ANNUAL REPORT 2024

unife
THE EUROPEAN RAIL INDUSTRY

European Rail Supply Industry

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Message from Michael Peter, UNIFE Chair

2024 was a year of change and a year of great progress for the rail industry. We continued driving innovation and reinforcing our vital role in building a sustainable and connected future. Unfortunately, it was another year characterized by the visible effects of climate change, further underlining the importance of our work, and the need to accelerate technology deployment.

Firstly, I would like to extend my sincere gratitude to the UNIFE Director General, UNIFE secretariat, UNIFE members, and the entire rail community for the collective effort and dedication that shaped this year.

We had important changes within UNIFE, welcoming our new Director General Enno Wiebe in June.

Enno embraced the role quickly leading the association through challenging times and paving the way towards transformation. We said farewell to a great supporter and true enthusiast for our sector, Josef Doppelbauer who left his role as Executive Director of the European Union Agency for Railways after 10 years of dedicated work.

2024 brought external changes marked by geopolitical events including elections in the EU. We saw a year of fundamental shifts in well-established industrial sectors, like automotive, and fast advancements in key technologies like Artificial Intelligence (AI). And we witnessed devastating floodings in Spain and Central Europe in 2024, and more recently destructive wildfires in California. These climate-related events are becoming much more frequent, emphasizing the evident and urgent need for decarbonization and climate resilience. It has never been a more important time for us as an industry. The transport sector accounts for 1/5 of CO2 emissions, which is why rail as the most sustainable mode of transport must be top of an agenda of change.

And we are ready. In 2024 the EU rail supply industry has shown again that it is well positioned in Europe and the world, to strive and accelerate the green mobility transition. Decarbonization is a major driver for our market with governments investing heavily. This was highlighted in the UNIFE World Rail Market Study (WRMS) which forecasts solid growth for the next five years with an overall growth prediction of 3%.

We can be proud that seemingly the whole world was watching as our industry presented its potential at a record-breaking InnoTrans 2024. With 170,000 visitors from 133 countries, innovation was alive on every corner of over 200,000m2 of exhibition space in Berlin. The decarbonization and digitalization agenda was advanced greatly at a hugely impressive and impactful event. Electrification remains the key driver for decarbonization, however important advances were made with battery and hydrogen trains particularly to reach more remote lines. On a personal level, I am particularly excited about how our sector is leveraging the benefits of AI, for instance via analysis and assessment tools for predictive maintenance and their enablement with strong cybersecurity foundations.

InnoTrans 2024 showed that we are certainly on the right track, and it served as a reminder that we need to further accelerate in specific areas. A key challenge is to expedite the implementation of (new) technologies to help make rail even more attractive. One example is ERTMS that can serve as a building block for seamless rail traffic across Europe. Here, we need to accelerate national rollouts to enable the earlier phase out of Class B systems. Another example is FRMCS (Future Railway Mobile Communication System) where we need to ensure a smooth transition from the current GSM-R telecommunications system.

With the support of the European Institutions, we can achieve these goals by:

- Ensuring strong European funding for rail under the next Multiannual Financial Framework (2028-2034)
- Promoting regulatory stability
- Reducing administrative burdens

In summary, we can be proud of all we achieved in 2024. Our collaborative efforts and the continued dedication from the UNIFE secretariat have certainly advanced our progress. 2025 will be a pivotal phase as we establish continuity and growth with the new EU Commission in place.

Our priorities remain clear, and our importance never greater. With our new UNIFE leadership, and with full support of the rail supply industry, I have every confidence that 2025 will be another strong and memorable year for our sector!

Have a pleasant read,

Michael Peter
Chair of UNIFE, and CEO of Siemens Mobility

Message from Enno Wiebe, UNIFE Director General

2024 was a turbulent year across European and global politics, which has made it a compelling time to join UNIFE. As one of the most established industry associations in Brussels, I have been humbled by the sense of community, the ambitious nature of our members and the tasks we have as an industry ahead of us.

In having focused conversations with our members and various stakeholders, it is clear that our priorities in 2024, now and the near future come under two key umbrellas: **competitiveness and funding**.

Our industry and broader sector is vital to Europe's economic security and future prosperity. Our products ensure goods and people are moved across the continent in the most environmentally friendly and safest way possible, also while driving innovation in mobility.

In order to keep Europe on a trajectory to wealth, we have and we continue to advocate strongly for European companies and businesses to remain competitive in a global marketplace. While it is a positive to see this as a priority for the new European Commission, we spent 2024 tirelessly working throughout the EU Election period to ensure future reforms are of the most immediate pressing concern for industry.

This includes our recurring efforts on **EU Public Procurement upcoming reform and the Foreign Subsidies Regulation**, which remain a cornerstone of the conversations we have had across the European institutions. We are pushing the need to ensure European companies benefit and are best placed when it comes to European initiatives and funding.

This often leads our conversations with the Member States, with whom I have sought to enhance our relationship with. We need to greater outline the value of the sector at a more regional and local level, which includes outlining how we can best protect local jobs, drive economic growth across regions, and boost rail links to improve the quality of life of citizens.

2024 was a packed calendar year for the association attending a range of events, advocating for the rail industry, building networks and working to deliver on our initiatives. This includes attending **InnoTrans 2024** where we had the opportunity to showcase an industry on the cusp of transforming itself, and the way European passengers and freight move across the continent in economically difficult times. As well as our presence at the **Connecting Europe Days in Brussels**, where we showcased how vital **ERTMS** and **DAC** are to completing the **TEN-T network** and driving European competitiveness.

UNIFE successfully also unveiled the **10th edition of its World Rail Market Study**, which details the positive horizon the sector is working towards, with a detailed forecast suggesting the global market is expected to **grow by 3% annually** in real terms for the rest of the decade. By the end of this period, the average market size of the global rail industry is expected to expand to **€240.8bn**. Nonetheless, the overall accessibility to markets continued to decline, in line with the historical downtrend, reaching only 59% in 2021-2023.

We – and to a point, personally – need to remind everyone across the sector and the European institutions of what is at stake if ERTMS (especially the future upgrade to FRMCS), and DAC are not fully rolled-out as envisioned, as we potentially could miss out on the full benefits of this dynamic technology.

This is why we ensured the signature of the **ERTMS Stakeholder Platform Board** joint declaration at InnoTrans, while also specifically advocating on behalf of dedicated resources from the **Multiannual Framework 2028 – 2034** – the EU's budget – to the ERTMS roll-out, and DAC programmes.

Following up on the **European Year of Skills**, UNIFE held in 2024 dedicated forums to progress the agenda of addressing skills shortages in the rail supply industry such as the **High-Level Rail Skills Conference** in March, followed by the conclusion of the **STAFFER** programme in October, where we hosted many sector representatives and high-level attendees from the European institutions to progress solutions to these issues.

Empowering young people to undertake '*Railway Erasmus*' across Member States and building a unique information portal to consolidate the Europe-wide offer of rail-related educational programs, were some of the many recommendations outlined by the **Skill Training Alliance For the Future European Rail System (STAFFER)** project in its final report, which we will continue to advocate for in 2025 and beyond.

We continue to be significantly active in the development of a truly Single European Rail Area. This included on-going work for the next update of the **Technical Specifications for Interoperability**, exploiting the potentials of **Europe's Rail Joint Undertaking's Innovation and System Pillar** and ensuring the necessary reforms for the **Fourth Railway Package** are delivered upon. UNIFE as Representative Body is continuously supporting the work of the **European Union Agency for Railways (ERA)**.

UNIFE's **commitment to research and innovation** continued not only our involvement in many research programs, but our ongoing advocacy for the future rail research program beyond Europe's Rail Joint Undertaking. We will remain active and vocal on the need to ensure any future European R&I program is able to drive innovation happening within the sector and to share benefits across Europe. It is also of utmost importance to better link the European R&I program with pre-deployment activities and to support initiatives like the **Europe's Rail Deployment Group** launched in 2024.

With geopolitical and digitalisation challenges, Cybersecurity becomes a considerable focus for the rail supply industry going forward. We are in the process of developing a sector wide approach in response to the **Cybersecurity Resilience Act**, which ensures future legislation gives equal responsibility to all stakeholders. UNIFE succeeded to launch and to be nominated as the coordinator of the first rail sector cybersecurity group bringing together European railway undertakings, infrastructure managers and suppliers. This is vital to containing future cyber threats, which is why we intend to use our new membership of the **EU Commission's Cyber Resilience Act Expert Group** to work constructively with stakeholders to protect the

European railway system as well as broader mobility infrastructure.

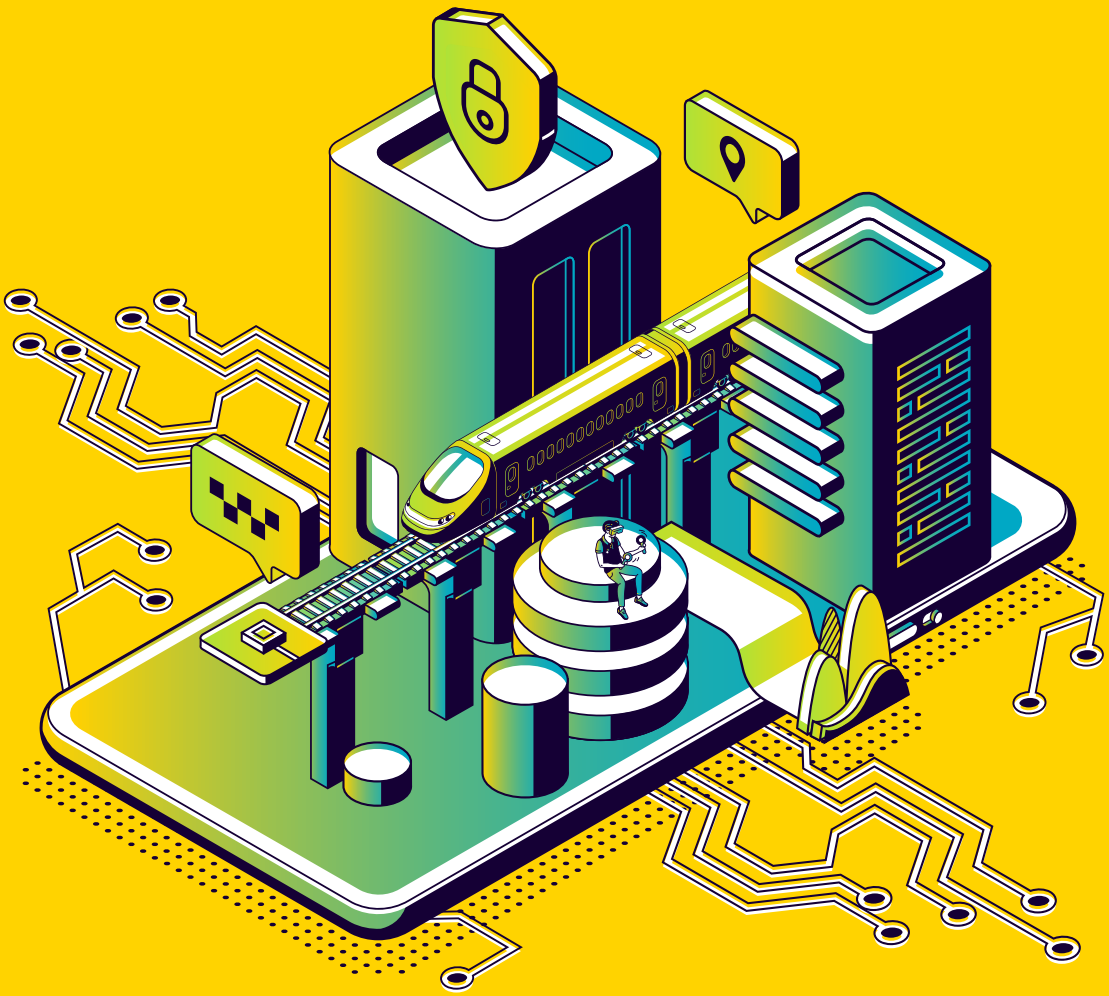
In 2024, the **IRIS Certification®** team rolled-out the **rev.04 update to the IRIS Portal**, which sought to streamline and improve the auditing process. Further to this, the team used InnoTrans as an opportunity to showcase the new scheme, which intend to elevate the level of quality control across the industry.

Looking ahead into 2025, our focus will turn to advocating for consistent and comprehensive funding and broader assurances on the delivery of TEN-T, ensuring regulatory stability and a reduction of administrative burdens for the industry, amid a backdrop of challenging geopolitical, European and domestic political situations.

I am confident we can take on the challenge, seize the opportunities and accomplish much with the passionate, ambitious and growing team that we have in Brussels. My ongoing commitment to building bridges – not walls – within the association, the industry, broader sector and the institutions, is done in the hope of reaching and accomplishing rail's future goals together.

Enjoy the reading,

Enno Wiebe
Director General of UNIFE



01.

UNIFE in 2024

UNIFE Mission

“Promoting Rail Market Growth for Sustainable Mobility”

1. **Promoting** European policies and programmes favourable to rail
2. **Working** towards an interoperable and efficient European railway system
3. **Ensuring** European Rail Supply Industry’s leadership through advanced research, innovation and quality
4. **Providing** UNIFE Members with strategic and operational knowledge

How UNIFE Works

I. EU Standardisation & Harmonisation

- **Collaborating** with the European Union Agency for Railways on the definition of rail regulations (including the Technical Pillar of the Fourth Railway Package) and Technical Specifications for Interoperability (TSIs)
- **Supplying** expertise for European and International Standardisation Bodies (e.g. CEN/CENELEC, ISO)
- **Contributing** to the development of the Single European Rail Area

II. Public Affairs

- **Advocating** policies that increase the global competitiveness of the European Rail Supply Industry
- **Supporting** modal shift policies that give priority to rail
- **Encouraging** investment in rail projects
- **Promoting** rail transport as the best solution to meet social challenges of the future

III. European Rail Research

- **Coordinating** EU-funded research projects
- **Playing an active role** in ERRAC - the European Rail Research Advisory Council
- **Cooperating** with the Europe's Rail Joint Undertaking and contributing to the follow-up of its activities
- **Shaping the future** of rail research & innovation in Europe

IV. IRIS Certification®

- **The globally recognised** rail quality management system
- **Enables efficient business** processes and leads to substantial quality improvements and cost reduction throughout the supply-chain
- **More than 2275** IRIS Certification® certificates issued worldwide

With whom we work

EU institutions

Industry/Trade

Others

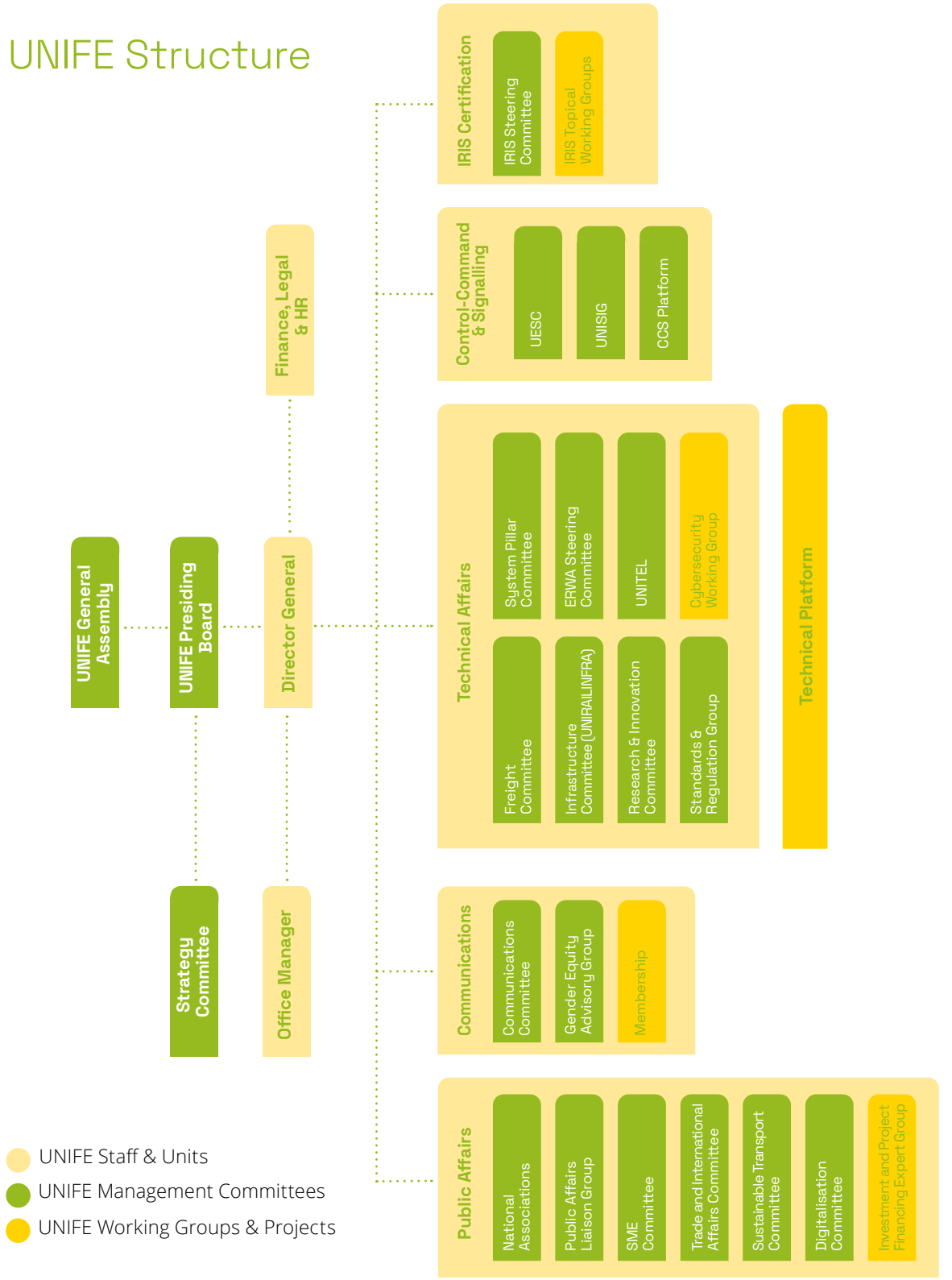
Rail organisations

Standardisation

Research

Partner events

UNIFE Structure



2023-2026 UNIFE Presiding Board

UNIFE Chair

Michael Peter
CEO, **Siemens Mobility**

Members of the Presiding Board

Henri Poupart-Lafarge
CEO, **Alstom**

Nicolas Lange
Member of the Executive Board and Responsible for the Rail Vehicle Systems division, **Knorr-Bremse AG**

Javier Martínez Ojinaga
CEO, **CAF Group**

Augusto Mensi
CEO, **Lucchini RS**

Pascal Schweitzer
CEO, **Faiveley Transport**

Giuseppe Marino*
CEO, **Hitachi Rail Group**

Roger Dirksmeier
Managing Director, **FOGTEC (representing the UNIFE SME Committee)**

Franz Kainersdorfer
Member of the Management Board, **Voestalpine AG**

*Subject to approval of the UNIFE General Assembly in June 2025

UNIFE Committees and Working Groups

The **Presiding Board** is UNIFE's highest committee. It is responsible for the management of the association. The Board takes any measure or action required to achieve the objectives and general policies of the association. This body reviews applications for membership before they are submitted to the General Assembly for ratification. The Presiding Board is composed of 9 members elected by the General Assembly, every three years. One seat on the Presiding Board is reserved for the Chair of the UNIFE SME Committee.

The **Strategy Committee** steers UNIFE activities and advises the Presiding Board on all strategic and political issues. It is composed of high-level managers representing the association's most prominent members.

The **Technical Platform** brings together all UNIFE Members and equally covers all EU research, technical harmonisation and standardisation matters. The platform regularly reports on relevant developments and the Association's activities at EU level standardisation bodies. It also shares news regarding the Association's R&I projects, including **Europe's Rail Joint Undertaking**. The Technical Platform communicates changes within the regulatory framework in regards to **the European Union Agency for Railways** (ERA) and the **European Commission** (i.e. DG MOVE, DG RTD, DG CONNECT, etc.,). This body enables all members to have a better understanding of current EU rail technical issues, their background and their implications for the industry in Europe and beyond.

The UNIFE **Freight Committee** gathers companies active in the rail freight business and aims to strengthen the position of the industry within the European institutions' policy priorities. This committee provides its members with information and support on EU R&I funding opportunities, rail freight policy developments and participation in EU lobbying on pertinent rail freight developments, including discussions concerning ongoing and upcoming TSIs/Standards, as well as following the Digital Automatic Coupling activities at European level including the work of the Task 4 of Europe's Rail System Pillar.

UNIRAILINFRA is a consensus-building platform focused on rail industry infrastructure at a pre-competitive stage. It promotes investment and innovation in the railway infrastructure and energy areas. UNIRAILINFRA brings together companies specialising in the manufacturing and supply of fixed railway equipment linked to the infrastructure and energy subsystems with companies that design, construct and maintain those products. This committee provides its members with information and support on EU R&I funding opportunities, rail infrastructure policy developments and participation in EU lobbying on pertinent topics such as public procurement, investment and revision of TSIs/standards.

The **Research and Innovation (R&I) Committee** is responsible for monitoring European rail research opportunities and preparing recommendations. It is responsible for the regular exchange of information on European rail research, including updates pertaining to Europe's Rail Joint Undertaking, discussions on Horizon Europe R&I work-programmes and the definition of railway suppliers' R&I positions. The committee also drafts common

positions that will be defended at the EU level. Its purview also includes contributing to ongoing initiatives such as ERRAC, Europe's Rail and European Commission consultations on R&I. This committee is also following the preparation of the upcoming European Research Framework Programme (FP10).

The **UNIFE System Pillar Committee** is responsible for the definition of the overall strategy and strategic guidance of UNIFE regarding Europe's Rail System Pillar activities. This committee is following Europe's Rail System Pillar activities and aims at defining UNIFE's position on the strategic topics discussed in the System Pillar. This committee is composed notably of UNIFE Europe's Rail Founding Members and members of the UNIFE Strategy Committee. This committee is working in close contact with UNITEL, UNISIG, SRG and the UNIFE Freight Committee.

The **UNIFE System Pillar Technical Group** is responsible for the follow-up of the Task 1 of Europe's Rail Joint Undertaking dealing notably with the definition of the high-level architecture of the European railway system. It defines UNIFE's position on strategic topics linked to the evolution of the European railway system. The Committee brings together representatives from UNITEL, UNISIG and SRG and reports to the UNIFE System Pillar Committee.

The **Standards and Regulation Group (SRG)** steers UNIFE's technical activities pertaining to the European regulatory framework i.e. the Railway Interoperability and Safety Directives, TSIs, and standardisation, in Europe and abroad. The SRG coordinates the UNIFE positions towards the European Union Agency for Railways (ERA) and the Group of Representative Bodies (GRB). The SRG is composed of the standardisation, regulation and authorisation managers from UNIFE's main system integrators and subsystem suppliers.

The **European Railway Wheels Association (ERWA)** aims at promoting usage benefits, lifecycle cost reduction and standardisation of railway wheels and wheelsets. Its mission includes developing standards and promoting innovation in safety and environmental friendliness. The group also encourages the adoption of best practices across the European market. The ERWA Steering Committee is composed of CEOs from European wheels and wheelsets manufacturers. It is supported by the Development Committee, which analyses political issues, market strategy and communications; and the Technical Committee, which deals with standardisation, regulation and research.

The **Digitalisation Committee** focuses on developing digital technologies in the rail sector from a political, technical, and business perspective. The main objectives of the Committee are to bring the rail supply industry's view to the centre of the EU-level digital debate. In addition, the members aim to understand better the potential opportunities and challenges of digitalising rail transport.

The **Cybersecurity Working Group** brings together the association's member companies that possess significant cybersecurity expertise. This working group's main objective is to provide UNIFE members with a forum to discuss and identify opportunities for cybersecurity cooperation within the European rail sector, strengthening its position when compared to competitors and other stakeholders. This working group is responsible for the follow-up of the implementation of the Cyber Resilience Act and the coordination at sector level through the rail sector cybersecurity platform.

UNISIG Committee is the technical body responsible for the development, maintenance, and updating of the ERTMS and CCS/TMS technical specifications. For ERTMS in particular, this process is carried out in close cooperation with the European Union Agency for Railways (ERA). Within the membership of UNISIG, there are three categories: full members, associated members, and partners. UNISIG is governed by a Steering Committee (SC) comprised of senior technical managers from the full members, and is supported by a technical authority known as the Supergroup (SG), which consists of highly qualified ERTMS experts from each of the full members. The detailed technical work of UNISIG is carried out in Work Groups (WGs) responsible for specific technical specifications or in Mirror

Groups corresponding to ERA's Working Groups, where UNISIG is represented by appointed experts.

The **UNIFE Extended CCS Steering Committee (UESC)** coordinates UNIFE's strategic and political ERTMS activities. UESC members regularly liaise with European Commission (DG Move) and European Railways Agency (ERA) representatives to address any political issues related to ERTMS and organise high-level meetings between European bodies representatives and Signalling companies' CEOs and/or Directors.

The **ERTMS Marketing Group (UEMG)** is tasked with coordinating any marketing activities related to the **European Rail Traffic Management System** (ERTMS). This includes collecting and disseminating deployment statistics, planning events, generating common publications such as factsheets, flyers, and brochures, as well as managing the ERTMS website.

The **Control Command and Signalling Platform (CCS-P)** is a platform aiming at exchanging on control command and signalling topics. The platform is an information and sharing platform focusing on the progress of Europe's Rail Joint Undertaking System Pillar activities especially regarding Task 2 of the System Pillar dealing with Control Command and Signalling.

The **UNITEL Committee** focuses on the development and implementation of the future railway mobile communication system (FRMCS), the inherent successor of GSM-R, as part of the future ERTMS and interoperable railway. UNITEL brings together the major railway telecommunications products suppliers and companies that have significant experience in current GSM-R and future railway systems. The committee members aim to ensure that the railways communication system fulfils existing and future signalling, train control and traffic management requirements, as well as supports European railway research initiatives.

The **National Associations Committee** gathers the directors of 12 national rail associations from 11 different EU Member States, collectively representing more than 1,000 large- and medium-sized European rail supply companies. As UNIFE Associate Members, these organisations promote our positions domestically while elevating national concerns to the European level.

The **Public Affairs Liaison Group (PALG)** brings together representatives of full UNIFE Members responsible for EU and national advocacy. It discusses lobbying strategies concerning important EU political files. It also identifies synergies between the association and its membership for impactful lobbying activities and campaigns.

The **SME Committee** is a platform of 45 UNIFE Members to share information and learn about EU policies impacting SMEs and available EU funds accessible to them. The committee is working to facilitate SME member access to EU funding support schemes, and to understand the impact of EU policies in the fields of industry, environment, intellectual property, investments, digitalisation, skills, and others. UNIFE is supporting its SME members through the SME Committee by reporting on the latest developments at the EU level and sharing best practices to learn from each other.

The **Trade & International Affairs Committee (TIAC)** oversees the monitoring of EU trade negotiations and instruments with potentially significant implications for the European rail supply industry and coordinating UNIFE's responses. The Committee also focuses on public procurement, be it at international or EU level. TIAC is also a platform for the exchange and dissemination of information on bilateral cooperation activities undertaken by UNIFE in international markets.

The Sustainable Transport Committee (STC) brings together the rail supply industry's leading experts on sustainability-related topics. The STC defines the strategy and carries out UNIFE's activities in the field of sustainable mobility, climate crisis, energy efficiency, urban mobility, circular economy, sustainable finance (EU Taxonomy) and any other relevant EU policy initiative. The STC coordinates the activities of three technical expert bodies, named Topical Groups: the *Life-cycle Assessment Topical Group* (LCA TG), the *Chemical Risks Topical Group* (CR

TG), and the Corporate Sustainability Reporting Directive Working Group (CSRD WG).

The **Investment and Project Financing Expert Group** brings together high-level executives responsible for EU funding and financing, finance and corporate relationships with financial institutions, such as the European Investment Bank (EIB) and national export credit agencies. This committee explores and assesses EU funding avenues for rail related projects, including Public Private Partnerships (PPPs). The Expert Group advocates for providing enabling conditions and appropriate regulatory EU and international funding frameworks for rail.

The **International Railway Industry Standard (IRIS) Steering Committee** was established in 2006 and is composed of high-level representatives from the UNIFE system integrators and equipment manufacturer membership. This steering committee is the UNIFE working group responsible for IRIS Certification® operational management and decisions regarding resources, contracts and financial budgeting.

The **UNIFE Gender Equity Advisory Group** is assessing the current situation of female employees throughout the industry, to understand barriers of entry for those wishing to have a fulfilling rail career and to craft association position papers, statements and recommendations in order to ensure the optimal mobilisation of the rail community going forward.

The **UNIFE Communications Committee** steers the UNIFE Communication Strategy. It is composed of the Communications Directors of UNIFE members.

