-cost solutions for regional rail, where the basic principles were developed in Shift2Rail, and the market-ready development is taking place in EU-RAIL.
- ▶ **Predictability & shared risk management to leverage private investment:** Considering the long-life cycle environment of the rail sector, a Joint Undertaking facilitates long-term planning, migration strategies and predictability through large scale R&I projects and serves as a stable platform for innovative initiatives while enhancing financial contributions and synergy within the rail sector.
- ▶ **Creating a rail R&I ecosystem including SMEs, start-ups & academia:** a joint initiative promotes collaboration between the public and private sectors. The involvement of SMEs, start-ups and the academia will ensure that Europe's ecosystem of rail R&I is strengthened, and new ideas are taken up by the sector.

The core objectives of a successor to EU-RAIL shall be to provide a joint action for decarbonisation and competitiveness, enhancing the possibility to develop collaborative R&I and coordinating it on high impact projects, contributing to the horizontal enablers for competitiveness such as system digitalisation, simplification, lowering barriers to the Single Market and removing intra-EU barriers. It is supporting the Draghi

³ Report EC Expert Group on Competitiveness on European rail supply industry - <https://ec.europa.eu/docsroom/documents/37829>

⁴ Letta Report - <https://www.consilium.europa.eu/media/ny3j24sm/much-more-than-a-market-report-by-enrico-letta.pdf>

report⁵ by optimising national rules to ensure competitive markets and the investment in key digital solutions with incentives for market uptake. We believe that a future collaborative rail research programme shall deliver:

- ▶ **Stronger European rail industry:** strengthen the global leadership of the European rail supply industry and maintain its positive trade balance in the context of an increasingly competitive global market, notably from Asia. Staying at the forefront of R&I will be a key factor for Europe to foster its industrial lead.
- ▶ **Completion of SERA and TEN-T:** coordinated and deployable R&I through a European sector wide cooperation, coordinated between different stakeholders, is needed to deliver an agile and resilient European system covering passenger mobility, freight and EU industrial and military strategic capabilities on high-density corridors in rural as well as urban areas.
- ▶ **Reduced costs & simplification of the European rail system:** using R&I as a key tool to significantly reduce the complexity and costs of the current European rail system.
- ▶ **Resilient rail system:** ensuring reliable asset availability, climate-resilient and robust network operations, and prioritising advanced cybersecurity for a reliable and future-proof mobility.
- ▶ **Focused R&I projects:** use case and business case-oriented R&I projects with lean project structures, targeting high TRL focused on the challenges of the rail system and the rail supply industry.
- ▶ **Increasing the impact and leverage mechanisms of rail R&I:** the impact of future rail R&I will be further increased by structurally including urban rail research priorities and by allowing a wider range of stakeholders playing an active part in relation to their capacities and characteristics.
- ▶ **Standardisation & harmonisation:** A new JU is crucial for ensuring the continuation of the support to the sector of standardisation and harmonisation activities from the current JU. If not, the ongoing harmonised specification work on ERTMS, FRMCS, DAC and others will be put at highest risk and jeopardise any European standardisation and harmonisation approach.
- ▶ **(Pre-)deployment:** to facilitate the transfer of R&I results, it is essential to ensure harmonisation, standardisation, migration planning and co-funding for (pre-)deployment. This requires collaboration among all stakeholders (industry, operators, and public authorities). A European approach is essential to ensure the success of coordinated migration strategies for technologies with cross-border impact.
- ▶ **Support for basic R&I:** continued support for R&I covering all TRL and strengthening of the European industry and academic rail R&I ecosystem, boosting global competitiveness through impactful R&I as described in the Heitor report⁶.

⁵ Draghi Report - https://commission.europa.eu/topics/eu-competitiveness/draghi-report_en

⁶ Heitor Report, DG RTD - <https://op.europa.eu/en/publication-detail/-/publication/2f9fc221-86bb-11ef-a67d-01aa75ed71a1/language-en>

The signatories

CER - The Community of European Railway and Infrastructure Companies

The Community of European Railway and Infrastructure Companies (CER) brings together railway undertakings, their national associations as well as infrastructure managers and vehicle leasing companies. The membership is made up of long-established bodies, new entrants and both private and public enterprises, representing 78% of the rail network length, 81% of the rail freight business and about 94% of rail passenger operations in EU, EFTA and EU accession countries. CER represents the interests of its members towards EU policy makers and transport stakeholders, advocating rail as the backbone of a competitive and sustainable transport system in Europe.

