UIC WORK PROGRAMME 2020-2022

INTERNATIONAL UNION
OF RAILWAYS

INTRODUCTION BY GIANLUIGI CASTELLI UIC CHAIRMAN

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After the last decade of innovation and global growth, the rail business world ended 2019 at a crossroads, facing a range of technical, strategic and environmental challenges: energy efficiency, integration and interoperability, the increasing cross-industry interconnection among diverse sectors, the evolution of the competitive arena in the current digital age.

UIC takes global challenges seriously and is ready to govern the market evolution with a well defined 3-year strategy. The UIC Work Programme 2020 – 2022 is a compendium that outlines the main priorities, opportunities and focus areas for our Members and the sector at large.

Our technical and safety expertise, our breakthrough innovative solutions, our effort towards a global and more sustainable modal shift will be the key factors of our organisational change.

Keywords of change are an increased transparency level, a more comprehensive internal communication and reporting flow and, ultimately, a broader participation process. This new, enhanced relationship of trust will be the cornerstone of our future business path; a path that implies a deep change of mindset.

The very concept of transport has been deeply redesigned. Transport – and rail transport as the most efficient and sustainable mode – can no longer be addressed as a separate market sector.

Transport is now a constant that underpins virtually every business and transformation process: from technological change to internal growth strategy, from logistics and customer relationship management to political and social integration.

Our goal is to move beyond a sectorial view, to better ensure market uptake of our forward-looking solutions, and to contribute substantially in meeting our stakeholders expectations.

2020 is a new inflection point and the beginning of the decade of delivery on the promise of digitalisation and technology.

With our new UIC Work Programme, we are finally ready to take our vision, strategy and innovative solutions to the next level, demonstrating their potential around the world.

Such mission will only be accomplished with the shared participation and contribution of all of us on a global scale.

STRATEGIC FOCUS AREAS

Share, Open, Connect

01

Promote rail transport globally

Strategic positioning
The fundamentals: safety, security, environment and innovation
Highlight and demonstrate the attractiveness of the railways
Partnership with relevant organisations (international and national)

02

Further develop UIC as the technical platform to address members' needs

Embody and convey a system-wide vision and technical positions
Up-to-date IRSs in line with stakeholders' needs
Produce specifications/guidelines
Leverage data and sharing of experience
Technical policies that serve members' priorities
Monitor implementation & added value of UIC products

03

Create innovation through projects

Become a world forum for innovative projects
Further develop a shared innovation strategy
Put digital technologies at the centre of the rail system
Contribute to accelerating the innovation cycle
Support European and global innovation programmes for the benefit of the sector

04

Promote sustainable, carbon-free transport

Rail as the backbone of mobility
Convey a multimodal vision shared with public transport and supply-chain stakeholders
Develop innovative projects for better attracting green bonds

05

Efficient, transparent management for the benefit of our members

Ethical and transparent governance
Regular reporting and ongoing assessment of added value from activities
Ongoing skills development
Provide the Regions with a vehicle for project development

INTRODUCTION BY FRANÇOIS DAVENNE UIC DIRECTOR GENERAL

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This work programme is an action-oriented document. It aims at giving consistency and accountability to the commitments taken by UIC in the different working bodies (forums, platforms) for the 2020-2022 period. The wide area of the subjects covered by UIC working groups deserves a common approach that will highlight the main workstreams.

This strategic perspective aims at defining the main areas where UIC's deliveries are expected by UIC members. The main words here are added value and transparency.

Added value, since UIC is delivering to the railway community a wide range of services and expertise, ranging from promotion of rail globally to continuous innovation through research and projects. UIC has to demonstrate that its legitimacy over the whole spectrum.

Transparency, since UIC is using the resources of its members whether in terms of expertise or in financial terms. UIC shall deliver regular reporting and performance assessment in order to demonstrate that addressing crucial issues for the railway system within UIC is not only relevant but also financially sound.

I would like to highlight four priorities;

- first, to efficiently complete the digitalisation of the rail system. This digitalisation is ongoing with digital signalling systems being implemented in the different UIC regions, but the system view is still missing. This can be seen in the proliferation of initiatives within or outside the operating community. One of the main objectives for UIC would be to appear as the place where the CCS (Control Command and Signalling) architecture could be discussed by creating a "CCS Specification Forum". It could be the technical body supporting the effort of building a coordinated CCS rolling plan taking on board:
  - coordination on on-board architecture / trackside signalling infrastructure,
  - commonly agreed principles on TMS (Traffic Management System) at the European level but also globally;
- second, having a comprehensive approach of UIC standards and specifications based on a close monitoring of the area of use and of the added value for the railway business in each of the UIC regions.

As an example, working relations with National Safety Authorities should be developed globally in order to establish UIC products as the preferred and harmonised AMOC (Accepted Means Of Conformity);

- third, through a better articulation between projects and research, UIC shall be able to create an innovative technical environment that would make the modal shift towards public transport and rail freight desirable and attract more public investment to the railway;
- the fourth priority, and perhaps the most important one, is to build a sound partnership inside and outside the sector in order to be able to efficiently promote the interests of the railways. Firstly, UIC will continue to work closely with the manufacturing community in order to demonstrate that the industry is able to promote its own solutions. Secondly, UIC will make sure there is no duplication of work by experts provided by its members. Finally, UIC will foster its partnership with public transport associations (such as UITP) and local authorities, in order to demonstrate that public transport relying on the railway backbone can deliver high-quality end-to-end mobility.

This would only be possible by fostering the direct participation of the different UIC regions in our 120 working groups. These bodies with their more than 1500 experts are carrying forward the development of UIC products, whether in terms of projects or in terms of new IRSs. In 2020, their structure, functioning, challenges and expected deliverables will be made clearer and easier to access for the whole member community. We expect that this increased transparency will reinforce the international outreach of UIC.

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TABLE OF CONTENTS

UIC MEMBERS AROUND THE WORLD 8

PROMOTE RAIL WORLDWIDE 12
Strategic positioning 12
Highlight and demonstrate the attractiveness of the Railways 13
The digital platform 15
Partnership with relevant organisations 16

THE FUNDAMENTALS: SAFETY, SECURITY AND TRAINING 20
Ensuring safety for passengers, freight and the rail system 20
Security: a growing concern 23
Attracting talents to Railway 26

DEVELOP A SYSTEM VISION WITH A DIGITAL DRIVE 30
Further develop UIC as the technical platform to address members' needs 30
Up-to-date IRSs in line with stakeholders' needs 31
Produce specifications/guidelines 34
Create innovation through projects 35

RAIL FREIGHT AS THE BACKBONE OF THE WORLDWIDE LOGISTIC CHAIN 40
Further develop UIC as the technical platform to address members' needs 40
Further develop a shared innovation strategy 44
Convey a global multimodal vision shared with supply chain stakeholders 46

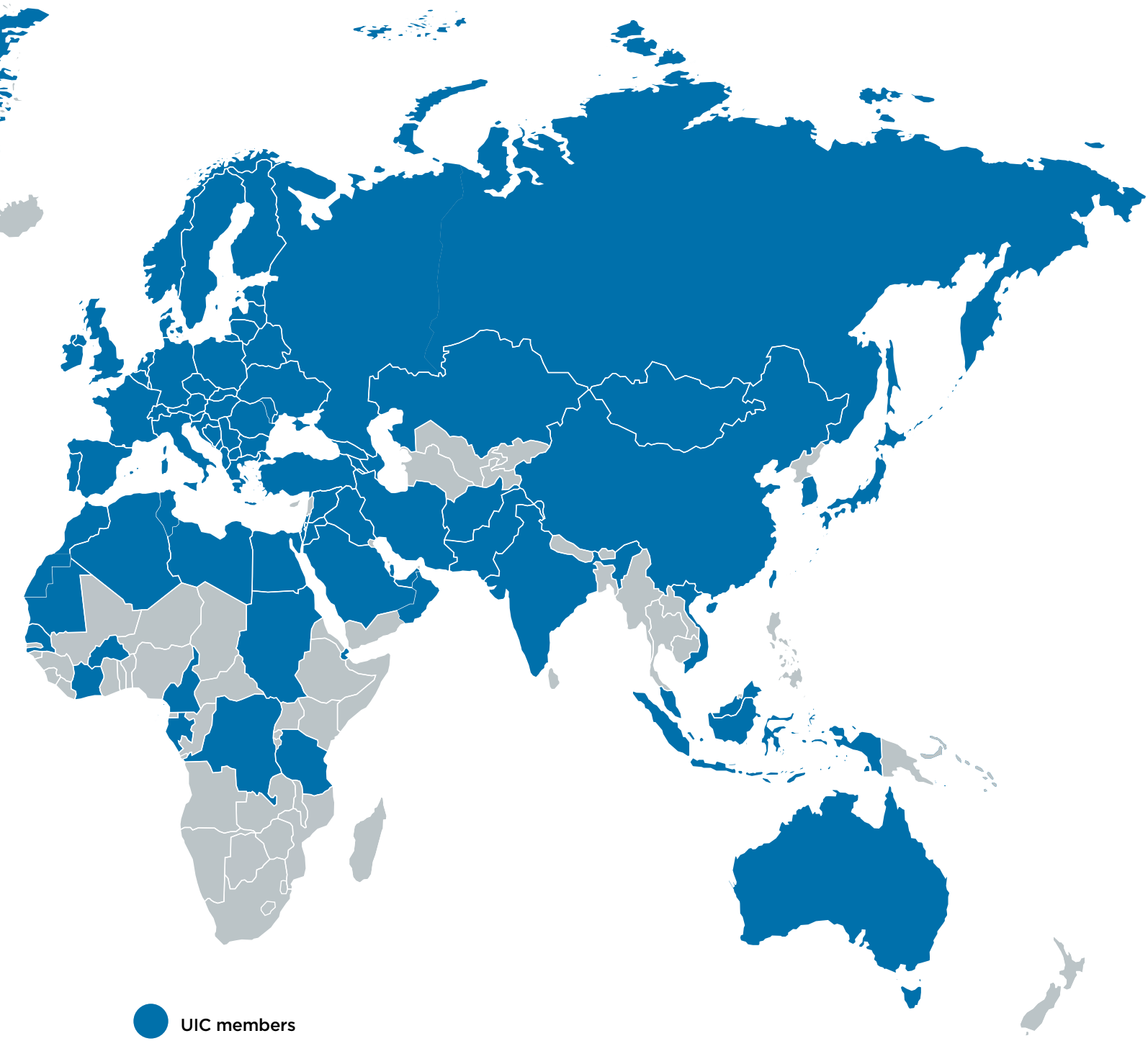
RAIL AS THE TRANSPORT MODE OF CHOICE FOR PASSENGERS 50
Further develop UIC as the technical platform to address members' needs 50
Create innovation through projects 54

PROMOTE SUSTAINABLE CARBON FREE TRANSPORT 58
Leverage data and sharing of experience 58
Rail as the backbone of mobility 59
Develop innovative projects for better attracting green bonds 61

EFFICIENT, TRANSPARENT MANAGEMENT FOR THE BENEFIT OF OUR MEMBERS 64
Regular reporting and ongoing assessment of added value from activities 64
Ongoing skills development 66
Provide the Regions with a vehicle for project development 67

LIST OF ABBREVIATIONS 68

UIC MEMBERS AROUND THE WORLD


UIC members

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PROMOTE RAIL
WORLDWIDE

PROMOTE RAIL WORLDWIDE

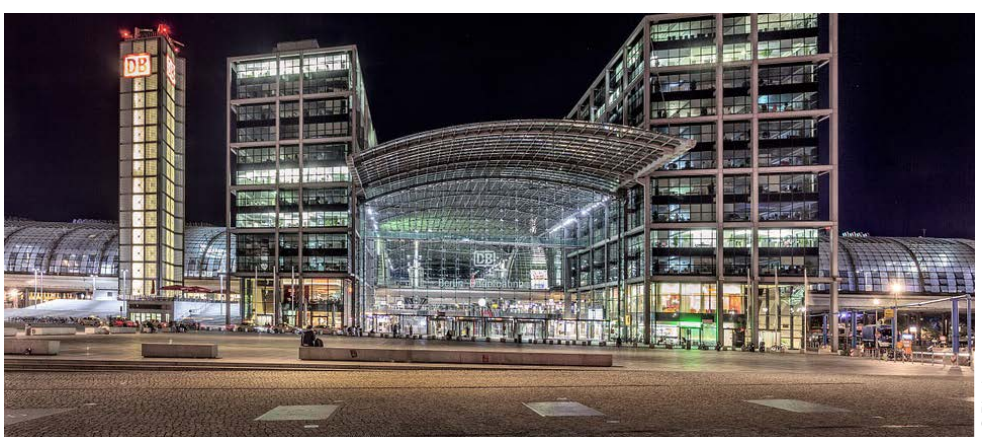
STRATEGIC POSITIONING

As this work programme will take UIC up to the 100th anniversary of the association, it is also an opportunity to clarify UIC's identity, values and mission statement.

More than ever, UIC's identity is to be the worldwide railway organisation. In this context, UIC is confronted with the challenge to help the sector to be successful in struggling against climate change.

That would mean a massive modal shift to railway. The network of UIC regions is an exceptional tool for implementing the global railway standards that are needed to cope with this challenge. The role of international standards has been a main driver in the success of the internationalisation of the aviation sector due to ICAO (International Civil Aviation Organization) and IATA (International Air Transport Association). They could take the same prominent place for railways, building on UIC assets. UIC values of "Unity, Solidarity, Universality" are well suited to deliver a technical framework that should adapt to many different contexts, while preserving unity.

Perhaps more importantly, this work programme is the occasion to have a mission statement that is in line with our post-digital era: "share, open, connect". UIC is about sharing knowledge, energy and sensitive business data, and so it needs to continue to be this trusted and recognised platform. UIC is also about opening up, through specifications and standards, the possibility of a savvy approach to rail system management.



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Finally, it is about connecting people and systems for the mobility of tomorrow, while preserving UIC customer relationships.

