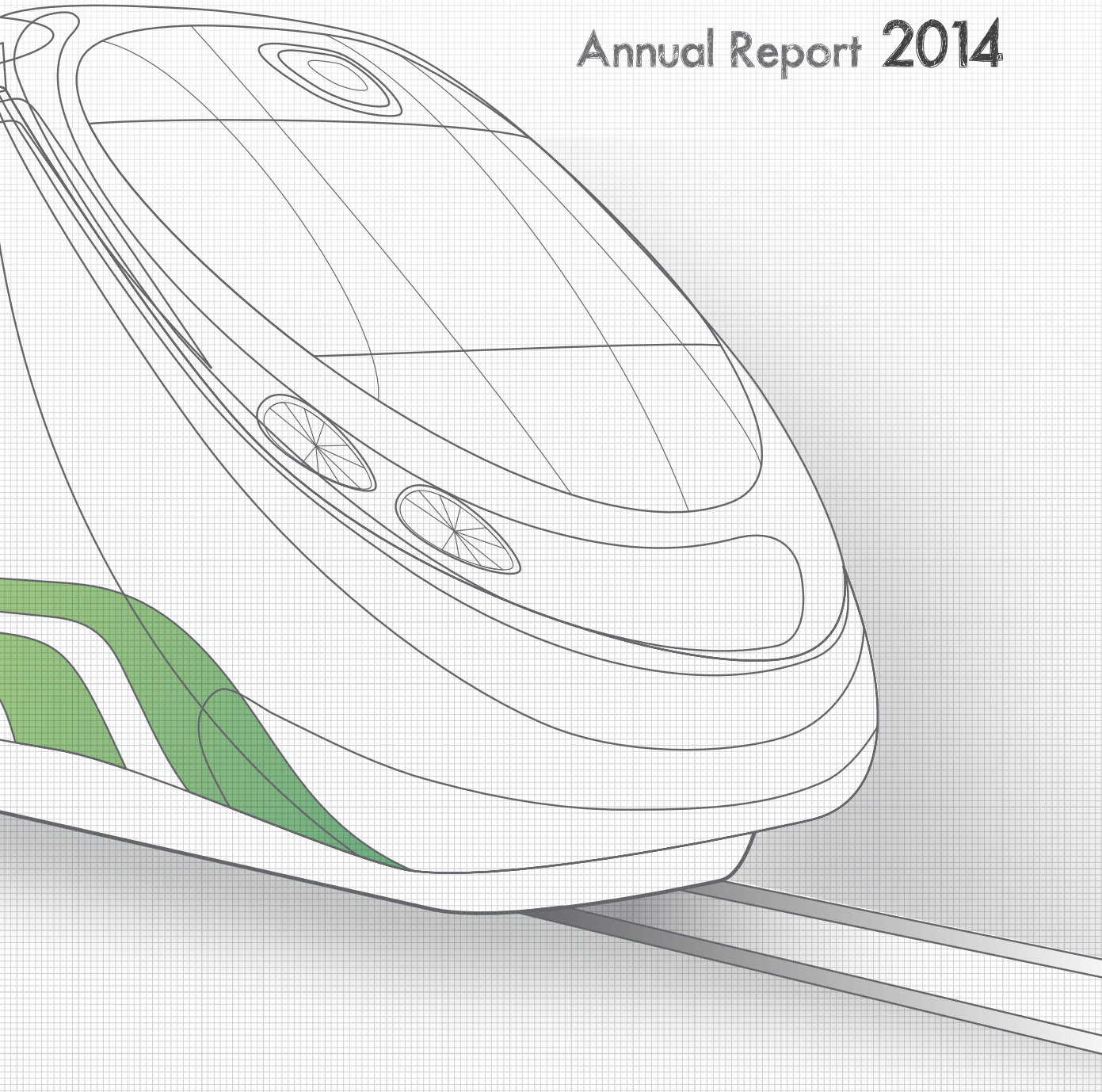
unife
THE EUROPEAN RAIL INDUSTRY

Annual Report 2014



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UNIFE – THE EUROPEAN RAIL INDUSTRY
AVENUE LOUISE 221, BTE 11
B – 1050 BRUSSELS
www.unife.org | general@unife.org
Tel: +32 2 626 12 60 | Fax: +32 2 626 12 61

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Message from the Chairman and the Director General

Dear UNIFE Members, Partners, and Supporters,

2014 was an unprecedented year for our Association. In addition to being a major transitional year for the European Institutions, with European elections being held in May, a new European Parliament (EP) taking office in July, and a new European Commission (EC) in November including a new Commissioner for Transport Violeta Bulc; UNIFE has some major accomplishments to note for 2014, but also some considerable challenges for our Industry in the near future. As you will read in detail in this report, UNIFE continues to push the EU to focus on the importance of rail both as a key pillar of European mobility policy but also to bolster one of Europe's major industries that leads its global market.

The most outstanding news resulting from our Association's and its members' work in 2014 is the final adoption of Shift2Rail—which is now an established Joint Undertaking for system-wide rail innovation and research with a budget of at least €920 million. After nearly four years of preparatory work coordinated by UNIFE, which entailed constant dialogue with the Commission, the organisation of meetings with a myriad of stakeholders and engineers across Europe in order to draft and revise a comprehensive, system-wide research and demonstration plan, as well as rallying support from major rail manufacturers, operators, infrastructure managers, SMEs, research centres and academia; the dream is now a reality—the course for a step change in the rail system is set. Ensuring Shift2Rail's adoption in only six months from the official Commission proposal and before the end of the mandate of the previous European Parliament was not only extraordinary, it was necessary to avoid significant delay that would have arisen from the impending EU institutional changes. Shift2Rail will certainly be a much needed boost to both the competitiveness of rail transport as a mode and the European rail industry; but we mustn't rest on our laurels—in addition to effectively carrying out the work set forth in Shift2Rail, there are a number of other challenges that restrict the rail industry from its potential.

One such issue is the Fourth Railway Package. For UNIFE members, this has been particularly frustrating, because the part of the package that would have the greatest positive impact on our industry—the Technical Pillar—has widespread agreement throughout the rail sector and the EU institutions. Unfortunately, it is currently attached to the much more politically controversial Political Pillar—and without separating the Package, the agreed upon legislation in the Technical Pillar cannot be implemented. The Technical Pillar would create a single, simplified European rolling stock authorisation procedure valid in all Member States and governed by the European Railway Agency (ERA)—which would allow newer, cross-border rolling stock to be placed into service much more quickly and, thus, massively reducing the cost and time of authorisation. Throughout 2014, UNIFE has been advocating the separation of the package to the EU institutions and prodding both the Greek and Italian Presidencies of the EU Council during their mandates in 2014 to begin trialogues on the Technical Pillar with the EC and EP. This is a major priority as it is the foundation of our industrial and competitive footprint in the European rail market.

On a related topic, UNIFE continues to coordinate the input of the rail supply industry towards the development of regulations and documents drafted by ERA and the EC. UNIFE's principal objective in this area is to support the harmonisation and transparency of technical rules in order to facilitate the development and authorisation of rail products in the EU. 2014 was also quite a milestone for ERA which celebrated its 10th anniversary this year. UNIFE would like to thank ERA's outgoing Executive Director, Marcel Verslype, for his remarkable efforts of to establish and grow the Agency's role. Former VP from Bombardier Transportation, Josef Doppelbauer, was elected the new Executive Director of the Agency this year, and UNIFE looks forward to working closely with him when he starts his mandate in in 2015.

Lutz Bertling,
UNIFE Chairman

Philippe Citroën
Director General

UNIFE has also been active on the issue of promoting the proper absorption and investment of EU funds into rail infrastructure across Europe—specifically in developing the TEN-T rail corridors and fully equipping them with ERTMS. Significant funds are available through the Connecting Europe Facility (CEF) instrument, and calls for the €11.9 billion of CEF funding for transport were launched in September. UNIFE has also met repeatedly with stakeholders in Central and Eastern European countries to stress the importance of investing the billions of euros of EU funds available for transport into rail networks. This will continue to be an area of focus for UNIFE in 2015.

Speaking of ERTMS, now more than ever, ERTMS deployment is at the core of the EC's transport strategy and it remains a perennial priority for UNIFE. At present, over 76.000 kilometres of track worldwide are fitted (or contracted to be fitted) with ERTMS; and over 9.500 vehicles are equipped with ERTMS. UNISIG suppliers are committed to deploying ERTMS and the interoperability of the European rail system—and we are collaborating with both the EC and ERA to move this forward.

InnoTrans this past September was a major success for UNIFE—where we attracted a record number of visitors to our stand and events throughout the fair. During InnoTrans, UNIFE released the fifth edition of the World Rail Market Study, carried out by Roland Berger Strategy Consultants, which reports modest growth in the global rail supply market over the past two years, and projects a cautiously optimistic 2.7% growth over the next five years—valuing our global market in 2019 at €176 billion. However, accessibility to foreign markets and mounting competition from foreign industry is of imminent concern to the European rail industry—and one of many impetuses for UNIFE's international activities.

UNIFE continues to be vigilant in the international arena to ongoing free trade agreement (FTA) negotiations, and uneven market access for EU rail suppliers abroad in the context of the increasing presence of non-European suppliers on the EU market. Read more in this report on UNIFE's international activities in many areas, including: the EU-Japan FTA, the Transatlantic Trade and Investment Partnership (TTIP) with the US, the EU-China investment agreement negotiations, among many others.

On top of the major achievement of Shift2Rail, UNIFE continues to take a leading role in the European Rail Research Advisory Council (ERRAC) and participate in many EU funded rail research projects. In 2014, UNIFE has also submitted several proposals under the first "Mobility for Growth" call of the European Horizon 2020 Programme, which will serve as critical "lighthouse" projects for the R&D activities under Shift2Rail.

Finally, 2014 was a milestone year for IRIS as it surpassed 1000 certifications worldwide in June. IRIS continues to sharpen its strategy and instill a culture of quality throughout the global rail industry.

UNIFE would like to thank Henri Poupart-Lafarge, President of Alstom Transport, for his successful three-year chairmanship during a critical period for the European rail industry. Of course, we would also like to take this opportunity to thank the UNIFE members for all of their continued hard work, 2014 was an exceptional year and with your dedicated support we are confident that 2015 will be equally successful.

Sincerely,

Lutz Bertling,
UNIFE Chairman

Philippe Citroën,
UNIFE Director General

UNIFE in 2014

01

A. Mission

Promote Rail Market **Growth** for Sustainable Mobility

The four priorities to achieve our mission:

- Promote European policies favourable to rail
- Shape a European interoperable and efficient railway system
- Ensure European rail supply industry leadership through advanced research, innovation and quality
- Provide UNIFE members with strategic and operational knowledge

I. EU Standardisation & Harmonisation

- liaison & collaboration with the European Railway Agency for defining rail regulations (including TSIs)
- provide expertise for European and International Standardisation Bodies
- promote an interoperable and environmentally friendly Single European Railway Area

II. Public affairs

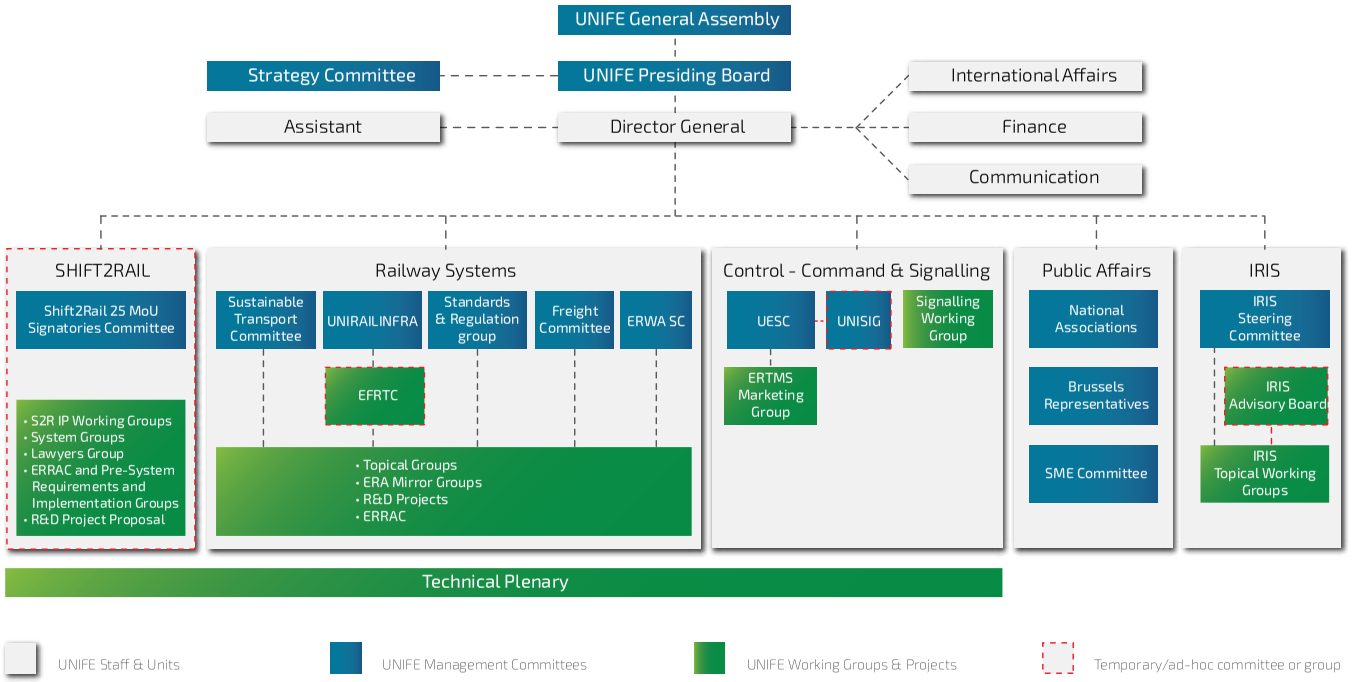
- support policies that increase the competitiveness of the European Rail Industry
- promote an interoperable and environmentally friendly Single European Railway Area
- promote modal shift
- advocating rail transport as best solution to meet social challenges of the future

III. European rail research

- coordinate EU-funded research projects
- active role in ERRAC - the European Rail Research Advisory Council
- shaping the future of rail research & innovation in Europe

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


UNIFE General Assembly
Strategy Committee
UNIFE Presiding Board
International Affairs
Assistant
Director General
Finance
Communication
SHIFT2RAIL
Shift2Rail 25 MoU Signatories Committee
• S2R IP Working Groups
• System Groups
• Lawyers Group
• ERRAC and Pre-System Requirements and Implementation Groups
• R&D Project Proposal
Railway Systems
Sustainable Transport Committee
UNIRAILINFRA
Standards & Regulation group
Freight Committee
ERWA SC
EFRTC
• Topical Groups
• ERA Mirror Groups
• R&D Projects
• ERRAC
Control - Command & Signalling
UESC
UNISIG
Signalling Working Group
ERTMS Marketing Group
Public Affairs
National Associations
Brussels Representatives
SME Committee
IRIS
IRIS Steering Committee
IRIS Advisory Board
IRIS Topical Working Groups
Technical Plenary
UNIFE Staff & Units
UNIFE Management Committees
UNIFE Working Groups & Projects
Temporary/ad-hoc committee or group

C. Committees and 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 and submits new Full and Associate member candidates to the General Assembly for ratification. The Presiding Board is currently composed of 8 members elected by the General Assembly for three years on the proposal of the retiring Board. The Chairman of the newly created UNIFE SME Committee will be assigned the ninth seat of the UNIFE Presiding Board as of January 2015.

The UNIFE **Strategy Committee** and the UNIFE Technical Committee are the highest UNIFE bodies after the Presiding Board. They steer UNIFE activities, provide expertise and advise UNIFE management in their respective fields of competence: strategic and political issues and preparation of the Presiding Board decisions; standardisation, regulation and research for the Technical Committee. The members of these committees are high-level managers from the most prominent UNIFE Members.

The UNIFE **SME Committee** brings together the small and medium-sized member companies of UNIFE. The objective of this Committee is to provide rail industry SMEs with information on EU policies and EU funds dedicated to SMEs, to support them in accessing these EU funds and to facilitate a direct and fruitful exchange between the rail-supply SMEs and the European Institutions. As of January, 2015 the Chairman of the SME Committee will sit on the UNIFE Presiding Board where he will represent the views SME members at the highest level of UNIFE.

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. The National Associations address UNIFE positions nationally while bringing national issues to European level. The committee is composed of the directors of 15 National Associations from 14 different countries.

The **Standards and Regulation Group (SRG)** steers UNIFE's technical activities in the fields of the European regulatory framework namely: the Interoperability Directive, Safety Directive, and other directives applicable to the European railway system. This also includes all related technical regulations and the railway Technical Specifications for Interoperability (TSIs). The SRG also deals with the rail standardisation initiatives (Joint Programming Committee Rail/CEN/CENELEC/ETSI/IEC) and with the standardisation outputs of the UNIFE research projects. The SRG oversees the work of the UNIFE Topical and Mirror Groups composed of technical experts from the UNIFE membership and also coordinates the interfaces with the other UNIFE technical steering committees. The SRG is composed of technical directors from the main UNIFE system integrators and main subsystem suppliers.

The **Shift2Rail 25 MoU Signatories Committee** followed the setup of the proposed Joint Undertaking under Horizon2020 for a step change in European rail technology. It was composed of R&D managers from the 25 companies that founded and invested in the initiative. This committee also oversaw the preparation of the four project proposals of Horizon2020 linked with Shift2Rail: Roll2Rail, IT2Rail, IN2Rail and LOG2Rail.

The **UNIRAILINFRA Committee** brings together suppliers, contractors, and integrators active in the fields of engineering, production, installation, etc. and the EFRTC (European Federation of Railways Trackworks Contractors). The Committee provides a platform for consensus building on infrastructure 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 sector. It also plays an advisory role for UNIFE technical and political activities that have an impact on infrastructure. In 2014, the discussions within the UNIRAILINFRA Committee were focused on topics such as standardisation and regulation activities (e.g. TSIs Infrastructure and Energy subsystems), research activities (e.g. European research projects and Shift2Rail) and public affairs activities (e.g. Infrastructure policy and EU Funds, trade and international issues).

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 from the ERTMS/ETCS suppliers.

The **IRIS Steering Committee** oversees 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 the UNIFE membership.

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 for UNIFE's technical and political activities having an impact on signalling. The Committee is composed of representatives from the UNIFE membership active in signalling.

The UNIFE **Sustainable Transport Committee (STC)** has been the platform for exchanging and defining common positions on UNIFE's environmental sustainability activities since 1999. In doing so, its competences have grown over time and are mostly dedicated to supporting UNIFE members with early information and outreach actions on policy changes, supporting the improvement and communication of environmental performance of products and responding to growing stakeholder demands with respect to more eco-efficient products and service solutions.

Sustainable Transport Committee

Life Cycle Assessment Topical Group	Chemical Risk Topical Group	Energy Efficiency Topical Group

The STC drafts and assures coherent and effective common positions of the rail industry in the environmental field. It is supported by several Topical Groups, which provide the technical content on the main dossiers and regularly report to the STC. The STC and its Topical Groups can rely and build upon a long-established cooperation among the rail sector in EU-funded collaborative research projects.

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 European Union. The Committee offers to its members the opportunity to inform and support them on EU funding opportunities for their R&D projects, to raise awareness of EU policies dedicated to rail freight, to lobby on issues related to rail freight in Europe and to strengthen the discussion on ongoing and upcoming TSIs/Standards. The Kick-off meeting will take place in February 2015 in Brussels.

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 several EU representatives of UNIFE members in Brussels.

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

The UNIFE **Communications Committee** advises the UNIFE communications strategy. It is composed of the Communications Directors of UNIFE members.

UNIFE Network of Technical Experts

Authorisation and Cross Acceptance Mirror Group	Aerodynamics Topical Group
Electromagnetic Compatibility (EMC) Mirror Group	Brake Topical Group
Energy Mirror Group	Cab Topical Group
Infrastructure Mirror Group	Chemical Risk Topical Group
Noise Mirror Group	Crash Safety Topical Group
Persons with Reduced Mobility (PRM) Mirror Group	Diesel Topical Group
Rolling Stock Mirror Group	Energy Efficiency Topical Group
Safety Assurance Mirror Group	Fire Safety Topical Group (Previously Safety in Railway Tunnel MG)
Telematic Application for Passengers and Freight (TAP/TAF) Mirror Group	Life Cycle Assessment (LCA) Topical Group
Wagon (WAG) Mirror Group	Railway Dynamics Topical Group
	Train Control Management System (TCMS) Topical Group

D. Presiding Board 2014-2016

The present UNIFE Presiding Board was elected at the UNIFE General assembly 2014 for a three-year term (2014-2017). The incumbent chairman is Lutz Bertling, President of Bombardier Transportation.

Lutz Bertling
Chaiman of the Presiding Board

President,
Bombardier Transportation

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 Group**

Henri Poupart-Lafarge
Member of the Presiding Board

President,
Alstom Transport

John Moore
Member of the Presiding Board

CEO,
Balfour Beatty Rail

Stefano Siragusa
Member of the Presiding Board
CEO,

Ansaldo STS
(also representing AnsaldoBreda)

Dieter Wilhelm
Member of the Presiding Board

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

SHIFT²RAIL

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Shift2Rail

02

A. Shift2Rail: the new European PPP for Rail R&D
B. From the Commission's proposal to the establishment of the Joint Undertaking: the significant mobilisation of UNIFE on Shift2Rail in 2014

"A stand-out success [of this Commission's mandate] was to create a new public-private partnership for the rail sector: Shift2Rail. It fits in well with my long-term vision for transport and my strategy for revitalising Europe's railways. It will support the global leadership of the European rail industry, create jobs and increase exports".

Vice-President and Commissioner for Transport Siim Kallas, Joint Technology Initiatives launch event, Brussels, 9 July 2014

Following years of significant mobilisation and intense work by the rail industry – under the coordination of UNIFE – Shift2Rail is no longer a dream or distant project, it has become a reality, an established European Joint Undertaking (JU) that will manage a long-term R&D Programme for our sector. The first section below will present the main features of this new PPP. The second will look back on 2014 as an exciting year for the final legislative process and an intensive year of activity for UNIFE.

A. Shift2Rail: the new European PPP for Rail R&D

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. Through the R&I carried out within this Horizon2020 initiative, the necessary technology will be created to help complete the Single European Railway Area (SERA).

In addition to the above, 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 the lifecycle costs.

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

Background of the Initiative

Following more than a decade of fruitful cooperation with the EU in Rail R&D, the Shift2Rail journey began in 2009 when key European Rail sector players, under the coordination of UNIFE, began investigating a policy instrument that could facilitate a step change for the European rail system. The results were then presented to the European Commission.

The companies supporting Shift2Rail underlined that maintaining the status quo for rail research in Europe was not an option. European leadership of the global rail market could only be maintained if a critical mass of committed EU industry joined forces to develop innovative, high-capacity, and high-quality products.

Capitalising on the previous success of the rail sector in EU-funded collaborative research projects since the mid-1990s, Shift2Rail was the natural evolution for EU industrial research cooperation in Horizon 2020. It was clear as well that in order to meet the ambitious goals of EU transport policy and climate change, a massive coordinated investment in rail research was necessary.

Fully aware of both the need to act to make rail transport more innovative – and to complete the SERA – and of the readiness of the rail sector to engage in such an undertaking, the European Commission announced its legislative proposal of December 2013 to establish the Shift2Rail JU and the Council of the European Union adopted it in June 2014 with a favourable opinion of both the European Parliament and the European Economic and Social Committee.

