



UIC
ACTIVITY
REPORT
2023



INTERNATIONAL UNION
OF RAILWAYS

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OF RAILWAYS

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Published by: UIC Communications Department
Director of publication: Marie Plaud-Lombard
In close cooperation with the UIC Management Committee,
all UIC Departments, working bodies and UIC Members.

Translation and proofreading: Rebecca Rees-Ewald
Design and layout: Coralie Filippini
Photo credit: Adif, Camrail, CFS, CP, CR, DSB, FTIA, IP, IR,
KTZ, MÁV, NSW, ÖBB, ONCF, PrésidenceSénégal, ProRail,
VIA Rail, SBB, SNCF, SNCFT, TCDD, Translink
Printing: Sylvain Savarino,
UIC - 16 rue Jean Rey - 75015 Paris

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mention of the source (UIC).
ISBN: 978-2-7461-3412-6
Copyright Deposit: July 2024, Paris

FOREWORD BY KRZYSZTOF MAMIŃSKI, UIC CHAIR



The year 2023 was the first year for implementing the new [Work Programme 2023-2025](#), with the aim of collectively strengthening our organisation's role in the world. This included activities such as:

- Promoting rail transport worldwide
- Further developing UIC as a technical platform to meet members' needs
- Creating innovation through projects
- Promoting sustainable, emission-free transport
- Increasing interregional development
- Having efficient and transparent management

2023 marked an important milestone, being the first year since 2020 in which our activities were not hampered by the challenges of the Covid-19 pandemic or geopolitical challenges. It enabled us to successfully organise key events and resume face-to-face meetings with our members around the world.

In 2023, UIC was also able to balance its budget, and as a result we are on track to deliver the 2023-2025 work programme.

Promoting rail is increasingly linked to the sustainable development agenda. Rail must play a leading role in decarbonising the transport sector, both globally and regionally. For this to happen, the rail community must step up its efforts to further promote the advantages of rail in public discourse, and to make it more attractive and competitive in the eyes of current and potential users, as well as to all decision-makers.

What is significant about UIC's operations is that UIC's governance has remained robust and our membership numbers stable, driven by our organisation's increasingly deepened sense of purpose.

Additionally, UIC project management has seen improvements in terms of transparency and efficiency with the development of an enhanced financial management structure.

In conclusion, despite the external crises in recent years, UIC has remained stable, achieved its strategic objectives and continued to strengthen its role on the international stage. Given this year's achievements, I firmly believe that UIC is ideally positioned to meet the challenges ahead in 2024 and to contribute to the sustainable growth of the rail sector worldwide.

"I FIRMLY BELIEVE THAT UIC IS IDEALLY POSITIONED TO MEET THE CHALLENGES AHEAD IN 2024 AND TO CONTRIBUTE TO THE SUSTAINABLE GROWTH OF THE RAIL SECTOR WORLDWIDE."

FOREWORD BY FRANÇOIS DAVENNE, UIC DIRECTOR GENERAL



In the past year, UIC has maintained its steadfast commitment to accountability and to improving its influence, while also spearheading initiatives that underscore our dedication to transparency, innovation, and regional empowerment within the global rail community.

In 2023, our collective efforts to enhance accountability and expand our sphere of influence have yielded significant results. The preparations for COP28 in Dubai provided a crucial platform for communicating the essential messages of our "More Trains" campaign, emphasising the indispensable role that railways play in fostering sustainable transport solutions. Furthermore, our diligent work to improve transparency in finance and project management has resulted in the development of a new budget presentation and financial reporting methodology, ensuring clarity and integrity in our operations. I am proud to announce that our 2023 budget remained balanced, and that we successfully adhered to our project plan, underscoring our unwavering commitment to fiscal diligence and operational excellence.

Additionally, I am pleased to highlight UIC's contributions in delivering added value to our members. From the framework agreement with the European Union Agency for Railways (ERA), to our involvement in critical tasks within Europe's Rail Joint Undertaking (ERJU) System and Innovation pillars, including advancements in system architecture, 5G integration, and operational regulations, UIC has been at the forefront of driving transformative change and innovation within the rail industry. Looking ahead, the forthcoming market-ready version of the Future Railway Mobile Communication System (FRMCS) by 2026 is immensely promising, contingent upon our members' steadfast commitment to securing funding for the MORANE 2 (MOBILE Radio for RAILways Networks in Europe) test programme through ERJU. Moreover, our pioneering efforts with the Open Sales & Distribution Model (OSDM) underscore our proactive approach in collaborating with partners like the Community of European Railway and Infrastructure Companies (CER), showcasing the rail sector's proactive stance and added value in today's dynamic environment.

Furthermore, our dedication to regional empowerment and outreach has not wavered. The implementation of comprehensive strategies for standardisation and specification processes, coupled with the launch of a new finance platform work programme, reflects our commitment to enhancing regional engagement and facilitating access to capital for railway development.

Finally, I would like to extend my heartfelt gratitude to our members, partners, and stakeholders for their steadfast support and work throughout the year. Together, we have demonstrated that UIC is not merely an organisation but a catalyst for positive change, technical innovation, and meaningful collaboration within the global rail community.

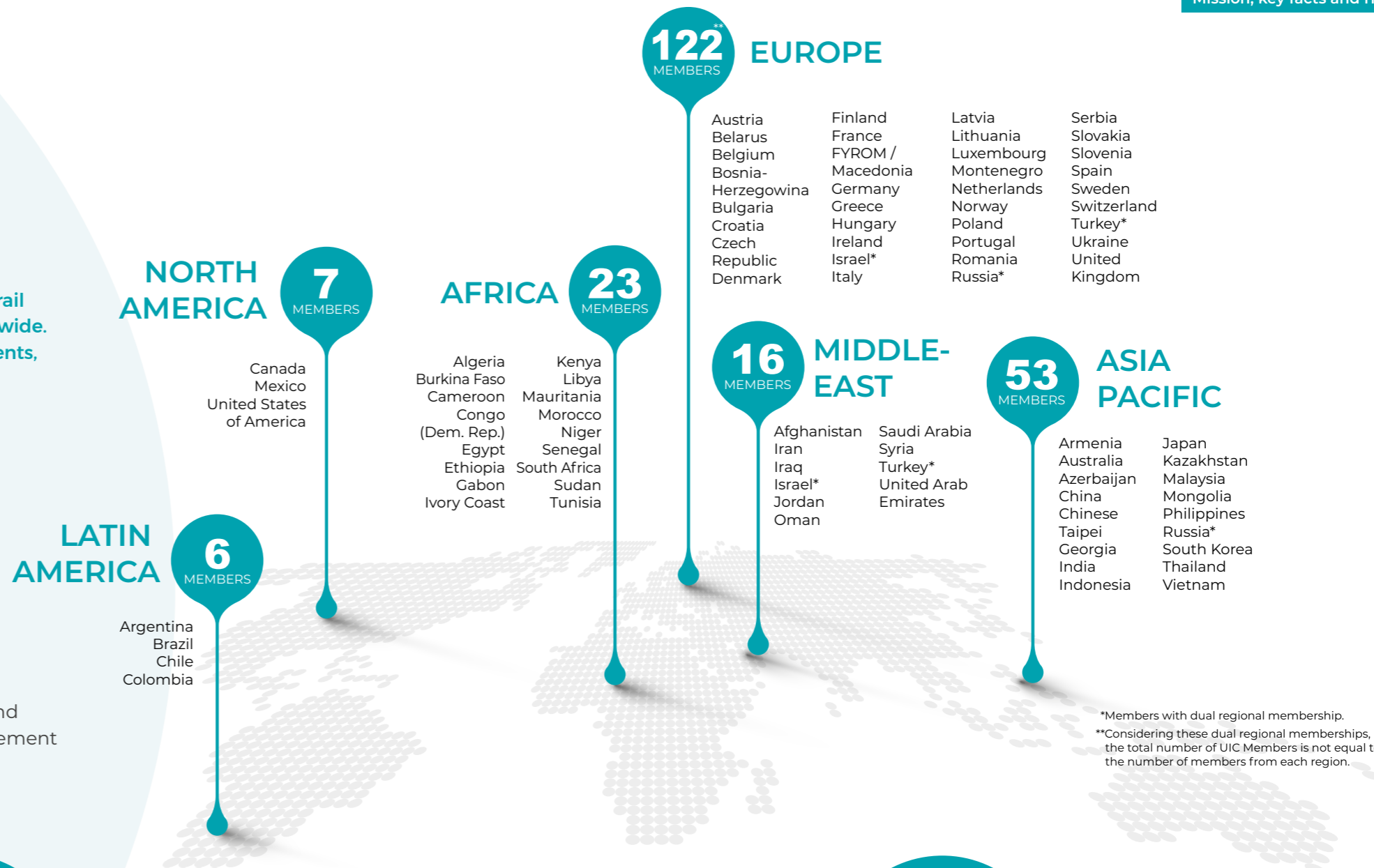
"UIC HAS BEEN AT THE FOREFRONT OF DRIVING TRANSFORMATIVE CHANGE AND INNOVATION WITHIN THE RAIL INDUSTRY."