Furthermore, a specific focus area has been added concerning promotion of sustainable carbon-free transport. Indeed, while representing 8% of global passenger and freight transport activity (in pkm/tkm), railways represent 2% of the transport sector emissions. The rail and public transport networks benefit from a cardinal virtue for tackling climate change, which is frugality:

- in energy consumption;
- in public space;
- in terms of life cycle;
- because these systems are scalable.

Connecting urban, suburban and rural areas, with stations positioned at the heart of many cities, Railways can become the backbone of a global transport chain, able to meet the needs of all citizens.

Therefore, a modal shift to rail will have a huge impact on CO_2 emissions, without requiring any new technology or research and development. These special capacities of the railway are of particular interest in emerging countries that are confronted with rapid growth of mobility needs.

UIC AS TECHNICAL BACK-OFFICE: WORKING WITH INSTITUTIONS AT GLOBAL LEVEL

- **At EU level, UIC, as a member of the Group of Representative Bodies (GRB), will provide technical assistance to each Representative Body, and in particular to CER and EIM.**
- **At the same time, Representative Bodies (including CER and EIM) will defend the regulatory interests of their members with ERA and the European Commission. It is in this context that UIC may be called upon to provide technical support to ERA and the European Commission.**
- **Internationally, UIC provides technical assistance to international organisations, whose documents apply to the 1520 gauge system (OSJD, Council on Railway Transport of Commonwealth Member States).**

HIGHLIGHT AND DEMONSTRATE THE ATTRACTIVENESS OF THE RAILWAYS

Within the global communication strategy for UIC, the involvement of CEOs should be pursued. Indeed, UIC added value is to propose communication strategies under the drive of UIC members. Those strategies will be more powerful if UIC can rely on CEOs' involvement, in particular in the United Nations framework, where company leaders' participation in events is highly appreciated.

One of the key issues of UIC communication strategy is to demonstrate the potential of railways for tackling the climate change issue. For this, the CEOs would be UIC's best ambassadors, as was demonstrated with the RFF (Rail Freight Forward) campaign organised in 2019.

Being more present in the international press, through interviews with UIC experts and the promotion of UIC expertise and more concretely of UIC tools, such as EcoPassenger for example, or of UIC gold nuggets such as FRMCS (Future Railway Mobile Communication System), is one of UIC's objectives, to emphasise more the attractiveness of Railways.

Take the opportunity to promote UIC's strategy when taking the floor at events, particularly those at world level. For example:

- continue the dialogue with the political world at international level by introducing in a credible and audible manner arguments advocating a decarbonised transport at the OECD International Transport Forum (ITF) and in the United Nations framework. The involvement of several CEOs of UIC members would be organised in developing a coordinated approach;

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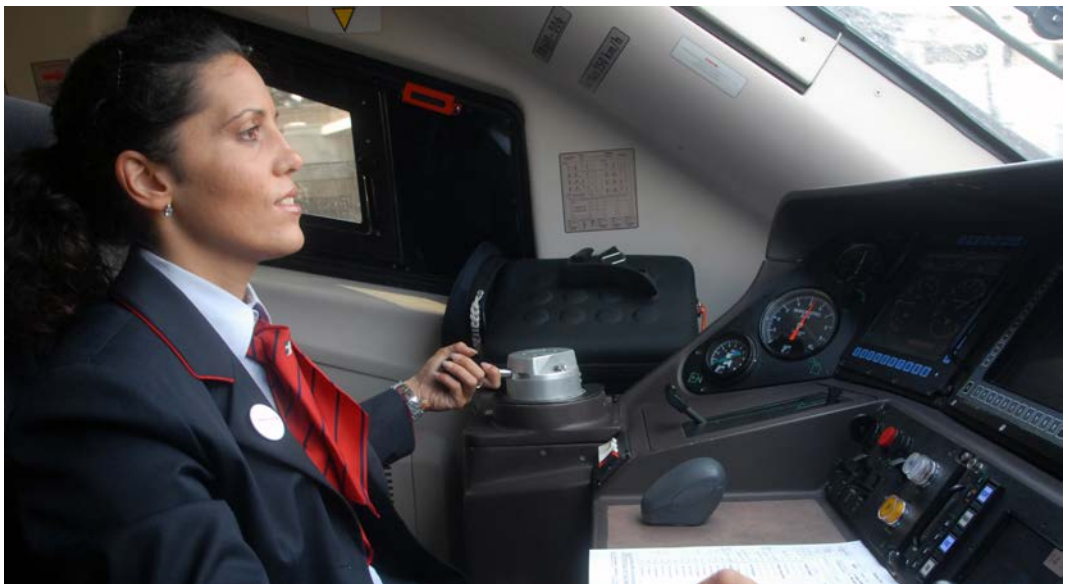

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- continue presence and commitment in COP26 and in the UN events. COP26 will be in 11/2020 in Glasgow;
- organise a sector presence in:
  - the CES Las Vegas in January 2020 to highlight the crucial role of Railways in the mobility chain and digital as a lever for competitiveness,
  - Viva Technology in Paris in June 2020-2021-2022 the world's meeting point for start-ups and leaders to celebrate innovation, and during Le Mondial de la Mobilité, in 10/2020 in Paris,
  - at the occasion of Innotrans in September 2020 and 2022 in Berlin, which groups together all the actors of the railway industry and which will provide an opportunity to promote FRMCS;
- develop a coordinated approach concerning gender equality and diversity. In 2020, UIC aims to prepare a statement for the rail sector on this issue, by defining, as a first step, the expectations of the members in all UIC regions. UIC Members will be consulted through its working bodies;

  The scope of the statement is:
  - Women as rail users - transversal approach (security, safety, sustainable, passenger, HR, etc.),
  - Women as railway employees - Human Resources, expertise development, ...

The overall objective is then to continue the dialogue with the United Nations (Goal 5 of the Sustainable Development Goals (SDG's) to achieve gender equality and empower all women and girls), but also with ITF (during the forthcoming Forums), the World Bank (SuM4All – Sustainable Mobility for All), UITP and CER/ETF.

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THE DIGITAL PLATFORM

In June 2015, UIC General Assembly decided to create the Digital Platform with one mission revolving around three principles: Share, Open, Connect. Since the very beginning, it has been clearly stated that the main characteristics of digital were to be both transverse and global.

Transverse because all activities, all projects have or must have a digital component.

Freight, Passenger, Signalling, Rolling Stock, Asset Management, all domains convey digital.

Global: Digital is global by definition; all Regions are concerned. Digital maturity is obviously different from one continent to another, from one company to another. UIC Digital Platform organises events every year in various places (conferences, workshops, Digital Tours, etc.).

The UIC Digital Platform has a responsibility to apply digital as a "brand" in all UIC activities and components, including all UIC Regions.

OUR FOCUS FOR 2020-2022

For the period 2020-2022, the Digital Platform will organise the following events, some of them repeated:

- **Digital Conference: every year prior to UIC GA. An opportunity to meet and exchange with key-actors of the Digital sphere;**
- **Digital Days: every 2 years. An event dedicated each time to an identified theme seen as strategic for UIC Members (2019: Digital twin);**
- **Regional Conferences and Summits. For example:**
  - **"Intelligent Rail" workshop in Hangzhou in cooperation with CR and CARS (09/2018),**
  - **1st African Rail Digital Summit in Cape Town in cooperation with AU and NEPAD (02/2019).**

This implies a deep involvement in all projects and a constant and deep presence in all activities. Due to the fast-evolving nature of the Digital industry, a digital progress paper will be issued every 2 years (2020 and 2022).

For the Africa region, the 2nd African Rail Digital Summit will be organised in Tunisia beginning of April 2020.

PARTNERSHIP WITH RELEVANT ORGANISATIONS

Influencing actions for the benefit of the rail sector are a major axis requested by its members. Particular attention is therefore paid to partnerships. These are evaluated on a regular basis.

Six categories of partnership are considered:

1. local, governmental and intergovernmental authorities (OTIF, ECO, OSJD, EEC, UNECE, BSEC, ESCAP) must intervene appropriately in the sector in order to present the sector's views in debates leading to decisions on transport, sustainable development, etc.;
2. standards bodies allowing UIC products to be recognised and added to existing standards (CEN-CENELEC, ETSI, ISO, IEC, ITU);
3. other technical associations bringing complementary expertise to UIC;
4. financial institutions supporting or potentially supporting investment in rail and to whom UIC can propose its approach and the use of its standards and/or specifications (World Bank, ADB, EIB);
5. associations promoting rail as an important part of daily civil life, opinion-makers creating a climate of demand for rail travel;
6. other transport associations covering a different geographical area or different areas of responsibility from UIC and complementing its influencing actions and developing intermodality, such as UITP or IATA.

TYPOLOGY OF UIC AGREEMENTS

Structuring partnerships:

- international and intergovernmental institutions: United Nations, including SG, DESA/ECOSOC, UNFCCC, UNECE, ESCAP, DG MOVE UE, OTIF, OSJD, EEC, ASEAN, UA;
- major technical partnerships, essentially in Europe, on standardisation but also on other complementary transport modes or corridors: UITP, ERA, the International Coordinating Council on Trans-Eurasian Transportation, standards bodies, etc.;
- civil partners for improving UIC's visibility within public opinion: USIC, FISAIC;
- potential partners for funding regional projects: S²R, ADB, WB, EIB, etc.

Partnerships to be developed:

- framework of actions with organisations with who there is no agreement: ITF;
- new areas for cooperation: UNCRD, UNILO, AIIB (in progress), UPU, OMD/WCO, among others.

OUR FOCUS FOR 2020-2022

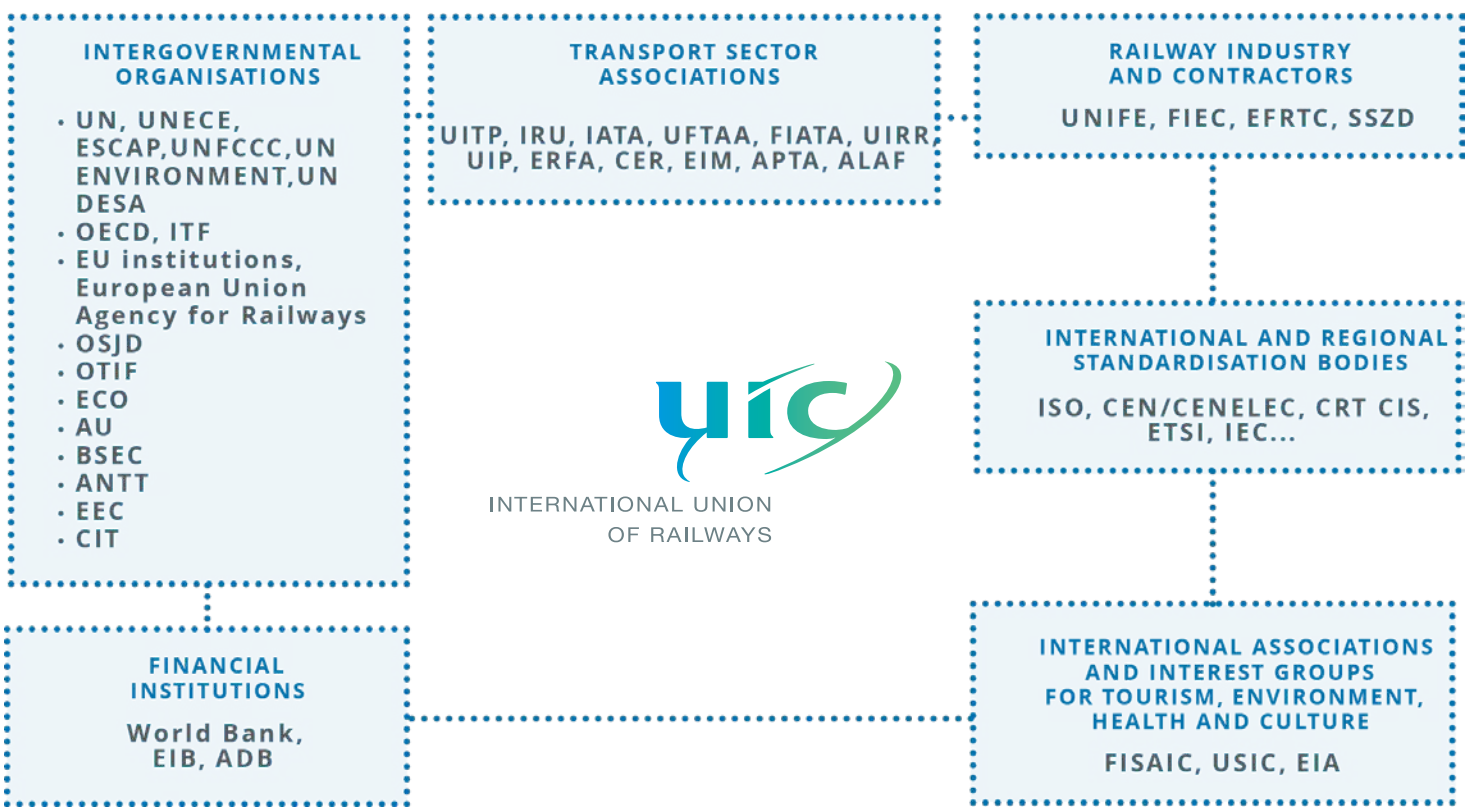
Over the period 2020-2022, UIC will consolidate this partnership policy by producing operational mapping of the agreements to be made and capitalising on the main existing agreements.

The specific objectives of this programme 2020-2022 are:

- **to give rail more prominence in the United Nations agenda in favour of sustainable development through the consultative status of UIC (resume contact with SG UN in the first quarter of 2020 to include UIC in its actions);**
- **participate/revive themed working groups with our historic partners: MaaS with UITP in 2020, reactivate our cooperation on Safety/Security with United Nations Economic Commission for Europe UNECE and United Nations ESCAP on paperless intermodal transport;**
- **renew, upgrade and update the MoU and action plans with long-time partnered organisations: OTIF, OSJD (negotiations to be started in January 2020 with focus on high-speed, IRS, coding & IT, combined transport, ticketing), UNESCAP detailed in December 2019, CIT to be initiated in 2020, etc.;**
- **contribute by our expertise in tender applications and assist with the projects and working groups of these organisations: UNECE, ESCAP, S²R (first AG 2020), H2020.**

SYNERGIES BETWEEN UIC AND ITS PARTNER ORGANISATIONS

UIC maintains and develops close cooperation links with over 100 leading international organisations or specialised institutions.



