



InnoTrans 2024: A Retrospective on Innovation and Future Mobility Solutions



Berlin, 24-27 September 2024

The recently concluded InnoTrans 2024 in Berlin has once again solidified its position as the premier global event for the transport technology sector. Held from September 24th to 27th, this year's edition brought together over 2,900 exhibitors from over 50 countries and welcomed more than 150,000 professionals. It showcased cutting-edge innovations and promoted international collaboration across rail, public transport and mobility industries.



Event Highlights

InnoTrans 2024 presented diverse main exhibition segments, including topics about Railway Technology, Railway Infrastructure, Public Transport, Interiors and Tunnel Construction. In addition, thematic areas like the InnoTrans Convention, AI Mobility Lab, InnoTrans Campus and Bus Display allowed industry leaders to share insights into the future of mobility. The Eurailpress Career Boost offered young professionals opportunities to network with industry giants, helping bridge the gap between education and the workforce.



The project is supported by the Europe's Rail Joint Undertaking and its members.



Technological Innovations on Display

This year, InnoTrans focused heavily on the digital transformation of transport technologies. Key themes included automation, sustainability, and efficiency, with a strong emphasis on smart infrastructure, IoT-based solutions and artificial intelligence (AI). These technologies are set to drive the next generation of mobility, enabling safer, faster and greener transport systems.

Spotlight on FP3-IAM4Rail: Pioneering Railway Maintenance

One of the standout projects at InnoTrans 2024 was FP3-IAM4Rail, which took centre stage with its innovative approach to railway maintenance and, in general, to asset management. The initiative showcased groundbreaking advancements in Digital Twins with a dedicated AR (Augmented Reality) corner in the EU unified stand, Robotics and Additive Manufacturing, aiming to revolutionise how railway assets are designed, maintained and optimised.

Key Achievements of FP3-IAM4Rail:

- Digital Twins: virtual models of physical rail assets, aided by sensing, enable real-time monitoring and predictive maintenance, reducing downtime and improving reliability. Advances on use cases developed with the leadership of RFI/Italferr and CEMOSA, located in Málaga-María Zambrano High-Speed ADIF station for the optimised maintenance of installations, or another for the Structural Health Monitoring (SHM) of a Spanish High-Speed Viaduct and its corresponding assessment, were accessible to the public via immersive OCULUS devices.



SHM Digital Twin Demo via Oculus AR device taking place at InnoTrans 2024



- **Robotics:** the automated robotic systems presented by FP3-IAM4Rail streamline inspections and repairs, improving safety and minimising manual intervention. The ERTMS Trackbot for mapping and positioning balises, developed by ProRail and Strukton, present in the InnoTrans yard, or the ARGO robot tested by FSI to inspect the underbody train parts, showcased good examples of these technologies applied to the inspection of railway assets and/or the execution of works.



ERTMS Trackbot and ARGO robot for train underbody parts inspection

- **Additive Manufacturing:** on-demand 3D printing of custom rail parts helps reduce costs and delays, while promoting sustainability by lowering material waste. ÖBB presented a fireproof coating layer for a train door produced with one application of this type of technology.

These innovations are beginning to position FP3-IAM4Rail as an important vector in transforming railway maintenance in the European Rail ecosystem, ensuring fewer disruptions, higher safety standards and a more efficient overall operation.

Looking Ahead: The Impact of InnoTrans 2024

The innovations seen at InnoTrans 2024, particularly from FP3-IAM4Rail, show the growing importance of digital and physical innovative solutions in shaping the future of rail transport through a holistic asset management approach. As we move forward, collaboration between industry leaders, technology providers and research initiatives will be critical to meeting the constantly evolving demands of global mobility.



The technologies presented at this year's fair are expected to influence industry standards for years to come, accelerating the transition towards more autonomous, connected and sustainable transport systems.

For more details about FP3-IAM4Rail or to explore reports from InnoTrans 2024, please visit our websites or contact our teams.



Founding Members



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