Expected Outcomes of the Initiative

Shift2Rail will foster the introduction of better trains to the market (more comfortable, quieter and more reliable, etc.), operating on innovative rail network infrastructure in a reliable way from the first day of service introduction, at a lower life cycle cost, with more capacity to cope with growing passenger and freight mobility demand. All of this will be developed by European companies thereby increasing their competitiveness on the global marketplace.

Shift2Rail will also contribute to the paradigm for modal shift to attract customers to rail. For the EU passenger this will mean more travel options, more comfort, and improved punctuality. For the freight forwarder/shippers this will mean that rail freight will become more cost effective, punctual and traceable as a shipment option.

Shift2Rail will contribute to:

- Cutting the life-cycle cost of railway transport (i.e. costs of building, operating, maintaining and renewing infrastructure and rolling stock) by as much as 50%;
- Doubling railway capacity;
- Increasing reliability and punctuality by as much as 50%.

Shift2Rail will impact all segments of the rail market: High Speed/Mainline, Regional, Urban/ Metro & Suburban, and Freight and make daily life easier for millions of European passengers and rail freight users.

Thanks to the four-year investigation period by the European rail industry and the wider rail community, the JU built the first version of the long-term strategic Master Plan around key research areas segmented in five Innovation Programmes (IPs) and cross-cutting activities. As already mentioned in the Council regulation establishing the Shift2Rail JU, these five Innovation Programmes address:

- IP1 - COST-EFFICIENT AND RELIABLE TRAINS, INCLUDING HIGH CAPACITY TRAINS AND HIGH SPEED TRAINS: Comprehensive and systematic re-evaluation of the structure and on-board systems in order to boost capacity, efficiency, and sustainability of all types of passenger rolling stock.

- IP2 – ADVANCED TRAFFIC MANAGEMENT & CONTROL SYSTEMS: Building on existing ERTMS/ETCS specifications, interoperability across the EU network – including urban rail networks (CBTC) – is increased and research is dedicated to keeping ERTMS technology ahead of the competition.

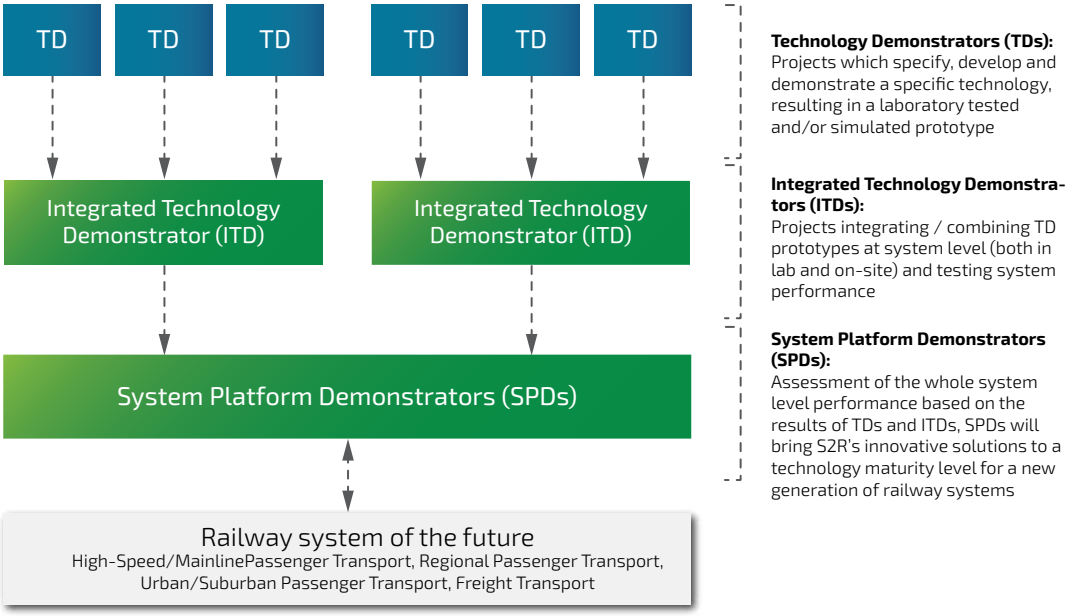
- IP3 – COST-EFFICIENT AND RELIABLE HIGH CAPACITY INFRASTRUCTURE: Offers a comprehensive and systematic approach to improving the durability, capacity and efficiency of track and energy systems to cope with increased train traffic and speeds.

- IP4 – IT SOLUTIONS FOR ATTRACTIVE RAILWAY SERVICES: Fosters inter-modal passenger transit across Europe with an attractive and efficient conventional as well as urban rail network, and smart connections to road and aviation networks.

- IP5 – TECHNOLOGIES FOR SUSTAINABLE & ATTRACTIVE EUROPEAN FREIGHT: Door-to-door transport time, security, and traceability, thereby demonstrating a real business case for smart interoperable rail freight that offers reliable, competitive, sustainable, flexible transport services that are efficiently interfaced with other modes.

An important focus of Shift2Rail will be on demonstration activities, which are needed to deliver a quantified impact, but also to provide guidance on the most efficient combinations of these technologies, and assess the potential for improvement to the national, EU transport network and the Single European Railway Area (SERA).

The demonstration of technical achievements will be based on the following three-fold architecture: Technology Demonstrators (TDs), Integrated Technology Demonstrators (ITDs) and System Platform Demonstrators (SPDs).



Shift2Rail: a major opportunity for future participants

As foreseen in the Council regulation establishing the Shift2Rail Joint Undertaking, Shift2Rail will offer many ways for interested stakeholders to participate in future R&D activities. In addition to the list of the JU Founding Members already identified by the European Commission, a large number of industrial partners, SMEs, operators, infrastructure managers, universities and research centres will have the opportunity to engage in the R&D activities, be it as Associated Members – individually or within a consortium – as partners in the framework of the future regular open calls for shorter-term projects (which will be launched by the Joint Undertaking) or as subcontractors.

B. From the Commission's proposal to the establishment of the Joint Undertaking: the significant mobilisation of UNIFE on Shift2Rail in 2014

UNIFE has played a major role in the creation of Shift2Rail since it has coordinated the whole preparatory phase of this new European PPP from 2009 until its final adoption this year. 2014 has been a decisive year where UNIFE has been particularly involved in:

- convincing the European Institutions to adopt the European Commission's proposal for a Council Regulation that would officially and legally establish the Shift2Rail Joint Undertaking;

- following up on the preparation of the Shift2Rail Master Plan;
- and continuing to raise rail stakeholders' awareness throughout Europe about Shift2Rail and the opportunities it offers.

A successful advocacy campaign to convince the European Institutions to adopt the Regulation

Following the publication by the European Commission of its legislative proposal in December 2013, throughout the first half of 2014, UNIFE led a successful advocacy campaign to convince the European Economic and Social Committee, the European Parliament and the 28 Member States to adopt the Council Regulation that officially and legally established the Shift2Rail Joint Undertaking.

In this regard, the strong support of the Hellenic Presidency of the EU during the first semester proved to be essential in order to win this race against time. By making Shift2Rail one of the top priorities on their political agenda, the Hellenic Presidency made it possible to both obtain a favourable vote of the European Parliament in April (at the very last Plenary Session before the European elections) and a subsequent final adoption by the Transport Council in June. Had it not been adopted in the first semester of 2014, its adoption would have been significantly delayed due to the changes in the European Institution leadership that took place in the second half of 2014.

This strong support of the Hellenic Presidency of the EU was reflected in the organisation by the Greek Authorities – together with UNIFE – of an important European conference in Athens in February that was entirely dedicated to Shift2Rail. High-level speakers at the event included Michalis Papadopoulos, Greek Deputy Minister of Infrastructure, Transport and Networks, Nikolas Stathopoulos, Secretary General for Greek Ministry of Infrastructure, Transport and Networks, MEP Brian Simpson, Chairman of the European Parliament's Transport and Tourism Committee, and Olivier Onidi, Director, DG-MOVE, all of whom were very supportive of Shift2Rail. This conference gathered 150 rail stakeholders and decision makers and was the occasion for the Hellenic Presidency to insist on their determination to pass the Council Regulation by the end of their Presidency in June.

In addition to the numerous meetings with the Representatives of the 28 Member States, UNIFE also led an important advocacy campaign to convince the Members of both the European Parliament and the European Economic and Social Committee.

During the plenary session on 25 March, the European Economic and Social Committee Members unanimously adopted an Opinion in which they highlighted the crucial importance of Shift2Rail: "The EESC strongly backs the Shift2Rail initiative, which it sees as an important contribution to European industry in the strategic railway sector."

On 15 April, during the last plenary session of the former European Parliament, an overwhelming majority of the European Parliament (95%) expressed their support of Shift2Rail by voting in favour of the report previously adopted unanimously by the Parliament's Committee on Industry and Research (ITRE Committee).

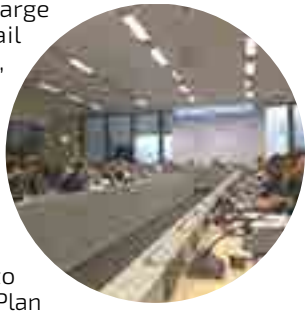
Following these positive Opinions released by both the European Economic and Social Committee and the European Parliament, the Council of the European Union finally adopted the Regulation establishing the Shift2Rail Joint Undertaking on 16 June, 2014. This adoption marked the end of the legislative process and therefore the beginning

of a new era for rail research and innovation in Europe. As the coordinator of the whole PPP preparatory phase, UNIFE Director General Philippe Citroën stated that day: "This final adoption of Shift2Rail by the Council is the culmination of years of preparation by a myriad of stakeholders and is an essential achievement for the future of the rail industry and the whole rail sector in Europe."

Shift2Rail was then officially launched in Brussels on 9 July 2014 in the presence of the European Commission President Jose Manuel Barroso, Transport Commissioner Siim Kallas, Research Commissioner Máire Geoghegan-Quinn, Member of the UNIFE Presiding Board Dr Jochen Eickholt (CEO of Siemens' Rail Systems Division), UNIFE Director General Philippe Citroën, and the Chairman of the S2R Preparatory phase's Steering Committee Josef Doppelbauer (Bombardier Vice-President for Research and Innovation).

The active follow-up of the preparation of the Shift2Rail Master Plan

As far as technical preparation is concerned, UNIFE played a considerable role by coordinating the in-depth input of hundreds of engineers resulting in the detailed Technical Annexes that were submitted in December 2013 to the European Commission. This comprehensive document represented the first input for the draft Master Plan, which the European Commission was in charge of preparing during the first semester of 2014. As explained in the Council Regulation establishing the Shift2Rail Joint Undertaking, this Master Plan is defined as a "common, forward-looking strategic roadmap" that "shall identify the key priorities and the essential operational and technological innovations required."



UNIFE, together with a large delegation of Shift2Rail Founders and Promoters, participated in the stakeholder meeting organised by the European Commission in Brussels on 20 June. This meeting was the occasion for UNIFE and the entire rail sector to react on the draft Master Plan presented then by the European Commission. During that event, the Commission officially recognised that the Technical Proposal and the subsequent Technical Annexes submitted by UNIFE had been a fundamental input for the drafting of the Shift2Rail Master Plan.

After the integration of some amendments, the first version of the Shift2Rail Strategic Master Plan was approved in September by the Shift2Rail Governing Board and it must now be finally endorsed by the Council in early 2015.

The continuation of the large awareness-raising campaign on Shift2Rail throughout Europe

Philippe Citroën and UNIFE staff had already participated in no less than 21 information events on Shift2Rail in 16 Member States across 2013 (Austria, Czech Republic, Estonia, France, Germany, Greece, Ireland, Italy, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, and United Kingdom). In 2014, UNIFE – as the coordinator of the whole PPP preparatory phase and with the valuable support of national rail industry associations – continued to take part in such information events throughout Europe with the objective of both presenting Shift2Rail and helping stakeholders to anticipate and get ready for future R&D activities.

In 2014, Philippe Citroën and UNIFE staff participated in 15 information events on Shift2Rail in 14 countries (Belgium, Bulgaria, Croatia, Estonia, Finland, France, Germany, Greece, Luxembourg, Netherlands, Romania, Spain, Sweden, and Switzerland).

The most recent event organised by UNIFE took place in September 2014 in Berlin during the InnoTrans international trade fair. Christos Economou, the Interim Executive Director of the Joint Undertaking took the floor – together with Keir Fitch, Head of Unit at the European Commission's Directorate-General for Transport – to present Shift2Rail, its objectives and its next steps

Next steps for UNIFE

With the Shift2Rail JU now a reality, UNIFE is happy to have successfully fulfilled its mission as coordinator of the whole PPP preparatory phase. From now on, UNIFE and its staff will continue to follow-up very closely the activities and initiatives within Shift2Rail and will regularly inform UNIFE member companies about the funding opportunities offered by the PPP.

UNIFE already organised an infoday for UNIFE members in October 2014 in order to present the recently launched Shift2Rail Call for Associated Members. UNIFE will of course continue to disseminate information in the future – in particular on the regular Shift2Rail open calls for proposals – and will help UNIFE Members to apply for EU funds. UNIFE will also remain supportive to its member companies in their later involvement in Shift2Rail and other upcoming R&D related activities.

Finally, UNIFE will continue to work in close relationship with the European Commission to ensure additional funding in favour of Shift2Rail, more particularly for deployment activities which could be funded under the Connecting Europe Facility (CEF).

Josef Doppelbauer (Bombardier, Chairman of the Shift2Rail Preparatory Committee, Chairman of ERRAC), Philippe Citroën (Director General, UNIFE), Keir Fitch (Head of Unit, R&I Transport Systems, DG MOVE, European Commission), Christos Economou (Interim Executive Director, Shift2Rail)


12

European Affairs

03

A. A New institutional landscape

The European elections in May 2014 marked the first of a number of changes in the European Institutions that will have a major influence on future transport policy.

On 7 July, **Michael Cramer** (Greens-EFA, Germany) was elected as the new chair of the European Parliament's Committee on Transport (TRAN). Mr. Cramer was first elected to the European Parliament in 2004 and re-elected in 2009. From 2004, he chose to sit in TRAN, where he has always been supportive of rail transport and critical of undue advantages to air and road transport. Moreover, on 4 September Mr. Cramer was also elected as the new President of Rail Forum Europe, the MEPs' platform dedicated to rail transport. TRAN's Vice-Chairs are Dominique Riquet (ALDE, France), Dieter-Lebrecht Koch (EPP, Germany), István Ujhelyi (S&D, Hungary) and Tomasz Piotr Poreba (ECR, Poland).

2014 Italian Presidency of the Council of the European Union

On 1 July, Italy took over the **Presidency of the Council of the European Union** from Greece. Presenting the priorities of the Italian Presidency, Transport Minister Lupi said that the Presidency would make strong efforts to advance the Fourth Railway Package, starting negotiations with the Parliament on the "technical pillar" and looking for a balanced approach in order to achieve a common position in Council on the "political pillar".

In October 2014 the European Parliament and the Council of the European Union approved the new college of Commissioners led by Jean-Claude Juncker. The college of commissioners consists of one member from each EU country. The **Commissioner for Transport is Violeta Bulc (Slovenia)**.

Among the priorities set by President Juncker for the transport portfolio, the completion of negotiations of the Fourth Railway Package and the delivering of a number of important industrial innovation projects such as Shift2Rail are worth mentioning. Also of interest for the rail industry are the Commissioners for Trade, Cecilia Malmström (Sweden), and Internal Market Industry, Entrepreneurship and SMEs, Elżbieta Bieńkowska (Poland). The new Commission took over at the beginning of November.

On 30 September, Josef Doppelbauer, Vice President of R&D at Bombardier was elected as the next Executive Director of the European Railway Agency (ERA) by the ERA Administrative Board. Mr Doppelbauer was Bombardier's representative on the UNIFE Strategy Committee in addition to being the Chairman of the Shift2Rail Steering Committee until the adoption of the initiative this past June. He has been very involved in European rail research and is the current chairman of the European Rail Research Advisory Council (ERRAC),

a post he has held for the past for the past two years. On 1 January 2015, Mr Doppelbauer will take over the leadership of ERA from Mr Marcel Verslype, who will finish his second mandate as Executive Director of ERA at the end of 2014. Philippe Citroën will join the ERA board as a representative of UNIFE with the status of observer.

UNIFE is making a concerted effort to introduce itself to all the new MEPs associated with Transport as well as to the new Commission. With this goal in mind, in September 2014 UNIFE published the European Rail Supply Industry Pocket Guide as a means of presenting the importance of the rail supply industry to Europe in terms of employment, exports, industry leadership, sustainable transport, and innovation. This document is a useful tool when introducing the industry to new elected officials and decision makers. This document can be downloaded in the publications section on the UNIFE website.

B. The Fourth Railway Package

Throughout the year 2014 the Technical Pillar of the Fourth Railway Package remained extremely important for UNIFE. Once adopted the Technical Pillar will reform the authorisation process in Europe – which currently represents an enormous administrative burden for both operators and manufacturers and leads to high costs for our industry.

Most importantly, the Technical Pillar will make the European Railway Agency (ERA) a one-stop-shop for multi-country authorisations. With this change the expensive double testing that is often required today would disappear.

It is also mainly due to UNIFE's active lobbying campaign that the Greek Presidency completed the decision-making process in the Council for the Technical Pillar when it managed to secure an agreement on the ERA Regulation in June 2014. UNIFE's strong plea to adopt the Technical Pillar in order to support the competitiveness of the European rail industry was heard by several Member States who supported this idea in the Transport Council Meeting of 8 October and also by the European Commission. Unfortunately, the Italian Presidency has not managed to conclude and adopt the Technical Pillar during their mandate. Nevertheless, the Technical Pillar of the Fourth Railway Package remains one of UNIFE's highest priorities and the Public Affairs team is currently in contact with the incoming Latvian and Luxembourgish Presidencies to ensure that progress can be made on this dossier during their mandate.

C. EU Funds for Rail Infrastructure (EFSI, TEN-T, CEF, ERDF, and Cohesion Funds)

European Fund for Strategic Investment (EFSI)

On 26 November at the European Parliament, European Commission President Jean-Claude Juncker presented a € 315 billion Investment Plan for Europe. Over the next 3 years, the European Commission and the European Investment Bank (EIB) will launch a partnership with the objective of mobilising investment primarily in strategic infrastructure, SMEs and middle capitalisation companies.

This new European Fund for Strategic Investments (EFSI) amounts to €21 billion in investment funded by the EU and the EIB which is expected to attract 15 times that investment from private entities,

totalling €315 billion to be invested in infrastructure throughout the EU. During an exchange with the European Parliament's Transport Committee on 2 December, Transport Commissioner Violeta Bulc announced that transport projects would be among the main beneficiaries of this European Investment Plan and would absorb some € 100 billion of investment in the coming years. UNIFE will be following this closely in the coming year to see how these funds can be best accessed for rail infrastructure.

TEN-T revision and Connecting Europe Facility

On 5 December 2013, the Council of the European Union officially adopted the Trans-European Transport Network (TEN-T) Guidelines and their related financial instrument, the Connecting Europe Facility (CEF). The new Regulations entered into force on 1 January 2014.

The TEN-T Regulation defines the geographic scope and technical requirements for the future European transport network until 2050, and identifies the priorities for its development. These include focusing on projects of high European added value, such as the removal of bottlenecks and the construction of missing links, improving the interoperability and interconnections between transport modes and removing disparities between and within Member States. The focus on environmentally-friendly transport will improve the sustainability of European transport systems. Multimodal core network corridors were also introduced to facilitate the coordinated implementation of the core network. UNIFE fully supports the role of European Coordinators in order to ensure the efficient and effective progress of the core network corridors. In particular, UNIFE member companies back the activities of Karel Vinck, horizontal coordinator for the deployment of ERTMS.

The CEF Regulation provides EU financial aid to support projects in the transport, energy and telecommunication infrastructure. It falls under the Multiannual Financial Framework (MFF) 2014-2020 which entered into force on 1 January 2014 and which allocated €26.2 billion to transport.

The new CEF budget is a clear improvement on the €8.1 billion allocated to the TEN-T budget under the last financial period 2007-2013. This financing will stimulate further investment by Member States to complete difficult cross-border connections and links which might not otherwise be built. 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 core network is set to be completed by 2030.

On 11 September 2014, the European Commission invited Member States to propose projects to use €11.9 billion of EU funding to improve European transport connections under the Connecting Europe Facility (CEF). These are the first calls under the CEF in the area of transport. The funding will be attributed to the most competitive projects and focused on nine major transport corridors in Europe.

The projects will receive EU funds but must be co-financed by Member States. The results of the bidding and the allocation to projects will be announced next summer.

Cohesion Policy and Rail Investments in CEE

Through the Cohesion Funds and the European Regional Development Funds (ERDF), the EU makes several billion Euros available for investments into the transport infrastructure of the economically less developed European Member States. However, a number of Member States appear to find it challenging to make use of these funds which would enable them to rebuild their railway infrastructure for only a quarter of the costs that they would otherwise have to shoulder! For this reason, UNIFE has travelled to the region several times

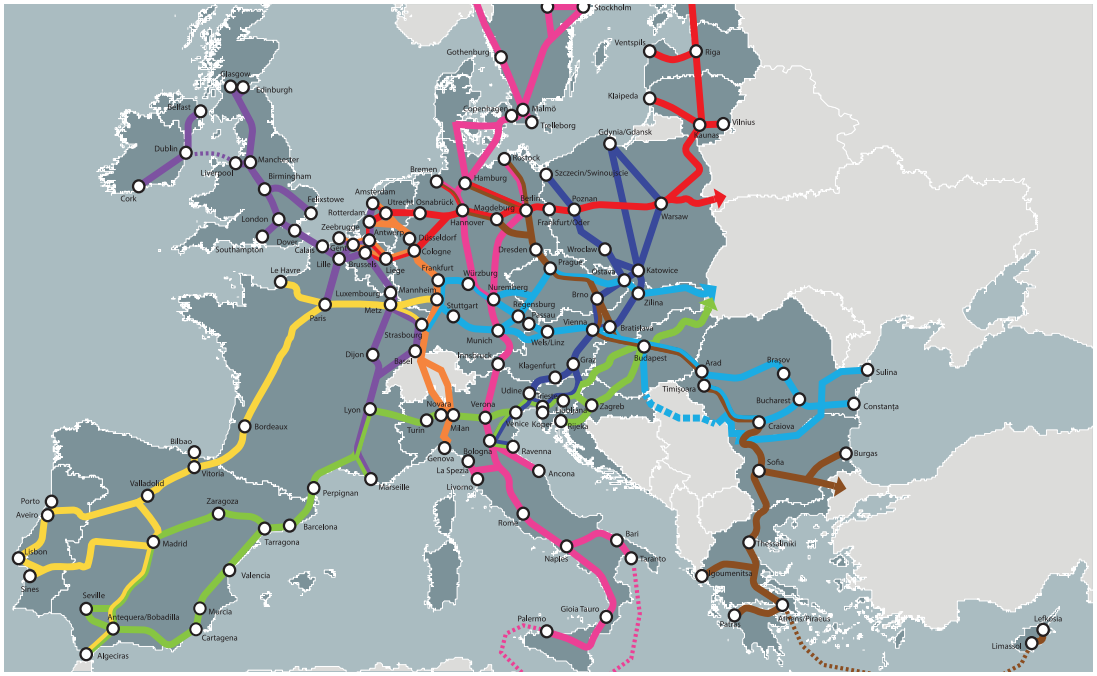
to advocate rail investments. For instance UNIFE went to Romania three times to address this issue (including meeting with the Romanian Secretary of State responsible for railways). UNIFE also went to Bulgaria in June where Philippe Citroën raised the topic in a meeting with the Bulgarian Prime Minister, and UNIFE presented the topic in Poland in March. UNIFE also continued to raise awareness in Brussels and had several meetings with DG REGIO (with the units responsible for Romania, Bulgaria, and transport), with DG MOVE, and with the coordinator of the East-Med-Orient Corridor.