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THE FUNDAMENTALS: SAFETY, SECURITY AND TRAINING

THE FUNDAMENTALS: SAFETY, SECURITY AND TRAINING

ENSURING SAFETY FOR PASSENGERS, FREIGHT AND THE RAIL SYSTEM

UIC has an increasing role to play in helping its members to develop harmonised or compatible measures within a region to ensure the high level of safety expected from the railways, combined with constantly improving flexibility and competitiveness.

It will also facilitate the exchange of information, and lessons learned in regions between which there is little railway contact.

The safety database

The safety database contains detailed descriptions of significant accidents since 2006, involving 27 companies from Europe, Middle East and Asia-Pacific regions. It provides UIC members with crucial data. We observe a positive dynamic, as three new members joined the activity in 2018 and another three in 2019. Today, the database nearly contains 30,000 geo-localised events. It allows all kinds of cross-criteria queries and benchmarks among infrastructure managers. Indicators, including the renowned UIC Safety Index, were created in order to better apprehend the trends of railway safety worldwide.

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OUR FOCUS FOR 2020-2022:

- extending the database to 3 new members worldwide per year;
- continuous improvement of data quality through regular checks and revisions;
- improving the reports to better address members' needs and interests (reports available at https://safetydb.uic.org/);
- providing members with direct access to the database, offering customised data tables and ready-to-serve data visualisations;
- expanding the content to fit with needs expressed by the EU RA project on Common Occurrence Report;
- being widely considered by the railway industry as the access point to accurate and comparable railway safety data.

For the Africa region, two annual training sessions will be organised in Rabat on Safety, Security and Track Maintenance.
Further to the Crisis Management seminar in Gabon in 2019, an IRS on crisis Management will be put in place by Safety Platform.

Human Factors

The safety unit supports UIC members, through its team and the human factors working group of the safety platform, in integrating Organisational and Human Factors into their safety systems. Recommendations are developed for UIC members and presented to them in widely targeted publications. Our last study published on November 2019 is titled: *towards a positive railway safety culture*.

The human factors approach is all about identifying and providing conditions which make it easier for operators and teams to contribute positively to safety. It allows a better understanding of what influences human activity and an ability to act on the design of workplace situations and the organisation of work in order to create conditions for safety activity. Taking human factors into account is recognising the value of human beings in a system by granting as much importance to human and social aspects as to technical and procedural matters. This gives a greater efficiency and reliability and allows efficient control over project costs. Measures implemented in several companies have shown that taking Human Factors into account can produce a 20% improvement in terms of quality, efficiency and economic profitability.

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OUR FOCUS FOR 2020-2022:

- study on incorporation of human factors in railway companies: "How can Human Factors be introduced and developed in my company?";
- study on Human Factors in automation projects in collaboration with ERA;
- the Safety Unit of UIC and RSSB are co-organising the "Seventh International Human Factors Rail Conference" which will be held from 24th – 26th June 2020 in London;
- to preserve the skills of railway staff over a longer period of time, a benchmark on ageing in the railway sector and its consequences will be proposed and a set of recommendations will be developed within UIC regions.

European Level Crossings Forum (ELCF)

One of the most valuable outcomes of the European Level Crossings Forum ELCF is undoubtedly "ILCAD" – the International Level Crossing Awareness Day", a unique road/rail worldwide campaign spearheaded by the UIC that draws railway industry representatives, road authorities, academics and more from around the world – which aims to raise awareness about the dangers associated with the road/rail interfaces (level crossings).

The objectives of the yearly ILCAD campaign and the launch conference are:

- to raise awareness about the danger at level crossings;
- to promote safe behaviour by all users at and around level crossings;
- to find measures to increase safety and lower the number of accidents.

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OUR FOCUS FOR 2020-2022

ILCAD 2020: Britain's railway infrastructure manager, Network Rail, will host the launch conference of the 12th edition of ILCAD on 11 June 2020, at the National Railway Museum in York, United Kingdom.

For the Middle East Region, a seminar/training on Safety (level crossings) will be organised in 2020.

For the Africa Region, a seminar on Level Crossings will be organised in 2020 in Algeria.

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SECURITY: A GROWING CONCERN

Railway security deals with the protection of persons, information, goods and infrastructure from all forms of threat, from malicious acts to terrorist attacks, for the purpose of improving service quality and developing transport. Railway security is an increasingly important issue in the world; it is a common responsibility to meet the demands of customers and staff. In addition to the security of traffic, security now forms an integral part of customers' demands (passenger and freight) and the working environment of staff.

The UIC security platform is organised around an annual congress to take stock of the work carried out and to propose future priorities, a steering committee which meets every quarter involving the UIC regions, UIC department activities (passenger, freight, rail system/infrastructure) and professional and political partners (UITP, RAILPOL, CER, EIM, etc.), three permanent working groups (Human Factors, New Technologies and Strategy, Procedures and Regulations) and two ad hoc working groups at the request of UIC members (BIRC on Border crossings and SIA on Sabotage/Intrusion/Attack).

OUR FOCUS FOR 2020-2022

The main objectives for the period 2020-2022 are:

- to work closely with the 3 rail activities (passenger, freight, rail system/infrastructure) to develop security as a key element of rail service quality and development of business;
- to cooperate with the relevant authorities to develop, adopt and promote new or amended measures to improve the ease of rail passengers and freight in crossing borders;
- to identify and monitor existing as well as new types of security threats to rail and develop and implement effective and relevant response to these threats;
- to work closely with member companies, other sector associations and governmental agencies in identifying deficiencies in system security and to encourage their resolution as joint initiatives.

The main events already planned in 2020 at global level are the following:

- 2-4 June 2020: Organisation of the UIC Security Week and Security Awareness Day on in Paris;
- 25-27 November 2020: Organisation of the 16th annual congress of the security platform.

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OUR FOCUS FOR 2020-2022

The main topics already planned for the period are the following:

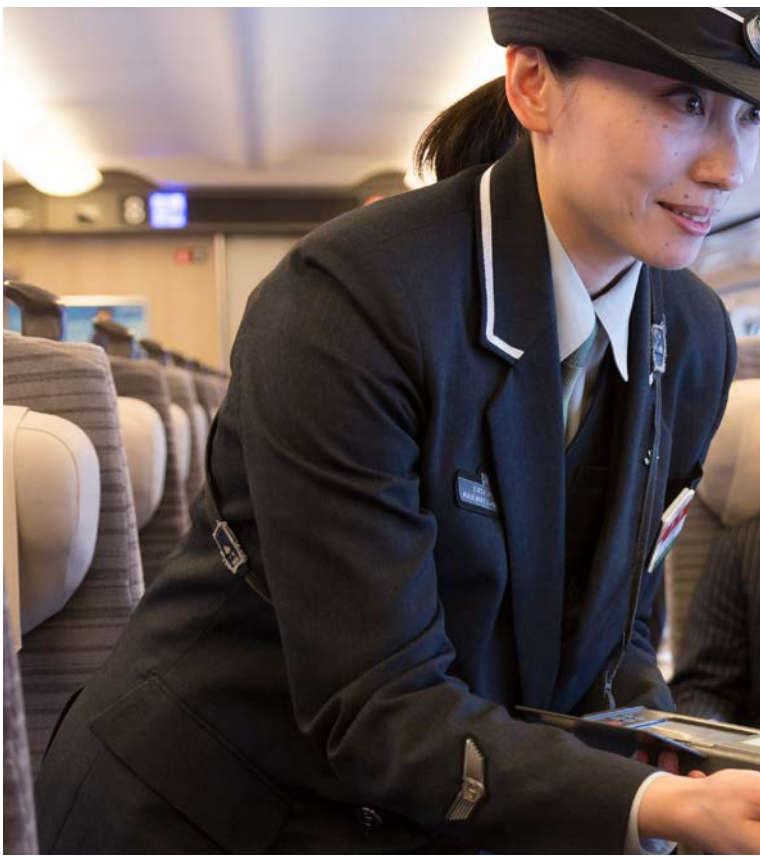
- Human Factor WG: basic approaches to transport security and recommendations for their implementation during mass events (using railway transport);
- Technology WG: new/innovative technologies to fight against metal theft;
- Strategy: prepare technical answers to EU proposals on rail security legal framework;
- BIRC WG: Border crossing in the European-Asian corridors:
  - improve freight transport security and procedures at border crossings in cooperation with the International Coordinating Council on Trans-Eurasian Transportation and WCO,
  - improve passenger transport security and procedures at border crossings in passenger traffic in cooperation with Frontex;
- SIA WG: Sabotage/ Intrusion/Attacks:
  - insider threats,
  - securing military transports,
  - avoiding unauthorised access to train drivers' cabins and securing cabs while driving,
  - protection against obstacles on tracks,
  - inclusion of cargo-related topics.

Produce specifications/guidelines

In the period 2020-2022, the various working groups of the security platform will update the existing publications when needed and provide new guidelines.

Leverage data and sharing of experience

During the period 2020-2022, the UIC security division will further develop and improve the UIC Rail Security HUB (https://railsecurityhub.org/), which is a private secure web platform where rail security experts can find, access and share solutions to railway security issues (such as left-luggage or cybersecurity): new solutions will be regularly updated to address emerging threats.



The TACT Toolbox will also be updated to share good practices and innovative ways for training, security awareness (public, staff, strategy and concept) as well as communication about different security topics.

The network of quick responders will continue to be used to exchange fast information between the members about arising security questions. The objective is to be very reactive in organising answers in case of new threats targeting one of our members.

Create innovation through projects

Beyond the cooperation activities of the security platform, involvement of UIC in EU security research projects is a key activity to develop innovative security solutions for the future. In collaboration with various partners. 11 security related EU projects have already been held with involvement of UIC and 2 projects are ongoing (SHERPA and PROACTIVE). The results are available on the respective websites and on the UIC security hub.

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OUR FOCUS FOR 2020-2022

For the period 2020-2022, new proposals in the framework of EU Horizon 2020 have already been submitted to develop innovative solutions; if selected, the projects will start in mid-2020 for 3 years.

The topics addressed are the following:

- **prevention, detection, response and mitigation of combined physical and cyber threats to critical infrastructure in Europe;**
- **human factors, and social, societal, and organisational aspects to support resilient crowd behaviours in collective threat situations and protect public space;**
- **Chemical, Biological, Radiological and Nuclear (CBRN) cluster with a focus on ventilation;**
- **prediction, prevention, proactive and participation: open platform for smart city security.**

ATTRACTING TALENTS TO RAILWAY

Large-scale employers across the business world are prioritising the skills agenda, and railways cannot be an exception.

Yet there is an emerging consensus across the sector that rail is not attractive enough to tempt the brightest and the best of the next generation of professionals, while simultaneously overcoming the ageing workforce issues and a looming skills shortage.

UIC has been developing its Railway Talent programme in order to support its members in their initiatives and strategies to attract and retain the best talent.

The Railway Talent programme became formally operational in 2014, underpinned by a series of cooperation agreements between railways, industry players and other related institutions.

UIC network does not only offer an opportunity to connect rail people around the world both physically and virtually through its digital platform.

The railtalent.org website has been developed as the primary portal for supporting Talent initiatives, notably:

- highlighting international rail training and education opportunities. This has been supported by the creation of a global network of railway-focussed higher education institutions (Rail Uni Net) which evolved in 2019 into TrainRail (International Rail Education and Training Board), to foster closer links between industry and academia;
- creating a career matrix to promote careers in the railway sector;
- exploring the potential of on-line learning, using different training tools and methodologies: on-line learning group and team learning, communities of practices or SIG (Special Interest Group), informal learning & recognition, assessment, self-assessment, peer assessment, case studies, simulation).

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OUR FOCUS FOR 2020-2022

For 2020 and beyond, additional eLearning courses could be deployed on Members' request. In addition, a further impetus could be given to the platform by making it a cross-sectoral tool for the different UIC Communities of practice.

The project will deploy a mentoring pilot programme targeted at women, as well as continue supporting attractiveness measures towards schools and universities. Rail talent became partner of "Contest for youth" (RUT initiative in partnership with RZD), targeted at schools and is exploring the feasibility for 2020 and beyond of developing the TrainRail hackathon.

A core group of young talent formed at WCRT2019 will also be in the focus of the Talent project until the next WCRT (World Congress on Rail Training) in 2021.

Website: www.railtalent.org

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DEVELOP
A SYSTEM VISION
WITH A DIGITAL DRIVE

DEVELOP A SYSTEM VISION WITH A DIGITAL DRIVE

FURTHER DEVELOP UIC AS THE TECHNICAL PLATFORM TO ADDRESS MEMBERS' NEEDS

Embody and convey a system-wide vision and technical positions

From its creation in 1922, UIC has been playing a leading role in the search for harmonisation of technical solutions and operation principles in the railway industry, in order to enhance interoperability and interchangeability between railway networks, and to share best practices.

Nonetheless, the coordination of work between the members of UIC towards a system-wide vision, and the development of the necessary common work using digital tools as a catalyst is a process UIC needs to improve, with the following practical steps:

- increase the efficiency of UIC infrastructure and rolling stock management (construction, production, maintenance and operation);
- provide the tools for enhancing mobility-associated services towards fully interoperable and intermodal networks ready to operate under MaaS (Mobility as a Service) principles;
- encourage greater involvement by experts from all the UIC regions in achieving better transparency and a more open project inception and management process.

Leverage data and sharing of experience

Feedback from experience and shared risk assessments carried out by UIC members have been raw materials for UIC Leaflets and will remain so for the future IRSs. This is notably the case for the UIC safety database, with more than 30,000 accidents collected by 27 UIC members since 2006. It is proposed to extend this sharing of experience for asset management on the one hand, and for predictive maintenance of both rolling stock and infrastructure on the other hand.

