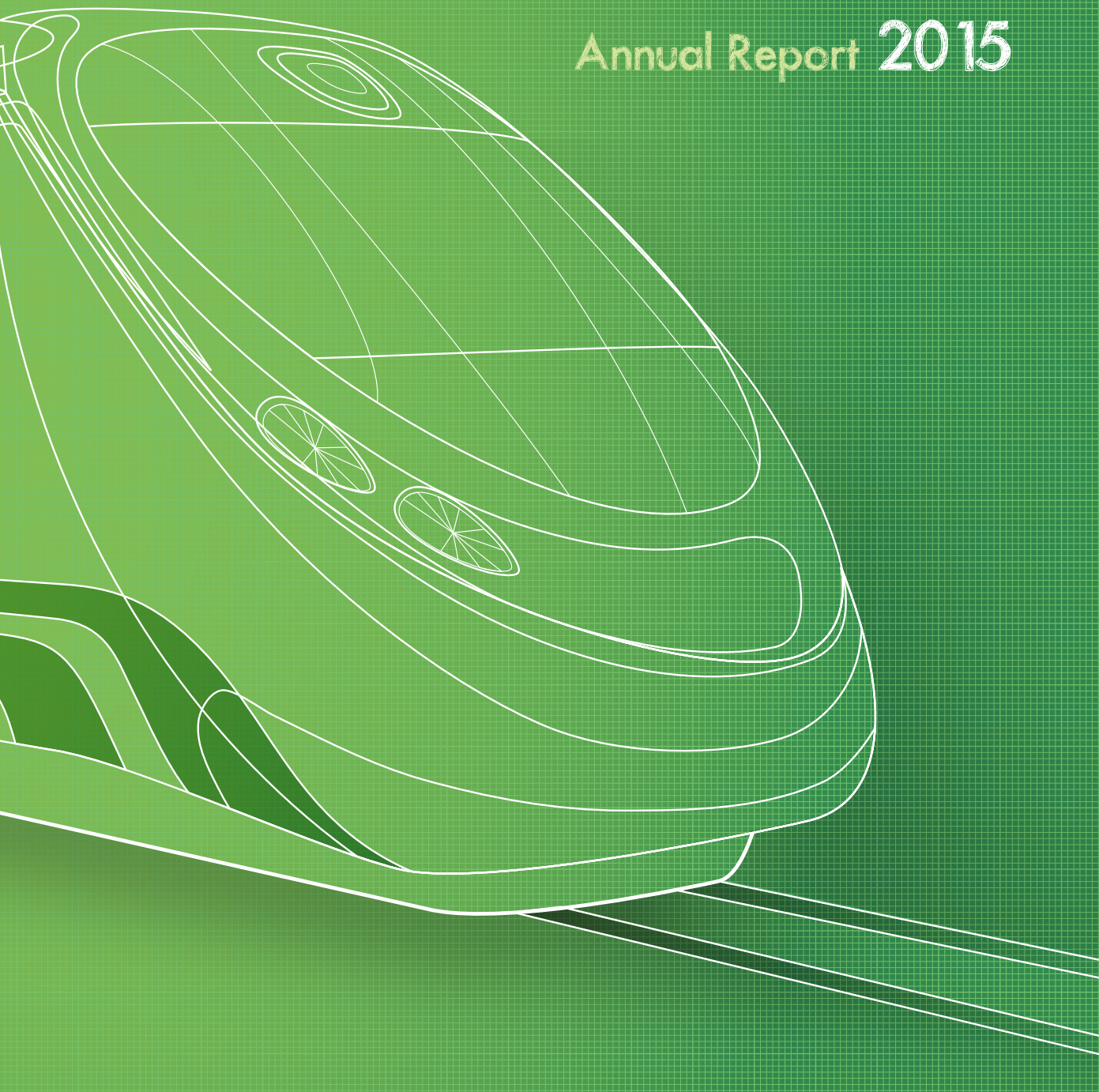
unife
THE EUROPEAN RAIL INDUSTRY

Annual Report 2015



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Message from the Director General

Dear UNIFE Members, Partners, and Supporters,

2015 was a dynamic year for UNIFE and the European rail industry as a whole—a year where we clearly felt the winds of change in our industry with major movements on the global competitive landscape as well as major policy developments at the EU level and globally. In late 2014, a new College of European Commissioners was confirmed and a new European Parliament had just begun its mandate. Across 2015, UNIFE had a number of productive meetings with Commissioners and their Directorates-General, the Latvian and Luxembourg Presidencies, as well as future Member State Presidencies, among many other stakeholders, on the many aspects of EU policy that affect our industry. UNIFE thoroughly communicated the needs and challenges of our industry and we have seen positive progress on our most pressing and important topics.

During the past year, we witnessed the merger of the two largest Chinese rail suppliers to form the CRRC—by far the most sizeable train builder in the world. This and other large and ambitious emerging competitors from abroad pose a significant threat to the European leadership of the global rail supply market. Throughout 2015, UNIFE has made these competitive threats abundantly clear to EU decision makers—as well as identifying all possible areas where the EU Institutions could help the European rail industry continue to thrive both domestically and internationally. Therefore we were very pleased with the decision of the European Parliament's Industry Committee (ITRE), at the suggestion of UNIFE, to prepare a ***Resolution on the competitiveness of European rail supply manufacturers*** which is currently being drafted under the leadership of MEP Martina Werner. In the autumn of 2015, UNIFE distributed our contribution to this Resolution which outlines suggestions on how the EU Institutions can help boost our industry's competitiveness by helping EU suppliers improve their offering, enhancing the business environment for EU suppliers both domestically and abroad, and stimulating the demand for rail products. This involves many aspects of EU policy making, including: R&D, transport, skills development, infrastructure financing, SME, and trade policy, among others. This Resolution, expected to be adopted in Plenary in the first half of 2016, shows considerable promise for the outlook of the European rail supply industry.

The Technical Pillar of Fourth Railway Package is a topic of critical concern to UNIFE as it aims to simplify the cumbersome and costly rolling stock authorisation processes across the many EU Member States. It is not yet adopted but the end is in sight as significant progress was made by the Latvian and Luxembourg Presidencies across 2015. As it stands, we have received indications from Transport Commissioner Bulc and from the upcoming Dutch presidency that the Technical Pillar will be fully adopted as early as March 2016.

The Shift2Rail Joint Undertaking (JU) has not been set up with the same speed with which the preparatory phase was finalised in 2014. We were pleased to see a successful launch of three of the Shift2Rail lighthouse projects where UNIFE and its members are heavily involved (Roll2Rail, In2Rail, and IT2Rail). The Associated Members of Shift2Rail and the first open calls were just announced in December 2015 and we know that several UNIFE members will also be part of Shift2Rail in addition to the six UNIFE companies that are Founding Members. Research policy and the coordination of rail research at the EU level continues to be a priority for us as we finalise the last FP7 rail projects and continue work on Horizon2020 projects. UNIFE will continue to be involved through our members in Shift2Rail as well as working to identify EU funding for both the JU and other research projects that aim to further develop the rail system.

UNIFE was also especially active across 2015 in its advocacy for EU investment in rail projects—particularly with regard to rail infrastructure, rolling stock and ERTMS deployment. For this reason, we closely followed and supported the Commission's TEN-T policy and Connecting Europe Facility (CEF) funding as well ensuring that the Commission's new European Fund for Strategic Investment (Juncker Plan)

provides opportunities for the rail industry without diverting existing European funds earmarked for rail.

The promotion of ERTMS as well as the push for its deployment has been an area of intense focus for UNIFE and we have been working closely with EC ERTMS Coordinator Karel Vinck and European Railway Agency (ERA) Executive Director Josef Doppelbauer on the rollout of the ERTMS Breakthrough Programme. In December, UNISIG successfully delivered the second Release of the specifications of ERTMS/ETCS Baseline 3 to ERA.

As previously indicated, fair access to global markets is crucial for the health of our industry which is of course export oriented and a global leader. This is why UNIFE has been particularly engaged with the Free Trade Agreements (FTA) that the EU is negotiating with Japan and the US (TTIP); as well as the EU-China Investment agreement. The EU-Japan FTA was an area of intense activity as this FTA should be concluded soon and UNIFE has been and remains at the forefront of these talks insisting that the Japanese truly open their rail market and deliver concrete outcomes for EU suppliers. TTIP with the US has been developing slowly in 2015 but is expected to be an area of increased attention in 2016. China continues to be a major focus as its considerable market seems to be slowly closing to EU suppliers while Chinese companies are now increasingly competing with EU suppliers on global markets.

UNIFE intently followed the COP21 Climate Change negotiations that took place in Paris in December. Through the Paris Process for Mobility and Climate as well as our continued participation in SLoCaT, UNIFE sought to raise the profile of rail transport and our members' products as one of the main solutions to the significant and rising transport CO_2 emissions. We were pleased to see such a landmark and ambitious agreement was reached in Paris; and our efforts will continue to make sure that governments put rail transport at the backbone of their sustainable transport initiatives.

UNIFE has mobilised its significant number of SME members within the UNIFE SME committee and has had meaningful exchanges with the EU institutions on SME policy as well as learning how they can better take advantage of EU policy and funding tools for SMEs.

IRIS has continued its expansion throughout the globe and exceeded their yearly target with nearly 1300 certificates issued to date. IRIS is looking to expand more internationally and is investigating formal collaboration with international standards entities such as ISO.

UNIFE witnessed a considerable jump in our membership numbers this year as we welcomed 14 new companies to the Association at the 2015 General Assembly in Bucharest. These companies add further geographic diversity as well as bolstering the representation of SMEs in the membership—which will further compound our industry's influence at the EU level.

As we bring 2015 to a close, I'd like to thank the outgoing UNIFE Chairman Lutz Bertling for the support he gave over the past two years to UNIFE activities. I'd like to welcome his successor, Laurent Troger, President of Bombardier Transportation.

I've highlighted a few of the main topics above, but this 2015 Annual Report is packed with details on our work across the year. I would like to thank the UNIFE staff for their dedication on all of these many topics and projects across the year. Furthermore, I would be remiss if I didn't express my sincere thanks to our members for their dedicated work and support of our efforts. I am confident that with your continued support, 2016 will be an equally outstanding year and we look forward to working with you on the many opportunities and challenges ahead.

Best regards,

Philippe Citroën,
UNIFE Director General

UNIFE IN 2015

01

A UNIFE Mission

Promoting Rail Market Growth for Sustainable Mobility

The four priorities to achieve our mission:

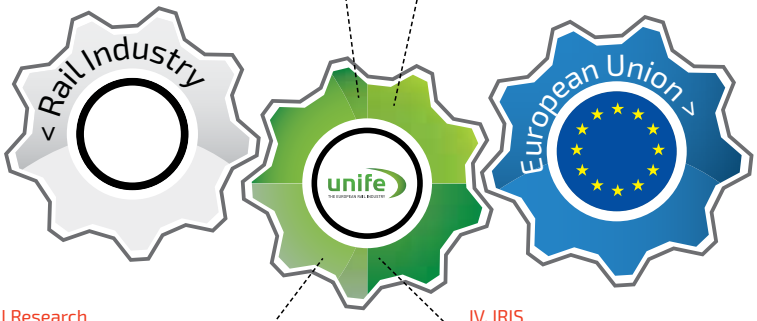
- Promoting European policies favourable to rail
- Shaping an interoperable and efficient European railway system
- Ensuring European rail supply industry leadership through advanced research, innovation and quality
- Providing UNIFE members with strategic and operational knowledge

I. EU Standardisation & Harmonisation

- Collaborating and liaising with the European Railway Agency and other rail stakeholders in defining rail regulations (including TSIs)
- Supplying expertise for European and International Standardisation Bodies (e.g. CEN-CENELEC)
- Promoting an interoperable Single European Rail Area

II. Public Affairs

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



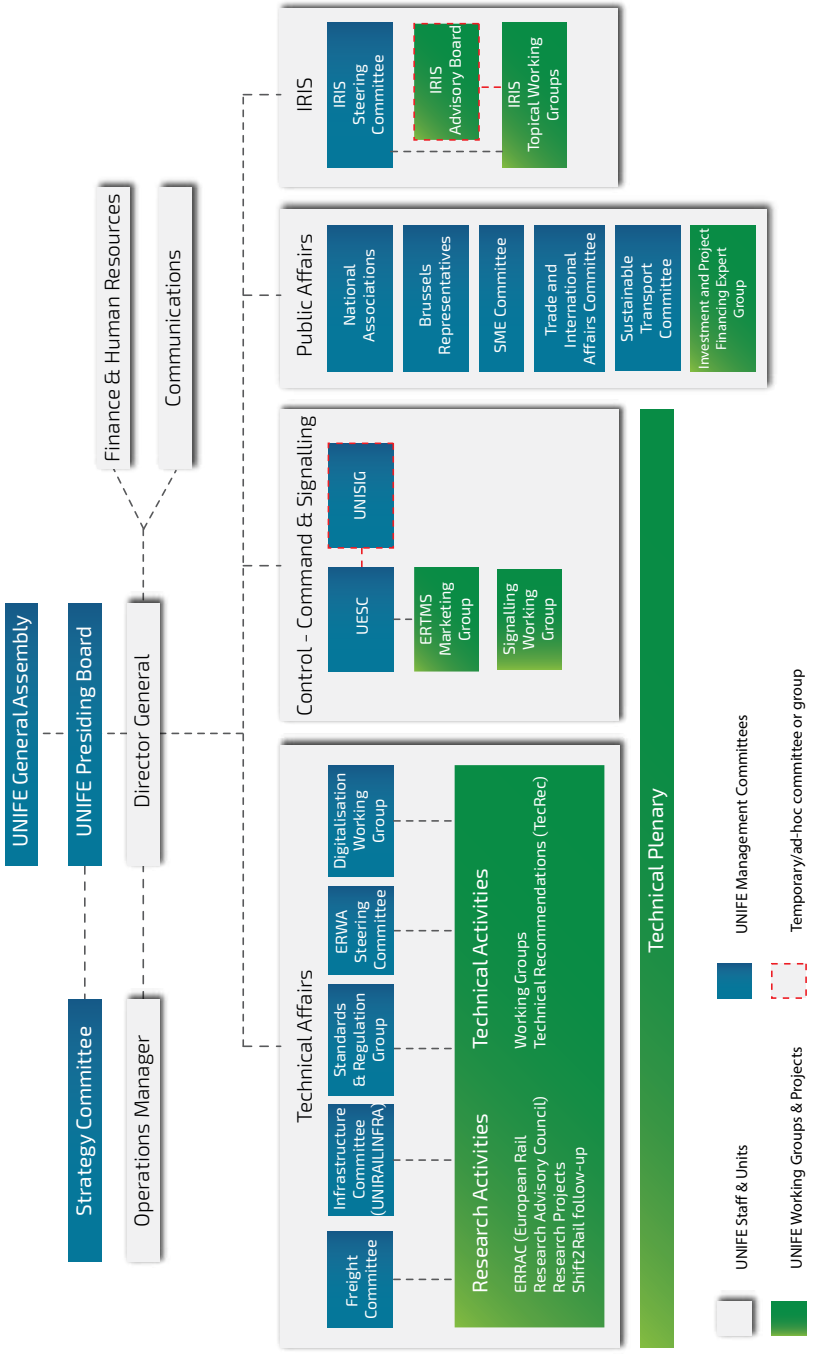
III. European Rail Research

- Coordinating EU-funded research projects
- Active role in ERRAC - the European Rail Research Advisory Council
- Shaping the future of rail research & innovation in Europe
- Follow-up Shift2Rail activities

IV. IRIS

- The globally recognised standard for business and quality management in the rail sector
- Enables efficient business processes and leads to substantial quality improvements and cost reduction throughout the supply-chain
- Currently over 1000 IRIS certificates issued worldwide

B UNIFE Structure



C Committees and Working Groups

The UNIFE Presiding Board is the highest UNIFE Committee and is accountable for the management of the association. It takes any measure and action required to achieve the objectives and general policies of the association. It submits the admission of new Full and Associated members to the General Assembly for ratification. The Presiding Board is composed of 9 members elected by the General Assembly for three years on the proposal of the retiring Board. As of January 2015, a seat has been assigned to the Chairman of the newly created UNIFE SME Committee.

The UNIFE Strategy Committee is the highest UNIFE body after the Presiding Board. It steers UNIFE activities, provides expertise and advises UNIFE management on strategic and political issues and advises the agenda of the Presiding Board. The members of this committee are high-level managers from the most prominent UNIFE Members.

The UNIFE Technical Plenary covers in a balanced way all EU research, regulation and standardisation matters. In addition to exchanging information on the different national perspectives, this committee enables UNIFE members to have a better understanding of the ongoing EU research, regulation and standardisation issues, their background and implications for the industry all over Europe and beyond. The Technical Plenary gives input to be considered by the other UNIFE technical committees (SRG, UNIRAILINFRA, ERWA, etc.) and is the interface to UNISIG regarding research, standardisation and regulation topics.

The Standards and Regulation Group (SRG) steers UNIFE's technical activities in the fields of the European regulatory framework (Railway Directives, TSIs, and other regulations applicable to the railway system). The SRG also manages rail standardisation initiatives and assesses the impact of UNIFE research projects on the standardisation and regulation activities. The SRG is composed of technical directors from the main UNIFE system integrators and subsystem suppliers.

The Freight Committee gathers companies active in the rail freight business and aims at strengthening the position of the industry in the policy framework of the EU. The committee provides its members with information and support on EU funding opportunities for their R&I projects, EU policies dedicated to rail freight, as well as the opportunity to lobby on EU rail freight issues and strengthen the discussion on ongoing and upcoming TSIs/Standards.

The UNIFE Infrastructure Committee (UNIRAILINFRA) brings together suppliers, contractors, and integrators active in the fields of engineering, production, installation, etc. The committee provides a platform for consensus building on infrastructure and energy topics at a pre-competitive stage, aiming at promoting investment and innovation in the railway infrastructure sector. Within this context, the purpose of the UNIRAILINFRA Committee is to discuss and promote the development of the rail infrastructure and energy sector.

The ERWA Steering Committee aims at promoting usage benefits, life cycle cost improvement and standardization of railway wheels and wheelsets. The committee is composed of the CEOs of the European wheels and wheelsets manufacturers. Two additional committees support it: the ERWA Development Committee dealing with political issues, market strategy and communications; and the ERWA Technical Committee dealing with standardization, regulation and research.

The UNIFE Digitalisation Working Group brings together UNIFE member companies providing solutions for digital and intelligent mobility (e.g. information and communication technologies…). This working group is in charge of monitoring EU discussion on the digital evolution applied to the railways (e.g. Rolling Stock, Infrastructure, Signalling, Passenger/Freight customer information).

The UNIFE ETCS Steering Committee (UESC) is in charge of coordinating UNIFE activities in the field of ERTMS from a strategic and political perspective. It is composed of high-level representatives of ERTMS suppliers.

The UNIFE ERTMS Marketing Group (UEMG) is in charge of coordinating marketing activities related to ERTMS, in particular deployment statistics, events, common publications and the ERTMS website.

The Signalling Working Group provides expertise in the field of signalling to UNIFE. It is a platform for consensus building on signalling-related issues, aiming to promote investment and innovation in the railway signalling sector. It plays an advisory role to UNIFE's technical and political activities impacting signalling. The committee is composed of representatives from the UNIFE membership active in signalling.

The UNIFE National Associations Committee is made up of 15 National Associations representing more than 1,000 large and medium-sized rail supply companies from all over Europe. As associated members of UNIFE, they engage in an important exchange, addressing UNIFE positions nationally while bringing national issues to the European level. The committee is composed of the directors of 15 National Associations from 14 different countries.

The Brussels Representatives Working Group aims to provide a platform for idea exchange on EU policy dossiers, reflecting on lobbying strategies and identifying potential synergies between UNIFE and EU representatives of the member companies. The group is composed of the EU representatives of UNIFE members in Brussels.

The SME Committee brings together the small and medium-sized companies of UNIFE. The objective of this committee is to provide the SMEs of our sector with information on EU policies and EU funds dedicated to SMEs, support them in accessing these EU funds and facilitate a direct and fruitful exchange between the rail-supply SMEs and the EU Institutions.

The UNIFE Trade & International Affairs Committee (TIAC) is in charge of monitoring EU trade negotiations with important stakes for the European rail industry, and coordinating UNIFE's positions in this respect. The TIAC is also a platform of exchange and information dissemination on bilateral cooperation activities undertaken by UNIFE on international markets.

The UNIFE Sustainable Transport Committee (STC) is the platform for exchanging and defining common positions on environmental sustainability topics. The STC provides early information and outreach actions on EU policy changes to UNIFE members, and also focuses on the communication of environmental performance of products and growing stakeholder demands with respect to more eco-efficient products and service solutions. The STC is supported by several Topical Groups, which provide the technical content on the main dossiers and regularly report to the STC.

The Investment and Project Financing Expert Group brings together high-level executives responsible for the long-term financing of infrastructure and industrial projects (including PPPs) and in charge of their companies' relationships with multilateral development banks (such as the European Investment Bank and the European Bank for Reconstruction and Development).

The IRIS Steering Committee steers the activities relevant to the promotion and development of the IRIS standard, the globally recognised business management system of the rail sector. The committee is composed of high level representatives of System Integrators and Equipment Manufacturers from UNIFE member companies.

The Communications Committee steers the UNIFE Communication Strategy. It is composed of the communications directors from UNIFE member companies.

UNIFE Technical Working Groups	
Authorisation and Cross Acceptance	Infrastructure
Aerodynamics	Life Cycle Assessment (LCA)
Brakes	Noise
Cabin	Persons with Reduced Mobility (PRM)
Chemical Risks	Railway Dynamics
Crash Safety	Rolling Stock
Diesel	Safety Assurance
Electromagnetic Compatibility (EMC)	Signalling
Energy	Telematic Application for Passengers & Freight (TAP & TAF)
Energy Efficiency	Train Control Management System (TCMS)
Fire Safety (SRT)	Wagon (WAG)

UNIFE Presiding Board 2015

The present UNIFE Presiding Board was elected at the 2014 UNIFE General Assembly for a three-year term (2014-2017).

Lutz Bertling*
Chaiman of the Presiding Board

President,
Bombardier Transportation

Henri Poupart-Lafarge
Member of the Presiding Board

President,
Alstom

Dieter Wilhelm
Member of the Presiding Board

Member of the Executive Board, **Knorr-Bremse AG**

Stefano Siragusa
Member of the Presiding Board

CEO,
Ansaldo STS

Miroslav Fukan
Member of the Presiding Board

Executive Director,
Oltis Group (representing the UNIFE SME Committee)

John Moore
Member of the Presiding Board

CEO,
Balfour Beatty Rail

Jochen Eickholt
Member of the Presiding Board

CEO,
Siemens Mobility Division

Stephane Rambaud-Measson
Member of the Presiding Board

Chairman and CEO,
Faiveley Transport

Jean-Pierre Forestier
Member of the Presiding Board

Senior Vice-President in charge of Transportation Systems, **Thales**

*Lutz Bertling left Bombardier Transportation as of 9 December 2015.

EUROPEAN AFFAIRS

02

A. Preparation of the Presidencies of the Council
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C. Fourth Railway Package
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G. Digitalisation
H. Sustainable Freight Transport
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J. EU SME policy
K. 2030 Framework for Climate & Energy
L. NRMM
M. Platform for Electro-Mobility
N. Rail Forum Europe

A Preparation of the Presidencies of the Council

The Presidency of the Council of the European Union rotates among the Member States of the EU every six months. The Presidency's function is essential as the responsible Member State not only chairs the meetings of the Council but also determines the political agenda and sets the work programme for the semester as well as facilitating dialogue at Council meetings and with other EU institutions. For this reason, UNIFE makes a great effort to meet future EU Presidencies well in advance of the start of their mandate to convey UNIFE's messages for their political agenda. In 2015, Latvia and Luxembourg, respectively, held the Presidency of the EU Council. UNIFE Director General, therefore, met with high-representatives of the Latvian Government on several occasions, including Transport Minister Anrijs Matīss during a visit in Riga in February. Similarly, UNIFE also met with the Luxembourg Transport Minister François Bausch in November 2014 and later in March 2015. As it is extremely important to meet Member States' Ministries as early as possible to contribute to their future work programmes. UNIFE has already met high-representatives of the three upcoming Presidencies of the Council: the Netherlands, Slovakia and Malta, in November and December 2015. Notably, Philippe Citroën has already met with Mark Frequin (Director General for Transport, Dutch Ministry for Infrastructure), Rastislav Chovanec (State Secretary, Slovak Ministry of Economy), and Joe Mizzi (Maltese Minister for Transport).