Mission, key facts and figures

UIC stands as the leading global organisation dedicated to advancing rail transport and the collaborative development of railway systems worldwide. With a membership comprising 218 members spanning all five continents, including rail operators, infrastructure managers, and railway service providers, UIC is at the core of cooperation and progress within the rail sector.

At the heart of UIC's mission is to understand and address the varied business needs of the rail community. Through comprehensive innovation programmes, UIC strives to identify and implement solutions that drive efficiency, sustainability, and safety across the rail network. Additionally, UIC plays a vital role in preparing and disseminating a wide array of documents, including reports, specifications, guidelines, and International Railway Solutions (IRs), which serve as invaluable resources for the seamless adoption and integration of innovative solutions within the industry.

In essence, UIC serves as a dynamic hub for partnership, innovation, and knowledge sharing, fostering the continual development and enhancement of rail transport on a global scale.

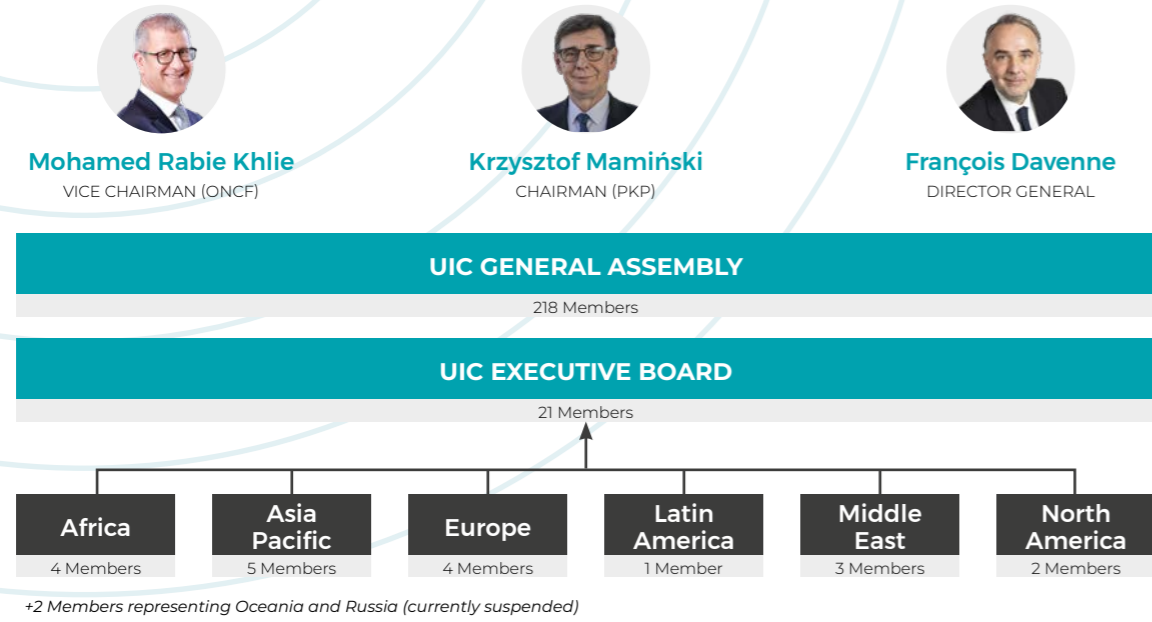


*Members with dual regional membership.
 **Considering these dual regional memberships, the total number of UIC Members is not equal to the number of members from each region.

January 2024



UIC Governance



UIC in focus: highlights of 2023

UIC's activity



Dialogue platform focusing on members' challenges

- Sharing of best practices
- Exchanges of information
- Experiments, joint studies, POCs, etc.



Specifications / Reports / Solutions

- Contributing to TSIs and standards
- Railway best practices
- Application guidelines
- Online tools and databases
- 398 UIC Technical Documents



Training courses and conferences

- Courses on cutting-edge topics
- Conferences on areas of interest (Asset Management, GSM-R, FRMCS, civil engineering structures, railway tracks, High-Speed, Railway Stations, Rail Tourism, Regional Trains, Ticket Distribution etc.)



Working groups and joint projects

- Shared projects to address the strategy defined by the members
- Internal and external working groups with railway members



UIC in focus: highlights of 2023



UIC: the ideal network for rail innovation and strategic partnerships

In 2023, UIC made significant progress in the development of rail worldwide.

Thanks to flagship initiatives like the Telecom/Future Railway Mobile Communication System (FRMCS)-5G for rail, and the Open Sales and Distribution Model (OSDM) specifications, alongside active commitments within the EU Rail research programme, notably leading projects such as Railway System Architecture, Digital Automatic Coupling (DAC), and co-leading Performance, Reliability, Availability, Maintainability, Safety, Security (PRAMSS). In telecommunications, this included leading the CCS+ and Control Command and Signalling Technical Specifications for Interoperability (CCS TSI), UIC has emerged as a significant contributor to rail innovation within the European Union.

In parallel, by supporting both the “Vision of Rail 2030” and its fundamental values, UIC has paved the way for rail innovation at global level, open to all UIC members. In particular, UIC has created the “Energy Saving Taskforce”, the “Resilient Railways” projects and “Regional Safety Taskforces”, while also laying the groundwork for six R&I Regional Competence Hubs (one per UIC Region), aimed at increasing collaboration and involvement in research and innovation across the entire value chain.