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TECHNICAL POLICIES THAT SERVE MEMBERS' PRIORITIES

UIC offers its members updated technical policies in order to serve their priorities. The main technical priorities would be the following:

- FRMCS;
- cybersecurity and blockchain;
- new fuels (hydrogen, etc.);
- asset management and predictive maintenance;
- railway automation through artificial intelligence and robotics;
- Control-Command System (CCS) evolution.

The following actions will be undertaken:

- strengthen braking expertise (new technologies tests and conformity): actions already initiated in 2019, to be expanded by 2020;
- develop a stream on digital impact regarding train-track Interaction and track structure (smart maintenance, IoTs): preliminary actions in 2020 and structured stream in 2021;
- set up an operation platform for sharing all aspects of railway operations between key stakeholders: definition of framework in 2020;
- strengthen cooperation and collaboration with UNIFE: as per 2020.

UP-TO-DATE IRSS IN LINE WITH STAKEHOLDERS' NEEDS

The role of the UIC as the principal point of reference for railway standardisation since 1928 is now changing as a consequence of two main drivers:

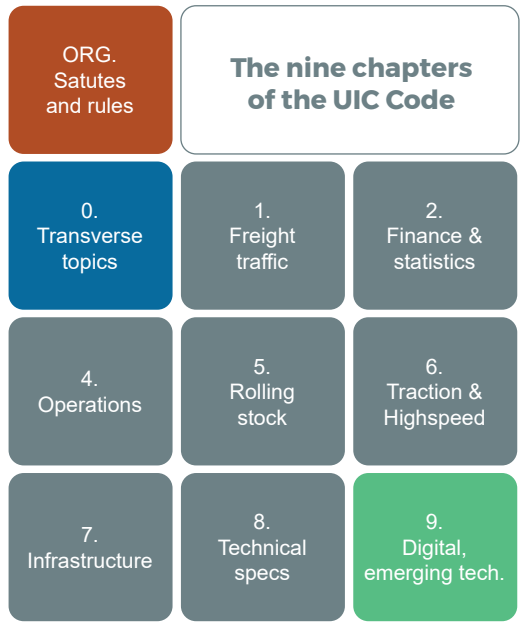
- the opening-up of the market and the change from an operator-driven approach to a kind of "shared responsibility" with the supply industry as product markets become more global;
- the internationalisation of the railway ecosystem with new markets and new actors worldwide has increased the need for international operating standards.

IRS INTERNATIONAL RAILWAY SOLUTION

Clarify the added value

In 2019 the UIC Standardisation Unit was able to analyse the current assets of some 670 UIC leaflets, covering all aspects of the railway system.

Today the migration towards IRS will concern a core of about 350 leaflets that are the key elements for design, construction, operation and maintenance of the services that the operators provide to the end users within the railway system.



A significant majority of the UIC's IRS assets are dealing with topics that relate to the technical management of the railway system – infrastructure, rolling stocking, telecommunications, signalling, operations, etc.

The gradual changes in the field of standardisation whether at international (ISO, IEC, ITU) or regional (CEN, CENELEC, ETSI) level, and the ability for IRS to be used as a vehicle for publishing regional and technological variations, will lead to a more operations-oriented output of IRS.

OUR FOCUS FOR 2020-2022

By mid-2020, a route map will be produced setting out the core elements of the technical standardisation produced by the UIC.

This will provide both a six-year technical strategy and a business-led approach to preparation and publication to ensure that the IRSs produced by the UIC are best suited to the needs of UIC members worldwide.

The way in the which the UIC working groups undertake the task of developing IRS will need to take this into account and work in conjunction with the Code.

Achieve migration to IRS by 2022

Past internal discussions about UIC's Standardisation Strategy ended with the objective expressed at the 86th UIC General Assembly (GA) meeting in Tokyo, in which all initiatives have to be taken and promoted to migrate our leaflets to International Railway Solutions or IRS (guidelines with a worldwide coverage). In doing so, GA reaffirmed its commitment to UIC as a Standardisation Setting Organisation (SSO) and expressed the will, in this new context, to protect it and to promote and enhance this heritage.

IRS INTERNATIONAL RAILWAY SOLUTION

Structured in a common core part together with optional specific annexes and specifications, IRS are designed to benefit from the inputs of all the UIC Regions, thus providing for the greatest possible application of the document.

But also, specific annexes might be used to distinguish between specific systems (e.g. 1435 / 1520 / 1660 /1668 mm gauges, or types of pantographs…) or geographic applications (Europe, Asia, Russia, etc.).

By the time the migration programme has ended (scheduled for December 2022), the IRS that are produced by the UIC will be a very strong operator-led contribution to economic development, the innovation of mobility as a service and the building of common rules for the benefit of interoperable, efficient and attractive railways of tomorrow.

The UIC's team that is leading this process in conjunction with all the technical units have published a Standardisation Guide.

Using a series of diagrams and flow charts, they set out the roles and responsibilities of the various internal and external stakeholders and the processes for producing and maintaining IRSs. A second version of the Guide will be published in 2020.

The guidance document (M2) that sets out how to draft UIC documents has been updated to include the processes that are relevant to the drafting of IRSs.

This is currently approaching the end of its consultative period and was approved by the Standardisation Platform Core Group at its meeting on November 1st, 2019.

It will help experts and editors with the processes for drafting IRSs whilst respecting the new IRS template and format. A training session has been held last 29th January 2020 to roll out the processes contained in the document.

UIC is developing a 'shared workspace' that will facilitate a significantly elevated level of transparency of the process and progress of the preparation, publication and maintenance of IRSs.

The first trial version of this 'live' database is planned to be released in the 1st quarter of 2020.

The database will list all the leaflets being migrated, the IRS number and the number of the former leaflet, the IRS title, UIC department responsible, the name of the UIC technical manager responsible for the document, the working group in charge, the current stage

of the migration process, the estimated date of publication, available language editions, countries using the leaflets as a reference for their national law (if information and source known), TSI(s) or other regulations using the leaflet as a reference (if information and source known), deadline for synchronising the migration into IRS or the revision of IRS with OTIF, OSJD or European documents.

The tool will allow filtering of the data uploaded with a wide range of selectiveness including sorting by type, topic, etc.

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An analysis is currently ongoing to identify the features that are required and to provide a tool that is the most relevant for the end users. This will be a powerful tool for:

- initiating a dialogue on the concrete collaboration areas and the provision of experts;
- identifying the area of added value of UIC standards for all regions and in particular Asia.

The result would be to encourage our major non-European members to work more within UIC and to have a better quality for the standards that are published for the sector by the sector.

The UIC Standardisation Platform plenary meeting and 3rd annual conference will be held in Paris on 30th September 2020.

For the Middle East region, a seminar/training on standardisation/interoperability will be organised in 2020.

PRODUCE SPECIFICATIONS/ GUIDELINES

UIC will promote a digitally driven architecture of the railway system, based on modules whose interfaces will be standardised. Such an architecture will be put in place in the common interest of the Railway Operating Community and manufacturers and will use a 4-layer model inspired by the OSI (Open System Interconnexion) concept:

- each module should be specified by its own features according to the needs of ROC;
- each module could be manufactured without any overregulation, provided that the specifications requested by ROC are strictly respected by the manufacturers.

It is in the interest of ROC to adopt common specifications for these modules. UIC is the appropriate forum for writing and publishing them, in close collaboration with the sector.

Another UIC added value could be the publication of guidelines, in order to help UIC members to quickly adopt innovation and new modules:

- evolve on-board legacy system specs with new digital TCMS paradigms and ensure coherence;
- materialisation of asset management: big data, solutions, linkage with modelling and operations.

Contribute to accelerating the cycle of innovation

Promoting a new architecture of the railway system, based on modules whose interfaces would be standardised, is a key enabler for a plug-and-play approach. Such an approach facilitates the market uptake of innovation, and then accelerates the cycle of innovation.

In addition, UIC is the appropriate forum for carrying-out research activities with its members, promoting the research activities of its members, supporting European and global innovation programmes, and accelerating dissemination.

Monitor implementation and added value of UIC products

UIC works with the most relevant part of the Infrastructure Managers, Railway Undertakings, Entities in Charge of Maintenance, and Vehicle Keepers as a Railway Operating Community (ROC). According to their needs, UIC will offer them an integrated and holistic approach, including all necessary digital features that will add efficiency and better quality to the system.

OUR FOCUS FOR 2020-2022

The UIC operation sector to be created by 2020 will be the focal point where strategy and added value will have to be discussed, along with ad-hoc UIC Days by UIC members in order to better capture the essence of their needs, with an expected rhythm of 4 countries visited every year.

Thus, there is a need to capitalise on the possibilities offered by UIC's current statutes and regulations in order to encourage segmentation and, in the context of ten years of work, to reflect on improvements that may be made and promote UIC's products, image and value more effectively to its members and third parties by means of appropriate segmentation. This work has started at the end of 2019 and will continue throughout 2020.

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CREATE INNOVATION THROUGH PROJECTS

Become a world forum for innovative projects

While most of its counterparts' associations, for example CER and UNIFE, are Europe-wide, UIC offers the unique opportunity to carry out research activities and benchmarking on a worldwide scale, based on its Regional structure and its global vision for railway development, thus creating unique added-value.

OUR FOCUS FOR 2020-2022:

- improved coordination of global research efforts between the UIC Regions, through IRRB → end of Q3 2020.

  On a pre-competitive level, the opportunities afforded by existing collaborative structures such as the IRRB, and for Europe the RICG, can enable efficient and effective cross-fertilisation of ideas and sharing of best practice, as well as planning to take advantage of the various funding streams provided by external structures. To maximise the efficiency and effectiveness of this effort, there must be a clear and well- coordinated understanding of all the UIC requirements for innovation;

- definition and collection of the objectives and strategy for innovation of the various UIC departments → end of Q2 2020.

  UIC's role in the further development of innovation strategy is its ongoing relationship with the most significant external players, including the successor of Shift2Rail (S2R), the key funding bodies and the major industrial and technology developers.

  In this context, UIC will ask for a specific role for a more effective contribution to the successor of Shift2Rail and for a better involvement of each UIC member willing to be involved. A MoU with S2R will be negotiated during the first quarter of 2020;

- better documentation and organisation of our technical input in Europe, including the Railway Operating Community requirements for the big projects to define the work programme of S2R2 → end of Q2 2020.

FOCUS ON RESEARCH: IRRB AND RICG

UIC's IRRB (International Rail Research Board) working body promotes and steers global cooperation in research, development and innovation within the rail sector through its network.

The IRRB involves all major stakeholders at global level in joint activities in the field of research and development and work with universities.

It provides UIC members, as well as a number of excellent, affiliated scientific and research centres and specialised institutions in the field of rail transport, with a platform to identify global common research priorities and to exchange information on important research issues with the aim of better harnessing research potential worldwide for parallel development and innovation in the railway system.

Thus, IRRB members benefit from synergies in conducting research, avoiding duplication and bridging knowledge gaps between regions and continents, and can explore opportunities for research resources and funding at a global level.

The work of the IRRB is structured around five working groups, led by five vice-chairs and supervised by a chairman (Vladimir Andreev of JSC RZD).

The Research and Innovation Coordination Group (RICG) is the key forum for coordination of research activity within UIC in a European context.

The RICG meets regularly and brings together active UIC members with an interest in research in Europe.

It has a strong focus on ROC inputs into European research strategy, such as the 12 Capabilities.

The RICG has led the initial development of the ROC's response to proposals for the new partnership to replace Shift2Rail.

The selection and management of projects, including those funded through the opt-in process, and central UIC bids for EU-funded projects are managed by the Projects Management Office (PMO) within the UIC Finance department.

Income from funded projects is important for the retention of our pool of technical experts.

The RICG has developed a series of Areas of Development (AoDs) to drive each of the 12 Capabilities forward and to feed into research and development priorities and actions.

IRRB International Railway Research Board

Further develop a shared innovation strategy

To complete its goal of assisting its members in the anticipation and management of evolution in the railway field with a digital drive, UIC will carry out a reflection on the different visions of the Members that will help to define a common axis and research actions that could arise.

OUR FOCUS FOR 2020-2022

Definition of long-term perspectives and vision of the railway system (5, 10, 15, 20 years ahead) in order to propose directions and roadmaps for research and technological breakthrough. These would serve to fuel innovative thinking for promoting the Railways.

Put digital technologies at the centre of the railway system

For the Asia-Pacific region:

- a study on predictive infrastructure maintenance with digital technology (shared experience, research) will be launched;
- a study and prospects for timetable management with Big Data will be launched;
- research into best practice in railway digitalisation and intelligent railway systems will be developed.

Efficiency, performance, security and safety levels of the railway system rely on the balance and the interfaces of its different subsystems: infrastructure, energy, trackside control-command and signalling, on-board control-command and signalling, rolling stock, operation and traffic management, maintenance and telematics applications for passenger and freight services.

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OUR FOCUS FOR 2020-2022

For this purpose, UIC will:

- drive the Future Railway Mobile Communication System (FRMCS) initiative for the sector, including definition, specification and standardisation of both infrastructure and new on-board equipment (TOBA, Telecom On-Board Architecture), and also assessments on migration scenarios. It will then establish FRMCS as the key enabler of Control-Command System (CCS) digitalisation;

FRMCS
Future Railway Mobile Communication System

- support the coordination of new CCS initiatives in Europe as a technical body, in order to put ROC at the centre of the decision-making process. The objective is to ensure the general adoption of an extended European signalling system, affordable and stable, including ETCS;
- set up a Railway Cybersecurity platform, focused on the protection of railway critical networks threatened by the upcoming emergence of IP.

  This platform will define concrete solutions (product and services) for the ROC;
- develop an Artificial Intelligence Practice, providing ROC with a common understanding of AI ecosystems and solutions adapted to their needs;
- facilitate the emergence of railway digital modelling ("digital twins") in close collaboration with the initiative in the Asia Pacific Regional Assembly;
- two digital workshops in Australia and Kazakhstan.