As it is an important and useful tool to convey the Association's messages, UNIFE also published and widely circulated two UNIFE Briefings for the Latvian and Luxembourg Presidencies and is in the process of publishing a briefing for the Dutch Presidency for early January 2016.

Philippe Citroën (UNIFE Director General) meeting Anrijs Matīss (Latvian Minister of Transport)

B Industrial Policy

The European rail supply industry is a strategic economic sector for the EU. It is an innovative and export-oriented manufacturing industry worth some €47 billion annually and employing approximately 400.000 people in Europe. As shown in the 2014 World Rail Market Study, rail markets will continue to grow on all continents and there are therefore great business opportunities to seize for European suppliers. However, European rail supply companies face a critical challenge to their global market leadership with industrial competition from Asia, and especially China, becoming increasingly fierce.

In the context of this market dynamism and increased global competition, UNIFE particularly welcomed the decision of the European Parliament's Industry Committee (ITRE), at the initiative of Rapporteur MEP Martina Werner, to prepare and adopt in 2016 an official *Resolution on the competitiveness of European rail supply manufacturers*. This is the outcome of an important awareness campaign led by UNIFE in early 2015 to present the strengths and challenges of the European rail manufacturing industry to the Members of the European Parliament's ITRE Committee.

This future Parliamentary Resolution is an excellent occasion for the industry to get more visibility and secure a prominent place on the political agenda of the European Institutions. With this goal in mind, UNIFE organised a major event in Brussels on 13 October –together with Rapporteur MEP Martina Werner– during which UNIFE Chairman, Lutz Bertling, outlined the main pillars for an official EU coordinated industrial strategy for boosting the competitiveness of the European rail supply industry. Furthermore, UNIFE Director General Philippe Citroën participated on 30 November in an official exchange of experts organised by the ITRE Committee and entirely dedicated to the industrial competitiveness of our sector where the resolution received vocal support from MEPs across all parties.

Content-wise, this Resolution will be a unique opportunity to discuss and define at the European level, for the first time ever, a European industrial strategy aimed at safeguarding the world leadership of the European rail industry. In this respect, UNIFE defined and circulated at the end of 2015 a comprehensive *Initial Contribution* document which advocates for EU measures targeting three

Rapporteur MEP Martina Werner delivering the speech during the Parliamentary evening organised by UNIFE

European Parliament's ITRE Committee Exchange with Experts on Resolution on the Competitiveness of European rail supply manufacturers

inseparable pillars. The first consideration of an EU industrial strategy should indeed concern how the EU could help "strengthen the offer" by enabling European suppliers to continue to produce the best rail products on the world market.

Secondly, it is essential to work on improving the business environment in the EU and internationally to ensure that European suppliers can produce and sell their products in fair market conditions. Still, the best products and a satisfactory business environment are meaningless if there is no demand for rail products. Therefore, stimulating demand in the EU and globally is the critical third pillar of the strategy.

C Fourth Railway Package

Representatives of the European Parliament, European Commission, and Council after successful agreement on Fourth Railway Package Technical Pillar Trialogues (17 June)

2015 marked significant progress towards the formal adoption of the Fourth Railway Package and, in particular, its Technical Pillar, a top priority for the European rail industry.

The Technical Pillar of the Fourth Railway Package is extremely important as it addresses one of the heaviest burdens on the rail sector: the complex and expensive authorisation procedures in Europe that currently immobilise assets worth €1.2 billion. By addressing this problem the Technical Pillar, once implemented, will help create the strong home market that the European rail manufacturers need to continue thrive globally.

Therefore, UNIFE enthusiastically welcomed the final agreement reached during the trilogue on 17 June, thanks to the much-appreciated efforts of the Latvian Presidency of the Council, the European Parliament – with its TRAN Committee Chair Michael Cramer – and the European Commission. It is also due to UNIFE's role as a facilitator that the three EU Institutions agreed on a legislative framework that will create a streamlined and efficient process for vehicle authorisation in Europe and enhance the role of the European Railway Agency (ERA), making it a one-stop-shop for vehicle authorisation and safety certification.

The Transport Council meeting of 8 October set another very important milestone towards the adoption of the Fourth Railway Package, as the Transport Ministers of the 28 EU Member States unanimously agreed a General Approach on the Political Pillar, which, as of now, is still attached to the already agreed Technical Pillar. Member States agreed on proposals to liberalise domestic rail passenger services and strengthen the governance of railway infrastructure. The Council is currently engaged in trilogue discussions with the European Parliament and the Commission in order to finalise and approve them during the first half of 2016.

The Technical Pillar of the Fourth Railway Package is a great opportunity for the railway industry. Considering the 3-year transposition period, from 2019 onwards, railway products, and in particular rolling stock, will have a Europe-wide authorisation delivered by ERA. This will shorten the time to market and make the industry more competitive, as well as providing all rail stakeholders with greater planning certainty.

In order to accompany and monitor the preparatory phase of the Technical Pillar and drive the preparatory work, a Task Force on the implementation of the Technical Pillar of the Fourth Railway Package was established by the Commission. This Task Force is composed by ERA, the Commission, delegations from Member States and sector representatives, including UNIFE. Its first meeting took place on 8 October. The aim of this task force is to have a fully operational ERA delivering vehicle authorisation and single safety certification by January 2019, and its ultimate objective is to commit at the Member State level for an acceleration path towards the new regime with all stakeholders.

In November, UNIFE was invited by the Luxembourg Presidency of the EU and ERA to speak at their conference on "Moving towards the Single European Railway Area", entirely focussed on the upcoming implementation of the Technical Pillar. The event featured the participation of a number of high-level speakers, including Transport Commissioner Bulc who mentioned March 2016 as the likely date of formal adoption of the Fourth Railway Package as a whole.

Given the utmost importance of the Technical Pillar for the entire rail sector, UNIFE welcomes the decision of the Transport Council of 10 December to allow the Presidency of the Council to forward the agreed texts to the European Parliament so that the Technical Pillar can be finally and officially adopted during the first semester of 2016.

D EU Investment Policy and Financing for Rail

UNIFE has been extremely active throughout 2015 to help boost investments in rail projects – including at urban level – be it for infrastructure, rolling stock or signalling (especially ERTMS deployment).

TEN-T Policy and Connecting Europe Facility (CEF)

The cornerstone of the European transport infrastructure policy is the TEN-T Guidelines and the Connecting Europe Facility (CEF) Regulation. The TEN-T Guidelines define the geographic scope and technical requirements for the future European transport network until 2050, with the aim to replace by 2030 the patchwork of priority projects with a single multimodal European *core network*. By 2050, the broader *comprehensive network* should be developed as "ground layer" to ensure accessibility and common standards.

The TEN-T Policy is supported by a significant funding mechanism – the €24.02 billion Connecting Europe Facility (the funding has been increased 3 times compared to 2007-2013 period). The vast majority of CEF funding will be for major cross-border projects and projects addressing main bottlenecks on the 9 TEN-T multimodal Core Network Corridors. It will also be a key funding instrument to help deploy the European Rail Traffic Management System (ERTMS) throughout Europe. From this budget, €11.3 billion is reserved for projects in Member States eligible for the Cohesion Fund.

In this context UNIFE fully supports the role of the European Coordinators appointed for each of the nine Core Network Corridors. In particular, UNIFE and its member companies back the activities of Karel Vinck, horizontal Coordinator for the deployment of ERTMS.

The cost for implementing the first financing phase for the TEN-T core network, for the period 2014–2020, is estimated at €250 billion. The huge needs have been exemplified by the extremely high amount of projects submitted for the 2014 CEF Transport Calls which received more than 700 proposals with a total requested funding amounting to €36 billion. The Commission announced in June 2015 that 276 transport projects would be supported with a total funding of €13.1 billion (which include 112 rail projects with €9.83 billion in funding).

On 5 November 2015, the European Commission launched the second CEF Transport Call with a deadline of 16 February 2016. The total funding available within this call is €7.5 billion including €6.5 billion reserved for Cohesion Member States. The outcome of the calls will be published by summer 2016.

In this context, Philippe Citroën – during numerous meetings with Transport Ministers and key decision-makers in capitals across Europe (Austria, Belgium, Bulgaria, Czech Republic, Latvia, the Netherlands Romania, Slovakia, Slovenia and Spain) – urged Member States to submit well-prepared rail projects. UNIFE has also held frequent meetings with the Commission and the Innovation and Networks Executive Agency (INEA). UNIFE also participated in the TEN-T Days in Riga on 22-23 June.

Cohesion Policy and Rail Investments in Central and Eastern Europe

Through the Cohesion Fund and the European Regional Development Fund (ERDF), the EU makes several billion euros available for investment in transport projects. 2015 was a crucial year due to the adoption of the Member States' Operational Programmes for the 2014-2020 programming period. Therefore, UNIFE has been actively advocating for a greater share of funding to be allocated for rail projects in all eligible Member States. This is even more important since several Member States have sometimes been tempted to shift their EU Cohesion Funds initially planned for rail projects to other modes of transport over the 2007-2013 programming period.

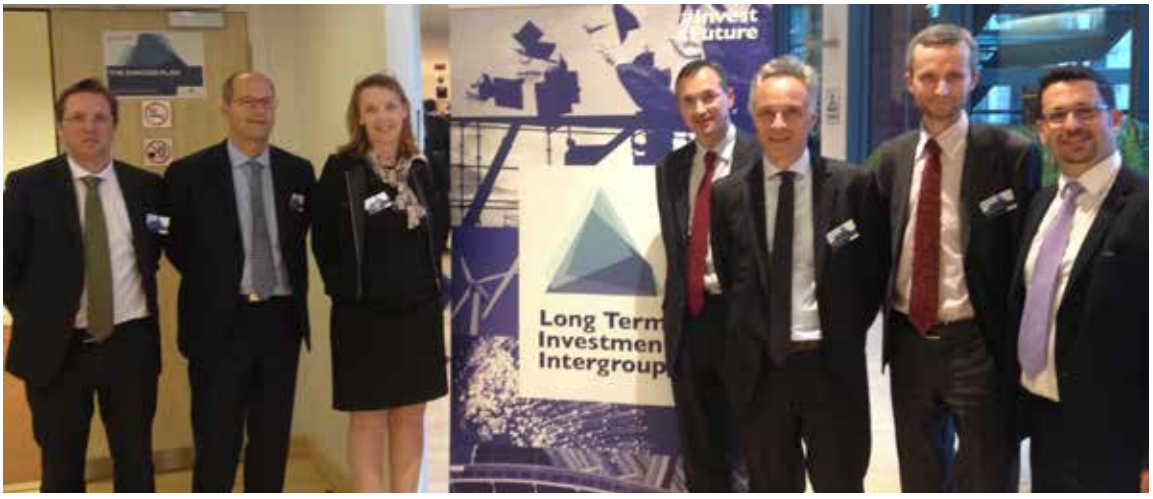
Unfortunately, some of Central and Eastern European Member States also find it challenging to make use of the funds which would enable them to rebuild their railway infrastructure. By facilitating cooperation and exchange of information between all rail stakeholders and through meetings with decision makers in many CEE Member States (Bulgaria, Czech Republic, Hungary, Latvia, Poland, Romania, Slovenia), UNIFE continues to promote efficient absorption of EU Funds available for rail – which will remain a critical task for railway companies and public authorities.

Mobilising Private Investment for Rail

While public grants will remain of vital importance to financing rail projects, UNIFE has cooperated closely with the European Institutions and the European Investment Bank (EIB) to ensure that EU initiatives aimed at mobilising private investment for strategic projects also benefit the rail sector.

The key instrument in this context will be the European Fund for Strategic Investments (EFSI or the so-called "Juncker Investment Plan") which aims to mobilise about €315 billion of additional investments across the next three years. While being called a fund, the EFSI is in practice a €16 billion guarantee to the EIB from the EU budget, complemented by €5 billion from the EIB's own capital, which helps the EIB to increase its support to higher risk projects. Since the main reason for creating the EFSI was the huge investment gap in the EU economy as a whole despite the abundant liquidity, the primary goal of the EFSI is to have a quick impact in terms of new investment. In this context, the projects supported under the EFSI will have to be commercially sound, economically and technically viable, contributing to EU objectives, mature enough to be bankable, and without any sectoral or geographical pre-allocations. As a consequence, rail projects will have to compete with projects from all other sectors.

Given the uncertain benefits for the rail sector, UNIFE was adamant in defending the Connecting Europe Facility (CEF) Transport grants, because initially €2.7 billion in cuts (from the total of €26.2 billion) were foreseen in order to create the aforementioned €16 billion guarantee from the EU budget. Together with other transport sector associations, UNIFE carried out an intensive advocacy campaign to oppose these cuts, stressing that the rail sector would be disproportionately affected. In this context, the compromise reached by the European Parliament, the Council and the Commission limits the cuts to €2.2 billion with additional €500 million being transferred from CEF Transport financial instruments to grants.



UNIFE Working Group on Investment and Project Financing at the Inaugural conference of the EP's Long Term Investment and Reindustrialisation Intergroup

UNIFE was also satisfied that the legislative text on the EFSI includes the "development of transport infrastructures, equipment and innovative technologies for transport" as one of the 7 main objectives of the EFSI. It also foresees a possibility that the EFSI could be used for "projects and priorities eligible under CEF Regulation and TEN-T Guidelines" (cf. 9 Core Network Corridors and ERTMS), as well as "smart and sustainable urban mobility projects" (Regulation (EU) 2015/1017 of 25 June 2015).

UNIFE welcomed the creation of the new European Investment Advisory Hub and is looking forward to the creation of the European Investment Project Portal (to be launched by early 2016), a publicly available web portal where project promoters seeking external financing will have the opportunity to showcase their projects to potential investors.

The EFSI and other financial schemes combining public and private financing (i.e. public-private partnerships) have been at the heart of the discussions within the new UNIFE Investment and Project Financing Expert Group (launched early 2015) – especially during the Expert Group's meetings with the European Commission and the European Investment Bank. The EFSI was also the topic of a Rail Forum Europe event co-organised by UNIFE in October.

UNIFE has also been closely following the legislative work on the EU Regulation on private European Long-Term Investment Funds (ELTIFs) and the continuous work on Capital Markets Union (including long-term project financing).

Last but not least, in 2015 UNIFE became one of the official *Partners* of the newly-established European Parliament's *Long Term Investment Intergroup*.

Stocktaking review of the 2011 Transport White Paper

The Transport White Paper, published by the European Commission in 2011, outlined the vision for EU transport policy for the next ten years including perspectives up to 2050. The document rightly emphasised the role of rail in meeting EU targets for the decarbonisation of the transport sector and the establishment of a single European transport area.

UNIFE welcomed the stocktaking review process launched by the Commission at the end of 2014 as a useful opportunity to evaluate the progress made towards the ambitious objectives set in 2011 and to identify corrective actions for issues that have not been properly addressed thus far. In this context, UNIFE highlighted the need to keep a high level of ambition by confirming the target of 60% reduction in transport greenhouse gas (GHG) emissions by 2050 as well as the modal shift objectives and put forward a number of key priorities for the European rail industry:

- The objective of the mid-term review should not be to re-discuss the targets and policy priorities set in 2011, but to increase and streamline the efforts to meet them.

- Initiatives aimed at re-launching EU competitiveness should take into account the White Paper objectives and, in particular, of rail's environmental credentials.

European Economic and Social Committee hearing "White Paper on Transport: where do we stand?"

- R&D initiatives should aim at increasing the attractiveness of rail transport and at the same time support the leading role of the European rail industry in light of increasing competition.

- The lack of level playing field in the global rail market is an ongoing concern and should play a key role in ongoing and future EU trade negotiations.

EC White Paper mid-term review Rapporteur MEP Wim van de Camp

UNIFE provided regular feedback to the Commission, including a dedicated Position Paper, a response to a public consultation and active participation in the discussions in the main Brussels fora. UNIFE also conveyed its key messages to the European Parliament in the framework of the own-initiative Report on the mid-term review of the 2011 Transport White Paper, adopted on 9 September under the coordination of Rapporteur MEP Wim van de Camp, and to the European Economic and Social Committee, whose official opinion was adopted on 23 April.

The Commission should finalise its stocktaking exercise at the beginning of 2016 and publish an implementation report that assesses the progress made until now.

F Urban mobility

Urbanisation of the world's population has been a major trend of the past decades that is expected to continue. As a result, UNIFE revamped its activities on urban transport at the EU level over the course of 2015, taking the opportunity provided by the European Parliament's own initiative Report on sustainable urban mobility, adopted on 2 December under the coordination of Rapporteur MEP Karima Delli. In particular, UNIFE contributed to the Parliamentary debates highlighting the role that rail solutions can play to make urban transport more sustainable as well as the need to invest more in rail-bound solutions in urban areas. Moreover, in 2015 UNIFE reinforced its partnership with like-minded associations, such as POLIS and UITP.

UNIFE considers that a modal shift from private vehicles to public transport is the most effective way to reach the goal of more sustainable urban mobility in European cities, and thus contribute to meeting the 2011 Transport White Paper CO_2 emission reduction targets of 60% by 2050 compared to 1990. In particular, rail is by far the largest provider of electric mobility for both urban and interurban transport. As a consequence, rail-bound solutions should be the starting point for any future EU policies aimed at promoting electric mobility.

The European rail supply industry provides solutions for urban transport with low, or even zero emissions of CO_2 and other pollutant gases. Light rail, metros and commuter trains are the least polluting public transport means in urban areas. Moreover, the rail supply industry is committed to improving the energy-efficiency of its products through different technologies and methods, such as hybrid technologies, weight reduction, regenerative braking, energy storage, new traction technologies, optimised operational parameters or alternative green power supply solutions.

UNIFE's main message is that rail should play a central role in future EU policies on sustainable urban mobility as it is a key part of the solution to current issues, such as pollution, GHG emissions and congestion. In order to boost this process towards sustainable mobility, adequate financing, at both the EU and Member State level, should be ensured for rail-bound projects and R&D activities in light of their high economic, environmental and social impacts.

UNIFE hopes that the European Commission will follow-up on the Parliament's own initiative Report on sustainable urban mobility adopted at the end of 2015 by proposing initiatives aimed at promoting and financing sustainable transport solutions. This should also be pursued in the framework of existing financial tools such as the Connecting Europe Facility (CEF) and the European Fund for Strategic Investments (EFSI). As investments in urban transport are essential, UNIFE calls on the Commission to increase or at least maintain the current level of public investments in sustainable urban transport and on local and national authorities to potentially explore alternative sources of financing for rail-bound urban transport projects.

Digitalisation

The Digital Single Market is one of the 10 main political priorities of the European Commission, as stated in the EC Communication "A Digital Single Market Strategy for Europe", published in May 2015. Moreover, digitalisation is one of the four "core content drivers" put forward by Violeta Bulc, European Commissioner for Transport, who has made the digitalisation of transport one of the top priorities of her mandate. In this respect, the Commission is now working on establishing a "Digital Single European Railway Area" (cf. discussion document of 31/07/2015).

As a representative of European suppliers of signalling solutions (ERTMS/ETCS), communication solutions and digital applications for passengers and freight, UNIFE has been actively participating in the meetings organised by the Commission on rail digitalisation. UNIFE was also selected to join the *Digital Transport and Logistics Forum* launched by Commissioner Bulc in July, where UNIFE is engaged with the Commission in the review of the "Digital Single European Railway Area" document. In this respect, UNIFE expressed its point of view during bilateral meetings with the European Commission and attended dedicated conferences such as the 11th Rail Forum in Florence: "Digital SERA, how to get there?". The primary priority for UNIFE on this topic is to speed up the implementation of already existing digital technologies, such as ERTMS.

Additionally, UNIFE is also engaged in dialogue with operators, and looking for possible collaboration with them in the near future on the digital railway topic.

Finally, considering the highly strategic importance of this activity, UNIFE decided to create a "Digitalisation Platform" that will be launched at the beginning of 2016. The scope of the platform is to coordinate and manage the different activities linked with the Digitalisation concept:

- Political activities with the European Institutions and the Member States (e.g. Digital Single European Railway Area, DTLS platform (Datagram Transport Layer Security), Intelligent Transport Systems (ITS))
- Technical activities (Standardization & Regulation)
- Research activities (e.g. Shift2Rail, H2020 – ITS, ICT, Security)

The Digitalisation Platform will be a forum of exchange and information where UNIFE members will report and exchange on their activities linked to digitalisation. All UNIFE members have been invited to join this platform.

H Sustainable Freight Transport

In September 2015, the European Commission proposed a New Agenda for Rail Freight to cope with the challenge of shifting 30% of long-distance road freight to more energy-efficient transport modes by 2030 and 50% by 2050 posed by the Transport White Paper. In fact, although rail's freight market share has been relatively stable for several years, it is not growing and in some Member States it is declining.

The agenda focuses on a few specific challenges, including:

- Improvement of reliability and punctuality through higher interoperability and better co-operation across borders in the field of traffic and infrastructure managers;
- Strengthening of cost competitiveness through higher productivity and more efficient train operations;
- New added-value service features, supported by deployment of innovative technology, allowing rail to (re-)enter new / lost market segments;
- Securing societal and political acceptance and support of rail freight, such as in the area of rail noise.

Decisive support for the agendas goals will come from the newly established Shift2Rail Joint Undertaking. Shift2Rail's Innovation Programme 5 (IP5) should be the backbone of the strategy to achieve a more sustainable and attractive European rail freight.

UNIFE actively supported the Commission's efforts in this regard through the recently created UNIFE Freight Committee, which is currently developing its own freight agenda by highlighting the main challenges and objectives foreseen by the European rail industry. Several of the Freight Committee members presented the rail industry's point of view during the 2015 edition of the European Rail Freight Day which took place in Vienna on 4 December 2015. The event was opened by the new Director General of DG MOVE, Henrik Hololei, and Philippe Citroën also moderated the roundtable on innovation in freight rail technology. Similar to 2014, UNIFE and its Freight Committee were instrumental in helping the Commission organise this important event on rail freight.

Henrik Hololei, Director-General, DG MOVE

I EU public procurement policy

In March 2012, the European Commission published its long-awaited proposal to promote a level playing field on international public procurement, which is of particular importance when it comes to the railway sector. Although very encouraging signals were sent by the European Parliament, discussions remained blocked in the Council. UNIFE still supports the international procurement instrument and awaits a revised proposal from the European Commission in this respect.

In parallel, UNIFE has undertaken activities in the wake of the modernisation of the EU public procurement framework. Indeed, public procurement accounts for a significant share of the EU economy (around 20% of EU GDP), and is crucial for UNIFE members. Three new Directives entered into force on 17 April 2014 (2014/24/EU; 2014/25/EU; 2014/23/EU), with their transposition into national law and practice set by 18 April 2016.

Among the important developments of this new framework, it is now specified that "contracting entities shall base the award of contracts on the most economically advantageous tender" (so-called MEAT principle) and that award criteria "shall be identified on the basis of the price or cost, using a cost-effectiveness approach, such as life-cycle costing". Throughout the year, UNIFE has strongly advocated the use and enforcement of the MEAT principle since outside of the mere purchase price, there are numerous other factors that directly or indirectly determine the total cost of ownership and life cycle cost. In particular, discussions with railway infrastructure managers (EIM) have been undertaken.

J EU SME policy

With the input of its SME Committee, UNIFE participated in the public consultation launched by the European Commission to revise the Small Business Act. In 2015, UNIFE disseminated its Position Paper during bilateral meetings with the Commission and Members of the European Parliament's Industry Committee, as well as through other channels. UNIFE is actively advocating for a business-friendly EU environment that will help the thousands of European rail-supply SMEs grow, innovate and export within and outside of the EU. Indeed, the vast majority of European rail-supply SMEs now must perform business outside their country of origin, and increasingly outside of the EU. Internationalisation is now a prerequisite for growth and even survival; but it can be challenging for an SME to succeed in foreign markets. UNIFE therefore advocates for an ambitious EU Trade agenda that is beneficial to European rail-supply SMEs as well as the development of EU instruments supporting SME internationalisation. Moreover, like SMEs in many other sectors, rail supply SMEs can face significant difficulties in obtaining the financing they need to grow and innovate. For example, many SMEs have experienced quantitative constraints on the credit supply side in the recent years. UNIFE consequently calls on the Commission to strengthen the promotion of new EU financial instruments dedicated to SME financing throughout the EU in the form of guarantee and equity facilities (be it through the COSME Programme, the Structural Funds or the new European Fund for Strategic Investments (EFSI)).

Members of the UNIFE SME Committee also had the opportunity to express their views, needs and challenges when they met in October with MEP Martina Werner, Rapporteur of the European Parliament's future Resolution on the Competitiveness of the rail supply manufacturers. Additionally, the Committee met with several representatives of the Commission and the European Executive Agency for SMEs (EASME) across 2015.

