UNDER THE PATRONAGE OF HIS HIGHNESS SHEIKH MANSOUR BIN ZAYED AL NAHYAN, VICE PRESIDENT, DEPUTY PRIME MINISTER, AND CHAIRMAN OF THE PRESIDENTIAL COURT



HOSTED BY



TRANSPORT INFRASTRUCTURE EXHIBITION & CONFERENCE

8-10 October 2024 | ADNEC, Abu Dhabi

# TECHNICAL CONFERENCE CALL FOR PAPERS

Deadline For Submissions: Monday 8 July 2024



Submit your abstract





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## About The Global Rail Conferences

Global Rail 2024 will unite policymakers, network operators, transport authorities, financiers, technology pioneers, developers and OEMs, to discuss actionable strategies for realising rail's transformative potential for communities, climate, and economies. The three-day Global Rail Strategic Conference will identify strategic pathways for unlocking value in the railway project lifecycle, through global and cross-sector collaboration supported by regulation and policy mechanisms designed to accelerate innovation, scale new technologies, advance digital transformation and unlock rail's potential as an enabler of economic growth, supply chain resilience and decarbonisation. The Global Rail Technical Conference, will showcase cutting-edge R&D with the potential to transform rail operations and maintenance, passenger experience, project delivery and unlock value across the rail project lifecycle. Through a mix of panel discussions, fireside chats, case studies and project updates, the Global Rail 2024 conferences will unite the transport value chain to accelerate the pathway towards the interconnected, sustainable transport ecosystem of tomorrow.

## The Global Rail Technical Conference

The Global Rail Technical Conference will showcase cutting edge R&D from technology pioneers, research institutes, consortiums, industry and academia, with the potential to disrupt rail operations, maintenance, passenger experience, and project delivery, and unlock value for multiple stakeholders across the rail, transport and mobility value chains.

## Important Dates

Global Rail Technical Conference call for papers open

27 May 2024

Global Rail Technical Conference call for papers closed

15 July 2024

Author Notifications

July 2024

Global Rail Technical Conference, ADNEC, Abu Dhabi

8-10 October 2024





## **Technical Conference Categories**



### **Innovation in Construction and Infrastructure:**

Sustainable solutions for driving down project costs, reducing project timelines and increasing stakeholder collaboration, and cutting-edge innovations in rail track design and engineering, station design, tunneling and overhead lines, to advance electrification, reduce infrastructure costs, and increase network capacity.

**High-Speed Rail** 

The latest innovations in high-speed rail engineering, planning and design





## **Digital Rail**

Harnessing the potential of 4IR technologies such as AI, IIoT and blockchain for operational efficiencies, predictive maintenance, intermodal connectivity and transparency across rail and transport value chains.

## Passenger Experience



Passenger-centric solutions such as smart ticketing, 5G, MaaS and integrated mobility platforms to increase ridership across rail networks and the seamless integration of passenger rail with mobility ecosystems.

Technologies to increase supply chain transparency amongst intermodal operators to future proof supply chains globally.



## **Rolling Stock Innovation**

Innovations to improve the sustainability, safety, life cycle and cost of rolling stock including, hydrogen fuel cell and battery powered locomotives.

Next generation solutions supported by AI, edge computing, IIoT and cloud applications for the secure operation of rail infrastructure and the real-time monitoring of passenger and employee safety.



## **Urban Planning and Smart City Development**

Novel methods for integrating rail networks into smart city and sustainable urban environments.

## **Supply Chain Resiliency**



## **Safety and Security**

## The Global Rail Technical Conference Subcategories

Novel construction methods for tunnels, bridges, stations Materials and track components Infratech Condition-based monitoring and predictive maintenance of infras Civil engineering Infrastructure resilience and mitigation of extreme weather events Electrification Infrastructure financing Digital solutions for infrastructure modelling and design	
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Digital Rail	
Autonomous and driverless trains	
TCS	
RMCS	
Safety	
Al and condition-based maintenance	
System integration technologies	
System interoperability	
Smart rolling stock	
nfrastructure financing	
Digital signaling and systems	
High – Speed Rail	
Electrification solutions	
lagLev	
Al applications for high-speed rail	
Stakeholder collaboration and management	
Civil engineering	
Jrban planning for high-speed rail	
ransit-oriented development	

### **Passenger Experience**

Mobility-as-a-service applications

Wayfinding solutions

5G and communications technologies

Passenger safety and surveillance monitoring

Al and Generative Al

### Supply Chain Resiliency

Intermodal integration

Supply chain tracking technologies (AI, blockchain, internet of things)

Intermodal hub capacity management

Single window platforms

Integrating rail with First - Last Mile (FLM) solutions

### **Rolling Stock Innovation**

Low/zero emissions rolling stock

Noise/vibration countermeasures

Alternative drive systems

Fleet management

Refurbishment of rolling stock

Procurement and finance models

Condition-based and predictive maintenance

Rolling stock design for freight rail

Rolling stock design for passenger rail

### Safety and Security

Cyber security systems

Regulation and certification

Interoperability

Implementing digital safety in rail systems

Adapting cyber security to rail environments

Electrification safety

Passenger safety

Worker safety

### Urban Planning and Smart City Development

Transit-oriented development

Digital twins for smart city modelling

Managing energy supply and demand

Integrating rail into smart city infrastructure

## Abstract Submission Guidelines

All submitted technical abstracts will be reviewed by the Global Rail 2024 Technical Conference Committee. Early submission is important to ensure committee members have ample time to review the abstracts.