For the North America region:

- an ad-hoc FRMCS group for North American members will be created;
- a cyber security coordinated approach to level crossings will be set up, to be developed with the Transportation Technology Center, Inc (TTCI), a subsidiary of the Association of American Railroads (AAR).

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RAIL FREIGHT AS THE BACKBONE OF THE WORLDWIDE LOGISTIC CHAIN

RAIL FREIGHT AS THE BACKBONE OF THE WORLDWIDE LOGISTIC CHAIN

FURTHER DEVELOP UIC AS THE TECHNICAL PLATFORM TO ADDRESS MEMBERS' NEEDS

Up-to-date IRSs and specifications in line with stakeholders' needs

Freight produces different products to support interoperability and smooth cross-border developments:

- leaflets / IRS,
- guidelines,
- standard multilateral contracts with stakeholders of the transport chain.

The transport of dangerous goods (TDG) is subject to specific regulatory measures. TDG safety on the railways is based on general railway operating safety.

Rules and regulations are updated on an ongoing basis in order to take account of experience and of new types of goods arriving on the market.

IRS INTERNATIONAL RAILWAY SOLUTION

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The harmonisation of rules between various modes of transport is increasingly important, with international trade and multimodal and intermodal transport all growing.

Work to amend the various regulatory texts takes place within intergovernmental (OTIF), European and international bodies.

UIC participates in this work with the status of a non-governmental organisation which, however, allows it to make observations and proposals based on railway solutions.

The two key documents in that respect, which just migrated into IRS, are UIC IRS 40471-3 dealing with inspection of consignments and IRS 20201 dealing with emergency planning for marshalling yards.

The loading guidelines developed by UIC are a set of nationally and internationally valid regulations for loading goods in railway transport. They describe binding rules and stipulations for the usage and capacity utilisation of the wagons and for the dimensions of the load. They are referred to in standard EN 16860.

The UIC loading guidelines constitute an extremely valuable intangible asset which is shared with all players. All of them must know and comply with the proper implementation of the existing loading rules and directives and use the appropriate equipment.

The Group work priorities for the period ahead will be to continue to provide expert support in the JNS procedure following the accident on the Danish Great Belt.

The Group is also organising itself to engage more proactively with IMs so that the Loading Guidelines, which still contain some legacy of an integrated railway system, become the reference tool for modern railway operation.

For the Middle East region:

- a seminar/training on exchange of freight wagons will be organised at the end of 2020;
- a working group on the coordination of freight tariffs in the region will be created with the technical support of UIC HQ.

Leverage data and sharing of experience

For many years UIC has driven the digitalisation process through RAILDATA, a special group for freight which was set up in 1995 to address the collective need of freight Railway Undertakings in the domain of data exchange. Since its creation, it has designed, developed and run IT services to support the business.

Raildata's key applications and current priority objectives are:

- ORFEUS (Open Rail Freight EDI User System) - consignment/wagon CIM/CUV note data exchange.

  Key actions: Improvement of ECN flow for sales/purchase and TAF/TSI.

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- ISR (International Service Reliability) - wagon movement and status reporting.

  Key actions:
  - sharing of wagon geo-coordinates for increasing the density of track&trace information;
  - new version of wagon movement messages which will cover new TAF location- and train-codings;
  - Mileage-Calculation in ISR and sending of the results to GCU Broker or direct to the Keeper.
- WDI (Web Data Interface) - web form for capture and presentation of train consist data and of wagon movement.

  Key actions: support of workflows for first and last mile processes, and also for processes of handling transit trains.
- RTIS (Running Train Information System) - processing of train running movement information.

  Key actions: improvement of web interfaces.
- CoReDa (Commercial Responsibility Database) - wagon database with current responsible keeper.

  Key actions: connecting new partners.
- ATTI (Agreement on Technical Transfer Inspection for wagon exchanges) - quality management system database.

  Key action: new reporting functionality to support the production quality analysis (technical transfer inspection, RID, operation).

FOCUS ON SMOOTH HANDOVER OF WAGONS

The Agreement on Freight Train Transfer Inspections (ATTI) is a UIC Special Group whose membership comprises both UIC and non-UIC railway undertakings.

The ATTI has developed a set of rules to simplify the transfer of wagons between parties whilst ensuring the highest possible level of safety.

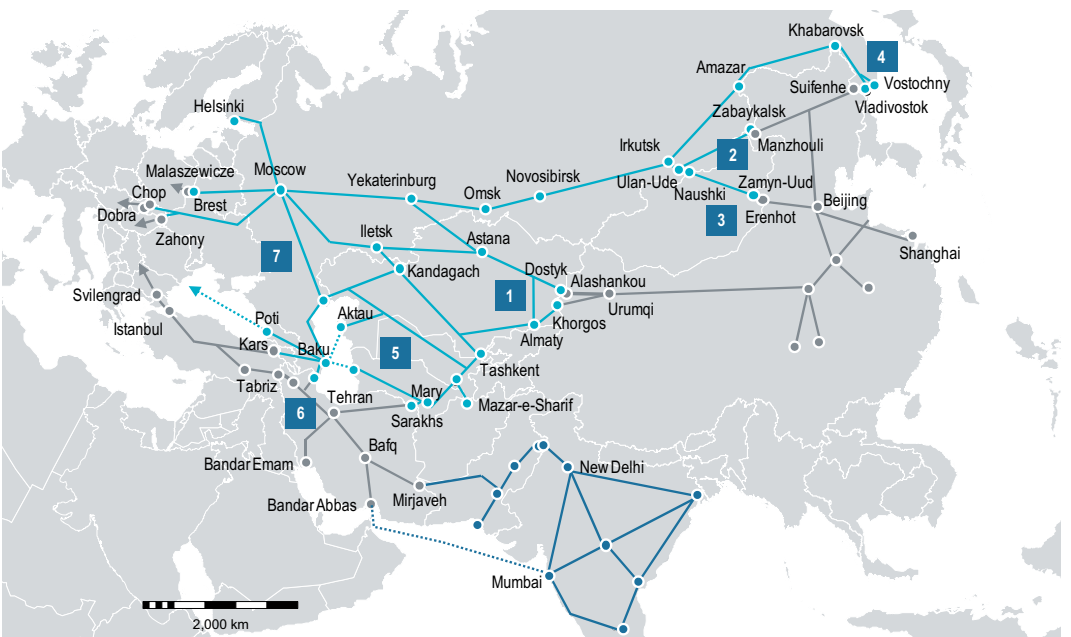
Since its creation in June 2014, the initial group of 44 participants has grown to over 100 members, and a quality monitoring system has been put in place.

Monitor implementation of rail freight corridors

In the context of the implementation of Regulation 913/2010 for Competitive Freight, the need for harmonisation of corridor (RFCs) "access" became increasingly urgent for railway undertakings (RUs) under pressure to implement productivity enhancements. RUs therefore asked UIC to facilitate and coordinate this process with the ECCO project (Efficient Cross Corridor Organisation).

ECCO provides key technical input on some of the priority issues in the Sector Statement (SS), which represents the commitment made by the sector to boost international rail freight in the context of 11 priorities. It is also a key tool to advance some priority topics of the CEO Task Force in the following domains:

- on behalf of Railway Undertakings and in partnership with ERFA, produce a Handbook on International Contingency Management;
- in partnership with customer associations (UIRR, ESC), draw up quality KPIs to monitor the rail offer;
- provide a concerted operational viewpoint on the Corridor Regulation (913/2010) to support lobbying activities on its revision;
- coordinate the RU input towards certain RNE activities, inter alia, the elaboration of harmonised Network Statements.



© Noah's Train in Rome / OK Kunst

As the worldwide railway organisation, UIC is particularly committed to supporting the successful implementation of transcontinental corridors.

In accordance with the 2019 programme objectives, the following topics were progressed as follows:

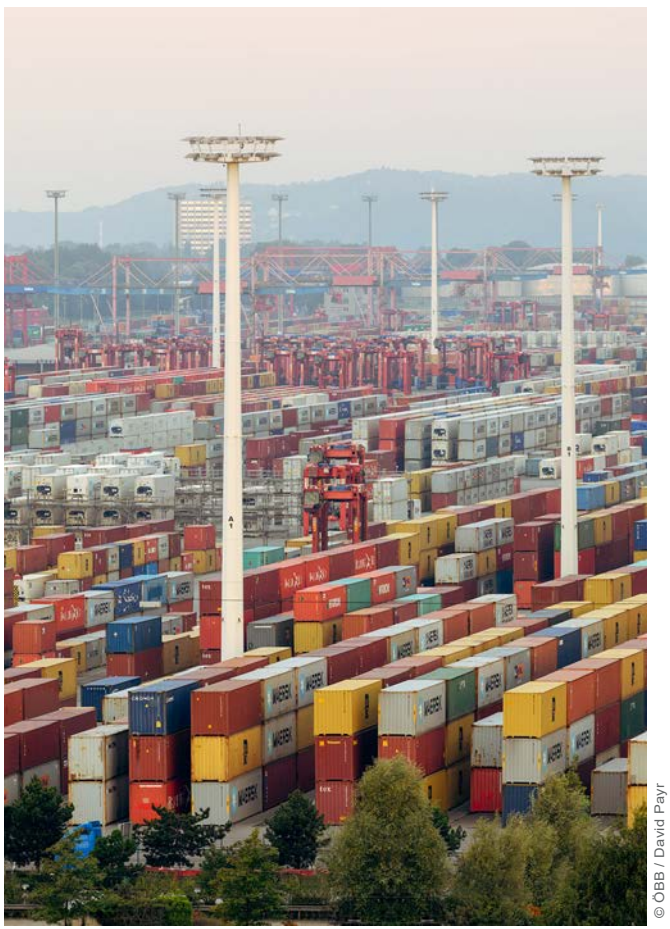
- monitor business development;
- following the 2017 study carried out by Roland Berger which focused on route development and market organisation, a study was launched with the support of IEC (Infrastructure Economics Centre) of Moscow focusing on the elasticity of transport flows between Asia and Europe in relation to:
  - decreasing Chinese subsidies,
  - infrastructure investments,
  - port strategies,
  - service improvements.

  The Study results was delivered in December 2019;
- the corridor activity also focuses on specific digital initiatives which foster productivity gains, such as the use of electronic seals or the use of blockchain technology;
- capitalising on its network of partners, UIC addresses a range of issues, through its membership of the Board of the International Heavy Haul Associations, UIC contributes to the exchange of best practices around the world on topics linked to running long and heavy trains.

FURTHER DEVELOP A SHARED INNOVATION STRATEGY

To be competitive in the 21st century, a new vision of the industry needs to be developed. In the same way that road is always pushing the limits of technology, Rail Freight, as an industry, should adopt a more technology-minded approach. This aspect is contained in the "30 by 2030" Rail Freight White Paper as one of the 3 key levers for achieving modal shift.

RAILFREIGHT FORWARD
EUROPEAN RAIL FREIGHT VISION 2030



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OUR FOCUS FOR 2020-2022

The vision of the European Freight CEOs is to increase modal share by 30%. In order to accomplish modal shift, the railway sector needs to become more customer-focussed, more competitive and continue to develop multi-modal services. Some processes and solutions therefore require implementation on a collaborative basis to increase consistency, efficiency and transparency, including tracing, through enhanced data exchange. Such exchange of information is expected to achieve the following goals:

- significant cost reduction by reducing manual efforts in data acquisition and by using standard data formats;
- higher customer satisfaction by better information quality (e. g. ETA) and quicker information provision;
- optimised dispatching and better provision of information to customers through easier data capture;
- better quality of operations through the reduction of data errors and the elimination of system breaks.

Key to the success of innovation projects will be for the RU's to work together to drive standardisation.

Three main areas are defined where the RU's need to take up their responsibility:

- to achieve a competitive edge, the sector will drive automation of operations. The benefits will be greater reliability, more cost-efficient operations and greater safety;
- the sector will continue to develop telematics resulting in intelligent wagons. This will be a major enabler for other products to the customer. It will also allow optimised maintenance schedules leading to an overall lower cost structure;
- the interfaces with customers should become more user-friendly. By developing customer portals, the RUs will drive bundling and increase the ease-of-use of the rail solution. These initiatives will benefit a lower order handling cost, thereby increasing the competitiveness of the solution.

Key topics coordinated by UIC range from:

- harmonising the sensoric approach from the user perspective – UIC develops user specifications both at wagon and train level to support the implementation of intelligent trains;
- development and management of a migration plan to exchange uniform / harmonised wagon data;
- tackle customer concerns about real-time information by addressing the issue of ETA both at wagon and train level from an international/cross-border perspective;
- roll-out digital process such as electronic consignment notes.

Support European and global innovation programmes for the benefit of the sector

The digitalisation of rail requires huge investments for RUs. The current financial situation of European freight RUs makes them reliant on external funding and this is why European programmes such as CEF or Shift2Rail are of vital importance.

UIC helps its members to leverage funding for some of its priority projects such as the one addressing the cross-border driver language topic. For this topic, the concept is to use a digital tool for communication between RUs and IMs based on predefined messages designed to cater for operational processes.

UIC, in partnership with RNE was awarded funding from the Shift2Rail programme for the project called Translate4Rail.

The objective of this project is to enable any driver to be safe when driving in a foreign country of which he does not know the language. This entails the capacity of the driver to exchange necessary standard information in written or voice messages with the traffic controller for a safe run of his train and good information of the traffic controller in compliance with the Decision 2012/757/EU of the Commission of the 14th of November 2012.

Translate 4Rail

In a nutshell, the objectives of the project are to increase the reliability of trans-European rail freight transport by providing quick alternatives by different routes to maintain the service in case of incidents. At the same time, the objective is to fluidify the border crossings and thus to enhance network capacity, travel safety and competitiveness.

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CONVEY A GLOBAL MULTIMODAL VISION SHARED WITH SUPPLY CHAIN STAKEHOLDERS

It is a priority challenge for European RUs to drive the implementation of a system vision of rail freight. This does not only mean working in partnership with infrastructure managers to ensure adequate capacity but also means further collaborating with the other stakeholders of the chain.