Furthermore, UNIFE accompanied SME Committee members to the EU-Latin America Business Summit on SMEs in June as well as to "Transport SME Innovation Day" organised by the Commission in November.

2030 Framework for Climate & Energy

In February 2015, the European Commission presented the 'Energy Union' package consisting of three Communications. One of them, entitled 'The Paris Protocol – A blueprint for tackling global climate change beyond 2020', focused on the EU contribution to the 21st UNFCCC Conference of Parties (COP21) which took place in Paris in December 2015. The Communication translated the decisions taken at the European Summit in October 2014 into the EU's proposed emissions reduction target (the so-called Intended Nationally Determined Contribution – INDC) for the new agreement. The EU's INDC is the commitment to reduce all CO_2 emissions by at least 40% in 2030 compared to 1990 levels.

Furthermore, the Communication 'A Framework Strategy for a Resilient Energy Union with a Forward-Looking Climate Change Policy' addressed five dimensions, including energy efficiency. In particular, the Commission stated its ambition to achieve "an energy-efficient, decarbonised transport sector" with measures to decarbonise the transport sector (focus on electrification and review of regulations setting emission performance standards for passenger cars and vans), internalise external costs (revision of the Eurovignette Directive), remove barriers to less greenhouse gas intensive modes of transport such as rail, or more transversal initiatives such as a legislative proposals on the Effort-Sharing Decision (for sectors not covered by the ETS such as transport).

With CER, UNIFE continued to convey the messages of the 2014 Position Paper encouraging EU Member States to consider a transport dimension for the post-2020 climate and energy policies. With new legislative proposals in the pipeline and the necessity to fully integrate transport in their scope, UNIFE will monitor the initiatives to ensure that the 2030 Framework for Climate and Energy Policies is ambitious enough with respect to CO_2 emissions reduction, especially in the transport sector.

L NRMM

In September 2014, the European Commission proposed measures to cut emissions of major air pollutants from engines in non-road mobile machinery and reduce the complexity of the legal framework for the sector. The proposal provides for more stringent emission limit values for internal combustion engines installed in non-road mobile machinery (NRMM) and aims to repeal an extremely complex directive comprising 15 Annexes (and amended 8 times since it was adopted in 1997).

Considering the difficulties faced by the rail industry due to the introduction of stage IIIB emission limits for railcars and especially for locomotives, UNIFE welcomed the Commission's proposal that takes into consideration the market characteristics of the rail sector (project-based feature of the rail sector, niche market for diesel engine manufacturers, etc.).

Throughout the year, the European Parliament (ENVI Committee) and the Council have defined their respective positions, which have taken into account UNIFE's messages on the exemption for contracts already in place at the time the new regulation enters into force or on the interchangeability of railcar engines (RLR) and locomotive engines (RLL). Even more importantly, transition periods and emission limits have not been changed by co-legislators. The European Parliament and the Council are now involved in trilogues in order to reach a final agreement on the text.

M Platform for Electro-Mobility

In 2013, an informal cooperation was launched between different associations and companies (CER, UNIFE, UITP, EURELECTRIC etc.) on the topic of electro-mobility, especially in the framework of the negotiations on the Clean Power for Transport package.

In 2015, the work of the Platform for Electro-Mobility was revived and formalised with operational rules and various work streams. There are now 13 members, and the representation of the rail sector within the platform has also grown since, on top of associations representing multimodal transport. UNIFE, CER, EIM and Alstom are full and active members.

The activities of the Platform for Electro-Mobility include joint inputs and outreach actions with respect to relevant EU policies (e.g. Energy Union and EU Energy and Climate Package), future research, development and demonstration of e-mobility within Horizon 2020, and EU institutional awareness for e-mobility benefits. Within the activity on EU policies, several working groups have been created, including one on 'Electric Rail & Rail Freight'. The working group held its first workshop in November 2015 and began drafting joint messages on how electrification of rail traffic and rail freight can significantly reduce GHG emissions and which support policies are needed.

Rail Forum Europe

Over the course of 2015, UNIFE continued to successfully manage the secretariat of Rail Forum Europe (RFE), the MEPs' platform dedicated to rail transport. Created in 2011 by a group of Members of the European Parliament with a genuine interest in rail, RFE plays an important role in bringing together all the stakeholders in the rail sector with EU decision-makers to formulate and discuss rail policy in Europe. Its role is very well perceived by stakeholders and decision-makers and RFE events are now a widely recognised rendezvous on the Brussels arena, providing a platform for fruitful exchanges on hot topics for the European rail community.

Following the European elections of May 2014 and the subsequent transitional period, in 2015 Rail Forum Europe relaunched its activities under the coordination of new Chairman MEP Michael Cramer and Vice-Chairs MEP Gesine Meissner and MEP Georges Bach.

In addition to the Chair and Vice-Chairs, the following Members of the European Parliament – active across various Parliamentary Committees – are currently full Members of RFE: Ines Ayala-Sender, Ismail Ertug, Jo Leinen, Dominique Riquet, Andreas Schwab, Philippe De Backer, Karima Delli, Boguslav Liberdazki, Lucy Anderson, Tomasz Poreba, Franck Proust, Christine Revault d'Allonnes-Bonnefoy, Jozo Rados, Massimiliano Salini, Istvan Ujehlyi, Wim Van de Camp and Martina Werner.

41 Associate Member companies and associations directly involved in the rail sector also support RFE. Leonardo Dongiovanni, Public Affairs Manager at UNIFE, is the Executive Secretary of the Association.

In 2015, RFE organised the following events, which provided a good opportunity to discuss the main topics on the agenda of the EU institutions:

- 28 January 2015: *Deteriorating international rail links - What can be done?* (sponsored by the European Passengers' Federation)
- 11 March 2015: *Taking stock of the 2011 Transport White Paper – rail achievements and challenges ahead* (sponsored by CER and UNIFE)
- 5 May 2015: *Rail 2.0: on track to digitalisation* (sponsored by SNCF and Thales)
- 14 September 2015: *On track to COP21: The role of rail in sustainable mobility* (sponsored by Transdev and UNIFE)
- 20 October 2015: *EFSI: an opportunity also for the rail sector?* (sponsored by CER and UNIFE).

RFE activities will continue in 2016, with a number of events already planned throughout the year, addressing some of the legislative dossiers of interest to the EU institutions and the European rail community.

For more information, please visit the website of Rail Forum Europe at **www.rail-forum.eu**





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INTERNATIONAL AFFAIRS

03

A. EU and Japan Free Trade Agreement negotiations
B. EU-US Transatlantic Trade and Investment Partnership negotiations
C. EU and China trade relations
D. EU and Vietnam Free Trade Agreement
E. EU legislation on Conflict Minerals
F. Cooperation with Russia (NP UIRE)
G. Cooperation with the US
H. Cooperation with Brazil (ANTT)
I. Cooperation with Gulf Countries
J. UNIFE engages in COP21

A EU and Japan Free Trade Agreement (FTA) negotiations

As a result of UNIFE's pressure to level the playing field between the EU and Japan, rail was identified as one of the key sectors in the EU-Japan FTA negotiations, which began in March 2013. The specific importance of railways procurement for the successful conclusion of the negotiations was confirmed at the highest level during the EU-Japan Summit which took place on 29 May 2015 in Brussels.

Following an agreement between the European Commission and the Japanese Government, a package of measures to guarantee transparency and non-discrimination along the Japanese rail procurement process (the 'one-year package') was enforced in October 2014. In particular, the package aimed at ensuring that Japanese rail operators describe their procurement policies in detail and make them available to the public, along with their annual procurement plans and list of awarded contracts. In parallel, the second phase of negotiations started around three major axes: the Operational Safety Clause, regulatory cooperation and market access commitments.

In June 2015, UNIFE drafted a position paper to express its views on both the implementation of the 'one-year package' and its concrete effects on the ground, as well as the main outcomes needed by the end of the FTA negotiations to achieve a true level playing field between the EU and the Japanese rail markets. In spite of some progress on transparency, UNIFE made it clear that the guarantees derived from the 'one-year package' were not sufficient for the European rail industry – a concern echoed by several Member States such as France and Germany.

Throughout 2015, UNIFE and its members have reminded European Institutions to be ambitious in the market access negotiations in order to create the right business conditions for EU suppliers. UNIFE conveyed these messages in various fora, including in BUSINESSEUROPE, the European Economic and Social Committee, and the European Parliament.

Furthermore, during the UIC High-Speed Rail Congress in July, UNIFE organised several meetings with Japanese and European stakeholders, and organised a high-level reception between EU suppliers and Japanese rail operators hosted by the EU Delegation in Tokyo.

In parallel to the negotiations, the EU-Japan Industrial Dialogue on Railways continued to hold biannual meetings, with one in May 2015 (Brussels) and another one in November 2015 (Chiba, Japan). During these meetings, UNIFE members took the opportunity to present their products and technologies on different market segments (e.g. urban transport). During these Industrial Dialogues Philippe Citroën particularly insisted on market access related topics, making concrete recommendations for improvements in procurement procedures, but also on technical cooperation between the European Commission and the Japanese Government. With four Industrial Dialogue meetings held to date, UNIFE has stressed that although an efficient tool to accompany the ongoing FTA negotiations, the Industrial Dialogue cannot, on its own, solve the problems faced by the EU industry when trying to access the Japanese rail market.

Philippe Citroën represents UNIFE at the 4th EU-Japan Industrial Dialogue on Railways in Chiba, Japan

B EU-US Transatlantic Trade and Investment Partnership negotiations

Throughout 2015, UNIFE closely monitored the Transatlantic Trade and Investment Partnership (TTIP) negotiations between the EU the US, and the twelve rounds of negotiations that took place since their launch in June 2013. Although both parties are committed to move swiftly towards the conclusion of a deal, the negotiations have progressed at a slower pace than expected due to a number of political obstacles and the US focus on the Trans-Pacific Partnership (TPP), for which an agreement was reached in October 2015.

For UNIFE, public procurement is a key priority in the TTIP negotiations. US content requirements can indeed constitute a major non-tariff barrier, since the 'Buy America(n)' provisions can deter foreign companies from investing when the thresholds are set at an unreasonably high level. Furthermore, procurement commitments under the WTO Agreement on Government Procurement (GPA) remain insufficient since mass transit authorities or some key federated States are not covered in its scope. Throughout 2015, concerns have also been growing around local hiring requirements from adjudicating local authorities, be it when federal grants are involved or not. To this day, public procurement appears to be one of the most sensitive issues addressed in the negotiations, with particular difficulty concerning US commitments at the sub-central level (state and municipal). An exchange of offers is, however, foreseen in early 2016.

In December 2015, UNIFE updated its Position Paper on the TTIP in order to take into account these recent evolutions on public procurement as well as on regulatory issues that can affect the European rail industry. Furthermore, UNIFE maintains regular contacts with the European Commission, in particular DG TRADE, to inform them of the current position of the rail sector.

C EU and China trade relations

In the past few years, UNIFE members have encountered increasing difficulties on the Chinese rail market: not only are some market segments now ***de facto*** closed to foreign suppliers, but additional constraints are imposed by adjudicating authorities (non-transparent public procurement procedures, increasing localisation rates, etc.) on the market segments that are accessible. At the same time, however, Chinese State-owned companies are becoming increasingly challenging competitors in all product segments and on all continents. The most recent development in this respect is the merger between the two main Chinese train manufacturers CNR and CSR. The merger process was completed on 1 June 2015, with the two companies establishing CRRC, the largest rolling stock supplier in the world.

UNIFE has closely monitored several initiatives and dossiers:

Access to China's market

In November 2013, negotiations between the EU and China on an Investment Agreement were officially launched. The EU-China Investment Agreement aims to improve access to the Chinese market and provide EU investors in China with a high level of investment protection in a single, coherent text. UNIFE believes the negotiations should facilitate and improve conditions for doing business in China, addressing important issues like mandatory Joint Ventures, licensing regimes and localisation rates. In this respect, the lack of progress on the negotiations is a concern for UNIFE and its members.

Furthermore, China has been trying to join the WTO Agreement on Government Procurement (GPA) for several years already, and the offers it has provided so far have been deemed insufficient in terms of guarantees and coverage of procuring entities by other GPA parties. While discussions continue, UNIFE encourages China to join the WTO GPA with an ambitious revised offer on a reciprocal basis with the EU.

Cooperation and competition with China

During the EU-China Summit held in June in Brussels, China already indicated its willingness to invest in the EU "Juncker Investment Plan" (EFSI). This was confirmed during the EU-China High-level Economic Dialogue held in September in Beijing, during which a joint working group was set up to increase cooperation on all aspects of investment (European Commission, European Investment Bank, Silk Road Fund experts). During the Economic Dialogue, a Memorandum of Understanding was signed on the EU-China Connectivity Platform to enhance synergies between China's "One Belt One Road" initiative and the EU's connectivity initiatives such as the TEN-T policy. UNIFE hopes that the rail sector will be informed about future activities of this platform.

Following the first meeting of the rail working group established between DG MOVE and the Chinese National Railway Administration (NRA) in October 2014, another meeting was held in October 2015 in Beijing. Discussions focused mainly on ongoing and foreseen railway projects, and on the respective regulatory and public procurement frameworks. UNIFE is eager to bring its support to the work of this group in so far as it could have a positive impact on access to China's market and on the understanding of the Chinese regulatory and standardization system.

Finally, UNIFE is monitoring the enforcement of the OECD Sector Understanding on Export Credits for Rail Infrastructure (RSU) and its promotion in an international context, as well as on the enforcement of EU public procurement rules on ongoing and forthcoming investment projects, in order to ensure that a level playing field can be guaranteed between all rail market players. This has become all the more important as China is discussing with some EU Member States to invest massively in rail infrastructure, and to connect Asia and Europe via the Silk Road Economic Belt.

Jyrki Katainen (Vice-President of the European Commission) and Violeta Bulc (EU Commissioner for Transport), at the EU/China High Level Economic and Trade Dialogue

D EU and Vietnam reach an agreement on a Free Trade Agreement

In August 2015, the EU and Vietnam reached an agreement in principle on a Free Trade Agreement (FTA), for which negotiations started in October 2012.

Besides eliminating nearly all tariffs (over 99%) with transition periods to enable Vietnam to adapt, important provisions have been agreed on public procurement. The EU and Vietnam agreed on a set of transparency and non-discrimination disciplines fully in line with WTO GPA rules. This is the first time that Vietnam agrees to grant such a level of access to its procurement markets. The two biggest Vietnamese cities (Hanoi and Hô Chi Minh City), as well as Vietnam Railways (the nationwide railway operator), have been included in the public procurement chapter.

In the FTA, disciplines have also been agreed on State-owned enterprises and subsidies, in order to provide fair market access to EU companies. Regarding investment protection, there has been an agreement on key provisions on protection such as national treatment.

On the basis of this agreement, the negotiating teams will now continue the process, settle some remaining technical issues and finalise the legal text. Once finalised, the agreement will then need to be approved by the Council and the European Parliament.

E EU legislation on Conflict Minerals

In March 2014, the European Commission published a legislative proposal intended to create a responsible sourcing strategy for tin, tungsten, tantalum (3Ts) and gold in order to break the link between minerals extraction, minerals trading, and the financing of armed conflicts in certain conflict-affected areas. As responsible sourcing is important for the European rail industry, UNIFE welcomed the proposal of the Commission. This file was handled by the International Trade (INTA) Committee in the European Parliament. After a satisfactory vote in the Committee, which was in line with the main aspects of the proposal of the Commission, the Parliament's vote in plenary session added a request of mandatory compliance for "all Union importers" sourcing in conflict areas. In addition, 'downstream' companies would be obliged to provide information on risk management for the 3Ts and gold.

UNIFE drafted a Position Paper to affirm its support to the Commission's voluntary approach focusing on upstream companies, which alone can create the necessary transparency in the supply chain – thus helping downstream companies make better commercial decisions. The complexity of supply chains and the significant burden linked to a mandatory scheme for downstream companies would not only make such a scheme impossible to implement, but also provide very limited results.

Throughout the second semester, UNIFE has been working with the Council of Member States to convey these messages, since the Council is still defining its position on the proposed Regulation.

F Cooperation with Russia (NP UIRE)

Russia continues to be an important and attractive market for the European rail industry, with significant investments foreseen especially in rolling stock (replacement and extensions of trams, light rail and locomotives).

In 2015, UNIFE strengthened its cooperation activities with its Russian counterpart, the Non-Commercial Partnership of the Russian Rail Industry (NP UIRE), in order to strengthen ties between UNIFE members and the Russian railway sector. In particular, UNIFE and some of its members traveled to Moscow in May and November to pursue discussions on investment projects and technical activities on regulations and standards (authorisation process, use of specific standards in Russia etc.). These are key aspects for many UNIFE members wishing to enter the Russian market or to better understand the requirements and rules for the certification of their products in the Customs Union.

Building on this cooperation framework, UNIFE invited NP UIRE to present the state of play of investment projects in Russia during the UNIFE General Assembly in June 2015. This provided the opportunity for UNIFE members to listen to an overview of the Russian rail market and establish new contacts.

On 2-4 September, a delegation from UNIFE attended the 8th International Fair of Railway Equipment and Technologies: EXPO 1520. The event featured a prominent representation of the European rail supply industry. In particular, UNIFE Director General Philippe Citroën participated in the high-level Opening Ceremony, the Plenary Session and the International Business Forum. Furthermore, UNIFE and NP UIRE signed a MoU focusing on the continued promotion of the IRIS scheme in Russia and the CIS. At present, there are over 90 Russian companies that are IRIS-certified, making it one of the largest IRIS-certified markets in the world.

Philippe Citroën and Oleg Belozerov (President of Russian Railways) delivering a speech at the Opening Ceremony of the International Fair of Railway Equipment and Technologies (EXPO 1520) in Moscow

Cooperation with the US

On the basis of its Memorandum of Understanding with APTA (American Public Transportation Association), UNIFE has maintained close contacts with US rail stakeholders throughout the year.

In January 2015, a delegation from UNIFE participated in the 94th Annual Meeting of the Transportation Research Board (TRB), which took place in Washington D.C. UNIFE had a stand and was able to present its activities in various fora, including the Rail Group Executive Board, the Freight Rail Committee and the Standing Committee for International Cooperation. The TRB was also an opportunity to meet with various US and European stakeholders in the field of rail research and business.

Throughout the year, technical cooperation activities continued between UNIFE, APTA, the European Railway Agency (ERA) and the Federal Railroad Administration (FRA). Conference calls and meetings on an agreed list of topics (signalling, international standards etc.) were held to deepen exchanges and better understand the respective regulatory and standardization systems.

In October, UNIFE participated in the APTA Annual Meeting in San Francisco. In addition to a presentation by Philippe Citroën to the APTA Business Member Board of Governors and a high-level presentation to attendees on major international infrastructure projects, UNIFE used this opportunity to meet with key American rail authorities in urban transit and high-speed rail development (notably with senior leaders from the California High Speed Rail Authority). Furthermore, in the framework of the UNIFE-APTA Memorandum of Understanding, UNIFE held meetings with senior APTA leadership as well as a meeting on the progress of the ongoing transatlantic technical work carried out by APTA, UNIFE, ERA, and the FRA. UNIFE also met with representatives of UNIFE member companies in the US in order to better understand their challenges on the US market.

H Cooperation with Brazil (ANTT)

Brazil is the EU's largest trading partner in Latin America, and is a key market for European railway business with significant investments foreseen in the coming years by Brazilian authorities (infrastructure, signalling etc.).

In September 2014, during InnoTrans, a Memorandum of Understanding was signed between the European Railway Agency (ERA) and the Brazilian National Ground Transportation Agency (ANTT). Subsequently, a delegation from UNIFE went to Brazil alongside the ERA on 17-18 November 2014 to meet with the ANTT and organise public workshops on topics such as signalling and interoperability.

In the framework of a broader agreement on transport with the European Commission, a delegation from ANTT attended the ERTMS CCRC (European Rail Traffic Management System Control Command and Radio Communication Conference) on 22-23 September in Lille. The purpose of the Brazilian study visit was to focus specifically on signalling and ERTMS in particular. As a result, UNIFE and ProRail also organised a technical visit on the Betuweroute in the Netherlands in order to showcase the roll-out of ERTMS technology on a dedicated freight route. Since then, ANTT has organised a debriefing event in Brasilia, and a further visit has been organised in December on governance issues. A follow up visit from a European delegation is foreseen in early 2016 to discuss interoperability issues, and UNIFE is planning on actively taking part.

I Cooperation with Gulf Countries

The Gulf Countries region is a priority market for UNIFE members. The region is one of the most important growth drivers to the industry and foresees considerable investments, with the GCC's ongoing rail project scheduled to be completed by 2018 and estimated to cost around US$15.5 billion.

Since 2014, UNIFE has been discussing with the Gulf Cooperation Council (GCC) – a strategic body overseeing the economic developments in the region – to foster knowledge exchanges and strengthen the dialogue between Governments and the European rail industry. Against this background, UNIFE participated in the GCC Rail and Metro Conference held in Muscat, Oman, in January 2015. A delegation from UNIFE was present, along with about 500 high-ranking rail and metro specialists, as well as supporting public and private sectors from more than 25 countries. During a panel with top executives from Etihad Rail, Saudi Railways Organization, Saudi Railway Company, Qatar Rail, and Oman Rail, Philippe Citroën presented UNIFE and insisted on the necessity to have an interoperable system for the GCC rail project.

With the GCC rail project endeavouring to connect the 6 GCC Member States, the GCC Secretariat General is concerned with issues such as interoperability, safety and open access. In this context, a study tour was organised in EU Member States in June 2015. As part of this study tour, a delegation comprised of high-level representatives from the GCC secretariat and GCC Member States (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, UAE), visited Brussels for meetings with the EU institutions and UNIFE on 10 June. UNIFE hosted a lunch for its member companies to meet with the GCC delegation, and there were fruitful exchanges between both sides on investment projects and challenges.

Philippe Citroën represents UNIFE at the GCC Rail and Metro Conference held in Muscat

UNIFE engages in COP21

Since last year, UNIFE has been even more active in promoting rail as the backbone of a sustainable transport system in order to address greenhouse gas emissions from the transport sector and to effectively tackle climate change. This was all the more important in 2015 as the United Nations Climate Change Conference (COP21 or CMP 11) in Paris from 30 November to 11 December brought together world leaders from nearly every nation of the world to agree on a universal targets on climate change. The resulting international climate agreement commits to holding the increase in the global average temperature to below 2 °C above pre-industrial levels and to limiting the temperature increase to 1.5 °C above pre-industrial levels. Furthermore, this ambitious and landmark agreement will provide a major opportunity for decision-makers to design more sustainable transport policies centred on rail solutions.

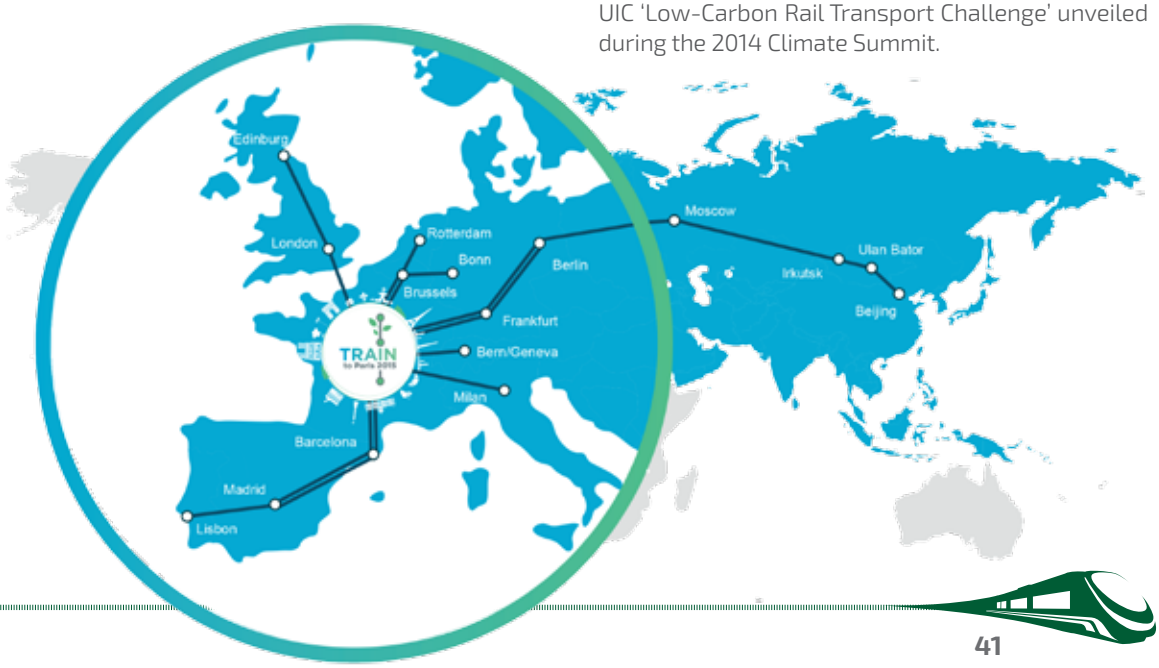
For the first time in the history of COP, transport was widely represented following awareness campaigns in recent years. While it is expected that this climate agreement will have a significant impact on all sectors, especially transport, transport must be acknowledged as a major contributor and the role of financing enhanced (Governments, but also from NDBs and MDBs). For this reason, UNIFE participated in several transport-related initiatives and events:

The UIC 'Train to Paris'

On 28 November, the UIC co-ordinated campaign 'Train to Paris' brought delegates including national Governments, NGOs, decision-makers and journalists from across Europe and Asia by train to Paris for the COP21 United Nations Conference on Climate Change in Paris. The aim of this Worldwide Campaign was to raise awareness of the important role of sustainable, low carbon rail transport, in the solution to both climate change mitigation and adaptation.