Moreover, UIC improved its partnerships with international institutions, in order to facilitate the development of railway projects and innovation at regional level.

Thus, the recent 103rd General Assembly saw UIC being awarded the Connecting Europe Facility (CEF) grant for the Digital Platform for Rail, with the Polish State Railways (PKP) joining the consortium to promote European rail development.

The 1st “*International Forum: Financing Rail Projects in Africa*” in Dakar in October 2023 also gave UIC centre stage to promote its message.

Last but not least, the UIC World Congress on High-Speed Rail reshaped the perception of rail investment in developing countries, leading to increased support from financial institutions.

These achievements underscore UIC’s pivotal role as a catalyst for rail development on a global level, demonstrating the importance of strategic partnerships and collaborative efforts in shaping the future of transport.

Implementation of the new Work Programme 2023-2025

Positioned as the most sustainable mass transport option currently available, rail is deemed to be essential in effectively addressing climate change related challenges. Therefore, the railway community is being called upon to intensify its efforts to promote the benefits of rail, making it more attractive and competitive to users and decision-makers alike.

The UIC Work Programme 2023-2025, published by UIC in March 2023, aims to realise this vision by focusing on several key areas.

Firstly, efforts will be made to enhance rail’s cost-effectiveness through digitalisation and innovation while addressing interoperability and capacity constraints. Additionally, substantial investment in modern infrastructure and rolling stock are imperative.

UIC has also pledged its commitment to ensuring that rail plays a crucial global role in making the transport sector sustainable and achieving environmental goals in the fight against climate change. The supra-regional development of railways is especially important, not only in terms of addressing climate challenges worldwide, but also as a tool for social policies, increasing citizen mobility, and eliminating social exclusion.

The UIC Work Programme 2023-2025 will use a structure comprising projects within and outside of the scope of Europe’s Rail Joint Undertaking (ERJU), as well as regional work programmes tailored to specific contexts. Sector advocacy efforts will be based on the Manifesto adopted in July 2022, aiming for a global paradigm shift towards energy efficiency in transport policies.

Over the next three years, a concerted effort will be made to create a closer partnership of rail operators, manufacturers, public and road transport operators, and associations from around the world. Financing the shift towards rail will be prioritised, taking into account that large-scale investment in infrastructure and rolling stock is essential to achieving these decarbonisation goals.

In conclusion, implementing the UIC Work Programme 2023-2025 is pivotal for unlocking the development and innovative potential of the railway sector on a global scale, particularly amidst the crises faced in recent years and the urgent need for climate action.

UIC AT CES

Las Vegas



JANUARY 2023

18TH UIC WORLD SECURITY CONGRESS

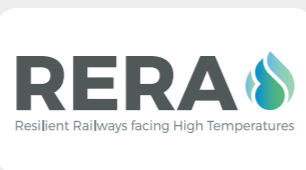
Jaipur



FEBRUARY 2023

UIC TASKFORCE ON HIGH TEMPERATURES AND DESERTIC CONDITIONS

Online



FEBRUARY 2023

11TH UIC WORLD CONGRESS ON HIGH-SPEED

Marrakech



MARCH 2023

UIC GOES TO WASHINGTON TO DISCUSS THE RAILWAYS’ ROLE IN TRANSFORMING TRANSPORT

Washington



MARCH 2023

UIC WORK PROGRAMME 2023-2025 LAUNCH

Online



MARCH 2023

UIC PUBLISHES ITS 2022 GLOBAL RAIL SUSTAINABILITY REPORT

Online



MARCH 2023

JOINT UIC-ESCAP SESSION ON RAIL DIGITALISATION



APRIL 2023

Regional empowerment under dynamic leadership: UIC's successes in 2023

In 2023, UIC's achievements were seen across all five populated continents, demonstrating its regional empowerment objectives.

Key structural projects were launched and important agreements signed in Europe:

- UIC's influence grew, notably through projects like FRMCS, supported by an updated Memorandum of Understanding with Europe's Rail Joint Undertaking.
- OSDM played a crucial role in the sector's Ticketing Roadmap, while improved coordination with CER enhanced collaborative efforts and technical progress.
- The European Union Agency for Railways (ERA) recognised the central role that UIC played in the enhancement of a railway safety culture and peer reviews, paving the way for the development of this role within the five other UIC regions.
- A taskforce on Digital Twins, approved by the European Management Committee, was launched to provide a roadmap for UIC members to better leverage existing solutions.

Simultaneously, ambitious strategic projects and programmes were developed in other regions under the dynamic leadership of the respective regional Chairs:

- Across the Asia-Pacific region, activity skyrocketed thanks to a comprehensive strategic plan with a multi-year budget and regional projects in the field of innovation, sustainability and safety.



- Effective cooperation in the Middle East focused on projects such as freight and border crossings, telecoms, resilient railways, and having a safety taskforce, as well as interregional endeavours.
- In Africa, cooperation with the African Union Commission (AUC) reached new heights, supported by initiatives such as the "1st International Forum: Financing Rail Projects in Africa" in Dakar, Senegal, in October 2023, the implementation of the Africa Safety Taskforce, the future launch of the Africa Security Taskforce, UIC's rail training sessions, UIC's participation in AUC workshops and preparations for the Africa R&I Regional Competence Hub.
- North America continued its work by sharing best practices and taking an active role in global advocacy.
- In Latin America, new collective endeavours aimed to strengthen membership, with new members arriving.

These regional achievements underscored UIC's commitment to progressing railway development and sustainability on a global scale.

Increased action in standardisation and specification activities

UIC is seeing significant growth in its specification and standardisation activities, particularly in its outreach beyond Europe. This shift reflects growing acknowledgment of how relevant the UIC-developed operational standards are worldwide. As the organisation makes progress in the adoption of International Railway Solutions (IRSs), concerted effort is also being put in to increase the visibility and accessibility of UIC's work, especially in regions outside of Europe.

A notable example of this global engagement is evident in projects such as desert conditions in the Middle East, Africa and Latin America being addressed, with the aim of creating tailored IRSs. Such initiatives underline UIC's commitment to addressing varied operational challenges around the world, cementing its position as a leader in railway standards.

Central to this effort is the need for improved monitoring and coordination. Effective governance of the Standardisation Platform and streamlined publication processes are therefore crucial for ensuring the timely dissemination of standards.

Moreover, initiatives such as instructional videos aim to simplify access to UIC documents, enhancing usability for members.

Looking to the future, UIC's standardisation strategy is undergoing a shift towards a more agile approach, focusing on meeting the evolving needs of its members. This includes accelerating the UIC Leaflet to IRS migration, striking a balance between implementing innovative solutions and maintaining legacy documents. Here, it is vital to involve external experts and stakeholders, both within and outside of Europe, to step up the migration process and broaden the range of expertise available for the standardisation efforts.

Additionally, a roadmap for the remaining UIC leaflets and missing documentation will facilitate prioritisation efforts and enhance coherence with other bodies. By leveraging partnerships and referencing widely used standards, UIC seeks to enhance how important and applicable its standards are on the world stage.