UNIFE Technical Working Groups

- Aerodynamics
- Brakes
- Cabin
- Chemical Risks
- Crash Safety
- Diesel
- Electromagnetic Compatibility (EMC)
- Energy
- Entity in charge of maintenance (ECM)
- Fire Safety (SRT)
- 1520 Gauge vehicles
- Infrastructure
- Life Cycle Assessment (LCA)
- Noise
- Persons with Reduced Mobility (PRM)
- Railway Dynamics
- Rolling Stock
- Safety Assurance
- Signalling
- Special Vehicles
- Telematic Application for Passengers & Freight (TAP & TAF)
- Train Control Management System (TCMS)
- Vehicle Authorisation
- Wagon (WAG)

02.
European Affairs

1. New institutions, new priorities

The UNIFE Public Affairs unit was highly active in 2024, an electoral year in which both the mandate of the European Parliament and the European Commission were renewed. Before the European elections in June, UNIFE launched a campaign with its members on the future priorities, and expectations of the European Rail Supply Industry. The **UNIFE manifesto** "**On the Move to a Net-Zero EU**" was released in March 2024. The manifesto outlines the European Rail Supply Industry's priorities for the 2024-2029 EU legislative cycle, putting climate solutions, skills, public procurement, innovation and better regulation at the heart of a strategy that will turbo-charge European rail to create jobs as a net-zero industry.

During the plenary sessions in Strasbourg and Brussels, the UNIFE team met Members of the European Parliament (MEPs) from various relevant Committees, many elected for the first time. The manifesto was a key element shared during the meetings in order to convey simple and clear messages.

UNIFE also joined forces with other partners to meet the MEPs and influence the platform and agenda of the new Commission. UNIFE is an active member of the **Rail Forum Europe (RFE)**, the association of the Members of the European Parliament dedicated to rail transport, and **AEGIS Europe**, an industry alliance representing over 25 key industries aiming to promote manufacturing investment, innovation, jobs and growth in Europe.

In the same spirit, UNIFE is a member of the **Platform for Electromobility**, which brings together more than 40 members across the whole value chain of electric mobility and all transport modes, including rail. Being active in these coalitions is crucial to increasing the impact of our message and being heard by European decision-makers.

UNIFE manifesto - **On the Move to a Net-Zero EU: The European Rail Supply Industry priorities for 2024-2029**

2. Industrial Policy

a. The Net-Zero Industry Act: Fostering clean technologies in Europe

As part of the Green Deal Industrial Plan, the European Commission proposed the **Net-Zero Industry Act (NZIA)** to ensure that the green transition is not put at risk by strategic dependencies.

UNIFE closely followed the negotiations on this initiative since some of the key energy technologies concern the rail supply industry value chain, in particular the electric propulsion technologies for transportation, batteries and electrolysers and fuel cells.

An agreement on the NZIA was found between co-legislators and the Regulation entered in force on 29 June. In the framework of the implementing phase, UNIFE contributed to the work of definition of the technologies.

Despite a limited positive effect on the European rail supply industry, this Regulation will most probably be a blueprint for the work of the 2024-2029 European Commission to foster EU-grown technologies including in the field of public procurement.

European Commission's **Factsheet on the Net-Zero Act**

b. Mobility ecosystem transition pathway

In January 2022, the European Commission's DG GROW published a Staff Working Document titled "*For a resilient, innovative, sustainable and digital mobility ecosystem – Scenarios for a transition pathway*". The Mobility Ecosystem (including rail supply) is one of the 14 priority sectoral groupings established by the European Commission.

After a long process, the initiative culminated in 2024. In January, the European Commission published the **final report titled** "**Transition pathway for the EU mobility industrial ecosystem**", which is based on the various roundtables and stakeholders' consultations.

In February, **UNIFE participated in the Roundtable event organised by DG GROW** on the Transition Pathway for the EU industrial mobility ecosystem. Particularly, UNIFE took part in a panel on the experience of the co-creation process with representatives from ACEA and CLEPA (automotive industry), SEA Europe (shipbuilding industry), CONEBI (bicycle industry), IndustriAll and CEEMET (social partners). There was alignment between the mobility ecosystem industries on a number of topics, including the need for regulatory stability, the question of the level playing field, and the need to strongly focus on skills and the shortage of qualified workforce across all sectors. This event marked the kick-off of a call for pledges, which closed in September and for which certain UNIFE Members provided pledges.

European Commission's **Transition pathway for the EU mobility industrial ecosystem**

Roundtable event on the Transition Pathway for the EU industrial mobility ecosystem

c. EC Expert Group Competitiveness of the Rail Supply Industry

UNIFE continued using the EC Expert Group on the Competitiveness of the Rail Supply Industry as the platform to voice the needs and concerns of the European rail supply industry towards the EU institutions and the Member States.

Throughout 2024, the European Commission revived the involvement of EU Member States in the discussions. In May and December 2024, **two meetings of the European Commission (EC) Expert Group were held** to discuss the worldwide rail market, the industry's economic situation, and major priorities of the rail supply industry such as EU public procurement.

Looking forward, the continuation of the EC Expert Group after 2025 will be instrumental in maintaining our constructive dialogue and collaboration with the different Directorates-General (DGs) of the European Commission, the Member States, and the railway operating community. The recent meetings confirmed that this forum is a much-needed governance tool for discussing our industry's priorities at the EU level, in conjunction with the transition pathway.

Meeting of the EC Expert Group on the Competitiveness of the Rail Supply Industry with **Carlos Corts** presenting the WRMS

3. Skills Policy

UNIFE pursued the topic of Skills in 2024, in particular in the context of the **European Rail Skills Alliance (STAFFER)**. The ERASMUS+ financed project, which aims at supporting an overall sectoral skills strategy, developing concrete actions to address short- and medium-term training needs, and also identifying the most sought-after jobs within the European rail sector, concluded at the end of October 2024.

Throughout the year, **UNIFE organised and participated in several events to promote STAFFER and UNIFE's activities on skills.**

On 27 March, UNIFE organised the high-level conference, *"Next–Gen Rail: Building The Workforce of Tomorrow for the Rail Sector"*, in Brussels, with invitees such as Georges Gilkinet (Belgian Deputy Prime Minister and Minister for Mobility), and Andriana Sukova (Acting Director-General, DG Employment, European Commission). During the conference, speakers discussed policy changes and showcased the sector's initiatives to help end the rail skills shortage and focus on the skills needs of tomorrow. It also provided unique perspectives and insight on best practices regarding employee re-training and retention.

On 15 April, UNIFE participated in the *"Future Workforce and Skills"* session during the Transport and Research Arena (TRA) Conference in Dublin. The STAFFER blueprint and its main outcomes and recommendations were presented to the audience. UNIFE had the opportunity to engage with different stakeholders and European Commission representatives, in highlighting the main challenges in resolving the issues for the rail supply industry and sector at large.

"Next–Gen Rail: Building The Workforce of Tomorrow for the Rail Sector"

On 24 October, after four years of collaboration, STAFFER held its final conference in Brussels. It gathered partners from across Europe to discuss the main outcomes and deliverables of the project. Beyond its contribution to the programme, UNIFE moderated the last panel discussion on the legacy of STAFFER that featured Kristian Schmidt (Director, Land Transport, DG MOVE, European Commission), Paloma Iribas Forcat (Chair of the ERA Management Board), Giorgio Travaini (Executive Director, Europe's Rail Joint Undertaking), Enno Wiebe (Director General, UNIFE) and Alberto Mazzola (Executive Director, CER).

STAFFER Final Conference: UNIFE's Director General **Enno Wiebe** featuring in the panel on the legacy of the project

Furthermore, **UNIFE contributed to several key project deliverables, including the Final Report. It also delivered, along with CER, the Policy Recommendations to decision-makers.**

On top of the various events organised during the year, **UNIFE advanced on its communication channels and online activities around skills, attractiveness and diversity**, supported by infographics, informative video reels and press articles.

For more information, please visit STAFFER's dedicated **website**.

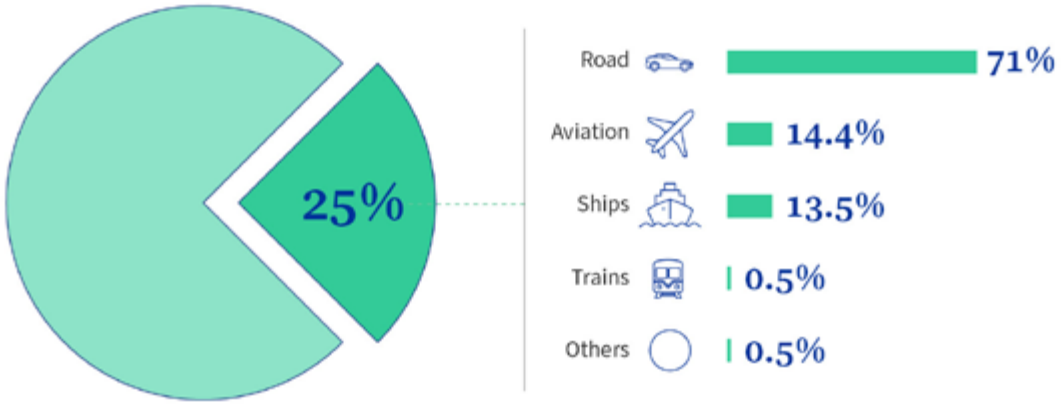
4. Green and digital transition

a. Greening Freight Transport Package

In July 2023, the European Commission presented measures to make freight transport more efficient and more sustainable, with three initiatives - improving rail infrastructure management (the revision of the ***Regulation on the use of railway infrastructure capacity***), offering stronger incentives for low-emission lorries (the revision of the ***Weights and Dimensions Directive***), and better information on freight transport greenhouse gas emissions (***CountEmissions EU***). The aim is to increase efficiency within the sector, helping it to contribute to the target of cutting transport emissions by 90% by 2050, as set out in the *European Green Deal*, while allowing the EU single market to continue growing.

UNIFE followed the three topics, knowing that the first one is important for operators and rail infrastructure managers. At the same time, revising the *Weights and Dimensions Directive* will be crucial for the rail sector as all the new lorries must be compatible with rail. Rail-based multimodal transport chains are the most efficient way to save energy overall.

With ***"CountEmissions EU"***, the European Commission proposed **a common methodology for calculating transport operation greenhouse gas (GHG) emissions across different modes**. Companies will calculate their GHG emissions voluntarily. The methodology aims to provide reliable data on door-to-door emissions to enable proper service benchmarking, and to allow consumers to make informed choices on transport and delivery options.



Transport is responsible for almost 25% of greenhouse gas(GHG) emissions in the EU

Count Emissions EU is necessary to avoid greenwashing practices in transport. However, the proposed initiative is problematic for the rail sector, with default values too negative for the rail GHG emissions, despite the rail sector being responsible for only 0,5% of the emissions in the transport sector in Europe (see below). Therefore, UNIFE has been active on this topic, sending proposals in January 2024 to MEPs and EU Member States, and having meetings with the European Commission's DG MOVE. UNIFE will continue to be active on this topic in 2025 with the start of interinstitutional negotiations.

The decarbonisation of the rail sector is included in the broader context of reducing the environmental impacts for the rail sector. Known as **circular economy**, this economic model is increasingly important as the new European Commission have placed it at the centre of its platform. As mentioned at the event on circular economy organised at InnoTrans by Alstom, UNIFE has a role to play in fostering collaboration between the manufacturers (and their suppliers), the operators and the European institutions. Many initiatives have already been implemented to facilitate the transition to a shared circular economy approach and strategy, for instance, all the UNIFE environmental technical documents, such as the **Rail Industry Substance List (RISL)** or the **Material and Substance Declaration Template (MSDT)**.

Jonathan Nguyen (UNIFE Head of Public Affairs) at the event on circular economy organised by Alstom at InnoTrans on 25 September

b. European Taxonomy and CSRD

UNIFE and its members continue to be active on the EU Taxonomy file, as this topic is **vital to channel investments towards greener projects and financing solutions, including the rail sector and supply industry**. UNIFE continued to support the Commission's ambition to use the EU Taxonomy Regulation to define a common classification scheme, including criteria for identifying sustainable economic activities, to guide investors and financial institutions through a truly green transition.

The EU Taxonomy's regulatory framework must enable fair, verifiable and reliable comparability between the different economic activities and modes of transport. **UNIFE continues to have concerns regarding its contribution to a level playing field.** The European Commission undermines its sustainable-finance investment criteria by including modes of transport in the EU Taxonomy that are not "*contributing substantially to climate change mitigation or adaptation*", such as the aviation sector. The European Commission should instead incentivise investment and development in zero- or low-emission modes of transport, like rail.

With a position paper released in March 2024 and sent to the European Commission, the European rail supply industry has raised concerns about aligning economic activities in the EU Taxonomy with the ***Do No Significant Harm*** **(DNSH) criteria** on "*pollution prevention and control regarding the use and presence of chemicals*". At the moment, implementing the DNSH criteria goes beyond the current scope of legal restrictions. The EU taxonomy criteria should be based on a risk-based approach. Consistency between the Taxonomy DNSH criteria and the perimeters of restrictions in existing chemical regulations must be ensured. The situation has potentially harmful financial consequences for the rail supply industry. UNIFE is therefore following this topic carefully, and is in contact with other stakeholders to clarify concerns on the issue.

UNIFE position paper: **Making the EU Taxonomy work for the European Rail Supply Industry**

The **Corporate Sustainability Reporting Directive (CSRD)** is a binding EU legal framework linked with the EU Taxonomy, and is vital for the future of the European industry. It requires large companies to publish regular reports on the **Environmental, Social, and Governance (ESG**) risks they face and how their activities impact people and the environment to drive investments in sustainable activities. The UNIFE Sustainable Transport Committee (STC) and the new CSRD *ad hoc* Working Group support members in complying with the CSRD requirements and developing a unified interpretation of the key performance indicators (KPIs) for ESG, aiming for consistency, efficiency, and relevance. This work aims to improve the reporting and sustainability performance of the rail industry, including operators and infrastructure managers.

c. PFAS restriction proposal and chemicals regulation

Per- and poly-fluoroalkyl substances (PFAS) are a family of artificial chemicals with about 12,000 different substances. PFAS have various valuable characteristics, bringing unique combinations of properties such as durability under extreme conditions (temperature, pressure, radiation, chemicals), electrical and thermal insulation, heat transfer, clean fire suppression, lubrication, and water and dirt repellence.

Besides widespread consumer uses, PFAS are used in many industrial sectors, including the rail supply industry and its entire value chain, such as refrigerants (F-gases), electronic components, hydraulic fluids, lubricants, sealings, plastics, textiles, adhesives or paints. However, **PFAS have a high persistence associated with potential environmental and human health concerns**, thus their prevalence in high-impact media coverage, which labels them as "*the forever chemicals*".

The European Chemicals Agency (ECHA), backed by the national authorities of Germany, Denmark, the Netherlands, Norway and Sweden, **published a PFAS restriction proposal on 7 February 2023**. The proposed restriction on PFAS is set to be one of the largest ever on chemical substances in the European Union. If approved, manufacturing and placing products containing PFAS on the EU market **will no longer be permitted** in the near future (around 2030). After this, **possible derogations might exist for a use-specific and a time-limited transition period** (maximum until around 2045) **without extension or renewal**. This means work on alternatives by industry is essential. For this reason, UNIFE organised an internal webinar for its members, accompanied by a **factsheet** explaining the PFAS restriction proposal for the rail sector.

Matteo Barisione speaking on PFAS at the UNIFE General Assembly

The 6-month ECHA public consultation received more than 5,600 submissions from over 4,400 organisations, including the 68-page contribution from UNIFE and its partner organisations. **Endorsed by nine rail organisations led by UNIFE**, it proposes a mapping of the PFAS used by the railway sector, a list of alternatives (when possible), and a table listing derogations for essential PFAS applications. With the same rail organisations, UNIFE sent an open letter to the European Commission in February 2024 explaining that the PFAS restriction proposal is a key concern for the European rail sector.

The **European Transport Coalition on PFAS**, a coalition of transport associations created and led by UNIFE, organised meetings with the European Commission. The coalition shared common concerns about the critical impact of the PFAS restriction proposal on mobility and its industries.

UNIFE will continue monitoring the European Chemicals Agency's next move. UNIFE also applied and was accepted as a new (occasional) **accredited stakeholder at ECHA's expert groups**. Over 100 organisations are accredited, of which 75% are industry associations. The final ECHA proposal will be sent to the European Commission. Therefore, raising awareness of the potential negative impact of a total PFAS use ban on the rail sector is crucial.

On chemical regulations, UNIFE is also active within the **Alliance for Sustainable Management of Chemical Risk (ASMoR)**, a coalition that focuses on applying the Essential Use Concept (EUC) and other issues relating to risk management of chemicals in the European Union to ensure the safe use of hazardous substances.

Finally and with the support of its Members, UNIFE also updated and clarified several **UNIFE technical documents related to the environment**. These included the F-gases factsheet, the **Rail Industry Substance List (RISL)**, and the **Material and Substance Declaration Template (MSDT)**. On 15 October 2024, a well-attended webinar was organised by UNIFE to explain these updates to its members.

PFAS restriction proposal: a key concern for the European rail stakeholders

The following European rail stakeholders associations are signatories to this statement: *Association of European Rail Rolling Stock Lessors* (AERRL), *Alliance of Passenger Rail New Entrants* (ALLRAIL), *Community of the European Railways and Infrastructure Companies* (CER), *European Rail Freight Association* (ERFA), *International Union of Wagon Keepers* (UIP), *International Union for Road-Rail Combined Transport* (UIRR), *International Association of Public Transport* (UITP) and *European Rail Supply Industry* (UNIFE).

PFAS, a large class of thousands of synthetic chemicals

Per- and poly-fluoroalkyl substances (PFAS) are a family of artificial chemicals with 12,000 different substances. PFAS are used in many products and have various valuable properties: lubricant, water and dirt repellence, durability under extreme conditions (temperature, pressure, radiation, chemicals), electrical and thermal insulation, refrigerants etc. However, **PFAS have a high persistence associated with potential environmental and human health concerns**, thus the alternative name of "*the forever chemicals*".

ECHA and the PFAS restriction proposal

For this reason, on 7 February 2023, the national authorities of Denmark, Germany, the Netherlands, Norway and Sweden submitted **a PFAS restriction proposal** to the **European Chemicals Agency (ECHA)**.

The proposed restriction on PFAS is set to be one of the largest ever on chemical substances in the EU. As a result, manufacturing, using and placing products containing PFAS on the EU market **will no longer be permitted by 2027-2030.** After this, **possible derogations might be granted for use-specific cases and a time-limited transition period (maximum until 2039-2042) without extension or renewal.** In addition, particular uses have been given time-unlimited derogations. Some PFASs are already restricted in the EU (PFOS, PFOA, C9-C14 PFCAs). This proposal does not affect these existing restrictions and ongoing decision-making for PFHxS and PFHxA restrictions.

PFAS are currently crucial for the European rail stakeholders

Besides some consumer products, PFAS are used in many industrial sectors, including the rail supply industry and its entire value chain. **Some PFAS are crucial for the rail supply industry** through their use in various applications - such as firefighting foam, refrigerant (F-gases), electronic components, batteries, fuel cells, hydraulic fluids, lubricants, sealings, plastics, textiles, adhesives, paints, etc.

The European railway stakeholders support efforts to restrict PFAS, which pose unacceptable risks to human health or the environment, such as perfluorooctanoic acid (PFOA). The European rail stakeholders are committed to continuously improving their products and services' environmental compatibility and safety.

Open letter to the European Commission explaining the key concern for the European rail sector

d. Artificial Intelligence (AI) Act

The **Artificial Intelligence (AI) Act** is an initiative from the European Union that aims to regulate AI based on its capacity to potentially harm society. It follows a "risk-based" approach - the higher the risk, the stricter the rules. Companies need to ensure that their staff have sufficient AI literacy to deal with AI systems. This AI Act clarifies the obligations of each actor in the AI value chain. After the negotiating process, the Artificial Intelligence Act was officially adopted on 13 June 2024.

Members of the UNIFE Digitalisation Committee identified one specific issue - the **expected articulation between the AI Act and the sectoral regulation**, in this case, *Railway Interoperability Directive 2016/797*.

Yet, *Directive 2016/797* only covers mainline railways, excluding urban rail systems, such as tramways and metros. These systems still undergo third-party assessments and follow national regulatory frameworks. AI and high-risk AI systems for mainline or urban rail are similar. Yet, they are subject to different regulations, leading to potential regulatory overlap. UNIFE contacted the European Commission, the Member State Representatives, and the MEPs in charge of the dossier to alert them on this topic.

5. Investment Policy

"With the new institutional set-up that emerged after the European elections in June 2024 and the inter-institutional budgetary discussions for the post-2027 programming period, **UNIFE will strongly advocate for the imperative need of securing a significant share of EU funds for rail in the next EU Multiannual Financial Framework (MFF) 2028-2034**, whose preparations will start in 2025. This is an extremely important endeavour considering the benefits of rail transport for the European economy, the environment, the internal market (including European SME's), the competitiveness of the EU industry and consequently, all of society".

a. New EU MFF 2028-2034

European Commission President Ursula von der Leyen announced on her re-election in June 2024 that "***this will be an investment Commission***". This message is echoed by both the **Enrico Letta report** and **Mario Draghi report**, making strong calls for considerably scaling up investments at the EU level, including in rail transport and its associated technologies. In November, **UNIFE finalised its position paper on the next MFF**, highlighting the following building blocks for the configuration of the next EU MFF 2028-2034:

- A continuation of the **Connecting Europe Facility** programme, with a substantial budget increase is fundamental to accomplishing the TEN-T network
- **Structural Funds** must continue to play their role in supporting EU Member States and regions in overcoming disparities by boosting rail connectivity, including at the urban level
- An ambitious **EU Research and Innovation programme** to boost the rail industry's competitive edge, and to prepare for the adoption of future critical technologies
- Revamped blended finance programmes such as **InvestEU,** and regulatory updates are necessary to leverage public and private financing for rail. This will revitalise the European public-private partnership market for rail transport projects
- Powerful EU External Aid instruments to successfully implement EU **Global Gateway post 2027**
- **Emissions Trading System (ETS)** revenues and carbon credits should be further leveraged to support more rail projects and associated technologies
- A centrally managed **EU IPCEI fund** should be established to support European rail projects as Important Projects of Common European Interest

UNIFE's recommendations for the EU Multiannual Financial Framework (MFF) 2028-2034

- Strengthen European **public procurement** provisions to ensure fair competition, sustainable rail projects and European-grown jobs. This will help reward best practices in infrastructure project delivery
- The **disbursement mechanisms** of EU funds should be fit for purpose and carefully assessed depending on the funding instrument, its objectives and timelines

b. Connecting Europe Facility (CEF) II

The CEF II programme has continued to provide crucial support to the achievement of the Trans-European Transport Network (TEN-T).

As the backbone of sustainable mobility in Europe, **rail projects have received more than 70% of the €25.8 billion CEF transport funding** through the four calls for proposals launched between 2021 and 2024, including through the military mobility ones. With the launch of the 2024 call last September and due to the front-loading of funding during 2021-2023, the CEF II transport budget will be mostly exhausted. Financial support through CEF grants will continue to be vital for the **development of the TEN-T Corridors and ERTMS deployment**. They are key to accomplishing the **Single European Railway Area**, which is crucial to bridging the gaps and bottlenecks, thus increasing the competitiveness of the European rail system.

In this context, **UNIFE will strongly advocate for CEF to continue to be the cornerstone of the EU Investment Policy in the transport sector in the post-2027 period.** A first rail sector paper was published in December 2024, where AERRL, CER, UIP, UITP and UNIFE are calling for a new CEF with a co-funding of at least €100 billion. Thus, setting investment priorities to realise the Single European Railway Area including the TEN-T and to ensure that the transport system as a whole efficiently supports EU's economic growth. Furthermore, UNIFE will resume its engagement with the *More EU Budget for Transport* coalition to insist on robust EU funding for transport post 2027.

c. Revised TEN-T Regulation

The new TEN-T Regulation - for which UNIFE has been strongly advocating to be as ambitious as possible - entered into force in July 2024.

The Regulation defines the network through the European Transport Corridors in a three-layer approach. It sets out the requirements for our infrastructure to ensure a coherent quality throughout the EU. The core network includes the most important connections between major cities and nodes and must be completed by 2030. The extended core network needs to be completed ten years later in 2040. The comprehensive network connects all regions of the EU to the core network and needs to be completed by 2050. Particularly important, the revised Regulation establishes that **ERTMS will be the single European signalling system to be deployed across the entire TEN-T network**, enhancing rail safety and efficiency. It also mandates that national systems are decommissioned. Furthermore, **rail-airport connectivity** will be enhanced, and all major cities along the TEN-T network will develop sustainable **urban mobility plans to promote zero and low-emission mobility**. Finally, the TEN-T will also be extended to connect with European neighbours of the **Western Balkans, Ukraine and Moldova**.

The Trans-European Transport Network (TEN-T)

Furthermore, UNIFE participated in the **Connecting Europe Days 2024** (2-5 April, Brussels) where UNIFE's former Director General Philippe Citroën participated in the session "*Strategies for sustainable funding of European public transport*" along with other stakeholders from the sector.

d. European Structural and Investments Funds (ESIF)

ESIF funds, aimed at supporting the EU Cohesion Policy, represent another very important tool to boost rail investments. **In the 2021-2027 period, ca. €30 billion will be allocated to rail-related investments**. On top of the more traditional Cohesion Fund and European Regional Development Fund, the **Just Transition Mechanism** is also an avenue to explore. Particularly, its **Public Sector Loan Facility** provides financial support in the transport sector to regions, including for rail, both in the mainline and urban segments. The facility will mobilise additional investments with the support of the European Investment Bank (EIB).

Nevertheless, ESIF implementation, after four years, is progressing very slowly. At this point, less than 10% of the total €368 billion of EU co-financing has been absorbed by Member States. In this sense, **UNIFE will continue to echo this absorption challenge, calling for strengthening the collaboration between all stakeholders in order to deliver the projects on time.**

e. Recovery and Resilience Facility (RRF)

Overall, total estimated expenditure in sustainable mobility amounts to EUR 87.9 billion, across 27 member states, which corresponds to 25.7% of the total green expenditure in the plans (grants and loans included). This expenditure is matched with 77 reforms across the 27 member states.

The RRF - the core of **NextGenerationEU** - is set to provide €650 billion in grants and loans for ambitious investments and reforms across Member States to advance the green and digital transition, while strengthening the resilience and competitiveness of the EU.

Member States' Recovery Plans include numerous rail-related investments (amounting to ca. €50 billion). However, the Recovery and Resilience Facility (RRF) legal basis establishes that all investments need to be completed by **August 2026** in order for Member States to be able to request the corresponding payments from the European Commission. In the case of rail, due to the specificities of the industry, projects can take longer to complete.

This poses a **risk of funds being left unused**, something UNIFE wants to avoid, as it would mean a lost historic opportunity to build and modernise rail infrastructure, as well as renew ageing rolling stock fleets. Throughout 2024, **UNIFE alerted the European Commission several times on this issue and remains available to propose and seek possible joint solutions to provide more flexibility and reap the full benefits of RRF investments for rail.** According to the last RRF Annual Report, it is worth noting that the RRF has driven over €82 billion in investments directly supporting businesses, and over €300 billion in RRF funds are expected to be disbursed by the end of 2024.

f. EU State Aid Rules

Regarding the revision of **EU State Aid Guidelines for Railways and the proposal on the new Land Transport Block Exemption Regulation**, UNIFE has submitted substantial feedback to the European Commission in order to improve and clarify some aspects of the existing proposals.

UNIFE welcomes the **Transport Block Exemption Regulation (TBER)**, as a new block exemption regulation and the new **Land Multimodal Transport Guidelines (LMTG)**, to enable Member States to provide public aid that contributes to a modal shift towards sustainable land transport modes. Nevertheless, **UNIFE has identified some aspects that require further clarifications and adjustments in order to reap the full benefits of this initiative and accelerate the modal shift to rail.** This notably includes the scope of the operating aid for reducing external costs of transport, the scope of beneficiaries eligible to receive investment aid for the acquisition of rolling stock, including the type of financial instruments. This also includes the investment aid for interoperability, including ERTMS and DAC (and the aid intensity related to these categories), the classification of zero-emission and bi-mode rolling stock.

UNIFE also highlights that when State Aid is aimed at supporting the procurement of assets regardless of the private or public nature of the beneficiary, the principle of the **Most Economic Advantageous Tender (MEAT), as well as a level playing field with non-European economic operators (including as *per* the Foreign Subsidies Regulation) must be properly implemented**.

6. Public Procurement in Europe

Public procurement spending in the EU totals approximately 14% of GDP (€2 trillion/year) by over 250.000 public authorities (with the majority of rail and urban transport operators being public authorities). **Public procurement is by far the predominant and most common process for funding rail projects in Europe**, especially taking into account the various funding and investment opportunities for rail in the EU (e.g. the National Recovery Plans (NRPs) and other sources of EU funding).

Therefore, UNIFE remains committed to ensuring that funding dedicated to rail should be spent in the best possible way to ensure fair competition between suppliers, and to establish an approach in rail procurement that focuses on best value rather than on price criteria only.

Throughout 2024, UNIFE has actively continued to stress the importance of implementing the **Most Economically Advantageous Tender (MEAT)** principle across rail public procurement through several initiatives:

- On 30 April and 1 May, UNIFE participated in the **Middle East Rail Conference** in Abu Dhabi and spoke about strategic European public procurement. UNIFE highlighted the need to foster successful rail investments attached to best value (MEAT principle).
- On 14 May, UNIFE organised the **conference** "**Best value procurement for Rail – Can Europe make a step-change In award criteria?**" in Vienna. The conference was organised in partnership with the Austrian and German Rail Industry Associations, and kindly hosted by ÖBB. The event gathered representatives from the railway operating community and the suppliers. It featured fruitful workshops on experiences and best practices on how to apply the MEAT principle while showcasing the financial, social and environmental benefits of applying the MEAT principle.