UNIFE Director General Philippe Citroën rode aboard the official Brussels-Paris Thalys train, while UNIFE Chairman Lutz Bertling (Bombardier) and UNIFE Presiding Board Member Jochen Eickholt (Siemens) were on board of the official Berlin-Paris Deutsche Bahn train.

Following the arrival of all of the official trains in Paris, a high-level Round Table was held at UIC headquarters on 28 November. The event attracted several major railway undertaking CEOs, high-level officials from the United Nations, and other major transport stakeholders to participate in this panel discussion. UNIFE Presiding Board Member, Mr Henri Poupart-Lafarge (Alstom), spoke in this roundtable on behalf of UNIFE and pledged the industry's support of the UIC 'Low-Carbon Rail Transport Challenge' unveiled during the 2014 Climate Summit.



The Paris Process on Mobility and Climate (PPMC)

PPMC 2015+ PARIS PROCESS ON MOBILITY AND CLIMATE

The PPMC is a platform created to strengthen the voice of the sustainable transport community in the UNFCCC process, especially in view of COP21. By bringing together different actors and stakeholders in the sustainable transport community, the aim is to communicate on the important contribution that sustainable mobility can make to the mitigation of and adaptation to climate change.

UNIFE has been involved in the UNCCC sustainable transport activities via its membership in SLoCaT (since August 2014), which is one of the two main organisers of the PPMC. Therefore, in support of a stronger voice for sustainable transport as well as to boost the visibility and represent the interests of the rail sector in the upcoming UNFCCC COP21 negotiations, UNIFE decided to become Gold Sponsor of the PPMC.

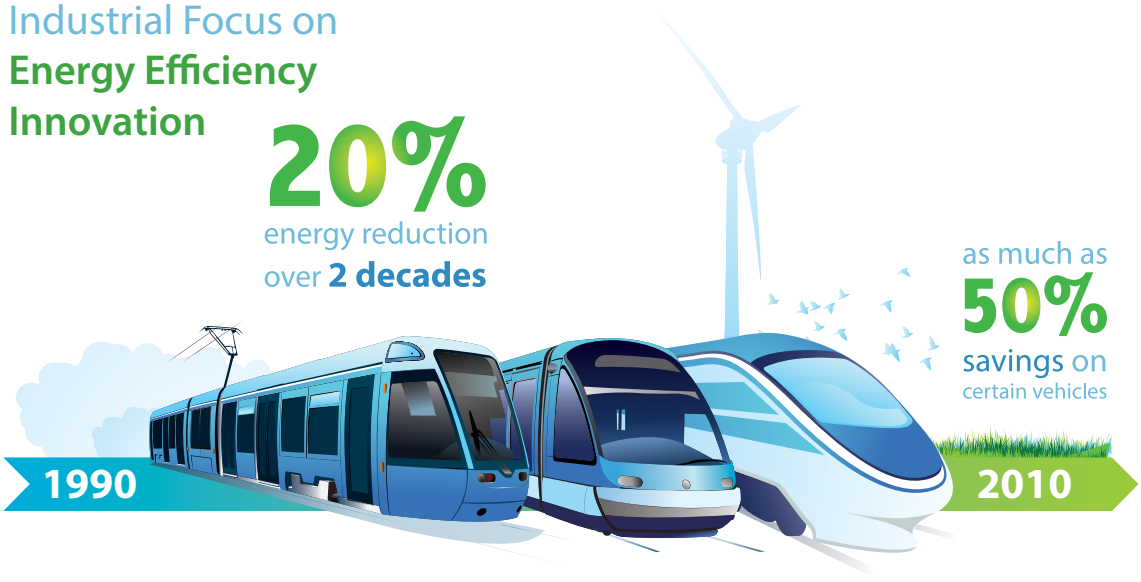
UNIFE actively participated in the PPMC events organised alongside COP21, in particular the Lima-Paris Action Agenda (LPAA) Transport Focus event on 3 December at the official COP21 premises at Le Bourget and the PPMC Transport Day which took place on 6 December at UIC headquarters in Paris.

The LPAA Transport Focus event provided a platform for governments to join with companies, cities, transport organisations and civil society to present collective initiatives to promote cleaner and more efficient solutions with the aim to change the course of "transport as usual." The Transport Focus event was organised around three primary sessions (urban mobility, freight and long distance transport, clean vehicles), which focused attention on the 15 transport initiatives linked to the LPAA. This included the UIC 'Low-carbon Rail Transport Challenge', which UNIFE supports. Ségolène Royal, French Minister for Ecology, Sustainable Development and Energy, and Violeta Bulc, EU Transport Commissioner, were among the high-level speakers of this historic step towards increasing the visibility of sustainable transport and rail within the UNFCCC process.

Transport Day 2015 • Paris

PPMC Transport Day 2015 was a day-long series of debates and discussions focused on the theme of: 'Ambitious Action on Transport and Climate Change is Feasible Now.' The sessions consisted of three high-level plenary sessions accompanied by a number of smaller breakout sessions on different subtopics. As a sponsor of the PPMC, UNIFE organised a break-out session to promote rail transport as a key part of the solution to reduce overall transport sector emissions. UNIFE's breakout session highlighted the environmental benefits of rail and included high-level industry representatives as well as urban and mainline operators from around the world that are implementing the energy efficient products of UNIFE members and proposing strategies to use rail to mitigate climate change.

Chris Jackson (Editor-in-Chief, Railway Gazette) presents outcomes of the UNIFE organised breakout session during PPMC Transport Day



STANDARDS & REGULATION

04

A Activities overview

UNIFE continued to coordinate the input of the rail supply industry towards the development of regulations and other documents drafted by the European Railway Agency (ERA) and the European Commission. The Standards and Regulation Group (SRG) and the various UNIFE technical working groups are platforms for UNIFE members to influence technical regulations concerning interoperability and safety, and UNIFE experts have participated in the various working groups and workshops organised by the European Institutions. The SRG also played a pivotal role in shaping the UNIFE technical position on the Fourth Railway Package, which is presented in detail in the European Affairs chapter of this report.

During 2015, like every year since the ERA was established, UNIFE held the status of observer on the ERA Administrative Board and Sub-Committees. UNIFE regularly attends these meetings and, where relevant, UNIFE has provided input on important topics such as the ERA work-programme and the preparatory activities for the implementation of the Fourth Railway Package.

The UNIFE SRG has also interacted with other stakeholders such as other sector associations (CER, EIM, etc.) via the Group of Representative Bodies (GRB) and with the European Standardization Organisations, in particular with CEN and CENELEC. In 2015 UNIFE has also increased its involvement in the Intergovernmental Organisation for International Carriage by Rail (OTIF) and sent representatives to the various OTIF working group meetings that took place across the year. UNIFE has supported the transformation of European Technical Specifications for Interoperability (TSIs) into OTIF documents, and the subsequent scope extension of the TSIs that is realised by this.

2015 Key Highlights:

New ERA Executive Director

On 2 January 2015 Josef Doppelbauer took over as the Executive Director of the European Railway Agency from Marcel Verslype. As a former manager at Bombardier Transportation and with more than twenty years of experience in the railway business, Josef Doppelbauer has a clear and thorough understanding of the needs of the rail sector. UNIFE has established a close working relationship with him in the framework of the GRB in order to alert him to the concerns of the European rail industry.

Technical preparation of the Fourth Railway Package

Thanks to the final agreement on the text reached in October 2015, the content of the Technical Pillar of the Fourth Railway Package is known to the institution and UNIFE welcomed the decision of ERA to start working on the assumption that the new regulation will enter into force in January 2016. UNIFE is also actively involved in the Task Force for the implementation of the Technical Pillar of the Fourth Railway Package. It is composed by ERA, the European Commission, delegations from Member States and sector representatives. Its purpose is to accompany and monitor the preparatory phase of the Technical Pillar and to drive the preparatory work in order to have a fully operational ERA delivering Vehicle Authorisation and Single Safety Certification by January 2019. UNIFE is looking forward to providing input to all activities aiming at shaping ERA with its expanded role.

Cleaning-up of National Technical Rules

In 2015, the principal objectives of the UNIFE standards and regulation activities focused on the reduction of technical rules in order to facilitate the authorisation of rail products in Europe. The new set of TSIs that entered into force in January 2015 with a geographical scope extended to cover the full European mainline network should have led to a significant reduction in the number of national technical rules applicable for authorisation. Unfortunately, this activity has not progressed as quickly as expected and, therefore, UNIFE met with the EU Institutions on several occasions to call for a swift clean up of the national technical rules.

On this topic, European Transport Commissioner, Violeta Bulc, addressed a letter to ERA asking for a structured approach for the clean up of unnecessary technical rules. UNIFE has monitored this point carefully, and actively worked with the national associations in order to achieve this objective and establish a comprehensive set of rules (TSIs and necessary national technical rules) as soon as possible.

Cooperation with OTIF

OTIF is the intergovernmental organisation for international carriage by rail. Its membership includes most European countries as well as several Middle Eastern states and former Soviet republics. Its objective is to facilitate international railway traffic. It developed transport legislation, for instance, regarding contracts of carriage for the international carriage of passengers and goods (CIV and CIM), and carriage of dangerous goods (RID). UNIFE follows the activities of OTIF in order to avoid any clashes between the requirements of the TSIs, which are law throughout the EU, and requirements stemming from OTIF. This is particularly relevant for the validation of technical standards and adoption of uniform technical prescriptions for railway material (APTU) and the procedure for the technical admission of railway vehicles and other railway material used in international traffic (ATMF). Whereas in the majority of cases OTIF transposes TSI requirements into its own documents without modifications of the technical content, some initiatives might clash with the European legal framework. This concerns, for instance, the wish of OTIF to set up a successor to the RIC in order to have interchangeable coaches. In this context, UNIFE elaborated on a set of specifications with CER in 2015. These can be transformed into a voluntary standard via the CEN and CENELEC.

UNIFE involvement in Standardization

Standardization is extremely important for our industry and several UNIFE members are involved in standardization activities. UNIFE provides a platform for its members to coordinate their standardization activities and their involvement in national standardization organisations.

To support the work that is done nationally on the European level, UNIFE has established close links with the relevant organisations related to standardization in Brussels. UNIFE works closely with the European Commission which sets the policy framework in which standardization takes place, and also with the CEN-CENELEC Management Centre which coordinates the activities of both standardization organisations. UNIFE is part of the Sector Forum Rail, formerly known as the Joint Programming Committee Rail (JPC-R), in which the standardization priorities of the sector are discussed directly with the CEN-CENELEC Management Centre.

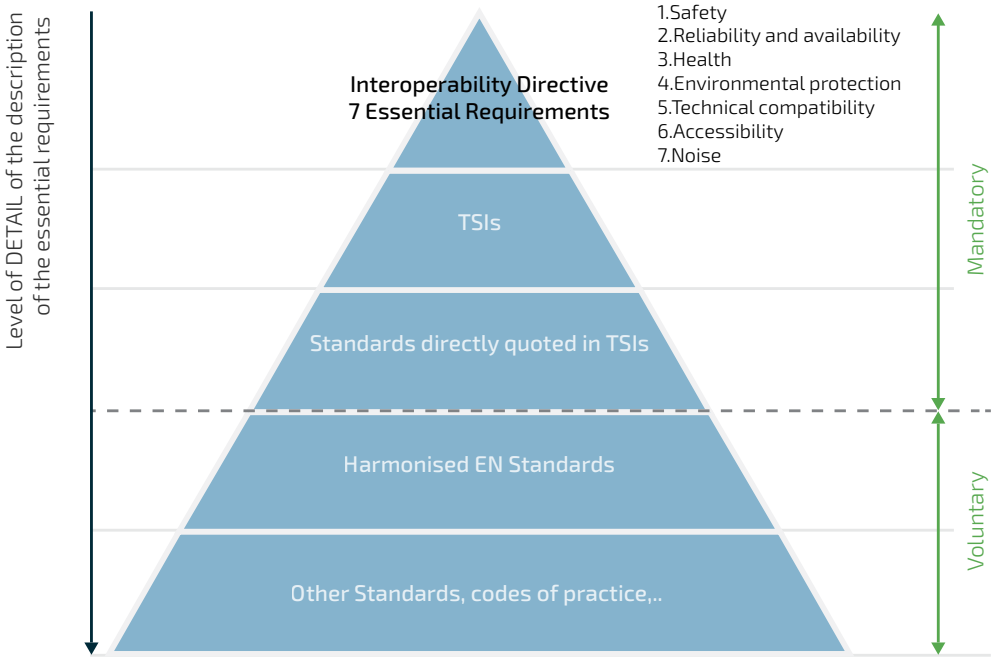
Over the course of 2015, the Commission has started to review the overall policy framework which led to the roundtable of the 'Friends of Standardization'. The results of these discussions are reflected in the Commission's Internal Market Package that was published on 28 October 2015. In this context, the Commission has initiated a 'Pact for European Standardization' which intends to reinvigorate the European Standardization system. The signature of this pact is foreseen for the second quarter of 2016. UNIFE contributes to the preparation of the text.

In 2015, UNIFE, together with the GRB, was part of a cross-industry alliance that lobbied successfully for making funds available to pay New Approach Consultants to establish the presumption of conformity of certain standards with the essential requirements set out in legislation, for instance in the Interoperability Directive. The funding was made available by the Commission until mid-2017.

At the international level, UNIFE has applied to obtain an A-Liaison status for the ISO Rail Technical Committee 269 (ISO TC 269) and made a presentation at the Plenary of this committee that took place in Beijing on 22 October 2015. An A-Liaison status will enable UNIFE to take part in the regular meetings of this ISO technical committee. The ISO TC269 members must first vote regarding this A-Liaison status and UNIFE should be informed in 2016 about the results of this vote.

Furthermore, UNIFE continued its cooperation with the urban transport operators in the field of standardization. In June 2015, an initiative was launched to revitalise the Urban Rail Platform, a forum driven by UNIFE and UITP (the International Association of Public Transport), to support, among other things, standardization in urban rail following a mandate given by the Commission. The preparatory works have progressed substantially over the past two years and now UNIFE and UITP have agreed to speed up the standardization process so that both the urban rail supply industry and the operators can reap the benefits of this process as soon as possible.

In addition to this focus on standardization, UNIFE is also a partner of the Eurospec initiative which complements the work of the European Standardization Organisations. Eurospec is a consortium of several large European railway operators that work together to develop joint technical specifications that should be used in their tender documents. The Eurospec initiative shares their documents with UNIFE in order to obtain feedback from the manufacturing industry with the goal of improving the quality of its specifications.



Ⓑ UNIFE Technical Working Groups

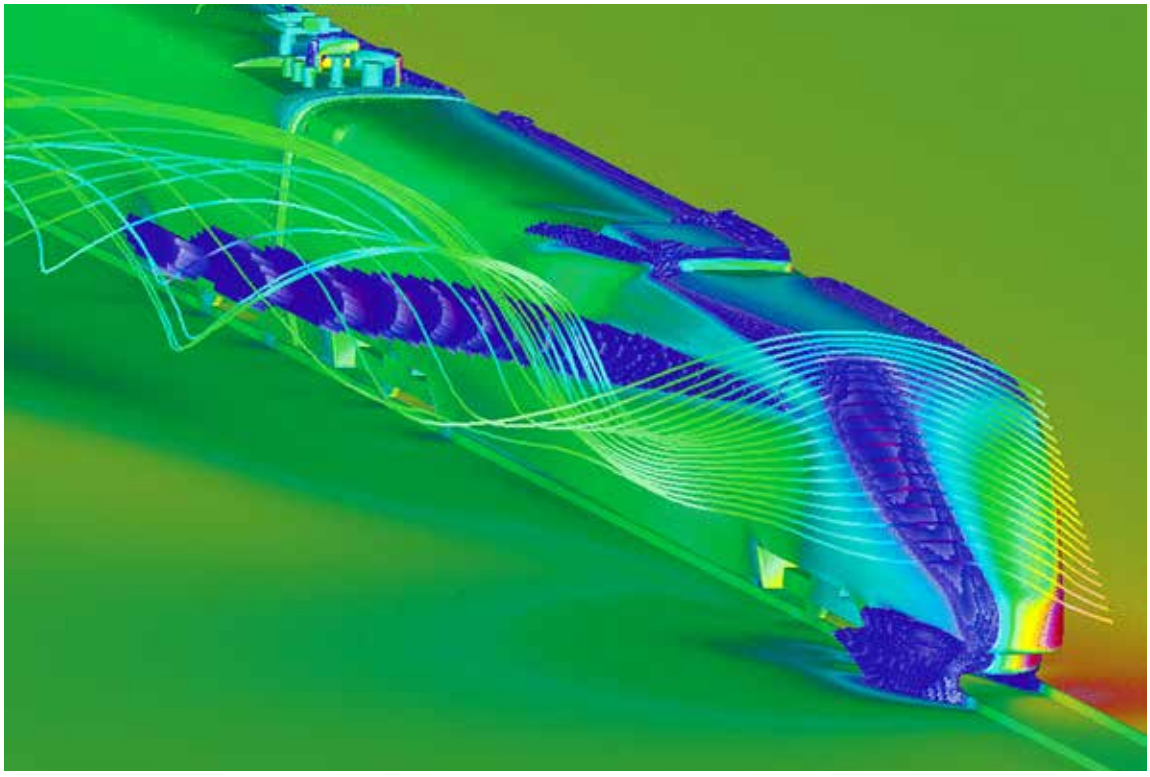
UNIFE Technical Working Groups steer UNIFE work on standardization, regulation and research. The overall coordination is done by the respective UNIFE committees. The UNIFE Technical Working Groups are split into two categories:

- The UNIFE Topical Groups (TG) which follow specific topics, mainly related to standardization and research activities.
- The UNIFE Mirror Groups (MG) which are temporary groups active during the drafting and revision of regulations and Technical Specifications for Interoperability (TSIs), mirroring the groups active in ERA where delegates of UNIFE participate as official representatives of the European rail supply industry.

The SRG in its role as a supervisor of the UNIFE Technical Working Groups periodically reviews the activities of these various groups and ensures that these groups operate in line with overall UNIFE objectives for standards and regulation.

Aerodynamics Working Group (TG)

The Aerodynamics Topical Group follows and formulates expert positions on the ongoing open issues regarding the practical applicability of current standards and regulations. The primary issues dealt with by this working group are the different rolling stock authorisation processes in different EU Member States regarding aerodynamics requirements and the practical applicability of the requirements for cross-wind stability. UNIFE working group members actively contributed to the discussions on the requirements for mitigating the risk related to "ballast pick up". This phenomenon is currently an open point in the Infrastructure TSI and is of high importance for rail operators and infrastructure managers.



Authorisation and Cross Acceptance Working Group (MG)

UNIFE is highly active and strongly supports the goals and objectives of the Cross-Acceptance Unit at ERA, in particular in clarifying the processes and conditions for vehicles to be placed into service with the goal of developing a single and harmonised understanding of the authorisation process.

The publication of the Commission recommendation "on matters related to the placing in service of subsystems and vehicles" on 5 December 2014 (2014/897/EU, also known as DV29bis) was a major step achieved by the sector in converging toward a common understanding of the authorisation process, in particular regarding the use of the Common Safety Methods for Risk Assessment in the framework of authorisation. UNIFE played a major role in these activities and warmly suggests its application to all members.

During 2015 the sector focused on the cleaning up of national technical rules. Following the entry into force in January 2015 of all TSIs with their geographical scope extended to the entire network, there is not much room left for national rules (which were previously applicable for off Trans-European Network lines). UNIFE and its members worked hard on proposing a structured process to support the Member States in cleaning up the existing national rules (around 17000) and identifying the ones still applicable in conjunction with the new set of TSIs. All national rules published in the Reference Document Database are now under review and a new structure will soon be available which will provide a comprehensive list of TSIs in conjunction with the applicable national rules.

Experts from the working group are also participating in the ERA "Unique Authorisation" working party that facilitates simultaneous authorisations in Europe under the current interoperability directive (2008/57/EU). This activity defines the requirements that do not need to be double checked when seeking an authorisation in multiple Member States. UNIFE hopes that the results of this working party will lead to a simplification and streamlining of the authorisation process.

In addition, this working group had a fundamental role in the technical support for the analysis of the Technical Pillar of the Fourth Railway Package and the future authorisation process for railway vehicles.

Cabin Working Group (TG)

The Cabin working group is involved in a number of ongoing standardization activities at the European level regarding the specifications of the driver's cabin elements, such as CEN prEN 16186-3 and CENELEC TS 50459-1-2-3. Due to the relatively large number of the current standards and applicable rules for rolling stock and signalling manufacturers related to the cabin topic, the UNIFE experts decided to work jointly on the consolidated analysis of the current situation. Besides the above mentioned specifications, the UIC Leaflet 612-01-02-03-04-05, CENELEC TR 50452-1-2-3 and ERA/ERTMS/015560 documents are taken into account. The purpose of such an activity is to identify possible synergies, differences, inconsistences and overlaps present in the current cabin specifications. The next step will be to provide relevant stakeholders with the practical guidance regarding the required functionalities for the current or future cabin products. The goal is to streamline the future cabin developments and to clarify the current cabin related standardization environment.

Chemical Risk Working Group (TG)

The Chemical Risk working group follows up on chemical risk issues and aims to develop a common understanding and harmonised rules for the rail industry as well as providing support for railway system integrators and their suppliers in understanding legal obligations. This working group has covered European legislation – including REACH, CLP, WEEE, and RoHS – and presented the point of view of the railway industry during consultations.

In 2012, the UNIFE Chemical Risk working group developed and launched the **"UNIFE Material Declaration Template"**. The goal of the template is to harmonise the information requested by some of the main system integrators and develop a common form which could be recognised by all stakeholders. With this new document, the reporting on hazardous substances is simplified for suppliers and the same format could be delivered for each system integrator. Based on feedback from the supply chain collected through a questionnaire, the group began working on a more simplified version of the Material Declaration Template in order to optimise the answers received. The next step will be to develop a common data material portal for the industry to access information on materials in one place that simultaneously gathers substance declarations from suppliers.

This year, this working group monitored EU regulatory developments related to the **new Regulation on Fluorinated gases**, which will have an impact on the European rail industry through the manufacturing of train components such as HVAC systems. The new Regulation was published in the EU official journal in May 2014 and repeals the existing Regulation from 2006.

These documents are part of the series of actions the European rail industry launched in order to best comply with EU regulation related to substances and can be found under the Railway Industry Substance List website www.unife-database.org which is regularly updated with the latest list of prohibited substances under the REACH regulation.

Electromagnetic Compatibility Working Group (MG)

The Electromagnetic Compatibility working group has been significantly involved in the activities focused on the closure of open points in the Command Control and Signalling (CCS) TSI related to compatibility of train detection systems, including track circuits and axle counters. The ongoing work is in cooperation with EIM and CER with the future impact on TSI revisions and further regulation developments as a part of Train Detection Compatibility working group, coordinated by ERA. This group has been working on the update of mandatory specification ERA/ERTMS/033281, describing the interfaces between CCS trackside and other subsystems. In this regard, the UNIFE working group has also followed the working group 30 of CENELEC TC9x dealing with testing of rolling stock for compatibility with axle counters.

During the whole year, the UNIFE working group members were in close contact with UNISIG Eurobalise experts. The joint expert group has been working on the key technical elements developed for the future rolling stock test methods for compatibility with ETCS Eurobalise on-board equipment.