A number of best practices have been developed over recent years such as:

- Xrail, the Single Wagon Load alliance, responds to customer demands on reliability and integrated information requests. It acts as a platform for innovation and technical collaboration;

- partnership with Combined Transport operators to improve the necessary standardisation of the system thus facilitating its running on the network;
- collaboration with the wagon keepers to harmonise mutual rights and obligations with regard to the use of wagons as a means of transport throughout Europe and beyond. This initiative is better known as the GCU;
- the General Contract of Use for Wagons (GCU) is a multilateral contract based on the international convention COTIF 1999 and Annex CUV. Since its start in July 2006, the GCU has grown to an impressive network of more than 600 signatories across 20 countries, with around 600,000 wagons currently declared in the GCU wagon database;

GCU Bureau
General Contract of Use for wagons
Contrat Uniforme d'Utilisation des wagons
Allgemeiner Vertrag für die Verwendung von Güterwagen

- at a global level, the work relies on strong links and ensuring synergies with the work carried out in the UIC Regions (Asia Pacific and Middle East) and with key partners. In particular OSJD member states developing use of contracts on the use of Freight wagons in International Traffic (PGV) and Agreement on International Goods Traffic by Rail (SMGS);
- the main focus is:
  - market monitoring and market research,
  - drive interoperability for emerging digital solutions,
  - drive innovation in partnership with the Digital Platform on blockchain technology for instance,
  - best practice and knowledge transfer especially in terms of operational interoperability.

Progressing partnerships in particular with the International Coordinating Council on Trans-Eurasian Transportation, CIT, BIC, ESCAP, UNECE, IHHA.

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For the Asia-Pacific region
2020 will see the development of:

- Intertran III; the project aims to develop "multimodal transport in the Asia-Pacific region and increase the competitiveness of rail transport", especially thanks to information technology;
- research for greater integration of railways in Asia-Pacific region in order to act as the backbone of integrated transport.

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RAIL AS THE TRANSPORT MODE OF CHOICE FOR PASSENGERS

RAIL AS THE TRANSPORT MODE OF CHOICE FOR PASSENGERS

FURTHER DEVELOP UIC AS THE TECHNICAL PLATFORM TO ADDRESS MEMBERS' NEEDS

Up-to-date IRSs in line with stakeholders' needs

Interoperability is a crucial requirement to further develop the railway market and present rail as an attractive alternative to other modes of transport. For this, the UIC passenger department is investing on the one hand in the responsive development of new standards to meet the members' needs and to keep up with the pace of new innovative technologies and the fast-growing and changing market, and on the other hand in the continuous updating and adaptation of existing IRS and UIC Leaflets.

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OUR FOCUS FOR 2020-2022

One of the biggest endeavours for the UIC passenger department in the next three years is the development of standards for E-ticketing on two aspects:

- E-ticketing – Barcode: in order to avoid multiple standards of barcodes, UIC members decided to develop a new barcode which integrates all requirements. The new FCB (Flexible Content Barcode) could be the contract. It allows several passengers for several legs in an international journey. This Barcode is therefore a UIC technical definition representing the through ticketing contract;
- E-Ticketing Control Database: UIC is implementing a Software as a Service (SaaS) for the Ticket data exchanges for e-Ticket control in Europe. The Central electronic ticketing control database (ETCD) will provided services covering the following areas; Digital ticket Online, Travel contract modification and After-sales services.

The UIC passenger department, high-speed sector is maintaining and developing standards regarding the development and operation of high-speed rail. The "Implementation of High-Speed Railway" series is a bundle of IRSs covering the topic of the implementation of HSR from the emerging phase up to the operation phase. Other standards are under development or updating regarding testing & trials, compatibility, communication & signals and energy.

For its part, the railway stations sector is launching, in the coming year, two technical groups for a one-year trial phase. The Information in Stations working group will continuously enrich and update the UIC IRS 10181: User information in railway stations. The Retail working group will address commercial activities and opportunities in stations.

IRS INTERNATIONAL RAILWAY SOLUTION

Produce specifications/guidelines

UIC is a shared knowledge platform translating the vision of its members into concrete Know-how through technical recommendations, guidelines and handbooks. In the upcoming three years, the UIC passenger department will publish a variety of documents addressing the challenges and topics of each sector of activity with a main focus on digitalisation, innovation and new technology in order to offer a better integrated railway transport, an attractive customer experience and future mobility.

The InterCity & High-Speed Committee of the UIC passenger department is currently working with several universities on multiple topics regarding the development of high-speed rail, the promotion of stronger ties between businesses and academia and the improvement of rail-oriented education. The committee has set a three-year joint research programme as follows:

- HSR productivity coordinated by BJTU, China;
- HSR social/territorial equity coordinated by the University of Naples, Italy;
- HSR marginal costs and value of time coordinated by the University of Technology of Krakow, Poland.

In addition, the committee is working on multiple reports and guidelines with the members and market experts:

- Customer Experience Management and assessment. Report is expected end 2021;
- operational efficiency for new and existing HSR. Report is expected end 2021;
- HSR operation in extreme climate conditions, especially in winter conditions. Each year a report is issued concerning each extreme climate condition.

Other documents to be published in the three-year timeframe by the remaining sectors (Railway stations, commuter and regional train services and tourism opportunities for railways):

- handbook on commuter and regional train services. Report will be available end 2020;
- benchmark on the use of new technologies in enhancing Digital Passenger Experience for tourists and tourism. Report will be available end 2021;
- optimisation of the station management of small stations. Report will be available end 2022;
- guidelines on Transit-Oriented Development (TOD). Report will be available end 2021;
- extensive online catalogue on smart solutions for railway stations. Report will be available beginning 2020;
- website on tourism opportunities for railways: www.toprail.org, currently in progress.

UIC TopRail
World Rail Tourism

Leverage data and sharing of experience

In the last decades, data has been reshaping every aspect of life, and railways are no exception, giving it new opportunities of exponential growth: new passenger experience, seamless multimodal trips and more efficient operations of passenger rail. In this regard, the most prominent activity of the UIC passenger forum harvesting the potential of data is MERITS (Multiple East-west Railway Integrated Timetable Storage) which is a centralised database containing the timetable data of a majority of European railway operators, which are reproduced and integrated twice a week. It is designed to give railway operators rapid access to accurate data in order to produce timetables and operate more efficiently based on a single source of data and thus MERITS data contains: train schedules and services, location database and minimum connecting times.

Furthermore, in 2019, the UIC commercialised the MERITS integrated data to third parties allowing better customer information, journey planning, booking and feeding mobile applications.

Considering the obsolescence of some UIC tools, like PRIFIS (PRIce and Fare Information Storage), and to take into account the new European technical framework, UIC is developing a new model based on new UIC Standards. The new Tariff Model (nTM) merges the current NRT (Non-Integrated Reservation Ticket) and IRT (Integrated Reservation Ticket) concepts to offer carriers and distributors customer-friendly and competitive prices for international travel, based on timetables. It should facilitate through ticketing and intermodality.

The strengths of this development will be:

- alignment with timetable data for better quality;
- technical and commercial renewal of the tariff data definitions;
- data-driven model for tariff data (combination from different carriers);
- providing tariff data in line with the requirements of bar codes and control data exchange.

In the context of sharing experiences, the UIC is a platform for knowledge exchange and transfer. The UIC passenger department organises yearly training on different topics:

- training on commuter and regional train services. Next one is expected in Bilbao on November 2020;
- training on Passenger Services based on IT Technologies, mainly ticketing, is expected in Seoul on March 2020;
- two-level training on High-Speed Systems (theoretical and practical levels) Level I in Paris in April each year, and level II in Madrid in November each year. A level III is expected to be put in place for more technical issues.

In addition, it will organise, in cooperation with the UITP, a new training on stations for infrastructure managers.

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Technical policies that serve members' priorities

The UIC is actively involved in shaping the future of railways in Europe and globally.

On a European level, the UIC co-organises with CER the High-Level Passenger Meeting (HLPM), an event aimed at European Passenger CEOs to discuss strategic topics relating to challenges faced by the European railways and discussing important rail Passenger transport policy issues.

During the last HLPM held in October 2019, various challenges and visions were discussed including Ticketing and Intermodality, new Tariff Model, Full Service Model, 5G & Blockchain for rail and their related security threats.

On a more technical level, the UIC participates in the ERA TAP-TSI working parties for discussing the IT regulations and synchronising the ERA's technical documents with the UIC's IRSs as a part of the UIC-ERA technical agreement.

More globally UIC collaborates with international organisations such as UITP and IATA, through joint projects to define the framework of more integrated intermodal transport.

Furthermore, two flagship events of the UIC: the World Congress on High-Speed Rail (Ankara), and the UIC next-station conference (Teheran), are stepping-stones for conceptualising and defining the next generation high-speed rail transport and railway stations.

The 11th World Congress on High-Speed Rail will take place in Beijing, China.

The 12th edition will be held in Morocco.

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CREATE INNOVATION THROUGH PROJECTS

Become a world forum for innovative projects

The UIC Global Passenger Forum has become an incubator for novel initiatives and projects, anticipating the UIC members' needs and investigating the full potential of passenger railways. Besides the ongoing projects of the sector and backbone activities, five new projects are to be carried out starting in 2020 for three years:

- innovation platform on AI, Blockchain, distribution and digitalisation. Workshops are organised every 3 months;
- TopRail III (Tourism opportunities for railways) from 2020 to 2022;
- Customer Experience Management platform from 2020 to 2022;
- guidelines on the efficiency of new and existing High-Speed lines from 2020 to 2021;
- Small Railway Stations Management Optimisation from 2020 to 2022.

Put digital technologies at the centre of the rail system

With the emergence of new technologies, along with changes in customer behaviour and choices regarding mobility, and the development of competition in the rail sector, railway undertakings and infrastructure managers are shifting towards a more customer-centred approach in providing services, by investing in innovation and research to offer more personalised and seamless journeys.

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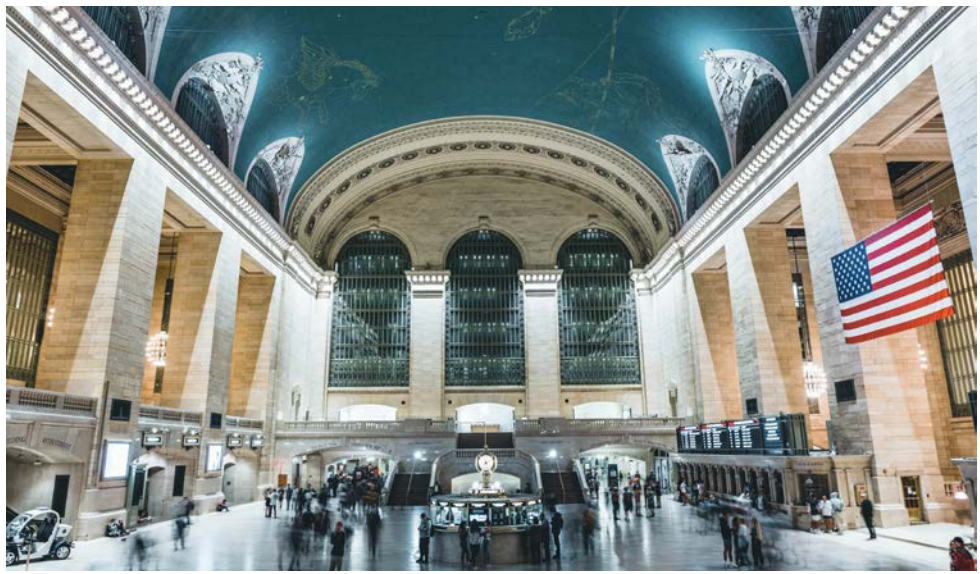
In this regard, the UIC passenger department is acting as a catalyst for the adoption of new technological practices and solutions by members through innovative projects and workshops.

The Innovation Platform is a working group of the Global Passenger Forum addressing new disruptive technologies and the way they are reshaping the travel industry through workshops and case studies encouraging members to investigate these solutions further, alongside the UIC, in the upcoming years. The main topics covered in the innovation platform are: Passenger Services Digitalisation, Blockchain and its potential benefits and challenges for Rail, Intermodality, new distribution capability and Mobility as a Service paradigm and Artificial Intelligence and data analytics.

Furthermore, each sector of the passenger department is working on at least one topic related to digitalisation and digital technologies for passenger rail:

- distribution, ticketing and the new Tariff Model (nTM);
- smart solutions for smart stations: the use of new technologies such as sensors, CCTVs, IoT, AI for a better customer experience in stations and for better station management;
- PRM-ABT (PRM Assistance Booking Tool): User-friendly web-based application that helps to structure and facilitate bookings of assistance services for PRM for international journeys throughout Europe replacing the manual systems (phone, fax and



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e-mail). It is a reference application for the standards and XML messages defined in UIC Leaflet 918-6;

- Autonomous Vehicle and Door2Door: Investigating the potential benefit of autonomous vehicles on the passenger rail sector in terms of more efficient and seamless door-to-door journeys.

Convey a multimodal vision shared with public transport and supply chain stakeholders

Being the foremost goal of the UIC Global Passenger Forum, seamless sustainable multimodal transport is a focus of every sector of the forum, dealing with it from different perspectives and with different stakeholders.

In terms of ticketing and distribution, the UIC is working closely with international and regional organisations to develop a strategy and technical standards for the implementation of air-rail and rail-public transport intermodal solutions:

- UIC Air+Rail Intermodal Travel (in cooperation with IATA): Intermodal integration of air and rail by removing major technical barriers, by providing technical guidance and standards in order to facilitate integration, as well as technical solutions to accelerate adoption;
- UIC Door-to-Door Local Transport Intermodal Travel (in cooperation with UITP): Digitally enabled intermodal ticketing, journey management and validation / inspection.

  The project will enable rail companies to offer journey packages that will be purchased online and fulfilled digitally. Project linked with outcome of e-ticketing.

Furthermore, it promotes its ticketing and data exchange standards among public and regional transport authorities to be used by public transport operator, and, thus, more interoperability.