The UNIFE conference "Best value Procurement for Rail - Can Europe make a step-change In award criteria?"

In the last quarter of 2024, **UNIFE also prepared for the upcoming evaluation of the EU public procurement framework**. Indeed, in her Political Guidelines from July 2024, the European Commission's President Ursula von der Leyen announced a major revision of the 2014 Directives, notably with the goal to give preference to European products for certain strategic sectors. While many of the announced directions are in line with UNIFE's previous positions on the matter, UNIFE has undertaken a major consultation process within its Membership in order to draft a comprehensive position in the course of 2025.

During 2024, UNIFE updated its contribution to the **interactive map on the activity of third-country State-Owned Enterprises (SOEs) in the European procurement market**. This map, created with the European Construction Industry Federation (FIEC), European International Contractors (EIC), and the European Dredging Association (EuDA), displays all projects in which third-country SOEs have tendered since 2009 in the construction, dredging and rail supply sectors. It confirms that the interest of third-country SOEs in the European public procurement market has kept growing significantly in recent years.

UNIFE and partners **map on SOEs tenders in the EU**

Lastly, in 2024, UNIFE chaired two meetings of the **AEGIS Europe** alliance's **Working Group on Public Procurement**, which gathers several industry associations driven by common interests and challenges in the field. Along with UNIFE, AEGIS Europe continues its efforts to promote a fair European and international public procurement framework towards the European institutions and individual Member States.

03. International Affairs

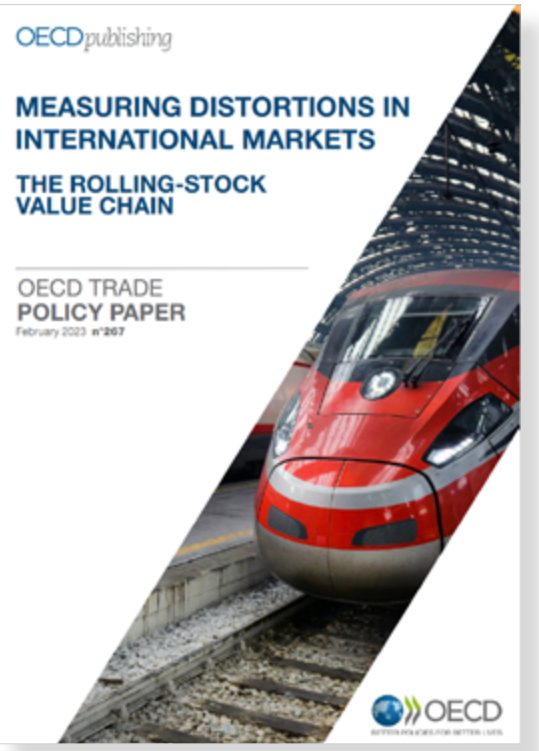
1. Organisation for Economic Co-operation and Development (OECD)

Work in 2024 for UNIFE with the OECD, hinged on the 2023 publication of the **OECD (Organisation for Economic Co-operation and Development) trade policy paper** **Measuring distortions in international markets – The rolling-stock value chain**.

The report helped shed light on the magnitude and the manner in which governments subsidise the rolling stock manufacturers that they deem as strategic, with a view to informing efforts to revisit global trade rules. It also highlighted that **government support to rolling stock manufacturers is raising concerns about possible market distortions and unfair competition**. In the report, it is notably stated that ***"CRRC obtained as much as 72% of all absolute support"*** **(through grants, tax concessions, below market borrowings, etc.), and that CRRC obtained "*tax support of more than $400 million in 2020 alone*"**.

Throughout 2024, UNIFE has continuously communicated on this important policy paper towards the new EU institutions and key-stakeholders, both in Europe and beyond. The report has also provided a credible and substantiated basis for important EU autonomous tools such as the Foreign Subsidies Regulation, which aims at tackling distortions on the European single market.

Furthermore, as a Member of **Business at OECD (BIAC)**, UNIFE has continued to participate in meetings and contributed to business positions in order to advance the interests of the European Rail Supply Industry on level-playing field issues.



OECD Trade Policy Paper: Measuring distortions in international markets – The rolling-stock value chain

2. Towards an EU Strategy for Export Credits

During the past year, UNIFE has been closely monitoring the developments on the EU Export Credits Strategy. Following the ***2023 Feasibility Study on an EU Strategy on Export Credits*** - for which UNIFE and its Members communicated their challenges and priorities - there are a couple of milestones worth highlighting.

The European Commission, the European Investment Bank (EIB) and the European Investment Fund (EIF) have established a **€300 million export credit guarantee facility** under the EU flagship investment programme InvestEU. This agreement enables the InvestEU guarantee to be used by the EIB Group's risk-capital subsidiary, the European Investment Fund, to support the export credit sector, aimed at boosting exports to Ukraine by small and medium-sized companies in the EU. This initiative aims to reduce financial risks, encouraging EU businesses to increase exports to Ukraine and revitalise trade. The facility will strengthen economic ties with the EU and contribute to Ukraine's economic recovery. The Commission has explained that this initiative is **a pilot project in the context of the European Export Credit Strategy,** aimed at coordinating and supporting national ECAs. The Commission also mentioned that **if this proves successful, a similar initiative could be replicated at other sectors such as infrastructure / transport.**

However, the Commission has established an **Expert Group on Enhanced Coordination of External Financial Tools.** The Members of this Expert Group are development finance institutions of the Member States ('DFIs'), national development banks of the Member States ('NDBs'), export credit agencies of the Member States ('ECAs'), the EIB, and group observers such as finance sector and EU business associations. **UNIFE was invited to participate in the very first meeting of this Expert Group to present observations regarding global competition in the transport sector**, including views on procurement procedures. From UNIFE, the main points elaborated revolved around the challenges related to procurement procedures in the context of Global Gateway projects, as well as unfair competition issues, such as low price bids practices, lack of level playing field and the applicability of the MEAT principle that should be part of the tendering process.

3. European Union Global Gateway Strategy

UNIFE dedicated session to Global Gateway and Latin America during InnoTrans, with the participation of DG INTPA, Renfe and Alstom

Throughout 2024, **UNIFE has further demonstrated its commitment to the effective implementation of the EU Global Gateway Strategy, by closely collaborating with the European Commission and other stakeholders**. Global Gateway is the EU's contribution to narrowing the global investment gap worldwide, with a mobilisation of €300 billion investments up to 2027. It is in line with the commitment of the G7 leaders from June 2021 to launch a values-driven, high-standard and transparent infrastructure partnership to meet global infrastructure development needs.

Firstly, at the 2024 UNIFE General Assembly, UNIFE organised the **Dialogue Forum: Boosting the global presence of the European Rail Supply Industry – A renewed EU & international toolbox to succeed**, which counted with the participation of both DG INTPA and DG GROW. The discussion focused on how the different EU instruments such as the **EU Public Procurement Framework** and strategies such as **Global Gateway,** can boost the global presence and competitiveness of European rail suppliers, who reaffirm their commitment to the principles of free trade, fair competition and a level playing field on global and European markets.

Secondly, UNIFE has co-chaired the launch of two **Global Gateway Railways Working Groups for the Latin America & Caribbean and Asia/Africa regions**. The objective of these groups is to coordinate EU action in the rail sector outside Europe, and to support the EU railway industry to gain access to market in the previously mentioned areas of cooperation and participate in tenders/projects. The work of the Railway Working Group is important to select priorities and design tailor-made action plans for the industry. During these meetings, UNIFE has clearly advocated on the need to work on the issues created by unfair competition and access to markets. The launch of the Working Group for Latin America and the Caribbean was followed by a dedicated session at InnoTrans, with the participation of DG INTPA, Renfe and Alstom.

Last but not least, UNIFE has continued to be engaged in the **Global Gateway Business Advisory Transport Sub-Group and its plenary meetings**. In 2024, this group has provided a very concrete deliverable – the paper ***Global Gateway and EU Contractors in third country markets' – current state of affairs and how to ensure a level playing field***. This document has been welcomed by the European Commission, as a guiding tool that will feed into future discussions and Global Gateway implementation.

4. Foreign Subsidies Regulation

The **Foreign Subsidies Regulation (FSR)** entered into force in 2023 and began on 12 October, when the reporting obligations to notify financial contributions, in the context of public procurement procedures and takeovers, were enabled.

The Regulation grants the European Commission the power to investigate financial contributions granted by non-EU governments to companies active on the European market. The Commission can open investigations against market players and, if such financial contributions constitute distortive subsidies, the European Commission could also open redressive measures.

European Commission - Press release

Commission opens first in-depth investigation under the Foreign Subsidies Regulation

Brussels, 16 February 2024

Today, the Commission is launching its first in-depth investigation into the potentially market distortive role of foreign subsidies, exercising its powers under the Foreign Subsidies Regulation. This investigation relates to a public procurement procedure. It shows the Commission's determination to preserve the internal market's integrity by ensuring that recipients of foreign subsidies cannot benefit from an unfair advantage to win public contracts in the EU, to the detriment of fair competition.

The investigation launched today follows a notification submitted to the Commission by CRRC Qingdao Sifang Locomotive Co., Ltd., a subsidiary of CRRC Corporation, a Chinese state-owned train manufacturer. It concerns a public procurement procedure launched by Bulgaria's Ministry of Transport and Communications, relating to the provision of several electric "push-pull" trains as well as related maintenance and staff training services.

According to the Foreign Subsidies Regulation, companies are obliged to notify their public procurement tenders in the EU when the estimated value of the contract exceeds €250 million, and when the company was granted at least €4 million in foreign financial contributions from at least one third country in the three years prior to notification.

Following its preliminary review of the notification received from CRRC Qingdao Sifang Locomotive, the Commission considered it justified to open an in-depth investigation, since there are sufficient indications that this company has been granted a foreign subsidy that distorts the internal market. For this, the Commission had to assess whether the foreign financial contribution constitutes a subsidy that directly or indirectly confers a selective benefit to the company; and whether this allows the company to submit an unduly advantageous tender.

During the in-depth investigation, the Commission will further assess the alleged foreign subsidies and obtain all the information required to establish whether they may have allowed CRRC Qingdao Sifang Locomotive to submit an unduly advantageous offer in reply to a tender. Such an offer could cause other companies participating in the public procurement procedure to potentially lose sales opportunities.

In line with the provisions of the Foreign Subsidies Regulation, at the end of its in-depth investigation the Commission may (i) accept commitments proposed by the company if they fully and effectively remedy the distortion, (ii) prohibit the award of the contract, or (iii) issue a no-objection decision.

European Commission's press release on the first in-depth investigation under the Foreign Subsidies Regulation

In February 2024, the first ever in-depth investigation under the FSR was opened by the European Commission against CRRC concerning a public procurement procedure launched by Bulgaria's Ministry of Transport and Communications. This was related to the provision of several electric "push-pull" trains, as well as related maintenance and staff training services. This resulted in the withdrawal from the procedure by CRRC. UNIFE welcomed this outcome but also highlights the need to tackle circumvention risks (e.g. with projects below the notification threshold).

UNIFE also participated in a number of public events to raise awareness of the main issues related to the European Rail Supply Industry, including in the **FDI Regimes & Foreign Subsidies Regulation 2024 conference organised by CompLaw on 14 May.**

UNIFE and its members will keep monitoring its implementation and full application, especially in view of a revision of the Regulation planned for 2026.

Jonathan Nguyen (Head of Public Affairs) participating in a panel of the FDI Regimes & Foreign Subsidies Regulation 2024 conference organised by CompLaw on 14 May

5. Carbon Border Adjustment Mechanism

Throughout 2024, UNIFE and its trade alliance **AEGIS Europe** have been active in the implementation process of the **Carbon Border Adjustment Mechanism (CBAM)**.

The law was adopted by the co-legislators in 2023, with application beginning later that year. The **CBAM is now under its transitional period until December 2025,** during which economic operators are requested to submit reports to the European Commission in regards to emissions embedded in their imports, subject to the mechanism without paying any financial adjustment. The full CBAM deployment will take place early 2026.

In its first phase, the CBAM will focus on goods most at the risk of carbon leakage:

UNIFE has been emphasising its support of the stated objective to establish a level-playing field on carbon content and to avoid carbon leakage, but has also highlighted the significant risks for the competitiveness of downstream industries, such as the rail supply industry. This is why - with the European Commission set to present by end of 2025 an impact assessment - UNIFE consulted its member companies. The outcome of the exchanges has been inputted into **a position paper in November 2024, requesting the extension of the scope of the CBAM to wheels, axles and wheelsets** – which due to their composition, ought to have a robust methodology for accounting for the carbon emissions generated during their production.

6. EU's Foreign Direct Investment Screening Regulation

The **EU's Foreign Direct Investment (FDI) Screening Regulation** was adopted in 2019 as a means to foster Member States to further evaluate foreign investments/non-EU related to security and public order, particularly when it comes to critical infrastructure. This Regulation is of particular importance for the European Rail Supply Industry since over the past years, the foreign direct investment has significantly increased, and the rail sector has been identified by several countries as a strategic sector.

In January 2024, the European Commission made a proposal to revise the Regulation and further strengthen the protection of EU security and public order. This legislative proposal builds on the experience gained by the Commission and Member States with reviewing over 1,200 FDI transactions notified by Member States over the previous three years under the existing Regulation. It also builds on an extensive evaluation of the current Regulation. It proposes to address existing shortcomings and improves the efficiency of the system by ensuring that all Member States have a screening mechanism in place, with better harmonised national rules; by identifying minimum sectoral scope where all Member States must screen foreign investments; and by extending EU screening to investments by EU investors that are ultimately controlled by individuals or businesses from a non-EU country.

Against this background, **UNIFE drafted a position paper on the Commission's proposal in April 2024.** The position paper strongly supported the direction of the revision proposed by the European Commission, but insisted on the need to further increase the scope of screening mechanisms, in particular when it comes to Annex I (EU programmes and projects) and Annex II (sectors and items). With the new institutions in place and active in the last trimester of the year, UNIFE successfully conveyed these messages to the European Parliament - in particular to the INTA and TRAN Committees.

UNIFE's feedback on the European Commisssion's Proposal for a Regulation on the Screening of Foreign Investments in the Union and repealing Regulation (EU) 2019/452

7. Bilateral cooperation with third countries

Bilateral cooperation with third countries remains one of UNIFE's priorities. Throughout 2024, and particularly during InnoTrans, UNIFE had the opportunity to exchange and meet with several partners across the globe.

a. Western Balkans

UNIFE continued to strengthen its relations with the **Transport Community Secretariat of the Western Balkans**. In this sense, two important events are worth highlighting.

UNIFE Director General Enno Wiebe and Matej Zakonjsek, Director General of the Permanent Secretariat of the Transport Community of the Western Balkans, held a constructive **meeting on 12 July** to identify mutually beneficial areas of cooperation for both regional partners of the Western Balkans and European rail suppliers. The two organisations identified three key topics - the rail technical framework with the upcoming revision of the TSI's (including also within the OTIF framework), public procurement practices (including by promoting the MEAT principle), and market openings in the Western Balkans' region.

Furthermore, UNIFE deepened these exchanges with the Transport Community and the Infrastructure Managers of Albania, Montenegro, Macedonia and Kosovo, in a dedicated event at UNIFE's InnoTrans stand on 24 September. The objective was to consider further sustainable and resilient rail investments. Such investments must ensure a successful extension of the TEN-T Network, for which the application and guidance of the MEAT principle will be key to deliver quality investments.

Western Balkans and Europe: Sustainable and resilient rail investments for a successful extension of the TEN-T Network session (InnoTrans 2024)

b. United States

In September, with the occasion of InnoTrans, UNIFE organised several activities to introduce the new UNIFE Director General to our US partners, and to discuss how to deepen the cooperation with them.

In particular, UNIFE organised the session *North America and Europe: The common challenges and opportunities of rail supply industries* at its stand on 25 September. The panel featured the US Railway Supply Institute, which is UNIFE's counterpart in the US. Discussions focused on rail market developments, public procurement or skills.

Additionally, UNIFE organised **bilateral meetings with long-standing US partners - the American Public Transportation Association (APTA) and the Federal Railroad Administration (FRA) during InnoTrans**. The constructive discussions focused on the market developments on both sides of the Atlantic, on the regulatory framework and on the overall rail supply landscape.

North America and Europe: The common challenges and opportunities of rail supply industries (InnoTrans 2024)

The UNIFE and Federal Railroad Administration (FRA) teams at their bilateral meeting (InnoTrans 2024)

c. Gulf Countries

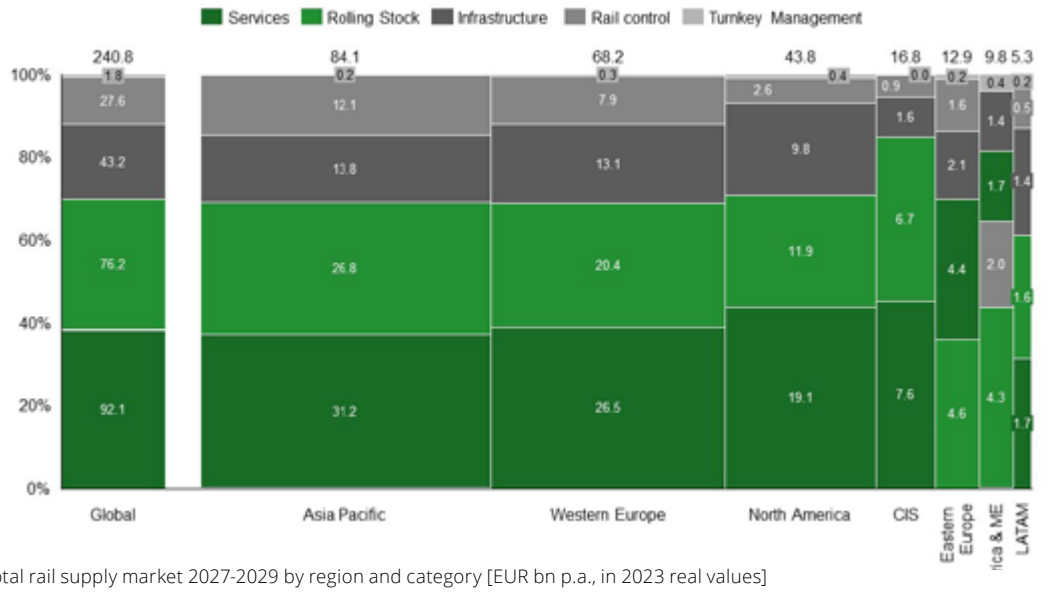
In May 2024, UNIFE participated in the Middle East Rail conference in Abu Dhabi, where we gave a presentation on the latest developments related to public procurement in the EU.

Furthermore, during InnoTrans in September, UNIFE introduced the new UNIFE Director General to partners of the Railways Authority of the Gulf Cooperation Council (GCC).

Discussions were held on how to deepen cooperation between UNIFE and the GCC in the framework of the ongoing GCC railway project to connect all six Gulf Cooperation Council member states.

04.

UNIFE World Rail Market Study 2024



Total rail supply market 2027-2029 by region and category [EUR bn p.a., in 2023 real values]

The **tenth edition of the World Rail Market Study (WRMS), conducted for UNIFE by Bain & Company**, was unveiled by UNIFE Director General Enno Wiebe on 24 September 2024 during InnoTrans. Published biennially since 2006, the study provides an overview of the market in its current form and a forecast of its future development in different regions and market segments. It also assesses changes in rail market accessibility.

The World Rail Market Study has confirmed the **global rail supply market grew 2.7% annually between 2021 and 2023**, while also projecting a positive forecast for the rest of the decade.

In the face of rising geopolitical tensions, the global rail supply market took advantage of growing transport demand and the ongoing green transition, booming to an **average annual volume of €201.8 billion** (adjusted for inflation). This is up from €176.5 billion, as recorded in the 9th edition of the World Rail Market Study in 2022 (covering the years 2019-2021).

Between 2021-2023 and 2027-2029, the global market is expected to grow by 3% annually in real terms. By the end of this period, the average market size is expected to expand to €240.8 billion per year. This growth – which is forecasted and based on over 10,000 future rail project orders (including greenfield investments, replacements, and modernisation projects) – comes in the face of rising protectionism, as **accessibility to global markets for the EU rail suppliers on average fell from 60% to 59% for the 2021-2023 period.**

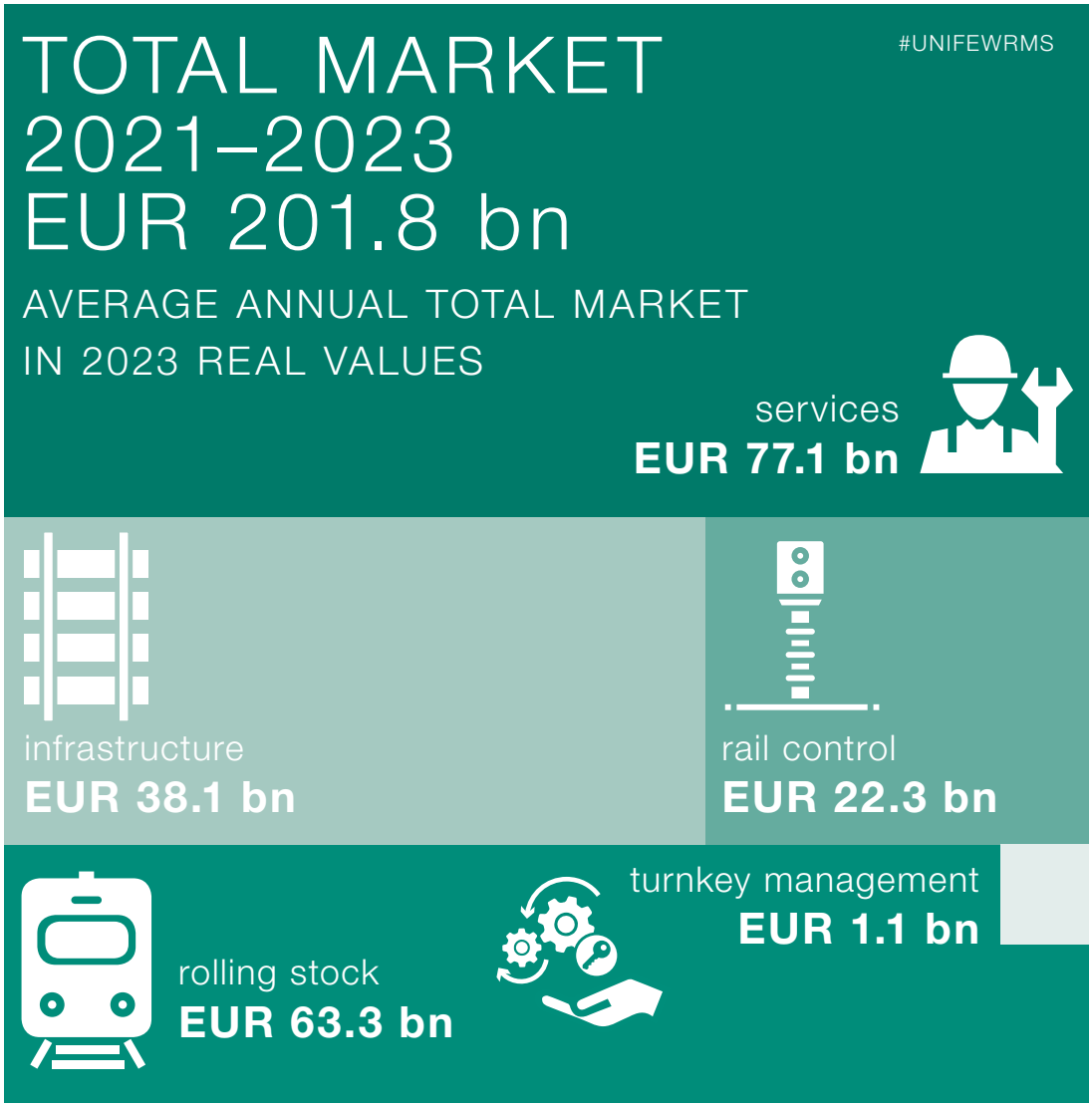
In the 2021-2023 period, the European Union and the United States deployed large investments to both support economic recoveries in the aftermath of the pandemic, and to accelerate the green transition. **The growth in the global rail supply market was largely driven by Western Europe, which grew by 7.3% per year.** This growth took place across the entire value chain, with some of the strongest growth areas including EMUs, infrastructure investments for light rail and investments in the ERTMS trackside and onboard systems. Other strong performers included Africa and the Middle East, with a growth rate of 10.2% per year, while Eastern Europe grew 6.8% per year and North America grew 3.8% per year.

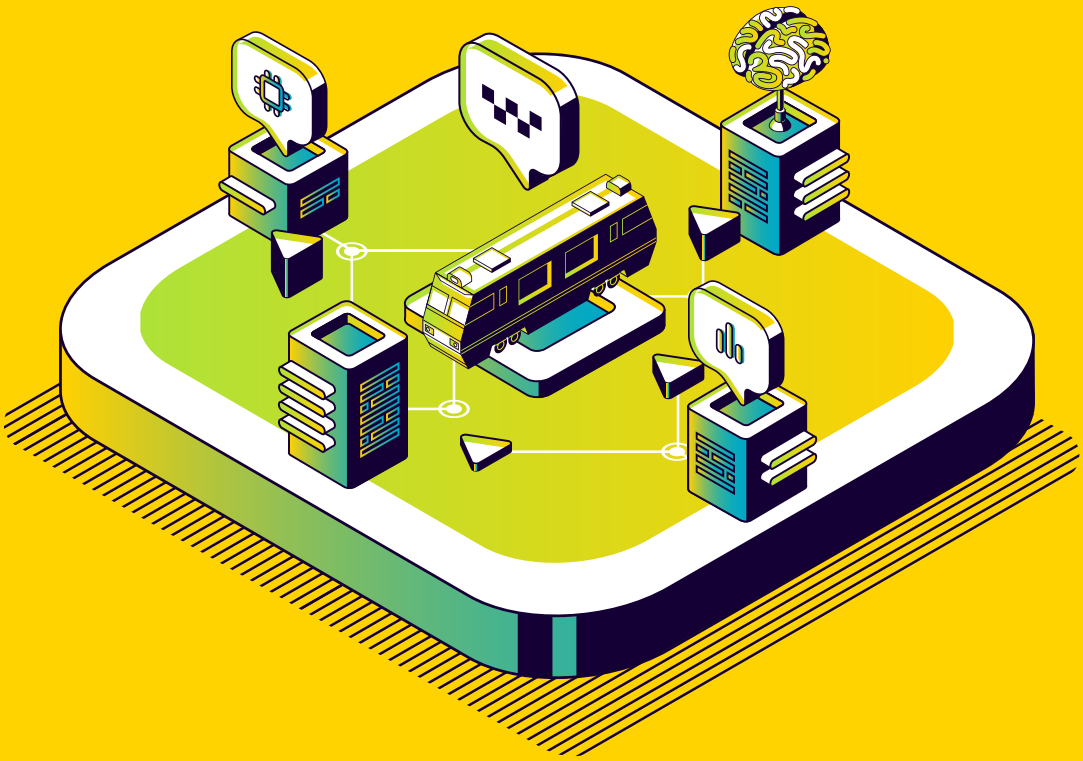
Prolonged COVID-19 lockdowns, financial challenges among local governments and railway operators caused a 1.2% decline per year in Asia Pacific, although it remained the largest region for demand.

During 2021 and 2023, there was substantial global investment in rolling stock (excluding coaches and freight cars). The installed base in this period grew by 5.1%. Positive market development in the rail supply industry is driven by several factors, including **urbanisation, digitalisation, and sustainability**. These factors enhance the demand for transportation, boost railways' competitiveness, and make rail investments a pressing policy priority due to their low environmental footprint.

More high-quality information can be found in the full version of the World Rail Market Study 2024, which is available from the **DVV Media Shop** in both online and physical copy formats. The **abstract** of the study can be found **here**.

For further information about the 2024 World Rail Market Study (WRMS), please contact UNIFE Public Affairs Manager **Carlos Corts**





05.
Standards and Regulation

1. Overview

Being the recognised representative body for the European rail supply industry at European level, UNIFE coordinates the contributions and position of its members towards the development of regulations, decisions, guidelines and other documents drafted by the European Union Agency for Railways (ERA) and the European Commission (EC).

The UNIFE Standards and Regulation Group (SRG) and its supporting UNIFE technical working groups are platforms for members to influence technical regulations that relate to the interoperability and safety of the European railway system. UNIFE actively participates in numerous working parties and groups organised by the European institutions to support the drafting of the aforementioned outputs. The SRG plays a pivotal role in coordinating UNIFE's technical stances on the implementation of the EU's Fourth Railway Package (4RP) and the recurring revisions of the Technical Specifications for Interoperability (TSIs).

SRG also interacts with other rail associations, such as CER, EIM, UIP and NB-Rail, as well as other stakeholders in Europe's rail sector through collaboration in the Group of Representative Bodies (GRB) and the European Standardisation Organisations (ESO) - particularly, CEN and CENELEC - through the Sector Forum Rail (SFR).

As an sector representative on both the ERA Management Board and ERA Executive Board, UNIFE Director General Enno Wiebe regularly attends these meetings to express the rail supply industry's position on important topics, such as ERA's annual work programme and ongoing activities supporting the 4RP's implementation i.e. vehicle authorisation.