This inclusive and proactive standardisation approach reflects UIC's commitment to transparency, and collaboration, as well as responsiveness to its member's needs. By fostering closer relationships and breaking down barriers, UIC aims to consolidate its position as a trusted global body in railway standards, ensuring seamless interoperability and efficiency of railway systems worldwide.

In conclusion, the ongoing global expansion of specification and standardisation activities signals a pivotal moment for UIC, as it adapts to emerging challenges and seizes opportunities. Through enhanced collaboration and strategic planning, UIC is poised to advance standardisation and make a significant impact in the railway industry worldwide.

UIC PARTICIPATED IN THE UNITED NATIONS ECONOMIC COMMISSION FOR EUROPE 70TH COMMISSION SESSION



APRIL 2023

LATIN AMERICAN MISSION TO DISCUSS SUSTAINABLE MOBILITY IN LATIN AMERICA & THE ROLE OF RAIL

Latin America



MAY 2023

UIC PUBLISHES A TECHNICAL REPORT ON THE TRENDS OBSERVED AT CES LAS VEGAS

Online



MAY 2023

UIC LAUNCHES THE UIC RAIL ACADEMY TO BETTER MEET THE NEEDS OF ITS MEMBERS IN ALL REGIONS

Online



JUNE 2023

FIT FOR FREIGHT SPRING DAYS

Online



JUNE 2023

15TH EDITION OF INTERNATIONAL LEVEL CROSSING AWARENESS DAY (ILCAD)

Warsaw



JUNE 2023

FRMCS CONFERENCE

Paris UIC HQ



JUNE 2023

UIC GENERAL ASSEMBLY

Paris UIC HQ



JULY 2023



UIC's confirmed leadership in the Future Railway Mobile Communication System (FRMCS)

2023 heralded another year of progress for UIC's FRMCS programme, which included several important milestones:

- The inclusion of UIC FRMCS V1 Specifications in the European CCS TSI
- The delivery of a global report on FRMCS planning for Europe, validated by the European Commission and by the entire European railway sector
- The activities for the European Horizon 2020 5GRail project, led by UIC, coming to a successful conclusion with the first prototypes for the future FRMCS ecosystem being delivered, allowing the UIC FRMCS pre-V1 specifications to be checked
- A new Memorandum of Understanding between Europe's Rail and UIC being signed, recognising UIC's leading FRMCS programme in terms of specifications and the necessary strategic alignment between the two bodies.

Interest in FRMCS is growing quickly in all regions, which was demonstrated by the 2nd Global FRMCS Conference attracting more than 300 participants from 30 countries to the UIC headquarters in Paris.

The next three years will be just as busy for the UIC FRMCS teams and contributors, as the objective of the first market-ready FRMCS specifications ("FRMCS 1st Edition") is now a tangible reality.

Safety Taskforce: enhancing regional collaboration and capacity building

In 2023, the Safety Unit launched dedicated regional taskforces to enhance teamwork and capacity building as part of safety-related regional railway operations. This move aims to address two key factors: to conduct safety work in regional languages and cultures, and tackle the varying maturity levels of safety management systems (SMS) across different regions.

To this end, Africa, the Middle East, and Latin America regions selected chairs and vice-chairs to lead these taskforces, with the Africa taskforce members agreeing to prepare for one or two safety peer reviews, which will be the first held outside of Europe. In Latin America, after a brainstorming session, the taskforce decided to focus on "capacity building" for the first two quarters.

Moreover, UIC plans to develop further key safety related activities, mainly by organising returns of experience (REX), organising the development of peer reviews, and providing training in safety culture, human and organisational factors, and safety leadership.

A similar start to this initiative is planned for North America, and Asia Pacific.

Safety culture peer reviews: ERA's recognises UIC's role in European Union and the effects for the other UIC regions

Safety culture peer reviews are commonly and voluntarily used in many industries (nuclear, aviation, etc.) as a key-tool to enhance safety, processes, and organisation. The rationale behind this practice is that having multiple and experienced "external" eyes on inside an organisation, with access to all staff and processes, will help to identify potential issues or vulnerabilities that might be missed by a single individual or team of auditors. It also enables easily-adopted best practices examples to be selected, as quick wins within the organisations which the reviewers are part of.

Carried out with volunteer members, ensuring confidentiality, peer reviews aim first to strengthen the safety culture of an organisation, then to improve the overall level of operational safety and performance. Peer reviews use a proven methodology based on best practices and relationships with experienced peers in other companies. Peer reviews are also one of the best tools to integrate the human and organisational factors in every layer of safety management system (SMS), as required by the Safety Directive¹.

UIC, which coordinated the European Twinning II project, gained experience by piloting three peer reviews at the Austrian Federal Railways (ÖBB), Infrabel, and the Luxembourg National Railway Company (CFL). UIC also published the ERA-acknowledge Safety Culture Peer Review Handbook², and developed a dedicated IT tool, to handle the peer reviews.

¹ eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32016L0798
² uic.org/IMG/pdf/safety_peer_review_handbook_15-09-23.pdf

Since December 2023, UIC has been coordinating and leading the peer review process thanks to an experienced team of reviewers and team leaders. This was undertaken with the help of ERA, who developed the railway peer review methodology. ERA has also gained experience by coordinating four peer reviews and developing training sessions for the different parties.

The benefits of a peer review are:

- Concrete integration of human organisational factors (HOF) into all parts of the SMS
- Improvement of overall SMS performance
- Fostering the identification and sharing of best practices between reviewers and organisations
- Identification of gaps, weaknesses, and strengths, in the domain of skills management
- Enhancement of problem-solving capabilities, on an individual and organisational level, thereby improving degraded management
- Sharing of new insights related to future organisational practices, such as automation and digitalisation
- Reduction of costs and risks by detecting errors and risks early and improving compliance and regulatory adherence

UIC's first step is to set up the first peer review programme, which will start in the middle of 2024 and run until the end of 2028. UIC will develop peer reviews in Europe and beyond, extending this reach to other regions, with priority being given to Africa in 2025.

ERA and UIC have agreed to coordinate the peer review programme by signing an appendix to their cooperation agreement.

UIC RAIL ACADEMY IS LAUNCHING ITS FIRST ONLINE TRAINING COURSES ON FRMCS

Online

UIC, THE VOICE OF RAIL AT AFRICA CLIMATE WEEK 2023

Online / Nairobi

1ST UIC PARTICIPATION IN THE EUROPEAN HERITAGE DAYS

Paris UIC HQ

2ND EDITION OF UIC SMGG DAYS

Paris UIC HQ

FRMCS REACHED AN IMPORTANT MILESTONE WITH THE SUCCESSFUL 5GRail DEMO

Annaberg

A NEW ANNEX SIGNED BETWEEN UIC AND ERA

Paris UIC HQ

1ST INTERNATIONAL FORUM ON THE FINANCING OF RAIL PROJECTS IN AFRICA

Dakar

UIC IN KUALA LUMPUR TO MEET MEMBERS AND TAKE PART IN REGIONAL EVENTS

Kuala Lumpur



JULY 2023



SEPTEMBER 2023



SEPTEMBER 2023



SEPTEMBER 2023



SEPTEMBER 2023



OCTOBER 2023



OCTOBER 2023



OCTOBER 2023

Enhancing freight train safety: JNS procedures, and EU regulatory action with UIC involvement

Due to a significant increase in the locked brakes of freight trains causing fires and wheel tread damage, in northern Italy in 2022, a series of both urgent and normal Joint Network Secretariat (JNS)³ procedures were implemented, after the Italian National Safety Authority (NSA)⁴ imposed related operational restrictions on freight trains. One of these urgent procedures involved the unintended brake application of LL IB 116* brake blocks, with short risk control measures being settled and agreed upon, in order to avoid and detect problems with locked brakes.