In terms of stations, UIC's vision is the sustainable integration in the urban fabric and in the mobility web, addressed through projects (Long Term Development for Railway Stations, Transit-Oriented Development) and the UIC nextstation conference (7th edition: Stations boosting the city).

For the North America region, 2020 will see the development of a multimodal approach (taking into account the importance of railway stations) through the organisation of side events in some major cities in North & Latin America in cooperation with APTA and the United States Conference of Mayors (USCM).

For the Asia-Pacific region, 2020 will see the development of:

- IT-based training on rail passenger services;
- research on the state of the art and comparison of key standards for high speed in Asia-Pacific.

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PROMOTE SUSTAINABLE CARBON FREE TRANSPORT

PROMOTE SUSTAINABLE CARBON FREE TRANSPORT

Rail transport's role as a key driver of sustainable development with the potential to mitigate the effects of climate change is widely recognised among civil society, citizens and decisionmakers. It will have to adapt to environmental change and must anticipate risks in order to limit a heavy financial burden.

But climate change is not the only issue facing the railway sector. Consequently, UIC also works on other key issues, such as depletion of resources (water, metals, etc.) and polluting emissions, with a view to identifying ways to mitigate such issues. It seeks out alternatives to unsustainable land use and is involved in many other activities enabling the railways to be in line with the United Nations Sustainable Development Goals (SDGs).

LEVERAGE DATA AND SHARING OF EXPERIENCE

UIC Energy, Environment and Sustainability (EES) platform works on:

- energy efficiency and GHG emissions;
- polluting emissions;
- noise and vibrations;
- sustainable land use, including the alternatives to Glyphosate;
- Circular Economy;
- rail as a backbone for door-to-door solutions.

These working groups provide yearly reports and guidelines, and also organise various workshops.

OUR FOCUS FOR 2020-2022

For 2020-2022, two workshops per year will be organised by the Energy Efficiency network, one by the noise and vibrations network.

A state-of-the-art report on door-to-door solutions will be published, as well as a "state of the art" on sustainable use of resources and circular economy.

A global report and a workshop should be organised by 2020 on a transition strategy for vegetation management on railways.

Produce specifications / guidelines

Two main IRS, SFERA (Standardisation of Driving Advisory Systems or DAS) and IRS 90930 (on the process of measurement, exchange, validation and billing of traction energy for cross-border traffic) will be published in 2020 and will then be promoted (a workshop on SFERA may be organised during this period) and updated regularly in the following years.

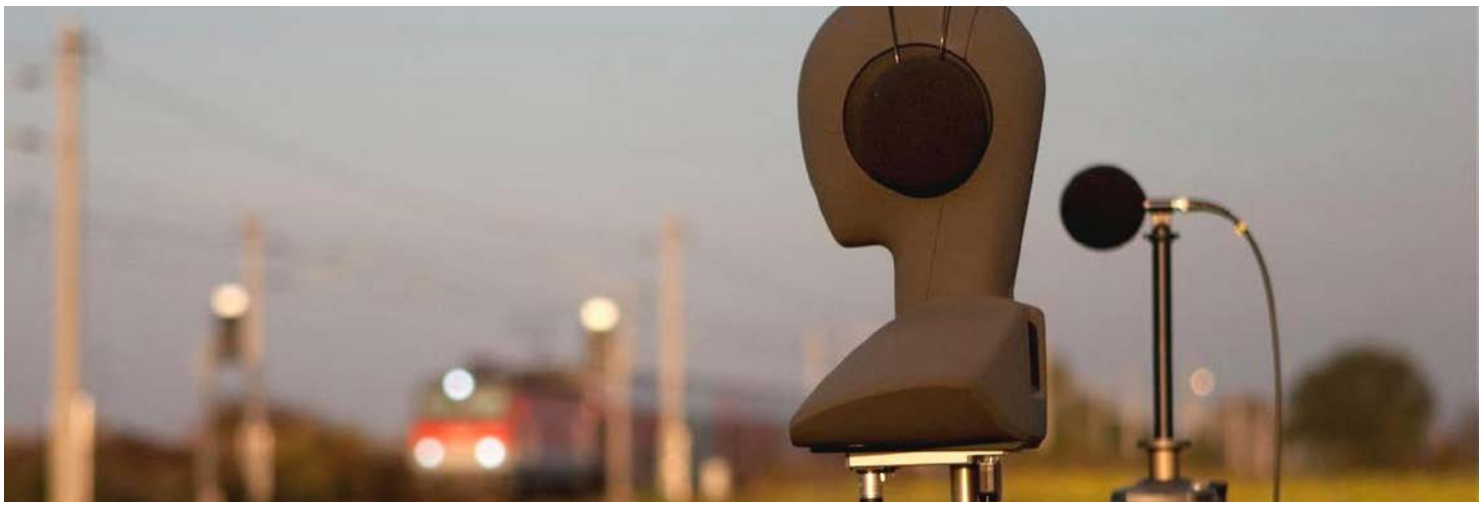
Moreover, UIC will carry on working with the International Energy Agency IEA on a short online analysis of GHG emissions in the rail sector.

Tools such as "EcoPassenger" and the "Environment Strategy Reporting System" (ESRS) tool dedicated to members' energy and CO_2 data collection, should also be updated and developed during 2020-2022.

eco passenger

Dire warnings of the IPCC 1.5°C report (2019) states that countries are not meeting their commitments made at COP 21 in 2015 for 2020 (their NDCs), leading the planet to a warm-up of 3°C by the end of the century. It is urgent that countries multiply their ambitions threefold and reach carbon neutrality before 2050. Transport is responsible for 24% of energy-related GHG emissions and in a business-as-usual scenario, these emissions will double by 2050.

Climate stabilisation requires a decarbonised transport sector.



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RAIL AS THE BACKBONE OF MOBILITY

- UIC is an internationally-accredited Non-Governmental Organisation in consultative relations with the United Nations since 1950 and was elevated to a special status in 2015, cooperating more actively with UNSG since that date, and participating annually in the Conference Of Parties (COP) organised by UNFCCC, in the Climate Summit and many other intermediate events, co-organises side-events in Partnership with UITP, and shares panel sessions with various stakeholders of the transport sector, in order to promote its advantages; UIC intends to participate in COP26 in England in 2020;
- UIC participates actively in different initiatives promoting sustainable mobility such as SUM4ALL (World Bank Initiative), Sustainable, Low Carbon Transport initiative (SLoCaT) and the Transport Decarbonisation Alliance (TDA);
- UIC takes part in the writing of various reports on sustainable mobility driven by the UNSG ("Mobilizing Sustainable Transport for Development" – 2016), the World Bank ("Global Mobility Report" 2017; "Global Roadmap of Actions" – 2019) and by SLoCaT ("TCC-GSR" – 2018);
- a kick-off meeting gathering together the Sustainable Development Directors of around 20 railway members took place in October 2019 to work on a strengthened representation of the sector at an international level.

Moreover, in 2014 UIC members launched the "Low Carbon Rail Transport Challenge" with commitments on energy efficiency, CO_2 emissions and modal shift targets, in order to position rail as a solution to climate change and frame discussions with the United Nations and national governments. The challenge was designed to illustrate how increased investment and modal shift to rail can help to secure climate change beyond the 2 degrees scenario.

In June 2019, UIC proposed to go one step further and launch a communication campaign by revising the sector's commitments:

- at a European level, through the adoption of the UIC and CER Carbon Neutrality "Vision 2050" as a new 2050 Carbon Neutrality Target and the strengthening of the 2030 target by reporting results against a new baseline 2005 in addition to existing baseline 1990;
- at a global level, through the adoption of a new 2050 Carbon Neutrality Target and the contribution of railway members to the UN SDGs.

INTERNATIONAL UNION
OF RAILWAYS
RAILWAY CLIMATE DECLARATION
New 2019 Pledge
According to the Paris Agreement, countries must renew or increase their commitments by the end of 2020, by amending their Nationally Determined Contributions submitted in 2015. They must correspond to the highest level of ambition possible. Therefore, UIC is committed to go further.
The Railway Climate Responsibility Pledge 2019 is an extension to the Pledge signed in 2015.
As an official representative of a UIC Member, I acknowledge the critical importance to take immediate action for a more sustainable future.
I recognise the central role of railways in the fight against climate change.
As a member of the worldwide community of railway operators and infrastructure managers, I commit to take a leading role in the actions to mitigate climate change, by reducing my company's carbon footprint and supporting a shift towards a more sustainable balance of transport modes.
In order to achieve this, I commit to:
1. Reduce my company's specific energy consumption and CO_2 emission, and through this contribute to the UIC "Low Carbon Rail Transport Challenge", presented in 2014 at the United Nations Climate Summit, and to the Rail Climate Responsibility Pledge, signed in 2015;
2. Carbon Neutrality by 2050;
3. Contribute to United Nations Sustainable Development Goals (SDGs).
Place, date
Signature
Company name
Name, title of signee

DEVELOP INNOVATIVE PROJECTS FOR BETTER ATTRACTING GREEN BONDS

In order to position rail as the backbone of sustainable transport, it needs investments to maintain its infrastructure, renew its rolling stock and make it attractive, comfortable, secure and reliable. Rail also needs the assurance that all modes will pay not only for the use of the infrastructure they need but also for the impacts that they generate (e.g. road pricing, congestion charges, taxes on kerosene, etc.).

UIC launched the "ECOSCORING" project, which:

- was launched in November 2018 at the joint request of the UIC Chairman;
- follows the EU Technical Expert Group on a taxonomy of economic activities considered as green;
- consists of the setting-up of a framework of scoring criteria, based on Sustainable Development Goals (SDGs), leading to an online scoring tool producing graphs and charts featured in a document (one-page synopsis + more detailed report);
- will be used for self-assessment of CSR (Corporate Social Responsibility) performance or as a communication tool to show to external stakeholders and financiers to improve access to green bonds, among other financial instruments;
- will be dedicated to all members.

Thanks to this project, Railways will take this opportunity to improve the sector's communication on its environmental performance and ensure it can more easily access the green bonds market and have a say in the drafting of the EU taxonomy of "green" economic activities.

It was agreed that UIC should help with the publication of a best-in-class standard (criteria defined by the rail sector under the leadership of UIC) and this should possibly include reporting by an external auditing company.

To elaborate the scoring, the group has shortlisted the most relevant SDGs (the ones where rail can have an influence). Now proper weighting is to be applied to all target and indicators.

For the Asia-Pacific region, a study of the carbon footprint of the life cycle of railway infrastructure will be prepared in 2020.

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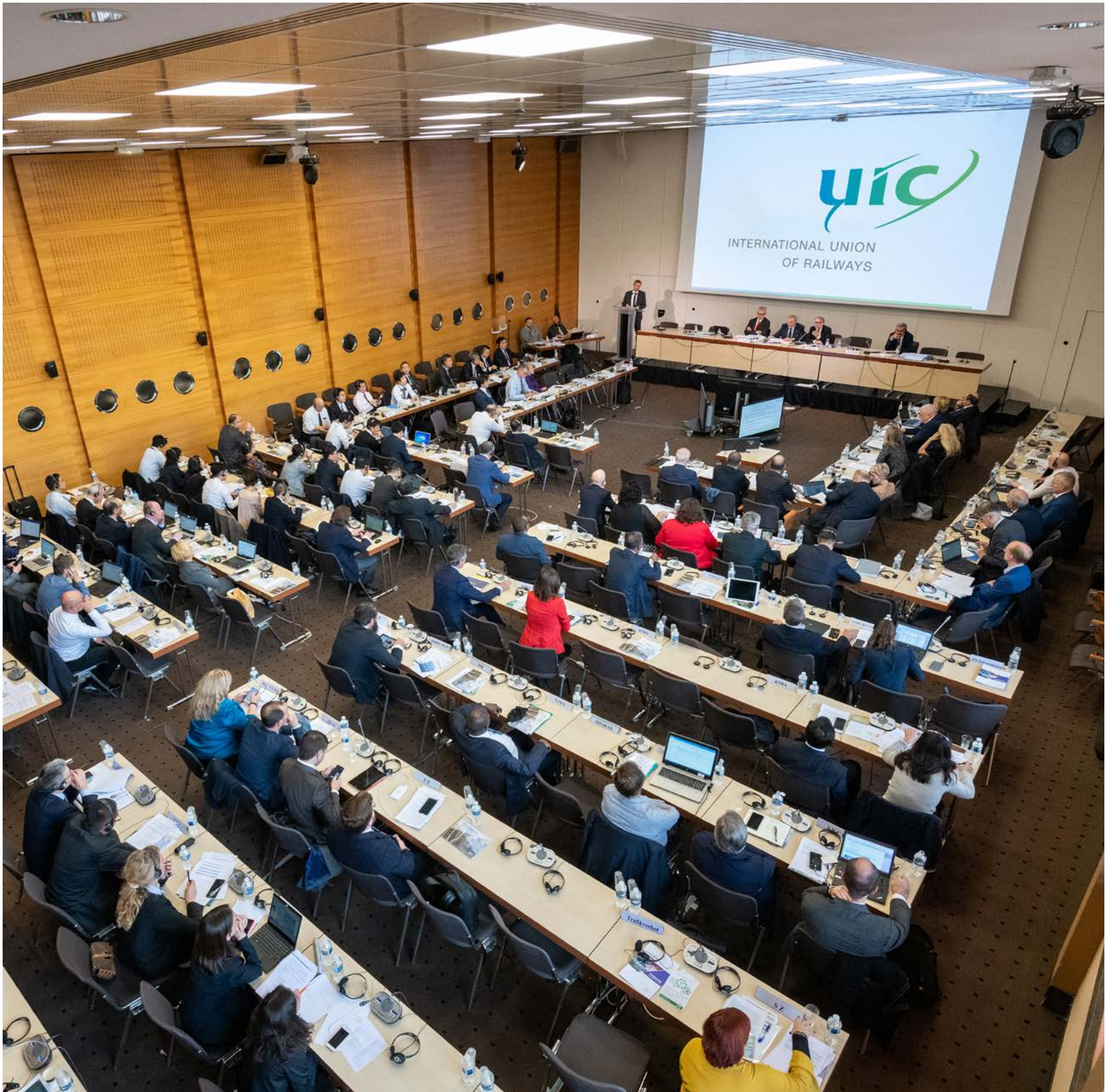

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EFFICIENT, TRANSPARENT
MANAGEMENT
FOR THE BENEFIT
OF OUR MEMBERS

EFFICIENT, TRANSPARENT MANAGEMENT FOR THE BENEFIT OF OUR MEMBERS

REGULAR REPORTING AND ONGOING ASSESSMENT OF ADDED VALUE FROM ACTIVITIES

The UIC will put in place internal management control for optimising resources by setting a budget for each Department for isolating the HQ component from the project component for the end of the first quarter of 2020. In 2021, an accrual accounting system will be introduced for better control of budget compliance.