The final deadline for submission is Monday 8 July 2024. Any submissions after this date will not be accepted. Incomplete submissions will not be considered.

### **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 8 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.

## **Global Rail Technical Categories:**

Use the 8 technical categories supplied to indicate the category that best describes your abstract. Abstracts are evaluated based on the following:

- The abstract must contribute to the rail or transport value chain and should contain significant new knowledge, technical results or experiences.
- Data in the abstract must be correct in terms of technical applications.

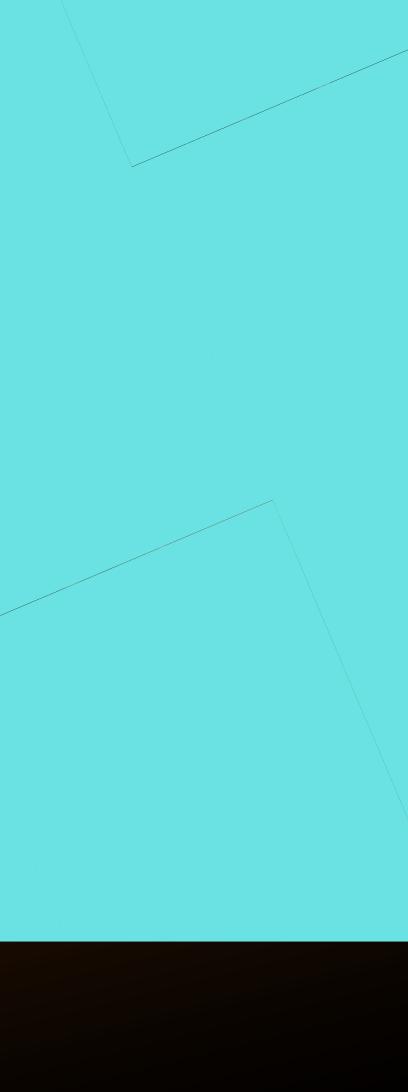
### Abstract Content:

Abstracts must contain adequate information for the reviewing committee to have a better basis for judgement. Abstract submissions should be structured in the following format:

- Objective of the paper (50 words)
- Introduction/background (100 words)
- Synopsis (200 words)
- Conclusion (100 words)

### **Content Guide:**

- Description: summarise the scope and nature of the work upon which the abstract is based; e.g digtal 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.





## **Guidelines For Accepted Abstracts:**

- team (organisers of Global Rail 2024)
- presentations.
- confirmed.
- Confirmed speakers are required to secure a speaker permit
- The organiser assumes no obligation for expenses by authors for

## **Commercialism:**

Abstracts should avoid the use of language that is commercial in tone in the title text or slides. Use of such terms will result in careful scrutiny by the review committee and may result in exclusion from the evaluation process.

• If your abstract is accepted you will be notified by the dmg events

• Authors of accepted abstracts will be required to prepare PowerPoint

• Upon submission of the presentation to the portal, authors will be asked for their consent to share the final presentation in PDF format with the Global Rail Technical Conference delegates post-event.

• Detailed instructions on the preparation of PowerPoint presentations will be sent to all authors once acceptance to speak has been

mandated by the UAE government in order to be allowed to present at the conference. In the event that the speaker permit application is rejected, the speaker will not be allowed to present at the conference.

travel and accommodation to attend and speak at the event.

## WHAT TO EXPECT AT GLOBAL RAIL 2024

## Who will you meet?

•	National rail operators
•	High speed rail technology
	Intermodal connectivity
	Smart rail solutions
	Advanced infrastructure
	End-to-end logistics
	Finance and investment
	Automation and digitalization
	Green tech and sustainability
	Smart mobility
	Infrastructure, development and construction
•	Freight rail technology
•	Transportation safety and security
•	Rolling stock manufacturing

Urban rail and metro systems

## International exhibition

The International Exhibition will bring hundreds of companies from around the world together to showcase the latest advancements, technologies, and solutions in rail infrastructure, rolling stock, digitalisation, construction, infrastructure, and sustainable mobility.

## Features at the exhibition

The Global Rail event includes dedicated zones such as the Infrastructure Engineering Zone, Construction Zone, and Innovation Podium, each tailored to showcase cutting-edge construction machinery, technology, and engineering products and services. These exhibits are essential components of the transportation value chain and are particularly relevant to the railway sector.





International **Country Pavilions** 





Construction Zone

Innovation Podium

## **Executive Club (By Invitation Only)**

The Global Rail Executive Club is exclusively for the industry's top leaders and influencers, including ministers, dignitaries, C-level executives, and senior decisionmakers driving a resilient rail and transport ecosystem regionally and globally.

Infrastructure **Engineering Zone** 



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## Make Your Impact at Global Rail 2024

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