For more information, please contact UNIFE Technical Affairs Manager **Nicholas Shrimpton**

2. 2024's key developments in rail standards and regulations

a. The 2024 EC Request to ERA for the next revisions of the Technical Specifications for Interoperability

Following the conclusion and publication of the 2023 TSI Revision Package (in force since 28 September 2023, the European Commission began consultations towards defining their next TSI revision mandate to the European Union Agency for Railways (ERA). DG MOVE initiated the discussions in the 100th meeting of the **Railway Interoperability and Safety Committee (RISC)** held 21-22 November 2023. For each TSI, DG MOVE presented a list of potentially relevant topics coming from different sources to be included in the next TSIs. An official consultation process then followed, lasting several rounds in which the member states and sector stakeholders were asked for comments. This took place from December 2023, and concluded in the 102nd meeting of the RISC on 25-26 June 2024, for which UNIFE was exceptionally invited.

In terms of scope, UNIFE joined forces with ten of the other railway representative bodies - AERRL, ALLRAIL, CER, EAL, EIM, FEDECRAIL, NB-Rail, UIP, UIRR, and UITP – in calling for prioritisation to be given to the on-going enhancements being driven by the Europe's Rail Joint Undertaking, with clear added value for the rail sector - namely for ETCS, operational rules harmonisation, FRMCS and the Digital Automatic Coupler (DAC).

In August 2024, the final request formally submitted by the European Commission to the European Union Agency for Railways' (ERA) for the next rounds of revisions of the Technical Specifications for Interoperability (TSIs). The request sets out a list of 80 actions and topic areas to be covered by the future revisions of the TSIs, with the delivery of the TSI revision recommendations expected by the end of 2026 and the end of 2028 by the ERA Working Parties, with a third recommendation expected after 2030.

The work on these revisions of TSIs has now formally begun, led by the ERA and their TSI Working Parties. UNIFE will contribute actively to this revision process with the support of its following committees: Standards and Regulation Group, UNISIG, UNITEL, Freight Committee, Cybersecurity Working Group and UNIRAILINFRA. Establishing and maintaining an efficient technical framework is key for the European rail supply industry, as we balance our shared goals of increasing the competitiveness and market share of rail transport, supporting the European Green Deal and strengthening the competitiveness of the European rail supply industry.

For more information, please contact UNIFE Technical Affairs Manager **Nicholas Shrimpton**

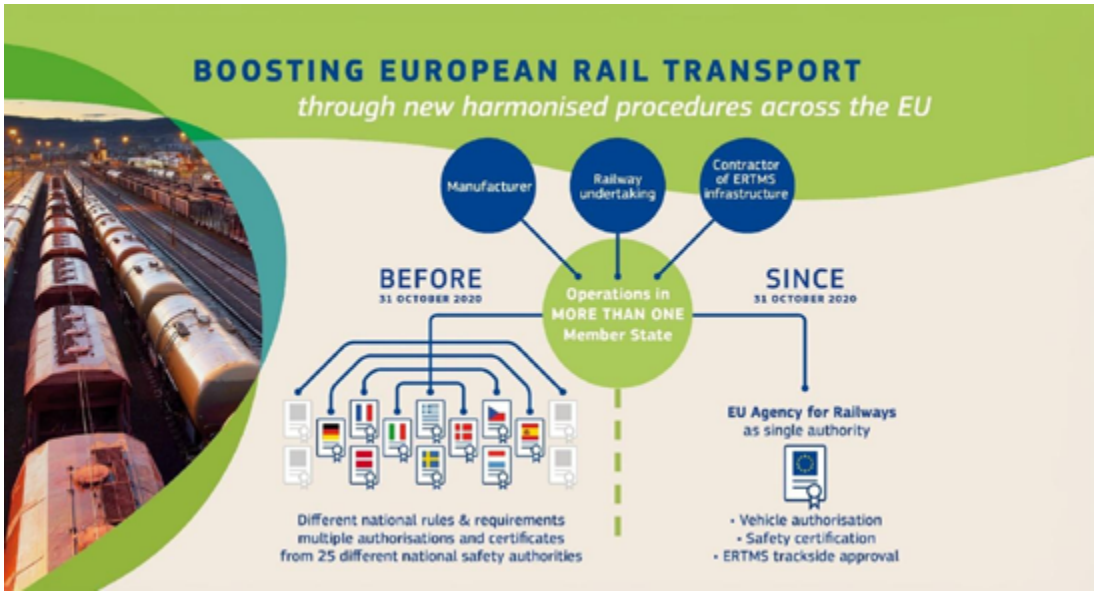
b. Implementation of the Fourth Railway Package's Technical Pillar

The 4RP's Technical Pillar, comprised of the recast Interoperability and Safety Directives and the ERA Regulation, entered into force in June 2016. Following the transposition of the measures by EU Member States, the Technical Pillar and its new vehicle authorisation regime entered into operation on 16 June 2019, and has been in force since 31 October 2020 in all Member States. Our association strongly supported the Technical Pillar's adoption, which we see as of paramount importance for the rail industry's competitiveness, as it aims to remove the remaining technical barriers to the creation of a **Single European Rail Area (SERA)**. A harmonised European authorisation process run by ERA should see a convergence and greater certainty of requirements, leading to a more consistent, quicker and cheaper vehicle authorisation process with less duplication of checks and testing.

Since 16 June 2019, ERA has acted as a European authorising entity and delivered over 7600 vehicle authorisation decisions - representing over 86,000 authorised rail vehicles.

With now over five years of experience in operation, the time has come to review the new processes based on the feedback and return of experience of UNIFE members. Together with all stakeholders from the railway sector and the **National Safety Authorities (NSAs)**, activities have been launched to review the newly implemented system and define recommendations from all involved stakeholders on how to optimise the new processes and achieve the targeted cost and time saving goals. This review is led by **4RP Steering Group** and the newly established **ERA Working Party on Vehicle Authorisation,** both of which UNIFE is member and has provided the feedback from the European rail supply industry. These activities are followed closely by the **UNIFE Vehicle Authorisation Mirror Group,** as the key UNIFE group to exchange on the 4RP authorisation process.

For more information, please contact
UNIFE Technical Affairs Manager
Nicholas Shrimpton



Vehicle authorisation harmonisation under Fourth Railway Package (Source ERA)

c. European Commission Expert Group on the Technical Pillar of the Fourth Railway Package

UNIFE is a permanent member of the EC's **Expert Group on the Technical Pillar of the Fourth Railway Package**, alongside Member State and other official sectoral representative bodies. This group is intended to consult the sector on legislation to be voted on, give recommendations on draft texts and help prepare discussions and votes in the **Railway Interoperability and Safety Committee (RISC)**. This Expert Group is intended to complement - but not replace - the RISC, which only allows Member State representatives to vote on the final Implementing Acts. Four meetings of the EC Expert Group on the Fourth Railway Package were held in 2024, two focused on the European Commission's consultation on the 2024 EC Request for the TSI Revisions, and two meetings focused on the Commission's revision of the TSI regarding telematic applications.

For more information, please contact
UNIFE Technical Affairs Manager
Nicholas Shrimpton

High-level Dialogue between European Commission's DG MOVE, European Union Agency for Railways, Europe's Rail Joint Undertaking, and UNIFE's Management and Strategy Committee members

d. UNIFE High-Level Dialogue with DG MOVE, ERA and Europe's Rail Joint Undertaking

In recent years, UNIFE has established a high-level dialogue between the European Commission (DG MOVE's Directorate C), ERA and Europe's Rail Joint Undertaking management teams and UNIFE Strategy Committee members at the CTO level. This high-level forum continued in 2024 under the leadership of the new UNIFE Director General Enno Wiebe. Discussions covered both political items, such as the new European Commission and its outlook impacting the rail industry, and technical items, addressing blocking points in several key areas such as FRMCS, DAC, the 4RP vehicle authorisation process and the future TSI economic impact assessments. This forum provides a unique opportunity to exchange with the directors of our EU institutional partners, escalate key items needing resolution and align on actions to continue the positive cooperation between the European rail supply industry and EU bodies.

For more information, please contact
UNIFE Technical Affairs Manager
Nicholas Shrimpton

e. Cooperation with the Group of Representative Bodies (GRB)

As the official representative body for the European rail supply industry, UNIFE is a member of the **Group of Representative Bodies (GRB)**. The GRB is a group of European railway associations tasked with supporting the sector's consultations with the **European Union Agency for Railways (ERA),** as it undertakes its work programme and its activities on rail safety and interoperability.

The GRB has continued to be highly active throughout 2024, with particular focus paid to the new EC request on the revisions, which resulted in a number of joint positions relating to regulation and standardisation being expressed in consultation forums or jointly submitted to the EC, ERA and Member State representatives over the past year.

In September 2024, UNIFE's Technical Affairs Manager Nicholas Shrimpton was also nominated to take over the Secretariat of the GRB for a two-year mandate.

For further information on GRB, please visit **www.grbrail.eu**

For more information, please contact UNIFE Technical Affairs Manager **Nicholas Shrimpton**

f. UNIFE's involvement in Standardisation

Standardisation is extremely important for our industry, with many UNIFE members involved in both European and global standardisation proceedings through their respective national bodies. UNIFE provides a platform for its members to coordinate their standardisation advocacy and build consensus on our industry's priorities in this area. UNIFE's Standards and Regulation Group (SRG) is responsible for monitoring developments in both regulation and standardisation within the technical framework applicable to rail products. The careful coordination of activities in both areas is required to ensure that the work carried out by European institutions and European Standardisation Organisations is complementary and improves the rail sector's functioning and competitiveness.

CEN-CENELEC and UNIFE representatives

To support the efforts of its members at the national level, UNIFE has established close links with relevant European Standardisation Organisations (ESOs), namely CEN and CENELEC. Our association works closely with the Commission, who sets the policy framework for European level standardisation, and the CEN-CENELEC Management Centre, which coordinates the activities of both organisations.

UNIFE is a member of the Topical Working Group on Standardisation (TWG STA) at ERA, which is the key platform for updating the regulated link between the TSIs and the European Standards, responsible for instance for updating the reference to over 100 standards during the 2023 TSI Revision Package. UNIFE participates in Sector Forum Rail (SFR) which facilitates discussions between the CEN-CENELEC Management Centre and representative bodies on the sector's standardisation priorities. By using these forums, UNIFE aims to influence the EC, ERA and ESOs to deliver an efficient technical framework with a lean interface between regulation and standardisation. UNIFE's 2022 Vision Paper on the Evolution of Regulation, Standardisation and Innovation for a Competitive European Rail Supply Industry acts as a baseline for our objectives in standardisation in the forums mentioned.

UNIFE also participated in 2024 to the **European Commission's High-Level Forum on European Standardisation, set up by DG GROW** as part of the **EU Strategy on Standardisation**. The purpose of the forum is to identify standardisation priorities in support of EU policies and legislation, and discuss horizontal issues such as international leadership, education and skills and pre-normative challenges, in a multi-sectoral setting.

For more information please contact UNIFE Technical Affairs Manager **Hugo Tabouret**

g. Urban Rail Platform

In 2024, UNIFE's cooperation with urban transport operators on regulation and standardisation continued through the **Urban Rail Platform (URP)**, a forum driven by UNIFE and the **International Association of Public Transport (UITP)**. The platform provide its members with a forum for discussing matters impacting urban rail related to EU regulations and EU Research and Innovation (R&I), and other funding opportunities. In addition, the URP provides a platform to review the state of play of urban rail standardisation works on-going at CEN-CENELEC, and to consider if any gaps or further actions are needed by the URP members.

For more information please contact UNIFE Technical Affairs Manager **Hugo Tabouret**

3. UNIFE Technical Working Groups

The UNIFE **Technical Working Groups** support the association's work on standardisation, regulation and research. The overall coordination is done by the association's committees responsible. There are two types of Technical Working Groups at UNIFE:

- **UNIFE Mirror Groups (MG)** are groups which are primarily active during the drafting and revision of regulations and TSIs. They mirror ERA's working parties or topical working groups, where UNIFE delegates participate as official representatives of the European rail supply industry
- **UNIFE Topical Groups (TG)** follow specific topics, mainly related to standardisation and research activities

The UNIFE SRG supervises the UNIFE Technical Working Groups and periodically reviews their activities to ensure that they operate in line with our overall standards and regulation objectives.

a. UNIFE Mirror Groups (MG)

ELECTROMAGNETIC COMPATIBILITY WORKING GROUP (EMC MG)

In 2024, UNIFE experts have worked in close cooperation with EIM and CER experts within the Train Detection Compatibility Working Group (TDC WG), which is coordinated by ERA.

The group actively worked during the first part of the year on the Break Down of limit values to single coaches/locomotives, and concluded by making a final proposal of the limit value for the locomotives and coaches, justified with the existing value provided by main manufacturers. The final proposal's approval by ERA TDC WG's members was postponed due to the main priority of the military coaches issue.

The military coaches issue was raised as a main and unique priority during the second part of 2024. The harmonisation of EMC related requirements especially in the context of unique authorisation of passenger coaches and traction units, was the main priority of this task.

For more information please contact UNIFE Technical Affairs Manager **Jose Bertolín**

NOISE MIRROR GROUP (MG)

In 2024, UNIFE Noise Mirror Group followed the definition of the new **Noise and Vibration** priorities for the next TSI mandate. They contributed to the definition of the schedule of proposed relevant activities such as vibration, parking noise and noise regarding alternative fuels propulsion systems.

The new ISO 3095 enquiry related to the Parking Noise measurement method was also an important activity followed by the group. The draft version of the standard ISO/DIS 3095:2023 was published in July 2023, while the final one is planned in 2025.

Last but not least, the new ERA Noise TWG fully dedicated to the Parking Noise, began its activity on 23 October 2024 with its KoM. During the next few months, ERA, CER, UNIFE and Rail Notified Bodies will work in the definition of the parking mode concept, and the maximum noise values to fulfil the EU proposed targets in noise emission reduction.

For more information please contact UNIFE Technical Affairs Manager **Jose Bertolín**

PERSONS WITH REDUCED MOBILITY MIRROR GROUP (PRM MG)

The PRM TSI defines common priorities and criteria to further improve accessibility for persons with reduced mobility. This also provided clear requirements for manual and electric wheelchairs, which allows their users to safely access passenger trains.

In 2024, the **Persons with Reduced Mobility Mirror Group (PRM MG)** resumed their activities in preparation of the 2024 EC TSI request and the new **ERA Topical Working Group on Platform-Train Interface (TWG PTI),** which will tackle the different change requests under the category 'increasing accessibility', related to PRM items in the next TSI revisions and ERA recommendations for 2026 and 2028.

For more information, please contact UNIFE Technical Affairs Manager **Nicholas Shrimpton**

SAFETY ASSURANCE MIRROR GROUP (SAFASSU MG)

The **Safety Assurance Mirror Group (SafAssu MG)** supports ERA's work on the *Railway Safety Directive*. It also assists the SRG and other working groups with expertise on risk assessment and the application of the ***Common Safety Method (CSM)*** *Regulation (EU) 402/2013*.

In 2024, this mirror group continued to elaborate the industry position within multiple ERA working groups focusing on railway safety. The group provided the UNIFE input to the three Agency workshop on **ERA Vision Document for the future CSM Revision mandate, which is** expected in 2025. The group followed the

Enno Wiebe at the International Railway Safety Council (IRSC)

development of the Common Safety Methods for the assessment of safety levels and safety performance of operators at both the National and European Union level (**CSM ASLP**) to ERA. The group monitored the work of the ERA Assessment Body (**AsBo**) Cooperation Group and its deliverables in establishing common recommendations for use for AsBos working method. Additionally, this group coordinates UNIFE's positions pertaining to the numerous ERA activities on human and organisational factors (**HOF**) and general safety culture.

In September 2024, UNIFE's Director General Enno Wiebe also attended the International Railway Safety Council (IRSC) 2024 in Vienna, proving a keynote speech on '*Paving the Way to a Successful ERTMS Rollout*'. As the world's largest railway safety conference, the IRSC brings together safety experts from around the world to exchange information, experiences and lessons in order to improve railway safety.

For more information, please contact
UNIFE Technical Affairs Manager
Nicholas Shrimpton

TELEMATIC APPLICATION FOR PASSENGERS AND FREIGHT WORKING GROUP (TAP/TAF TSI MG)

Work in 2024 was focused on completing the 2022 revision cycle process, which has been delayed. The merger of the TAF and TAP TSIs into one TSI (**TSI Telematics** for RU-IM communication) and a separate TAP retail TSI were not adopted as proposed. Final approval at RISC level was first expected for June 2024, but was successively postponed to November 2024. The process is most probably expected to be finalised in June 2025. Therefore, the sector decided to prepare a request (a letter) addressed to the EU institutions – European Commission, European Parliament – to adopt the current sector proposal which is being discussed within the EC/ERA expert group. This is also supported by sectoral associations, including UNIFE.

Within the Joint Sector Group (JSG), UNIFE also participated in work related to the implementation of the eFTI Regulation, which is significantly linked to the TAF TSI. Some of UNIFE's members are preparing the submission of the proposal for CEF Transport Call 2024, for revised TAF TSI and eFTI. UNIFE members in the TAF/TAP TSI Mirror Group participated through the JSG in the finalisation of the drafts of the new Regulation on railway network capacity management. This regulation is approved and is impacting both TSIs and capacity planning as an essential part of the TTR (Timetable Redesign process).

The TAF/TAP TSI implementation process continued very slowly in 2024. UNIFE members are once more engaged in work on implementation projects within the CEF Transport Call, which was published in September 2024, and also actively contributed to the Europe's Rail (EU-Rail) System Pillar. The EU-Rail Standardisation and TSI Input Plan (STIP) process actively promotes the Telematics TSIs as part of its involvement in the Steering Group of Europe's Rail System Pillar.

Within the working groups established by JSG, UNIFE continued working on compliance of DAC, FRMCS and cybersecurity development in relation to Telematics TSIs, OPE TSI and other operational regulations. The JSG CG 10 group, which prepared new common interface (CI) specifications, continued its activities to finalise this CI and introduce it to the operation. UNIFE members are considered as important actors in the Telematics TSI community, and continue to contribute throughout the rail transport industry by promoting competitiveness through interoperability and in the System Pillar of the Europe's Rail Joint Undertaking.

For more information please contact
UNIFE Technical Affairs Manager
Stefanos Gogos

VEHICLE AUTHORISATION MIRROR GROUP (VA MG)

The UNIFE **Vehicle Authorisation Mirror Group** was established to follow the development of the *Implementing Regulation (EU) 2018/545*, which establishes practical arrangements for the railway vehicle authorisation and railway vehicle type authorisation process, regarding to *Directive (EU) 2016/797*.

Since the entry into operation of the **Fourth Railway Package**'s (4RP) new European vehicle authorisation process in June 2019, the UNIFE VA MG has been the main group providing feedback of its application and practice at the expert level. The experience and lessons learnt, which have been shared in this group, have led to further clarifications and proposals for improvements being communicated with ERA and the Commission in the **4RP Steering Group**, and the newly established **ERA Working Party on Vehicle Authorisation**, with the common goal of streamlining the 4RP processes. Over the coming years, this Working Party is expected to define recommendations for improvements to the 4RP authorisation processes, and the source regulations where necessary.

In 2024, the VA MG has also contributed to the updates of the 2023 TSI Revision Package guides, with public consultation held on the Fees and Charges regulation update, and support in providing UNIFE positions for the ERA TSI Working Parties.

For more information, please contact UNIFE Technical Affairs Manager **Nicholas Shrimpton**

WAGON MIRROR GROUP (WAG MG)

In 2024, the UNIFE Wagon Mirror Group has been involved in the review and validation of change requests impacting the WAG TSI (Technical Specifications for Interoperability targeted at wagons), such as Hitch requirements for the transport of semi-trailers, and requirements for spark arresters on wagons.

The group was also invited to review and comment on the draft new European Commission TSI request, especially regarding topics that impact wagons. These comments have been sent to the Commission for consideration in the official request. Information as of late 2024 regarding the European Union Agency for Railways (ERA) view and proposals for authorisation or re-authorisation of DAC-fitted wagons, was also shared with the group. Group members also participated with the ERA working group for the authorisation of 100 freight trains fitted with DAC, which outlined rail supply industry experiences and to ensure the streamlining of the authorisation process.

For more information please contact UNIFE Technical Affairs Manager **Hugo Tabouret**

b. UNIFE Topical Groups (TG)

BRAKE TOPICAL GROUP

The UNIFE Brake Topical Group deals with all matters related to brakes at UNIFE, and meet to take decisions, especially regarding TSI (Technical Specifications for Interoperability) changes that impact braking technologies.

In 2024, the UNIFE Brake Topical Group has been consulted for the review and validation of a change request 669, which impacts the WAG TSI (TSI targeted at wagons) and relates to requirements for spark arresters on wagons. This change request was an output of the JNS Normal Procedure *"Consequences of unintended brake applications with LL blocks"* report.

For more information please contact UNIFE Technical Affairs Manager **Hugo Tabouret**

DIESEL TOPICAL GROUP

In 2024, the UNIFE Diesel Topical Group continued to monitor the implementation of the non-road mobile machinery (NRMM) Regulation (EU) 2016/1628, and the first results and feedback obtained on the In-Service Monitoring (ISM) requirements on Stage V rail vehicles, which is set out in the regulation.

UNIFE attended the European Commission's ***Group of Experts on Machinery Emissions under the Non-Road Mobile Machinery Directive*** **(GEME)** - which was hosted by DG GROW - where the application of the NRMM Article 35 on non-diesel engines was also discussed, in addition to the first ISM feedback. The group also continued their exchange on the NRMM and other regulatory or standardisation items impacting diesel vehicles, together with CER, EUROMOT and UIC in the Combined Diesel Expert Group (CDEG).

For more information, please contact UNIFE Technical Affairs Manager **Nicholas Shrimpton**

FIRE SAFETY TOPICAL GROUP

The UNIFE Fire Safety Topical Group has been working in 2024, to answer questions from the Rail Supply Industry about the Fire Certificate Inventory List (FCIL).

The Fire Safety Topical Group at UNIFE did create, and is responsible for, the FCIL and Fire safety Manufacturer Declaration templates. The FCIL can be used by rolling stock suppliers to identify and qualify their products with regards the fire safety aspects, based on EN 45545-2.

The filled-in declaration provides an acceptable means of compliance for Material requirements related to Fire Safety test certificates for TSI LOC&PAS. These documents are available for free on the UNIFE website (**https://www.unife.org/activities/standards-and-regulation/firesafetylist**), and are used by many actors of the Rail Supply Industry. Guidelines and Instructions are provided in the file, in order to explain how to fill-in the list.

In June 2023, the FCIL and Fire safety Manufacturer Declaration template version 6 has been issued in English, French and German. This new version is providing the documents with the necessary changes following the update of the Application Guide and actual text of TSI LOC&PAS:2023.

For more information please contact UNIFE Technical Affairs Manager **Hugo Tabouret**

SPECIAL VEHICLES TOPICAL GROUP

UNIFE established an ad-hoc expert group focused on 'special vehicles' (e.g. on-track machines, infrastructure inspection vehicles, road-rail vehicles) in 2020, following the request of several of its members. This group engaged itself with the existing TSI requirements for these vehicles, resulting in a change request being submitted by UNIFE for the 2023 TSI revision package, which is aimed to improve the consistency of the ***TSI LOC&PAS*** regarding special vehicles, with the recast Interoperability *Directive* and European standards that facilitate their authorisation within the Union.

In 2024, the group remained active in the follow-up of the changes in the 2023 TSI revision package and in preparation of the 2024 EC TSI request and the new **ERA Topical Working Group on Special Vehicles (TWG SPV**), which will aim to comprehensively update the TSIs to align them with the relevant European Standards. It will also seek to remove existing conflicts and thereby improve their common application.

For more information, please contact UNIFE Technical Affairs Manager **Nicholas Shrimpton**

4. UNITEL: Rail Telecommunication Activities

The **UNITEL Committee** brings together UNIFE members with significant telecommunications experience to build a consensus within the sector concerning the development and implementation of the **Future Railway Mobile Communication System (FRMCS) -** a priority technology for the future railway system. The need for FRMCS implementation is not only driven by the impending obsolescence of the Global System for Mobile Communications – Railway (GSM-R) and its associated challenges from 2030 onwards, but also due to the significant opportunities FRMCS will provide to enable and support railways' digitalisation. As **the recognised voice of the European railway telecoms supply industry** since its establishment in 2018, the UNITEL Committee continues to work closely together with their cross sectoral partners and the European institutions to ensure that the development and transition to FRMCS is as smooth and successful as possible.

In 2024, the UNITEL Committee and **UNITEL Technical Group (UTG)** experts have been highly active in the activities of the different ERA working groups responsible for the development of future **Control Command and Signalling Technical Specification for Interoperability (CCS TSI)**, pertaining to railway telecommunications and their inclusion of the future FRMCS specifications. UNITEL Committee members are also active in the multiple international standardisation organisations responsible for the development of the railway telecommunications system and

standards. UNITEL members have been engaged in the ongoing FRMCS R&I activities within the **Europe's Rail Joint Undertaking (EU-Rail)** and the successful submission of a proposal for the full-scale testing programme of the FRMCS specifications – project name MORANE-2. Such testing activities are seen as an essential step to successfully introducing the new communication system to the railway network and validate the FRMCS specifications prior to inclusion in the next TSI revision expected for 2027.

Most notably, the UTG experts have been heavily involved in the discussions of the **Extended ERA Core Team Radio (EECT Radio)**, which included reviewing the draft FRMCS Version 2 specifications delivered by the UIC in March 2024. The FRMCS V2 specifications were to be published as part of an ERA Technical Opinion, in order to provide a basis for the MORANE-2 testing and validation exercise. In September 2024, the **UNIFE position paper 'Focus needed to achieve FRMCS 1st Edition for TSI 2027'** was shared with all sectoral partners to collectively reflect on the status of the work underway, and call for further joint efforts to align on ensuring the satisfying finalisation of the FRMCS V2 and V3 specifications and inclusion in the TSI 2027.

Finally, UNIFE and the UNITEL Committee were also involved in multiple panel discussions, presentations or workshops dedicated to the development of FRMCS at several key events across 2024. These included the **ERA ERTMS Conference** in April 2024, **InnoTrans** in September 2024, and the **3rd UIC Global FRMCS Conference** in November 2024.

For more information, please contact
UNIFE Technical Affairs Manager
Nicholas Shrimpton

UNIFE Director General **Enno Wiebe** at the 3rd UIC Global FRMCS Conference

5. Cybersecurity

Cybersecurity represents a major priority on the EU agenda, and is a key area of interest and activity for the European Rail Supply Industry. It is worth underlining that the European Commission has set Cybersecurity as one of its top priorities, and a cornerstone for a digital and connected Europe. Therefore, several legislative initiatives aim to improve cybersecurity and cyber resilience to cyberattacks across Europe.

The main priority for the European Rail Supply Industry is to ensure that horizontal and vertical legal instruments are sufficiently coordinated to promote the harmonisation of cybersecurity regulations, but also to avoid potential overlaps. Harmonisation can be achieved through standardisation, and therefore both regulation and standardisation are seen as the most urgent task in the field of cybersecurity in the rail sector.

In September 2022, the European Commission proposed a regulation on cybersecurity requirements for products with digital elements, including software – the **Cyber Resilience Act (CRA)** – with three main objectives:

- Inclusion of cybersecurity by design through self-assessment or third-party certification affecting CE marking
- A maintenance phase in which manufacturers must provide free patches for any exploited vulnerabilities
- Reporting obligations for such exploited vulnerabilities

UNIFE pointed out early on in the process that the proposal would be difficult to apply to the railway sector, and that all these obligations could not be at the manufacturers' expense. The main concerns related to the unbalanced obligations, depending on the organisation of the rail sector as well as technical problems, (e.g. in the supply of spare parts interacting with legacy systems) and the high cost of the proposed maintenance phase, where the provision of free patches in industrial sectors is very costly. Through position papers, explanatory documents, high-level letters, joint statements with other associations, and proposed amendments to the text, UNIFE and its members engaged with the co-legislators until the end of the legislative process.

In October 2024, the Council adopted the **Cyber Resilience Act** introducing EU-wide cybersecurity requirements for the design, development, production on the market of hardware and software products. This was done to avoid overlapping requirements stemming from different pieces of legislation in EU member states. This new regulation will enter into force twenty days after its publication in the EU's official journal (December 2024), and will apply 36 months after its entry into force, with some provisions to apply at an earlier stage.

a. UNIFE guidelines proposal for the CRA

In 2024, the UNIFE cybersecurity working group sent to DG CONNECT and DG MOVE a paper with a set of recommendations for the upcoming preparation of the CRA secondary legislation, and guidelines by the European Commission. It is key that the specificities of complex sectors such as the rail sector are taken into account when implementing the CRA.

