



GlobalRail

Transport Infrastructure Exhibition & Conference

30 September - 2 October 2025 | ADNEC Centre Abu Dhabi, UAE

HOSTED BY



TECHNICAL CONFERENCE CALL FOR PAPERS

Deadline for Submissions:
Friday 28 February 2025



Submit your
abstract

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Pioneering Technology Innovation and R&D in the Transport Sector

Join the brightest minds and technical experts from across the transport sector at the Global Rail 2025 Technical Conference. This event, held as part of the larger Global Rail exhibition and conference, will bring together the change-makers at the forefront of engineering, technology, and industry innovation. Attendees will have the opportunity to explore the latest advancements poised to transform the movement of people and goods on both local and global scales.

Over the course of three days, the Technical Conference Program will showcase solutions, project case studies, insights and technological breakthroughs from academia, consortiums and research institutes. Attendees will gain access to critical advancements that promise to build a smarter, more efficient, and interconnected transport ecosystem, creating value for stakeholders across the rail, transport, and mobility value chains.



Important Dates

			
Global Rail Call for Papers Open	Global Rail Call for Papers Closed	Author Notifications	Global Rail Technical Conference ADNEC, Abu Dhabi
12 December 2024	28 February 2025	Mid-March 2025	30 September – 2 October 2025

Technical Conference Call for Papers Submission Categories



Project Planning and Management

NEW FOR 2025

This category will examine the role of sustainable financing, innovative funding and risk management strategies for successful rail projects, emphasising the role of stakeholder collaboration, route optimisation, data driven panning, shadow operations and effective Public Private Partnership models.

- Sustainable financing models
- Risk management
- Funding models
- Ancillary revenue streams
- Shadow operations
- Regulations and compliance
- Public Private Partnership (PPP) models
- Route planning and optimisation



Asset Management and Lifecycle Management

NEW FOR 2025

This category will focus on maximising infrastructure performance and longevity, through data-driven and predictive maintenance, legacy system monitoring and upgrade, and recycling and material reuse strategies.

- Climate resilient infrastructure
- Cost optimisation and lifecycle economics
- Asset end-of-life management
- Data driven decision making
- Upgrading legacy systems
- Recycling and reuse of materials
- Predictive and preventative maintenance
- Sustainability in Asset Management
- Regulatory compliance and standards



Intermodal Operations

NEW FOR 2025

Seamless intermodal operations are essential for optimising both freight and passenger mobility. This category will focus on terminal and hub efficiency, network integration, intermodal corridor development, route planning and scheduling, and regulatory and policy frameworks to support sustainable intermodal operations.

- Network integration
- Terminal and hub operations
- Freight operations
- Passenger mobility
- Collaboration and partnerships
- Route planning and scheduling
- Intermodal corridor development
- 'Just-in -time' logistics
- Green infrastructure and fuel efficiency
- Multi- modal ticketing
- Regulatory and policy alignment