Energy Efficiency Working Group (TG)

In 2015 the Energy Efficiency working group members agreed to further structure the functioning of the group by adopting an official mission statement, supported by all parties. In particular, the statement consolidated the main areas of intervention of the Energy Efficiency working group:

- Strategy definition and links to EU policy: to define UNIFE strategy with respect to relevant energy-related topics, to report on ongoing and upcoming EU legislation in the area of energy and to strengthen the discussion on ongoing and upcoming TSIs/Standards, enhancing collaboration with the main European Standard Organisations and their working groups focused on energy and transport;

- Coordination of technical activities within UNIFE: to inform and support UNIFE members on EU funding opportunities for energy-related R&D projects;

- Coordination of UNIFE communication and networking activities: to keep open channels with the Shift2Rail Joint Undertaking, especially with the activities carried out by the Shift2Rail Energy Transverse Group.

During the course of 2015, the Energy Efficiency working group hosted some relevant European stakeholders to discuss how to foster cooperation. In particular, the working group invited UITP to explore possible common standardization activities following the example of the cooperation with UIC in the area of Technical Recommendations (TecRec 100_001 as term of reference).

Life Cycle Assessment Working Group (TG)

Throughout 2015, the Life Cycle Assessment working group has pursued its discussions on how to improve eco-performance of the rail sector and to optimise production and tendering costs taking into consideration both increasing customer demands and legislative and standardization requirements, especially at EU level.

In the past, this working group has developed Product Category Rules (PCR) for railway rolling stock following the growing customer demand for information on the environmental performance of railway vehicles. The PCR is a standardized method to apply environmental life cycle assessments in a transparent and reliable way and to communicate the results in a credible fashion, based on the rules laid out by the International Environmental Product Declaration® system. The PCR document was updated in 2012 to take into account new developments such as the Railway Industry Substance List.

Based on the recent launch of Product/Organisation Environment Footprint pilot projects by the European Commission, this working group is also closely following the developments of some key projects and their potential impact on the existing EU regulatory and standardization framework. The group is carrying out broader research work on the main existing carbon footprint standards (ISO 14040/44, PAS 2050, ISO 14067, ISO 14064, GHG-Protocol and EN 16258) to determine their scope and use. Indeed, carbon footprint standards are increasingly used and could have an impact on customers' requirements.

Furthermore, the Life Cycle Assessment working group is discussing the possible standardization of existing Life Cycle Assessment related methodologies such as the Recyclability and Recoverability Calculation Method for Railway Rolling Stock finalised by the group in 2013. The document aims to define a common approach for the calculation of recyclability and recoverability rates within the railway industry. Furthermore, it presents a common rail industry method to make recyclability and recoverability figures comparable and transparent.

Finally, this working group has also focused its attention on possible ways forward, especially in communicating on the environmental performance of railway products to the general public and to decision makers.

Railway Dynamics Working Group (TG)

The Railway Dynamics working group was involved in many standardization activities across 2015, notably the active involvement in the development of EN standard 14363 (CEN/TC 256/WG 10), dealing with the tests for the acceptance of running characteristics of railway vehicles. The work on its next revision was expected to be closed by the end of the year 2015. To this end, the working group was in contact with ERA following the relevant updates of LOC&PAS and INF TSI relating the railway dynamics. Aside from these concrete expert contributions, the group has analysed the situation in Europe regarding the quality of different railway tracks, recent network access regulations and corresponding difficulties.

Safety Assurance Working Group (MG)

The Safety Assurance working group has supported the tasks performed by ERA, as requested by the Safety Directive. In 2014 the main focus was the final agreement on the Risk Acceptance Criteria for the Common Safety Methods (CSM) on risk assessment regulation, now renamed CSM Design Targets. This activity aimed to define a common set of criteria which must be met when using the explicit risk estimation principle of the CSM on Risk Assessment regulation; the goal being to help facilitate mutual recognition of such safety assessments. UNIFE has worked closely with ERA as well as CER and EIM in order to find a common position and proposal on this subject in past years. Finally, the text was agreed by RISC on July 2015 (Commission Implementing regulation 2015/1136/EU of 13 July 2015 amending Implementing Regulation 402/2013/EU on the common safety method for risk evaluation and assessment). UNIFE will continue to support this activity by helping develop the application guide, which will serve as a key tool to aid the implementation of the CSM Design Targets.

Additionally, the working group was called to support the new activity on Occurrence Reporting and Safety Information System. Soon a database will be created at the EU level to share incidents and accidents that could have an impact at the international level. As this activity is just beginning, UNIFE experts are working to define all possible requirements for such a database.

Finally, UNIFE experts participated in the revision of the EN50126 standard, which is under enquiry until the end of 2015.

Telematic Application for Passengers and Freight (TAP/TAF) Working Group (MG)

In 2015 UNIFE members contributed to several interoperability issues including the TSI related to freight and passenger subsystems. Regarding the TAP TSI, a revision will be launched in 2016, whereas in terms of the TAF TSI, a revision is envisaged for 2017. The TAP/TAF TSI related activities have a complicated structure in terms of the different working groups active around the subject, but UNIFE members have been actively involved in ERA's working groups and in order to amplify the involvement, the UNIFE TAP/TAF TSI working group has been recently revived, so as to follow the developments more closely and the ERA working groups listed below:

- TAP and TAF TSI Change Control Management Working Parties
- TAP and TAF TSI Change Control Management Board
- TAF TSI Implementation Co-operation Group

During the past year, UNIFE involvement was focused mainly in the processes of change management and monitoring of implementation of TAF TSI. At the level of change management, individual change requests related to technical annexes of each TSI are negotiated. The change management is gaining more and more importance with the increasing number of implementation activities, because individual actors (users) in TAF and TAP TSI are speeding up the processes of implementation. These activities require constant familiarity with the implementation process, because change requests necessary to be reflected in the technical annexes of TSIs are generated from this process. Therefore, active involvement of UNIFE members is also required in the executive bodies of TAF and TAP TSI, which are the TAF and TAP CCM boards.

In order to keep the activity of the railway sector in these ERA working groups efficient, UNIFE members are also involved in the work of the Joint Sector Group, which provides a unified and complex point of view for the whole sector on the necessary changes in TAF and TAP TSI. Moreover, UNIFE is represented in the TAP/TAF Steering Committee.

C Other Activities

Train Control Management System (TCMS) Working Group (TG)

The TCMS working group works on common solutions for the train communication network, the so called 'brain of the train'. In 2015, the working group followed the developments of the IEC/EN 61375-2-6 and contributed to IEC TC9 WG43. The TCMS working group was also involved in the TCNOpen (Train Communication Network Open Source Special Interest Group). TCNOpen is an open source initiative of the partner railway industries with the aim of building some key parts of new or upcoming railway standards, commonly known under the name TCN. TCNOpen is being jointly developed by participating companies so as to achieve cheaper, quicker and better quality results.

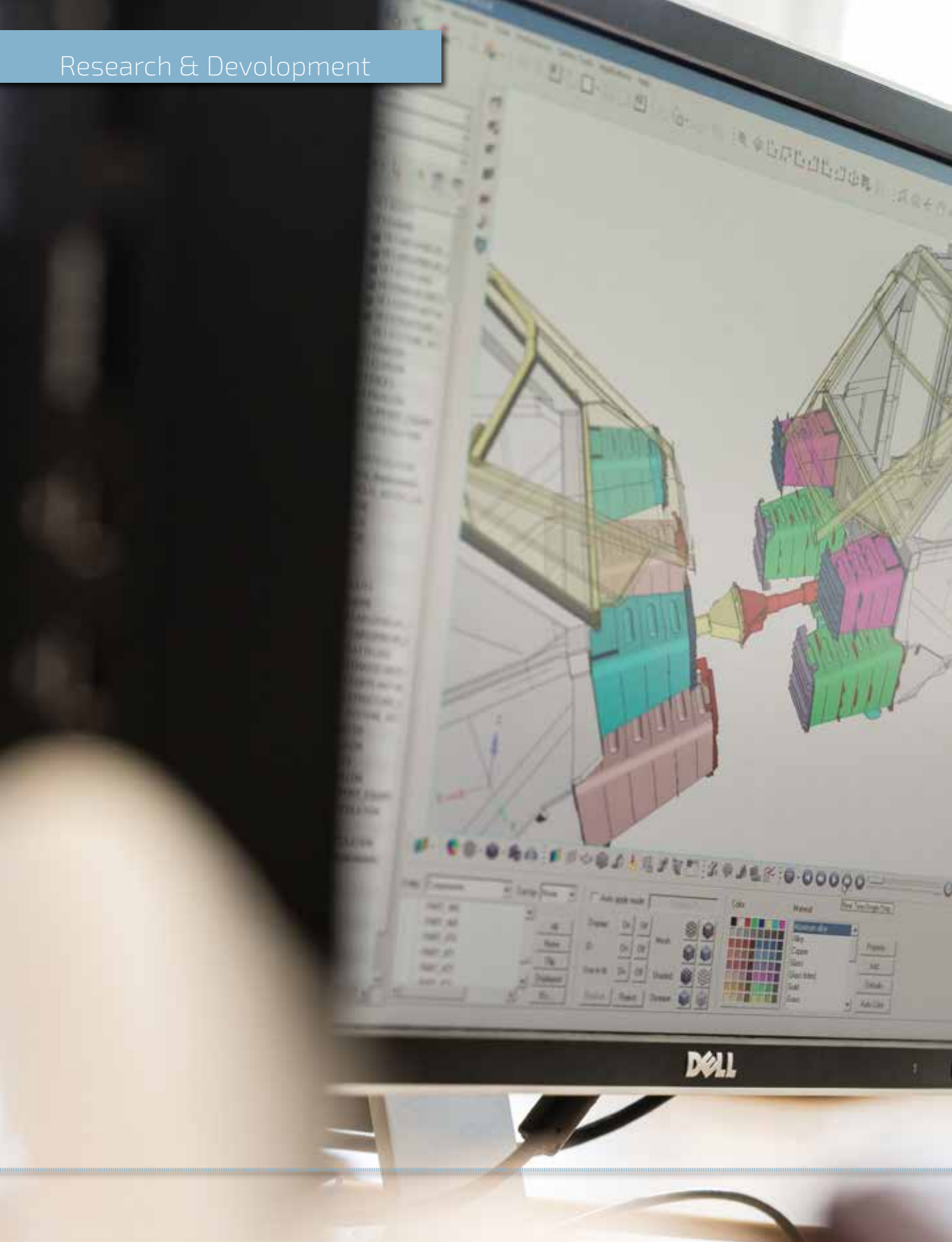
Wagon Working Group (MG)

The Wagon working Group has followed and supported the efforts carried out by ERA to revise the existing Wagon Technical Specification for Interoperability (TSI). The work started in October 2014 with a kick-off meeting and several subsequent meetings have been held so far. ERA is expected to finalise the revision proposal by the end of 2015 and to submit it then to the European Commission. The UNIFE Wagon working group has actively participated in the revision process by providing common positions and attending the ERA Wagon TSI limited revision working group meetings.

UNIFE and EFRTC

In 2015 UNIFE continued its cooperation with EFRTC, the European Federation of Railway Track-works Contractors. UNIFE participated in EFRTC's annual general meeting that took place in Poitiers in October 2015, giving an overview on the current European transport policies relevant to contractors. UNIFE also attended EFRTC committee meetings and assisted in the production of the annual newsletter. EFRTC participated in several UNIRAILINFRA committee meetings, which enabled a useful exchange between the supply sector and contractors.

Research & Devolopment



RESEARCH AND DEVELOPMENT ACTIVITIES

05

A. Horizon2020 and Shift2Rail
B. The European Rail Research Advisory Council (ERRAC)
C. Seventh Framework Programme (FP7)
D. Transport Research Arena (TRA)
E. World Congress on Railway Research (WCRR)

A Horizon2020 and Shift2Rail

Christos Economou (Executive Director ad Interim, Shift2Rail Joint Undertaking)

Shift2Rail

Following years of significant mobilisation and intense work by the European rail industry under the coordination of UNIFE, Shift2Rail became a reality in July 2014 as an established European Joint Undertaking (JU) that will manage a long-term R&D Programme for the rail sector.

Shift2Rail Overview

Shift2Rail is the first European rail joint technology initiative to seek focused research and innovation (R&I) and market-driven solutions by accelerating the integration of new and advanced technologies into innovative rail product solutions. Shift2Rail will promote the competitiveness of the European Rail Industry and will meet the changing EU transport needs. The R&I carried out within this Horizon2020 initiative, will create the necessary technologies to help complete the Single European Railway Area (SERA).

Furthermore, Shift2Rail has set ambitious targets and a robust framework in which to meet them. Specifically, the initiative aims to double the capacity of the European rail system, increase its reliability and service quality by 50%, all while halving lifecycle costs.

The multiannual budget of Shift2Rail will be jointly funded by the private sector and the EU. The budget of the Shift2Rail JU will be at least €920 million (for the period 2014-2020) – with €470 million contributed by the private sector and €450 million from the EU.

Main activities of the Shift2Rail Joint Undertaking in 2015.

Selection of Shift2Rail Associated Members
One of the main activities of the Shift2Rail JU in 2015 was the finalisation of the selection of the Associated Members. This selection process was a two-stage process that began in 2014.

Following the Commission Decision of 8 December 2015, the rail sector was informed that the Founding Members of the Shift2Rail JU have been joined by 19 Associated Members from across Europe.

The Shift2Rail JU is now composed of:

- The European Commission;
- 8 Founding Members: Alstom, Ansaldo STS, Bombardier Transportation, CAF, Network Rail, Siemens, Thales, Trafikverket;
- 19 Associated Members: 12 standalone companies and 7 consortia. Out of the 12 standalone companies 8 are UNIFE members (AZD, Diginext, Faiveley Transport, Hacon, Indra, Knorr-Bremse, MerMec and Talgo) and 6 UNIFE members are involved in the consortia (Plasser&Theurer, Strukton Rail, Tata Steel, TATRAVAGONKA, Voestalpine and Vossloh Cogifer).

In total 20 UNIFE members are involved in the Shift2Rail JU showing the high interest of the rail industry for Shift2Rail to develop a step change in rail technologies that will boost the attractiveness and competitiveness of the European rail system. The involvement of many European rail industry stakeholders within Shift2Rail also demonstrates the high commitment of the European rail industry to invest in R&D in order to maintain their innovation and technological leadership in a fiercer worldwide competitive environment.

Setting up of the Shift2Rail Scientific Committee
The Shift2Rail Scientific Committee was established and began its activities in 2015. It is comprised of a balanced representation of recognised European experts from academia, industry and regulatory bodies. This Committee has the necessary scientific competencies and technical expertise to make scientific suggestions and advice to the Shift2Rail JU. This committee will have an advisory role to the Shift2Rail JU similar to the previously established Shift2Rail States Representatives Group.

Approval and publication of the Multi Annual Action Plan (MAAP)
The MAAP was officially published on 17 December 2015. The MAAP is a detailed document considered by the Shift2Rail JU as the European Railway Sector Proposal for the development of the general strategic priorities defined in the Shift2Rail Master Plan in the Shift2Rail Programme under the EU's H2020 Framework Programme for Research and Innovation. The establishment of the MAAP has achieved some important milestones such as the official endorsement of the Shift2Rail Master Plan by the Council of the EU (COUNCIL DECISION (EU) 2015/214) on 10 February 2015. This key document covers all Shift2Rail activities and describes all necessary research activities of the five Innovation Programmes to deliver the Technology Demonstrators. This is a working document that should be updated throughout the Shift2Rail initiative.

Launch of the Shift2Rail open calls and general UNIFE support

On 17 December, the first Shift2Rail JU calls for proposals 2015 and 2016 were published by the S2R JU. These calls will follow the Horizon 2020 rules and must comply with all the specific rules mentioned in the calls. These comprise of two types of calls: calls for JU members and open calls.

The calls for JU members are reserved only to the 27 Shift2Rail JU members including both Founding Members and Associated Members. The open calls are addressed to any non-member of the Shift2Rail JU and cover all Shift2Rail Innovation Programmes and cross-cutting activities. The topics included in the open calls are linked with most of the Innovation Programme areas described in the Shift2Rail Master Plan and MAAP.

For more information on Shift2Rail, please visit **www.shift2rail.org**.

Horizon 2020 1st call – Shift2Rail lighthouse projects: Roll2Rail, IT2Rail and In2Rail

A combined kick-off meeting of three new EU rail R&D projects (Roll2Rail, IT2Rail and In2Rail) took place on 7 May 2015 in Brussels. These three projects were selected by the European Commission following the first "Mobility for Growth" call of the Horizon 2020 Programme.

These projects endeavour to launch key research activities that will feed into the Innovation Programmes of the Shift2Rail Joint Undertaking. Roll2Rail and IT2Rail are coordinated by UNIFE, while Network Rail, the UK Infrastructure Manager, coordinated In2Rail.

The kick-off meeting brought together 200 participants from the rail industry sector (representing railway undertakings, infrastructure managers, industry, SMEs, research institutions and academia from Western, Central, and Eastern EU Member states) involved in the projects and high level representatives from the European Commission (Keir Fitch – Head of Unit, Research & Innovative Transport Systems, DG MOVE), the European Railway Agency (Josef Doppelbauer – Executive Director) and the Shift2Rail Joint Undertaking (Christos Economou – Executive Director ad Interim). Following this collective launch ceremony, each of these three projects held their individual kick-off meetings.

Roll2Rail

The **Roll2Rail** (New Dependable **Roll**ing Stock for a more Sustainable, Intelligent and Comfortable **Rail** Transport in Europe) project aims to develop key technologies that will overcome hurdles to innovation in rolling stock development and forms part of a longer term strategy towards revolutionising the rolling stock of today. The project envisions paving the way towards a 15% increase in the capacity of the railway system, a 50% increase in the operational reliability and punctuality of the vehicles, a 30% improvement in energy efficiency of the system, and a 40% reduction in the vehicle and track cycle costs while at the same time also improving passenger comfort. It is planned that Roll2Rail will transition into Innovation Programme 1 of Shift2Rail meaning that at the end of the project the outcomes will be incorporated into real vehicles or relevant environments. The project expects innovations in 8 different areas such as traction and power electronics, train communications, car bodyshell, running gear technologies, brakes, train interiors, noise and vibration and energy performance.

The challenge addressed by this project is to outline the new generation of rail vehicles for the 21st century, which will be radically improved through the reduction of life cycle costs of rolling stock products and train energy consumption, and an increase in train

Shift2Rail lighthouse projects: Roll2Rail, IT2Rail and In2Rail Kick-off

capacity and reliability, which will deliver superior performance in terms of overall service quality, safety and customer experience in rail transport. To achieve this goal Roll2Rail addresses key topics, (whose potential combined innovations will be further developed within Shift2Rail) that will contribute to attaining the desired impact at vehicle and railway system levels. In particular:

- Reduced life cycle costs of rolling stock and track (e.g. reduction of energy consumption, reduction of running gear and track maintenance costs);
- Increase in capacity of the railway system (e.g. new generation subsystems, lighter subsystems);
- Punctuality and operational reliability increase (e.g. more reliable traction, new wireless technology for the train communication network, new criteria for brakes design);
- Reduction of energy consumption (e.g. traction, lighter vehicle, new universal cost model for running gear);
- Improved environmental performance (e.g. reduction in energy consumption, noise emissions);
- Improved quality of service and customer experience (e.g. punctually and seamless travel, travelling cost);

With a budget of €16 million, the project involves 31 partners covering a wide range of expertise in different areas. The UNIFE members involved in this project are: Ansaldo Breda, Alstom, Bombardier Transportation, CAF, Faiveley, Talgo, Knorr-Bremse, Siemens, Vossloh, UniControls and Thales.

For more information on **Roll2Rail**, please visit **www.roll2rail.eu** or contact **eulalia.peris@unife.org**.

IT2Rail

The **IT2Rail** (**I**nformation **T**echnologies for Shift**2Rail**) project is a first step towards the longer term IP4 -"IT Solutions for Attractive Railway Services", one of the Shift2Rail Joint Undertaking's five Innovation Programmes (IPs). Like IP4 this project aims at providing a new seamless travel experience, giving access to a complete multimodal travel offer which connects the first and last mile to long distance journeys. This is achieved through the introduction of a ground breaking Technical Enabler based on two concepts:

- The passenger is placed at the heart of innovative solutions with the ability to access all multimodal travel services (shopping, ticketing, and tracking) through a travel-companion application.

- An open published framework is providing full interoperability whilst limiting impacts on existing systems, without prerequisites for centralised standardization. This Technical Enabler will be completely settled in the context of Shift2Rail IP4, and IT2Rail is proposing a reduced approach to the scale of a specified use case without weakening any of the key concepts of IP4, such as the usage of Semantic Web technologies, meta planning on distributed data, travel companion with a protected and secured personal wallet stored in the cloud and containing the passenger's travel rights.

The use case will be defined as a specific instance of the open concepts, and will benefit from a completely scalable architecture fully developed in IP4. This approach addresses all of the key challenges of the work program, supporting a complete door-to- door intermodal travel offer and proposes a seamless integration of the very diverse existing and future services for planning, one-stop-shop ticketing, and real-time re-accommodation. Moreover, thanks to an interoperability framework which insulates travel applications from the standards fragmentation in multimodal transport, IT2Rail liberates business-

model innovations in the market-place, guaranteeing the economic self-sustainability of these e-services in the long-term.

With a budget of €12 million, the project involves 27 partners covering a wide range of expertise in different areas. The UNIFE members involved in this project are: Hacon, Indra, Oltis and Thales.

For more information on IT2Rail, please visit **www.it2rail.eu** or contact **stefanos.gogos@unife.org**.

In2Rail

The **In2Rail** (**In**novative Intelligent **Rail**) project aims to set the foundations for a resilient, consistent, cost-efficient, and high capacity European network by delivering important building blocks that unlock the innovation potential in Shift2Rail. Innovative technologies will be explored and the resulting concepts will be embedded in a systems framework where infrastructure, information management, maintenance techniques, energy, and engineering are integrated, optimised, shared and exploited.

In2Rail will take steps towards the Shift2Rail objectives including: enhancing the existing capacity fulfilling user demand, increasing the reliability delivering better and consistent quality of service, and reducing life cycle cost, resulting in increased competitiveness of the European rail system.

To achieve the above, a holistic approach covering Smart Infrastructures, Intelligent Mobility Management (I2M) and Rail Power Supply and Energy Management will be applied.

The Smart Infrastructure section will focus on intelligent reliable infrastructure (e.g. integrated asset monitoring, self-diagnostic and adjusting assets, efficient design and new materials, low-maintenance sensors), better system resilience and a reduced need for maintenance through innovative infrastructure design (e.g., novel working methods and smarter use of data leading to reduced LCC and greatly improved availability) and an overall reduction in carbon emissions and noise and vibration.

The Intelligent Mobility Management section will focus on a standardized approach to information management and dispatching system. This will enable an integrated Traffic Management System (TMS) and an Information and Communication Technology (ICT) environment which supports all transport operational systems. An advanced asset information system with the ability to 'nowcast' and forecast network asset statuses with the associated uncertainties from heterogeneous data sources will also be developed.

The Energy Management part will focus on the design of a future AC Rail Power Supply System with minimal energy losses and the implementation of an efficient energy management system. In2Rail will contribute to Innovation Programmes 2 and 3.

With a budget of €18 million, the project involves 54 partners covering a wide range of expertise in different areas. The UNIFE members involved in this project are: Alstom, Ansaldo STS, AZD, Bombardier Transportation, CAF, EFRTC, Hacon, Indra, MerMec, Siemens, Strukton Rail, Thales, Vossloh and Tata Steel.

For more information on In2Rail, please visit **www.in2rail.eu** or contact **nicolas.furio@unife.org**.

GNSS call: STARS project

The STARS (Satellite Technology for Advanced Railway Signalling) project proposal was submitted under Horizon 2020, 2nd Galileo call and has been favourably evaluated. This two-year European research initiative has the budget of almost €4,5 million and is now ready to start early 2016.
The project consortium, coordinated by UNIFE, is composed by seventeen partners, including the major railway signalling manufacturers (Alstom, Ansaldo STS, AZD, Bombardier Transportation, Siemens, Thales), organisations oriented on space and radio systems development (e.g. Thales Alenia Space) and research (e.g. CAF I+D).

The aim of this project is to bridge the gap between ERTMS needs for safety critical applications and E-GNSS services through a characterisation of the railway environment and of GNSS performance assessment in that environment. It is expected that the application of GNSS in ERTMS will lead to significant economic benefits through the reduction of trackside equipment, reduction of maintenance, increase of availability and performance.

Key objectives of the project are:

- To develop a universal approach to predict the achievable GNSS performance in a railway environment, especially for safety critical applications within ERTMS and to determine the necessary evolution of ETCS to include GNSS services;
- To quantify the economic benefits through reduction of cost, which will increase market appeal of ERTMS;

As a result of the project it should be possible to predict performance of GNSS in the railway environment with regard to accuracy, availability and safety. This should be possible for specific locations or sections along railway lines, and based on using a receiver compliant with minimum performance standards as defined in the European NGTC research project (coordinated by UNIFE). The resulting application will allow interoperability between equipment of different suppliers, which is one of the key elements that has led to significant applications of ERTMS in Europe and beyond.