This is needed to ensure the right level of cybersecurity, while adopting a consistent approach that will allow the rail sector to operate in an efficient manner. Without a smooth implementation of the CRA, the rail sector will face major economic impacts or disruptions. Therefore, UNIFE's paper aimed at ensuring a smooth implementation of the CRA within the rail sector, by raising a list of issues to be clarified between the European rail sector and the European Commission.

b. Cybersecurity Sector Group

In 2024, at UNIFE's initiative, a joint cybersecurity rail sector group was launched with the participation of UNIFE, CER and EIM. The main objective of the group was to meet and discuss about the cybersecurity challenges and the rail sector position vis-à-vis the European cybersecurity regulation. It also enables the sector to exchange on the coordination of cybersecurity at sector level, considering the standardisation work at international level (preparation of the first international standard 'railway applications – Cybersecurity', IEC 63452), the work on cybersecurity of the Europe's Rail Joint Undertaking System Pillar, and the upcoming revision of the TSIs. The Sector Group prepared also in 2024 a joint communication on this new sectorial group, which was announced at InnoTrans and at the 4th ENISA-ERA conference: Cybersecurity in Railways.

Moreover, two workstreams in the group started in 2024, with the aim to develop a sector position on the interpretation of the CRA concerning the extension of existing installations, and the list of rail products/components under the CRA application (Classification of products/components).

Enno Wiebe (Director General, UNIFE), **Josef Doppelbauer** (Executive Director, European Union Agency for Railways), **Mona Bjorklund** (Director for Policy Coordination, DG MOVE, European Commission), **Juhan Lepassaar** (Executive Director, European Union Agency for Cybersecurity) (ERA/ENISA Cybersecurity in Railways Conference)

c. CRA EC Expert Group

In order to assist the European Commission in relation to the implementation of the CRA and the preparation of the secondary legislation and guidelines, the EC decided in 2024 to set-up an expert group bringing together Member States and sector representatives. UNIFE with the support of the Community of European Railway and Infrastructure Companies (CER) and the European Rail Infrastructure Managers (EIM) applied to this expert group and was selected by the European Commission. Three other associations namely the European Rail Rolling Stock Lessors (AERRL), the European Rail Freight Association (ERFA) and the Notified Bodies Rail Association (NB-RAIL), all members of the Group of Representative Bodies, also supported the UNIFE's application. The CRA EC Expert Group will be officially kicked-off in 2025.

In addition, UNIFE continued to engage very actively with relevant stakeholders, including the **European Union Agency for Cybersecurity (ENISA)**, the **European Union Agency for Railways (ERA)** and the **European Commission,** through **DG CONNECT** (in charge of Communications Networks, Content and Technology) and **DG MOVE** (in charge of Mobility and Transport). UNIFE has actively conveyed its messages on cybersecurity priorities and concerns in various forums, such as the UNIFE General Assembly, InnoTrans and ERA and ENISA's joint cybersecurity event hosted in Lille in October 2024, among others.

For more information, please contact UNIFE Head of Technical Affairs **Nicolas Furio**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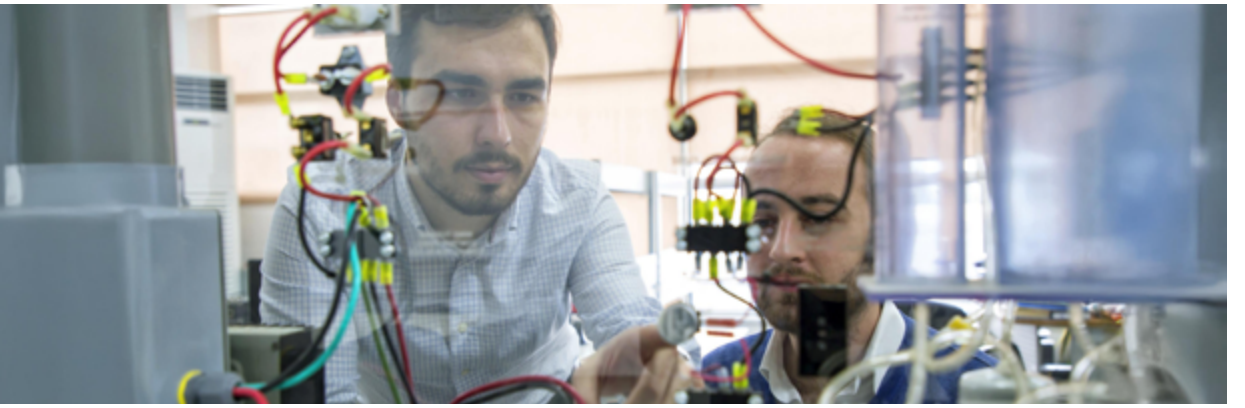
06.

Research and Innovation activities



As an essential part of our association's activity, the work on Research and Innovation (R&I) has successfully continued alongside our members, the European partners and the European institutions. Based on many years of in-house experience, UNIFE continues to contribute to the fulfilment of the European Union's R&I policies and objectives relevant for the railway sector and the competitiveness of the European rail supply industry.

1. Europe's Rail Joint Undertaking

Europe's Rail Joint Undertaking (EU-Rail) is the sector's second large-scale European research joint undertaking, which aims to focus innovation efforts and accelerate the creation of market-driven solutions, by integrating new and advanced technologies into novel rail tools. The Joint Undertaking supports the development of a strong and globally competitive European rail industry by contributing to the achievement of the **Single European Railway Area (SERA).**

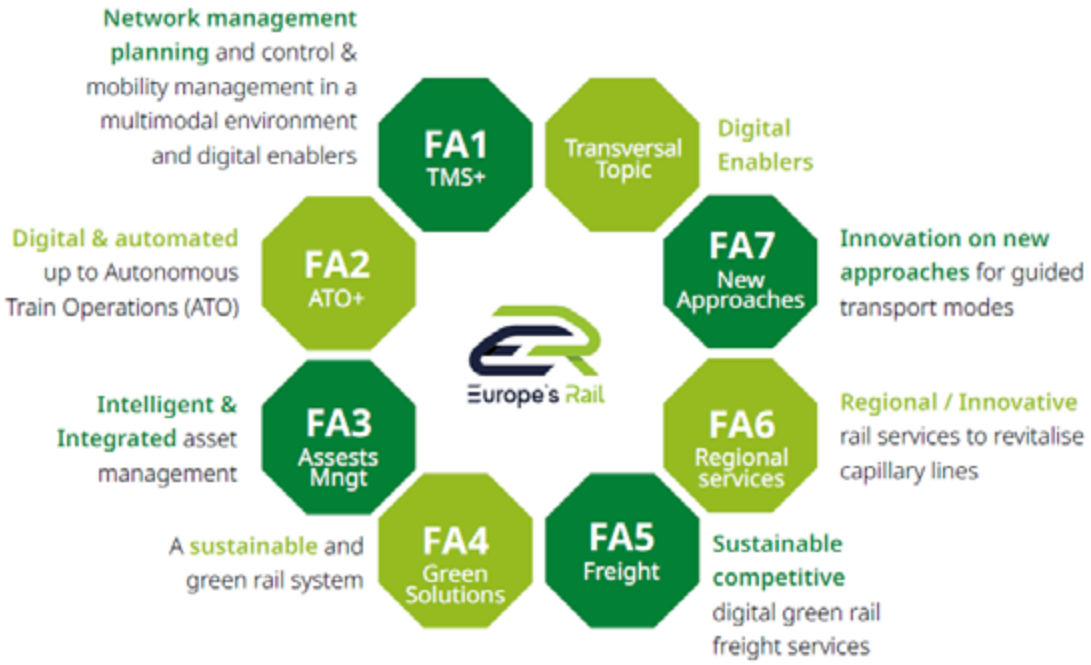
Europe's Rail is critical to ensuring next-generation rail solutions that leverage the emerging technologies needed to create a digital and green transition in transport.

EU-Rail's objective is to deliver a high-capacity, integrated European railway network, by eliminating barriers to interoperability and providing solutions for full integration by covering traffic management, vehicles, infrastructure and services.

Research and Innovation (R&I) initiatives conducted by Europe's Rail seek to achieve the project's overall objectives by working on new technologies that will be tested and applied across the entire rail system. To achieve such system-wide developments, the Joint Undertaking's work is structured into two distinct pillars: the **Innovation Pillar** and the **System Pillar**. In addition, the Joint Undertaking launched in 2024 a **High-Level Deployment Group**.

a. Innovation Pillar

The Innovation Pillar steers the Joint Undertaking's R&I activities and is organised into 7 Flagship Areas:



In 2024, seven Flagship Projects (embedded in the Flagship Areas) involving UNIFE members have been actively working on the delivery of the first of Europe's Rail innovations (e.g. ATO, DAC).

For more information on the Flagship Projects, please visit **https://rail-research.europa.eu/eu-rail-projects**

Following a Call for proposals for the Flagship Area 1 and exploratory research published in October 2023, seven projects worth €21.2 million were selected to be funded under Europe's Rail Joint Undertaking (EU-Rail) 2023 Call for Proposals for rail research and innovation (R&I) activities. Europe's Rail co-funding will amount up to €11.7 million. The new projects will support the work done in Flagship Area 1 dedicated to rail mobility management in a multimodal environment, and further strengthen exploratory research activities. **One of the proposals selected is a project coordinated by UNIFE named QuieterRail**, which focuses on noise and vibration, and that started in October 2024 (see section 2.c for more information on this project).

Early 2024, a Call for Proposals for rail research and innovation activities was published in order to award projects co-funded by the Europe's Rail Joint Undertaking, up to €21,7 million. With this Call for Proposals, the Europe's Rail Joint Undertaking intends to build synergies with the Smart Network and Services Joint Undertaking, addressing the digital and automated testing and operation validation of **the next EU rail communication system - FRMCS**. In addition, with this Call, Europe's Rail intends to address

the technical steps needed for Full Digital Freight Train Operations.

Regarding the FRMCS call, **UNIFE and 12 UNIFE members (including rail telecommunication suppliers) joined the consortium MORANE-2**, which submitted a proposal in order to develop and test the FRMCS technologies. The MORANE-2 proposal was accepted by Europe's Rail. This project will be a key milestone for the testing and validation of the FRMCS specifications to be included in the next version of the CCS TSI (approx. in 2027). The project will start end of 2024 or early 2025 and will last 30 months.

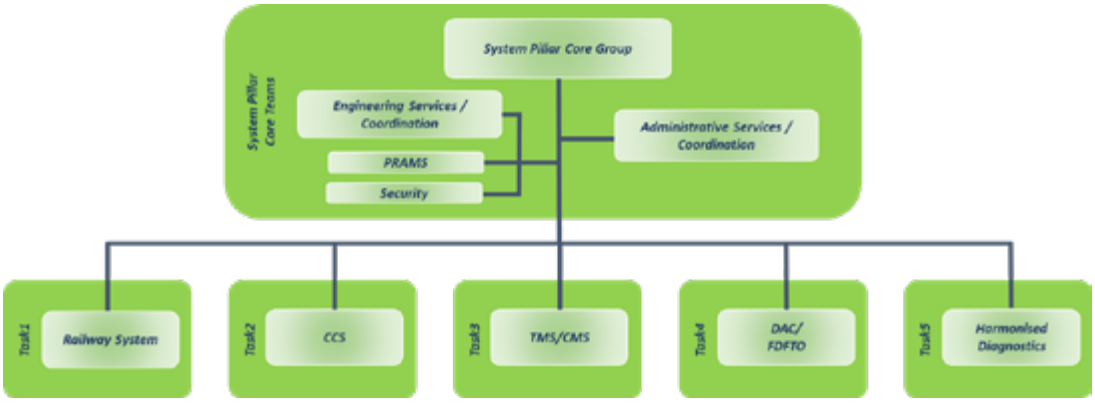
b. System Pillar

The System Pillar aims to define the concept of operations for Rail and a functional rail system architecture for the future, considering interfaces within different rail segments and other modes. The System Pillar seeks to deliver a unified operational concept and a functional, safe and secure system architecture.

It is also focused on the European railway network compliance with Directive 2016/797, which applies to integrate European rail traffic management, command, control and signalling systems. In line with the Directive, the Pillar also considers Automated Train Operation (ATO), in order to ensure that research targets are both commonly agreed upon, and that there must be shared customer requirements and operational needs. The programme has also positioned itself to be open to evolution needed as use cases shift.

This Pillar is managed by the System Pillar Core Group and is organised into five "Tasks":

- **Task 1: Railway System**
- **Task 2: (Advanced) CCS system design including:**
  - The cross-cutting domain teams (comprising Operational Design, Architecture and release coordination and Migration and roadmap)
  - The CCS System Design Teams (comprising Traffic control and supervision, Trackside assets control & supervision, Train control and supervision, Transversal CCS component, Field force CCS application, Communication team, Computing environment)
- **Task 3: TMS system design**
- **Task 4: DAC/FDFTO System design**
- **Task 5: Harmonised diagnostics**



First level operational breakdown structure of the System

UNIFE is an **active member of the System Pillar Consortium**, which provides the necessary resources and sector's input to ensure the System Pillar achieves its objectives set, to contribute to a major transformation of the European rail system and allow the sector to converge on its evolution of an overarching operational concept and system architecture. As a member of the Consortium, UNIFE has involved several of its members in the System Pillar's activities, in order to provide their expertise on technical areas such as Railway system, CCS, TMS, DAC and Harmonised diagnostics.

The **System Pillar Core Group** continued its activity in 2024 by leading and monitoring the day-to-day work of the System Pillar Tasks, providing content and guidance, managing the specific inputs and channelling the necessary outputs to the regulations and standards. UNIFE has nominated four experts responsible for representing the European rail supply industry in the core group.

The various "System Pillar Task Groups" have continued their activities in 2024, and aimed at facilitating a targeted, flexible, and rapid delivery of outputs. The System Pillar Consortium has nominated both railways and supplier experts for the System Pillar Tasks and domain teams.

The UNIFE System Pillar Committee - in cooperation with other UNIFE committee and working groups such as UNISIG, UNITEL, the System Pillar Technical Group, and the Freight Committee - is coordinating the association's approach, while contributing to the discussions with other rail associations to deliver the System Pillar's outputs.

In addition to the UNIFE's experts contributions to the work of the System Pillar Tasks, UNIFE has also contributed in 2024 to:

- The delivery of a strategic **Standardisation and TSI input plan (STIP):** This strategic plans presents the main changes to be introduced within TSIs (mainly CCS and OPE TSIs) and Commission standardisation request based on Europe's Rail activities. This includes, among other things, new functionalities and rules. This plan was also be made on the basis of migration considerations and alignment with Innovation Pillar flagship projects
- The high level discussion on the **migration strategy,** in order to define a rail sector vision for migration to be then considered by the System Pillar Tasks
- The **CCS TSI Maintenance Activities** including for instance the resolution of errors in the current TSI CCS in order to remove ambiguities in the specifications

Additionally, **UNIFE is also a member of the System Pillar Steering Group**, the governing body of the System Pillar.

c. High-Level Deployment Group

The newly High-Level Deployment Group launched in 2024, is a crucial foundation to accelerate implementing the outcomes of the Innovation and System pillars. It advises the Europe's Rail Governing Board on the market uptake of rail innovation developments, and supports their deployment. Its activities form a bridge between the research and innovation process, and the coordinated implementation through recommendations for deployment in the rail system.

In 2024, the group decided to start its activities with the deployment of FRMCS. It was agreed to set-up a subgroup focusing notably on the following activities:

- The delivery of an overview of the current status of railway telecommunications in Europe
- The definition of possible migration scenarios
- The preparation of financial analyses on FRMCS OPEX and CAPEX costs based on national inputs, funding, and financing analyses based on the migration scenarios

- The need to address authorisation and the regulatory framework, including the assessment on the how vehicles and tracks equipped with FRMCS (in coexistence with GSM-R) will be authorised quickly, and if the current regulatory framework needs to be modified
- The investigation of potential cross-border issues and private-public interfaces

Discussion also started on the appointment of a FRMCS Deployment Manager, who will be responsible to coordinate all the FRMCS deployment activities at European level. The UNITEL Committee is involved in the follow-up of the activities of the deployment group.

More information on Europe's Rail Joint Undertaking can be found at **https://rail-research.europa.eu**

For more information on UNIFE's activities related to Europe's Rail, please contact UNIFE Head of Technical Affairs **Nicolas Furio**

2. EU-funded R&I projects

a. Project RAILGAP

RAILGAP (**RAIL**way **G**round truth and digital m**AP**) is a Horizon 2020 project that started in January 2021. The project aims at developing innovative High Accuracy, High Precision Ground Truth and Digital Maps, which are essential elements of a European Global Navigation Satellite System (EGNSS) train positioning system and a Validation and Verification Environment.

The project finished its activity in September 2024 with a Final Conference event on 17 October 2024, which gathered 60 participants, including project partners and representatives of the EU Agency for the Space Programme (EUSPA) and main stakeholders of the satellite and rail sector.

The RAILGAP project offers a sustainable, cost-effective, and infrastructure-independent solution for generating railway Ground Truth and building Trackside Digital Map including the main achievements below:

- **Automatic data acquisition** process based on a measurement infrastructure built by means of COTS sensors
- Rigorous **characterisation of sensor** performance / derivation of Error Models and Data Fusion algorithms tailored to the railway environment
- Development of a methodology and the related tool for **generating Ground Truth**, georeferenced high-accuracy data to be used for validating railway signalling and localisation systems
- Development of a methodology and the related tool for **building/updating Digital Map**, a detailed and up-to-date representation of railway infrastructure, needed to exploit satellite positioning

For more information on RAILGAP, please visit **https://railgap.eu** or contact UNIFE Technical Affairs Manager **Jose Bertolín**

Final Conference RAILGAP

b. CLUG 2.0

CLUG 2.0 (**CLUG Demonstration of Readiness for Rail**) is a Horizon Europe project that started in February 2023, being coordinated by UNIFE and composed of the same partners as the CLUG project. The consortium includes the main European rail infrastructure managers and suppliers from the **Rail and Space Sectors**, who possess strong expertise and background on the applicability of the **Global Navigation Satellite System (GNSS)** to Rail safety applications.

During 2024, the consortium completed the RAMS analysis, a top-down approach to allocate RAM targets on the elements of the Localisation on-board (LOC-OB) system based on the RAMS plan (2023). A LOC-OB Failure Modes and Effects and External Interface Analysis were performed to complement the Preliminary Hazard Analysis (2023), through the identification of additional hazards and evaluation of risks and potential safeguard on each components of the system. The LOC-OB functional architecture design started in 2023, was concluded and validated through the LOC-OB System Functional Analysis.

By end of 2024, the consortium achieved the necessary prototyping maturity of the sensors, and the along track fusion algorithm developed in CLUG project. The project also completed the new track selectivity and safety functionality components to launch the data collection campaign. It includes sensors and system level FDE algorithms, Confidence Intervals computation and global Integrity concept. The raw data collection campaign needed to perform the post-processing analyses finally started after validating the performance of all the sensors installed in the two trains equipped in Switzerland.

The consortium of the project requested a 6 month extension due to the accumulated delay in the **Fault detection and exclusion algorithms implementation** and **data collection campaign,** which means further completion on the Post-Processing and Live demonstration and validation will take place in 2025.

For more information on CLUG 2.0, please visit **https://www.clug2.eu** or contact UNIFE Technical Affairs Manager **Jose Bertolín**

c. QUIETER-RAIL

QuieterRail (A step change in prediction, mapping, acceptance testing and cost-effective mitigation for railway noise and vibration) is a Horizon Europe project that started in October 2024. The project coordinated by UNIFE is comprised of 16 partners and takes place across six EU Member States (Belgium, France, Germany, Italy, Spain and The Netherlands), the United Kingdom and Switzerland. The consortium is constituted by 7 partners with a key leading role in TRANSIT and SILVARSTAR, to ensure a continuity in methods and software development from previous projects. It is reinforced by 9 partners, bringing additional expertise in other topics identified in the call.

QuieterRail targets the objectives outlined in the exploratory Europe's Rail JU topic HORIZON-ER-JU-2023-EXPLR-01 Noise and Vibrations, aiming at making a step change towards quieter rail traffic, through the following inter-related themes:

- Improved prediction methods for N&V from railways
- Expanded possibilities for environmental noise mapping, to highlight N&V hot spots and support the development and design of quieter rolling stock, tracks and noise control measures
- Improved and expanded acceptance testing of new rolling stock to enhance the existing statutory instruments within the TSI Noise
- The development of tools to support and facilitate cost-effective noise mitigation, and the integration of noise mitigation in railway asset management plans

The QuieterRail Kick-Off meeting took place on 1 October in Brussels, which was a great opportunity to discuss and align the objectives of the project with the project's partners and the relevant EU-Rail project officer.

For more information on QuieterRail, please contact UNIFE Technical Affairs Manager **Jose Bertolín**

Kick-Off meeting QuieterRail

3. UNIFE Freight Committee and Digital Automatic Coupling (DAC)

In 2024, UNIFE's Freight Committee has continued to actively follow up the development of the Digital Automatic Coupler (DAC). DAC is a breakthrough technology needed for the future of rail freight in Europe. By allowing automatic coupling and uncoupling, and by digitalising freight wagons and locomotives, DAC is paving the way for safe, efficient, reliable, and competitive rail freight operations, which could ensure a 15% boost in productivity. Its success relies on substantial financial support from the European Commission and the Member States, in order to deploy this technology in a coordinated way across Europe.

UNIFE has also been involved in Europe's Rail's Innovation Pillar and System Pillar work streams. The System Pillar Task 4's objectives are to deliver the specifications and architecture of a harmonised Single European Railway Area, fit for full digital freight train operations (FDFTO). This group composed of experts from the European Rail Supply Industry and European Railway Operating Community, is working on the elaboration of a Rule Book for harmonised rail operations with DAC, "Train Length" and "Train Integrity" to enable moving blocks for digital freight trains, as well as the definition of a FDFTO "Central Instance" to safeguard interoperability of DAC-equipped vehicles through the supervision of its Software updates.

The Freight Committee facilitated the monitoring and distribution of information about European rail freight to the association's wider membership, and supported members active in System Pillar Task 4 work stream. It also closely monitored the legislative process for the Greening Freight package, especially the Weights and Dimensions and Combined Transport directives. The scope of the Net Zero Logistics study launched by Europe's Rail in August 2024, and where UNIFE participates as an active member, has been reviewed and amended in the Freight Committee earlier last year.

DACcord

The **European DAC Delivery Programme (EDDP)** aims at effectively and successfully implementing DAC (Digital Automatic Coupler) for European Rail Freight in collaboration with experts representing manufacturers, rail operating companies, wagon keepers and the European Commission. UNIFE is a member of EDDP's Supervisory Board. UNIFE was present in September at the event organised in Berlin Spandau by Europe's Rail Joint Undertaking's (EU-Rail) and FP5/TRANS4M-R during InnoTrans. The physical demonstrations of automatic coupling and uncoupling have been very convincing, showing that DAC technology is reaching the last steps before a planned first commercial service in 2026, as part of the Pioneer DAC trains deployment phase.

The **DACcord project** is the continuation of the **DACcelerate project**, with updated goals and remains under the framework of the European DAC Delivery Program (EDDP). The overall goal of the DACcord project is to support ERJU in the preparation of the migration and implementation of the DAC in Europe. It's objectives are to:

- Enable a coordinated and efficient roll-out of DAC in Europe
- Set up a detailed migration and implementation plan for DAC
- Ensure sectorial and political support for the implementation of DAC throughout Europe, by disseminating and communicating on the technology, and while also participating and organising events

For more information on rail freight topics and DAC, please contact UNIFE Technical Affairs Manager **Hugo Tabouret**

4. European Rail Research Advisory Council (ERRAC)

2024 has been an important year for the European Railway Research Advisory Council (ERRAC). Based on the three years chairmanship rotation system between the Supply Industry and the Rail Operating Community (ROC), Andrzej Massel (UIC) who had been appointed Chair in early 2024, has been replaced in this position by Ralf Kaminsky (Siemens) representing UNIFE, from 1 July 2024.

The Vice-Chair, (previously Ralf Kaminsky), has been replaced by Christophe Chéron (SNCF / UIC), while Marion Berbineau (Gustave Eiffel / Academics community) continued her mandate as second Vice-Chair. Hugo Tabouret from UNIFE who was appointed ERRAC Secretary in January 2024, has been replaced in this role by UIC. Four steering committees (including two extraordinary) and two plenaries have been organised during the year, the location of the plenaries now alternating between Paris and Brussels.

During the first half of the year, ERRAC has sent a list of research and innovation topics to Europe's Rail, as an input for the preparation of the next exploratory call of Europe's Rail.

The first 2024 plenary meeting was held in May in Brussels. The European Commission gave an overview of the work being carried out in preparation for the next European Research Framework Programme (FP10). An update of the different ERRAC working groups was also presented and discussed.

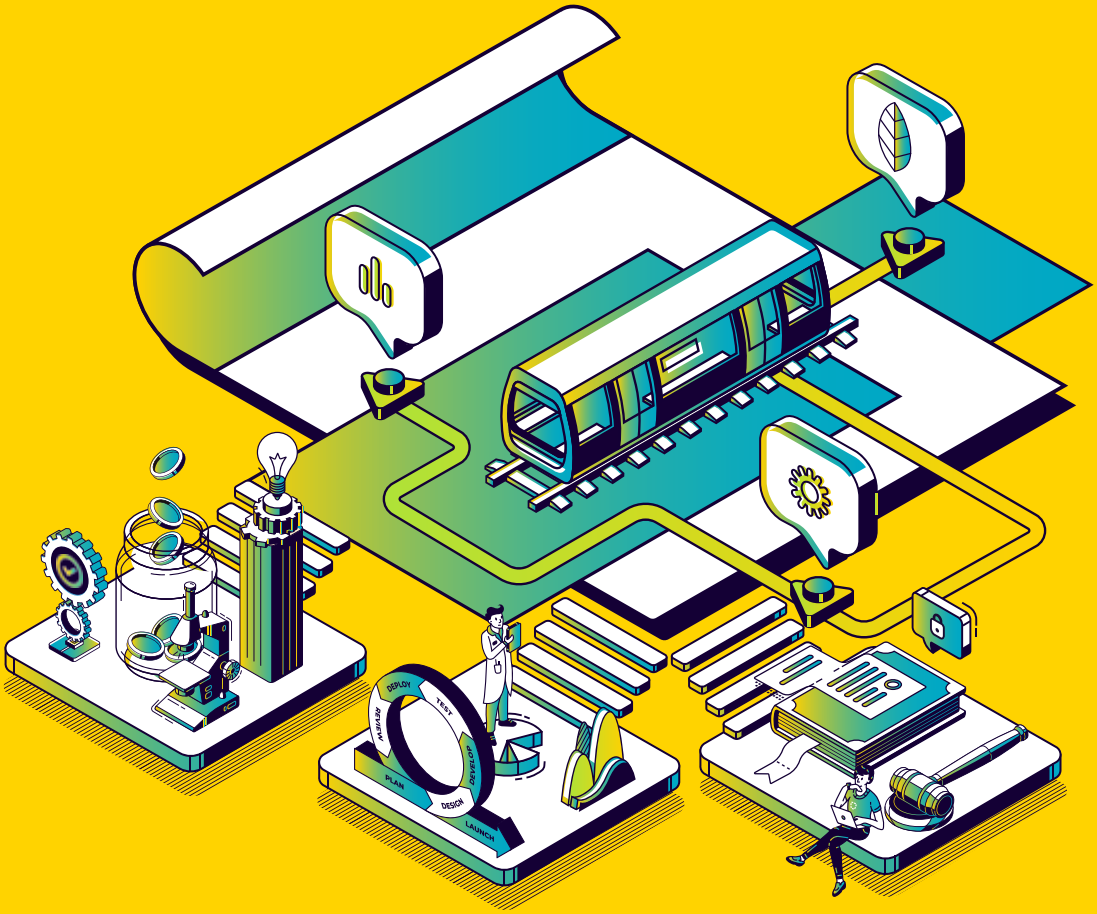
During the Transport Research Arena (TRA2024) organised in Dublin in April 2024 ERRAC was represented through a special session and discussion panel dedicated to the ERRAC Rail Research and Innovation Agenda (RRIA).

ERRAC Rail Research and Innovation Agenda (RRIA)

The final version of the RRIA was first presented at InnoTrans on 24 September 2024, where ERRAC was also represented and present. The RRIA is published and available for download on the ERRAC website, which contains all relevant details (**errac.org/publications/rail-research-and-innovation-agenda-rria**).

After the RAIL 2030 Vision and relevant Manifesto, this document is an important response from the rail sector, outlining what should be the strategic research priorities, as well as the key challenges and opportunities for rail over the next few decades. In particular, the RRIA has also been shared with the European Commission, in order to contribute to the preparation of the Framework Program 10 (FP10).

For more information about ERRAC's activities, please visit **www.errac.org** or contact UNIFE Technical Affairs Manager **Hugo Tabouret**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07.
Signalling and ERTMS

1. Overview 2024

We have had a great deal of communication chances in 2024 including the ERTMS ERA conference, Connecting Europe Days and InnoTrans. We used all opportunities to communicate our position and further continue to promote the rollout of ERTMS.

Further to this, we undertook technical activities such as finalisation of the Technical Specification for Interoperability "Control Command and Signalling"(CCS TSI) revision, and contributed to the future evolution of signalling standards. Here we benefited from our strong role in the System Pillar of Europe's Rail Joint Undertaking (EU-Rail).

Our involvement with the European Union Agency for Railways (ERA) about the performance of economic impact assessments, remains a high priority activity. To enable such assessments, we introduced a proposal which avoids the need for the provision of absolute cost figures. The related discussions with ERA and DG MOVE are not conclusive, and will continue in 2025.