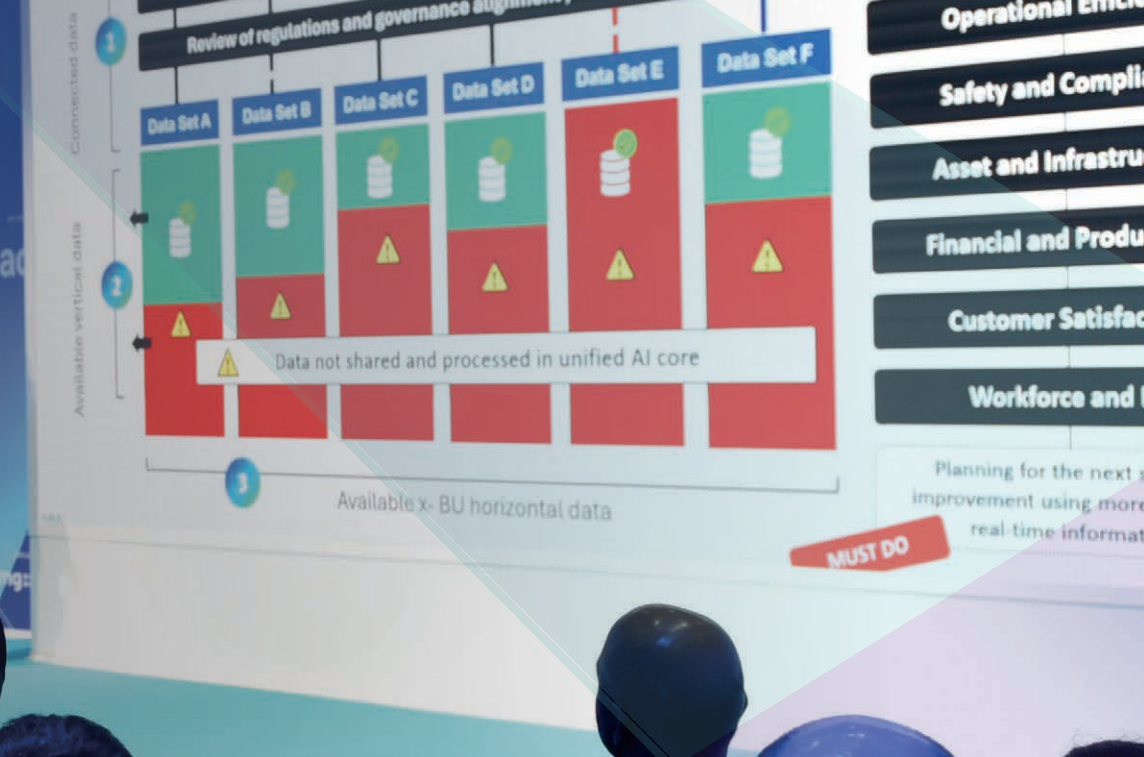
Signalling and Communications

NEW FOR 2025

Modern signalling and communication systems are crucial for building smarter, safer, and more efficient rail networks. Key focus areas include ERTMS implementation, 5G connectivity, and signalling system interoperability. Real-time monitoring, diagnostics, and safety protocols boost reliability, while regulatory compliance ensures seamless integration, driving the evolution of smart rail networks.

- ERTMS
- The 5G railway
- Interoperability of signalling systems
- Real-time monitoring and diagnostics
- Smart rail networks
- Regulatory standards and compliance
- Advanced safety protocols

Technical Conference Call for Papers Submission Categories



Passenger Mobility **NEW FOR 2025**

Seamless passenger mobility involves integrating solutions like Mobility-as-a-Service (MaaS) and shared mobility to provide enhanced travel options. Key elements include user-friendly ticketing and payment systems, efficient infrastructure for smooth transit, and ensuring accessibility for all passengers. Real-time updates through advanced passenger information systems further improve the overall travel experience.

- Mobility-as-a-Service (MaaS)
- Shared mobility solutions
- Integrated ticketing and payments
- Accessibility and inclusion
- Infrastructure for seamless transit
- Passenger information systems



Digitalisation, AI, IoT, Automation **NEW FOR 2025**

This category will explore how digitalisation, AI, IoT, and automation are transforming transport ecosystems by enabling real-time data collection, predictive maintenance, and smarter decision-making, to enhance service delivery, reduce costs and pave the way for smarter, connected and sustainable transport networks.

- Predictive maintenance
- "Internet of Trains" and IoT
- Automatic Train Operation (ATO) and Automatic Train Control (ATC)
- Digital Infrastructure management
- Passenger experience
- AI and generative AI use cases
- Machine learning applications



End-to-End Sustainable Transport **NEW FOR 2025**

This category will focus on enhancing connectivity through first- and last-mile solutions, electrification, and the development of metro and light rail systems. Integrating urban mobility with multimodal networks enables efficient travel across regions, while infrastructure for future transport modes, such as EV charging, ensures long-term sustainability.

- First- last - mile solutions (freight and/or passenger)
- Electrification solutions
- Metro and light rail development
- Urban mobility
- Integrated multimodal transport systems
- Infrastructure for future-ready transport modes e.g. EV charging



Innovation in Construction and Infrastructure

Exploring sustainable solutions to reduce project costs, shorten timelines, and enhance stakeholder collaboration, alongside cutting-edge innovations in rail track design, station architecture, tunneling, and overhead lines. These advancements aim to drive electrification, enhance infrastructure resilience, and boost network capacity.

- Building Information Modelling (BIM)
- Digital twins
- Modular construction
- Automation and robotics
- Infrastructure resilience
- Novel materials
- Digital construction
- Tunnelling methods

Technical Conference

Call for Papers Submission Categories

"If railways are our nations' arteries, maintenance is the treatment that keeps the blood flowing, while zentrak is the heartbeat that keeps them pulsing."

Hartwig Lankow, Vice President – Customer management – Middle East & Africa
Hartwig.Lankow@voestalpine.com



High-Speed Rail

The success of high-speed rail projects depends on a combination of innovative engineering and stakeholder collaboration, supported by the use of digital project planning tools to streamline processes, strengthen the business case, and drive down costs and overruns throughout the project lifecycle.

- Stakeholder collaboration
- Design and engineering
- Rolling stock innovation
- Infrastructure development
- Cross - border and regional rail
- Interoperability
- Financing and risk models
- Handover solutions
- Maglev



Rolling Stock Innovation

Innovations such as hybrid, hydrogen, and battery-powered trains, are boosting sustainability and efficiency in rail transport, while advanced propulsion systems, modular designs, and smart technologies are enhancing performance and adaptability. This category will showcase how rolling stock is evolving to support smarter and sustainable rail and transport networks.