For further information, please contact peter.gurnik@unife.org.

Horizon 2020 Mobility for Growth 2nd call and EC priorities

In 2015, the European Commission has launched the Horizon 2020 - 2016-2017 work programme entitled "Smart, green and integrated transport": Mobility for Growth 2nd call. It contains a list of research topics that are addressed in the calls for proposals across 2016-2017, with the call launched on 13 October 2015. The main difference with the Horizon 2020 work programme (2014-2015) – 1st Mobility for Growth call - and the 7th Framework Programme will be the absence of pure rail research topics. Nevertheless, there will be some opportunities within Horizon 2020 for rail research within some cross-modal topics (e.g. intelligent transport system, infrastructure, logistics, etc.). Cross-modal research is now a major priority for the European Commission.

Regarding the absence of pure rail research topics, the Commission considers that the future open calls of Shift2Rail (being part of Horizon 2020) will be enough for the rail sector during the 2016-2017 period. In response, the European Rail Research Advisory Council (ERRAC) officially informed the European Commission that Shift2Rail will not cover all the rail research sector needs and raised the issue of non-equal-treatment between transport modes.

For more information on the Horizon 2020 - 2016-2017 work programme "Smart, green and integrated transport"- Mobility for Growth 2nd call, please visit http://ec.europa.eu/research/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-transport_en.pdf or contact nicolas.furio@unife.org.

B The European Rail Research Advisory Council (ERRAC)

In 2015 the European Rail Research Advisory Council (ERRAC) elected new governance following the end of Josef Doppelbauer's mandate as ERRAC Chairman as he began his mandate as Executive Director of the European Railway Agency at the beginning of 2015. On 29 April 2015, Andy Doherty (Network Rail) was appointed as the new ERRAC Chairman and Nicolas Castres Saint-Martin (Alstom Transport) was appointed as the new ERRAC Vice Chairman.

The main challenges for the new ERRAC leadership are to restructure ERRAC taking into consideration the Shift2Rail Joint Undertaking, to ensure a good level of cooperation between ERRAC stakeholders and to enhance cooperation with other transport modes, as promoting cross-modal research is the main priority of the European Commission within Horizon 2020.

In 2015 regular ERRAC Strategy and Steering Committee meetings took place during which the future missions/activities of ERRAC were discussed. These committees have also monitored the current activities of ERRAC and were informed about the progress of the two European Coordination and Support Action projects: FOSTER RAIL and SETRIS.

Moreover two ERRAC Plenaries were organised in April and November 2015. These events brought together all the railway community involved in European Research, the European Commission (DG MOVE and DG Research & Innovation) and the Shift2Rail Joint Undertaking. These Plenaries were opportunities to:

- Listen to regular reporting on the European Commission and Shift2Rail activities and raise ERRAC's concerns regarding the place of rail research within Horizon 2020;
- Remind stakeholders that ERRAC is working through the FOSTER RAIL project on new roadmaps based on the Strategic Rail Research and Innovation Agenda. These roadmaps will be key documents for ERRAC for defining future rail research priorities;
- Discuss with ERRAC members about the reinforcement of relations between ERRAC and the other European Technology Platforms (e.g. ERRAC, ACARE, ALICE, WATERBORNE TP).

ERRAC agreed that the new missions/activities of ERRAC will be presented in 2016 to ERRAC members.

For more information on ERRAC, please visit **www.errac.org** or contact **nicolas.furio@unife.org**.

C Seventh Framework Programme (FP7)

Finalised European research projects

Osiris

OSIRIS (**O**ptimal **S**trategy to **I**nnovate and **R**educe Energy Consumption **I**n Urban Rail **S**ystems) was a three-year FP7 European research project that started in January 2012 with a budget of around €8 million. The project requested and obtained a three-month extension and consequently concluded in March 2015. The UNIFE members involved in the project were: Alstom, AnsaldoSTS, CAF, SAFT and Siemens.

OSIRIS held its final conference on 31 March 2015 at the Solvay Library in Brussels which was attended by almost 100 participants from across Europe. Jointly organised by UITP and UNIFE, the event was the opportunity for the project partners to present the final results and discuss the exploitation potential of the main outcomes with external participants.

Of particular significance were a number of new technologies developed by some OSIRIS members which took into account individual urban operators' needs and specific environments where they were tested. Alstom developed an innovative auxiliary converter for metro train which was tested in cooperation with ATM in Milan; CAF deployed a new concept of on-board Energy Storage System (ESS) for tram in Vitoria-Gasteiz; and Ansaldo STS produced a novel cooling system for technical rooms using underground water and tested it with the support of ATAC in the Rome metro. Combined, OSIRIS solutions achieved a 10% reduction in energy consumption as planned when the project was launched (see table).

OSIRIS Solutions	Energy Savings (in ref. to total system for an entire year)
Technical innovations on board and ground (3)	5% to 6%
Operational innovations (8) lighting, escalators etc.	1,7% to 4,6%
ST&LT passenger forecasting	2,3%
TOTAL (aft. elimination of non cumulative solutions/figures)	8.2 to 12.1%

For more information on OSIRIS, please visit **www.osirisrail.eu** or contact **andrea.demadonna@unife.org**.

OSIRIS Final Conference

ECUC

ECUC (**E**ddy **CU**rrent Brake **C**ompatibility) was a three-year FP7 European research project that began in September 2012 with a budget of around €3.2 million. UNIFE was the leader of the Work Package dealing with dissemination and exploitation. The project is coordinated by CEIT (Centro de Estudios e Investigaciones Técnicas). UNIFE members involved in the project were: Alstom and Knorr-Bremse.

The project aimed to prove that Eddy Current Brake (ECB) is a highly effective and applicable solution for increasing the braking capacity of new high-speed trains. Moreover it sought to resolve concerns raised by infrastructure managers by proposing concrete and realistic solutions to overcome any possible drawbacks that ECB have experienced on some lines.

A new generation linear ECB was designed and a study of incompatibilities was performed in two domains: electromagnetic and thermo-mechanical. As a result, ECUC proposed new designs as well as engineering and operational guidelines for ECB and signalling equipment. In its last stages it defined Technical Recommendations for the correct interoperable functioning of the ECB in a complex railway system.

The ECUC Final Conference, jointly organised by UNIFE, Knorr-Bremse and CEIT, was held at the Marriott Hotel in Vienna on 27 August 2015. The event gathered 35 participants from the broader European rail community.

For more information on ECUC, please visit **www.ecuc-project.eu** or contact **andrea.demadonna@unife.org**.

ECUC Final Conference

SUSTRAIL

SUSTRAIL (The **SUST**ainable freight **RAIL**way: designing the freight vehicle/track system for higher delivered tonnage with improved availability at reduced cost) was a four-year European research project that began in January 2011 with a budget of around €9.5 million. UNIFE's main role was dissemination and communication. The project was coordinated by Consorzio Train. UNIFE members involved in the project were: Lucchini RS, MerMec and Tata Steel.

The SUSTRAIL consortium held the SUSTRAIL Final Conference on 21 May 2015 in Brussels, offering participants – which included railway suppliers, research groups, railway operators (undertakings and infrastructure managers)—the chance to discover the main achievements of the project and learn about the use of the project's results, guaranteeing that the project's solutions will satisfy user needs and fulfil railway requirements at the EU and international level.

The overall objective of SUSTRAIL project was to support the freight railway in regaining a primary position in the market, accounting for:

- The increase in demand of the total freight transport volumes: about 40% (in tonne-kilometres) by 2030 and 80% by 2050;
- The shift of 30% of road freight over 300 km to other modes such as rail or waterborne transport by 2030 (50% by 2050) as targeted by the European Commission.

SUSTRAIL Final Conference

The work package leaders were able to present the results of their studies and tests carried out on a prototype bogie. Tasked with designing a rail freight vehicle which is environmentally-friendly, lightweight, low-noise and improved running gear, the work package leaders showed the testing of the bogie and described the main parameters, concepts and challenges throughout the design and testing process. By taking a holistic and integrated approach, the SUSTRAIL project was able to achieve successful results.

The SUSTRAIL Concluding Technical Report is available for download on the SUSTRAIL website

For more information on SUSTRAIL, please visit **www.sustrail.eu** or contact **nicolas.furio@unife.org**.

MERLIN

MERLIN (Sustainable and intelligent **M**anagement of **E**nergy for smarter **R**ai**L**way systems in Europe: an **IN**tegrated optimisation approach) was a three-year FP7 European research project that began in October 2012 with a budget of around €7.1 million. The project follows previous UNIFE-coordinated projects such as RAILENERGY, a project focused on the energy management of the entire European Rail system. The UNIFE members involved in the project were: Alstom, AnsaldoBreda, Ansaldo STS, CAF, MerMec, Oltis Group, and Siemens.

MERLIN's main aim and purpose was to investigate and demonstrate the viability of an integrated management system to achieve a more sustainable and optimised energy usage in European electric mainline railway systems. The main concrete result of the project will be the definition of the architecture for an intelligent Railway Energy Management System (REM-S) for both operational and strategic applications.

MERLIN held an Open Workshop in Malaga on 5 October 2015 with the participation of almost 30 rail experts. The event was jointly organised by ADIF, CAF, RENFE, UNIFE and UIC.

A number of tests (or scenarios) were planned and carried out within the MERLIN project in order to validate and demonstrate the technological solutions and enhancements.

The MERLIN Final Conference took place successfully on 10 December 2015 in Madrid and project partners have presented the main project outcomes.

For more information on MERLIN, please visit **www.merlin-rail.eu** or contact **andrea.demadonna@unife.org**.

ECUC Final Conference

Ongoing European research projects coordinated by UNIFE

REFRESCO

REFRESCO (Towards a **Re**gulatory **Fr**amework for the us**E** of **S**tructural new materials in railway passenger and freight **C**arb**O**dyshells) is a thirty- month project, supported by the European Commission under the Seventh Framework Programme. It started in September 2013 and has a total budget of approximately €4.7 million. REFRESCO brings together many of the main European railway system integrators and equipment suppliers, one of the largest European railway undertakings, universities and research centres as well as one of the largest certification companies in Europe. The UNIFE members involved in the project are: Alstom, Ansaldo Breda, Bombardier Transportation, CAF, DuPont, Siemens, Talgo and Vossloh.

The objective of REFRESCO is to set the framework for the implementation of new materials in the railway sector through the evolution of certification processes for rolling stock. Such materials have a high potential to reduce the weight of rolling stock compared to the metals currently used. The advantages of composites are already exploited in other sectors, such as aeronautics, where a real revolution has occurred in this area.

REFRESCO has reached its final stage, entering into its final months. So far, the completion of several technical work packages has resulted in a clearer picture of the gaps in the regulatory framework which need to be closed in order to facilitate the introduction of lightweight materials. Furthermore, a better understanding of the fire and smoke properties of the new materials as well as of their behaviour concerning noise and vibrations has been achieved.

Another important event for REFRESCO during 2015 was the reference group meeting that was held in July. The meeting was an opportunity for the REFRESCO project partners to exchange information with experts in the field of lightweight materials and to discuss the latest findings of the project. The Reference Group brought together experts from research institutions, engineering companies and material suppliers. Moreover, at the end of 2015, a liaison between the project and CEN-CENELEC was initiated in order to transfer the knowledge gathered within REFRESCO towards standardization.

The REFRESCO final event will be held in Brussels on 21 January 2016 where the consortium will present the findings from the project. The final conference will cover topics such as strength, crash and fire resistance, noise and vibration performance, electromagnetic compatibility (EMC) and maintainability of the composite materials.

For more information on REFRESCO, please visit **www.refresco-project.eu** or contact **eulalia.peris@unife.org**.

NGTC

NGTC (**N**ext **G**eneration **T**rain **C**ontrol) is a three-year FP7 European research project that began in September 2013 with a budget of around €11 million. The consortium comprises urban and mainline operators, major railway signalling companies and research centres. The UNIFE members involved in the project are: Alstom, Ansaldo STS, AŽD, Bombardier Transportation, CAF, Siemens and Thales.

The NGTC project aims to propose the next generation of signalling systems which will allow interoperability and interchangeability based on standardized interfaces through the investigation of similarities and differences between ERTMS and CBTC systems.

Across 2015, the Consortium reached a number of significant results which contributed to the overall progress of the project, in line with its main objectives notably:

- The Consortium has finalised the NGTC Functional Requirement Specifications (NGTC FRS), which is a key project document listing the current and future functionalities for the next generation of signalling systems.

- The System architecture group defined the architecture for both mainline and urban systems, maximising the commonality identified in NGTC FRS and opening the door for interoperable and standardized future systems. The next steps are to finalise the work on the functional allocations and the definition of NGTC System Requirements Specifications (NGTC SRS).

- Common Moving block principles applicable for all kind of railways were finalised and validated through simulation scenarios.

- Analysis of system requirements for future IP-based radio communication systems, applicable for both main and urban lines is now finalised. The subsequent work is focused on the analyses of potential candidate technologies and relevant system studies.

- Virtual balise concept based on satellite positioning technology has been significantly advanced. In close cooperation with the experts from GSA, ESSP and ESA, NGTC has progressed in the topics of safety analyses and GNSS receiver requirements specifications.

For more information on NGTC, please visit **www.ngtc.eu** or contact **peter.gurnik@unife.org**.

Ongoing projects with UNIFE involvement

Capacity4Rail

Capacity4Rail (New Concept for Railway infrastructure and operation: adaptable, resilient and high capacity) is a four-year FP7 European research project that began in October 2013 with a budget of around €15 million. Coordinated by UIC, UNIFE's main role in the project is dissemination and exploitation. UNIFE members involved in the project are: Ansaldo STS, EFRTC, Knorr-Bremse, Oltis Group, Voestalpine VAE, Vossloh Cogifer and Vossloh Fastening Systems.

Capacity4Rail aims at paving the way for the future railway system, delivering coherent, demonstrated, innovative and sustainable solutions for track design, freight, operation and capacity as well as advanced monitoring. With a comprehensive system vision, Capacity4Rail contributes to the development of guidance documents which identify further actions to be undertaken and future technologies and systems to be developed. The full sustainability of the developed solutions and innovations will be assessed and scenarios for a smooth migration of the system from its current to its future state will be evaluated.

This year, Capacity4Rail entered its second eighteen month period. Innovative track concepts have emerged, requirements for future freight systems have been specified and current practices to improve capacity have been reviewed. As a result, future monitoring strategies are being shaped and the vision for 2030/2050 is getting clearer.

The Capacity4Rail consortium has organised two dissemination workshops this year. The first workshop, which took place in June at UIC headquarters in Paris, presented the results and technological developments achieved so far. In September, a second workshop dedicated to Sub-Project 2 on Freight was held in Brussels. The latest achievements and progress were presented to an invited audience comprised of railway undertakings, wagon manufacturers, wagon keepers, freight forwarders and terminal operators. A third dissemination workshop will take place in Brussels before the end of 2016.

For more information on Capacity4Rail, please visit **www.capacity4rail.eu** or contact **nicolas.furio@unife.org** or **eulalia.peris@unife.org**.

FOSTER RAIL

FOSTER RAIL (**F**uture **O**f **S**urface **T**ransport **R**esearch **RAIL**) is a three-year FP7 European research project that began in May 2013 with a budget of around €1.8 million. This project is a Coordination and Support Action project aimed at supporting the rail European Technology Platform (ERRAC – The European Rail Research Advisory Council) activities. This project is assisting ERRAC in defining research needs for their strategies and programmes in order to realise the objectives of the Europe-2020 strategy and further the vision of the White Paper 2011 for a competitive and resource-efficient future transport system. UNIFE is supporting UIC in the coordination of the project and is the leader of several Work Packages. UNIFE members involved in the project are: Alstom, AnsaldoSTS and MerMec.

As a first major step, the FOSTER RAIL project published the Strategic Rail Research Innovation Agenda (SRRIA) at the end of 2014. The SRRIA's purpose is to guide and inspire future rail research and innovation over the coming decades and to reaffirm Europe's need to offer a well-balanced, business-led and strong programme of research and innovation for the railway system.

In 2015 the FOSTER RAIL project partners worked on the preparation of the technology Roadmaps based on the research priorities established in the SRRIA. Ten Roadmaps have been developed: 1- Customer Experience 2- Strategic and Economics 3- Safety 4- Capacity, Performance and Competitiveness 5- Energy and Environment 6- Control, command, communication and signalling 7 –Infrastructure 8 – Rolling Stock 9 - IT and other enabling technologies 10 –Training and Education. These Roadmaps describe the rail research priorities taking into consideration past rail research and the Shift2Rail Master Plan. UNIFE, with the support of its members, is leading three Roadmaps (6, 8 and 9) and is involved in all Roadmap activities.

For more information on FOSTER RAIL, please visit: **ww.errac.org** or contact: **nicolas.furio@unife.org**.

SETRIS

SETRIS (**S**trengthening **E**uropean **T**ransport **R**esearch and **I**nnovation **S**trategies) is a two-year Horizon 2020 European Coordination and Support Action project that began in May 2015 with a budget of around €3 million. The SETRIS Project brings together five Transport European Technology Platforms (ETPs) – road, rail (ERRAC), air, water and logistics – and a variety of their membership as partners into one consortium. UNIFE is representing ERRAC in the SETRIS project. SETRIS aims to deliver a cohesive and coordinated approach to research and innovation strategies for all transport modes in Europe.

The main objective of SETRIS is to update the strategic, research and innovation agendas (SRIAs) of the different ETPs within a multi-modal and integrated transport system framework. It will be needed for a later identification of synergies between the European platforms' and the relevant national platforms' agendas. This work will highlight not only innovations or research activities that need to be carried out but also the changes in governance that are necessary to facilitate these agendas. Furthermore, it will drive the transport sector to a more multimodal system in a coordinated framework. Moreover, there will be a complementary task to address the need to benchmark past and present rail-related research initiatives and projects in order to assess the viability of different research topics and the potential market uptake of the results.

Lastly, SETRIS will deliver inputs for supporting and strengthening the future Transport Research Arena (TRA) Conference.

For more information on SETRIS, please visit **www.newrail.org/setris** or contact **nicolas.furio@unife.org**.

D Transport Research Arena (TRA)

The **Transport Research Arena** (**TRA**) conference is an intermodal conference organised by the main European Surface Transport Technology Platforms and the European Commission: the European Railway Research Advisory Council (ERRAC), the European Road Research Advisory Council (ERTRAC), WATERBORNE TP and the Conference of European Directors for Roads (CEDR).

The efficient and sustainable mobility of people and goods can only be achieved by a close co-operation between research and industry. The synergy between these two fields of activity is an asset that the transport sector has to wisely use for the benefit of the citizens. TRA 2016 aims at getting science, research and industry closer to each other to identify the challenges and opportunities they can efficiently face together.

TRA2016 conference will contribute to innovation in sustainable mobility for Europe, by bringing together all the stakeholders (researchers, experts, operators, industry and policy-makers) of the transport system. The main theme of TRA 2016 is – MOVING FORWARD Innovative Solutions for Tomorrow's Mobility.

TRA 2016 - will take place from 18-22 April 2016 at the National Stadium in Warsaw.

In 2015 UNIFE was involved in the TRA Management and Organisation committees to prepare the TRA 2016 edition. This participation allows UNIFE to ensure that rail will be well-represented during TRA 2016.

For more information on TRA 2016, please visit **www.traconference.eu** or contact **nicolas.furio@unife.org**.

E World Congress on Railway Research

World Congress on Railway Research (WCRR) is the world's biggest gathering of rail researchers and takes place every two years by bringing together hundreds of participants for a week of presentations and workshops to discuss about the latest developments in railway research and innovation. The next edition will be organised by Ferrovie dello Stato and it will take place in Milan between 30 May and 1 June 2016.

In 2015 more than 900 abstracts were submitted worldwide and the new initiative to allow participants to present prototypes, named Proof of Concept (POC) was met with great success.

UNIFE has been very active in supporting all the preparatory phases of the event by providing speakers and chairmen for the different sessions which will be focused on two main themes:

- *Vision and Future* - The sessions will present papers dealing with long term and far future applications, covering proposals and studies concerning what railway transportation and mobility will be towards 2050.

- *Today's Research* – The sessions will present papers dealing with near future applications, covering ongoing research and innovative solutions developed to improve today's railway transport and mobility across 49 topics.

UNIFE and its members will be involved with more than 20 presentations and almost 10 UNIFE member company chairmen will lead discussions during the sessions of the event. Moreover, UNIFE will have a stand in the exhibition area.

For more information on WCCC2016, please visit **www.wcrr2016.org** or contact **andrea.demadonna@unife.org**.

Signalling and ERTMS

SIGNALLING AND ERTMS

06

A. Technical activities - UNISIG in 2015
B. ERTMS Longer Term Perspective
C. ERTMS Political Activities
D. ERTMS Deployment statistics 2015
E. ERTMS Communications in 2015

In December 2015, UNISIG successfully delivered to the European Railway Agency (ERA) the second release of the ERTMS/ETCS Baseline 3 specifications. This hard work of the UNISIG experts confirmed, once again, the full commitment of the manufacturers to ERTMS.

The follow-up of the implementation of the ERTMS Breakthrough programme, the revision of the European Deployment Plans, the activities related to the innovative financing of ERTMS projects, as well as the creation in December of the "ERTMS Stakeholders' Platform" were amongst the key highlights on the political front.

A Technical activities - UNISIG in 2015

UNISIG delivers the Second Release of the Baseline 3 ERTMS/ETCS specifications

In December 2015, UNISIG successfully delivered the next release of Baseline 3 ("Baseline 3 Release 2") of the ETCS specifications. The process led by ERA in collaboration with UNISIG and the ERTMS Users Group (EUG) began in summer 2014.

This new milestone in the maintenance of the ERTMS/ETCS specifications is noteworthy for the following reasons:

- This new release includes error corrections "compatible" to the last legal issue of the specifications (formally adopted by the European Commission in January 2015). This key principle ensures backward compatibility[1], a strategic aspect to safeguard investments already made by some Member states ("early ERTMS implementers").

- This release will also introduce GPRS (General Packet Radio Service), an evolution on the telecommunication side of the ERTMS/ETCS specifications, needed by some other European countries to further increase the performance of the system.

The approval of the new set of specifications by the Commission's Railway Interoperability and Safety Committee (RISC) is planned for February 2016. Entry into force of the new Control Command and Signalling Technical Specification for Interoperability ("CCS TSI") is expected by end of 2016.

Other UNISIG-related news

In August 2015, UNISIG delivered to the sector the first draft of the FFFIS DMI-EVC (Driver Machine Interface – European Vital Computer). This document, which will be finalised in 2016, is an interface specification between the driver's desk and the ETCS on-board computer covering all protocol layers of communication, including physical layer and connectors.

Further to a successful evaluation process in July 2015, UNIFE, together with the UNISIG members, signed the Grant Agreement with INEA for a project funded by the CEF 1st call, which will include, not exclusively, activities related to the maintenance of the ERTMS specifications from 2015 until end of 2017.

UNISIG representatives have also participated (since September 2014) in workshops organised by ERA on the evolution of the radio communication system for railways. These activities will help prepare the commercial deployment of communications systems other than GSM-R (for ERTMS) expected to become obsolete by 2030.

[1] Backward compatibility ensures that vehicles equipped with Baseline 3 can run on Baseline 2 trackside equipment. This concept is at the heart of the ETCS Baseline 3 specifications. UNIFE considers that safeguarding investments and managing the evolution of the specifications will help to speed up the deployment of ERTMS.

B ERTMS Longer Term Perspective

Along with the "Recommendation" containing "Baseline 3 Release 2", ERA will also submit to the European Commission a document summarising the "longer term perspective" for the evolution of the ERTMS/ETCS specifications.

This activity, which started in May 2015, gathered and collected the inputs from representatives ("rapporteurs") from UNIFE, CER, EIM and the ERTMS Users Group (EUG).

The main objectives were to identify and analyse the different mid and long-term strategic challenges related to the evolution of the ERTMS/ETCS specifications. One of the key challenges, after the delivery of Baseline 3 Release 2, is to find the optimal balance between the stability of the specifications and the evolution of ERTMS, while guaranteeing interoperability and preserving investments.

This report, which representatives of the Member States will discuss at the beginning of 2016, will be used as a supporting document to define the ERA multi-annual work programme for activities linked to the ERTMS Specifications roadmap and for other supporting activities within the ERTMS Longer Term Perspective.