2. ERTMS: Main political highlights and communication activities

a. ERTMS Stakeholder Platform

The ERTMS Stakeholder Platform co-chaired by DG MOVE and ERA, consists of the European Coordinator for ERTMS, the EU-Rail, and the Representative Bodies - including UNIFE. UNISIG, the ERTMS User Group and UIC, who are invited as observers. The activities of the ERTMS Stakeholder Platform was guided by an MoU signed in 2016. This was the situation when UNIFE officially launched an ERTMS rollout initiative at the beginning of 2024, during a high level meeting with DG MOVE and ERA

In this, we proposed measures to accelerate the ERTMS deployment in Europe. As a consequence, the ERA Executive Director Josef Doppelbauer suggested to revitalise the ERTMS Stakeholder Platform, and to update the 2016 MoU according to the recent demand.

With a strong contribution from UNIFE, the purpose of the platform, the strategic objectives and the target areas were developed, and finally agreed between the Representative Bodies in the form a joint declaration. This declaration was officially signed by all members of the ERTMS Stakeholder Platform during InnoTrans.

The sector declaration will form a major input for an update of the 2016 MoU, which is planned for spring 2025. We can expect a strong impact of this platform agreement on the future of ERTMS, due to its members and remit.

Signature of ERTMS Stakeholder Platform joint declaration at Innotrans 2024

b. ERTMS Events

ERA ERTMS Conference

The European Union Agency for Railways (ERA) organised the ERTMS 2024 Conference in Valenciennes, France from 23 to 25 April 2024. The event provided an extensive examination of the deployment of ERTMS across Europe. Participants gained valuable insights from successful project implementations, received updates on the current status of ERTMS deployment, and explored other future developments.

The conference also focused on strategies for migrating to and implementing the Future Railway Mobile Communication System (FRMCS). In addition, it highlighted innovation and research initiatives contributing to the advancement of The event attracted a global audience, which included decision-makers, industry leaders,

ERTMS ERA Conference 2024: ERTMS status and outlook

railway operators, infrastructure managers, and other key stakeholders. This conference is designed to many of these parties come together to share experiences, and promote the expansion of ERTMS both within Europe and beyond.

One of the conference's main features was a series of workshops, most of them moderated by expert members from UNIFE's UNISIG committee, offering an interactive platform for group discussions. On the first day, attendees had the chance to select three out of ten workshops, each designed to address emerging topics, generate new ideas, and strengthen the collaborative relationships vital for the successful rollout of ERTMS.

Moderators of the workshop "*How to accelerate the deployment of ERTMS for trackside and on-board?"*

Connecting Europe Days

In April, Brussels hosted the Connecting Europe Days, which brought together EU and Member State policy makers, financial and industry representatives, and transport stakeholders. They discussed concrete measures and shared best practices, which are aimed at creating a fully decarbonised, resilient, seamless, and digital mobility network in Europe.

UNIFE actively participated in this event and showcased its presence with a dedicated stand promoting ERTMS. At the stand, visitors were introduced to the updated factsheets produced by UNIFE's ERTMS Marketing Group (UEMG), responsible for highlighting the benefits, evolution, and latest advancements in ERTMS deployment both in Europe and worldwide. Attendees had the opportunity to delve into the development of ERTMS, its advantages, and the latest updates on various levels of ETCS (European Train Control System) currently in existence.

Additionally, thanks to Siemens Mobility (a member of UEMG), the UNIFE stand featured an ERTMS/ETCS simulator during the event. This interactive simulation attracted considerable attention from attendees, who eagerly seized the opportunity to immerse themselves in the experience of operating a train equipped with the ETCS Level 2 Baseline 3, with ATO over ETCS GoA2 system.

ERTMS/ETCS simulator, UNIFE Stand at Connecting Europe Days 2024

InnoTrans

At the 2024 InnoTrans (23-27 September), UNIFE organised several key discussion panels centred on the European Rail Traffic Management System (ERTMS). As part of the UNIFE Dialogue Forum in the Palais, UNIFE coordinated two panels: "Driving Efficiency and Performance in Railway Systems through ERTMS" (Political Panel), and "Boosting Efficiency: Innovations in ERTMS Technology as Drivers for Sustainable Rail Transport» (Technical Panel).

At the UNIFE stand, a third panel focused on "The Future of ERTMS: Proposals and Needs for Efficient Migration Strategies."

These discussions highlighted the critical role of collaboration, innovation, and strategic planning for successful ERTMS deployment across Europe. The panels addressed political, technical, and operational challenges, emphasising the importance of enhanced governance, harmonised regulations, and innovative financing.

As Europe moves towards a unified railway network, a seamless transition to ERTMS will be essential to achieving a safer, more efficient, and sustainable rail system for the future

3. ERTMS: Technical Topics

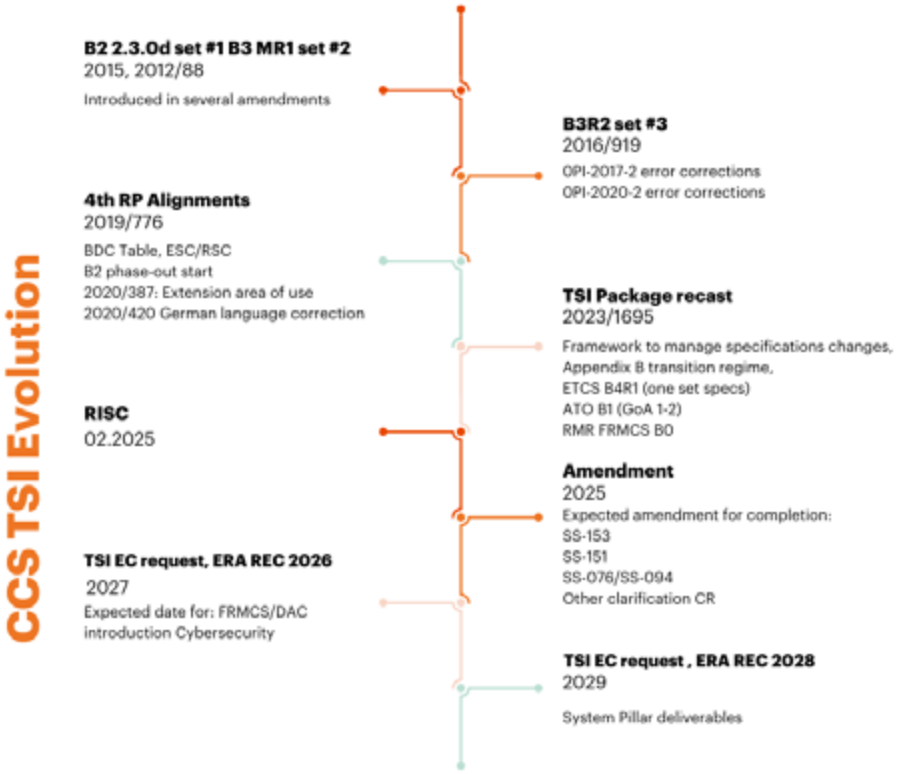
a. CCS TSI status and update

The Control Command and Signalling TSI outlines requirements for control-command and signalling systems on board trains, and along trackside subsystems within the European Union's rail network. The CCS TSI was adopted by the Railway Interoperability and Safety Committee (RISC) on 30 March 2023, alongside TSIs for other subsystems.

As shown in the CCS TSI evolution timeline, the next major milestone will occur after the February 2025 RISC meeting. Due to recent changes, the 2024 amendment for the CCS TSI has been rescheduled, pending final approval in February 2025. Once adopted, this amendment - encompassing subsets 153, 151, and 076 - will enter into force in summer 2025.

According to the EC's 2024 TSI Request, the introduction of FRMCS and DAC is set for early 2027. Looking further ahead, the planned 2029 CCS TSI update will introduce a new version, SV 3.1.

In the UNIFE Committee, UNISIG, around 230 experts collaborate to develop, maintain, and update the ERTMS and CCS/TMS technical specifications in close cooperation with ERA and Europe's Rail Joint Undertaking. Throughout 2023 and 2024, UNISIG has been actively engaged in developing the technical documents for the CCS TSI Application Guide.



b. ERA ESG Survey and the approach for future impact assessments

During the 2023 TSI revision process, UNIFE and other railway stakeholders called for comprehensive impact assessments based on cost-benefit analysis. As a result, the European Commission and the European Railway Agency (ERA) set up a task force to collect cost information, as input for economic analysis in future regulations.

As part of this initiative, ERA launched a survey in late June 2024 to collect data on 59 indicators, including unit costs, life cycle costs, and other aspects related to various railway assets.

UNIFE has received numerous questions and concerns from its members regarding the survey. These include issues such as the feasibility of sharing sensitive unit and life cycle cost data, the traceability of submitted data, potential uses and publication of the collected information, and the overall value of the survey outcomes.

In September 2024, UNIFE sent a letter to the European Commission and ERA expressing support for this initiative, while recommending a comparative delta cost approach as the preferred methodology for assessing economic impacts. This approach has been successfully applied in the past, notably in the CTO working group addressing ETCS-FRMCS compatibility. In that context, railways and suppliers collaborated to develop delta cost estimations between Baseline Light, BL4 sv 3.0 and FRMCS adapter solutions.

UNIFE remains committed to working with DG MOVE and ERA to establish an inclusive assessment process that actively involves all stakeholders.

c. ETCS Onboard cost drivers

The high cost of ETCS onboard systems is often mentioned as an important issue, endangering the rollout of ETCS. To achieve a constructive discussion, UNIFE started last year with exchanges with the European Coordinator for ERTMS Matthias Ruete, in order to identify root causes and cost drivers regarding onboard ETCS. The results were fed into the ERTMS rollout initiative UNIFE launched at the beginning of 2024, and subsequently became an important target area of the ERTMS Stakeholder Platform.

In September 2024, DG MOVE invited UNIFE for a workshop together with CER, EIM, AERRL and ERFA. The draft report distributed by DB MOVE was a reasonable starting point for the workshop in October, in trying to develop a detailed picture about cost drivers and potential measures to address them. Nevertheless, we found numerous statements requiring UNIFE's comment and amendments. The general agreement with CER to focus on the identification of root causes, helped to keep focus on these issues during the workshop with DG MOVE. The consolidated version of the report was not available before the preparation of the UNIFE Annual Report. However, our comments will have an impact on the final report, and that the ERTMS Stakeholder Platform will be involved in the definition of measures.

d. UNIFE Technical positions

UNISIG Position Paper: Operational Requirements on the Future of the Railway Sector

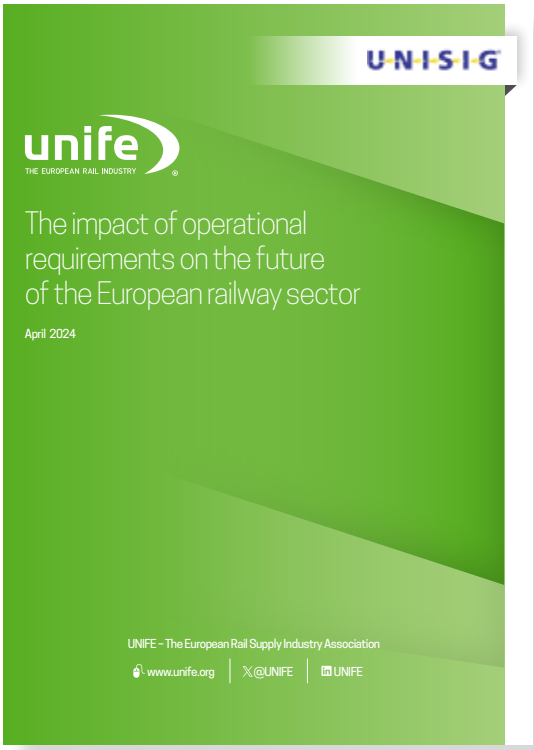
In April 2024, the UNIFE Committee UNISIG published a position paper on **The Impact of operational requirements on the future of the European railway sector**. The document highlights that while European railway development has some technological commonalities, and the sector remains largely driven by national requirements and localised conditions.

Despite past efforts to harmonise railway operations in Europe, these initiatives have faced significant implementation challenges. Although national railways recognise the theoretical benefits of harmonisation, the complexities involved have led them to prioritising existing frameworks over the creation of a Single European Railway Area.

During the Shift2Rail programme, the railways and suppliers established the Common Business Objectives (CBOs), which continue to guide Europe's Rail Joint Undertaking. The CBOs focus on three key areas:

- **Cost efficiency** - streamlining operations through regulatory simplification and standardisation
- **Rapid adaptation and deployment** - increasing flexibility and reducing time to market
- **Better performance** - increasing capacity and reliability while ensuring environmental sustainability

The paper concludes that pursuing technical standardisation without operational harmonisation can lead to economic stagnation, resulting in high costs. It advocates a shift from a national to a European perspective, emphasising that a successful railway sector depends on harmonised operational requirements and their implementation across Europe. UNISIG invites all railway stakeholders to embrace this fundamental change for a more efficient future.



UNISIG Position paper: **The impact of operational requirements on the future of the European railway sector**

Transition regime for partial fulfilment

Since 2022, UNIFE and its UNISIG committee have actively lobbied for appropriate regulations concerning partial fulfilment in the CCS TSI, which aim to find a compromise with the European Commission and the European Union Agency for Railways (ERA), while also aligning with CER.

Throughout numerous meetings with ERA and the Commission, UNIFE's efforts led to the inclusion of an Appendix G in the CCS TSI with certain exceptions to the full implementation of all functionalities, however this is not enough for the industry.

At the end of June 2024, UNIFE sent a letter to the Commission highlighting that the current priority for ETCS suppliers is the implementation of ETCS Baseline 4 Release 1, including all error

corrections. The request to complete ETCS onboard functionality, following the removal of partial fulfilment from the CCS TSI, was presented as a secondary priority. As a consequence, UNIFE called for a relaxation of the transition regime for partial fulfilment in the next planned amendment of the CCS TSI.

On 27 August, a response from the Commission acknowledging the benefits of extending the transition period for partial fulfilment was received. The Commission invited UNIFE to prepare a Change Request (CR) and formally submit our proposed solution. After some bilateral meetings between UNIFE (UNISIG), ERA and DG MOVE, it was agreed to validate the Change Request (CR).

As the result, there is the CR682 including a solution proposal for which the principles have been agreed between UNIFE (UNISIG), ERA and DG MOVE for the CCS TSI amendment in 2025. It has to be finally accepted in the ERA CCS TSI WP meeting in December. The solution does not contain any condition on the start of the design phase anymore.

ERTMS Trackside Approval

On May 2024, UNIFE (UNISIG) submitted its position to ERA regarding the interoperable ERTMS trackside approval process, emphasising the critical importance of achieving fully interoperable ERTMS trackside systems, and highlighting ERA's key role in facilitating this goal. The document also aims to address the increasing number of inquiries from infrastructure managers concerning ERTMS trackside projects, in order to better support ERA in responding to such requests.

In July 2024, UNIFE, together with CER and EIM, sent a joint letter to ERA and the European Commission seeking to improve the efficiency and effectiveness of the trackside approval process. In this letter, we outlined the considerable effort required from applicants and ERA for the implementation of trackside procedures. The letter also proposed several recommendations and objectives, including:

- **Optimising Documentation Requirements:** Reducing the volume of documentary evidence required to minimise the administrative burden, and enabling experts to focus on achieving interoperability goals.
- **Enhancing Technical Understanding:** Clarifying the purpose and objectives of the process to better align efforts and foster collaboration.
- **Improving Transparency in Communication:** Ensuring clearer and more open channels of communication throughout the process.
- **Eliminating Redundancies:** Streamlining procedures to avoid duplicative efforts.
- **Facilitating Early Decision Reports:** Providing earlier feedback to applicants to expedite project timelines.
- **Reusing Trackside Approvals:** Enabling the results of previous approvals to be reused in subsequent ERTMS projects based on the same systems and design rules.
- **Reducing Costs:** Exploring ways to significantly lower the costs associated with the approval process, particularly in light of increasing fees and charges.

UNIFE is committed to collaborate closely with ERA to implement these changes, and welcome the opportunity to discuss additional suggestions. UNIFE look forward to continuing our productive cooperation during the WG-Trackside approval meetings.

d. Future signalling and traffic management system

The System Pillar of Europe's Rail Joint Undertaking (EU-Rail SP) has now been running for around 2 ½ years. This established a platform for the joint development of railways and suppliers for the definition of more standardised signalling and traffic management solutions. In Lot 2, Task 2 & 3 and Lot 3 activities include around 230 signalling experts from UNISIG companies working in the different groups and domains. The projects require the full attention of all the members, to manage, and progress according to the workplan, while also being in line with our objectives. Further information can be found on the official **EU-Rail website**.

Task 2 continued to develop a harmonised operational concept and functional system architecture for an integrated European CCS system with higher standardisation level and less variations than at present. In particular, differences in operation are one of the main root causes for complexity, as well as product diversity, and that means they are therefore are a major cost driver. The harmonisation of operational principles remains therefore high on the agenda, and remains an important work item for Task 2. The architecture domain as well as the Traffic and Train Control & Supervision domains developed the CCS on-board and trackside architecture further, consolidating a modular target system architecture using standardised interfaces. This activity advanced in 2024, whereas a broadly accepted migration concept needs further work.

The UNISIG strategy for the System Pillar was developed more in detail for the specific domains. An important example is the Train Control & Supervision domain strategy, which set the target for the development of a System Pillar Granularity concept paper. Since the very beginning of the EU-Rail SP UNIFE had intensive discussion between railways and suppliers about the right level of system decomposition, (i.e. the question which interfaces shall be standardised and which not). The granularity concept paper developed includes agreed rules, telling under which conditions a standardisation is recommended, thus serving as a practical guide. The release of this document in the System Pillar Steering Group was the successful final step.

The EU-Rail SP Trackside Assets domain published mid-2024 an update of interlocking interface specifications. The Baseline 4 Release 3 version is a big step forward incorporating a lot of error corrections and clarifications, showing again the benefits of the cooperation in the sector between industry and railways. Whereas the operations related functional behaviour of object controllers for trackside assets have reached already a high level of maturity in the specifications, diagnostic and maintenance related functionalities have to be consolidated.

The Cyber Security topic is also key, where the railway sector is urgently requesting guidance. Despite the limited budget, the Security domain was able to deliver four important documents for the EU TSIs for the third and final review. The four specifications implement and detail the security related EU legislation (NIS2, CRA, CSA, RED) and international standards (ISO 27001, IEC 62443, CENELEC 50701/IEC 63452) to achieve interoperability for security related functions in the EU rail domain:

- Shared security services specification (interoperability requirements for standard security interfaces to the Shared Cybersecurity Services: Security Logging, Identity and Access Management, Public Key Infrastructure, Secure Time Synchronisation, Network Access Control, Backup and Restore, Domain Name System)
- Secure communication interface specifications (Interoperability requirements for communication protocols as TLS, OPC UA SC, HTTPS)
- Secure component specification (Non-interoperability-related requirements for rail automation components as IXL, RBC, object controllers, OBU,...)

Secure program requirements (Process-related requirements for commissioning, maintenance and operation) for the Transversal domain has defined a standardised CCS/TMS data model, which will enable high gains in the efficiency of project planning and implementation processes. Huge effort was invested to define and align a

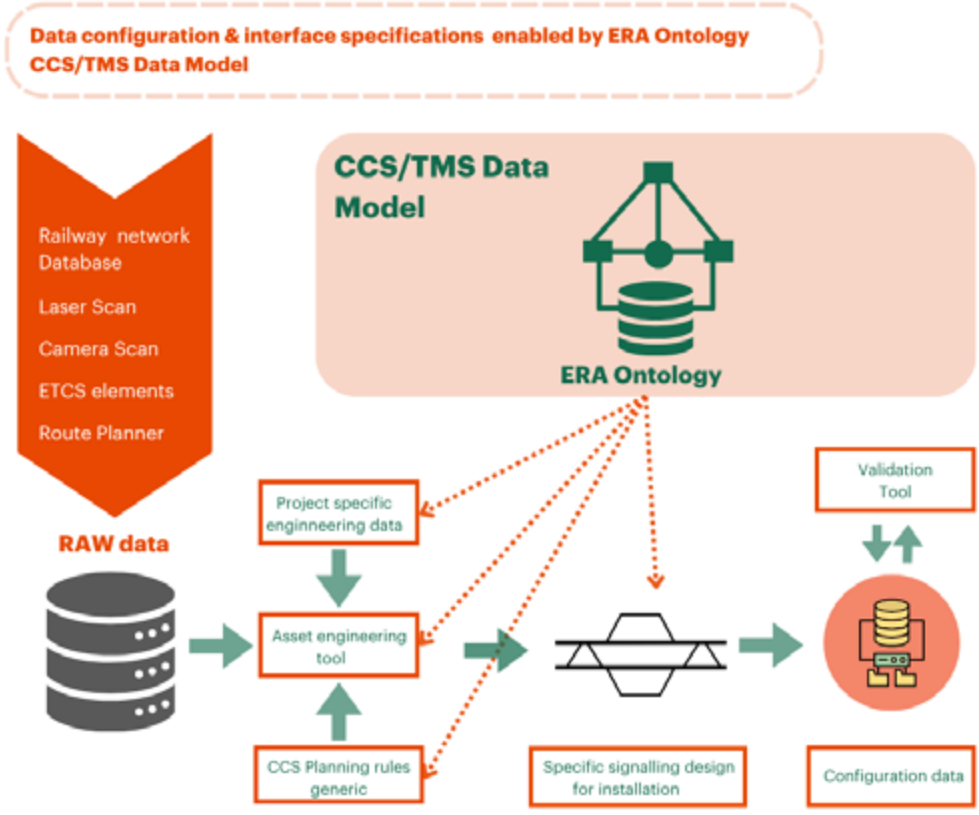
model between involved parties, which has now been released for application. The CCS/TMS data model is publicly accessible on the Europe's Rail Joint Undertaking (EU-Rail) website **https://github.com/StructLab/CCS-TMS-1.0/tree/main**.

The Standardisation and TSI Input Plan (STIP) collects all topics for harmonisation, including TSI, European Standardisation and SP documents, enabling a strategic alignment of the future outputs of EU-Rail's System Pillar. In other words: The STIP is defining the deliverable of the System Pillar for the next years. UNIFE was intensively involved in the review of the STIP over the entire year 2024.

The delivery and release of STIP in November 2024 is a major milestone for the sector with clear added values, notably regarding:

- The Harmonisation of Operational Rules
- The Evolution of ERTMS ETCS & ATO and FRMCS
- The Digital Automatic Coupler (DAC)

The final Standardisation and TSI Input Plan (STIP) can be downloaded from **https://rail-research.europa.eu/wp-content/uploads/2024/08/EU-RAIL_STIP_Cover_document-V1_0_Final.pdf**.



Clean and lean data-based process thanks to EU-Rail System Pillar Data Model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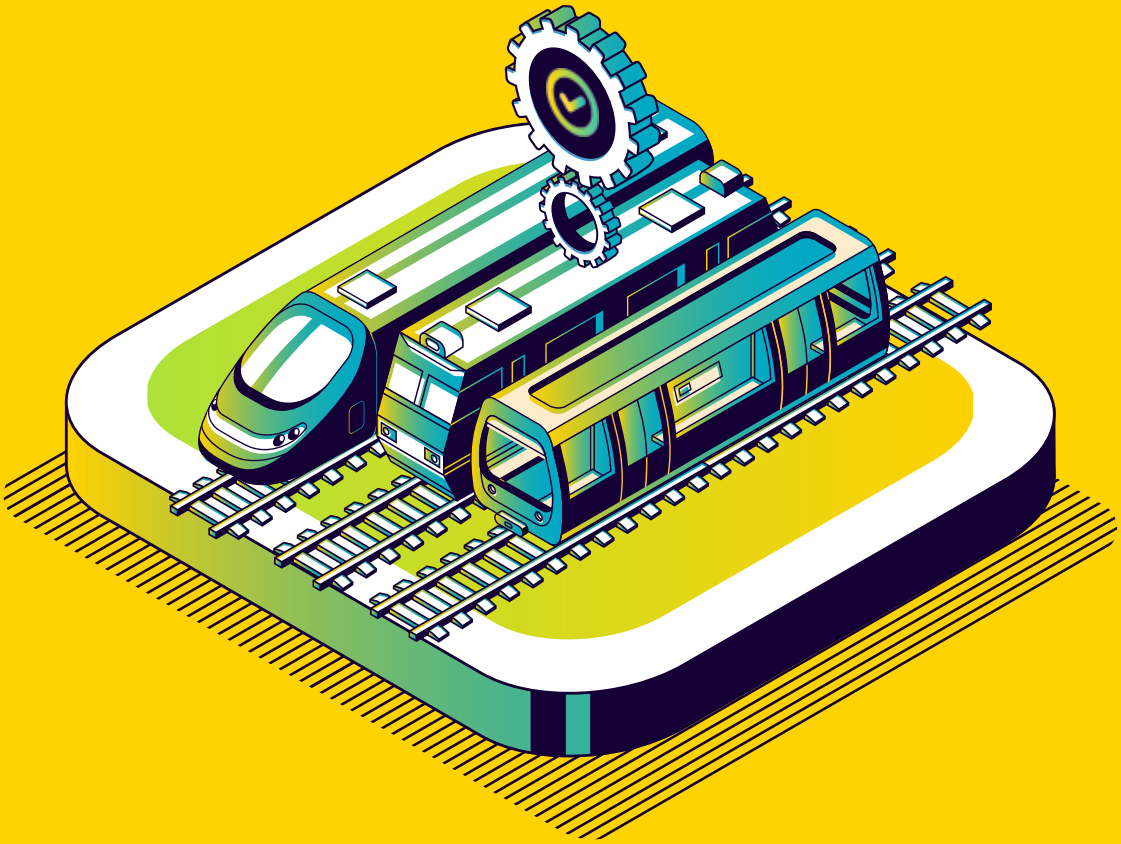


08.

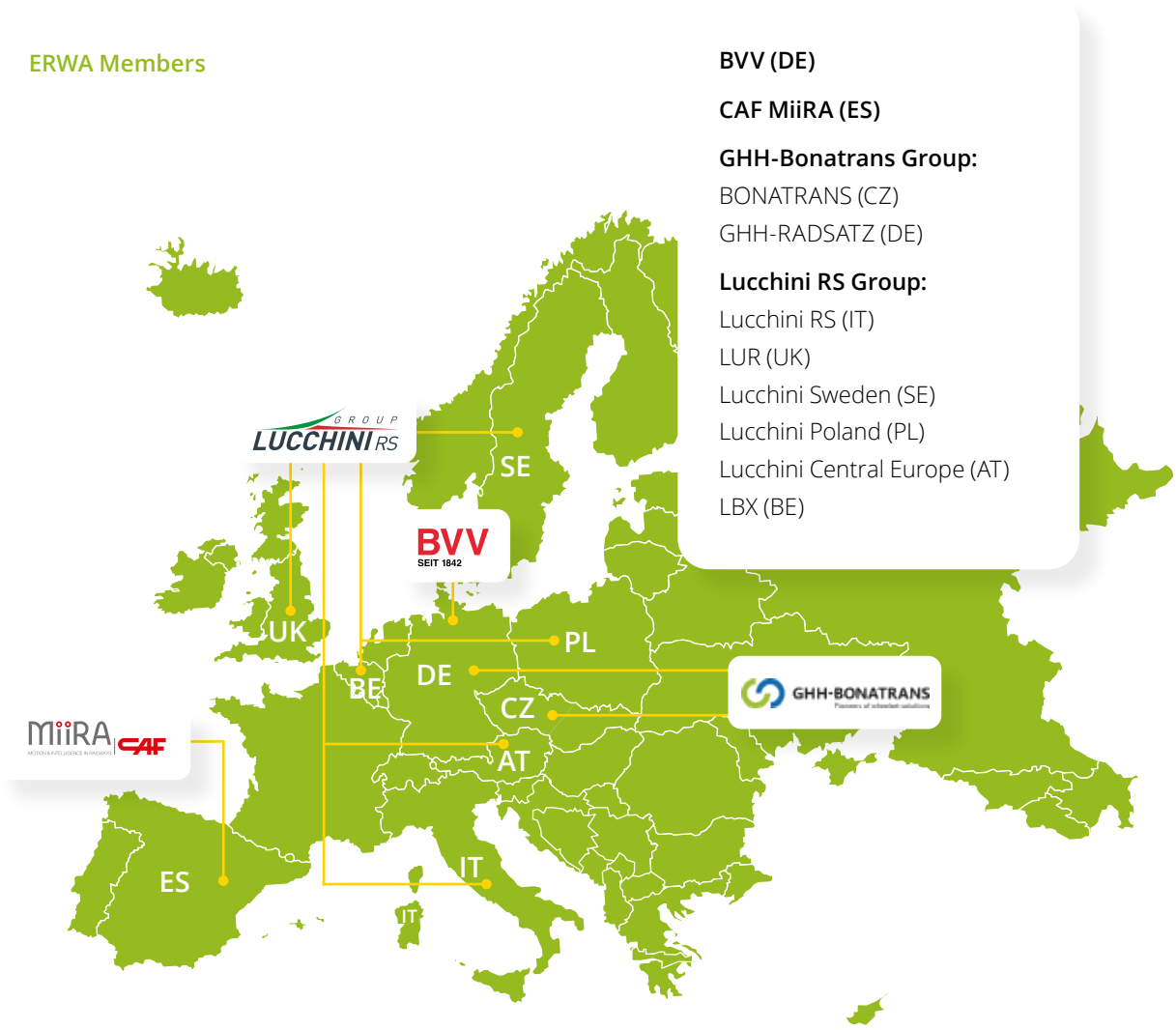
ERWA - UNIFE Railway Wheels Committee

UNIFE's Railway Wheels Committees' (ERWA) main mission is to contribute to the development of standards, further promote safety and environmental friendliness, while also developing innovations and fostering quality and best practices in the European market.