D. Sustainable freight transport

On 15 April 2014 the European Parliament's plenary session adopted the report of Austrian Socialist MEP Joerg Leichtfried on weight and dimensions of heavy goods vehicles by an overwhelming majority. The main message coming out from this vote was that the Parliament responded with a clear "no" to the Commission's proposal to allow cross-border circulation of longer and heavier road vehicles

(so-called "megatrucks") on the basis of bilateral agreements between consenting Member States. Mr. Leichtfried's resolution called on the Commission to carry out a thorough impact assessment on cross border journeys of megatrucks by 2016. The rail sector warmly welcomed the outcome of the vote, as any wider use of megatrucks would result in reverse modal shift of freight traffic from rail to road, which is in clear contradiction with the objectives set out in the Commission's White Paper of 2011.

However, this is definitely not the end of the story. Discussions are taking place in the Council as Member States do not seem to have a clear position on the matter at this moment. If the Parliament's proposal is accepted, the debate will be re-opened



EU TEN-T corridor network

in two years' time when the Commission produces an impact assessment.

UNIFE is part of a broad coalition of stakeholders advocating sustainable policies, such as modal shift, and therefore opposing cross-border circulation of megatrucks in order to achieve the targets set in the 2011 Commission's Transport White Paper.

For more information on megatrucks, please view the brochure on the subject available on the UNIFE website.

E. Non-Road Mobile Machinery (NRMM) Directive

In 2013 the European Commission began the revision process of the Non-Road Mobile Machinery (NRMM) Directive, a directive with regulates among other things the NOx and particulate emissions of locomotives and railcars. With its UNIFE Diesel Expert Group UNIFE has followed this process very closely. In September, the European Commission published its proposal for a new NRMM Regulation. The Commission made a very balanced proposal that takes into account the fact that the European rail diesel market is very specific and small in addition to the fact that following the very recent entry into force of stage IIIB the rail sector would not be able to shoulder the financial burdens that come with a new emissions stage. The file is going to be transmitted to the European Parliament. UNIFE will continue to follow this file and will take part in the expert groups concerned with the development of the delegated and implementing acts.

F. EU SME Policy

Small and Medium sized enterprises (SMEs) have been increasingly at the heart of EU political and financial initiatives. In this regard, the key political framework of the European Commission is called the Small Business Act (SBA). Adopted for the first time in 2008, the SBA was revised for the first time in 2011 and it addresses the essential challenges faced by SMEs in Europe: the access to both intra-EU and extra-EU markets, access to finance and the reduction of administrative burdens.

Under the leadership of the new European Commission for Industry and SMEs, Ms Elzbieta Bienkowska, the European Commission is currently preparing a new European SME Policy (2015-2020) which will be announced in 2015. The UNIFE SME Committee, formed in 2014, has already had the opportunity to meet a representative of the Commission's Directorate-General for Industry and Enterprise on this issue and UNIFE is currently preparing a common Position Paper to express the views of UNIFE regarding the issues, needs, challenges and expectations of the SMEs in the rail sector.

G. UNIFE intervention on the Machinery Directive

According to common practice, turnouts are not considered to require CE-marking and the corresponding procedures for conformity assessment despite not being explicitly excluded from the scope of the Machinery Directive. However, uncertainty regarding this common practice arose when, in 2012, a local authority requested for the first time that a tram operator have a CE-marking for a turnout. Since the CE label needs to be applied in a harmonised manner across Europe, this posed the risk that turnout systems all over the EU would need to be CE labelled.

UNIFE approached the European Commission and several Member States, and following this intervention it was decided by the responsible committee of the European Commission and the Member States that turnouts do not need to bear EC markings. This decision will be confirmed in early 2015, averting high costs and administrative burdens for the rail sector.

H. 2030 Framework for Climate & Energy

In January 2014, the European Commission published a communication on a framework for climate and energy policies from 2020 to 2030. In particular, the European Commission proposed a binding 40% reduction target at EU level for total greenhouse gas emissions. This communication was the basis of discussions between EU Member States to decide on future targets and commitments to be made on greenhouse gas emissions, renewable energy and energy efficiency. The document was based on the results of a public consultation held in 2013, in which UNIFE participated.

Together with CER, UNIFE released a position paper encouraging EU Member States to consider a transport dimension for the post-2020 climate and energy policies. In particular, both associations emphasised that **the European Union cannot achieve a decarbonisation of its economy by 2050 without taking measures to curb the ever increasing emissions from the transport sector.** Most notably, UNIFE and CER advocated for a formal confirmation in legislation of the 60% reduction of transport emissions by 2050 outlined in the Transport White Paper 2011, a reform of the EU Emission Trading System so as to ensure fair treatment between all transport modes, as well as new support measures to incentivise a shift to less polluting modes of transport and less polluting vehicles within modes. In addition, UNIFE participated in June in a public consultation focused specifically on energy efficiency, pointing out the importance of the transport sector and of the efforts made by the European rail industry in this respect.

During European Council held on 23-24 October, EU leaders agreed on the main targets of the 2030 framework for climate and energy policies. With new legislative proposals in the pipeline and the necessity to fully integrate transport in their scope, UNIFE and CER will keep monitoring negotiations taking place both within the Council and the European Parliament to ensure that the new framework is sufficiently ambitious and supports the modal shift to rail. UNIFE will be supporting the EU's efforts in the upcoming UN Climate Change Conference of Parties (COP21) meeting in Paris in 2015 (read more about this in the International Affairs section of this report).

I. Adoption of the Regulation on Fluorinated Gases

In November 2012, the European Commission proposed to replace the existing Regulation on fluorinated gases (F-gases) from 2006 in order to ensure a more cost-efficient contribution to achieving the EU's climate objectives. The proposal aimed to significantly reduce emissions of F-gases by two-thirds of today's levels by 2030.
Following the proposal, UNIFE and CER worked together to avoid bans affecting critical rail products in the absence of safe, technically and economically feasible drop-in alternatives to the ones currently in use. At the end of 2013, the European Parliament and Council reached an agreement on the Commission's proposal, and the final regulation was published in April 2014 (Regulation EU No 517/2014).

In the final version of the regulation, the railway sector may be impacted by certain articles of the new regulation, by market prohibitions related to the use of fluorinated greenhouse gases in refrigerators and freezers for commercial use. More generally, a phase-down mechanism involving a gradually declining cap on the total placement of hydrofluorocarbons (HFCs) on the market in the EU will be established. The mechanism will start with a freeze in 2015, followed by gradual reductions to reach 21 % of the levels sold in 2009-12 by 2030.

J. UNIFE plays a key role in a transition year for Rail Forum Europe

2014 was an important transitional year for Rail Forum Europe, the MEPs' platform dedicated to rail transport, officially established in February 2011.

At a RFE special cocktail held in Strasbourg on 16 April, UNIFE Director General Philippe Citroën and RFE Executive Secretary Leonardo Dongiovanni warmly thanked outgoing chairman Brian Simpson for his outstanding contribution to the rail sector over the past 25 years as a Member of the European Parliament and for his dedicated and dynamic presidency of the RFE since 2011. As of 1 July, Brian Simpson took up a new role as EU coordinator for the Motorways of the Sea. A passionate railway-man, Mr. Simpson will carry on his commitment for rail as the President of the UK Heritage Railway Association.

On 4 September, Members of the Rail Forum Europe Managing Board unanimously elected Michael Cramer (Greens, DE) as the new President of Rail Forum Europe. Mr. Cramer took office as the new RFE President on 11 September. During the same meeting, Gesine Meissner (ALDE, DE) and Georges Bach (EPP, LU) were elected as vice-Presidents of the Association. Rail Forum Europe held its first dinner-event at the European Parliament in Strasbourg on 22 October on "Rail Investments: status quo and future perspectives" sponsored by UNIFE. Philippe Citroën made a presentation on the world rail market and how rail can unleash its full potential in Europe to the attendees (which included a strong showing of MEPs).

In addition to the chair and vice-chairs, the following Members of the European Parliament are currently full members of RFE: Lucy Anderson, Ines Ayala-Sender, Georges Bach, Philippe De Backer, Ismail Ertug, Jo Leinen, Boguslaw Liberadzki, Gesine Meissner, Tomasz Poreba, Christine Revault d'Allonnes-Bonnefoy, Dominique Riquet, Massimiliano Salini, Andreas Schwab, Istvan Ujehlyi. An Advisory Committee composed of rail stakeholders assists MEPs in the definition of the activity programme and the preparation of the organisation's budget.

Rail Forum Europe organises events and technical visits sponsored by companies or associations. The following events were organised in 2014:

- 11 February 2014: ***GALILEO and ERTMS: integrating two leading European innovations to boost EU competitiveness*** (sponsored by AnsaldoSTS-UNIFE)
- 17 March 2014: ***Making cross-border rail attractive*** (sponsored by RoCK)
- 16 April 2014: ***Special cocktail to thank the outgoing Managing Board***
- 22 October 2014: ***Rail Investments: status quo and future perspectives*** (sponsored by UNIFE).

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

04

A. EU and Japan Free Trade Agreement (FTA) negotiations: A one-year package of measures on railways, but still not enough to achieve a level playing field

2014 was a crucial year for the EU-Japan Free Trade Agreement negotiations, since the Japanese government had to deliver on a number of non-tariff barriers to guarantee the pursuit of the negotiations after the first year. As a result of UNIFE members' pressure to level the playing field between the EU and Japan, rail was identified as one of the key sectors, with a specific roadmap on procurement.

Following the fifth round of negotiations in April 2014, the European Commission and the Japanese government agreed on a package of measures to guarantee transparency and non-discrimination along the Japanese rail procurement process. In particular, the package aims 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.

UNIFE and several national associations have made clear that the guarantees derived from the package were not sufficient for the European rail industry – a concern echoed by several Member States such as France and Germany. In particular, the Operational Safety Clause (OSC) remains an obstacle to this day, since the definition of its scope is wide and encompasses all railway sub-systems. Furthermore, in October 2014, at the insistence of the European Commission, Member States agreed on the lifting of the EU objection to the delisting of the three Honshu Japanese Railways (JR East, Central and West) from the WTO Agreement on Government Procurement. The three companies agreed to draft and publish codes of conduct based on principles of transparency and non-discrimination, but UNIFE remains vigilant on the future developments and projects to be launched by these companies due to the voluntary nature of the commitments.

UNIFE is now striving to ensure that the one-year package will provide real improvements for EU suppliers in their access to the Japanese market, and is also campaigning to maintain a strong and dedicated track on railways in the second part of the negotiations to ensure that a true level playing field between the EU and Japanese rail markets is achieved. Furthermore, UNIFE and its members ask the European institutions to be ambitious in the market access negotiations, both in terms of coverage of entities and creating the right business conditions for EU suppliers.

In parallel to the negotiations, an industrial dialogue on railways has been established in 2014. The first meeting was held in March in Brussels, and the second one in December in Tokyo. UNIFE and its members have particularly insisted on market access related topics, making concrete recommendations for improvements in procurement procedures, but also on technical cooperation between the European Commission (represented by the ERA) and the Japanese government, especially on safety issues.

B. EU and China start negotiations on investment and regulatory discussions on rail

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 a high level of investment protection in a single, coherent text.

Throughout 2014, UNIFE has actively raised awareness among European institutions on market access barriers faced by the European rail supply industry. This has become all the more important as China is in discussions with some EU Member States to invest massively in their rail infrastructure, raising the question of a level-playing field between both blocs, and to connect Asia and Europe via the Silk Roads Economic Belt.

UNIFE has particularly insisted on the fact that access to market should be the cornerstone of the ongoing negotiations, addressing important issues like mandatory joint ventures for manufacturing and services industries.

Another important activity in 2014 was the launch of an EU-China Working Group on Railways, with a first meeting held in October in Brussels. This Working Group, which is chaired by DG MOVE on the European side and by the National Railway Administration on the Chinese side, also features other relevant Directorate Generals and institutions where appropriate (e.g. European Railway Agency, European External Action Service etc.). For the first meeting, discussions focused mainly on ongoing and foreseen railways projects, and on the respective evolutions of regulatory frameworks. UNIFE was able to attend the meeting as an observer.

C. EU and US negotiations on a Transatlantic Trade Investment Partnership (TTIP) progress more slowly than expected

Throughout 2014, UNIFE monitored closely the negotiations on a Transatlantic Trade and Investment Partnership (TTIP) between the EU the US, and the seven rounds of negotiations that took place since their launch in June 2013. The negotiations have made progress, but at a slower pace than expected due to a number of political obstacles. Although both parties are committed to move swiftly towards the conclusion of a deal, major opposition has arisen in the EU on the potential consequences of the agreement. In particular, the question of Investor-to-State Dispute Settlement (ISDS) has crystalised debates.

In particular, UNIFE is following **the chapter on public procurement as well as the transversal regulatory issues that can affect the European rail industry.** One of the most prominent barriers is local content requirements, since the 'Buy America' provisions can act as a major deterrent against foreign companies 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 federal States are not covered in its scope. To this day however, public procurement appears to be one of the most sensitive issues at this stage, with major difficulty in discussing commitments at the individual US State level. Therefore, UNIFE maintains regular contacts with the European Commission, in particular DG TRADE, to inform them on the evolution of domestic content requirements in the rail sector.

D. EU and Canada unveil final text of the Comprehensive Economic and Trade Agreement (CETA)

During the EU-Canada Summit that took place on 26 September, EU and Canadian negotiators unveiled the final text of the CETA – a trade agreement that is expected to provide a €12 billion increase for Europe's GDP. This came after months of finalising the text, since a political agreement between the EU and Canada had been reached in October 2013.

The government procurement chapter of the agreement is presented as one of the most advantageous outcomes of the CETA agreement for the EU. Beyond guarantees of non-discrimination and transparency across the whole procurement process, all provincial and municipal government procurement will indeed be covered for the first time by an international agreement – with the exception of procurement of transit vehicles in Ontario and Québec, for which clearly framed local value requirements can be requested from bidders. Canada's provincial commitments have also been expanded far beyond existing commitments under the WTO Agreement on Government Procurement (GPA) to include most utilities.

The text will now have to go through a comprehensive legal revision process, and will have to be accepted or ratified by both the European Council and the European Parliament before entering into force. This is foreseen in 2016 or later depending, in particular, on the duration of institutional debates. E. OECD Rail Sector Understanding: A major achievement for the European Rail industry

E. OECD Rail Sector Understanding: A major achievement for the European Rail industry

Following months of strong mobilisation by UNIFE – and the great work of the UNIFE Export Credit Task-Force –the Association welcomed in January 2014 the entry into force of the new Sector Understanding on Export Credits for Rail Infrastructure (RSU) which adapts the OECD's widely-accepted rules on export credits to the sector-specific financing conditions of new railway infrastructure projects.

This innovative framework is designed to meet the variable needs of public authorities and exporters, in both advanced and emerging economies, while helping promote the use of rail as a viable alternative to road and air transportation, in the context of energy scarcity, fuel prices and climate change.

As advocated by UNIFE, the new Rail Sector Understanding (RSU) lengthens repayment periods for contracts involving an overall value of more than SDR 10 million ($15.3 million). Terms provide for repayment up to 12 years (instead of 8.5 in the past) for transactions in High-Income OECD countries, subject to conditions aimed at complementing the private sector, and of up to 14 years (instead of 10 in the past) for transactions in all other countries.

The RSU is applicable to export contracts for essential rail infrastructure assets, including rail control, electrification, tracks, rolling stock, and related construction and engineering work. This RSU is binding for Participants to the Arrangement on Officially Supported Export Credits which are Australia, Canada, the EU, Japan, Korea, New Zealand, Norway, Switzerland and the United States.

UNIFE will now remain vigilant during the implementation phase and we will continue to provide the OECD with the feedback of our Export Credit Task-Force in the framework of the Implementation Reports which will be presented annually by the OECD Secretariat.

F. UNIFE continues to support the International Procurement Instrument

In March 2012, the European Commission made a proposal to **promote a level playing field on the global procurement market – a crucial aspect when it comes to the railway sector.** Under the draft regulation, foreign bidders could be excluded from European tender procedures under certain conditions, should no reciprocal access be granted to European suppliers.

From the outset, UNIFE has supported the European Commission's proposal to increase incentives for EU trading partners to open up their procurement markets to European bidders. While UNIFE member companies supply almost 50% of the worldwide rail production, they indeed experience different levels of openness and transparency on non-European markets and sometimes face significant barriers to public procurement. These barriers, which result in missed business opportunities for the European industry, strongly contrast with the situation in Europe, where public procurement rules are fully transparent and open as per the EU public procurement legislation.

In January 2014, major progress was made on the proposal since the European Parliament endorsed the text in plenary session. The Parliament largely supported the Commission's proposal, though introducing some changes to the draft regulation. Nevertheless, the strong divisions within the Council of Member States have persisted throughout the year, and an agreement in the

short term seems unlikely, despite a compromise presented by the Italian Presidency. **In the coming months, UNIFE will closely monitor the intentions of the new European Commission on the sensitive yet crucial topic of international public procurement.**

G. New Memorandum of Understanding and first concrete results of cooperation with NP UIRE

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

In 2014, UNIFE intensified its cooperation activities with its Russian counterpart, the Non-Commercial Partnership of the Russian Rail Industry (NP-UIRE), in order to strengthen ties between the European and Russian railway sectors. Building on the work undertaken in various fields such as the International Railway Industry Standard (IRIS), UNIFE and NP UIRE signed a **new Memorandum of Understanding during the bilateral NP UIRE-FIF conference** which took place in April in Paris. Following this, UNIFE and some of its members went to Moscow to resume the **technical activities on regulations and standards** undertaken in 2012. During the meetings, the authorisation process of railway products in the EU and Russia has been thoroughly discussed, especially in the light of recent changes in the Russian regulatory framework. This is a key aspect 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.

At the occasion of the high-level "Railway engineering: Partnership of 1520 and 1435 Rail Gauge Manufacturers" conference organised on 24 September, Philippe Citroën (UNIFE) and Valentin Gaponovich (NP-UIRE) unveiled a **joint booklet resulting from this cooperation work.** The booklet describes in detail the regulatory framework for rail, the actors and rules of the authorisation process in the Customs Union and in the EU.

H. Cooperation between UNIFE and US rail stakeholders continues

Following the signature of a Memorandum of Understanding between UNIFE and APTA (American Public Transportation Association) in November 2013, UNIFE has maintained close contacts with US rail stakeholders throughout the year.

In May 2014, a delegation from UNIFE travelled to Washington D.C. to meet with some its members, but also to hold follow-up meetings with the Federal Railroad Administration (FRA) on regulations and standards and with APTA. It was also the first time that UNIFE met with the Federal Transit Administration (FTA) on financing programmes and public procurement rules.

In June 2014, a delegation from UNIFE travelled to Montreal to participate in APTA's 2014 Rail Conference. UNIFE was accompanied at this conference by Marcel Verslype, Executive Director of the ERA. Participation in this conference was done within the framework of the MoU signed between UNIFE and APTA, but also in support to the ongoing cooperation between the ERA and the FRA. During the conference, Philippe Citroën and Bernard Kaufman presented on UNIFE and IRIS activities in both sessions on transatlantic development of standards and innovation practices and the development of high-speed and passenger rail systems. Moreover, UNIFE attended a high-level meeting with APTA CEO, Michael Melaniphy, and Peter Varga, Chair of APTA's Executive Committee, to discuss future cooperation between the two associations as the transatlantic link becomes increasingly important.

Finally, following the decision to move the UNIFE-APTA-ERA-FRA cooperation forward on a number of topics (signalling, interactions track/wheels etc.) the different parties have started **formal technical exchanges** in the second half of the year.

I. EU-Brazil cooperation on railway kicks off

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.).

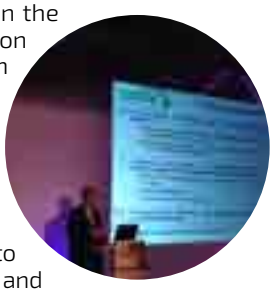
In February 2014, EU and Brazilian leaders signed a joint **Plan of Action on Competitiveness and Investments during the EU-Brazil summit**. UNIFE worked with the European Commission to ensure that rail is identified as a key sector for cooperation in this plan. While the Action Plan provided an overall cooperation framework between the EU and Brazil, UNIFE insisted on having a regulatory dialogue focused on rail.

In September 2014, during Innotrans, a **Memorandum of Understanding between the European Railway Agency and the Brazilian National Ground Transportation Agency (ANTT)** was signed. Furthermore, UNIFE invited Jorge Bastos, ANTT Director General, at its stand to present the development of the rail sector in Brazil, with a focus on planned and ongoing investment projects.

Following trilateral discussions at Innotrans, **UNIFE went to Brazil alongside the ERA on 17-18 November 2014** to meet with the ANTT. While morning sessions were dedicated to presentations on the rail sector organisation and challenges, the afternoons were opened to other rail stakeholders in Brazil (EPL, Valec…) and featured presentations of European experiences and technologies on topics such as signalling and interoperability. This technical mission paved the way for a high-level meeting in 2015, where a possible Memorandum of Understanding with the Brazilian Association of Railroad Suppliers (ABIFER) could be signed to reinforce ties between the European and Brazilian rail sectors.

J. A renewed presence in the Middle East

The Middle East region constitutes a priority region for UNIFE members. The region is one of the most important growth drivers to the industry and foresees considerable investments in both mainlines and urban rail in forthcoming years.



Following previous activities in the region, such as the organisation of the Strategic Rail Forum in Abu Dhabi in 2012, **UNIFE participated in the 10th MENA Rail & Metro Summit** which took place in Dubai in October 2014. Around 300 stakeholders from the transport authorities, operators and industry joined to discuss rail future investments and challenges in the region. Philippe Citroën presented the EU regulatory and standardisation system and on the latest technological trends in the European rail supply industry, insisting on the necessity of having a fully interoperable rail network throughout the region.

Furthermore, UNIFE has initiated discussions to cooperate 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, in January 2015 UNIFE will participate with ERA in a major GCC rail conference alongside transport authorities.

K. UNIFE steps up a gear with United Nations activities

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 fight against climate change.

On 23 September, UNIFE participated in the United Nations Climate Summit hosted by the UN Secretary General in New York. The main objectives of the Climate Summit were to catalyse ambitious action from stakeholders and to mobilise the political will for an ambitious legally-binding global climate agreement at the COP 21 in Paris (2015). Governments and leaders of industry put forward new and major initiatives that will help the world shift toward a low-carbon economy. The initiatives are clustered under 8 action areas, one of which was transportation. During a dedicated session on transport, several initiatives were unveiled in front of a high-level audience including several Heads of State and Government. UNIFE has pledged to support:

A. The Low-Carbon Sustainable Rail Transport Challenge from UIC, which aims to reduce transport greenhouse gas emissions and promote sustainable transportation by combining improvements in rail sector energy efficiency with an increase in rail's share of transport activity. UNIFE, along with Alstom, Siemens and Bombardier, support this initiative and will provide a decisive impetus.

B. The Declaration on Climate Leadership from UITP. Through this initiative, UITP members are making a voluntary commitment to reduce carbon emissions and strengthen climate resilience within their cities and regions. Their goal is to double the market share of public transport use around the world by 2025.