C ERTMS Political Activities

The European Commission supports the ERTMS "Breakthrough Programme" and revises the European Deployment Plans

Karel Vinck, the European ERTMS Coordinator, supported by the European Commission services, demonstrated once again the full commitment of the European Institution to ERTMS Deployment. The "**ERTMS Breakthrough programme**" should help speed up the deployment of ERTMS in Europe as it specifies a set of different actions for relevant rail stakeholders. UNIFE, with the support of its members, has been one of the major contributors and will continue to support the Commission in this respect in 2016.

The ERTMS Breakthrough Program also includes the revision of the **European Deployment Plans (EDPs)**, taking into consideration the investments already made as well as those planned by the different EU Member States. The revised EDPs were negotiated with the Member States in 2015 and are expected to be formally adopted in the second half of 2016.

The **TEN-T Days** held in Riga in June 2015 demonstrated once again that ERTMS is at the heart of the European Commission's strategy for Transport in Europe. A special session organised during the event offered a snapshot of the ongoing ERTMS-related activities from the technical, political and financial perspectives. Important topics to the manufacturing industry such as certification and authorisation were also tackled during the event.

In the autumn of 2015, UNIFE also started collaborating with the **ERTMS Deployment Management Team**, a consortium (INECO and Ernst & Young) tasked to ensure an efficient, synchronised, interoperable and timely implementation of ERTMS in Europe for each core network corridor, as well as ensuring the consistency on the network, with regard to both ERTMS trackside and on board equipment. This cooperation will continue in 2016.

Transport Commissionner Violeta Bulc testing the Siemens ETCS Live emulator at the UNIFE stand

ERA creates the "ERTMS Stakeholders' Platform" and the "ERTMS Development Board"

On 15 December, ERA held the kick-off meeting of the newly established "ERTMS Stakeholders' Platform" which will facilitate, with the involvement of decision-makers from the European railway sector, a harmonised approach to the development and deployment of ERTMS in Europe.

It will cover all aspects from the ERTMS specifications (alignment of the response to specification errors to a harmonised approach on engineering rules) to authorisation issues. A first subgroup will ensure the follow-up of the objectives included in the 2012 ERTMS MoU and the Breakthrough Programme; another will tackle issues related to testing, certification and authorisation. The work of the subgroups will begin in 2016 with full involvement of UNIFE and UNISIG.

Innovative financing of ERTMS deployment

With the adoption of the revised Deployment Plans expected in 2016, the major rollout programmes ongoing in several EU Member States and the limited EU funding available until 2020 for the deployment, the issue related to the financing of ERTMS remains a major priority for the sector.

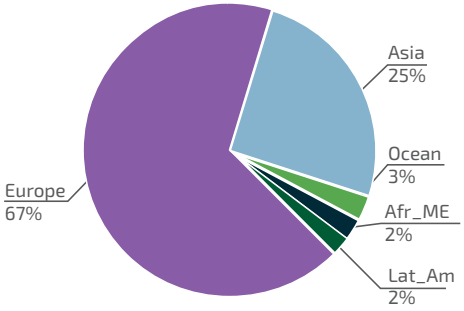
In 2015, the European Commission launched a study aimed at developing innovative financing schemes to support the deployment of ERTMS in Europe. These schemes, which UNIFE followed closely across 2015, would take advantage of new sources of private financing (including EFSI).

The Commission and the European Investment Bank (EIB) now expects Member States, infrastructure managers, railway undertakings, and rail equipment manufacturers to propose "quick-win projects". UNIFE will continue to monitor the implementation phase of these financing measures in 2016.

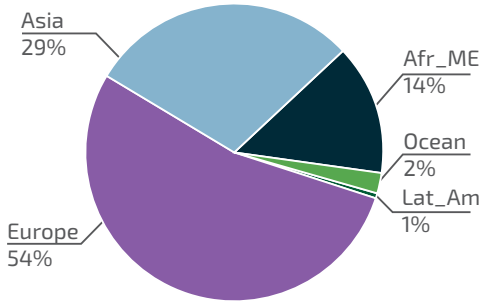
D ERTMS Deployment statistics 2015

Global ERTMS Deployement by Country

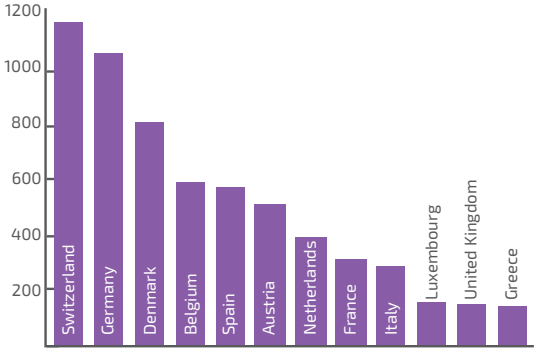
Global (ETCS L1 &/or L2) contracted vehicles in the World



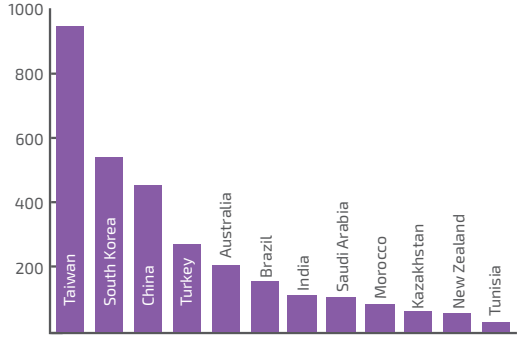
Global (ETCS L1 &/or L2) contracted tracks (km) in the World



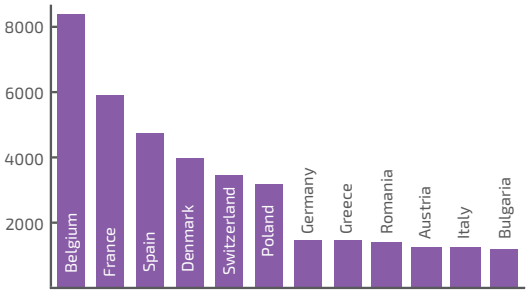
Global (ETCS L1 &/or L2) contracted vehicles in Europe



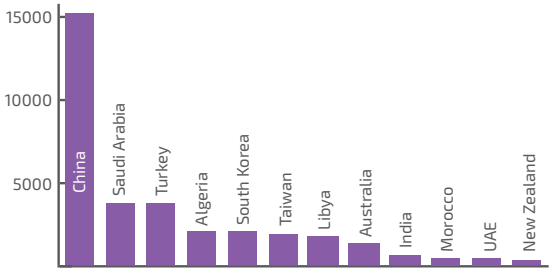
Global (ETCS L1 &/or L2) contracted vehicles in non-European countries



Global (ETCS L1 &/or L2) contracted tracks (km) in Europe



Global (ETCS L1 &/or L2) contracted tracks (km) in non-European countries



E ERTMS Communications in 2015

UNIFE General Assembly

Karel Vinck (European ERTMS Coordinator), Olivier Onidi (Director, DG MOVE) and Josef Doppelbauer (Executive Director, European Railway Agency) partook in the ERTMS session organised at the 2015 UNIFE General Assembly in Bucharest. This roundtable discussion was a unique occasion for the European Commission and ERA to share their point of view and vision on the development of ERTMS. This included the presentation of the ERTMS Breakthrough Programme.

ERTMS Roundtable at 2015 UNIFE General Assembly

ERA Control Command Railway Communication Conference (CCRCC) 2015

In September, over 300 delegates gathered in Lille for the European Railway Agency's CCRCC Conference. The event was an opportunity to obtain information about the latest ERTMS developments: from the presentation of rollout strategies of several Member States to experiences with ERTMS implementation from operators and infrastructure managers. Olivier Onidi (DG MOVE), Karel Vinck (ERTMS Coordinator) and Michael Cramer (Chairman, European Parliament Transport Committee) all joined forces to insist on the necessity for all EU Member States to pursue their efforts in deploying ERTMS in a coordinated and harmonised way, as it is still considered the backbone of the Single European Railway Area. During this event, UNIFE presented the new strategy developed by the European suppliers on an efficient method for the proof of conformity of the European Vital Computer (EVC).

Klaus Mindel, Chairman of the UNIFE ETCS Steering Committee

Cooperation with Brazil - ANTT

In the framework of its cooperation with the European Commission (DG MOVE) and the European Railway Agency (see page ##) a delegation from ANTT (Brazilian Ground Transportation Agency) also attended the ERA ERTMS Conference. As their study visit focused on railway signalling and, in particular, ERTMS, UNIFE organised a technical visit on the ***Betuweroute,*** the Dutch section of the Rail Freight Corridor A.

Cooperation with the Gulf Cooperation Council (GCC)

MENA SIGNALLING & TRAIN CONTROL SUMMIT

On 7-8 December 2015, UNIFE participated in the MENA Signalling & Train Control Summit in Dubai (UAE). The event brought together regional and international experts and academics to share their expertise and discuss the latest state-of-the-art signalling and train control technologies, where there was a particular focus on ERTMS.

UNIFE/UNISIG took this opportunity to present the development status ERTMS/ETCS specifications, as well as an outlook for the planned evolutions of the system in the future.

The event was also the occasion to witness the successful deployment of ERTMS in the Gulf countries (particularly in Saudi Arabia and the United Arab Emirates) and to strengthen the links between UNIFE and railway stakeholders in the GCC.

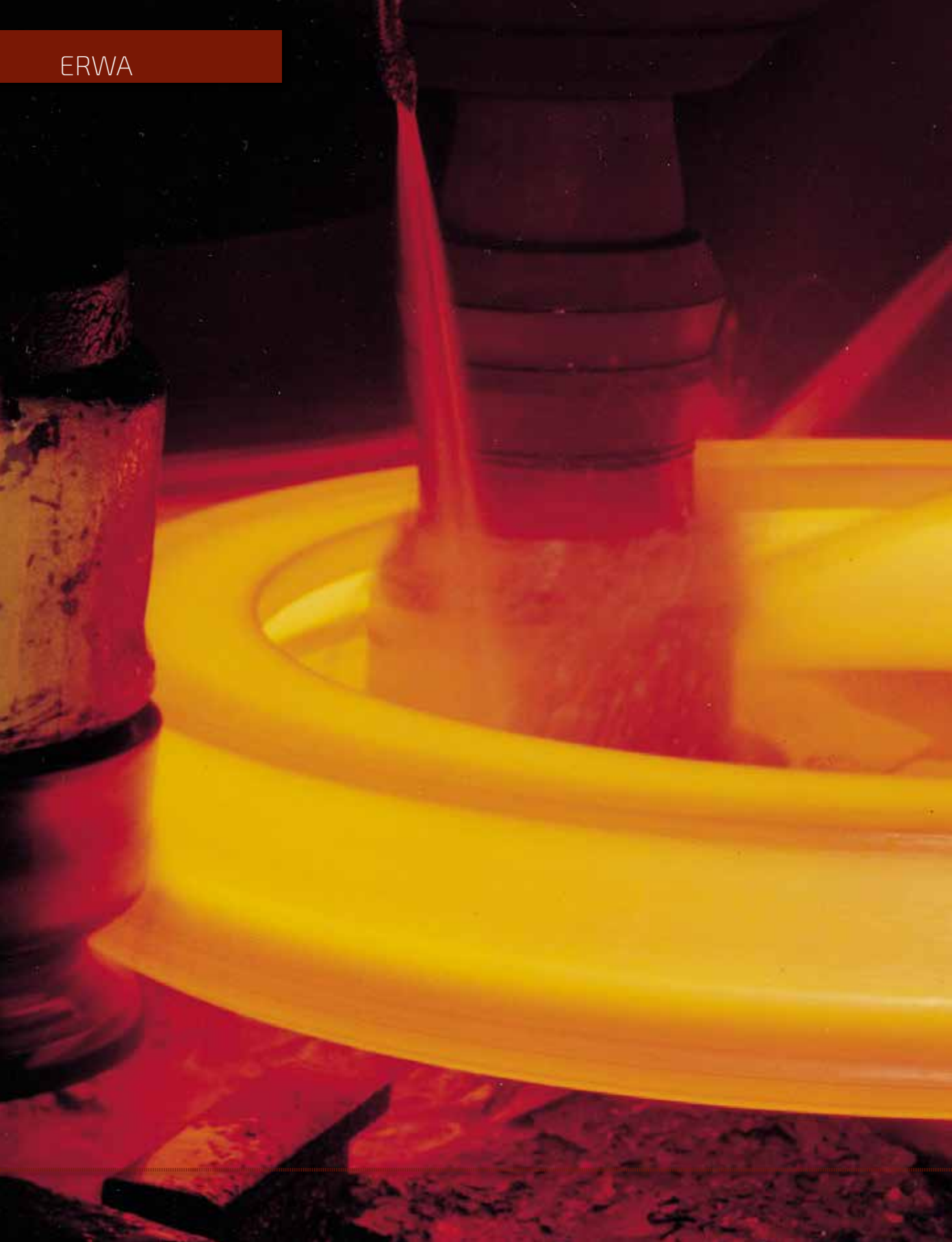
UNIFE also participated in the Smart Rail Europe Conference held in Amsterdam in May 2015 as well as the UIC GSM-R Conference held in September in Paris.

Other Communications

ERTMS factsheet 22:
ERTMS deployment in Sub-Saharan Africa

ERTMS Twitter

219 Tweets
456 Following
1,757 Followers



ERWA

07 | Railway Wheels and Wheelsets Committee

ERWA - Railway Wheels and Wheelsets Committee

ERWA, the UNIFE Railway Wheels Committee, currently comprises 10 companies, all of which produce railway wheels and wheelsets in 9 different European countries with deliveries to 5 continents. More specifically, these are: Bochumer Verein Verkehrstechnik, Bonatrans Group, CAF, GHH Radsatz GmbH, Lucchini RS, Lucchini Sweden, Lucchini Unipart Rail, Lucchini Poland, LBX and MG Valdunes.

At present, these ten companies are organised in five European groups, each of which is vertically integrated from forge to finished products: GHH-Bonatrans Group, CAF, MG Valdunes, BVV, and the Lucchini RS Group.

ERWA is divided into three sub-committees: the ERWA Development Committee, which is responsible for public relations, political issues and market trends; the ERWA Technical Committee, which deals with standardisation, regulation and research topics; and the ERWA Steering Committee, which coordinates all of the activities of these other committees as well as general management of ERWA.

Activities in 2015

In 2015 numerous activities coordinated by the ERWA Steering Committee were carried out. Specifically, these were:

- ERWA Public Relations activities
- Market trends evaluation
- ERWA statistics
- 18th IWC preparation
- Contribution to European standards and TSIs
- Initiation of activities regarding the drafting of the EURAXLES CEN Technical Report

The EURAXLES project was successfully completed in the spring of 2014. The objective of the project was the development of innovative, safer solutions for railway wheelsets with improved reliability in a cost effective way. Even though the project was completed in 2014, there is currently work being undertaken with the collaboration of the ERWA Technical Committee in order to draft a CEN Technical Report which will propose a finite element method for designing axles to address particular designs where beam theory cannot be used. The ERWA technical committee will also continue to follow the uptake of the project results in the standardization process at the EU level.

ERWA members with the organisers of the 18th IWC during a preparatory meeting in Brussels (April, 2015)

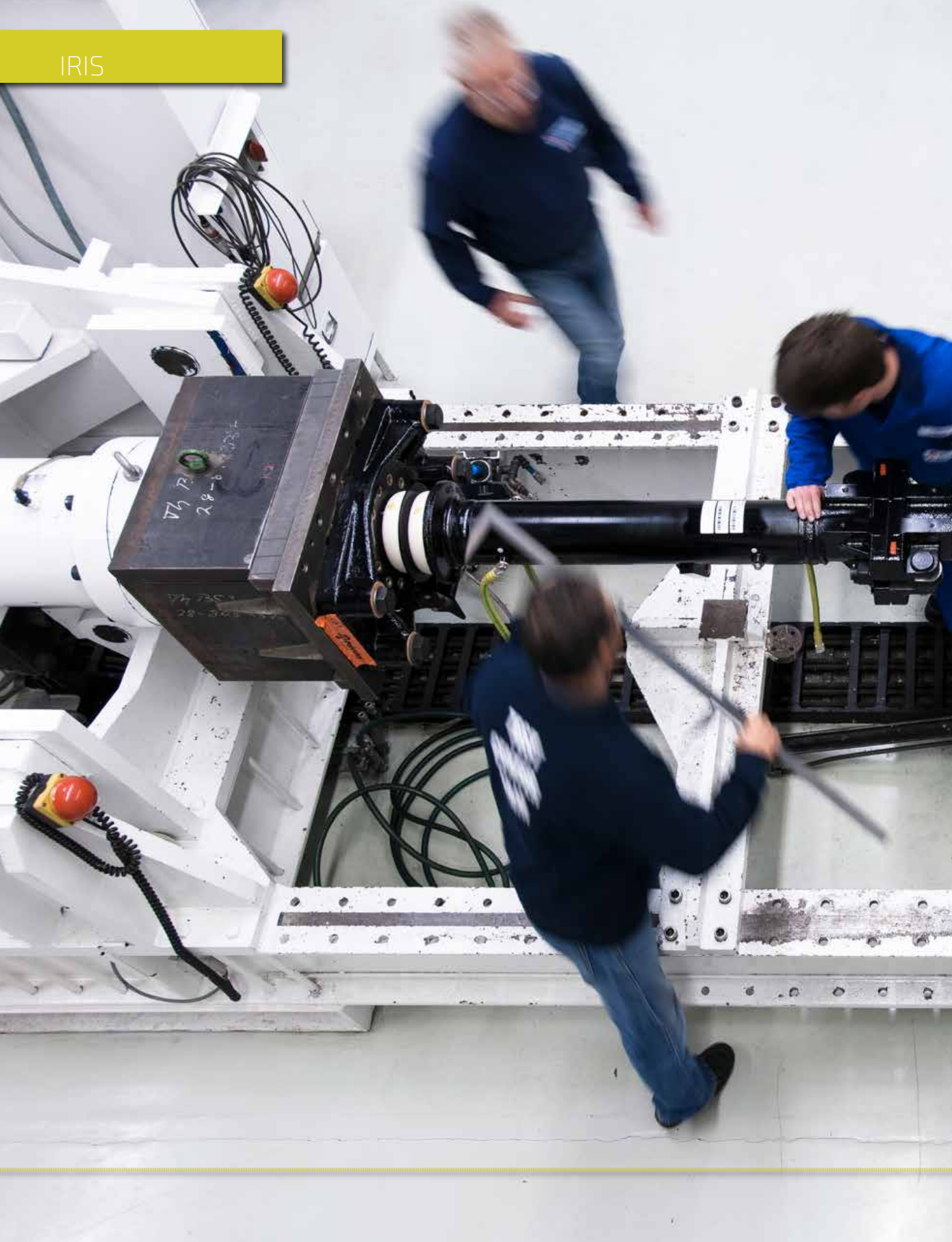
ERWA General Assembly

The ERWA General Assembly was held on 18-19 May 2015 in Ostrava, Czech Republic, hosted by Bonatrans. During this two day event, the yearly activities were presented by the committee chairmen: Mr Josu Imaz of CAF (ERWA Chairman), Mr Francesco Lombardo of Lucchini RS (Chairman of the ERWA Technical Committee) and Mr Jakub Weimann of Bonatrans (Chairman of the Development Committee). The ERWA chairmanship was then transferred to BVV, to Mr Karlheinz Springer. The mandate of the Development Committee and Technical Committee chairmen was renewed for another year in order to ensure the continuity of ERWA's work.

18th International Wheelset Congress

UNIFE and ERWA are now working towards the organisation of the 18th edition of the International Wheelset Congress (IWC), which will take place from 7-10 November 2016 in Chengdu, China. The preparations for this 18th IWC are well underway, with many organisational and promotional activities having taken place in 2015, in collaboration with the organisers (Southwest Jiaotong University, Sclead and China Railway Society). The IWCwill bring together wheelset experts from around the world to share and exchange on the latest key innovative developments in the area. For more information on the next IWC, please visit www.iwc2016.com.

18TH INTERNATIONAL WHEELSET CONGRESS



IRIS

08

A. IRIS achievements and strategic development
B. Increased global awareness of IRIS—focus on operators
C. Technical progress

A IRIS achievements and strategic development

In December 2015 the total number of **IRIS certified sites reached 1225 globally**, already meeting the 2015 annual business objective and demonstrating the IRIS contribution to the continual development and improvement of rail companies. Following the strategy defined in past years, IMC continued to invest in promoting IRIS globally through active participation in many rail events: EXPO 1520 in Moscow, UIC High Speed World Congress in Tokyo, a visit to Swedtrain as well as several seminars.

2015 kicked off with the confirmation of a new chairman of the IRIS Advisory Board (IAB): Mark Manley, Vice President Quality at Bombardier Transportation. At the same time, Marcus Schmid, Vice President Quality at Voith, was confirmed as the new IRIS Vice Chairman.

In 2015, the IRIS Steering Committee concentrated on the deployment of the strategy defined in 2014, aimed at:

- Further proving the added value of IRIS by demonstrating the positive impact of an IRIS compliant management system on product quality
- Improving the IRIS standard and its implementation
- Increasing the acceptance of IRIS
- Improving the quality of audits and auditing system as defined by the standard
- Continuing to promote an adequate culture of quality for the rail sector worldwide

Several activities have already been initiated by the IMC in order to fulfil the objectives defined in the official vision and mission of IRIS. Furthermore, the UNIFE Presiding Board took into consideration the international evolution of IRIS and decided to further develop IRIS requirements towards an ISO standard.

By improving the auditing system and helping to increase the acceptance of IRIS, the **auditor management** system has been improved by incorporating the experience from auditors from other industry sectors with similar processes (automotive, aerospace, nuclear, chemical, electrotechnic) and not limited to rail sector experience. Also the IRIS Steering committee agreed to give auditors the possibility to work for several certification bodies; the implementation of this new policy is currently under preparation.

One main activity was the setup of a communication strategy with operators through the development and formal confirmation of Memorandums of Understanding (MoUs). MoUs with Deutsche Bahn (German Railways), RZD (Russian Railways), and SNCB (Belgian Railways) were signed in 2015 and additional IRIS MoUs are planned with other major operators throughout 2016.

B Increased global awareness of IRIS — focus on operators

In August 2015, UNIFE signed a MoU on IRIS with Deutsche Bahn AG. The objective of this MoU is to promote mutually beneficial cooperation between Deutsche Bahn AG and UNIFE on quality standards in the rail sector. Such cooperation is expected to focus on increasing the exchange of knowledge and experience in a bilateral context on product quality, which is defined as product-related fulfilment of customer requirements. The activities outlined in this MoU endeavour to create a favourable context for the development of the rail sector worldwide.

Furthermore, in September 2015 the UNIFE Director General signed a MoU on IRIS with RZD (Russian Railways), which focuses on the establishment of a regular dialogue within the existing UNIFE/IRIS committees and the development and dissemination of the IRIS scheme in Russia and CIS. The overall goal of the activities outlined in this MoU is to reinforce a favourable context for the development of the rail sector worldwide and especially in Russia and the CIS.

This MoU follows eight years of cooperation between UNIFE and the Russian Non-commercial Partnership Union of Industries of Railway Equipment (NP UIRE) and outlines the continued promotion of the IRIS scheme in Russia and the CIS. At present, there are over 90 Russian companies that are IRIS certified, making it one of the largest IRIS certified markets in the world, which is largely a result of the past close cooperation between IRIS and RZD/NP UIRE.

Valentin Gapanovich, Senior Vice-President of RZD, commented that the signature of this new MoU will give further impetus for IRIS development and added that with the announcement of the new IRIS scope of certification on infrastructure, he also expects further improvements in product quality.

The signature of the MoU took place during the EXPO 1520 where UNIFE/IMC participated for the second time, represented by Philippe Citroën and Bernard Kaufmann who took the opportunity to exchange with Russian industry and operator representatives.

A third MoU on IRIS was signed in December 2015 with SNCB (Belgian Railways). Jo Cornu, CEO of SNCB, signed on behalf of the operator and UNIFE Director General Philippe Citroën signed on behalf of UNIFE/IRIS.

Valentin Gapanovich (Senior Vice-President, RZD) and Philippe Citroën (Director General, UNIFE) shaking hands after signature of the MoU

Dr Volker Kefer, Member of the DB Management Board for Infrastructure, signs DB-UNIFE MoU on IRIS

C Technical progress

IRIS evolutions

In line with the IRIS strategy, work on future IRIS evolutions began within the Technical Forum for Improvements (TFI), as defined in its mandate which identifies several technical improvements. The mandate covers:

- Consideration of feedback received from the field (user, stakeholders, state of the art)
- Improvement of the questionnaire, especially maturity level "qualified " and "optimised" and including input from released guidelines

The result of several workshops with participants from experts from the industry, operators and certification bodies was released on 1 July with the launch of the IRIS Addendum 2015.