The committee consists of the following members:

- **BVV** (DE)
- **CAF MiiRA** (ES)
- **GHH-BONATRANS Group**: BONATRANS (CZ), GHH-RADSATZ (DE)
- **Lucchini RS Group**: Lucchini RS (IT), LUR (UK), Lucchini Sweden (SE), Lucchini Poland (PL), Lucchini Central Europe (AT), LBX (BE)

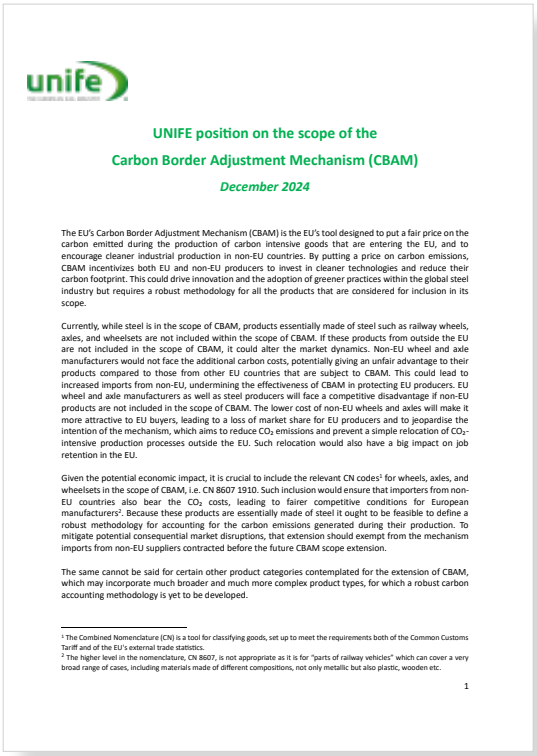
ERWA Members



Map of ERWA members

Throughout 2024, ERWA carried out many several essential activities:

- Contributing inputs to Standardisation and Regulation initiatives
- Maintaining close links with the **European Union Agency for Railways (ERA)** and standardisation bodies such as **CEN/CENELEC**
- Initiating public relations activities and publications
- Conducting market trend evaluations and forming committee statistics, along with patent and trademark monitoring
- Carrying out analyses regarding the Most Economically Advantageous Tender (MEAT) principle compliance
- Studying the impact of the **Carbon Border Adjustment Mechanism (CBAM)** and generating a dedicated UNIFE position paper. Given the potential economic impact of CBAM as currently implemented, UNIFE strongly recommends the extension of the scope of CBAM to include newly contracted imports of railway wheels, axles, and wheelsets (CN 8607 1910) with an exemption for already contracted imports. UNIFE however opposes the extension of the scope to other product categories until a robust methodology is available.
- Aiding in the organisation of the **next International Wheelset Congress (IWC)**



unife

UNIFE position on the scope of the

Carbon Border Adjustment Mechanism (CBAM)

December 2024

The EU's Carbon Border Adjustment Mechanism (CBAM) is the EU's tool designed to put a fair price on the carbon emitted during the production of carbon intensive goods that are entering the EU, and to encourage cleaner industrial production in non-EU countries. By putting a price on carbon emissions, CBAM incentivizes both EU and non-EU producers to invest in cleaner technologies and reduce their carbon footprint. This could drive innovation and the adoption of greener practices within the global steel industry but requires a robust methodology for all the products that are considered for inclusion in its scope.

Currently, while steel is in the scope of CBAM, products essentially made of steel such as railway wheels, axles, and wheelsets are not included within the scope of CBAM. If these products from outside the EU are not included in the scope of CBAM, it could alter the market dynamics. Non-EU wheel and axle manufacturers would not face the additional carbon costs, potentially giving an unfair advantage to their products compared to those from other EU countries that are subject to CBAM. This could lead to increased imports from non-EU, undermining the effectiveness of CBAM in protecting EU producers. EU wheel and axle manufacturers as well as steel producers will face a competitive disadvantage if non-EU products are not included in the scope of CBAM. The lower cost of non-EU wheels and axles will make it more attractive to EU buyers, leading to a loss of market share for EU producers and to jeopardise the intention of the mechanism, which aims to reduce CO_2 emissions and prevent a simple relocation of CO_2-intensive production processes outside the EU. Such relocation would also have a big impact on job retention in the EU.

Given the potential economic impact, it is crucial to include the relevant CN codes[1] for wheels, axles, and wheelsets in the scope of CBAM, i.e. CN 8607 1910. Such inclusion would ensure that importers from non-EU countries also bear the CO_2 costs, leading to fairer competitive conditions for European manufacturers[2]. Because these products are essentially made of steel it ought to be feasible to define a robust methodology for accounting for the carbon emissions generated during their production. To mitigate potential consequential market disruptions, that extension should exempt from the mechanism imports from non-EU suppliers contracted before the future CBAM scope extension.

The same cannot be said for certain other product categories contemplated for the extension of CBAM, which may incorporate much broader and much more complex product types, for which a robust carbon accounting methodology is yet to be developed.

[1] The Combined Nomenclature (CN) is a tool for classifying goods, set up to meet the requirements both of the Common Customs Tariff and of the EU's external trade statistics.
[2] The higher level in the nomenclature, CN 8607, is not appropriate as it is for "parts of railway vehicles" which can cover a very broad range of cases, including materials made of different compositions, not only metallic but also plastic, wooden etc.

1

UNIFE's position on the scope of the Carbon Border Adjustment Mechanism (CBAM)

These activities were carried out by the **ERWA Technical and Development Committees**, under the coordination of the **ERWA Steering Committee**. The Chairs of the ERWA Committees have been renewed for extra one-year mandate. UNIFE's ERWA Committees carry the following organisation:

Organisation of ERWA's committees

One of the Committee's activities over the past year has been the promotion of sustainability solutions. A **dedicated article** was published in the July 2024 issue of the IRJ focused on sustainability in products and in production processes.

As part of this work documented in the article, the European steel production industry is reducing the environmental impact of its activities, as it is responsible for around 8% of all global CO_2 emissions. ERWA members are supporting this move in their own processes, by for instance using scrap and recycled steel, rather than iron ore as the basis for producing the steel used in railway wheels and axles. Another important element is the sourcing of "green steel" for different products. Green steel production is based on the use of green hydrogen rather than coal as the fuel source, with many European steel manufacturers in the process of introducing these technologies at their plants.

To provide further reductions in carbon emissions, the improvement of the sustainability of steel has to go hand in hand with the extension of the lifecycle of the manufacturers' products. Some of the latest wheels manufactured by the ERWA members offer an extended lifespan of up to 30%. This equates to three years in a wheel with a lifespan of 10 years. In addition, weight-optimised products, including lighter wheels and axles, are increasingly being introduced. These can typically offer reductions of up to 30-50kg on a conventional 360kg wheel, helping to save customers money by cutting energy consumption or providing the capability to increase wagon payloads.

Noise is another environmental consideration that ERWA members are working hard to address. Investment in research and development is helping to optimise wheelset design and identify new technologies that are helping to reduce both rolling noise and flange squeal from wheel-rail interaction. Some noise-absorbing systems now deliver reductions of 30dB for flange squeal and 10dB for rolling noise, which is a significant improvement in wheel noise emissions and extremely beneficial in urban areas.


Advertising

European wheelset manufacturers take the lead on sustainability

European Railway Wheelset Association (ERWA) members, which have comprised the wheels and wheelsets committee of UNIFE since 2004, are pioneering the use of sustainable steel in wheels and wheelsets, while improving the sustainability of their production processes.

The European wheelset industry is renowned for its global leadership in the production and supply of wheelsets for rolling stock manufacturers across the world. As regulations and customer expectations over sustainability tighten, the industry is once again raising the bar by reducing the carbon footprint of its activities and introducing more sustainable products into the market.

Steel is used to manufacture railway wheels and axles as well as components such as bearings and brake discs. Steel production has traditionally been an extremely carbon-intensive process, with the steel industry responsible for 7% of all global CO_2 emissions. Significant work is underway throughout the European steel production industry to reduce the environmental impact of these activities and ERWA members are supporting this in their own processes.

This includes using scrap and recycled steel rather than iron ore as the basis for producing the steel used in railway wheels and axles. It also means sourcing "green steel" for different products. Green steel production focuses on using electricity and non-fossil fuels to reduce greenhouse gas emissions compared with conventional steel production. Indeed, many European steel manufacturers are in the process of introducing technology that enables the use of green hydrogen rather than coal as the fuel source at their plants.

Manufacturers are also working to improve sustainability by extending the lifecycle of their products. It will also help to maintain a competitive advantage for ERWA members in a market increasingly defined by lifecycle rather than upfront costs.

Some of the latest wheels manufactured by ERWA members offer an extended lifespan of up to 30%, or three years in a wheel with a lifespan of 10 years. In addition, weight-optimised products are increasingly being introduced. These can typically offer reductions of up to 40kg on a conventional 350kg freight wagon wheel, helping to save customers money by cutting energy consumption or providing the capability to increase payloads.

Noise is another environmental consideration that ERWA members are working hard to address. Investment in research and development is helping to optimise wheelset design and identify new technologies that are reducing both rolling noise and flange squeal from wheel-rail interaction. Some noise-absorbing systems now deliver reductions of 30dB for flange squeal and 10dB for rolling noise, a significant and noticeable improvement in wheel noise emissions, which is extremely beneficial in urban areas. The 10-15-year lifespan of these products means it is possible to install them on up to two more wheels once the original is withdrawn from service, again improving the sustainability of the product.

ERWA members are similarly looking at the environmental impact of their own production processes. The introduction of new equipment such as modern lathes is reducing energy consumption at plants while helping to optimise the use of material during production. Companies are also seeking to generate a greater proportion of their own energy by installing solar panels, which are now meeting around 15% of total electricity consumed. Excess heat energy previously wasted during wheelset production is similarly being captured to power heating systems. Training staff to work in more energy-efficient and sustainable ways is another critical component of strategies to reduce the environmental impact of wheelset production.

The intrinsic recyclability of steel is another sustainable characteristic of wheelsets that ERWA members are promoting by encouraging end users to use local recycling facilities at the end of product life. For ERWA it is all about creating an ecosystem in which the environmental performance of its members' products and services are optimised from the beginning. This will provide assurance to customers that these wheelset solutions are compatible with new sustainability regulations and tender requirements. This includes the European Union's Carbon Border Adjustment Mechanism (CBAM), which places a 'tariff' on carbon-intensive products, including steel. ERWA fully supports CBAM as long as it ensures a level-playing field between EU-based wheelset manufacturers and importers. After all, we must continue to work to enhance rail's status as the most environmentally-friendly mode of transport.

European Railway Wheelset Association (ERWA)

ERWA aims to promote usage benefits, lifecycle cost reduction and standardisation of railway wheels and wheelsets. ERWA is composed of four European manufacturers: RAFIL Germany, CAF INSIDE, Spain, GHH-Bonatrans Group, comprising Bonatrans, Czech Republic, and GHH Radsatz, Germany, and Lucchini RS Group, Lucchini RS Italy, LUKR in the UK, Lucchini Sweden, Lucchini Poland, Lucchini Central Europe in Austria and LDX in Belgium.

The intrinsic recyclability of steel is another sustainable characteristic of wheelsets that ERWA members are promoting by encouraging end users to use local recycling facilities at the end of product life. For ERWA, it is all about creating an ecosystem in which the environmental performance of its members' products and services are optimised from the beginning. This will provide assurance to customers that these wheelset solutions are compatible with new sustainability regulations and tender requirements, all while helping to enhance rail's status as the most environmentally-friendly mode of transport.

For further information about ERWA, please contact UNIFE Technical Affairs Manager **Stefanos Gogos** at **stefanos.gogos@unife.org**

09.

IRIS - International Railway Industry Standard

The **International Railway Industry Standard (IRIS)** is a globally recognised system for the evaluation of business management systems, which is unique to the rail sector. Owned by UNIFE and supported by operators, system integrators and equipment manufacturers, IRIS Certification® boosts customer satisfaction and implements a culture of quality in the rail sector by promoting methods and behaviours that lead sector stakeholders to pursue optimum performance.

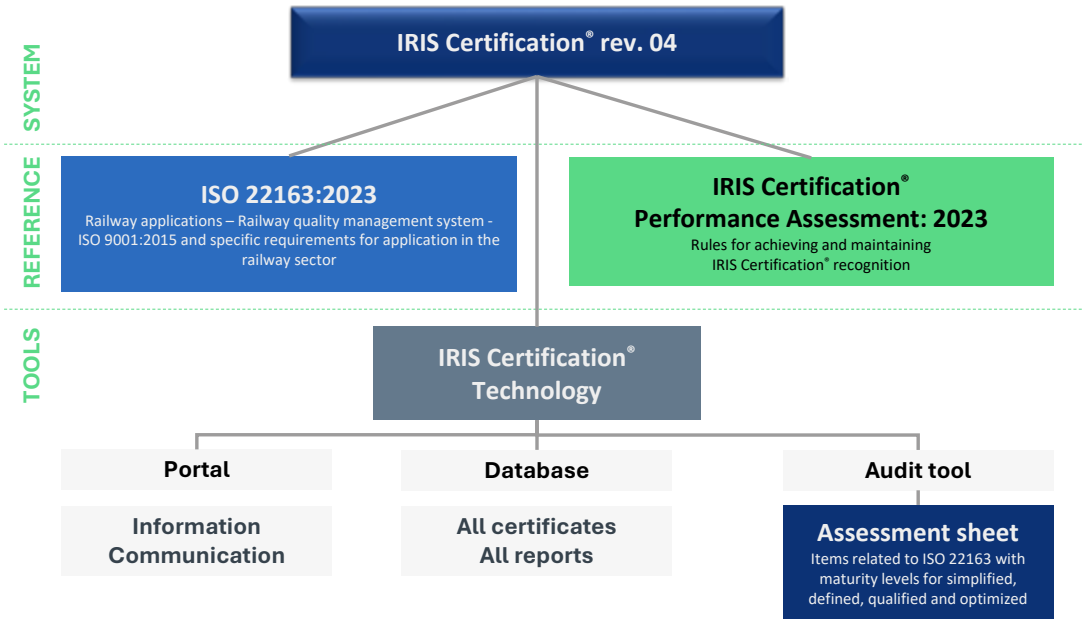
IRIS and the link to the International Organization for Standardization (ISO)

At the end of July 2023, the International Organization for Standardization (ISO) published the "ISO 22163:2023 Railway applications — Railway quality management system — ISO 9001:2015 and specific requirements for application in the railway sector". This document specifies requirements for a quality management system when an organization needs to demonstrate its ability to consistently provide products and services that meet customer and applicable statutory and regulatory requirements, and aims to enhance customer satisfaction through the effective application of the system, including processes for improvement of the system and the assurance of conformity to customer and applicable statutory and regulatory requirements.

The standard, as well as the IRIS Certification® Performance assessment: 2023, serve as basis for the IRIS Certification® audits.

IRIS Certification® milestones and operational situation in 2024

In 2024, UNIFE has reached important achievements in respect to the rollout of IRIS Certification® Rev.04 audits corresponding to the ISO 22163:2023.



IRIS Certification rev.04 system

In September 2023, the IRIS Management Center (IMC) issued the **IRIS Certification® Performance Assessment:2023**, which contains all the relevant rules related to the assessment methodology and the certification process. These two references, together with the new **IRIS Technology** (Full Web Application including rev.04 assessment sheet and IRIS Portal) that launched in February and March 2024 respectively, constitute the **IRIS Certification® rev.04 system**. IRIS rev.04 audits officially started on 1 April 2024, commencing the start of the IRIS rev.04 implementation phase.

In 2024, the IMC conducted an extensive auditor upgrade training campaign, delivering 20 face-to-face sessions worldwide. A total of 258 auditors participated, with 95% passing on their first attempt. Recognising the importance of attracting new auditors, the IMC has also organised two training sessions for new auditors, involving 23 attendees and achieving a first-attempt pass rate of 78%.

Even though during 2024 the number of certified companies has remained stable, we expect to see an increase in the number of certificates in 2025, as many small, medium, and micro-sized enterprises will take advantage of the **new simplified certification approach**, easing their entrance to the scheme. Furthermore, the IMC is enhancing the collaboration with all its **stakeholders** to successfully operate and promote IRIS Certification® Rev.04.

More details about the previously mentioned items will be given in the subsequent sections. Some more key information concerning **IRIS Certification®** can be found in the adjacent **Facts and Figures Factsheet** as well as on the IRIS Portal **www.iris-rail.org.**

Quality performance levels and control

The reactivation of the Gold Committee celebrates the outstanding achievements of companies that have not only maintained, but excelled in their IRIS Certification® despite some updates to the scheme (rev.4). We applaud their dedication to transparency, high performance, and continuous improvement. The IRIS Certification® signifies a commitment to quality, safety, and efficiency in the railway sector. Achieving the Gold level of IRIS Certification® is a testament to an organisations' unwavering dedication to best practices and operational excellence.

The Gold Committee was officially reactivated on 18 November. This esteemed committee plays a crucial role in upholding the highest Quality Performance Level of IRIS Certification®. They rigorously evaluate companies, ensuring they not only meet, but exceed the demanding criteria for the Gold level. The recent update to IRIS Rev.4 presented companies with a significant challenge. This comprehensive revision demanded a thorough review and adaptation of existing processes, documentation, and systems. The transition required a significant investment of time, resources, and expertise to ensure continued compliance and alignment with the enhanced standards.

We would like to sincerely show our gratitude to the companies that have overcome this challenge. Their dedication to maintaining the highest standards of quality and performance during this transition is commendable. The reactivation of the Gold Committee and the transition to IRIS Rev.4, mark a new chapter in the pursuit of excellence within the railway industry

Facts and figures

December 2024

IRIS Certification® is a global system enabling the rail sector to benefit from a strong and recognised evaluation method. Its successful implementation creates a win-win situation for all stakeholders.

4013 IRIS REGISTERED COMPANIES

2227 IRIS CERTIFIED COMPANIES

43% SMALL · 40% MEDIUM · 17% LARGE

6 GOLD QUALITY PERFORMANCE LEVELS

135 SILVER QUALITY PERFORMANCE LEVELS

1224 BRONZE QUALITY PERFORMANCE LEVELS

16 CERTIFICATION BODIES (CBs)

296 ACTIVE AUDITORS

242 LEAD AUDITORS

33 LANGUAGES

54 CO-AUDITORS

35 MULTI-CB AUDITORS

ALSTOM · CAF · Faiveley Transport · BONATRANS · HARTING · KNORR-BREMSE · Hitachi Rail STS · Talgo · SCHAEFFLER · SIEMENS · VOITH

www.iris-rail.org · unife.org · UNIFE

Performance assessment:2023

The first edition of the rules for achieving and maintaining IRIS Certification® recognition is available as of 29 August 2023 on the IRIS Portal. As mentioned previously, IRIS Certification® Performance assessment:2023 is part of the IRIS Certification® system, and has been reviewed and updated to integrate the evolution of the requirements defined in the ISO 22163, the certification process and assessment methodology. The main updates on the following topics:

- **Audit organisation** (audit execution, audit documentation, audit duration)
- **Assessment methodology** (applicability of certification activity versus business category)
- **Quality performance level** (transfer audits)
- **Product scope** (clarification to ease the understanding)

The second edition of the rules including further clarifications are expected to be released in Q1-2025.

IRIS Technology

A key advantage of the IRIS Rev. 04 scheme is the integration of its audit tool to facilitate assessments, coupled with a portal for streamlined management.

The IRIS Audit-Tool Web Application and Rev. 04 assessment sheet were launched earlier this year and are available for purchase through the **IRIS Portal shop**. This cloud-based solution enables companies to prepare for readiness reviews and conduct internal audits to perform gap analyses during the initial stages. Certification Bodies have been provided with Audit-Tool Web credentials, granting their IRIS-approved auditors the necessary access to conduct Rev. 04 audits.

The IRIS Audit-Tool Web Application leverages next-generation technology for streamlined audits and simplified reporting, offering cross-platform compatibility and global access. It includes the updated IRIS assessment sheet aligned with ISO 22163:2023, and the latest Performance Assessment methodology. Bugs related to the Audit-Tool web application have been successfully addressed and resolved.

The IRIS Portal and database have also been upgraded to support the Rev. 04 system, enabling company master data updates, a simplified certification approach, and a smooth transition phase for auditors and companies in 2024.

The IMC is dedicated to an IT roadmap that encompasses enhancements in cybersecurity, continuous improvements, and other innovative projects planned for 2025 and beyond.

Communication

Targeted communication was a cornerstone of IRIS activities in 2024, as the IMC ensured that all stakeholders were informed about critical aspects of the Rev. 04 scheme, launched on 1 April 2024.

Throughout the year, multiple webinars were conducted, attracting over 1,200 participants, in order to update stakeholders on the progress of the IRIS Rev. 04 implementation phase. Recordings of these webinars are available on the **IRIS Certification YouTube channel**, and the series will continue into 2025.

InnoTrans was a key element of the IRIS communication plan, with the IMC team hosting two roundtable sessions at the UNIFE stand:

IRIS Certification® Rev.04: Revolution or Evolution? All You Need to Know

This presentation was dedicated to the latest updates in the IRIS Certification® scheme. The speakers confirmed that the new Rev.04 is an evolution, introducing remarkable improvements that elevate the quality of our industry.

Return of Experience: How IRIS Certification® Benefits My Organisation?

This session focused on the testimonials outlining advantages of IRIS Certification® Rev.04 for Certification Bodies and IRIS-certified companies.

2024 was also a successful year for our social media efforts. Our online presence strengthened significantly, allowing us to highlight the following achievements:

Reactions
1 130

Clicks
4 448

Comments
40

Impressions
41 069

Likes
1 055

Webinars
3

Clickthrough rate (CTR)
1 130

Reposts
4 448

Webinar registrations
1 169

Control activities

In 2024, monitoring activities focused on ensuring the confidence and credibility of the IRIS Rev. 04 system, verifying its implementation and transition status, and training witness auditors and veto checkers.

During the first half of the year, primary efforts included training auditors and staff responsible for overseeing activities within Certification Bodies and the IMC. For Certification Bodies, 63 veto checkers were trained in sessions conducted throughout the year, ensuring personnel were qualified to validate and control IRIS Rev. 04 audits. Additionally, 10 witness auditors were trained to update their knowledge of Rev. 04 requirements, witness audit processes, and calibration audits.

In the second half of the year, witness audits commenced, with 43 audits scheduled and 60 auditors monitored, ensuring that each approved certification body conducted at least one witness audit. Office audits, predominantly held in person, facilitated the sharing of results and alignment of expectations among all stakeholders. Control of the scheme is a crucial activity to ensure that every auditors, and more generally, the complete IRIS scheme is properly applied and respected within the IRIS certified companies.

IRIS and ECM synergies

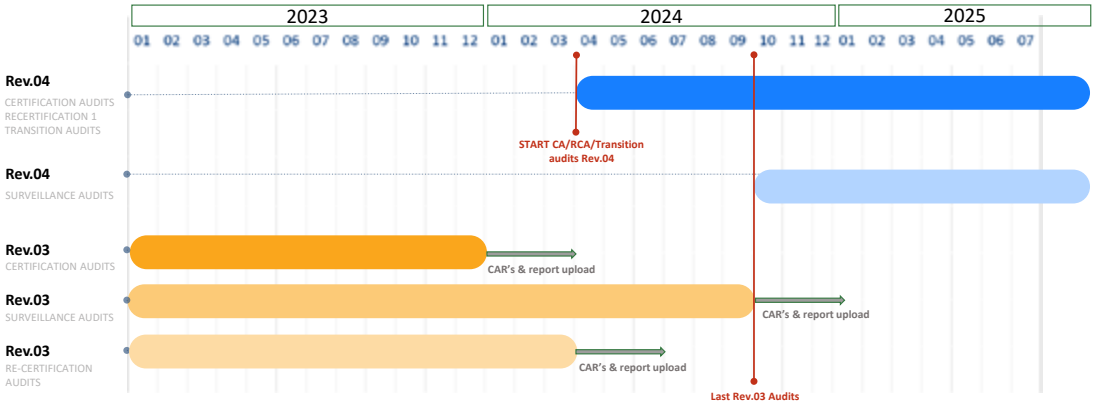
UNIFE, its ECM and IRIS experts, alongside other UNIFE members met in October with Josef Doppelbauer, the Executive Director of the European Union Agency for Railways (ERA), and his ERA safety team for an exchange on exploiting synergies between the IRIS Certification®, and the certification of Entity in Charge of Maintenance (ECM) for the benefit of the sector stakeholders. It was mutually acknowledged that synergies between IRIS and ECM can accelerate the ECM certification processes, reduce redundancies, and enhance overall operational efficiency. By aligning maintenance responsibilities and data traceability, IRIS and ECM will enhance the safety and reliability of railway operations. The harmonised framework will foster greater collaboration and knowledge-sharing among railway stakeholders, driving continuous improvement and maintenance excellence.

An ERA/IMC Working Group was set up in October/ November 2024 to work out the details of the concept suggested by UNIFE. The key issue is to reduce the audit days in the ECM process if the applying entity holds an IRIS certificate. As a result, a thorough analysis of the "compatibility" between the IRIS certificate and the four ECM maintenance functions is required. The outcomes of the ERA/IMC exercise will be included to the ERA ECM Application Guide in early 2025, serving as a recommendation for the actors involved in the ECM certification process on how to best utilise the synergies.

2024 was an important milestone for companies

Since the launch of IRIS Certification® rev.04 (as of 1 April 2024), organisations have been able to start certification, undergo a re-certification and conduct transition audits in rev.04.

An important milestone in the implementation phase was reached with the deadline to complete all rev. 03 surveillance audits on 30 September 2024. From this date forward, only rev. 04 audits are permitted. We sincerely thank all companies for their contributions to the success of rev. 03 since its launch in June 2017, and for their continued commitment to rev. 04.

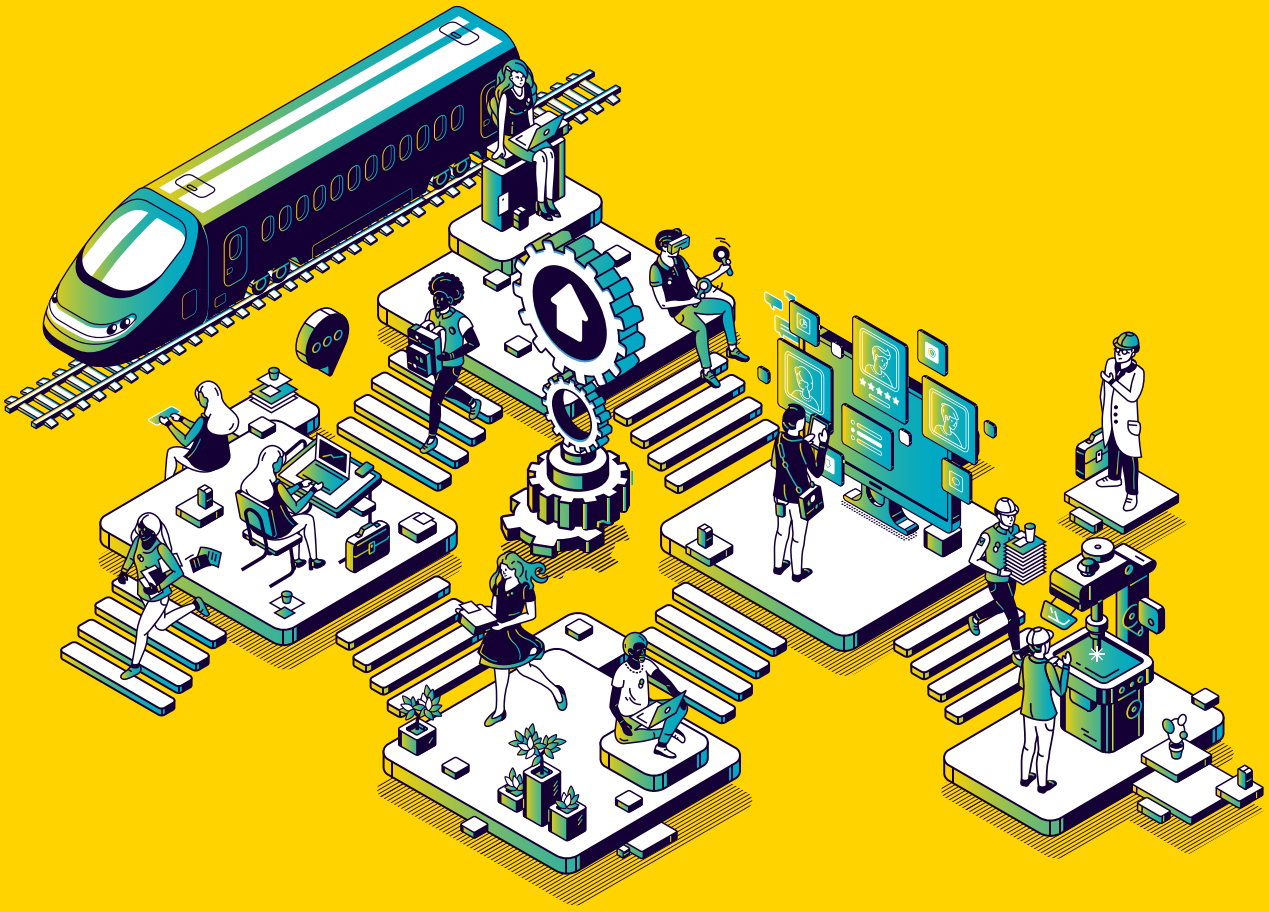


IRIS rev.04 implementation timeline

The IMC has ensured all needed actions to reach a smooth transition and continues communicating on all essential topics related to this vital evolution.