Furthermore, in the margins of the Climate Summit, UNIFE supported and participated in **"On Track to Clean and Green Transport", a high-level event organised by UIC, Amtrak, UN-DESA and SLoCaT** in New York City. Gathering heads of railway companies throughout the globe, representatives of international organisations and the world of diplomacy, this meeting discussed the potential development of sustainable transport in the future and the role it can play in fighting climate change. The event was attended by around 100 participants from all over the world, among whom Joseph Boardman, President and CEO of Amtrak.

Following the success of Transport Day 2013 in Warsaw (Poland), Bridging the Gap Initiative (BtG) and the Partnership on Sustainable, Low Carbon Transport (SLoCaT) organised Transport Day 2014 in the context of COP 20 held in Lima (Peru) on 7 December 2014. UNIFE was represented by its member companies, and the event was an excellent opportunity to scale up the role of transport in international climate change negotiations – in preparation of COP 21 to be held in Paris in 2015.

Finally, in August this year, a high level advisory group on sustainable transport was established by UN Secretary General Ban Ki-Moon, with 12 leading representatives including UIC and UITP. Based on this new momentum for sustainable transport in the UNFCCC process, UNIFE will pursue and intensify its efforts to provide support to these initiatives advancing the cause of rail transportation worldwide.

L. UNIFE in the Partnership on Sustainable Low Carbon Transport (SLoCaT) Foundation Board

In October 2013, UNIFE joined the SLoCaT Partnership on Sustainable Transport (SLoCaT), a multi-stakeholder partnership of over 80 organisations representing United Nations organisations, multilateral and bilateral development organisations, NGOs, academia and the business sector. The Partnership has as its overarching goal to mobilise global support to reduce the growth of GHG emissions generated by land transport in developing countries by promoting more sustainable, low carbon transport.

Joining SLoCaT has provided further outreach and visibility for UNIFE environmental activities on the international stage and marks a new step in the commitment of the European rail industry to promoting low-carbon transport. **In 2014, SLoCaT became a formal organisation and UNIFE Director General, Philippe Citroën, was appointed as member of the SLoCaT Foundation Board.**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THE EUROPEAN RAIL INDUSTRY
Conducted by
Roland Berger
Strategy Consultants
RAIL
WORLD RAIL MA

05 | World Rail Market Study

World Rail Market Study

The fifth edition of the UNIFE World Rail Market Study was launched by UNIFE Chairman Lutz Bertling on 23 September 2014 at the InnoTrans fair in Berlin. The UNIFE World Rail Market Study has been published biennially since 2006. In 2014 it was conducted by Roland Berger Strategy Consultants and published by DVV Media Group. **The study covers the development of the global rail supply market. It provides a detailed analysis of 55 focus countries**, including the major existing rail markets and the most promising emerging ones, clustered into seven regions.

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, based on trends and future orders, expects **the annual growth of the industry to increase to 2.7% per year over the next six years**.

The report details that the regional markets with the highest growth rates over the next six years are Latin America, Asia/Pacific, and NAFTA, this is driven by major investments in rail projects in Brazil, Colombia, China, and the U.S. The Africa/Middle East region is expected to maintain its current high market level in the upcoming years. **The total world market will amount to approximately € 176 billion per year by 2017-2019**. All regional markets are assessed regarding their development of the rolling stock, infrastructure, rail control, services, and turnkey integration development.

There are several trends that have driven the growth of the rail supply industry in the past and are likely to continue doing so. First, there are the megatrends such as population growth, urbanisation and increased demand for mobility, climate change and environmental concerns, deregulation, and liberalisation that will further contribute to the growth of the industry. Second, several initiatives at the EU level (e.g. free-trade agreement between EU and USA/Japan, revised TEN-T guidelines, stable rate of increase in ERTMS investments) will certainly improve the competitiveness of the European Rail Industry and meet the changing transport needs. Lastly, overall market demand is helped by increased order volumes in emerging markets and policies and measures like those mentioned above will enable mature markets to remain stable in upcoming years. Services, turnkey management, rail control and rolling stock contributed to this growth.

Worldwide accessibility is a key factor that is continuously changing, and thus affecting the business of the rail supply industry. The recently finalised EU-Canada (CETA), and ongoing EU-Japan, and EU-U.S. (TTIP) FTA negotiations, as well as the EU-China Investment Agreement negotiations, should serve to revert the current trend of a decreasing accessibility and further open non-European markets to European suppliers. Indeed, the European Commission supports open competition and public tendering, ensuring that all suppliers can evenly participate in ongoing tenders within the EU. Increased political efforts, however, are called for to ensure that these fair market conditions are implemented outside of the EU, and that a level playing field is achieved on the worldwide rail market.

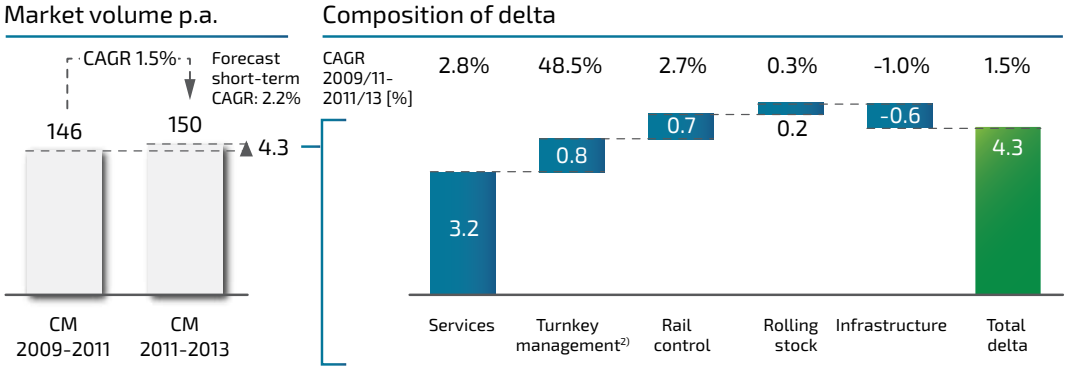
Investment in railways has always been dependent on the availability of public finance. However, public finance has become scarce. Therefore, alternative financing methods which help governments and rail transport companies to realise important projects become more important. **This study elaborates on Public Private Partnerships (PPPs) and alternative ways of financing**. In addition, two important rail markets, Russia and the U.S., are described in more detail to provide a comprehensive picture to the reader. Both markets are large in absolute terms and will be important drivers of future growth of the industry.

Overall market prospects remain solid and the commitment of governments in the EU and elsewhere towards rail transportation remains in place and is partially increasing. This is good news for rail supply companies, even though continued efforts will be necessary from the legislative side to level the playing field between EU and foreign rail suppliers and improve the accessibility of foreign markets. European rail suppliers are among the world's leading suppliers and can look forward to continued growth and market opportunities in both mature and emerging markets.

To order a copy of the UNIFE World Rail Market Study, please visit the UNIFE website.

Current market up by 1.5% CAGR over the previous study – Rail control, services and rolling stock grew

Comparison of worldwide total market volume WRMS 2014 vs. 2012[1] [EUR bn]

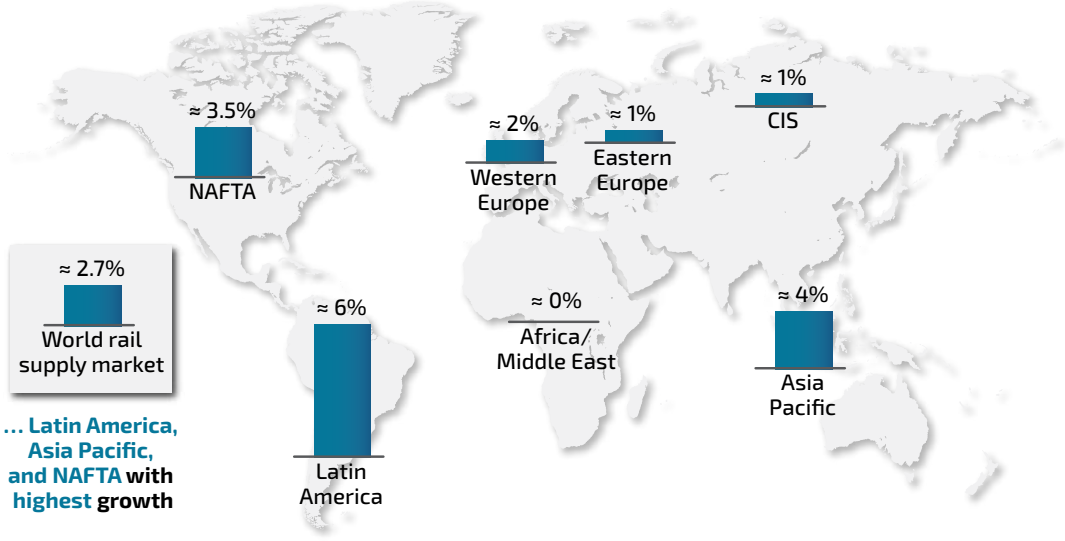


1) WRMS 2012-values without fare management and WRMS 2014-values without rail control maintenance
2) High growth rate mainly attributable to stronger focus on turnkey management compared to previous study

Source: Steering Board UNIFE WRMS 2014

Based on trends and future orders, the market is expected to grow by 2.7% …

Expected growth by region (CAGR[1]), total market)



… Latin America, Asia Pacific, and NAFTA with highest growth

1) Compounded annual growth rate of total market 2017-2019 vs. 2011-2013
Source: Steering Board UNIFE WRMS 2014

Standards & Regulation

06

A. Standards and Regulation Activities Overview

UNIFE continues to coordinate the input of the rail supply industry towards the development of regulations and documents drafted by the European Railway Agency (ERA) and the Commission. The Standards and Regulation Group (SRG) and the various UNIFE mirror and topical groups are platforms for UNIFE members to influence technical regulations concerning interoperability, and UNIFE experts have participated in the various working groups and workshops organised by the European Institutions. The SRG also plays a pivotal role in shaping the UNIFE position on the Fourth Railway Package, and you can find out more about that topic in the European Affairs chapter in this report.

The principal objectives of the UNIFE standard and regulation activities are to support the harmonisation and transparency of technical rules in Europe in order to facilitate the development and authorisation of rail products in Europe.

The UNIFE SRG also interacts with other stakeholders such as counterpart sector associations (CER, EIM etc.) via the group of representative bodies (GRB) and also the European Standardisation bodies, namely CEN, CENELEC and ETSI. In 2014 UNIFE also increased its involvement the Intergovernmental Organisation for International Carriage by Rail (OTIF) and UNIFE sent representatives to the various working group meetings that took place. UNIFE supports the transformation of European TSI's into OTIF documents, and the subsequent scope extension of the TSIs that is realised by this.

Key Highlights:

- **Approval of the DV29bis**

UNIFE experts and in particular the Authorisation and Cross Acceptance Mirror Group contributed significantly to the European Commission recommendation "on matters related to the placing in service and use of structural subsystems and vehicles" under the Interoperability and Safety Directives (informally known as DV29bis). This recommendation follows on from the DV29bis published in 2011 in order to further clarify different interpretations, particularly regarding the authorisation process. Whilst not a regulation, a Commission recommendation holds significant value. For example, if a case is brought to the European courts, the recommendation represents the correct interpretation of the relevant parts of the Railway directives. UNIFE was very pleased with the outcome of this document and looks forward to its publication, implementation and the benefits that should be realised with this common understanding. The expected publication is planned for the end of 2014 or beginning of 2015, depending on the time needed for translation.

- **Completion of the Revision of the Technical Specifications for Interoperability (TSIs)**

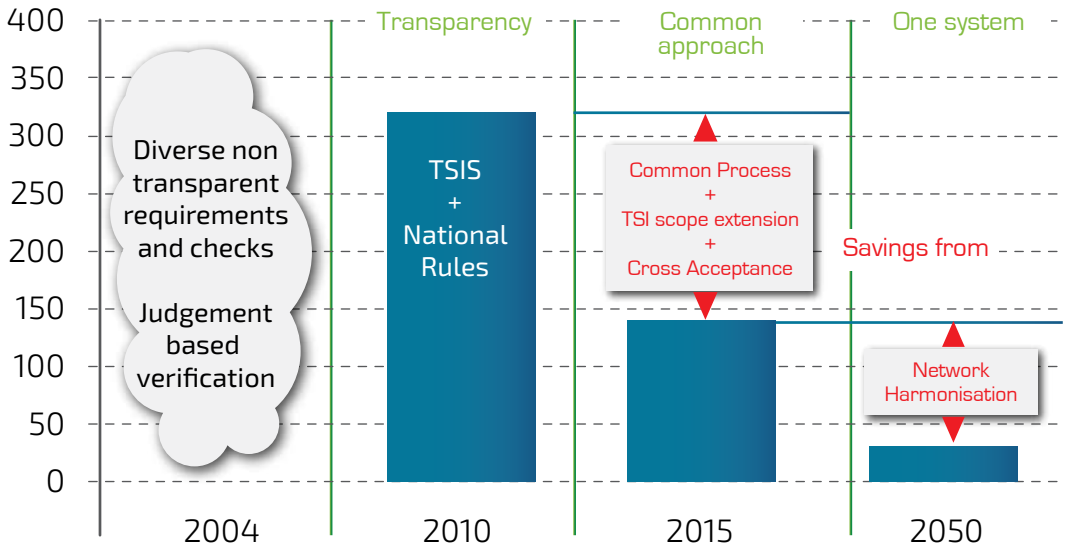
The first half of 2014 saw the approval of the TSIs for Energy, Infrastructure, Persons with Reduced Mobility and Noise respectively, and this follows from the positive vote that the Rolling Stock and Safety in Railway Tunnel TSIs received at the end of 2013. This now means that the TSI revision process that ERA launched in 2011 is now coming to a conclusion with the expected publication of these planned for end of 2014 with an entry into force date of 2015.

The revised versions have fulfilled the foreseen scope of:

- Extension of the geographical scope from TEN to the entire network
- Merging High Speed and Conventional Rail
- Closing as many open points as possible.

UNIFE experts contributed heavily to the development of these TSIs and, across 2014, have also helped develop the application guides that will provide support in the application of these new regulations. Furthermore, looking ahead to the next steps, UNIFE experts will continue to work with ERA to help close the remaining open points.

The extension of the geographical scope is a key achievement, as this will mean that from the entry into force of these new TSIs in 2015, the TSIs will cover the full European mainline network and will lead to a significant reduction in the number of national technical rules - UNIFE will closely follow this activity throughout 2015.



Economic benefits of simplification for vehicles and the potential of network harmonisation
Source: European Railway Agency, 2013

B. Topical and Mirror Groups

UNIFE Topical Groups (TG) and Mirror Groups (MG) aim to steer UNIFE work on standardisation, regulation and research. The overall coordination is done by the respective committees. Topical Groups follow specific topics, mainly related to standardisation and research activities. Mirror Groups 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 Standards and Regulation Group (SRG) in its role as a supervisor of the UNIFE Topical and Mirror 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.

a. Mirror Groups

Rolling Stock

This Mirror Group has been following and contributing to the development of the new Rolling Stock Locomotive and Passenger Carriages (Loc & Pas) Technical Specification for Interoperability (TSI). UNIFE was very satisfied that this reviewed TSI was positively voted in 2013, and throughout 2014 the group has contributed significantly to the application guide of the TSI, which is a key supporting document for implementation.

Following the positive vote, the TSI is being translated into all EU languages ahead of its publication at the end of 2014, with entry into force expected from January 2015.

Significant success has been achieved in closing open points, refining and correcting errors, and ensuring consistency for a good merger between high speed and conventional speed requirements. This version of the TSI also incorporates the 1520mm system. The group has also continued to be active in the ERA working party in order to work on identifying solutions to close the remaining open points. This input will form the basis of an amendment to the new TSI that is likely to be ready by the end of 2015.

Accessibility for Persons with Reduced Mobility (PRM)

The PRM Mirror Group has continued to develop and contribute to the TSI PRM revision activities coordinated by the ERA. Significant steps have been taken to increase the accessibility of railway transport and the Mirror Group is proactive and supportive of continuing this trend, particularly where technological advances have been made to improve accessibility.

The TSI text was adopted by RISC in early 2014 and the group has contributed greatly to ensuring that the TSI is consistent with the relevant standards (which are also under revision in parallel). In addition, work has also been undertaken in regard to the application guides.

The TSI regulation is expected to be published at the end of 2014 in all official EU languages, with an entry into force expected in early 2015.

Electromagnetic Compatibility (EMC)

The EMC Mirror Group has been significantly involved in the activities focused on the closure of open points in CCS TSI related to compatibility of train detection systems, including track circuits and axle counters. The ongoing work is in cooperation with ERA, EIM and CER with the future impact on TSI revisions and further regulation developments. The group has been also following the UNIFE-coordinated R&D project EUREMCO, which has reached its final year and is dealing with a number of EMC relevant topics (for more details see section on UNIFE R&D activities). The EMC Mirror Group experts were also in contact with UNISIG colleagues to discuss the current status of specifications relevant for compatibility between rolling stock and Eurobalise on-board equipment. Relevant methodologies for electromagnetic noise measurements on rolling stock were analysed with the demonstrations of currently achievable values.

Noise

In 2014, the European Railway Agency (ERA) did not organise ERA Noise working party meetings since the Noise TSI and Noise TSI final report were finalised in 2013.The Noise TSI has been voted in June 2014 and will enter into force in 2015.

In 2014, The Noise Mirror Group has focused its activities on the preparation of the Horizon 2020 1st call – MG2.3 New Generation of Rail Vehicles. The Noise Mirror Group has defined some research activities for this proposal coordinated by UNIFE.

Energy

The Energy TSI was adopted in March 2014 and will enter into force in 2015. In 2014, the energy mirror group continued providing its inputs for the ongoing revision of the energy TSI application guide. The energy TSI Application guide was finalised in 2014.

Infrastructure

The Infrastructure TSI was adopted in March 2014 and will enter into force in 2015. In 2014, the infrastructure mirror group continued providing its inputs for the ongoing revision of the energy TSI application guide. The infrastructure TSI Application guide was finalised in 2014.

Telematic Application for Passengers and Freight (TAP/TAF)

In 2014 UNIFE members contributed to several interoperability issues including the Technical Specification for Interoperability (TSI) related to freight and passenger subsystems. UNIFE members are actively working in ERÁ s working groups at different levels, which include:

- ERA TAP and TAF TSI Change management Working Parties
- ERA Cooperation group for the assessment of the TAF TSI implementation

UNIFE, through its member representatives, also plays a significant role in the Joint Sector Group along with the recently formed Support Management Office for TAF TSI implementation.

Moreover, UNIFE is represented in the TAP/TAF Steering Committee and the TAP/TAF TSI CCM Board as well.

Authorisation and Cross Acceptance

UNIFE strongly supports the goals and objectives of the Cross-Acceptance Unit at the ERA, in particular in clarifying the processes and conditions for vehicles to be placed in service in order to achieve a single and harmonised understanding of the authorisation process. To this end, a very important document, also known as DV29bis, was developed during this year, aiming at supplementing recommendation 2011/217/EC and further clarifying the authorisation process, in particular regarding the use of the Common Safety Methods for Risk Assessment in the framework of authorisation. The DV29bis was adopted by RISC in mid-2014 and UNIFE is very pleased to see a convergence of the sector towards a simplification of the authorisation process—this is a major achievement resulting from a great effort of UNIFE and its members. UNIFE looks forward to the publication of this recommendation and of the benefits that are expected to be realised by its implementation.

Another important step concerns the transparency of the National Rules. All the National Rules are now available in the Reference Document Database, a web-based tool collecting and cross-referencing all National Rules. Not all information in the database are validated today (10 countries only), and UNIFE is strongly pushing for the completeness and reliability of the content of the database. This will help reach the goal of total transparency regarding the rules an applicant has to comply with in order to obtain an authorisation across European Member States. In this respect, UNIFE is working closely with ERA to promote the elimination (or "cleaning up) of all unnecessary national technical rules for the harmonisation and clarification of the authorisation process at the European level.

Experts from the group are also participating in the new ERA working party, "Unique Authorisation" that was launched in 2014 to help facilitate simultaneous authorisation in Europe, as this working party aims to define 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 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.

Safety Assurance

UNIFE safety experts support the tasks performed by ERA, as requested by the Safety Directive. In 2014 the main focus was the continued development of the Risk Acceptance Criteria for the Common Safety Methods (CSM) on risk assessment regulation, now renamed CSM Design Targets. This activity aims to define a common set of criteria which have to 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. Several workshops took place in 2014 where UNIFE presented its input and views, and in the autumn a consultation of the proposed regulation was

launched by ERA. UNIFE will continue to support this activity by helping to develop the application guide, which will serve as a key tool to aid the implementation of the CSM Design Targets.

Moreover, UNIFE experts participate in CENELEC Working Group 14 that is working on the important EN50126 standard revision.

b. Topical Groups

Aerodynamics

The Aerodynamics Topical Group is following and formulating expert positions to the ongoing open issues regarding the practical applicability of current standards and regulations. Namely, the different practices of train authorisation applied in some European countries in regard of aerodynamics requirements still pose a serious issue that is currently under discussion with the European Commission and ERA. Also the initiative to apply cross-wind evaluation methods for trains without limit requirements (<250 km/h) is analysed. The group is prepared to be an active partner supporting the concrete solutions in these areas.

Brakes

The main work of the TG brakes for 2014 has been to support the activities of the Rolling Stock Mirror Group with respect to the revision of the Rolling Stock TSIs. The Topical Group also acts as a link with the brake standardisation world in order to ensure consistency between standards and regulation. The group has also been involved in activities relating to the revision of braking performance requirements in the Operation TSI – these requirements were adopted by RISC in November 2014.

Cab

The CAB Topical Group has been heavily involved in the ongoing preparation of the prEN 16186 standard (Railway applications - Driver's cab). Part 1 of the standard, dealing with the visibility, layout and access, has been effectively consolidated, especially in terms of its scope. After processing all the comments received from the reviewers and the finalisation of the editorial work, the first part of the standard will be published in 2015. The ongoing work on part 2 (integration of displays, controls and indicators) and part 3 (design of displays) will be the main activities of the group in 2015.

Diesel

Throughout 2014, the Diesel Experts Group continued to closely follow the activities of the European Commission, in particular with regard to the revision of the Non-Road Mobile Machinery (NRMM) Directive. This Directive regulates the pollutant emissions of a very broad variety of combustion-engine powered machinery, including rail cars and locomotives. 2014 saw the publication of the Commission's proposal for a new NRMM Regulation which will set the future emission limits for diesel railcars and locomotives as well and is therefore of high importance for the rail industry. In the preparation of the proposal the Diesel Experts communicated intensively with the European Commission, also in the framework of the GEME meeting. Fortunately, the European Commission shares the view of the rail industry that after the introduction of a technology-changing new emissions stage only two years ago, the rail sector at large would not be able to bear the cost of a new stage in the near future without any amortisation of the high investments for the previous stage. The Diesel Experts Group also closely liaised with the UIC experts, the CER experts and Euromot.

Fire Safety

During 2014 the Fire Safety Topical Group has continued to follow the implementation of the new Fire Safety standard – EN45545. As a support to this standard and in particular for the material requirements, which form the second part of the standard and will also be mandatory in the new TSI Loc & Pass, the group has developed a UNIFE template for a Fire Certificate Inventory List (FCIL). This template can be used by suppliers to provide information on the compliance of their products with the relevant material requirements for fire safety, facilitating the overall verification process and collection of information. The template will be available on the UNIFE website at the end of 2014.

The experts in this group also continue to contribute to the efforts to close the remaining

open point in the TSI Loc & Pas relating to Fire Safety, namely the development of a common conformity assessment method for alternative solutions to physical fire barriers.