- Hybrid, hydrogen and battery powered trains
- Advanced propulsion systems
- Modular and flexible design
- Automated coupling and decoupling systems
- Green certification standards for rolling stock
- Multi-gauge and voltage-compatible systems
- Digitalisation and smart technology



Urban Planning and Transit - Oriented Development

Urban planning and transit-oriented development integrate transport with sustainable urban growth. By designing connected communities around transit hubs, these strategies reduce car dependence, improve accessibility, and support efficient land use, fostering vibrant, sustainable urban spaces.

- Land-use integration
- Mixed - use development
- Station-centric design
- Warehousing solutions
- PPP models for Transit - Oriented Development
- Urban greening and climate-resilient planning
- Urban regeneration and economic development
- IoT and smart city development
- Transit - Oriented Development strategies for intermodal hubs
- Community engagement and placemaking



Safety and Security

This category will explore the latest advancements in rail safety and security, covering enhanced surveillance, operational safety measures, and cybersecurity. It will also highlight innovations in physical security, autonomous technologies, and workforce safety, as well as cross-border standards to ensure the safety of regional rail.

- Surveillance and monitoring
- Operational safety
- Cybersecurity solution
- Physical security
- Cross-border safety standards
- Workforce safety
- Passenger safety
- Autonomous and digital security solutions

Abstract Submission Guidelines



Submit your Abstract

All submitted technical abstracts will be reviewed by the Global Rail 2025 Technical Conference Committee. Early submission is important to ensure committee members have ample time to review the abstracts. The final deadline for submission is **Friday 28 February 2025**. Any submissions after this date will not be accepted. Incomplete submissions will not be considered.

IMPORTANT: All submissions must be submitted via our online submissions portal.

Abstract Submissions:

- Abstracts should include a maximum of 500 words and must be written in English.
- It is critical that all the requested information is provided at the time of your abstract submission.
- You must select from the 13 categories provided to best describe your abstract.
- Prior to abstract submissions your management clearance must be obtained. Any issues concerning clearance should be outlined when the abstract is submitted.
- If you have presented this abstract previously, you will need to provide details of when and where
- All abstracts must be submitted via our online submission portal.

Submission Guidelines:

- **Description:** Summarise the scope and nature of the work upon which the abstract is based; e.g digital signaling, passenger experience, predictive maintenance etc.
- **Applications:** Describe the possible application of the information provided in the abstract.
- **Results and Conclusions:** Summarise the results and major conclusions to be presented in the presentation and state specific conclusions of the work and how these differ from previous work on the same subject. State whether new information will be revealed and whether data from the lab or field, will be included.

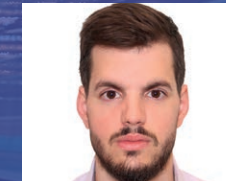
Technical Conference Committee Members



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Vice President, PMC and Rail Practice Lead
Parsons



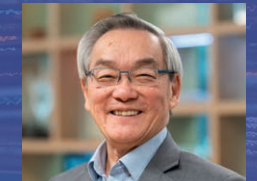
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Maria Marqués
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Egis

More to be announced

Global Rail Technical Conference Scoring Criteria

Your abstract will be assessed by the Global Rail 2025 Technical Committee based on the following criteria:

- **Relevance:** The abstract should contribute to the rail, transport or wider mobility value chain and should contain significant new knowledge, technical results or experiences.
- **Accuracy:** Data in the abstract must be correct in terms of technical applications.
- **Originality:** The product, method, strategy, or theory being presented should be innovative and demonstrate unique insights or approaches that advance the field.
- **Interest and Impact:** The extent to which the abstract appeals to a wide audience and its impact on the rail, transport or wider mobility industry.

How to submit your abstract



STEP 1

Create your account on the Global Rail Call for Papers portal by visiting www.grtieg.com/CFP



STEP 2

Select your category from the 13 options



STEP 3

Submit your abstract

What to Expect at Global Rail 2025

Building on the incredible success of its inaugural edition in 2024, Global Rail 2025 is set to exceed all expectations. This premier event unites visionary transport leaders, industry pioneers, and financiers to drive sustainable, integrated mobility solutions. By advancing economic growth and enhancing global connectivity, Global Rail 2025 is at the forefront of transforming the transport and infrastructure ecosystem towards a multi-modal future

Who will you meet:

C-suite, SVP, VP, Heads of, and Senior decision makers from:

- Network operators
- Transport operators
- Transport authorities
- Freight forwarding and logistics
- Infrastructure managers
- Financiers and investors
- Technology and AI
- Rolling stock and OEMs
- Ports and airports
- Smart mobility
- First - and -last mile solutions
- Intelligent transport solutions (ITS)
- Metro and light rail

Global Rail 2025 in Numbers

10,000⁺
International Attendees

200⁺
Visionary Speakers

100⁺
Participating Countries

200⁺
Exhibitors

800⁺
Conference Delegates

15⁺
Ministerial Delegations



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Etihad Rail

Make Your Impact at Global Rail 2025

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