A JNS procedure is regulated by the EU Regulatory Safety Framework, with ERA as the moderator/facilitator of the National Safety Authority networks, and of the nominated competent experts from the representative bodies. ERA is looking for collective solutions to these safety matters, given that JNS recommendations are not compulsory.

The normal JNS procedures then focused on permanent and long-term solutions, with the following potential changes in legislation/regulation, and standards being discussed:

- Usage guidelines for composite (LL) brake blocks published by UIC, providing the basis for their usage limits and conditions.
- The content will remain unchanged, however it should be transferred to more prominent EU documents

3. www.era.europa.eu/domains/accident-incident/joint-network-secretariat-jns_en
 4. www.era.europa.eu/agency-you/stakeholders/networks/national-safety-authorities_en

- The LL brake block types IB116* and J847, comply with WAG TSI, Appendix C.9, which equals adherence to UIC Leaflet 541-4, 6th edition.
- For blocks not complying with WAG TSI, Appendix C.9 and C.14, an explicit risk assessment must be carried out to cover any risks concerning locked brakes. Vehicles using these block types have to be authorised separately by each NSA.
- UIC 541-4, 6th edition, currently represents the most developed requirements for composite brake blocks. The JNS Normal Procedure (NP) Taskforce has therefore recommended that WAG TSI and EN 16452 be updated accordingly.
- 4.2.4.2 of WAG TSI requires risk assessments for braking systems, yet the UIC brake system in accordance with Appendix C.9 and C.14 does not require this

It was demonstrated that the best practices regulating this technical/operational topic are UIC documents, and that EN and TSI related documents should be updated based on them.



Leading role in promoting and developing Digital Automatic Coupling (DAC)

Digital Automatic Coupler/Full Digital Freight Train Operation (DAC/FDFTO) provides a unique opportunity to revolutionise rail freight systems in Europe. By changing the coupling process from being manual to automated, DAC accelerates the train formation process. This means that existing infrastructure capacities are used more efficiently, as well as the manual work required being reduced which in turn reduces production costs and improves work ergonomics and occupational safety.

DAC enables tractive force to be doubled compared to screw coupling (up to 1000kN), resulting in longer and heavier trains, and creating additional capacity on the existing rail network. DAC is also equipped with a power line that can provide energy to the freight wagons, thereby enabling the use of sensor technology and automated components, e.g. automatic brake tests.

The wagons will have electricity, which will enable the electro-pneumatic brake to be introduced, allowing for higher train speeds than today. Additionally, DAC data lines will ensure secure communication between the traction unit and the freight wagons. Therefore, freight trains will enter the digital age and become “intelligent”, facilitating the introduction of condition-based or unscheduled wagon maintenance and/or train integrity checks. DAC is also a key prerequisite for the introduction of the European Train Control System (ETCS) Level 2 without needing lineside equipment to significantly increase the capacity on existing, as well as future rail infrastructure.

As part of this, in 2023, UIC played a crucial role as joint leader of Europe’s Rail Joint Undertaking (ERJU) System Pillar Task 4, that oversees the development of crucial aspects of the DAC ecosystem.

Firstly, an initial proposal for a Central Instance (CI) is under development for managing data access and processes for software updates, allowing the possibility for communication between the sub-systems of different suppliers, undertakings and maintenance entities.

Secondly, Task 4 has been producing the Standardisation and TSI Input Plan (STIP) and Authorisation Strategy.

Here, UIC has been coordinating the request records from all DAC stakeholders and ensuring that these are properly channelled and implemented in TSIs, EN Standards, and System Pillar documents.

Last but not least, UIC has been leading the initial development of Harmonised Operational Rules for DAC-equipped trains. This work is building on the Flagship Project 5 (FP5) Deliverable 2.1 “Preliminary Operational Processes”, and aims to create a system-wide rule book, integrating information from all DAC workstreams, ensuring that DAC operations will have no national specificities that could hamper smooth and efficient interoperability.

The rulebook should also be available in an electronic format linked to a Content Management System (CMS) to streamline the development and delivery of updates, and to allow the users to adapt it to their specific organisation.

UIC EXCELLENCE IN RAILWAY PUBLICATIONS AWARDS 2023

Paris UIC HQ



OCTOBER 2023

PUBLICATION OF UIC ANNUAL REPORT ON RAILWAY ACCIDENTS

Online



NOVEMBER 2023

UIC TAKES PART IN A NUMBER OF EVENTS AND MEETINGS

Beijing



NOVEMBER 2023

“BRIDGING THE RAIL FINANCE GAP: CHALLENGES AND OPPORTUNITIES FOR LOW- AND LOWER-MIDDLE-INCOME COUNTRIES” RELEASED



NOVEMBER 2023

UIC DELEGATION HEADS TO COP28 TO ADVOCATE FOR THE RAIL SECTOR'S ROLE IN CLIMATE ACTION

Dubai



NOVEMBER 2023

FIT FOR FREIGHT AUTUMN DAYS

Online



NOVEMBER 2023

UIC REGIONAL ASSEMBLY EUROPE APPOINTS LUIGI FERRARIS (FS) AS NEW CHAIRMAN FOR THE REGION

Paris UIC HQ



DECEMBER 2023

UIC MEMBERS ATTEND THE 103RD GENERAL ASSEMBLY

Paris UIC HQ



DECEMBER 2023

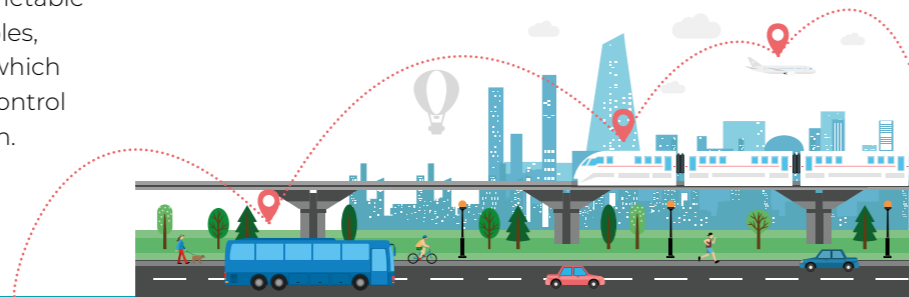
Progress in implementing the Ticketing Roadmap: a trail blazing year for the Open Sales and Distribution Model (OSDM) Specification in 2023

UIC consistently showcases its dedication to passenger experience innovation in the rail sector to support efficient, seamless and sustainable door-to-door solutions for rail-based mobility. This includes UIC's Station Managers Global Group, which promotes best practices in station operations, facilitates the development of high-speed rail all around the world, and supports the reinstatement of night train services in Europe as well as new offers for tourism on rail.