Railway Dynamics

The Railway Dynamics group is heavily involved in the standardisation activities, including the active involvement in the development of EN standard 14363, dealing with the tests for the acceptance of running characteristics of railway vehicles. The work on its next revision is approaching the final stage and should be released soon. Similarly, the group was working closely with ERA on Technical Document 2012-17, providing the necessary additional specifications to perform running dynamic behaviour testing of rolling stock. The document is nearly finalised, as only editorial works, for the most part, are ongoing.

Besides these concrete expert contributions, the group is following the situation in Europe regarding the quality of different railway tracks and recent network access regulations and relevant difficulties.

c. Sustainable Transport Committee Topical Groups

Energy Efficiency

In 2014 The Energy Efficiency Topical Group has been active mainly in providing input to the MoU signatories involved in the preparation phase of the Shift2Rail initiative. In this regard, the Group has set a number of clear objectives:

- To interface with other internal or external energy and sustainability groups for standardisation and regulation;
- To bring technical and scientific support across all detailed activities of Shift2Rail (IPs and TDs work);
- To integrate energy savings in the Energy KPI

Apart from Shift2Rail, the EE TG has discussed a number of energy-related issues over the past year, such as the participation of some of the Group's members in the UIC Energy Efficiency Days on 18 June in Antwerp and how best to cooperate with the STC and the SRG. In this regard, it was decided to draft a Mission Statement, including the Group's functioning rules and a work plan for 2015 to be shared with the STC and the SRG.

Chemical Risks

The Chemical Risk Topical Group (CR TG) 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 their legal obligations. The Topical Group covers European legislation – including REACH, CLP, WEEE, and RoHS – and presents the point of view of the railway industry during consultations.

In 2012, the UNIFE Chemical Risk Topical Group developed and launched the **"UNIFE Material Declaration Template"**. The aim of the template is to harmonise the information requested by some of the main system integrators and develop a common form which would be recognised by all. With this new document, the reporting on hazardous substances would be 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 has started 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 gathers substance declarations from suppliers.

This year, the CR TG 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 has 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.

Life Cycle Assessment (LCA)

Throughout 2014, the Life Cycle Assessment Topical Group (LCA TG) 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 standardisation requirements, especially at EU level.

In the past, the LCA TG 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 standardised method to apply environmental life cycle assessments in a transparent and reliable way and to communicate the results in a credible way, 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. In 2014, discussions have started to collect internal and external feedback on the PCR and its possible evolutions.

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

Furthermore, the LCA TG is discussing the possible standardisation of existing LCA 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 in order to make recyclability and recoverability figures comparable and transparent.

Finally, the LCA TG now focuses its attention on possible ways forward, especially in communicating on the environmental performance of railway products to the general public and to decision-makers.

C. TecRecs

a. Introduction

Pending the publication of a European standard (EN), a TecRec will serve as a common standard to improve the competitiveness of the European railway systems. Approved by both UNIFE and UIC, the TecRecs are recognised as a voluntary pre-standard by the rail sector as a whole.

TecRecs are designed to:

- Feed directly into the established European standardisation system, thereby speeding up the formulation of ENs
- Facilitate the optimal publication of important UNIFE/UIC EU-funded R&D project results, improving their chances of market uptake
- Set new product and interface standards, which are high priorities for UNIFE and UIC

TecRecs will intensify the rail supply industry's contribution to the European rail standardisation system. The UNIFE/ UIC Memorandum of Understanding signed in 2009 signifies a new era of collaboration between the industry and rail operators in developing more competitive railway systems.

Two TecRecs, mainly focused on Rolling Stock, were signed and published by UNIFE and UIC:

1. TecRec 100_001: "Specification and verification of Energy consumption for railway rolling stock"
2. TecRec 100_002: "Driver-machine interfaces"

b. Ongoing TecRec Works

TecRec Interior Passive Safety

Following the SafeInteriors project, UNIFE and UIC members have been working together to develop a TecRec for Interior Passive Safety. The main goal of this work is to formulate the basis for a technical standard which covers the findings and recommendations from the SafeInteriors project and also, where appropriate, draws on previous experience in other projects. This group commenced working at the end of 2011 and have in 2014 developed a final draft of this Technical Recommendation with the UNIFE SRG approving the TecRec in June 2014. The TecRec is currently pending approval by UIC, which will then enable its publication.

D. Other Activities

UNIFE and EFRTC

In 2014 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 Luxembourg in October 2014, giving an overview on the current European transport policies relevant to contractors and an update on the European Parliament election and the new organisation of the European Commission. 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. EFRTC was also involved in UNIFE standardisation and regulation activities regarding the revision of the infrastructure TSI application guide. EFRTC reiterated its support for UNIFE policies promoting a more open and competitive rail market and the simplification of authorisation processes for track construction and maintenance machinery.

UNIFE Research and Development Activities

07

A. Projects submitted under the first "Mobility for Growth" call of the European Horizon 2020 Programme
B. Finalised European research projects
C. Ongoing European research projects coordinated by UNIFE
D. Ongoing projects with UNIFE involvement

A. Projects submitted under the first "Mobility for Growth" call of the European Horizon 2020 Programme

Coordinated by UNIFE

Embracing the ambitions set out by the European Commission's 2011 White Paper, **IT²RAIL** is a lighthouse project to Shift2Rail, dealing with ***'IT Solutions for a Seamless Attractive Railway'*** and is dedicated to solutions for **transport multimodality, seamlessness and sustainability**.

This proposal addresses the topic **MG.2.2-2014 – Smart Rail services** of the first "Mobility for Growth" call issued by the European Commission as part of the Horizon2020 Programme, tackling the transport challenge 'Smart, Green and Integrated Transport'.

Through the **introduction of radical new technologies and solutions**, European citizens' global travel interactions will be transformed into a fully integrated and customised experience, rendering the entire European transportation system a natural extension of citizens' work and leisure environments, across all modes, local and long-distance, public and private.

IT²RAIL and SHIFT²RAIL should lead to a dramatic increase in 'rail attractiveness', generating sufficient growth in demand to support a major shift to rail through:

- **A seamless travel experience**: a complete multimodal travel offer, connecting the first and last mile to long distance journeys combining air, rail, coach and other services;
- **A seamless access to all travel services**: the travel experience will be totally enhanced through the integration of a wealth of travel services supported by innovative digital technologies.

SHIFT²RAIL and IT²RAIL share similar objectives. More specifically, IT²RAIL aims at **enhancing the rail traveller experience centred on solutions that respond to customer needs** in order to support door-to-door intermodal journeys anytime and anywhere, encompassing distinct modes of transportation. This includes factors such as travel planning, one-stop-shop ticketing and booking transactions, en-route travel companion, and real-time re-accommodation.

UNIFE is coordinating the project and is also leader of Work Package dealing with dissemination and exploitation. UNIFE members involved in the project are: HaCon, Indra, Oltis Group and Thales.

For further information, please contact:
stefanos.gogos@unife.org

The **ROLL²RAIL** project aims to **develop key technologies** and to **remove already identified obstacles to** radical innovation in the field of railway vehicles, as part of a longer term strategy to revolutionise rolling stock for the future.

This proposal addresses the topic **MG.2.3-2014 – New Generation of Rail Vehicles** of the first "Mobility for Growth" call issued by the European Commission as part of the Horizon2020 Programme, tackling the transport challenge 'Smart, Green and Integrated Transport'.

The high-level objectives of the work are to pave the way to:

- **Increase the capacity** of the railway system and bring flexibility to adapt capacity to demand;
- **Increase operational reliability** and therefore punctuality of the vehicles;
- **Increase availability** of vehicles;
- **Reduce the life cycle costs** of the vehicle and the track;
- **Increase the energy efficiency** of the system;
- **Improve passenger comfort**, thereby increasing the attractiveness of rail transport to passengers.

At the end of the project all results will be further developed, leading ultimately to demonstration in real vehicles or relevant environments in Shift2Rail, which ensures that these results will be taken to high Technical Readiness Level.

UNIFE is coordinating the project and is also leader of Work Package dealing with dissemination and exploitation. UNIFE members involved in the project are: Alstom Transport, Ansaldo Breda, Bombardier Transportation, CAF, Faiveley, Knorr-Bremse, Siemens, Talgo, Thales, Vossloh and UniControls.

For further information, please contact:
andrea.demadonna@unife.org

With UNIFE involvement

The **IN²RAIL** project plans **to set the foundations for a resilient, consistent, cost-efficient, high capacity European network** by delivering important building blocks that unlock the innovation potential that exists in Shift2Rail: innovative technologies will be explored and resulting concepts embedded in a systems framework where infrastructure, information management, maintenance techniques, energy, and engineering are integrated, optimised, shared and exploited.

This proposal addresses the topic **MG.2.1-2014 – I²I – Intelligent Infrastructure** of the first "Mobility for Growth" call issued by the European Commission as part of the Horizon2020 Programme, tackling the transport challenge 'Smart, Green and Integrated Transport'.

IN²RAIL will make advances towards Shift2Rail objectives: **enhancing the existing capacity** fulfilling user demand; **increasing the reliability** delivering better and consistent quality of service; **reducing the LCC**, and, increasing competitiveness of the EU 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.

Smart Infrastructure addresses the fundamental design of critical assets - **switches and crossings and tracks**. I2M researches **automated, interoperable and inter-connected advanced traffic management systems**; scalable and upgradable systems. Rail Power Supply and Energy Management create solutions **to improve the energy performance of the railway system**.

UNIFE is the leader of the Work Package dealing with dissemination and exploitation. The project is coordinated by Network Rail. UNIFE members involved in the project are: Alstom Transport, Ansaldo STS, AŽD, Bombardier Transportation, CAF, Colas Rail, EFRTC, Hacon, Indra, MerMec, Siemens, Strukton Rail, Thales, Vossloh Cogifer and Tata Steel.

For further information, please contact:
nicolas.furio@unife.org

The objective of the **LOG²RAIL** project, which is foreseen as a complementary initial step for the Shift2Rail program, is **to identify the marked needs and relevant Key Performance Indicators (KPIs and design technological and operational measures and new business models** to acquire a new service orientated profile for rail freight based on marked demands and the capability to fulfil KPIs. The final combination of the different solutions should lead decision makers to select the rail mode.

This proposal addresses the topic **MG.2.2-2014 – Smart Rail services** of the first "Mobility for Growth" call issued by the European Commission as part of the Horizon2020 Programme, tackling the transport challenge 'Smart, Green and Integrated Transport'.

LOG²RAIL will propose the most suitable target orientated technological and organisational development schemes to make rail freight more attractive and able to meet the requirements for the logistics sector. These schemes will result from several initial approaches which will be made within the technical work packages of the project.

The components of this new targeted rail freight system will involve among others:

- Business Models for collaboration of forwarders, railway undertakings, shippers (among others);
- A more competitive train equipped with wagons of innovative design;
- A more manoeuvrable, silent, longer and heavier freight train able to serve higher quality paths more reliably, more efficiently with the ability to be more easily placed on the graphical timetable;
- A more interconnected train with sensors and detectors providing updated information on the status of the rolling stock;
- The capacity to bridge some gaps of lack of electrification on the route and deliver wagons to non-electrified terminals or private sidings.

UNIFE is the leader of the work package dealing with dissemination and exploitation. The project is coordinated by HaCon. UNIFE members involved in the project are: Bombardier Transportation, CAF, Faiveley, HaCon, Knorr-Bremse, Mer Mec, Oltis Group and Vossloh.

For further information, please contact:
andrea.demadonna@unife.org

SETRIS

In addition to the work carried out in the FOSTER RAIL FP7 project, the ERRAC partners, including UNIFE, also participated in a project proposal, in the framework of the first "Mobility for Growth" call of Horizon 2020 (MG9.6 – 2014 – Strengthening the research and innovation strategies of the transport industries in Europe).

SETRIS ("**S**trengthening **E**uropean **T**ransport **R**esearch and **I**nnovation **S**trategies") aims at delivering a **cohesive and coordinated approach to research and innovation strategies for all transport modes in Europe**, around the following key activities:

1. **Identify synergies** between the transport European Technology Platforms (ETPs) strategic and research and innovation agendas (SRIAs) and between these and relevant national platforms;
2. **Review and update the existing SRIAs** for each of the transport ETPs within a multi-modal and integrated transport system framework;
3. **Benchmark past and present research initiatives** affecting the achievement of integrated transport SRIAs and market uptake;
4. **Define comprehensive, credible and realistic implementation plans** for each SRIA in a coordinated framework of running ETPs;
5. **Support, shape and contribute** to future TRA events.

These objectives will be implemented through the involvement, for the first time, of **representatives of all relevant transport modes and European Technology Platforms (ETP) within one single collaborative initiative**. The ETPs will develop a framework for long-term cooperation between actors from all transport modes that will support the cohesive and coordinated approaches to research and innovation strategies that will facilitate the delivery of a truly integrated transport system.

For further information, please contact:
nicolas.furio@unife.org

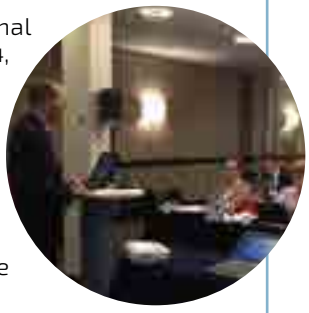
B. Finalised European research projects

ACOUTRAIN (Virtual certification of acoustic performance for freight and passenger trains) was a three-and-a-half-year FP7 European research project that ended in December 2014 with a budget of around €3 million. UNIFE was the coordinator of the ACOUTRAIN project which involved the following UNIFE members: ABB, Alstom Transport, Bombardier Transportation, Talgo and Vibratec.

ACOUTRAIN's main objective is promoting the interoperability of rail traffic in Europe by dramatically reducing the time and cost of the Noise Technical Specification for Interoperability (TSI) conformity assessment procedure and harmonising the process for noise conformity assessment across Europe by developing standard procedures and procedures for acoustic virtual testing. The scientific and technical objectives of the project are: (i) introducing acoustic virtual certification with a reliable simulation approach, (ii) establishing a method for separation of infrastructure and rolling stock noise contributions, (iii) establishing measurement procedures for new running conditions and (iv) developing procedures to obtain inputs for the European Noise Directive.

Vehicle Profile with noise sources positions

The ACOUTRAIN project is a successful project that has developed important knowledge on acoustic virtual certification. A concept for virtual testing has been developed, including **three different Virtual Testing approaches** (Extension of Approval, Hybrid Testing, Full Virtual Testing). ACOUTRAIN's objects of attention have been stationary and pass-by noise. From its research activities, step one involved designing a simulation tool and step two determined the best methods for modelling rolling noise, together with the characteristics of other vehicle noise sources (e.g. HVAC system). These steps were the basis for proposing a global certification procedure using virtual testing that had been validated by real testing. Moreover ACOUTRAIN has developed procedures that could be used as a simplified method. These procedures have been described with dedicated flowcharts and have been implemented in the application guide of the Noise TSI that will enter into force in 2015. Last but not least a close cooperation with the CEN WG3 dealing with Acoustics has been established. The ACOUTRAIN results on wheel roughness measurement will be used for the revision of the European standard EN 15610:2009 dealing with rail roughness measurement in order to extend the scope of this standard to both rail and wheel roughness measurements.



During the ACOUTRAIN Final conference in November 2014, the main achievements of the projects were presented to the European Commission, the European Railway Agency and other railway stakeholders. The results of the ACOUTRAIN projects were well received by the participants.

For more information on ACOUTRAIN, please visit: www.acoutrain.eu

For further information, please contact: nicolas.furio@unife.org

AUTOMAIN (**A**ugmented **U**sage of **T**rack by **O**ptimisation of **M**aintenance, **A**llocation and **I**nspection of railway **N**etworks) was a three-year FP7 European research project that ended in January 2014 with a budget of around €3.8 million. UNIFE's main role was planned in dissemination and communication. The project was coordinated by ProRail. The UNIFE members involved in the project were: EFRTC, MerMec, Strukton Rail and Vossloh Cogifer.

The project's main aim was to optimise railway track inspection, maintenance and possessions, and develop processes and technology so that railway infrastructure is only maintained when intervention is needed. Within the project, research was being carried out in the areas of **railway infrastructure inspection, high speed maintenance and possession planning**.

Five National Workshops were organised by the consortium's operators and infrastructure managers with UNIFE support in the Netherlands, France, Finland, Germany and UK between December 2013 and January 2014 which served as opportunities to present the main results achieved by the partners.

The project has achieved the five core objectives it had planned:

- The adoption of best practices from other industries in maintenance optimisation;
- The development of novel track inspection approaches for freight routes with a scope on in-train measuring and self-inspecting switch;
- The research and assessment of innovations to improve the effectiveness and efficiency of large scale inspection and maintenance processes;
- The further development of key technologies to drive the development of modular infrastructure design;
- The creation of a new maintenance planning and scheduling tool to optimise the maintenance activities.

For more information on AUTOMAIN, please visit: www.automain.eu

For further information, please contact: andrea.demadonna@unife.org

EURAXLES was a three-and-a-half-year FP7 European research project that ended in April 2014 with a budget of around €4.8 million. UNIFE was the coordinator of the EURAXLES project which involved the following UNIFE members: Alstom Transport, Ansaldo Breda, Bonatrans, CAF, GHH-Valdunes, Lucchini RS, MerMec and BVV-RAFIL.

Gathering fifty participants, the project EURAXLES successfully held its final conference on 29 April 2014 in Brussels.

The project, uniting 23 partners across Europe (6 axle manufacturers, 4 railway operators/IMs, 2 system integrators, 3 technology suppliers, 5 universities, 2 rail sector associations and 1 consulting firm) was launched in the autumn of 2010.

EURAXLES aimed at **developing innovative and safer solutions for railway wheelsets with improved reliability in a cost effective way** though the following core R&D activities:

1. *Optimised axle design*
2. *New coating solutions*
3. *Better detection of defects*
4. *Improved NDT methodology*

The main concept of the EURAXLES project was to follow three complementary routes which take into account, in an innovative way, the combined influence of axle design, production and maintenance standard parameters whilst retaining a safe management of the life cycle. This includes, improving the axle load definition, progressing beyond the state of the art by resolving the problems associated with existing surface coating methods (corrosion, damage) through improved adhesion and new innovative coating and treatment processes and enhancing the currently used ultrasonic techniques for inspecting the complete volume of the axle.

The following two main achievements can be highlighted from the final project results:

- The findings regarding the improved design of the axles for roughness, including the development of innovative painting and coating solutions that take into consideration the necessary environmental requirements are currently being proposed for **integration into the ongoing revision of the EN13261 standard**;
- **Recommendations on the use of Finite Element Analysis (FEM) for axle calculation will be published as a CEN Technical Report (CEN TR)**.

The consortium also intends to widely disseminate its results to the different stakeholders as well as to the European regulatory and standardisation bodies (European Railway Agency and CEN).

For more information on EURAXLES, please visit: www.euraxles.eu

For further information, please contact: lea.paties@unife.org

EUREMCO (**EU**ropean **R**ailway **E**lectro**M**agnetic **CO**mpatibility) is a three-and-a-half-year FP7 European research project that ended in December 2014 with a budget of around €3.7 million. UNIFE was the coordinator of the **EUREMCO** project which involved the following UNIFE members: Alstom Transport, Bombardier Transportation and Siemens. Partners from other parts of the rail sector included Railway Undertakings, such as DB, SNCF and Trenitalia, and Infrastructure Managers such as Network Rail and ProRail. Academic Institutions and Research Centres were also involved in the project.

EUREMCO addresses the question of compatibility between track circuits and rail vehicles. Track circuits are found in railway tracks, and are primarily used to detect the exact location of vehicles for signalling systems. **The main objective of EUREMCO was to harmonise and reduce the certification process of rail vehicles for Electromagnetic Compatibility (EMC)**. The main concept of the project is to specify the conditions for cross-accepted certification throughout Europe by using sound scientific methodologies that allow for the identification of the so called "transfer functions" that need to be applied to results obtained on different test tracks in different countries, for the same power supply system.

By also addressing non-electrified lines, the project will cover the entire European railway network. And by helping to close the corresponding "open points" in the Technical Specifications for Interoperability, the project will lead to a time and cost reduction in the certification process of rail vehicles against Electromagnetic Compatibility issues, corresponding to an estimated savings of €60 million over the next fifteen years.

During 2014, the project was presented at various occasions such as the Second International Conference on Railway Technology in Corsica and the European Railway Agency Nordic Geographical Interest Group in Oslo. In terms of research activity, much of the work revolved around completing, validating and analysing the data collected from the different test campaigns. The final results were presented during the final conference that took place on 9 December 2014 in Brussels.

For more information on EUREMCO, please visit: www.euremco.eu

For further information, please contact: stefanos.gogos@unife.org

MARATHON (**MA**ke **RA**il **T**he **HO**pe for protecting **N**ature) is a three-and-a-half-year FP7 European research project that ended in September 2014 with a budget of around €4.4 million. UNIFE was the leader of the Work Package dealing with dissemination and exploitation. The project was coordinated by D'Appolonia and the technical leader was NewOpera. UNIFE members involved in the project were: Alstom Transport, Faiveley and Vossloh.

MARATHON aims to increase network capacity and cost efficiency by the coupling of two classical trains, the two locomotives of the train are then connected via a radio link with a driver controlling the front and middle locomotive from the master locomotive (usually the front locomotive).

Marathon train in action

MARATHON looked at deploying "longer, faster and heavier trains" on the existing infrastructure, up to around 1500m in length. A key technical solution developed by the project is a wireless communication device which can enable two locomotives and trains to be connected together with the middle locomotive operated remotely from the front locomotive. In addition, an intelligent braking system was developed which allows for appropriate and safe braking across the full length of a MARATHON train.

Through two real-life successful operations of **MARATHON** trains, **the project has been able to prove that it is possible to run trains of over 1500m in length in Europe**, and has demonstrated the technologies which are necessary to do so. Both tests took place in France and operated on the mainline transporting freight from one point to another. The first test used an electrically powered locomotive whilst the second test used a diesel electric locomotive.

The project held its final conference in September 2014 during the InnoTrans event where around 50 participants exchanged and discussed the project results. The project also produced two videos of the live tests that took place and these are available on the project website.

For more information on MARATHON, please visit: www.marathon-project.eu

For further information, please contact: andrea.demadonna@unife.org

PROTECTRAIL (The Railway-Industry Partnership for Integrated Security of Rail Transport) was a four-year FP7 European research project that ended in June 2014 with a budget of around €21.8 million. UNIFE's main role was in dissemination and communication. The project is coordinated by Ansaldo STS. UNIFE members involved in the project are: Alstom Transport, Ansaldo STS, Bombardier Transportation, MerMec and Thales.

PROTECTRAIL aimed to develop an interoperable and modular architectural framework for mainline rail security solutions. **PROTECTRAIL** demonstrated that it is possible to build a modular IT system architecture that makes plug-and-play for security solutions possible. During the PROTECTRAIL demonstration that took place in Zmigrod, Poland in October 2014, the security solutions that were tested in the project could be plugged into existing security systems. Technologies integrated, tested and successfully validated included systems for intrusion detection, video tracking, scanning for dangerous goods as well as track protection.

In June 2014, PROTECTRAIL held its final conference in Paris. At the event, the main findings were presented and security solutions were exhibited. A White Paper was developed as one of the project's results. This White Paper summarises the key findings and a short implementation guide for the PROTECTRAIL framework.

For more information on PROTECTRAIL and to download the White Paper, please visit: www.protectrail.eu

For further information, please contact: jan.steinkohl@unife.org

SECUR-ED

SECUR-ED (**Secur**ed Urban Transportation – A **E**uropean **D**emonstration) was a three-and-a-half-year FP7 European research project that ended in September 2014 with a budget of around €40 million. UNIFE was the leader of the Work Package dealing with dissemination and communication. The project was coordinated by Thales. UNIFE members involved in the project were: Alstom Transport, Ansaldo STS, Bombardier Transportation and Thales.