From July onward:

- The IRIS questionnaire is transformed in an **assessment sheet**, showing the compliance maturity levels ("defined", "qualified" and "optimised").
- The maturity levels "qualified" and "optimised" are considerably improved and contain links to the **released IRIS guidelines**
- Examples are added to support companies with implementation hints.
- New product scope "Infrastructure"

These changes bring a huge simplification in the evaluation and help auditors (and ultimately companies) with the evaluation and implementation of the IRIS requirements. Furthermore, following the feedback from IRIS certified companies, the IMC has enhanced the application of the IRIS Addendum 2015 through tutorials and also carried out several training sessions at certification bodies' premises to ensure appropriate understanding of the changes by their auditors.

Continuing the long-term approach and taking into account the international evolution, a working group has been established in August to work on the improvements of the IRIS requirements also considering the ISO 9001:2015 evolutions including the new ISO high-level structure.

During the ISO/TC 269 plenary meeting in Beijing on 22 October, the country representatives considered the presentation made by UNIFE and decided to put the "A" liaison for UNIFE to ballot. The result of the voting is planned to be communicated at the beginning of 2016. If accepted, this will allow UNIFE to propose documents for standardization and to nominate experts in the working groups.

Furthermore, it was decided to set up an ad hoc group to immediately start preparing the future ISO Standard ("IRIS goes ISO") activities. The staffing of the ad hoc group will be concluded in early 2016 and will allow for the start of activities during the first semester of 2016.

New guidelines

In line with the goal of supporting its stakeholders, the IMC together with the IRIS technical working groups further developed new guidelines on **"Configuration management"** and **"RAMS/LCC"**. These guidelines aim to help companies with the implementation of the IRIS requirements and achieve a common understanding on these topics.

Information tools and systems:

Across 2015, the IRIS tools were further refined to enable safe and reliable work for all stakeholders.

a) The IRIS auditor training was updated and, in addition to the planned trainings in 2015, five more trainings were scheduled and carried out in Belgium, Russia and China. The training performed by the IMC ensures the same transfer of knowledge to all new auditors.

b) Further efforts to improve the system brought about upgrades to the database in order to improve the management and control of auditors. Similar to other sector schemes, this allows for the consideration of auditor competences in the fulfilment of IRIS certification requests from interested companies. This project will continue in 2016.


SECURITOP

COMMUNICATIONS

09

A. Events
B. Publications
C. Interactive Analysis

A Events

European Railway Award and UNIFE Annual Reception 2015

Since 2007 the European rail sector has celebrated and recognised personalities in the political and technical field as well as kicking off the political year with addresses from high-level EU policy makers. The ceremony, which took place at the Musées royaux d'Art et d'Histoire in Brussels, was followed by the joint CER-UNIFE Annual Reception and attracted more than 500 guests from all over Europe, including senior officials and transport stakeholders. The European Railway Award 2015 was presented on 21 January to Lord Andrew Adonis, former Secretary of State for Transport in the UK (2009-2010), and to industrial designer Alexander Neumeister.

Keynote speaker of the gala evening was the recently appointed European Transport Commissioner, Violeta Bulc, who congratulated the winners and spoke on her upcoming work to improve rail transport, remarking, "Rail is an essential part of my vision of transport for next five years. The adoption of the Fourth Railway Package is my main priority for that sector. It should finally ensure stability of the regulatory framework as there will not be any 'Fifth Railway Package' if the fourth one as adopted by Council and European Parliament is sufficiently ambitious."

Latvian Transport Minister Anrijs Matīss presented the plans of the Latvian Presidency for the first semester of 2015. He highlighted: "Rail transportation and, in particular, rail freight services play a vital role in the Latvian economy. We, therefore, strongly believe that the railway sector has a crucial role to play in ensuring the competitiveness and growth of the Union."

Representing the European Parliament, MEP Michael Cramer (Greens/EFA, DE), Chairman of the Committee on Transport and Tourism, addressed the work of his Committee on rail transport under his leadership and commented: "The European Railway Award puts the spotlight on the most environmentally-friendly mode of transport. It shows that we should not be shy in communicating how attractive, comfortable and sustainable travelling by train can be!"

As UK Secretary of State for Transport, Political Award winner Lord Andrew Adonis spearheaded the plan for High Speed 2, the proposed high-speed railway line from London to Birmingham and the north of England—which was adopted by the British Government in 2010. Under his leadership in the Ministry for Transport, the British rail system has improved extensively as a result of his many initiatives in high speed and mainline electrification.

Jochen Eickholt, CEO of Siemens Mobility Division, gave the laudatory speech for Lord Andrew Adonis. When accepting the award, Lord Adonis commented: "Policy on high speed rail in the UK has been revolutionised in the last five years, drawing on the success of high-speed rail in continental Europe and Asia. HS2 and HS3 are set to become the biggest infrastructure projects in Europe and their impact is driving positive assessments of high-speed rail more widely across Europe, Asia and the United States. I'm delighted and privileged to have played a part in bringing about this fundamental change, which will also help to create far more effective, trans-European transport networks built around state-of-the-art rail systems."

The laureate for the Technical Award 2015, Alexander Neumeister, is one of the most renowned industrial designers worldwide. Some of his famous designs include the German ICE-3 high-speed trains, the MagLev trains 'Transrapid', the Japanese 'Shinkansen 500 Nozomi', the German DMU trains 'Talent' and 'Desiro' or the C1 and C2 train-generations of the Munich subway.

The laudatory speech for Alexander Neumeister was given by Pablo Vázquez Vega, President of Renfe Operadora. When accepting his award, Alexander Neumeister remarked, "For nearly 45 years I have been designing trains! And still today, I see no other means of transport - be it private-cars, buses or airplanes, which combine so many positive factors - so many 'unique points of sale' - so to say."

Each award is accompanied by a donation of €10.000 to the charity of the laureate's choice. Lord Andrew Adonis gave the prize money to Teach First, and Alexander Neumeister gave his to the Mia Seeger Foundation.

The next edition of the European Railway Award (2016) will be held in Brussels on 16 February. For more information on the 2016 edition, please visit **www.europeanrailwayaward.eu.**

UNIFE General Assembly 2015 held in Bucharest, Romania

UNIFE held its 25th annual General Assembly at the J.W. Marriott hotel in Bucharest, Romania from 17-19 June, gathering nearly 200 participants. UNIFE members selected Bucharest for their 2015 General Assembly to demonstrate their hope that Romania and other countries in the region will absorb available EU structural funds to invest in their rail systems and also to draw attention to the enormous potential of the Romanian rail market.

In addition to attending to the Association's business, the General Assembly programme included presentations and commentary from industry CEOs and high-level speakers from the EU and Romanian government, including Members of European Parliament, Claudia Țapardel and Iuliu Winkler, senior officials from the Romanian Ministry of Transport, European Commission, ERTMS Coordinator, Karel Vinck, and Executive Director of the European Railway Agency, Josef Doppelbauer and a high-level official from the European Investment Bank. After a keynote speech delivered by Romanian Secretary of State for Transport, Iulian Matache, and a video address from EU Commissioner for Regional Policy, Corina Crețu, attendees listened to a presentation on the Romanian rail system from the Romanian Infrastructure Manager, CFR Infrastructure, and high-level roundtables on EU investment for rail, EU Rail Industry Competitiveness and Market Leadership, EU Transport Policy, and on developments in ERTMS. Also joining the General Assembly after participation in the Fourth Railway Package Technical Pillar's successful trialogues, Olivier Onidi, Director of the European Mobility Network at the European Commission's DG MOVE, reported on the impact the Technical Pillar will have on European railways and the industry, stating, "UNIFE and the rail industry have been on our side at the genesis and throughout the discussion about the Technical Pillar of the Fourth Railway Package, and after yesterday's agreement there will now be a true European landscape for railways."

As a large Member State in Southeastern Europe, Romania and its rail system play a crucial role in the completion of the Single European Railway Area, especially with the two TEN-T Corridors passing through the country (Orient/East Med and Rhine/Danube corridors). Moreover, the European rail industry is heavily invested in the area, with the rail manufacturing industry employing around 50.000 individuals and the broader sector (including operators and infrastructure managers) employing at least 110.000.

In a video message, EU Commissioner for Regional Policy Corina Crețu remarked, "For the 2014-2020 period, while it's too soon to make a final estimation considering that some of the Operational Programmes have not yet been adopted, nevertheless we expect that EU funds available for transport to be similar to the €82 billion made available during the previous period (2007-2013). However, there are new changes in Cohesion Policy funding and we will focus more on intelligent and ecological solutions that encourage multimodal systems, alternative fuel, and less on investment in basic infrastructures such as road. For railways, we hope that the share via CEF and the Cohesion Fund will be larger compared to the previous period."

This General Assembly was also the opportunity to celebrate a significant growth in its membership as UNIFE members ratified the admission of 13 new members: BLUE Engineering; CEG Elettronica Industriale; CONSOLIS Rail; DIGINEXT; France Signalisation; Frauscher Sensortechnik; Keymile; LOGIPLUS; MIPRO OY; SAFERAIL; STABIRAIL; TATRAVAGÓNKA; TEXELIS.

The UNIFE members have selected Amsterdam as the location for the 2016 General Assembly which will take place on 23 June 2016.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TEN-T Days 2015 held in Riga, Latvia

The biggest high-level policy event on TEN-T of the year was held in Riga, Latvia, on 22-23 June. Co-organised by the European Commission and the Latvian Presidency of the Council of the EU, it brought together more than 1000 participants, including EU Commissioner for Transport Violeta Bulc, Transport Ministers of the EU Member States, Members of the European Parliament, CEOs and key stakeholders. The discussions on the future of the European transport infrastructure policy were particularly focused on the implementation and financing of the TEN-T Core Network Corridors.

UNIFE had a prominent stand in the exhibition of the conference which showcased the diverse activities of the Association. Transport Commissioner Bulc and Latvian Transport Minister Anrijs Matīss were welcomed on the UNIFE stand by Philippe Citroën and had the opportunity to try out the ETCS live simulator, kindly provided by Siemens. The simulator, which allowed participants to test drive a train equipped with ETCS, was one of the big hits of the exhibition.

The TEN-T Days demonstrated once again that ERTMS is at the heart of the European Commission's strategy for Transport in Europe. The deployment of ERTMS remains a key priority, as reflected a session chaired by Sian Prout (Head of Unit, Single European Railway Area, DG MOVE). During this panel attendees were provided with an update of the latest developments concerning ERTMS, in the framework of the ERTMS Breakthrough Programme. This programme, launched at the beginning of 2015 by Karel Vinck (European ERTMS Coordinator) with the support of the European Commission, details the necessary objectives to be reached by the end of 2016 to speed up the deployment of ERTMS in Europe. The session offered a snapshot of the ongoing ERTMS-related activities, with most notably the revision of the ERTMS deployment plan (in close cooperation with the EU Member states), studies on new ways of financing ERTMS projects but also exchanges on the stability and long-term evolution of the ERTMS specifications.

Many of the debates during the TEN-T Days focused on the Work Plans prepared by each one of the 11 European Coordinators for the TEN-T. These Work Plans summarise the current state of infrastructure along each of the 9 core corridors, as well as for ERTMS and Motorways of the Sea, and set out the challenges and critical issues for future infrastructure development. The Work Plans will serve as a basis for action until 2030 because they set the framework for investment from public and private sources both at European and national level. The next TEN-T days will be held on 20-22 June 2016 in Rotterdam, Netherlands.

Other events in 2015 (selection)

15/3 UNIFE's stand at SIFER, Lille, France

29/4 UNIFE presentation during ASEM Transport Ministers' Meeting, Riga, Latvia

8/6 UNIFE receives APTA delegation at UNIFE stand during at UITP World Congress, Milan, Italy

7/7 UNIFE at UIC High Speed Rail, Tokyo, Japan

9/7 EU Ambassador to Japan, Viorel Isticioaia-Budura, at UNIFE EU-Japan Industry-Operator reception, Tokyo, Japan

22/9 UNIFE stand at TRAKO, Gdansk, Poland

4/10 UNIFE present at APTA Annual Conference, San Francisco, USA

26/10 UNIFE present in Milan for the Fourth Railway Package event, Milan, Italy

B Publications

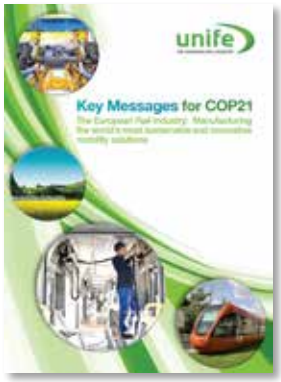
World Rail Market Study

Every two years, UNIFE and its members coordinate the research and publication of the UNIFE World Rail Market Study (WRMS), which is then officially announced by the UNIFE Chairman at InnoTrans, the most important trade fair for the rail industry, held in Berlin. The study covers the development of the global rail supply market based on detailed analysis of more than 50 focus countries, including the major existing rail markets and the most promising emerging ones, which are clustered into seven regions.

The most recent, fifth edition, published in September 2014, reported that despite low economic growth and public deficit problems in several important countries the world rail supply industry steadily grew at approximately 1.5% per annum in the period from 2011 to 2013. The study, which was based on the trends and future orders, forecasted annual growth of the industry to increase to 2.7% year over year until 2019.

The fifth edition of the WRMS has been extremely popular and the study remains a trusted tool for rail sector stakeholders around the world. At the end of 2015, the UNIFE WRMS Steering committee convened to begin work on the sixth edition which will be prepared over the first half of 2016 and announced at InnoTrans 2016 at the end of September.

Other publications 2015



UNIFE's Key Messages for COP21

UNIFE Briefing for the Latvian Presidency of the Council of the European Union

UNIFE Briefing for the Luxembourg Presidency of the Council of the European Union

About UNIFE Guide

The European Rail Industry Guide

Interactive Analysis

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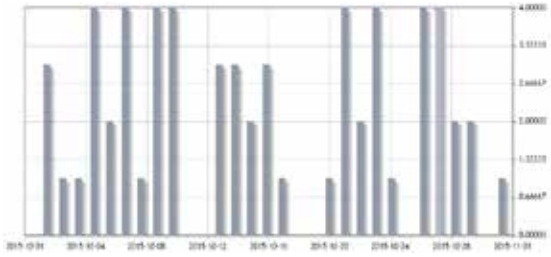

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1,803 +9%
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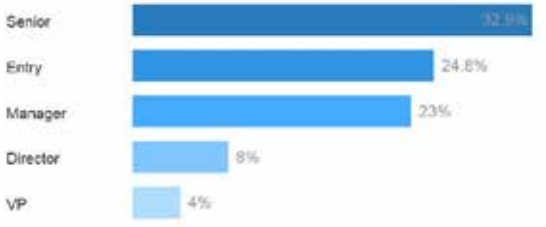

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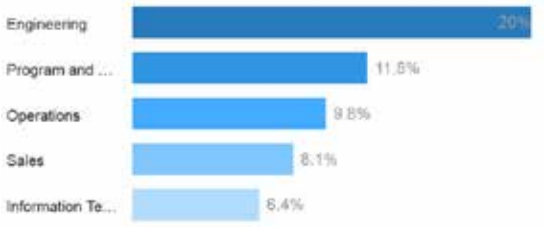

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10 | A. Full Members
B. Associated members

A UNIFE Members

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Ⓑ Associated Members

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Associazone Industrie Ferroviarie (ANIE/ASSIFER), **Italy**
www.anie.it

Austrian Association of the Railway Industry, **Austria**
www.bahnindustrie.at

European Federation of Railways Trackworks Contractors (EFRTC)
www.efrtc.org

Fédération des Industries Ferroviaires (FIF), **France**
www.fif.asso.fr

Holland Rail Industry, **Netherlands**
www.hollandrailindustry.nl

Spanish Railway Association (MAFEX), **Spain**
www.mafex.es

Association for Railway Automation, Signalling, Telecommunication and Industry (RASTIA), **Bulgaria**
www.rastia.org

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www.riagb.org.uk

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Association for Rail Industry Companies (SWEDTRAIN), **Sweden**
www.swedtrain.org

Swissrail Industry Association, **Switzerland**
www.swissrail.com

UNISIG

Der Verband der Bahnindustrie in Deutschland (VDB), **Germany**
www.bahnindustrie.info

Zentralverband Elektrotechnik- und Elektronikindustrie (ZVEI), **Germany**
www.zvei.org


RJ IF 501

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11

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B. Best wishes to the UNIFE Staff that left the team in 2015

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B UNIFE wishes all the best to those who left the team in 2015

Maxime Schaub-Crouan

Giorgio Travaini
(joined Shift2Rail Joint Undertaking)

Acronyms

APTA	American Public Transportation Association
ATO	Automatic Train Operations
CBTC	Communications Based Train Control
CEE	Central and Eastern Europe
CEF	Connecting Europe Facility
CEN	European Committee for Standardisation
CENELEC	European Committee for Electro-technical Standardisation
CER	Community of European Railway and Infrastructure Companies
CIS	Commonwealth of Independent States
COP(21)	Conference of Parties
CSM	Common Safety Methods
DG MOVE	Directorate General for Mobility and Transport
DG R&I	Directorate General for Research and Innovation
DG TRADE	Directorate General for Trade of the European Commission
DPF	Diesel Particle Filter
DMI	Driver Machine Interface
DMU	Diesel Multiple Unit
EC	European Commission
ECB	Eddy Current Brakes
EFRTC	European Federation of Railway Track-works Contractors
EFSI	European Fund for Strategic Investments
EIB	EIB – European European Bank
EIM	European Rail Infrastructure Managers
EMC	Electro-Magnetic Compatibility
EP	European Parliament
ERA	European Railway Agency
ERFA	European Rail Freight Association
ERDF	European Regional Development Fund
ERRAC	European Rail Research Advisory Council
ERTMS	European Rail Traffic Management System
ERWA	European Railway Wheels Association
ETCS	European Train Control System
ETS	European Trading Scheme
EU	European Union
EURNEX	European Rail Research Network of Excellence

FP7	Seventh Framework Programme
FTA	Free Trade Agreement
FRS	Functional Requirement Specification
GCC-SG	Gulf Cooperation Council Secretariat General
GHG	Greenhouse Gas
GRB	Group of Representative Bodies
GPA	Government Procurement Agreement
GPRS	General Packet Radio Service
IEC	International Electro-technical Commission
IMC	IRIS Management Centre
IPs	Innovation Programs
IRIS	International Railway Industry Standard
ISAB	Independent Safety Assessment Body
ISO	International Organisation for Standardization
ITRE	Committee on Industry, Research and Energy in the European Parliament
ITS	Intelligent Transport Systems
JPCR	Joint Programming Committee Rail
JRC	Joint Research Centre
JSG	Joint Sector Group
JU	Joint Undertaking
LCC	Life Cycle Costs
LOC & PAS	Rolling Stock Locomotive and Passenger Carriages
LPAA	Lima-Paris Action Agenda
MEP	Member of European Parliament
MG	Mirror Groups
MoU	Memorandum of Understanding
NB-Rail	Association of Notified Bodies
NIB	National Investigation Bodies
NRB	Network of Representative Bodies
NRMM	Non Road Mobile Machinery
NSA	National Safety Authority
NP UIRE	Russian Union of Industries of Railway Equipment
OECD	Organisation for Economic Co-operation and Development
OTM	On Track Machines
ORS	Operational Requirement Specification

NOx	Nitrogen Oxide
PPMC	Paris Process on Mobility and Climate
PPP	Public Private Partnership
R&D	Research and Development
RAMS	Reliability, Availability, Maintainability, Safety
RDD	Register of Notified National Rules
RFE	Rail Forum Europe
RINF	Register of Infrastructure
RISC	Railway Interoperability and Safety Committee
RZD	Russian Railways
S&R	Standards and Regulation
SMEs	Small and Medium-sized Enterprises
SRG	Standards and Regulation Group
SRRA	Strategic Rail Research Agenda 2020
SRRIA	Strategic Rail Research and Innovation Agenda 2050
SRT	Safety in Railway Tunnels
STC	Sustainable Transport Committee
TAP/TAF	Telematic Application for Passengers and Freight
TCMS	Train Control Management System
TecRec	Joint UNIFE and UIC Technical Recommendations
TEN	Trans-European Networks
TEN-T	Trans-European Network for Transport
TG	Topical Groups
TMP	Technical Management Platform
TRAN	Committee on Transport and Tourism in the European Parliament
TRA	Transport Research Arena
TRB	Transportation Research Board
TSI	Technical Specification for Interoperability
TTIP	Transatlantic Trade and Investment Partnership
UIC	International Union of Railways
UIP	International Union of Private Wagon Owners
UIRR	International Union of combined Road-Rail transport companies
UITP	International Association of Public Transport
UNFCCC	United Nations Framework - Convention on Climate Change
UNISIG	Union Industry of Signalling
WTO	World Trade Organization

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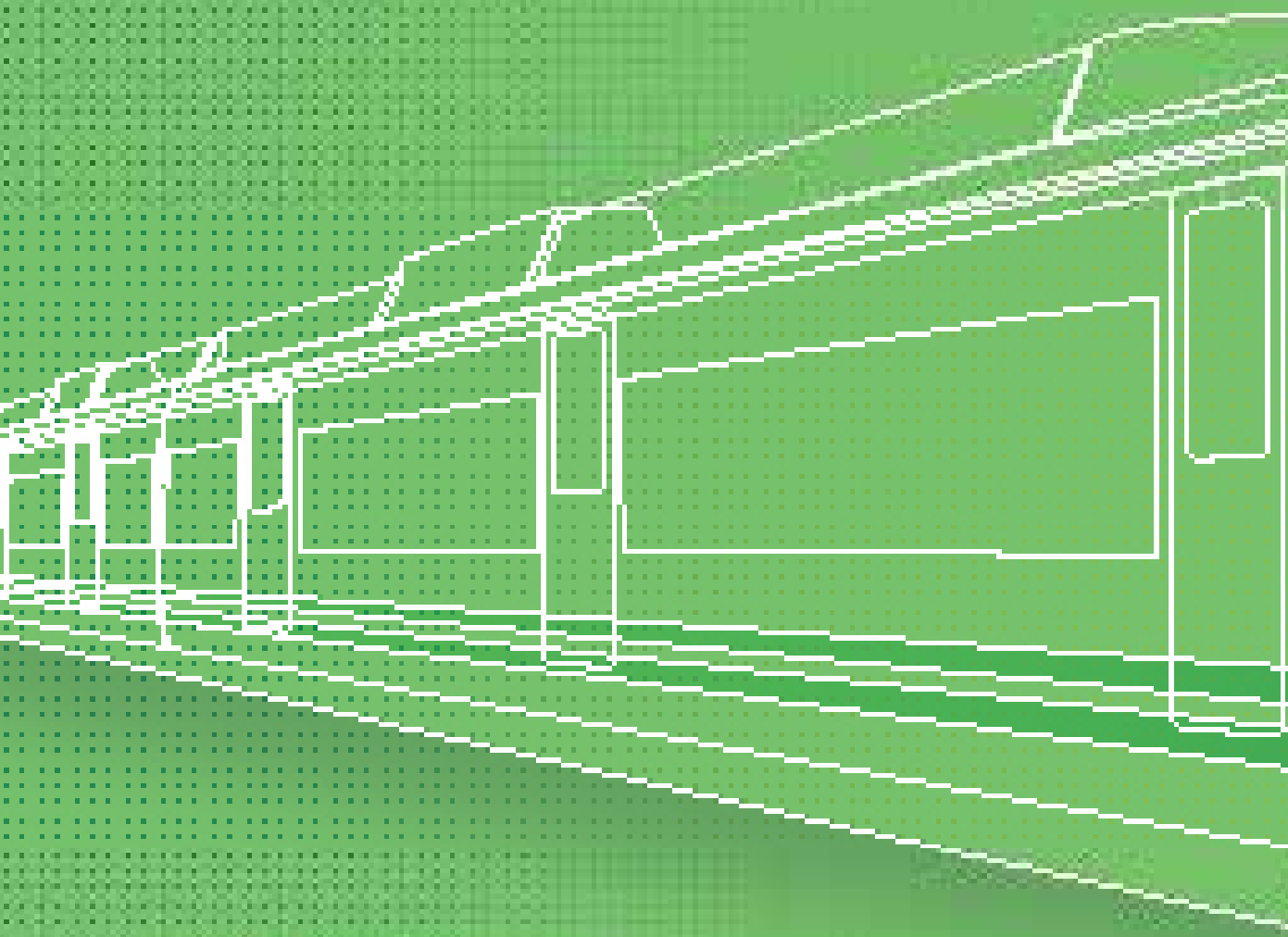

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