The customer experience in end-to-end mobility is a priority, including all needs and assistance requirements, and has been achieved through flagship projects such as the Multiple East-West Railways Integrated Timetable Storage (MERITS), which centralises train timetables, the Open Sales and Distribution Model (OSDM), which simplifies ticket sales, and the Electronic Ticket Control Database (eTCD), which facilitates ticket validation.

In 2023, significant progress was made in implementing the European Ticketing Roadmap, supported by UIC by-design open solutions.

As a result of these efforts many leading European companies and main distributors adopted the UIC OSDM Specification, with the geographical expansion and implementation of the Agreement on Journey Continuation also being achieved, and the Electronic Ticket Control Database, that enables full paperless ticketing and easier refunds for passengers, being deployed.



The Open Sales and Distribution Model (OSDM) represents a pioneering initiative across Europe's B2B sector. It aims to revolutionise and streamline how participating railways and ticket vendors manage ticket sales, reservations, and pricing across the continent.

OSDM employs a sophisticated API and introduces a standardised IT specification that caters to both online and offline distribution channels, with two principle aims: to substantially simplify and improve the booking process for customers, and to lower the complexity and distribution costs for retailers, distributors and carriers.

Moreover, OSDM accommodates multimodal extensions, including integration with bus and local transport ticketing systems, reflecting a commitment to enhancing the accessibility and transparency of fare information across different platforms, following the Fair, Reasonable and non-discriminatory (FRAND) requirement.

It also supports graphical seat reservation capabilities online, improving customer convenience and satisfaction.

For broader adoption and transparency, OSDM's specifications are designed to be accessible and adaptable, promoting innovation and competition within the railway and transport sectors. This approach not only supports the growth of Global Distribution Systems (GDS) and Online Travel Agencies (OTA) but also aligns with the evolving needs of the airline industry and other public transport modes seeking integrated distribution solutions.

From a technical point of view, OSDM is "open by design", which means the specifications, computing codes (APIs), and developers' tools (sandbox, GitHub, etc) can be found on www.osdm.io. Moreover, the code as efficiently as possible, in order to reduce energy consumption and to be compatible with all terminals (PC, smartphones, tablets, and so on).

In essence, OSDM represents a pivotal advancement in European rail travel, fostering collaboration and efficiency across the industry while meeting the growing demand for seamless, sustainable, and consumer-centric travel solutions.

The 11th UIC World Congress on High-Speed Rail held in Morocco

The 11th edition of the UIC World Congress on High-Speed Rail, one of UIC's flagship events, took place from 7-10 March 2023, in Marrakech, Morocco, the first time it was held on the African continent. The congress brought together a wealth of information and discussions under the theme "High-speed rail: the right speed for our planet".

The congress examined the relationship between speed and the century's primary challenge: meeting the necessary goals in the fight against climate change. Participants reflected on the urgency of the latest IPCC report, which warns that time is running out to keep global warming below 1.5°C.

This calls for a paradigm shift that requires harnessing all available energy and resources.

High-speed rail must play a central role in creating a sustainable transport system where rail forms the backbone. Over the next decade, the world must drastically reduce emissions, and rail, with the lowest greenhouse gas emissions of any transport mode, is crucial.

The discussions at the congress emphasised that defining the "right speed" on a local and regional scale is a major challenge for the sector. However, the consensus was clear: the time to act is now. Within this context, since 2019, UIC has been promoting the concept that the transport sector must become a paragon of resourcefulness. This can be achieved by limiting CO₂ emissions and energy consumption, and adapting speed and material life cycles, and in each of these areas, rail has the advantage.

According to the International Energy Agency, rail's market share needs to increase by more than 40% by 2030 for the transport sector to reach its 2050 "net zero" target. Although steps are being made in the right direction, especially in the high-speed domain, the railway sector only transports around 8% of passengers and 7% of freight globally, meaning that, not only are more trains needed, but they are needed now. This will require substantial investment from the public and private sectors in order to create suitable and convenient public transport for residents, as well as policies to encourage this transition.



As outlined during the congress, the development of high-speed rail is also dependent on a number of different variables, such as the economic situation, the availability of sources of funding, the geopolitical situation, and the willingness of decision-makers to act. An understanding that rail has an edge over other modes of transport is also vital, with safety, low emissions, and the high quality and safety of travel comprising just some of these advantages.

Although it is difficult to predict what the situation will be in 2040, many continents are currently developing high-speed rail. Europe plans on doubling its high-speed network by 2030 and even tripling it by 2050. North America has plans for ambitious investment in this area, and Morocco's example shows that the African countries can, and wish to, construct high-speed trains.

The Asian and Middle Eastern countries are heavily investing in high-speed rail, while other regions are also considering the merits of this type of investment.

The UIC World Congress on High-Speed Rail is a further turning point in raising awareness of the fact that all stakeholders must continue to work together. The information shared during the congress must be succeeded by strong, notably financial, commitments. So that rail is an entirely inclusive and connected mode of transport, there is need for:

- Cohesion and consistency in relevant policy decisions
- Permanent support from donors

The UIC World Congress on High-Speed Rail 2023 was a landmark event, but cooperation is still of the essence, especially in view of the upcoming United Nations Climate Change Conferences (COPs). Rail and general public transport must have a wider reach and, thanks to pre-existing and readily available solutions, are seen as the solution for decarbonised transport.

Key takeaways from the 18th UIC World Security Congress

The 18th UIC World Security Congress was jointly organised with the Rail Protection Force of Indian Railways (RPF) in Jaipur, India, from 21 to 23 February 2023, under the theme “Railway Security Strategies: Responses and Visions for the Future”.

It resulted in the [Jaipur Declaration⁵ being signed](#), which outlines the agenda for the UIC Security Platform over the coming years and the security priorities for all UIC regions.

The congress additionally led to greater cooperation between the UIC Security Division and INTERPOL on the topic of human trafficking, as well as to regional cooperation being further developed with the proposal to create security expert networks in the Africa, Middle East, South America and Asia-Pacific regions.

UIC’s advocacy: policies and climate finance to expand railway globally

In 2023, UIC built on its previous advocacy activities and knowledge products to maximise its impact and influence over international climate and transport policymaking. The #More Trains campaign advocated for the expansion of global railway networks, highlighting railways as a solution to combat global warming whilst delivering other sustainable development goals.

This proactive stance emphasised the need to double the share of low or zero emission modes of transport, including rail and public transport, to put the transport sector on track to a Paris Agreement compliant future.

This time hosted in Dubai, COP was a key event, but the advocacy also continued at the International Transport Forum (ITF) Summit, the World Bank “Transforming Transport” event, and major regional events such as the UNCRD Environmentally Sustainable Transport Conference and the Africa Climate Week.

Here, UIC worked with key partners to build dialogue with governments at all levels and sectors (transport, energy, and urban development).