Personalised and more reactive follow-up of late subscription payments will be introduced, with a roadmap for reducing accumulated payment arrears.

Solidarity between members, particularly from a financial point of view, obliges us to re-establish a personal relationship with so-called "absent" members to explain in exhaustive terms what the UIC does, to understand their expectations and implement corrective actions. The "UIC days" correspond to this B2B approach, by enabling us to better meet the expectations of UIC members.

The project reporting database is henceforth the shared frame of reference for our members. The progress made this year will be continued to take into account past experience. Moreover, a system of extracting data using predefined formats will be introduced to enable targeted reporting.

The internal reporting project will be introduced for the operational departments which lead the projects. It will be made both more frequent and more comprehensive with a three-fold aim:

- to make working groups and experts aware of the need for coherent project monitoring;
- to provide them with the necessary tools for easy monitoring of their budget and their deliverables;
- to encourage the pooling of experts and resources for working towards more ambitious projects and to avoid fragmentation.

This new organisation should lead to a strengthening of UIC's presence in European projects (H2020 and Shift2Rail) and so improve the sector's image as a major technical force.

As requested by the members, the permanent activities are assessed every five years, with the assessment report helping to determine which actions will continue to be financed. Moreover, a number of key processes are not subject to uniform procedures. For example, the opt-In process is based on a set of decisions taken by the General Assembly which have never been consolidated.

Lastly, an organisational audit of the support departments will commence in 2020 with the aim of optimising the efficiency of our organisation and our production results. In the same vein, a study will be conducted on the subsidiaries and on the work procedures between UIC and the subsidiaries, specifically on the pricing policy and marketing for IRS.

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IRS INTERNATIONAL RAILWAY SOLUTION

FOCUS ON THE QUALITY MANAGEMENT SYSTEM (QMS) ACTION PLAN 2020 – 2022:

- consolidate the Quality Management System (QMS) – Quali'OP approach;
- incorporate notions of ethics and sustainable development into UIC's Quality approach – RSE Approach;
- set up an Integrated Management System (IMS) centred on the global performance of UIC and its subsidiaries.

Actions

Objective n° 1 : Consolidate the QMS – Quali'OP approach			
Actions	**Short term (2020 – 2021)**	**Medium term (2020 – 2022)**	**Long term (2020 – 2025)**
1.1. Consolidate the Quali'OP approach and its certification; 1.2. Include subsidiaries in the QMS field of action (UIC – UES as an ecosystem)	Integrate the internal audit to the QM position	Increase pilots' reponsibility Strengthen the quality team with 1 operational staff position	Participate to sectoral reserach (CEDAP, AFNOR, FQP etc.) Get certified ISO 9001 for some processes and/or subsidiaries, in addition to Quali'OP

Objective n° 2 : Integrate concepts of ethics and sustainable development - Social and Environmental Responsibility (SER) approach			
Actions	**Short term (2020 – 2021)**	**Medium term (2020 – 2022)**	**Long term (2020 – 2025)**
2.1. Set-up an SER approach for UIC and its subsidiaries 2.2. Consider a sectoral SER approach to be led by UIC	Integrate the QSE concept Identify stakeholders and formalise the approach	Audit the existing situation (SER Focus) with AFNOR Monitor the SER sectoral approach	Obtain a 1st level of the label « Committed to SER » according to ISO 26000 and disseminate it Deliver a SER sectoral standard for railways

Objectif n° 3 : Set-up an Integrated Management System (IMS) focused on the global performance of UIC and subsidiaries			
Actions	**Short term (2020 – 2021)**	**Medium term (2020 – 2022)**	**Long term (2020 – 2025)**
Integrate all the UIC quality approaches (Quali'OP, SER, ISO etc.) into one single system of continuous improvement (IMS), as a tool for driving the global performance of UIC and subsidiaries	Integrate risks management and performance driving concepts into QMS	Set-up approach Inform stakeholders Implement approach	Obtain certifications ISO 9001, ISO 14000, OHSAS 180001 / ISO 45001 for the IMS and use it as a lever for implementing a sustainable performance management

OUR FOCUS FOR 2020-2022:

- financial and project Reporting to be implemented – Q2 2020;
- audit of support departments completed by end of Q2 2020, with a target of new organisation by end of 2021;
- consolidation of procedures by the end of 2020.

ONGOING SKILLS DEVELOPMENT

As part of the quality approach, annual personal assessment interviews will be introduced in order to:

- establish greater dialogue between managers and personnel;
- provide a mutual clarification of the missions and targets to be attained;
- choose monitoring indicators;
- perform an annual assessment.

This project will be led by the HR Department and notification and consultation will take place with the CSE (Social and Economic Committee). The aim is to kick off the first interviews at the end of 2020 to fix personal targets for 2021. Appropriate training will be provided for staff by:

- dividing the strategic priorities into training topics to bring personnel up to the expected level in order to meet the UIC's targets approved by the GA;
- provide awareness training for managers for adopting a position during work-related interviews.

Actions will be undertaken to enhance the contribution of staff on secondment to UIC from members to gain more value from these secondments. Currently, the attitudes towards a post at the UIC vary among the networks. The aim of this project will be to share the idea that a successful time spent at the UIC can have a positive impact on career prospects.

To this end, an HR Department network will be set up to discuss making the secondment status more visible and more widespread, including finding a legal solution so that the international period of secondment can be extended beyond two years to be more in line with the needs of the UIC.

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OUR FOCUS FOR 2020-2022:

- **boiler plate for seconded expert – Q4 of 2020;**
- **personal assessment implemented in 2021.**

PROVIDE THE REGIONS WITH A VEHICLE FOR PROJECT DEVELOPMENT

The existence of the regions is justified by:

- classification and organisation of UIC members that differ from one region to the next: e.g. the concepts of separation of activities or methods of funding are not the same in Asia-Pacific as in Europe;
- the need to respond to the statutory representativity of members: considering only the financial contribution by region for establishing the UIC's work programme would not be sufficient to ensure the reach and representativity of the UIC on an international level.

Aside from technical, administrative, digital interoperability, etc. prioritised by the UIC, there is a need to find shared themes for developing cooperation between sometimes very diverse members from the same region, in a climate of increasingly fierce international competition, and increasingly-interconnected industrial interests.

And finally, to ensure the universal legitimacy of UIC itself in all its regions, the successful experiences of one region can be of help to other regions.

UIC intends to use the example of the Asia-Pacific region to improve the involvement of the regions in the project process. Asia-Pacific is the leading UIC region in terms of performance and railway needs, but not the first in terms of activity within the association: 35% of world lines, 83% of passenger-km transported, 61% of rail freight... But only 20% of members for 30% of the UIC's operating budget.

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To tackle its ambitions compared with its weight in UIC, the region has set up two processes to establish its work programme:

- this is put into effect by the various UIC departments as well as by the region's members, whose resources in terms of experts could overcome their lack of representation;
- it relies on original funding, based on the statutory provisions that leave the regions free to find their own funding mechanisms, while remaining within the common rules.

This calls for organisation, transparency and rigorous planning ahead of the decision-making and management of the projects. The Asia-Pacific region thus operates as both as a GA and in project mode:

- it reports a budget projection and monitoring, established using a cost-accounting system by project sub-accounts every six months, approved by the GA;
- it is working on contractualising and professionalising the management of its projects (planning, content, budget, monitoring) with the Project Management Team APRA set up in 2019, in support of the Project Leaders.

Target: to present a report at end 2021 and a proposal for general roll-out.

LIST OF ABBREVIATIONS

ADB	Asian Development Bank
AIIB	Asian Infrastructure Investment Bank
ALAF	Latin American Railway Association
ANTT	National Agency of Land Transport of the Federal Republic of Brazil
APTA	American Public Transportation Association
ASEAN	Association of Southeast Asian Nations
AU	African Union
BIC	Bureau of International Containers
BSEC	Black Sea Economic Cooperation
CCS	Control Command and Signalling
CEN	European Committee for Standardization
CENELEC	European Committee for Electrotechnical Standardization
CER	Community of European Railways and Infrastructure Managers
CIM	Uniform Rules concerning the Contract of International Carriage of Goods by Rail
CIT	International Rail Transport Committee
COTIF	Convention concerning International Carriage by Rail
CRT CIS	Council for Rail Transport of Community of Independent States
CUV	Uniform Rules concerning Contracts of Use of Vehicles in International Rail Traffic
DG MOVE	Directorate-General for Mobility and Transport, European Commission
ECO	Economic Cooperation Organization
ECOSOC	Economic and social council of the United Nations
EEC	European Economic Community
EFRTC	European Federation of Railway Trackworks Contractors
EIA	European Intermodal Association
EIB	European Investment Bank
EIM	European Rail Infrastructure Managers Association
ERA	European Railway Agency
ERFA	European Rail Freight Association
ERFA	European Rail Freight Association
ETSI	European Telecommunications Standards Institute
FIATA	International federation of freight forwarding agents associations
FIEC	European Construction Industry Federation
FISAIC	International Federation of Artistic and Intellectual Communities of Railwaymen
FRMCS	Future Railway Mobile Communication System

GCU	General Contract of Use for Wagons
IATA	International Air Transport Association
IEC	International Electrotechnical Commission
IHHA	International Heavy Haul Association
IRS	International Railway Solution
IRU	International Road Transport Union
ISO	International Organization for Standardization
ITF	International Transport Forum
ITU	International Telecommunication Union
OECD	Organisation for Economic Co-operation and Development
OSJD	Organisation for the Collaboration between Railways
OTIF	Intergovernmental organisation for international carriage by rail
SSZD	Union of Railway Constructors (Russia)
TAF-TSI	Technical Specifications for Interoperability for Telematics Applications for Freight
TDG	Transport of Dangerous Goods
TMS	Traffic Management System
TOBA	Telecom On-Board Architecture
UFTAA	United Federation of Travel Agents' Associations
UIP	International Union of Private Wagons Owners' Associations
UIRR	International Union of Combined Rail / Road Transport
UIRR	International Union of Combined Rail/Road Transport
UITP	International Association of Public Transport
UN	United Nations
UNCRD	United Nations Centre for Regional Development
UNDESA	United Nations Department of Economic and Social Affairs
UNECE	United Nations Economic Commission for Europe
UNESCAP	United Nations Economic and Social Commission for Asia and the Pacific
UNFCCC	United Nations Framework Convention on Climate Change
UNIFE	Union of European Railway Industries
UNILO	United Nations International Labour Organisation
UPU	Universal Postal Union
USIC	International Railway Sports Association
WB	World Bank
WCO	World Customs Organization

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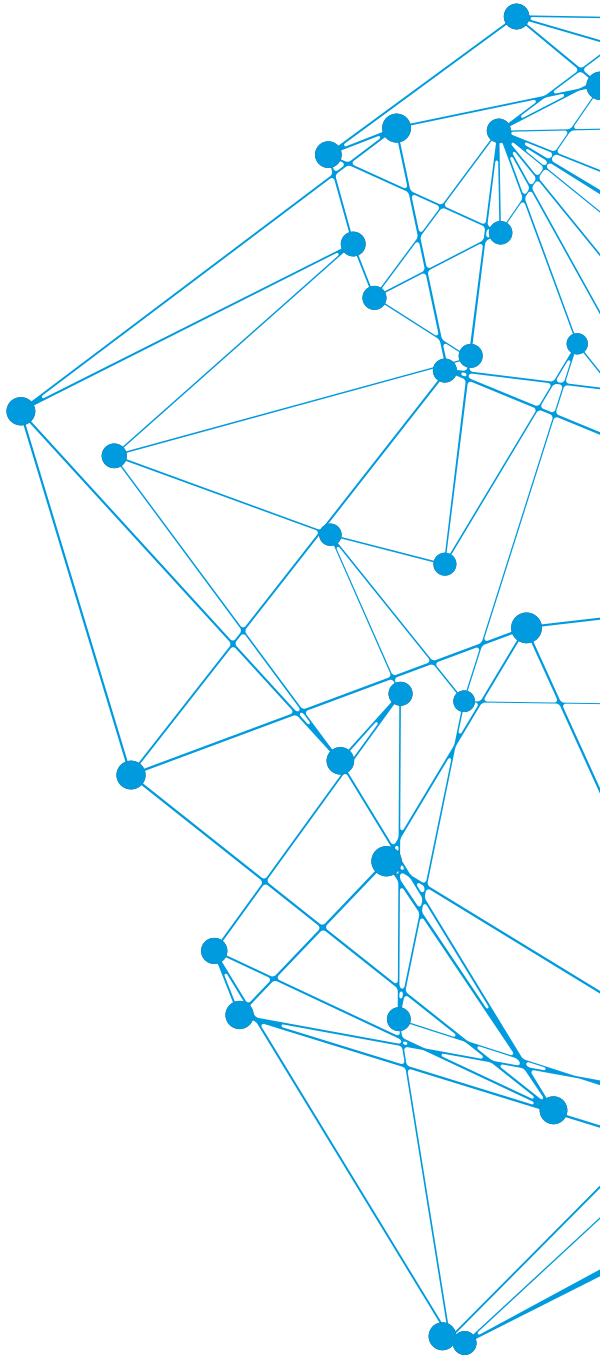

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