EAL – ERTMS Accredited Labs

EAL is an association of lab platforms to test ERTMS components and subsystems. EAL has been recognized by the European Commission as a Representative Body at the European Union Agency for Railways, and its members contribute to the update and corrections of the test specification of ERTMS. The objective of the Association is to promote, support and accelerate the deployment process of the European Rail Traffic Management (ERTMS) and the European Train Control System (ETCS) from the point of view of the testing and validation, as well as from the research community.

EIM – European Rail Infrastructure Managers

EIM was established in 2002 following the liberalisation of the EU railway market to promote the interests of all rail infrastructure managers in the EU and the EEA. EIM's primary goal is to promote growth of rail traffic and the development of an open sustainable, efficient, customer-oriented rail network in Europe. EIM provides a single voice to represent its members rail infrastructure managers vis-à-vis the relevant EU institutions and other European stakeholders. EIM also assists its members to develop their businesses through the sharing of experiences and contributing to the technical and safety activities of the European Union Agency for Railways.

FEDECRAIL - European Federation of Museum & Tourist Railways

FEDECRAIL seeks to promote the rescue, restoration and operation of Europe's railway and tramway heritage. Represent its members' interests with international agencies, the European Commission and the European Parliament. Encourage the exchange of ideas across national and cultural boundaries and foster co-operation between museum and tourist railway organisations involved in railway heritage. Help provide advice and assistance for such organisations. Study and resolve problems shared in restoring and operating heritage railways and tramways.

UIP – International Union of Wagon Keepers

Founded in 1950, the UIP – International Union of Wagon Keepers, with its seat in Brussels, is the umbrella association of national associations from 14 European countries, thus representing more than 250 freight wagon keepers and Entities in Charge of Maintenance (ECMs). As the voice for more than 248'000 rail freight wagons which perform 50 % of the rail freight tons-kilometers throughout Europe, the UIP represents half of the whole European wagon fleet and one of the most important resources for rail freight transportation in Europe.

UIRR – The voice of Europe's intermodal freight transport

Founded in 1970, UIRR brings together 100+ leading Intermodal Transport Operators, Transshipment Terminal Managers, Technology Partners and National Associations to steer the EU policy agenda towards a competitive zero-carbon intermodal transport freight sector for Europe. UIRR also advocates for stronger standards, increased interoperability and harmonised digital, operational, and technical processes.

UITP - International Association of Public Transport

UITP is the international association representing public transport stakeholders. In the European Union, UITP brings together more than 450 urban, suburban and regional public transport operators and authorities from all Member States. We represent the perspective of short distance passenger transport services by all sustainable modes: bus, regional and suburban rail, metro, light rail, tram and waterborne.

UNIFE - The European Rail Supply Industry Association

UNIFE, the European Rail Supply Industry Association represents European train builders and rail equipment suppliers. The association advocates for more than 115 of Europe's leading rail supply companies – from SMEs to major industrial champions – active in designing, manufacturing, maintaining and refurbishing rail transport systems (trains, metros, trams, freight wagons), subsystems and related equipment. UNIFE also brings together national rail industry associations from 12 European countries.

UIC – International Union of Railways

UIC is the worldwide organisation for the promotion of rail transport at a global level and for the collaborative development of the railway system. It brings together more than 200 members across all 5 continents, and includes rail operators, infrastructure managers, railway service providers, and more. UIC maintains close links with all stakeholders in the rail transport sector around the world, including manufacturers, railway associations, and public authorities, as well as with other domains and sectors whose experiences may be beneficial to rail development. UIC's main missions include understanding the business needs of the rail community, developing innovative programmes to identify solutions to these needs, and preparing and publishing documents such as reports, specifications, guidelines, and IRSs that facilitate the implementation of innovative railway solutions.