The messages focused on three publications:

- Transport Energy Nexus – a jointly promoted call upon governments, climate, development and private funders, philanthropists, businesses, academics and civil society to take bold and urgent action in the transport sector, by committing to “doubling the share of energy efficient and fossil-free forms of land transport by 2030”.
- Policy guidelines for Nationally Determined Contributions – analysis shows that only 25% of the 168 Nationally Determined Contributions (NDCs) analysed mention rail as a climate solution, and merely 10% have specific targets. The report provides recommendations and examples to enhance rail measures in NDCs, urging interested parties to engage with these initiatives.

- Climate Finance for Rail – The UIC study “Bridging the Railway Finance Gap, Challenges and Opportunities for Low and Middle-Income Countries” with Alstom, the University of Birmingham, and Roland Berger and in collaboration with the World Bank, addressed the financial challenges which hinder sustainable railway development. It addressed the need for financing to engender a modal shift and access to carbon compensation instruments and green financing.

These activities and initiatives have allowed for UIC presence at COP28 to be a great success and led to strengthened partnerships for 2024.

UIC’s Finance Platform agreed to introduce a new activity on carbon credits and green finance in railways, catering to both emerging and developed countries.

These efforts underscored UIC’s commitment to its global mission and established its role as a leading advocate for sustainable rail infrastructure on the international stage.



5. uic.org/events/IMG/pdf/uic_wsc_jaipur_final_declaration.pdf



UIC financial overview: key figures

End of the financial year 2023

The recent years have been marked by different factors such as the COVID-19 Pandemic and the Ukrainian Crisis, with contingency measures needing to be taken to overcome the negative impact of these. UIC's finances were heavily impacted in 2022 due to the suspension of the Russian and Belarussian members, amounting to 500k€. Nevertheless, the saving and optimisation strategies deployed by the UIC management led to the final deficit being reduced by 45%, from the initially projected 503k€ to 280k€ at the end of 2022.

In 2023, the main cost-related challenge was general inflation, for which the sole method of mitigative action was to effectively control the headquarters' operating costs.

The challenge in terms of financial resources was that market trends saw a reduction in event space rental, which needed to be compensated by other sources of revenue.

Both objectives were met and, at the end of 2023, UIC final financial results have improved significantly, from 280k€ at end 2022 to a mere 400€. UIC has therefore returned to a balanced budget for the year 2023.

This result was reached thanks to a 1.1% increase of the headquarters' revenue, from a forecasted 11.6m€ to 11.8m€, mainly driven by improved financial performance due to the increase in interest rates.

		ACTUAL HQ	ACTUAL PROJECTS	2023 ACTUALS CONSOLIDATED
RESOURCES	Fees	9 213		9 213
	Project contributions		9 563	9 563
	External funding	12	2 475	2 487
	Space renting	968	-	968
	Royalties	27	67	94
	Financial revenues	393	22	415
	Extraordinary revenues	3	36	39
	Management & Support	1 191	(296)	895
	TOTAL RESOURCES	11 807	11 868	23 675
SPENDINGS	Staff	6 331	5 124	11 455
	Subcontracting	3 013	4 935	7 947
	Travels & Reception	752	748	1 499
	Equipment maintenance	479	728	1 207
	Depreciation variation	528	54	582
	Provision variation	(75)	232	157
	Financial charges	75	8	83
	Extraordinary charges	237	25	262
	Taxes	468	14	482
	TOTAL SPENDINGS	11 807	11 868	23 675
	RESULT	(0)	0	(0)

The picture below presents UIC accounts at the year's close, given as a consolidated overview of all UIC's activities, related to the headquarters and to projects respectively. This was shown by the management team in the December 2023 General Assembly.

Concerning the fee payment trends, the year 2023 recorded a further reduction of €(126)K, setting the stock at €(1,759)K. It is to be highlighted that, for now a couple of years, Members and Regional Coordinators are committed in a common and close monitoring of unpaid fees, with a continuous positive evolution.

The 2023 accounts will be put forward for approval at the July 2024 General Assembly.

2023 project activities

The new "Opt-in Online" software was implemented in 2023 to streamline the relationship between UIC and the members participating in the opt-in process, and achieved a very high level of satisfaction with UIC members.

The 2023 Work Programme attracted 34 members (+5 compared to 2022) for 38 projects (reduced quantity due to a more focused approach for certain sectors).

Overall, the Opt-in Project portfolio has been growing significantly, from 8.4m€ in 2022 to 9.6m€ in 2023.

Similarly, the revenue for external projects (e.g. those not funded by members) increased from 1.6m€ in 2022 to 2.5m€ in 2023.

This has led to UIC's overall project portfolio 2023 amounting 12.1m€, exceeding the 11.8m€ target from the 3-year plan presented at the December 2022 General Assembly by more than 200k€.

These results confirm how important 2023 was as a year for UIC project activity growth, in full adherence with the strategy validated by UIC members.

Finally, it is also noteworthy that the level of resources generated by UIC projects is now significantly higher than the resources provided by membership fees, which must be considered as a key indicator of UIC's strength, and to the benefit of all its members.

		2023 Budget (GA 12'2022)	2023 Forecast 1 (GA 06'2023)	2023 Forecast 2 (12'2023)	2023 Actuals (12'2023)
RESOURCES	Fees	9 143	9 185	9 214	9 213
	Project contributions				
	External funding	40	25	26	12
	Space renting	1 100	1 200	950	968
	Royalties	56	74	60	27
	Financial revenues	200	200	207	393
	Extraordinary revenues	30			3
	Management & Support	1 211	1 243	1 214	1 191
	TOTAL RESOURCES	11 780	11 927	11 671	11 807
SPENDINGS	Staff	6 157	6 182	6 267	6 331
	Subcontracting	3 102	3 205	2 755	3 013
	Travels & Reception	400	408	532	752
	Equipment maintenance	799	799	893	479
	Depreciation variation	700	742	712	528
	Delta Provision	116	129	30	(75)
	Financial charges	100	81	76	75
	Extraordinary charges	50	25	49	237
	Taxes	356	356	356	468
	TOTAL SPENDINGS	11 780	11 927	11 670	11 807
	RESULT	0	0	1	(0)

Collaborative partnerships: strengthening railway cooperation for a worldwide impact

UIC has always emphasised that rail is the most economically efficient mode of transport, excelling in terms of both reduced emissions and saving energy while also have a minimal spatial footprint.

This significance is poised to escalate as urbanisation intensifies, with over 70% of the global population projected to reside in cities in the near future. As urban spaces become denser, the demand for mass transport systems that occupy minimal space are becoming imperative.

Examining global transport statistics, rail currently holds an 8% modal share in transport but contributes a mere 2% of the total emissions. The existing technological capabilities are primed to further curb emissions, with the potential for rail systems to reduce emissions to less than 0.5%, if aligned with current European standards. In parallel, a reduction is anticipated in energy consumption, reaffirming rail's role as an environmentally sustainable transport solution.

UIC's mission involves working closely with various institutions to develop innovative projects and meet the expectations of its members across different regions worldwide.

This approach requires continuous collaboration with governmental bodies, railway companies, and other stakeholders to foster the development and improvement of railway infrastructure. UIC ensures that each region's specific requirements are actively heard and adapted to, ensuring that the created projects not only align with the organisation's general objectives but are also customised to address the unique challenges and opportunities within each region. Whether it is improving safety, increasing the railway network efficiency, or promoting eco-friendly practices, UIC strives to provide relevant and tailored solutions.