SECUR-ED was a demonstration project with the objective of providing a **set of tools and procedures to improve urban transport security**.

A key element of the project was the demonstrations which took place in Paris, Madrid, Berlin and Milan. **Each demonstration focused on different technologies and threats, ranging from CCTV and video analytics to CBRN-E and intrusion detection**. **SECUR-ED** also included a non-technological security solution and, for instances, developed training and lesson plans for operational public transport workers. All **solutions are designed to be transferable, scalable and adaptable to the needs of different public transport systems**.

The final event was held in September 2014 in Brussels. It was combined with an exhibition of security solutions that were used in the project.

For more information on SECUR-ED please visit: www.secur-ed.eu

The SECUR-ED videos found on the project's website are a good way to learn more about the security challenges in public transport and the solutions generated by SECUR-ED.

For further information, please contact: jan.steinkohl@unife.org

C. Ongoing European research projects coordinated by UNIFE

MERLIN (Sustainable and intelligent **M**anagement of **E**nergy for smarter **R**ai**L**way systems in Europe: an **IN**tegrated optimisation approach) is a three-year FP7 European research project that started 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 are: Alstom Transport, AnsaldoBreda, Ansaldo STS, CAF, MerMec, Oltis Group, and Siemens.

MERLIN's main aim and purpose is 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. This should consequently lead to an improved design of existing and new railway distribution networks and electrical systems, and also a more efficient usage of energy resources.

MERLIN Mid-Term Conference held during the UIC Energy Efficiency Days in June 2014

The project is entering its final twelve months and several key milestones have been reached including:

- Analysis and identification of components in the rail system, which have an impact on energy usage;
- Definition of the scenarios and their respective objectives which are to be simulated and/or demonstrated in MERLIN through the application of the MERLIN outcomes;
- Development of an exploitation plan to help support the implementation of the results post-project;
- First release of the draft architecture for the MERLIN Railway Energy Management System;
- Establishment of a rail reference group involving railway operators to help guarantee the applicability of the MERLIN outcomes;
- Successful hosting of the MERLIN mid-term conference in parallel with UIC Energy Efficiency days during the month of June 2014.

Over the next twelve months the project will undertake simulations and live demonstrations of the MERLIN energy management system to then further refine and improve the outcomes of the project. UNIFE and UIC will jointly organise a final conference in the autumn of 2015 where the final results will be presented.

For more information on MERLIN, please visit: www.merlin-rail.eu

For further information, please contact: andrea.demadonna@unife.org

Next Generation of
Train Control systems

NGTC (**N**ext **G**eneration **T**rain **C**ontrol) is a three-year FP7 European research project that started 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 Transport, Ansaldo STS, AŽD, Bombardier Transportation, CAF, Siemens and Thales.

NGTC's focus is on the evolution of train control specifications with the goal of achieving higher flexibility and efficiency, while facilitating the interoperability between various railway track categories and easier interchangeability of system modules.

Across 2014, the consortium has reached the first significant results that created the basis for the following stages of the project. Finalised comparison analysis of the existing functional requirements for both main lines (ETCS) and urban lines (CBTC, UGTMS) determined the commonality level (same, similar, different) for all the identified existing system functionalities. Identification of the future train control systems needs was followed by the development of the **NGTC Functional Requirement Specifications** (**NGTC FRS**). On this firm basis, the NGTC architecture and system specifications will be further developed.

Besides the ongoing work on the system level, the members of the consortium are also focusing on the number of significant technologies and areas for future train control systems development. Main lines as well as urban lines experts have jointly specified the high-level moving block principles, to be applied on the various track categories. Moving block technology, when applied, has a significant positive effect on track maintenance and operational costs, while helping to achieve demanding operational performance requirements.

Rapid development of digital radio communication systems during the past few years is the hot topic for train control systems development. In NGTC, experts have specified a consistent set of technical requirements based on the analyses of the needs coming from the variety of existing train control system specifications and standards. The next steps will be to identify the potential candidate technologies suitable for the wide-spectrum of system needs and evaluate their technical feasibility.

NGTC presentation at TRA event in Paris

Satellite Train positioning is the technology which will allow cost-effective train operations on certain track categories. In 2014, working group experts have focused on the achievable positioning performances by specifying the set of parameters, relevant mainly for the functional interoperability. The development of the "virtual balise" functionality is also effectively supported by GSA (European GNSS Agency), providing the needed expertise for the full understanding of advanced space technologies in order to achieve sufficient reliability, availability and safety.

For more information on NGTC, please visit: www.ngtc.eu

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

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

During its third year, OSIRIS has achieved a number of important goals, including **the running of three pilots aimed at testing new vehicle / infrastructure-based technologies** and their results will be presented during the Final Event scheduled in mid-March 2015 in Brussels.

- In the Milan metro, ATM and Alstom Transport deployed new technologies on auxiliary converters and transformers in order to increase energy efficiency, drastically reduce the mass of the converter and increase the interactions between the converter and the train;

- In the Rome metro, Ansaldo STS and ATAC developed and installed a demonstration plant of a cooling system that utilises the available groundwater to cool the technical local, with the aim of realising a free-cooling system. It is expected that such a plant could lead to a consistent saving of electrical energy and reduce refrigerant ozone depletion and related global warming issues;

- CAF installed a new on-board energy storage system provided by Saft on a tram in Vitoria-Gasteiz aimed at providing more power and energy than current deployed systems in railways.

OSIRIS was present at the Transport Research Arena (TRA) event that took place in April 2014 in Paris. The UNIFE Project Coordinator presented some results to Mr. Shane Sutherland, Member of the Cabinet of Commissionner Geoghegan-Quinn (Research, Innovation and Science), Mr. Liam Breslin from DG Research and Mr. Josef Doppelbauer, ERRAC Chairman at the UNIFE stand.

OSIRIS presentation to Mr. Shane Sutherland, Member of the Cabinet of Commissionner Geoghegan-Quinn (Research, Innovation and Science), Mr. Liam Breslin (DG Research) and Mr. Josef Doppelbauer (ERRAC Chairman) at the TRA event in Paris

At the end of 2013 the first OSIRIS newsletter was published and distributed during a number of events: UITP Energy Efficiency seminar on 4 December 2013, TRA 2014, and InnoTrans 2014.

The OSIRIS Final Event will be held in March 2015 and all the results will be presented.

For more information on OSIRIS, please visit:
www.osirisrail.eu

For further information, please contact:
andrea.demadonna@unife.org

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 two-and-a-half-year FP7 European research project that started in September 2013 with a budget of around €4.6 million. The REFRESCO consortium includes many of the principal European rolling stock system integrators, other members of the rail supply industry, operators and material suppliers, in addition to academia and research institutions and one of the largest certification companies in Europe. The UNIFE members involved in the project are: Alstom Transport, Ansaldo Breda, Bombardier Transportation, CAF, DuPont Transportation, Siemens, Talgo and Vossloh.

REFRESCO assesses the possibility to use and authorise lightweight composite materials in rail vehicles. New materials such as composites and light metallic alloys could be used to construct lighter rolling stock, which will consume less energy and help reduce the emissions and energy consumption of rail transport. While composite materials have already been used in the manufacture of parts of rolling stock, there is currently no way to certify a rail vehicle built entirely or in large part from non-metallic materials.

The overall 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**. REFRESCO will generate recommendations and provide the information needed to adapt the regulatory framework of railway carbody structures to the introduction of new materials.

Technical work began in 2013 and continued in 2014, with the start of a thorough and wide-ranging benchmarking exercise of the most promising materials being used within and outside the rail sector, as well as an identification of the gaps in current approval methodologies which will need to be filled to allow the use of new materials. The work and outputs of REFRESCO will feed into Shift2Rail projects.

For further information on the project, please visit: www.refresco-project.eu

For further information, please contact: jan.steinkohl@unife.org

D. Ongoing projects with UNIFE involvement

ALL WAYS TRAVELLING

In 2012, the consortium "**ALL WAYS TRAVELLING**" won a tender, initiated by the European Commission (DG MOVE) to **develop and validate European passenger transport information and booking system across transport modes**. The consortium is comprised of Amadeus, BeNe Rail, IATA, Thales, UNIFE and Zeppelin University. The project forms one of the initiatives adopted by the European Commission (EC) within its Roadmap to a Single European Transport Area. The roadmap aims to build a more efficient, sustainable transport system to increase mobility across Europe, drive growth and associated employment within the transport sector, and reduce carbon emissions.

The project is split in two phases. In the first phase, which was successfully completed and presented to the European Commission on 26 May 2014, the ALL WAYS TRAVELLING consortium has undertaken an in-depth study of multimodality. For the second phase, a series of Proofs of Concept (POC) has been developed in terms of business models, operations and specific technologies that have been identified as critical for market delivery. The Kick-Off meeting for the second phase, in which UNIFE is participating only as an observer, is planned for 21 November 2014 in Brussels.

The project is coordinated by Amadeus. The work and outputs of ALL WAYS TRAVELLING will feed into Shift2Rail projects.

For more Information on ALL WAYS TRAVELLING please visit: www.allwaystravelling.eu

For further information, please contact: stefanos.gogos@unife.org

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. UNIFE's main role is planned in dissemination and communication. The project is coordinated by UIC. UNIFE members involved in the project are: Ansaldo STS, EFRTC, Knorr-Bremse, Oltis Group, Voestalpine VAE, Vossloh Cogifer and Vossloh Fastening Systems.

CAPACITY4RAIL aims to bring a **system vision of the railways looking towards 2030/2050**, by proposing guidelines for future deployments in the mid-term and recommendations for technologies to be developed and deployed in the long-term in order to obtain an **affordable, adaptable, automated, resilient and high-capacity railway**. With a comprehensive system vision, it contributes to the development of guidance documents that identify further actions to be taken and future technologies and systems to be developed. It will demonstrate that **a step change in railway infrastructure and operations may be achieved within the constraints of the need to maintain railway services while work is being carried out**.

The project builds on various past and ongoing research projects (for example inputs of INNOTRACK for switches and crossings for future railways). The project is structured into four Sub-Projects related to infrastructure: track, freight, operation, and advanced monitoring. A fifth transversal Sub-Project gives the project a system view and ensures the connection between the other Sub-Projects. 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.

The project challenges concern the use of existing know-how, the implementation of findings, the need to find timely low cost ways to add capacity, and rapid implementability at minimal cost. The coordination is of vital importance, which seeks to create an open and creative atmosphere and keep a multi-disciplinary system approach.

For more information on CAPACITY4RAIL please visit: www.capacity4rail.eu

For further information, please contact: nicolas.furio@unife.org

ECUC (**E**ddy **CU**rrent Brake **C**ompatibility) is a three-year FP7 European research project that began in September 2012 with a budget of around €3.2 million. UNIFE is 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 are: Alstom Transport and Knorr-Bremse.

The project **aims 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 aims 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 eddy current brake** will be designed and the study of incompatibilities will be performed in two domains: electromagnetic and thermo-mechanical. As a result, ECUC will also propose new designs and engineering and operational guidelines for eddy-current brakes and signalling equipment. In its last stages it will define Technical Recommendations for the correct interoperable functioning of the ECB in a complex railway system.

ECUC Test campaign

The ECUC Mid-Term event took place in November 2014 and project partners presented the latest results to the almost 20 external participants. The first preliminary results of a test campaign run in Germany in October 2014, where an ICE3 (BR403) equipped with three different types of ECB was tested on the high speed line between Ingolstadt and Nuremberg. The final results will be presented during public events and the ECUC Final Event during 2015.

For more information on ECUC, please visit:
www.ecuc-project.eu

For further information, please contact:
andrea.demadonna@unife.org

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. UNIFE is supporting UIC in the coordination of the project and the leader of several Work Packages. UNIFE members involved in the project are: Alstom Transport, AnsaldoSTS and MerMec.

Publication of the Strategic Rail Research and Innovation Agenda (SRRIA)

One of the main **FOSTER RAIL** achievements in 2014 is **the publication of the Strategic Rail Research and Innovation Agenda (SRRIA)**. Prepared by the **FOSTER RAIL** partners, the document'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. T**he SRRIA has been officially endorsed by the ERRAC plenary on 4 November 2014**. Another achievement of **FOSTER RAIL** in 2014 is the establishment of several Rail Business Scenarios.

In addition, **FOSTER RAIL** has worked **on the revision of the ERRAC Roadmaps published in 2012 in order to align them with the new SRRIA.** Ten Roadmaps have been identified and will propose new plans for research and innovations aligned with the SRRIA and the Shift2Rail Draft Master Plan.

ERRAC Plenary on 4 November 2014 with Keir Fitch and Christos Economou

In addition to this major activity and following the new Terms of Reference of ERRAC approved in April 2013, several ERRAC Strategic Board meetings took place in 2014 and two ERRAC Permanent Advisory Groups (Member states and Academics) have been established. The role of these Advisory Groups will be to advise ERRAC on its future activities and/or developments.

ERRAC has also enhanced its relations with other sectors (most notably ERTRAC and WATERBORNE TP, the Technology Platforms of the automotive and waterborne sectors, respectively) but also with other research programmes such as National technology platforms.

One good example of cooperation between sectors is the **Transport Research Arena** (**TRA**) conference. **TRA** is an intermodal conference organised by the main Surface Transport European 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 conference was successfully held in April 2014 in Paris and gathered over 3 000 participants. UNIFE, through **ERRAC**, was actively involved in the preparation and during the conference. In addition to a stand, UNIFE presented EU research projects (including, but not exclusively, **ACOUTRAIN**, **EURAXLES**, **EUREMCO**, **MERLIN**, **OSIRIS**, **NGTC** and **RFRESCO**) and participated to several sessions on European Transport Policy.

The main objective of TRA 2014 was to contribute to European transport competitiveness. TRA 2014 was a unique opportunity and a multi-disciplinary and inter-agency event, to bring together all the transport actors and to exchange ideas about the transport sector which plays a major strategic role in the European single market and in a fast changing economic and societal frame. TRA was also the opportunity to discuss policies, technologies and behaviours that must be continually adapted to new constraints, such as climate change, the diminishing supply of fossil energy, the economic crisis, the increased demand for mobility, safety and security, etc.

The next edition of TRA will be held in Warsaw in April 2016.

For more information on FOSTER RAIL and ERRAC, please visit: www.errac.org

For more information on TRA, please visit: www.traconference.eu

To upload the new SRRIA, please visit: www.errac.org/publications/strategic-rail-research-and-innovation-agenda/

For further information, please contact: nicolas.furio@unife.org

UNIFE stand at the TRA event in Paris

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

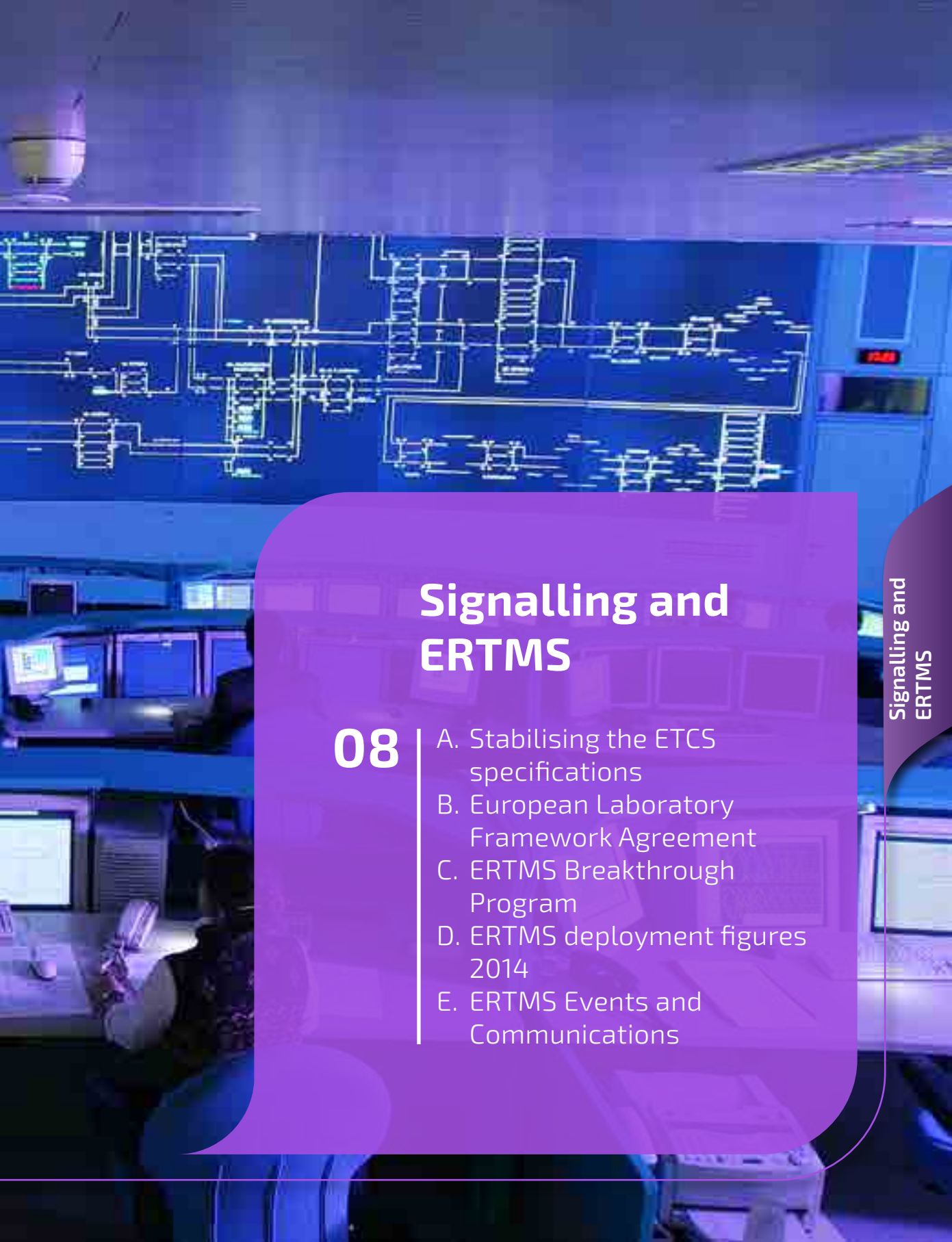
The project **aims to contribute to a new era in the rail freight sector by adopting a holistic approach, implementing a clear methodology and viable procedures for combined improvement in both freight vehicles and track components**. The expected benefit from the SUSTRAIL project is an increased performance of the whole rail freight system (vehicle plus track), which is assessed and quantified through the implementation of appropriate life cycle cost analyses. SUSTRAIL is promoting modal shift of freight in Europe from road to rail, providing the approach, structure, and technical content to support this modal shift through improvements in the railway freight system including innovations in rolling stock and track components.

Selected routes have been identified across three European countries (UK, Bulgaria and Spain) that have been investigated in terms of capacity, type of freight vehicle and characteristics of the infrastructure. This made it possible to define a benchmark that will be used to compare and assess the benefits of the SUSTRAIL proposed upgrades both on vehicles and infrastructure. Business cases have been set up to demonstrate on real routes the contributions, solutions and innovations that SUSTRAIL is aimed at introducing in the railway sector.

In 2014, two project General Assemblies were organised to discuss about the progress of the project, present the results of SUSTRAIL and define the next steps.

For more information on SUSTRAIL, please visit:
www.sustrail.eu

For further information, please contact:
nicolas.furio@unife.org



Signalling and ERTMS

Looking back, 2014 was an intense year for ERTMS. From the release of the first maintenance of Baseline 3 in June to the preparation of the future specifications, UNIFE and its members were also busy encouraging an enhanced deployment of the ERTMS standard in Europe. UNIFE is, more than ever, committed to fulfilling the objectives of the ERTMS Memorandum of Understanding (2012). The deployment figures of ERTMS for 2014 are still encouraging and demonstrate the trust put in this system by Infrastructure Managers and Railway Undertakings. In addition, the outlook for future European deployment plans (e.g. United Kingdom and Belgium) is very promising.

It is also worth noting that the global expansion of ERTMS is still developing (see figures) as UNIFE continues its efforts to promote the standard abroad (see the "International Affairs" chapter of this Annual Report).

A. Stabilising the specifications: First maintenance release of Baseline 3 approved by the Members States

12 June 2014 marked a milestone for UNIFE and the UNISIG members. The European Commission's Rail Interoperability & Safety Committee (RISC) positively voted on the introduction of the first maintenance release for Baseline 3 of the ERTMS specifications, which provides an update to the Control Command & Signalling TSI ("CCS TSI").

The introduction of the ERA-led first maintenance version of Baseline 3 in the TSI is a major step for the sector and is expected to **improve stability of the specification while ensuring backward compatibility**. Since significant investments have already been made with the previous Baseline (Baseline 2), the industry has made concerted efforts to ensure that vehicles equipped with new baseline (Baseline 3) can run on Baseline 2 track side ("backward compatibility"). This protects the ERTMS investments already made in EU Member States such as Italy and Spain.

Nevertheless, a continuous maintenance of the standard and a long term maintenance strategy should be established. UNIFE fully supports ERA in establishing a stable process for the specification to support the European Commission's objective for the deployment of ERTMS in Europe. UNIFE/UNISIG have already started to assist ERA in identifying and processing the most urgent issues to be covered in the next release, currently scheduled for the end of 2015.

B. Suppliers' commitment to interoperability testing– European Laboratory Framework Agreement

The current ERTMS Memorandum of Understanding (2012) includes a provision for collaboration on the testing of interoperability of on-board and track side products. The ETCS suppliers (members of UNIFE) have signed, in February 2014, a European Laboratory Framework Agreement to outline cooperation of this specific matter.

While product testing and on-board and trackside integration tests are usually performed by suppliers individually, cooperation in this respect is seen as a necessary step to accelerate the identification of interoperability-related systematic failures and, as such, accelerate the deployment of the ERTMS in Europe.

Accordingly, the purpose of this Framework Agreement is to define a harmonised organisational framework for the conduct of ERTMS Test Campaigns in an efficient, flexible and reliable way.

This Framework Agreement is intended to be used to perform interoperability testing services at the request of third parties (e.g. railways operators, infrastructure managers, suppliers) wishing to perform such tests on their already (NoBo) certified on-board or trackside equipment or to perform interoperability test demonstrations for interested third parties (e. g. operators, infrastructure managers, national authorities or public institutions). Furthermore interoperability test reports may be used to expedite certification and authorisation procedures according to national and/or European laws and regulations.

UNIFE will continue to promote this framework agreement in 2015.

C. Supporting the deployment of ERTMS: ERTMS Breakthrough Program

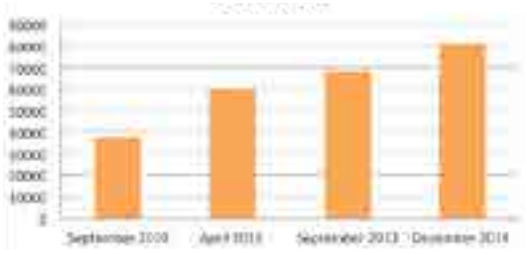
The second half of 2014 coincided with the initial discussions and work on the European Commission's ERTMS Breakthrough Program. This document provides a set of actions to be fulfilled by the European Commission, the Member States and the rail sector in order to speed up the deployment of ERTMS in Europe.

In 2014, UNIFE began to support the European Commission in defining the key actions to be performed in the coming years to ensure a successful and harmonised ERTMS deployment in Europe. This support will, of course, continue throughout 2015.