Since its creation, the IRIS scheme has undergone a significant evolution, enhancing its robustness and accessibility. With these advancements, IRIS has established itself as the most recognised and trusted standard in the railway sector. The entire IMC is committed to further refining the standard in 2025, with a particular focus on ensuring it continuously addresses the challenges faced by the railway industry. We remain dedicated to our journey toward achieving excellence in safety and quality.

For more information on IRIS visit the IRIS Portal **www.iris-rail.org**, follow us on **X**, **LinkedIn**, **YouTube**, or subscribe to **our newsletter**



10. Communications

1. European Railway Award 2024

The 2024 European Railway Award was held in Brussels on 29 January 2024. It was jointly organised by the European Rail Supply Industry Association (UNIFE) and the Community of European Railway and Infrastructure Companies (CER). The **17th edition of the event marked the European Year of Skills**. Former **European Transport Commissioner Violeta Bulc was awarded the event's Rail Champion prize for her work promoting women in transport professions**, while the **Rail Trailblazer prize went to the project by Danish State Railways (DSB) pioneering a new train operator profile for their S-trains**. The awards were bestowed during a prestigious ceremony at Belgium's Royal Museums of Fine Arts, opened by European Commission Executive Vice-President for the European Green Deal Maroš Šefčovič and representing the Belgian Presidency of the EU, Belgian Deputy Prime Minister and Minister for Mobility Georges Gilkinet.

Opening the event **Maroš Šefčovič, European Commission Executive Vice-President for the European Green Deal** declared: *"Greening mobility must be the new licence for the transport sector to grow. There is no doubt that Europe needs a strong railway system to maintain its competitiveness, while also staying on track to reach our climate and biodiversity targets. A successful implementation of the European Green Deal in the transport sector depends greatly on the development and innovation of the rail market."*

Representing the **Belgian Presidency of the EU, Georges Gilkinet, Belgian Deputy Prime Minister and Minister for Mobility** asserted: *"In a ground-breaking move towards a sustainable and connected future, the recent agreement on the Trans-European Transport Network Regulation provides*

Maroš Šefčovič, European Commission Executive Vice-President for the European Green Deal

Violeta Bulc, Former European Transport Commissioner - European Railway Award's Rail Champion 2024

Georges Gilkinet, Belgian Deputy Prime Minister

a clear, long-term vision for European railway infrastructures. Such vision needs substantial financial resources. We must wisely invest to reach both our economic and environmental goals."

The **European Railway Award's Rail Champion** title is an honorary recognition jointly bestowed by the two associations. With this year's prize, UNIFE and CER wished to **recognise the efforts of former European Transport Commissioner Violeta Bulc to bring more diversity to transport professions, where women have long been underrepresented**. **Violeta Bulc notably spearheaded the Women in Transport Platform for Change, a stakeholder forum that exists to this day and continues to give real impetus to the issue**. Her call to attract more women to careers in transport resonated with the rail sector, which has in recent years redoubled its efforts to increase the number of women working in rail, leading to tangible results.

In her acceptance speech, **Violeta Bulc** said: *"I am deeply honoured and profoundly touched by the award given to me by the railway sector, which I perceive as a testament to the dedicated efforts of the entire transport ecosystem during my tenure. It is also a tribute to the collective excellence of President Juncker's team. Transport serves as the vital thread connecting communities and fostering relationships. When transport functions seamlessly, society thrives; conversely, when transport stops everything stops. Therefore, those working in the transport sector bear the weight of society on their shoulders."*

Selected by a jury of policy makers, sector experts, and journalists, the **2024 Rail Trailblazer** prize went to **DSB's S-train operator project – a recruitment initiative that successfully harnessed the benefits of digital transformation to create a new job profile tackling skill gaps, attracting new talent, and increasing diversity**.

The **European Year of Skills** provided a highly relevant focus area for this year's ceremony. Relying on a broad and highly skilled workforce, the rail sector is particularly aware of the challenges of attracting and training workers that are well-equipped for the digital and green transitions. From gaps in skills, to an ageing workforce, there are numerous obstacles to overcome to ensure rail has access to the skilled labour it needs.

Besides paying tribute to the impressive work being done to attract, train and retain new talent in the sector, the event debated how to redefine the skill landscape for the future of rail during a roundtable discussion, where the UNIFE and CER Chairs were joined by Members of the of the European Parliament Tilly Metz, and the European Commission Director General for Mobility and Transport, Magda Kopczyńska.

The 18th edition of the European Railway Award will be held in Brussels on 17th February 2025 at the Belgium Royal Museums of Fine Arts.

For further information visit **www.europeanrailwayaward.eu**

European Railway Award 2024 Roundtable: Méabh McMahon (Moderator, Euronews), **Andreas Matthä** (CER Chair & CEO of ÖBB), **Magda Kopczynska** (Director-General for Mobility & Transport, EC), **Tilly Metz** (MEP), **Michael Peter** (UNIFE Chair & CEO of Siemens Mobility

2. UNIFE General Assembly 2024

Augusto Mensi (CEO, Lucchini RS), **Mark Nicklas** (Head of Unit Mobility, DG GROW, European Commission), **Giorgio Travaini** (Executive Director, Europe's Rail Joint Undertaking), **Pascal Schweitzer** (President of the Managing Board, Faiveley Transport), **Danny di Perna** (Executive VP & COO, Alstom), Moderator **Elizabeth Jordan** (Editor, Global Railway Review)

UNIFE's **33rd General Assembly** was held in Brussels on 12 and 13 June 2024, with new Director General Enno Wiebe outlining the pressing matters of the industry.

This includes pushing for the modernisation of European rail stock and technology, while presenting the need for new investment commitments from both policymakers in Brussels and across European Member States.

As part of the General Assembly, **the vision manifesto** On the Move to a Net-Zero EU: the European Rail Supply Industry Priorities for 2024 – 2029 was presented to members and political stakeholders, which aims at **entrenching the rail industry as a ready-made solution for policymakers seeking a high-tech, high-growth, and near emissions free mode of transport** to partner with.

The broader event was also a platform for the rail industry to discuss boosting competitiveness and simpler regulation, which could address broader flagging growth across the Eurozone, especially as European institutions seek to achieve net-zero targets while managing several geopolitical challenges.

As part of proceedings, high-level political representatives and rail industry executives also assessed emerging developments in the worldwide rail sector. Attendees received keynote addresses from Georges Gilkinet, Belgian Deputy Prime Minister and Minister for Mobility and representing the Belgian Presidency of the EU, and Magda Kopcyznska, the European Commission's Director General of DG MOVE.

Georges Gilkinet, Belgian Deputy Prime Minister and Minister for Mobility used the appearance to focus on unlocking the potential future of rail, stating *"We must unleash the full potential of both day and night trains. During the Belgian Presidency, we made sure to organise the final agreement on the TEN-T regulation. Modal shift towards rail transport must be the priority of the next mandate. We must set ambitious targets. There must also be a level playing field with other modes of transport."*

Michael Peter, Chair of the UNIFE Presiding Board and CEO of Siemens Mobility declared *"We are in pivotal times and need a strong industry voice for rail. Together we must raise awareness about our role in reaching our climate targets, about the prosperity our industry provides, and how a competitive and fair market for rail contributes to Europe's future."*

Subsequently, UNIFE outlined its ongoing commitments to ensuring a strong future for the rail supply industry. The board reaffirmed policies and programs such as **UNIFE's Gender Equity Policy** and the activities of the Gender Equity Advisory Group, which alongside the **Skill Training Alliance For the Future European Rail system (STAFFER)**, are aimed at making substantial gains in diversifying and attracting new talent to the rail supply industry.

UNIFE's membership elected to expand its ranks by ratifying the applications of 8 companies: **Schunk Transit Systems** (DE), **Fujikura Europe** (UK), **Eviden Austria** (AT), **Trane Technologies International** (IE), **IKOS Consulting** (FR), **Polomarconi.it** (IT), **Clear CinCom** (NL), **Bentley Systems** (IE).

The 34rd UNIFE General Assembly will take place on 11 and 12 June 2025 in Warsaw.

Georges Gilkinet, Belgian Deputy Prime Minister

Magda Kopczyńska, Director General for Mobility and Transport, European Commission

Enno Wiebe, Director General UNIFE and **Michael Peter**, UNIFE Chair & CEO of Siemens Mobility

3. InnoTrans 2024

The European Rail Supply Industry was showcased by UNIFE at InnoTrans 2024 as an industry and mode of transport transforming itself and the way European passengers and freight move across the continent.

The programme focused on the future of the industry by hosting several key events on the future of rail cybersecurity, ERTMS and the Future Rail Mobile Communications System (FRMCS). Furthermore, UNIFE spotlighted inclusivity and the role of women, as the industry diversifies and reflects the wider public.

UNIFE successfully unveiled the 10th edition of its **World Rail Market Study**, detailing the positive horizon the sector is working towards, with a detailed forecast suggesting the global market is expected to grow by 3% annually in real terms for the rest of the decade. By the end of this period, the average market size is expected to expand to €240.8 bn.

At UNIFE's stand, many attendees also had the opportunity to engage in Virtual Reality with key rail applications, provided by some of UNIFE's members such as Alstom Lucchini RS, Tesmec and Plasser & Theurer. The virtual exhibition space was customised for InnoTrans 2024, giving participants an immersive environment, such as engaging with a 3D model of an Alstom TRAXX locomotive.

During the five-day event, UNIFE was also busy holding court with several international delegations such as the US Federal Railroad Administration, the American Public Transportation Association (APTA), the Railway Supply Institute (RSI), the Gulf Cooperation Council Secretariat General (GCC), and the Confederation of Indian Industry (CII) to ensure the industry is building ties in the face of challenging geopolitical headwinds. Key issues from the meetings included the discussion of regulatory standards, the deployment of key technologies and the strong need for future investment in rail.

UNIFE hosted a dedicated Political & Technical Dialogue Forum and numerous sessions at the stand dedicated to the ERTMS roll-out, focusing in particular on the transition to FRMCS. This enabled a discussion around the importance of standardising and harmonising technical regulations, while also outlining the need for future investment to keep the program's rollout on track. As part of these efforts, a joint declaration was signed by the ERTMS Stakeholder Platform Board ensuring coordination, alignment and promotion of the deployment and implementation of ERTMS, to create a Single European Railway Area.

Further to this, UNIFE put IRIS Certification in the spotlight. Being a global system for enabling the rail sector to benefit from a strong and recognised evaluation method, UNIFE gave an inside view into the IRIS program and showcased the value it brings to the companies that engage in quality certification through a range of sessions at the stand.

Celebrating excellence across the sector and industry is also a key part of InnoTrans, **which is why UNIFE congratulated the winners of the Women in Rail Award 2024**, as UNIFE were on the panel. Metro Istanbul was awarded in the Women Empowerment Award category, while Maria-Luisa Dominguez from ADIF took out the Leadership and Mentoring Award, and Veronic Elena Bocci from DICTEFER clinched the Research and Innovation award.

These awards took place concurrently with the UNIFE SMEs Award, which saw wins from Gillet Tools in the category of Innovation for the

dynamic MOVE-IT RC product, while Prolan won in the category of Corporate Social Responsibility for its various acts of charity and support for communities within Hungary.

UNIFE Director General Enno Wiebe reflected on the event, outlining the successful demonstration and display UNIFE put on at Messe Berlin: "We had fruitful discussions on trade with international delegations, moved along the agenda of ERTMS and FRMCS, while also showcasing the strategic and technological directions we are taking next. As the World Rail Market Study confirmed – rail is on a mission to transform itself and the wider world."

4. UNIFE Communication Metrics

Google Analytics - www.unife.org

74,441 Visitors

106,122 Page views

X - @UNIFE

5,268 Followers

66,121 Impressions

237 Tweets

755 Likes

LinkedIn - UNIFE - The European Rail Supply Industry Association

11,308 Followers

229,449 Impressions

17,683 Clicks

6,762 Page views

Youtube - UNIFE_Rail

8,800 Impressions

1,700 Views

230.2 Hours watch time

UNIFE in the Media

9 Interviews

204 Articles about or mentioning UNIFE

Publications

12 Position Papers/Reports UNIFE produced or contributed to Interviews

5. Communication leadership and support for:

unife

- www.unife.org
- @unife
- UNIFE – The European Rail Supply Industry Association
- UNIFE_Rail

- europeanrailwayaward.eu
- @EU_RailwayAward

ertms

- www.ertms.net
- @ERTMS
- ERTMS - European Rail Traffic Management System

IRIS Certification

- www.iris-rail.org
- @IRIS_Certificat
- IRIS Certification

IRQB

- www.irqb.org
- @TheIRQB
- IRQB - The International Rail Quality Board
- The IRQB

STAFFER

- www.railstaffer.eu
- @RAIL_STAFFER
- Rail Staffer

HOP ON FOR OUR PLANET!

- www.hoponrail.eu
- @HopOnRail
- www.linkedin.com/showcase/hop-on-for-our-planet/
- @hoponrail
- HopOnRail

ERRAC

- www.errac.org
- @ERRAC_Rail
- The European Rail Research Advisory Council (ERRAC)

+Dissemination for **6 R&I Projects**

11.

UNIFE Members in 2024

UNIFE Full Members

ABB	ABB Power Grids Sécheron	https://global.abb
AKKODIS	Akkodis	https://www.akkodis.com
ALSTOM	Alstom	https://www.alstom.com
ALTPRO	ALTPRO	https://altpro.com
Ardanuy	Ardanuy	http://www.ardanuy.com/es
ASTRA	ASTRA	https://avcactive.com
AXTONE	Axtone	https://www.axtoneglobal.com
AŽD	AZD	https://www.azd.cz/cs
Bentley Advancing Infrastructure	Bentley	https://www.bentley.com
BVV SEIT 1842	Bochumer Verein Verkehrstechnik	https://www.bochumer-verein.de/en
BODE	Bode	https://www.bode-global.com

	Bodet Time	https://www.bodet-time.com
	Bonatrans	https://www.ghh-bonatrans.com/en
	CAF	https://www.cafmobility.com
	Camlin Rail	https://camlingroup.com
	CEG Elettronica	https://www.cegelettronica.com/en
	Cellnex	https://www.cellnex.com
	CENTRALP	https://www.centralp.fr
	Clear CinCom	https://clearcincom.com
	Comesvil	https://www.comesvil.com
	Constellium	https://www.constellium.com
	ContiTech	https://www.continental-industry.com/en/solutions/suspension-anti-vibration/railway
	CS Group	https://www.csgroup.eu/fr
	Cylus Cybersecurity	https://www.cylus.com
	DAKO-CZ	https://www.dako-cz.cz

	Dellner	https://www.dellner.com
	DIGAS	https://digasgroup.com
	Dual Inventive Holding	https://dualinventive.com/en
	EKE Electronics	https://www.eke-electronics.com
	Elcowire Rail	https://elcowire.com
	Elma	https://www.elma.com/en
	ELPA	http://www.elpa.si
	ENYSE	https://www.enyse.com
	Eolane	https://www.eolane.com/en
	Ericsson	https://www.ericsson.com/en
	ErvoCom	https://www.ervocom.ch/en
	Eviden	https://eviden.com
	Evopro	http://www.evopro.hu/hu
	Express Service	https://lz1866.com

Faiveley Transport	Faiveley Transport	https://www.wabteccorp.com
FOGTEC FIRE PROTECTION	FOGTEC	https://fogtec-international.com
FRAUSCHER	Frauscher	https://www.frauscher.com
FREQUENTIS FOR A SAFER WORLD	FREQUENTIS	https://www.frequentis.com/en
Fujikura	Fujikura	https://www.fujikura.co.uk
funkwerk	Funkwerk	https://funkwerk.com/en
Gerflor theflooringgroup	Gerflor	https://www.gerflor.fr
GESTE MOBILITY & SAFETY	GESTE	https://geste.group
GHH-RADSATZ	GHH-Radsatz	https://www.ghh-bonatrans.com
Gi TOOLS	Gillet Group	https://www.gillet-tools.com
GREENBRIER EUROPE	Greenbrier Europe	https://www.greenbrier-europe.com
HACON	HaCon	https://www.hacon.de
HARTING	Harting	https://www.harting.com
HASLERRail	HaslerRail	https://www.haslerrail.com
HIMA SMART SAFETY.	HIMA	https://www.hima.com/rail

	Hirschmann	https://www.hirschmann.com/de
	Hitachi Energy	https://www.hitachienergy.com
	Hitachi Rail STS	https://www.hitachirail.com
	Hoppecke	https://www.hoppecke.com
	ICF	http://www.icf.com.es
	Ikos Consulting	https://www.ikosconsulting.com
	Indra	https://www.indracompany.com/en
	IVM	http://ivmtech.it/en
	Kalthoff	https://www.kalthoff-luftfilter.de
	Knorr-Bremse	https://www.knorr-bremse.com/en
	Koni	https://www.koni.com
	Kontron	https://www.kontron.de
	KONUX	https://www.konux.com
	Leonardo	https://www.leonardo.com

	Lippert	https://www.lippertcomponents.eu
	Lucchini RS	https://lucchinirs.com
	Masats	http://www.masats.es
	Matisa	http://www.matisa.ch
	Megger	https://megger.com
	MERMEC	http://www.mermecgroup.com
	MERMEC STE	https://www.mermecste.com
	MIOS	https://www.mioselettronica.com
	MIPRO	http://www.mipro.fi
	Neat	https://www.neat.it
	NetModule	https://www.netmodule.com/en
	Nokia	https://www.nokia.com/networks
	OLTIS Group	https://www.oltisgroup.com
	Pilz	https://www.pilz.com/en-INT

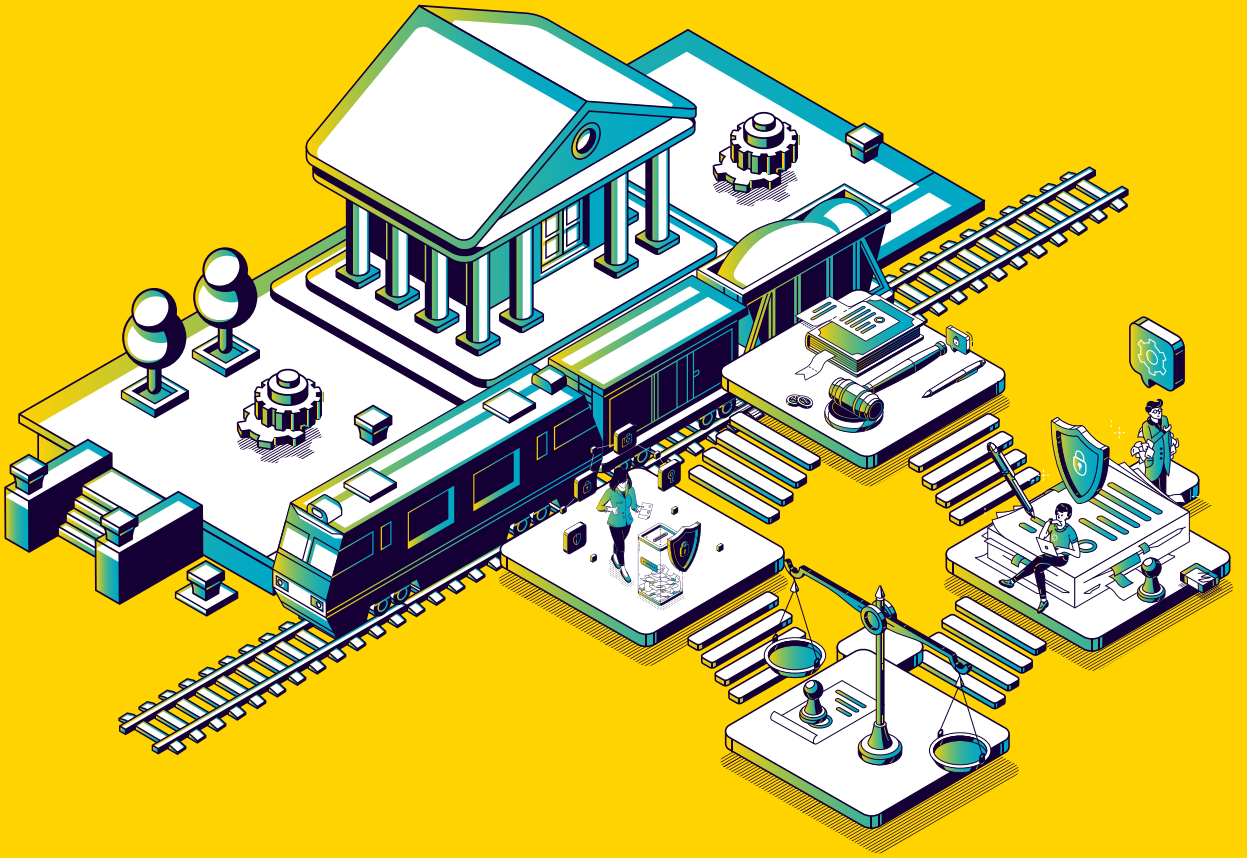
Plasser & Theurer	Plasser & Theurer	http://www.plassertheurer.com
POLOMARCONI.IT	Polomarconi	https://www.polomarconi.it
Progress Rail A Caterpillar Company	Progress Rail	https://www.progressrail.com
PROLAN	Prolan	https://www.prolan.hu/en
Prometco	Prometco	https://prometco.fi
PROVER	Prover	https://prover.com
Radiall	Radiall	https://www.radiall.com
R.N RAILNOVATION	RailNovation	https://railnovation.com
RazorSecure	Razor Secure	https://www.razorsecure.com
RELOC CRAIOVA	ReLoc	http://relocsa.ro
RideOnTrack	RideOnTrack	https://www.rideontrack.com
saft	Saft	https://www.saft.com
SCHAEFFLER	Schaeffler	https://www.schaeffler.com
SCHEIDT&BACHMANN	Scheidt & Bachmann	https://www.scheidt-bachmann.de/en

	Schunk	https://www.schunk-group.com
	Selectron	https://www.selectron.ch/en
	Siemens Mobility	https://www.mobility.siemens.com
	Skoda	https://www.skodagroup.com
	SOFTIL	https://www.softil.com
	Talgo	https://www.talgo.com
	Te.Si.Fer	http://www.tesifer.it
	Team	https://www.belam.com
	Techne	https://www.techne-kirow.de
	TELESTE	https://www.teleste.com
	The Cross Product	https://www.thecrossproduct.com
	Thermo King	https://europe.thermoking.com
	Triorail	https://www.triorail.com
	TTC Marconi	https://www.ttc-marconi.com

	Unex	https://www.unex.net
	VDS	https://www.vdsrail.com/en
	Viavi	https://www.viavisolutions.com
	VibraTec	https://vibratec.fr
	Voestalpine	https://www.voestalpine.com
	VOITH	https://voith.com
	Vossloh	https://www.vossloh.com/en
	VÚKV	https://www.vukv.cz
	Wenzel	https://wenzel-elektronik.de
	Westermo	https://www.westermo.com

UNIFE Associate Members

Verband der Bahnindustrie	Austrian Association of the Railway Industry, **Austria**	www.bahnindustrie.at
AGORIA	Agoria, **Belgium**	www.agoria.be
RASTIA	Railway Signalling, Automation, Telecommunication And Industry Association (RASTIA), **Bulgaria**	https://rastia.org
ACRI Association of Czech Railway Industry	Association of the Czech Railway Industry (ACRI), **Czechia**	www.acri.cz
fédération des industries ferroviaires "Les voies du progrès"	Fédération des industries ferroviaires (FIF), **France**	https://industrie-ferroviaire.fr
DIE BAHNINDUSTRIE. VDB VERBAND DER BAHNINDUSTRIE IN DEUTSCHLAND E.V.	Der Verband der Bahnindustrie in Deutschland (VDB), **Germany**	www.bahnindustrie.info
zvei electrifying ideas	Zentralverband Elektrotechnik- und Elektronikindustrie (ZVEI), **Germany**	www.zvei.org
ASSIFER ASSOCIAZIONE INDUSTRIE FERROVIARIE	Associazione Industrie Ferroviarie (ANIE/ ASSIFER), **Italy**	www.anie.it
AIF ROMANIAN RAILWAY INDUSTRY ASSOCIATION	Romanian Railway Industry (AIF), **Romania**	www.asifrom.ro
MAFEX	Spanish Railway Association (MAFEX), **Spain**	www.mafex.es
SWEDTRAIN	Association for Rail Industry Companies (SWEDTRAIN), **Sweden**	www.swedtrain.org
SWISSRAIL Industry Association	Swissrail Industry Association, **Switzerland**	www.swissrail.com



12.
UNIFE Staff

Enno Wiebe

Director General
enno.wiebe@unife.org

HR, Finance, Legal, Membership, and Operations

Isabelle Tshiams

Personal Assistant to the Director General/ Office Manager
isabelle.tshiams@unife.org

+32 2 626 12 60

Paulina Pineda

Chief Finance, Legal & HR Officer
paulina.pineda@unife.org

+32 2 626 12 65

Franck Cipolla

Director Human Resources, Finance and Administration ad interim
franck.cipolla@unife.org

Vardan Harutyunyan

Accountant
vardan.harutyunyan@unife.org

Public Affairs

Jonathan Nguyen

Head of Public Affairs
jonathan.nguyen@unife.org

+32 2 431 04 60

Carlos Corts

Public Affairs Manager
carlos.corts@unife.org

+32 2 642 23 20

Matteo Barisione

Public Affairs Manager
matteo.barisione@unife.org

+32 2 643 70 81

Communications

Andrei Ciufu
Head of Unit - Communications
andrei.ciufu@unife.org
+32 2 626 12 64

Tanvi Mishra
Communications Manager
tanvi.mishra@unife.org
+32 2 431 04 63

Ben Cuzzupe
Communications Manager
ben.cuzzupe@unife.org
+32 2 643 70 80

Rachely Burgos
Communications Manager
rachely.burgos@unife.org
+32 2 626 12 67

Technical Affairs

Nicolas Furio
Head of Technical Affairs
nicolas.furio@unife.org
+32 2 626 12 62

Stefanos Gogos
Technical Affairs Manager
stefanos.gogos@unife.org
+32 2 431 04 62

Nicholas Shrimpton
Technical Affairs Manager
nicholas.shrimpton@unife.org
+32 2 626 12 69

Jose Bertolín
Technical Affairs Manager
jose.bertolin@unife.org
+32 2 642 23 24

Hugo Tabouret
Technical Affairs Manager
hugo.tabouret@unife.org
+32 2 626 12 68

Luca Biggiogera
Technical Affairs Manager
luca.biggiogera@unife.org
+32 2 626 12 69

Rachid Irbah
IRIS General Manager
rachid.irbah@unife.org
+32 2 643 70 86

Anne-Emmanuelle Baudrier
IRIS Technical Leader
anne-emmanuelle.baudrier@unife.org
+32 2 642 23 26

Ursula Tacke*
IRIS Senior Technical Support Manager
ursula.tacke@unife.org
+49 177 1 84 84 37

Jesica Seijo**
IRIS Development Manager
jesica.seijo@unife.org
+34 616 36 57 16

Anish Bawa
IRIS Technology / Communications Manager
anish.bawa@unife.org
+32 2 643 70 84

David Martínez***
IRIS Control Manager
david.martínez@unife.org
+34 616 147 893

Xiuluan Shi****
IRIS Witness / Calibration Auditor
xiuluan.shi@unife.org
+86 138 42 80 12 63

Victoria Enechojo John
IRIS Financial Controller
victoria.john@unife.org
+34 616 147 893

Alina Skidanova
IRIS Administrative Officer
alina.skidanova@unife.org
+32 2 431 04 61

*acting as a representative of QM370

** detached from CAF

*** acting as representative of FLYTREN S.L

**** acting as representative of DL-Ideal Consulting

UNISIG

Klaus Mindel*
UNISIG General Manager
klaus.mindel@unife.org
+49 1525 9207 452
*acting on behalf of Mindel Rail Consult

Victoria Campos
UNISIG Manager
victoria.campos@unife.org
+32 2 643 70 88

UNIFE wishes all the best to those who left the team in 2024

Philippe Citroën

Roxana Ribeiro

Marta García

Bernard Kaufmann

Francesco Frattolillo

Maria Romero

Ana Manuelito

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UNIFE - the European Rail Supply Industry Association

Avenue Louise 221
B-1050 Brussels
Tel: +32 2 626 12 60
www.unife.org | **general@unife.org**

X: @UNIFE | LinkedIn: The European Rail Supply Industry | YouTube: UNIFE_Rail

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THE EUROPEAN RAIL INDUSTRY

UNIFE - The European Rail Supply Industry Association

@UNIFE

general@unife.org

+32 2 626 12 60

UNIFE_Rail

Avenue Louise 221, Brussels, Belgium, B-1050