The crux of the matter lies in challenging the existing mobility paradigm, where individual cars dominate the landscape. While cars and trucks will continue to be prevalent, altering the fundamental structure of how the world moves is imperative for enhanced efficiency. Rail is the best solution in this transformative endeavour, offering a central role in reshaping our perception of mobility. The envisaged paradigm shift acknowledges that, despite an anticipated growth in traffic, a new backbone is essential for a sustainable and efficient transport system.



Driving rail development through a commitment to diversity

UIC's workforce has been at a relatively constant level for more than 5 years both in terms of employees and secondees.

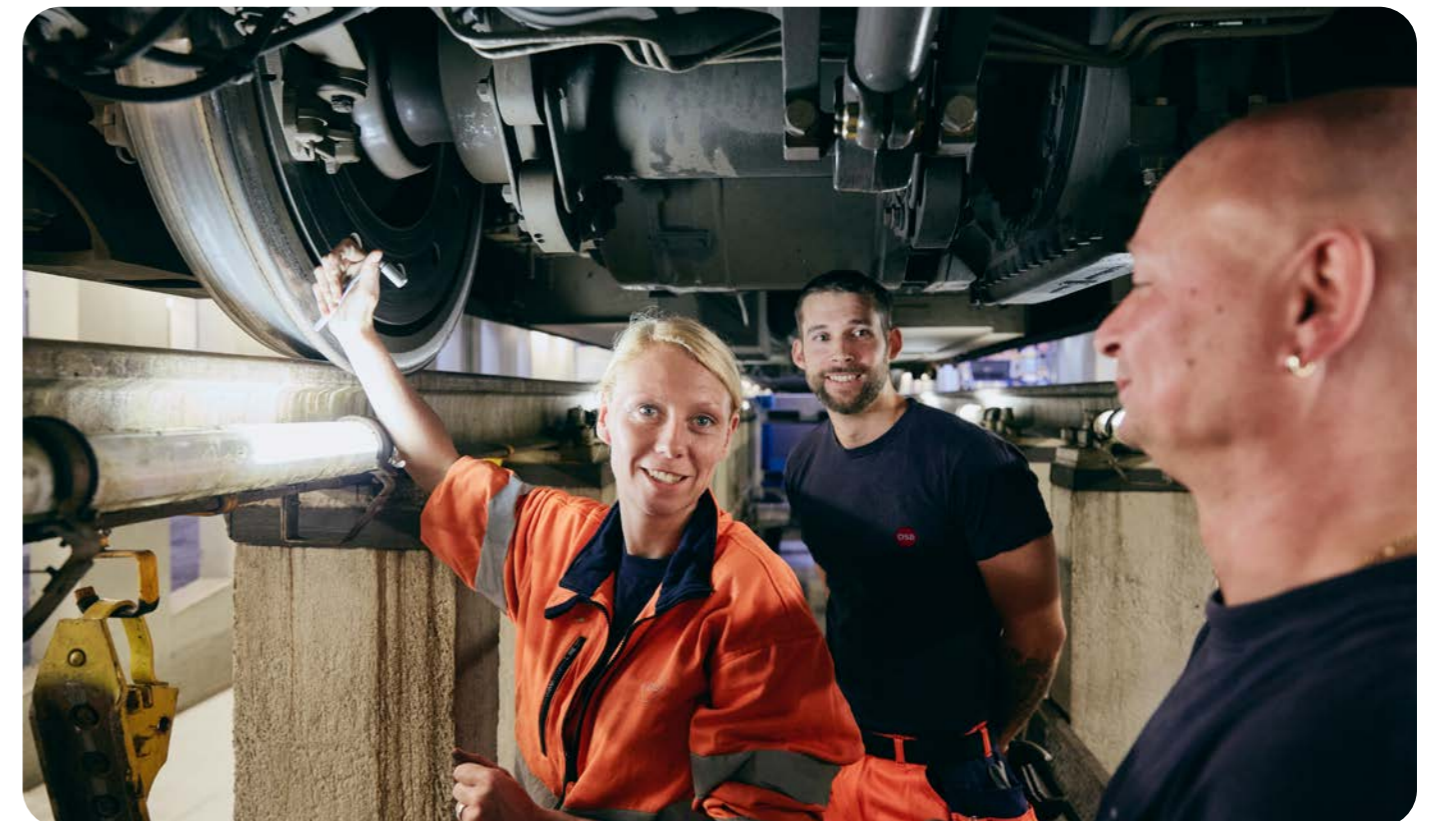
Nevertheless, the structure has evolved with increased diversity and higher profiles to manage the development of demanding projects:

- 8% turnover in 2023, with two new positions being created within the context of the new projects
- The implementation of annual individual interviews to set objectives and assess performance
- 97 staff members took part in a wide array of training courses, with a total of 171 sessions completed

In 2023, UIC had 124 employees, 58 women and 66 men, representing 20 different nationalities.

Its staff includes 18 secondees from UIC member companies from ten different countries.

The UIC workforce's makeup represents both the diversity of its members and a clear illustration of its multicultural ethos.



Dissemination: sharing knowledge and best practices throughout the rail community

UIC has the capacity to disseminate best railway practices through more than 85 events per year (seminars, webinars) and publications (documents, websites).

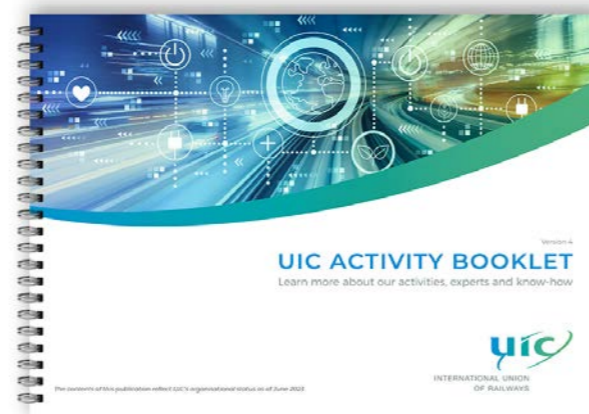
In 2023, UIC published a number of key documents for understanding UIC's role and staying informed about the railway sector's latest advancements. These include the

UIC Work Programme 2023-2025, which outlines UIC's strategic plans and objectives for the next three years, and the

UIC Activity Booklet Version 4, which provides detailed information on UIC's structure, mission and ongoing projects.

Some of the key events organised by UIC in 2023 were:

- The 2nd Global Future Railway Mobile Communication System (FRMCS) Conference held 7-8 June in Paris demonstrated that FRMCS is the railway system's next big development in the decade to come, as it will be key in progressing railway digitalisation and paving the way for train modernisation, improving security for railway services, optimising costs for railway assets, as well as boosting capacity and service performance.
- The International Level Crossing Awareness Day (ILCAD) and International Trespass Awareness Day (TRESPAD) is unique, as it addresses a general societal need for enhanced rail safety. In the 2023 edition organised in Poland, entitled "Tracks are for trains", these campaigns educated and engaged communities worldwide, promoting technological advancement and a collective effort to prevent accidents at level crossings and trespassing incidents.



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