Patrizio Grillo (Acting Head of Unit for the Single European Railway Area, European Commission - DG MOVE), Klaus Mindel (Chairman, UNIFE ETCS Steering Committee), Luc Lallemand (CEO, INFRABEL), Andrew Simmons (Technical Director, National Operating Strategy, Network, Rail), Emin Karaman (Turkish State Railways)

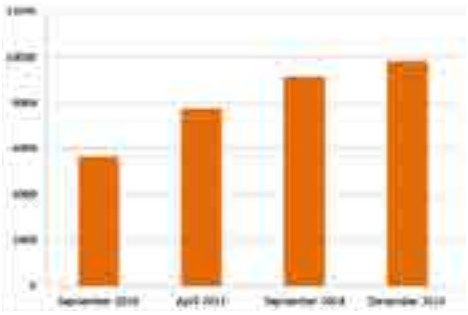
D. ERTMS deployment figures 2014

ERTMS equipped track worlwide (km) Contacted



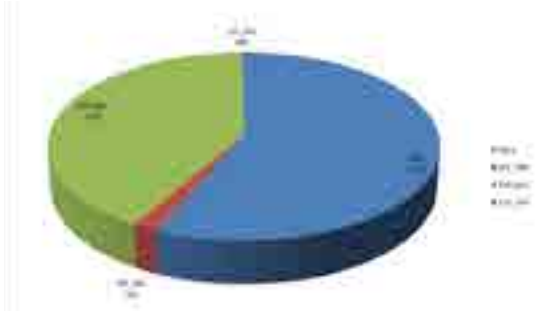
ERTMS trackside contracts
In tracks km, comparison September 2010 - December 2014

Number of vehicles equipped with ERTMS worldwide Contracted



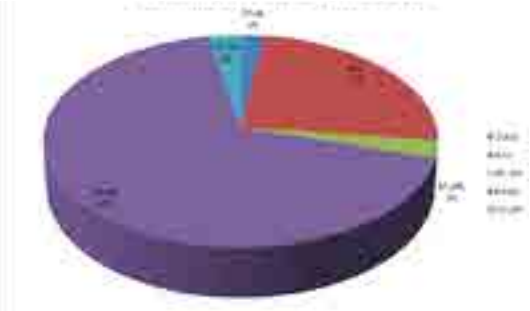
ERTMS onboard units contracted
Comparison September 2010 - December 2014

ERTMS investments worldwide by geographical area
Trackside (km)
December 2014



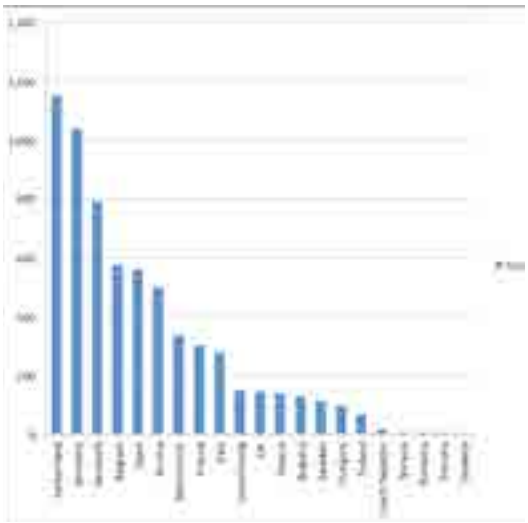
***ERTMS trackside contracts** - In percentage, by region*

ERTMS investments worldwide by geographical area
Contracted onboard units
December 2014

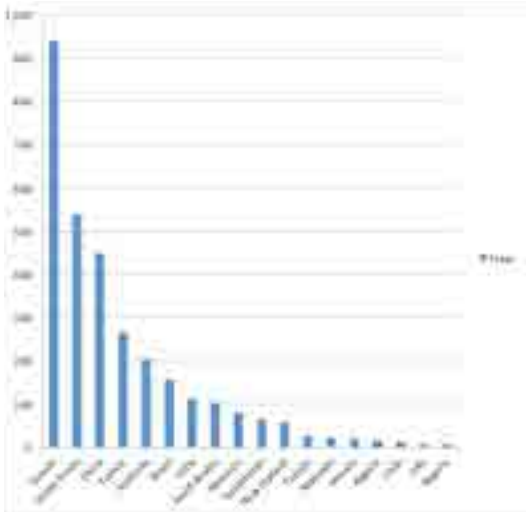


***ERTMS onboard units, contracted** - In percentage, by region*

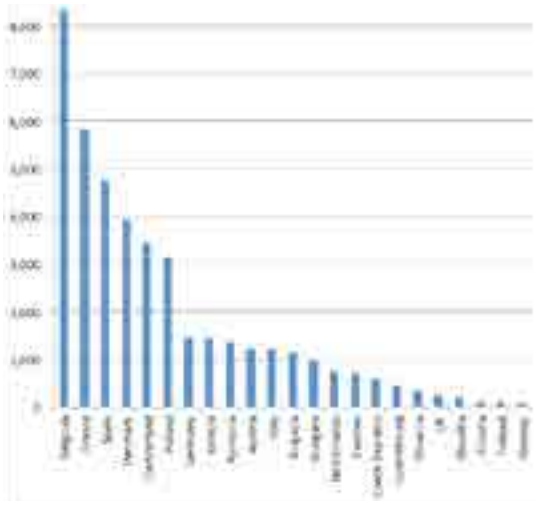
Global ERTMS vehicles contracted in Europe, per country



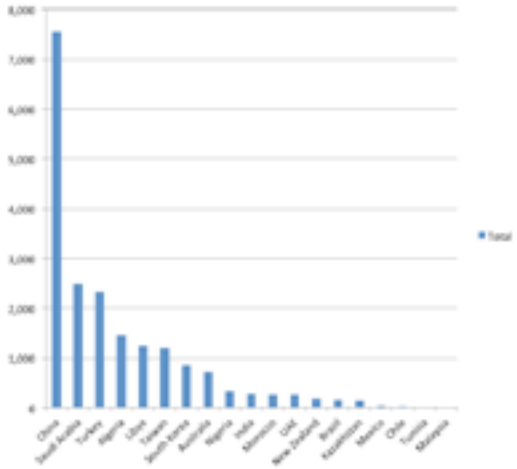
Global ERTMS vehicles contracted in non-European countries



Global ERTMS contracted tracks (km) in Europe



Global ERTMS contracted tracks (km) in non-European countries



E. ERTMS Events and Communications

InnoTrans 2014 – High level Dialog Forum on ERTMS

The ERTMS High-Level-Dialog-Forum organised by UNIFE and VDB successfully gathered around 100 participants on 25 September in the framework of InnoTrans 2014 in Berlin. This well attended event, moderated by UNISIG General Manager, Michel Van Liefferinge, gave the broader worldwide rail sector a snapshot of the current status of the ERTMS implementation in Europe and throughout the world.

Stability of specifications to guarantee investments

The issue of the stability of the specifications of ETCS was at the heart of this session, Patrizio Grillo, Acting Head of Unit for the Single European Railway Area (European Commission - DG MOVE) said that ensuring a stable standard in order to guarantee the future deployment of ERTMS was a major priority for the European Commission.

This strategic aspect was also shared by Klaus Mindel, Chairman of the UNIFE ETCS Steering Committee. He highlighted the concept of backward compatibility, which is at the core of the strategy of the European rail manufacturing industry, in order to preserve the significant investments already made by Railway Undertakings. For UNIFE, safeguarding investments and managing the evolution of the specifications will help to speed up the deployment of ERTMS.

Positive business case for the deployment of ERTMS

This forum at InnoTrans was also the occasion for representatives from Railway Undertakings and Infrastructure Managers to share their vision on ERTMS. Luc Lallemand, CEO of INFRABEL, presented the infrastructure manager's strategy for implementing ETCS on the Belgian rail system by 2022. Andrew Simmons, Technical Director, National Operating Strategy at Network Rail, put the emphasis on the key drivers for deploying ETCS in the UK: increase of safety and capacity, network optimisation and cost. Both shared the opinion that ERTMS provides a sound business case for an increased operational capability, removes barriers for interoperability and enhances the safety of the railway system. Emin Karaman, from Turkish State Railways (TCDD) also presented the operational and economic benefits obtained by deploying ETCS, in Turkey.

Other notable events in 2014:

- Rail Forum Europe event organised in February in Brussels where participants discussed the future evolutions between Galileo and ERTMS.
- UNIFE and UNISIG actively participated in the last UIC ERTMS World conference, which took place between 1-3 April in Istanbul, Turkey. This biennial conference gathered key experts in ERTMS worldwide.
- The focus on ERTMS during the last ERA conference, organised on 7-8 May in Lille, France was the occasion to review the current state of play for ERTMS, at the European level.

Factsheets, website and social media

Updated ERTMS factsheets are now fully available on the ERTMS website.

Please follow us also on Twitter **@ERTMS**

Increased visits on the **www.ertms.net** website

09 ERWA - Railway Wheels and Wheelsets Committee

ERWA, the UNIFE Railway Wheels Committee, currently comprises 9 companies, all of which produce railway wheels and wheelsets in Europe: Bochumer Verein Verkehrstechnik, Bonatrans Group, CAF, GHH Radsatz GmbH, Lucchini RS, Lucchini Sweden, Lucchini UK, Lucchini Poland and MG Valdunes.

At present, the nine 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.

The ERWA Spring Meeting, which takes place once per year, was hosted in 2014 by GHH and was held on 26 May, 2014 in Essen, Germany. During this two-day event, Mr Raimund Abele of GHH-Bonatrans Group (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) presented the activities and progress of their respective groups. The members of the Steering Committee have then elected as the new ERWA Chairman Mr Iñigo Ona (Managing Director of CAF Wheelsets). The mandate of the Development Committee and Technical Committee Chairmen was renewed for another year.

Iñigo Ona, *ERWA Chairman, Managing Director, CAF Wheelsets*

In 2014 numerous activities coordinated by the ERWA Steering Committee were carried out. They can be summarised as follows:

- Strategic/public affairs activities
  - Market statistics and trends
  - Communication strategy and lobbying
- Technical activities
  - Contribution to European standards and TSI
  - IRIS
  - Joint R&D projects (finalisation of EURAXLES)

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. The ERWA technical committee will also continue to follow the uptake of the project results in the standardisation process at the EU level.

18TH INTERNATIONAL WHEELSET CONGRESS

In September 2013, the 17th edition of the International Wheelset Congress (IWC) took place in Kiev, Ukraine. UNIFE and ERWA are now working towards the organisation of the 18th IWC, which will take place in October 2016 in Chengdu, China. The IWC is an event which gathers wheelset experts from around the world to share and exchange on the latest key innovative developments in the area.

IRIS - International Railway Industry Standard

10

A. IRIS achievements and strategic development
B. Technical progress
C. IMC aims to make IRIS certification more known worldwide

IRIS awarded its 1000 certificate in early May 2014

A. IRIS achievements and strategic development

2014 was an important year for IRIS, focused on: building up the strategy, next steps for technical evolution and improving stakeholder communications tools. Also, the 1000th certification was awarded in June. This achievement shows an increasing interest and involvement in quality culture from the rail sector and recognition of IRIS certification as a seal of quality. For IRIS certified companies, the continual improvement process promoted by IRIS should enable them to better attain their internal and external goals.

IRIS Vision - Our Ambition for the Future	IRIS Mission - Our Purpose
Quality is an absolute prerequisite for a reliable and safe rail product. • IRIS enables companies conducting business in the rail sector to sustainably ensure quality and satisfy their customers' needs in terms of quality. • IRIS instills a culture of quality in the rail sector by promoting methods and behaviours that focus on quality improvement. • IRIS is recognised and used worldwide.	Sustainable and consistent high quality can only be achieved with clearly defined processes and procedures which are implemented and regularly maintained. The International Railway Industry Standard (IRIS) was developed and is promoted by the European Rail Industry Association (UNIFE) in order to define requirements, tools and means to improve the quality of rail products. Our goal is to increase customer satisfaction through continuous and tangible improvement of product performance and quality within our sector worldwide.

IRIS Mid-term strategy (2014-2019)

This year, the IRIS Steering Committee agreed on a strategy to be deployed over the next five years, with the mission and vision broken down into key initiatives and metrics. In April, this mid-term strategy has been validated by the IRIS Advisory Board members (representatives from industry and operators).

The vision and mission will build the pillars for the next IRIS activities and strategic initiatives, focusing on:

- Demonstrating the added value of IRIS by showing the positive impact of an IRIS compliant Management System on product quality
- Improving IRIS standard and its implementation
- Increasing acceptance of IRIS
- Improving the quality of audits and auditing system as defined by the standard
- Continuing to promote a Quality Culture within the worldwide rail sector.

Mark Manley elected Chairman of IRIS Steering Committee, IRIS Advisory Board

During the IRIS Steering Committee, the committee members confirmed the election of Mark Manley, Vice President Quality from Bombardier Transportation as Chairman of the International Railway Industry Standard (IRIS) Steering Committee. Mark Manley was also selected as the next Chairman of the IRIS Advisory Board (IAB). He will continue to work on developing IRIS in the future and on its recognition worldwide. IMC also would like to warmly thank Hubert de Blay who has held this position for over seven years and has driven the development of the scheme with conviction.

From left: Gabriele Feder (Lead-Auditor IRIS for the Brasov audit, TÜV SÜD Management Service GmbH), Peter Mühlbauer (Managing Director, TÜV SÜD Management Service GmbH), Dr. Michael Holzapfel (Director Sector Management Rail, Schaeffler Technologies GmbH & Co. KG), Alexander Rathiens (Co-Auditor IRIS for the Brasov audit and product compliance manager for IRIS, TÜV SÜD Management Service GmbH)

B. Technical progress

1) IRIS evolutions

Following the IRIS strategy, the future IRIS evolutions are currently in development. Taking into account the global development, technological advances as well as stakeholders needs, a two phase approach was decided on:

1. Short-term approach: IRIS addendum 2015
All elements to develop IRIS further and in line with internal strategy, focusing on:

- Update of questionnaire
- Adding the scope of certification "infrastructure: Industrial elements (as TSI)" as per UNIFE Presiding Board decision
  - Estimated timeline: September 2014 – June 2015

2. Mid-term approach: IRIS rev. 03
All elements in line with mid-term strategy, however influenced by external parties considering:

- ISO 9001: 2015
- Input/requirements from customers
- Feedback from companies with Maintenance activities and guidelines
- Extension to services and distributors
  - Start: September 2015

2) Two new guidelines

IMC together with the IRIS technical working groups and in particular Deutsche Bahn AG, developed two new guidelines on "Problem solving" and "Special processes". These guidelines aim to help companies with the implementation of the IRIS requirements and with achieving a common understanding on specific topics

3) Information tools and systems:

Due to the continual worldwide progress of certifications (>1000) and registered companies in the IRIS Portal (>1600), we have to adapt our tools to enable safe and reliable work for all stakeholders.

a) The audit scheduling interface, so called **"Diary"** has been restructured to allow a preventive scheduling and a better monitoring of the IRIS certification process by certification bodies and especially IMC.

b) **The process scopes**, which represent a group of IRIS' 20 "product scopes" allocated to IRIS approved auditors to perform audits at companies have been created. The process scopes reinforce the technical knowledge background needed to perform IRIS audits. **The process case study (PCS)** has been implemented in the system to allow the auditors to validate new competences. Thanks to this development, more auditors will be available to audit more IRIS product scopes in the medium-term.

c) IRIS has implemented IRIS **certificates in different languages**, such as German, French, Italian, and Russian--this will reinforce the worldwide acceptance of IRIS.

d) Our continuous efforts to improve the certification process will be supported by a **data analysis tool**, which will improve the measurements of indicators and data with the goal boosting the progress of the scheme and preparing further technical development of IRIS. This project will continue in 2015.

C. IMC aims to make IRIS certification more known worldwide

At the beginning of the year, the Steering Committee agreed to develop all communication actions linked to the promotion of the certification. Indeed, the benefits of being IRIS certified is still insufficiently known or understood by many companies of the rail sector. Therefore, IMC has started working on a communication strategy and a graphic chart to review the way of promoting the scheme.

With the goal of promoting the scheme in mind, IMC has been in contact with all operators to understand what is important to them in terms of quality and has established regular contacts and collaboration with them.

From left: Bernard Kaufmann (General Manager, IRIS), Andrea Mihalova (Product manager for Automotive and Rail certification Business Line, Bureau Veritas -certification body), Andrey A. Egorencov (Director Marketing & Sales, MTZ Transmash), Valentin Gapanovic (Vice-president, RZD), Philippe Citroën (Director General, UNIFE)

IMC put a lot of efforts in promoting IRIS internationally throughout 2014 with the participation in many events: APTA conference in Montreal, KORAIL delegation hosted in Brussels, RZD conference in Berlin, CIS conference in Almaty, Innotrans, and several other seminars.

Highlight on IRIS at InnoTrans 2014

For the fourth time, IMC participated to InnoTrans and welcomed numerous visitors to the IRIS booth on the UNIFE stand. During this four day event, IRIS talk sessions were organised on several topics such as IRIS added value, worldwide development with a focus on Russia, and future evolutions.

Every two years, InnoTrans is an important "rendezvous" or IMC, providing the opportunity to meet new members who believe in IRIS and contribute to a worldwide culture of quality in rail.

The growth and global prominence of the IRIS standard is apparent. The IMC will continue to reinforce the strength of the certification process and the quality of the audits, as requested by the stakeholders. This will be supported by the technical developments related to the 2015 IRIS addendum.

UNIFE Communications 2014

11

A. European Railway Award 2014
B. UNIFE General Assembly 2014
C. InnoTrans 2014
D. Freight Days
E. Relaunch of www.unife.org
F. UNIFE Interactive Analysis

A. European Railway Award 2014

Since 2007, the European rail sector has celebrated and recognised personalities in the political and technical field at the annual European Railway Award Ceremony, jointly sponsored and organised by CER and UNIFE. In 2014, the ceremony took place at the Musées Royaux d'Art et d'Histoire on 28 January in Brussels and was followed by the joint CER-UNIFE Annual Reception. The event attracted more than 500 guests from all over Europe, including high-level politicians and transport stakeholders, and was a successful official kickoff of UNIFE's activities in 2014. The 2014 European Railway Award was presented on 28 January to Jacques Barrot, former European Commissioner for Transport, for political achievements and to Giorgio Diana, Researcher and Professor of Mechanical Engineering at Politecnico di Milano, for technical achievements.

Once again, the keynote speaker of the gala evening was then European Commission Vice-President Siim Kallas, who congratulated the winners and reflected on his work as Transport Commissioner to improve rail transport, remarking, "Throughout this time, my aim has been to find and deliver the best combination between policy and technical innovation: the two categories for the European Rail Awards. If European railways are to become more attractive and competitive, it is in both of these areas that we need to progress. It is why the Fourth Railway Package and Shift2Rail programme work so well together."

Representing the European Parliament, MEP Brian Simpson (S&D, UK), Chairman of the Committee on Transport and Tourism, addressed the work of his Committee on Rail Transport under his leadership and commented, "Without a doubt the biggest obstacle my Committee has faced in its attempts to deliver a truly European Rail system has come from the Member States; many of whom have rules and regulations from the steam era that are not only out of date but totally irrelevant for modern railways."

Political Award winner Jacques Barrot had a major influence on the development of the European rail system as European Commissioner for Transport from 2004-2008. As Commissioner for Transport, Jacques Barrot shed light on rail public service, public passenger transport services by rail and by road, and strengthened passengers' rights. Furthermore he supported the liberalisation of the rail transport sector and the development of sustainable mobility through a number of types of aid.

Sophie Boissard, Vice President Business Strategy & Development at SNCF Group (replacing Guillaume Pepy, President of SNCF), gave the laudatory speech for Jacques Barrot. When accepting the Award, Barrot commented, "I think that mobility in the single European market will take place increasingly by rail. After a period of decline, rail transport must regain its footing: doesn't rail now deliver 40% of freight in the US? If we want Europe to lead the international community in CO2 reductions, we must go beyond even that!"

The laureate for the Technical Award 2014, Giorgio Diana, is a world renowned specialist of rail vehicle dynamics. In the past 30 years, he contributed to the advancement of knowledge regarding the running dynamics of rail vehicles and their interaction with the infrastructure, with practical implementations in several new generation trains including the new Frecciarossa 1000.

The laudatory speech for Giorgio Diana was given by Michele Mario Elia, the CEO of Rete Ferroviaria Italiana. When accepting his award, Giorgio Diana remarked, "Innovation is generally proposed and pushed by the research centres: the train operators and the infrastructure management have all the advantages of having innovation in a new product, to improve performance and reliability."

Each award is accompanied by a donation of €10.000 to the charity of the laureate's choice. Jacques Barrot gave the prize money to Burkina Sans Frontières, and Giorgio Diana gave his to the Italian Red Cross.

The next edition of the European Railway Award (2015) will be held in Brussels on 21 January. For more information on the 2015 European Railway Award event, please visit: www.europeanrailwayaward.eu.

B. UNIFE General Assembly 2014

In 2014, UNIFE held its 24th annual General Assembly at the Crystal Exhibition Centre in London from 11-13 June. London was selected because the United Kingdom is a key market for UNIFE members, as well as being a rail-friendly country that is promoting a modal shift to rail transport. As is customary, UNIFE Committees and Working Groups met across the first day of the event (11 June) and nearly 160 UNIFE members gathered that evening for the General Assembly Gala Dinner at the Tate Britain Gallery.

In addition to attending to the Association's business, UNIFE members and guests listened to roundtables and presentations that featured speakers from the UK Government, Network Rail (UK Infrastructure Manager), the European Commission, the European Railway Agency, and the Hellenic Presidency of the EU Council, as well as senior leaders from UNIFE member companies. Clare Moriarty, Director General of the Rail Group at the UK Department for Transport, gave the keynote address and spoke about the competition coming from other modes of transport, commenting: "Rail needs to respond to these challenges. You need to improve the service offered to passengers and freight. You need to make the railway easier to use. You need to cut costs and reduce carbon. And that's why I strongly support the Shift2Rail rail research and innovation initiative."

Four roundtables were held throughout the day, each moderated by Chris Jackson (Editor-in-Chief of the Railway Gazette). The first roundtable in the morning was on Shift2Rail and featured Keir Fitch (Head of Unit, Research and Innovative Transport Systems, European Commission, DG-MOVE) with questions and discussion from Henri Poupart-Lafarge (President, Alstom Transport) and Stefano Siragusa (CEO, Ansaldo STS). The next session focused on ERTMS Policy and included a presentation by Karel Vinck (ERTMS Coordinator for the European Commission), Jean-Pierre Forestier (Senior Vice-President of Thales Transport Systems), and Simon Whitehorn (Head of National Operation, Network Rail). The third panel discussion topic was on rail investments in the UK and featured Robbie Burns OBE (Director, Western & Wales Region, Network Rail), Lutz Bertling (President of Bombardier Transportation), and Steve Scrimshaw (Managing Director, UK Rail Systems for Siemens). The final roundtable that took place in the afternoon was on the Fourth Railway Package

Following the successful 3-year term of Alstom Transport President, Henri Poupart-Lafarge, as UNIFE Chairman, the UNIFE membership unanimously elected Lutz Bertling, President and COO of Bombardier Transportation as the next UNIFE Chairman, effective immediately.

Outgoing UNIFE Chairman, Henri Poupart-Lafarge, commented, "I am happy to see that Shift2Rail has finally gained a large consensus: the European institutions, national governments and rail stakeholders (with both infrastructure managers and operators) have realised that the rail sector and the European society can only benefit from such a large scale joint effort. Our industry needs to continue to push for the adoption of the Technical Pillar of the Fourth Railway Package to allow for centralised authorisation process for the entire EU under the European Railway Agency; as such legislation will result in major efficiencies to the rail system and cost-savings to industry and Member States."

After thanking the membership for his election as UNIFE Chairman, Lutz Bertling, remarked, "I am pleased to take over the Chairmanship of UNIFE at such an exciting, but challenging time for the European rail industry. Decisions and investments made at the European level have a massive impact on our industry. For example, the Shift2Rail Joint Undertaking that is about to begin operations will have a game-changing impact on the transportation sector, along with the massive investment and deployment efforts the EU has made in the interoperable signaling system ERTMS. We will, of course, continue to be very present in Brussels on the political issues facing our industry."

UNIFE would like to thank Siemens for providing the excellent meeting facilities at the Crystal Exhibition Centre on 11 and 12 June and Ingeteam for sponsoring the Gala Dinner at the Tate Britain Gallery on the evening of 11 June.

UNIFE members decided that **the next General Assembly will take place from 17-19 June, 2015 in Bucharest, Romania.**

Main Decisions of the UNIFE General Assembly 2014 were the following:

1. The election of Lutz Bertling (President of Bombardier Transportation) as Chairman of the UNIFE Presiding Board

2. The General Assembly ratified the admission of two new full members: HaCon and ČKD Kutná Hora

3. The General Assembly approved the creation of the UNIFE SME Committee to better represent the activities of UNIFE's Small and Medium Sized enterprises in its strategy. The Chairman of the SME committee will occupy the ninth seat on the UNIFE Presiding Board

4. The General Assembly approved the UNIFE General Policy for 2014 and the budget proposal for 2015

C. InnoTrans 2014

InnoTrans continues to be the quintessential event for the European rail industry to showcase its major innovations, make important commercial connections, and hear from the decision makers and sector leadership about plans for the future. UNIFE once again had a stand at InnoTrans and a full programme. Just after the opening ceremony on day one (September 23), UNIFE Chairman and President of Bombardier Transportation, Lutz Bertling, announced the release of the World Rail Market Study, this was followed by a presentation of the major findings by Andreas Schwilling, Partner from Roland Berger Strategy Consultants. The late afternoon had a particular focus on vehicle authorisation and the technical pillar of the Fourth Railway Package, with Philippe Citroën both participating in a discussion at the European Railway Agency stand (just facing UNIFE) and moderating a discussion on the Fourth Railway Package that included Libor Lochman (Executive Director of CER) and Marcel Verslype (Executive Director of ERA).

On day two, the presentations at UNIFE's stand focused on international affairs, Shift2Rail, and sustainability. To start things off, UNIFE participated in a morning conference on railway engineering with the NP-UIRE, the Russian Union of Industries of Railway Equipment (read about this in the International Affairs section). Following this, and back at the UNIFE stand, visitors listened to a session with the UNIFE Sustainable Transport Committee Chairman, Michael Schlemmer, who chairs UNIFE's sustainable transport committee as he discussed the continued efforts that our industry must make to communicate the environmental value of rail transport and to continue pushing for more ways to make rail products even more sustainable. For the Shift2Rail session, a sizeable audience gathered to hear Josef Doppelbauer, Chairman of the Shift2Rail Preparatory Committee and Chairman of ERRAC, Keir Fitch, Head of Unit for Research and Innovative Transport Systems, and Christos Economou, interim Executive Director of the Shift2Rail Joint Undertaking, gave a robust overview of the initiative, including its technical programme, the current efforts being made to set up the Joint Undertaking, and next steps for companies interested in becoming involved.

Following Shift2Rail, the afternoon featured a discussion on rail sector developments in Brazil with Jorge Luiz Macedo Bastos, Director General of Agencia Nacional de Transportes Terrestres (ANTT). The UNIFE stand closed the day's programme with an IRIS Session on the Worldwide Development of the standard with a particular focus on Russia—Valentin Gaponovich, Vice President of RZD took part in this session alongside Andrea Mihalova from Bureau Veritas.

Day three kicked off with a major presentation organised by UNIFE in the Palais Conference hall in Messe Berlin. This Dialogue Forum entitled, "ERTMS Rollout Plans & Interoperability" attracted a large crowd and featured Patrizio Grillo, Acting Head of Unit for the Single European Railway Area (DG-Move), Michel van Liefferinge, General Manager of UNISIG, Klaus Mindel, Head of Product Strategy, Train Control, Thales, Luc Lallemand, CEO of Infrabel, Andrew Simmons, Technical Development Director at Network Rail, and Emin Karaman, Signalling Division Engineer at TCDD. The audience listened to presentations by each panelist on their past successes and future strategies regarding deploying ERTMS, followed by a robust discussion panel moderated by Michel van Liefferinge including questions from the audience. In the afternoon at the UNIFE stand, Philippe Citroën welcomed Michael Cramer, Chair of the European Parliament's TRAN Committee and President of Rail Forum Europe to discuss the importance of rail to the EU's transport goals. Mr Cramer reiterated the importance of the Fourth Railway Package and reaffirmed that it would be one of the priorities of the Parliament's TRAN Committtee. IRIS also held a session on the future IRIS evolutions and the European project, SECURED, was also presented.

For UNIFE, InnoTrans was once again a major success and we would like to thank all of our members who came by to visit and participate in the programme across the week.


MARKET


unife

D. UNIFE helps organise the European Rail Freight Days

Organised by the European Commission, UNIFE, and CER, the European Rail Freight Days event, which took place on 27-28 November in Brussels, was a major success, gathering over 200 stakeholders from across the rail sector to discuss the major challenges facing the European freight rail system. The new European Commissioner for Transport, Ms Violeta Bulc, opened the first day of the event and called for a larger role for Rail Freight in an integrated European transport system so that Europe can meet its ambitious target of reducing CO2 emissions by 60% by 2050. This was the Commissioner's first appearance at an event dedicated to rail since her mandate began on 1 November.

Ms. Bulc pointed out that there are still too many technical and regulatory barriers in place in Europe that affect both operators and the rail industry. Among them, the authorisation procedure for locomotives and wagons set to operate across borders takes too much time and is overly expensive. For this reason, the Commissioner added, the EC is undertaking incisive actions to achieve the completion of a Single European Rail Area, including freight. She also expressed her strong support of the work being currently carried out by the EC on ERTMS to deliver a sound, reliable and stable technical system, thereby supporting a fair competitive environment for railway operators. Philippe Citroën welcomed the statements made by Ms. Bulc and expressed the industry's appreciation towards the current EC initiatives in the areas of interoperability and simplification of authorisation for new rolling stock.

Irmtraut Tonndorf (Chair of ERFA), Geert Pauwels (CEO SNCB Logistics), Violeta Bulc (European Commissioner for Transport), Jean-Michel Genestier (Deputy Director SNCF Logistics)

E. Relaunch of www.unife.org

In December, the Association launched an updated version of the website, www.unife.org. The goal of this website renovation is to bring ease of navigation to visitors of our website as well as more prominently highlighting the UNIFE's priorities. The current website has been used by the Association for the past five years and the usability and navigability has become more dated. Moreover, the new website has a more visually appealing layout that employs more photography—allowing UNIFE to display concrete images of our members' products being manufactured and put to use on rail systems. The new website is also designed to be responsive—that is to say, more user-friendly and visually appealing for mobile users.

In the process of preparing the new website for launch, the UNIFE staff also took an opportunity to clean and update all of the information available on UNIFE's many activities. UNIFE members and stakeholders should be able to now very easily access the up-to-date information they seek on the website—while at the same time being reminded of our main priorities at the time. Plus, a tagging system allows visitors to view related content on a particular topic through a quick click.

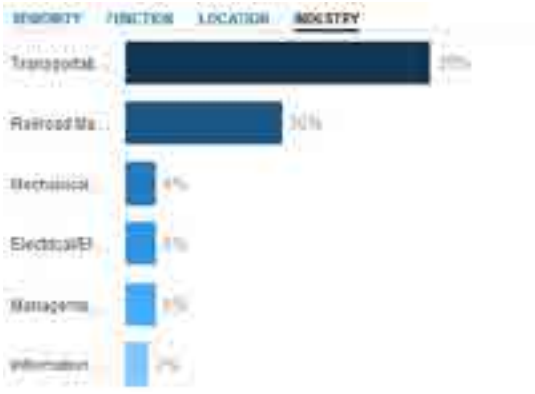
In addition to the normal day-to-day content updates, the UNIFE Communications staff will be intermittently updating the banner images on the website to give a refreshed feel to frequent visitors and we encourage UNIFE members to submit any photos that they think will be good for the website (or for other publications) to the UNIFE staff.

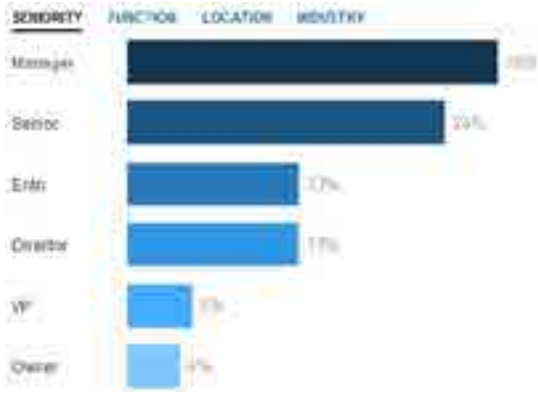
F. UNIFE Interactive Analysis

Google Analytics

57,840	Visits
37,219	Unique Visitors
148,632	Page views
00:02:59	Avg. Visit Duration
64.18%	New Visits

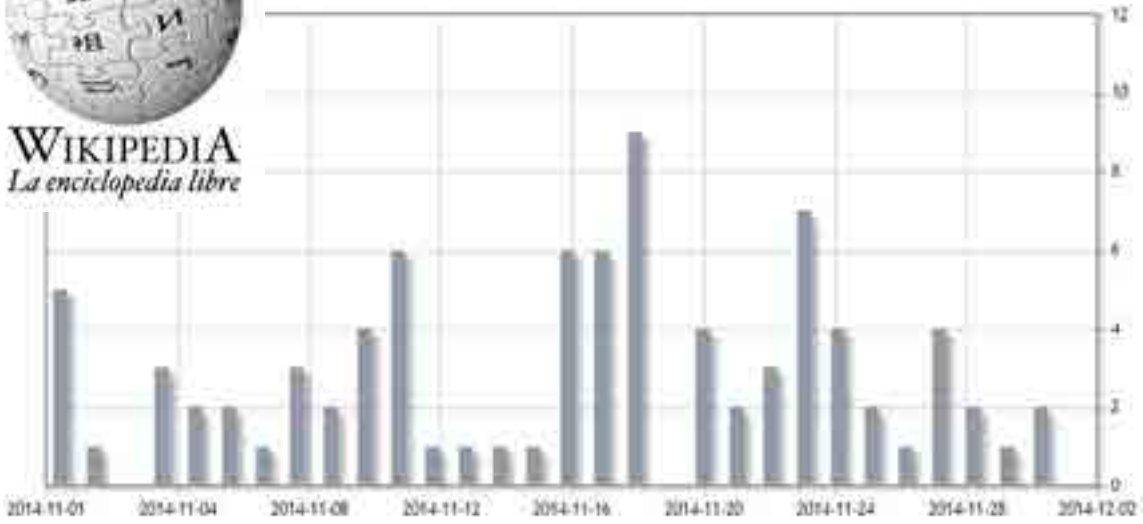
LinkedIn





Members	**Seniority**	**Function**	**Week over week growth rate**
1,364	**28% Manager**	**13% Engineering**	**7%**

822 UNIFE Page views



@UNIFE

374 tweets

818 following

1,669 followers

UNIFE Members in 2014

12 | A. Full Members
B. Associated Members

A. Full Members

ABB Sécheron
www.abb.com

ALSTOM Transport
www.alstom.com

ALTPRO
www.altpro.com

AnsaldoBreda
www.ansaldobreda.it

Ansaldo STS
www.ansaldo-sts.com

Arcelor Mittal
www.arcelormittal.com

Ardanuy
www.ardanuy.com

Astra Vagoane Călători
www.astra-passengers.ro

AZD Praha
www.azd.cz

Balfour Beatty Rail
www.bbrail.com

Bochumer Verein Verkehrstechnik
www.bochumer-verein.de

Bombardier Transportation
www.bombardier.com

Bonatrans
www.bonatrans.cz

CAF
www.caf.net

CENTRALP
www.centralp.fr

CHAPS
www.chaps.cz

ČKD Kutná Hora
www.ckdkh.cz

COLAS RAIL
www.colasrail.co.uk

COMAU
www.comau.com

Constellium
www.constellium.com

DuPont Transportation
www2.dupont.com

ECM
www.ecmre.com

EKE Electronics
www.eke.com

Electro-Motive Diesels
www.emdiesels.com

ELTA
www.elta.fr

Exa
www.exa.com

Faiveley Transport
www.faiveleytransport.com

FOGTEC
www.fogtec-international.com

Frenoplast
www.frenoplast.com

Funkwerk
www.funkwerk-it.com

GDF Suez
www.gdfsuez.com

GE Transportation
www.getransportation.com

GHH-RADSATZ
www.ghh-radsatz.com

Greenbrier Europe
www.gbrx.com

HaCon
www.hacon.de

HARTING
www.harting.com

Hirschmann
www.hirschmann.com

Hoppecke
www.hoppecke.be

Indra Sistemas
www.indracompany.com

Ingeteam
www.ingeteam.com

Intecs
www.intecs.it

Kirow Ardelt
www.kranunion.de

Knorr-Bremse
www.knorr-bremse.com

KOLOWAG
www.kolowag.com

KONČAR
www.koncar.com

Kontron
www.emea.kontron.com

Lucchini RS
www.lucchinirs.it

Matisa
www.matisa.ch

MERMEC
www.mermec.it

NEXALA
www.nexala.com

OLTIS Group
www.oltisgroup.com

PENTAIR
www.pentairprotect.com

PIXY
www.pixy.ch

Plasser & Theurer
www.plassertheurer.com

SAIRA
www.sairaeurope.com

Saft
www.saftbatteries.com

Sapa
www.sapagroup.com

Schaeffler Group
www.schaeffler.com

Schaltbau
www.schaltbau-gmbh.com

Scheidt & Bachmann
www.scheidt-bachmann.de

Sécheron
www.secheron.com

Selectron
www.selectron.ch

Siemens Mobility
www.mobility.siemens.com

Sirti
www.sirti.it

SKF
www.skf.com

Skoda Transportation
www.skoda.cz

Strukton Rail
www.struktonrail.com

Talgo
www.talgo.com

Tata Steel
www.tatasteeleurope.com

Thales Rail Signalling Solutions
www.thalesgroup.com

UniControls
www.unicontrols.cz

Valdunes
www.valdunes.com

VDS Video Display Systems
www.vds-it.com

VibraTec
www.vibratec.fr

Voestalpine
www.voestalpine.com

VOITH
www.voith.com

Vossloh
www.voith.com

VUKV
www.vukv.cz

B. Associated Members

Association of the Czech Railway Industry (**ACRI**), Czech Republic
www.acri.cz

AGORIA, Belgium
www.agoria.be

Romanian Railway Industry Association (**AIF**), Romania
www.asifrom.ro

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.or

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

Railway Industry Association (**RIA**), United Kingdom
www.riagb.org.uk

SIRTS, Poland
www.sirts.pl

SWEDTRAIN, Sweden
www.swedtrain.org

SWISSRAIL Industry Association, Switzerland
www.swissrail.com

UNISIG
www.unisig.com

VDB, Germany
www.bahnindustrie.info

ZVEI, Germany
www.zvei.org

UNIFE Staff

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A. UNIFE Staff in 2014
B. Best wishes to the UNIFE Staff that left the team in 2014

A. UNIFE Staff in 2014

Philippe Citroën
Director General
Philippe.CITROEN@unife.org

Nicolas Furio
Senior Technical Affairs Manager
Nicolas.FURIO@unife.org

Andrei Ciufu
Communications Manager
Andrei.CIUFU@unife.org

Stefanos Gogos
Technical Affairs Manager
Stefanos.GOGOS@unife.org

Andrea Demadonna
Technical Affairs Manager
Andrea.DEMADONNA@unife.org

Peter Gurnik
Technical Affairs Manager
Peter.GURNIK@unife.org

Leonardo Dongiovanni
Public Affairs Manager
Leonardo.DONGIOVANNI@unife.org

Kujtesa Hajredini
IRIS Manager
Tesa.HAJREDINI@unife.org

John Harcus
Head of Communications
John.HARCUS@unife.org

Agathe Marie
Communications Manager
Agathe.MARIE@unife.org

Angela de Heymer
IRIS Senior Manager
Angela.DEHEYMER@unife.org

Marcos Mendez
Operations Manager
Marcos.MENDEZ@unife.org

Bernard Kaufmann*
IRIS General Manager
Bernard.KAUFMANN@unife.org
**acting as representative of BK RAIL*

Jonathan Nguyen
Public Affairs Manager
Jonathan.NGUYEN@unife.org

Michel Van Liefferinge*
UNISIG General Manager
Michel.VANLIEFFERINGE@unife.org
**acting as representative of MV4TECH SCRI*

Léa Paties
R&D/UNISIG Project Manager
Lea.PATIES@unife.org

Jean-Philippe Peuziat
Public Affairs Manager
JeanPhilippe.PEUZIAT@unife.org

Maxime Schaub-Crouan
IRIS Technical Coordinator
Maxime.SCHAUB-CROUAN@unife.org

Paulina Pineda
Senior Finance Manager
Paulina.PINEDA@unife.org

Jan Steinkohl
Public Affairs Manager
Jan.STEINKOHL@unife.org

Alice Polo
Senior Interoperability and Safety Manager
Alice.POLO@unife.org

Giorgio Travaini
Senior Technical Manager
Giorgio.TRAVAINI@unife.org

B. Best wishes to the UNIFE staff that left the team in 2014

Franco Cataldo

Judit Sandor

Ross Hanley

Audrey Semakadde

Javier Rodriguez

Acronyms

AEIF	European Association for Railway Interoperability
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 Railways and Infrastructure Companies
CIS	Commonwealth of Independent States
CSM	Common Safety Methods
DG CLIMA	Directorate-General for Climate Action
DG MARKT	Internal Market and Services Directorate General
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
ECAs	Export Credit Agencies
ECB	Eddy Current Brakes
EFRTC	European Federation of Railway Track-works Contractors
EIM	European Rail Infrastructure Managers
EMC	Electro-Magnetic Compatibility
EP	European Parliament
ERA	European Railway Agency
ERATV	European Register for Authorised Types of Vehicles
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
ETSI	European Telecommunications Standards Institute
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
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
ITRE	Committee on Industry, Research and Energy in the European Parliament
JNS Joint	Network Secretariat
JPCR	Joint Programming Committee Rail
JRC	Joint Research Centre
JSG	Joint Sector Group
JTI	Joint Technology Initiative
LCC	Life Cycle Costs
LOC & PAS	Rolling Stock Locomotive and Passenger Carriages
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
PPP	Public Private Partnership
R&D	Research and Development
RAMS	Reliability, Availability, Maintainability, Safety
RDD	Register of Notified National Rules
RINF	Register of Infrastructure
RISC	Railway Interoperability and Safety Committee
RZD	Russian Railways
S&R	Standards and Regulation
SRG	Standards and Regulation Group
SRRA	Strategic Rail Research Agenda 2020
SRRIA	Strategic Rail Research and Innovation Agenda 2050
SRT	Safety in Railway Tunnels
UIP	International Union of Private Wagons
UIRR	International Union of Combined Road - Rail Transport Companies
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
TSI	Technical Specification for Interoperability
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
UNISIG	Union Industry of Signalling

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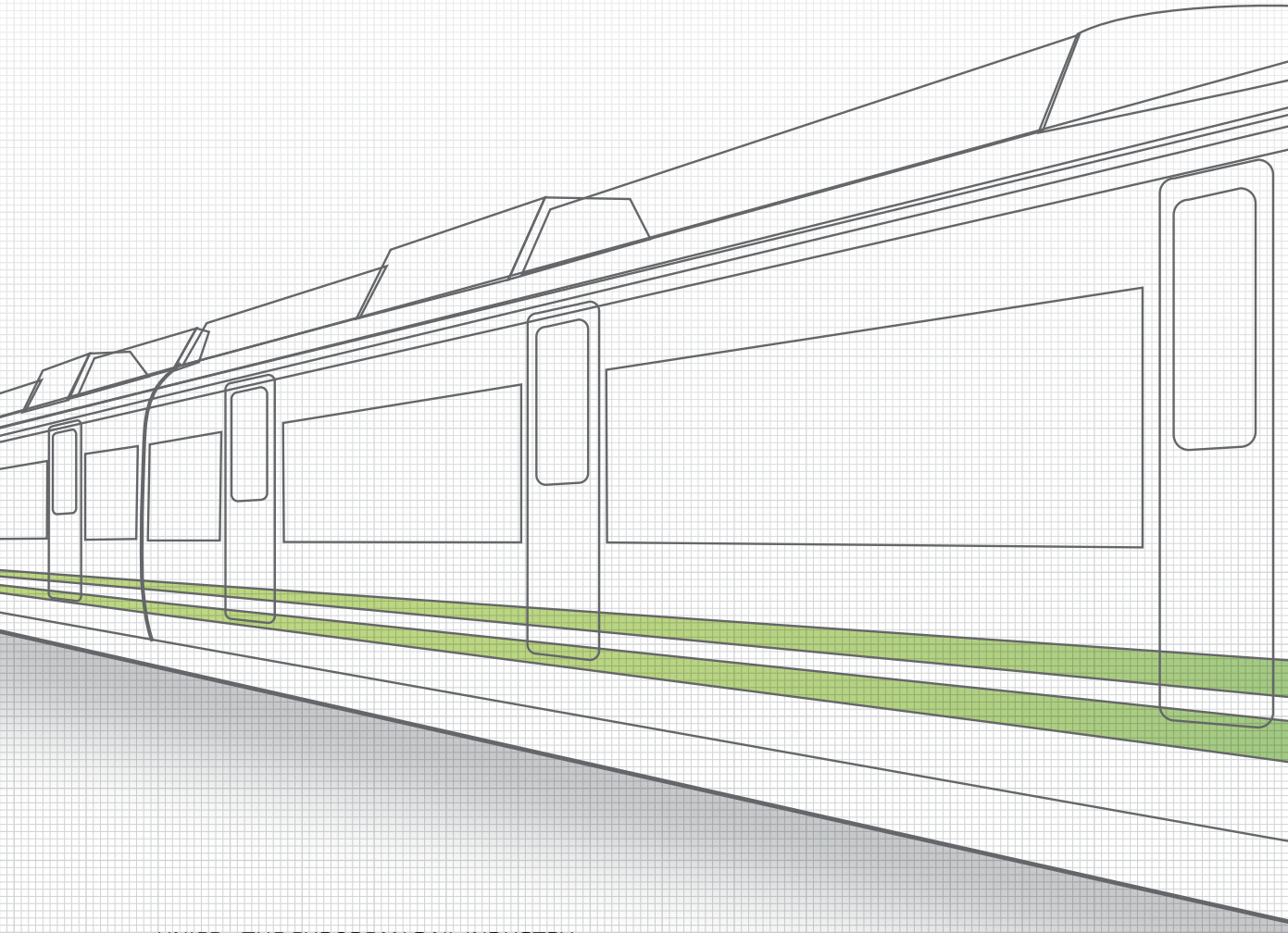
THE EUROPEAN RAIL INDUSTRY



UNIFE - THE EUROPEAN RAIL INDUSTRY
AVENUE LOUISE 221, BTE 11
B - 1050 BRUSSELS
Tel: +32 2 626 12 60 | Fax: +32 2 626 12 61
www.unife.org | general@unife.org