



Significant Progress in Genoa, Italy: Steering Committee and Technical Management Team Meetings



We are thrilled to share the latest developments from the FP3-IAM4Rail European project, a pioneering initiative within the Europe's Rail Joint Undertaking. The first week of September, the Technical Management Team and Steering Committee gathered in Genoa, Italy, to engage in a series of decisive strategic discussions. These meetings represented a key moment in our ongoing effort to revolutionise railway asset management and drive the embracing of innovative technologies across Europe.

The picturesque and historic city of Genoa served as an ideal setting for these crucial discussions, which centred on the progress achieved to date and the future trajectory of the FP3-IAM4Rail project. The vibrant exchange of ideas and insights among team members demonstrated a shared commitment to developing practical solutions that will enhance the capabilities of the rail sector.



Railway track in the city of Genoa



Key Topics Discussed

During our time in Genoa, several crucial topics were discussed, covering the project's most recent technological advancements and future goals. These discussions included the following:

→ TMS-IAMS Information Exchange for Level Crossings

The team explored the integration of Traffic Management Systems (TMS) with Intelligent Asset Management Systems (IAMS), particularly focusing on the current process enhancing the flow of information for level crossings.

→ Robotics Platform Featuring the ERTMS Trackbot for Installing Balises

The meetings also focused on the progress of the robotics platform a ERTMS (European Rail Traffic Management System) Trackbot. This state-of-the-art robotics platform is designed to automate the installation of balises, which are critical components that communicate with trains and enable signalling.



ERTMS system.

→ Digital Twins for Structural Health Monitoring

Part of the meetings were dedicated to the concept of digital twins, virtual models that mirror physical railway assets such as buildings and infrastructure in real time, thanks to the fusion of models with on-site sensors and monitoring systems. The application of digital twin technology will allow us to monitor the structural health of critical components across the rail network, but also to create credible simulation scenarios, identifying potential issues before they become critical. This will improve preventive maintenance and reduce downtime, leading to greater reliability and operational safety.



→ Railway Checkpoints for Mixed (Passenger + Freight) Traffic

Given the increasing complexity of modern rail networks, the team also focused on the development of railway checkpoints designed to manage mixed traffic to assess rolling stock condition via wayside monitoring, but also to exchange on-board information useful for protecting the infrastructure in case of defects and malfunctions. With passenger and freight trains sharing the same tracks, these checkpoints will ensure smooth and efficient coordination for optimisation of maintenance tasks if needed, increasing capacity, reliability and availability.



Railway checkpoints.

→ Additive Manufacturing for Rail Components

Another innovative topic discussed was the advancement of additive manufacturing technologies, also known as 3D printing, to produce rail components. This technology has the potential to manufacture or repair certain components more quickly and to reduce material waste. Crossing panels or fireproof coatings for vehicle components are amongst the first targets to be using these techniques.



Aligning with the Future of European Railways

One of the key objectives of the meetings in Genoa was to align the FP3-IAM4Rail team's efforts with the broader vision for the future of European rail infrastructure. The team is dedicated to fostering solutions creating an architecture ensuring that the developments within this project not only meet today's needs but also anticipate the challenges and opportunities of tomorrow.

By using the latest technology and sustainable methods, we are making the FP3-IAM4Rail project a leader in the railway industry. These discussions helped us align our plans and make sure all project goals match the long-term objectives of Europe's Rail Joint Undertaking.

Collaboration and Expertise Drive Success

The collaboration between the Technical Management Team and the Steering Committee in Genoa showed the remarkable skill and knowledge behind the FP3-IAM4Rail project. Each participant brought invaluable perspectives and insights to the table, which reinforced our collective commitment to delivering innovative, real-world solutions. The strong spirit of teamwork was evident throughout the discussions, and this shared dedication will be crucial as we move forward with the next phases of the project.



Technical Management Team meeting held in Genoa.



A Big Thank You to All Participants

We would like to extend a heartfelt thank you to all the participants of the meeting in Genoa. Your passion, expertise and hard work are driving the success of this project. Together, we are making significant progress toward creating a railway system that is more efficient, accessible, maintainable and resilient. Everyone's contributions are crucial as we continue to push the boundaries of what is possible in railway asset management and technology.



Steering Committee meeting held in Genoa.

Looking Ahead

As we move forward, the FP3-IAM4Rail project will continue to lead the way in developing the next generation of railway infrastructure and rolling stock assets. With our innovative solutions for asset management, robotics, digital twins and additive manufacturing, we are prepared to redefine the way rail networks and operators operate, making them safer, more reliable and better equipped to meet the demands of the future.

Our vision for Europe's railways involves the integration of advanced technology and sustainable practices. We work to create a network that serves the needs of infrastructure managers, passengers and freight operators and above all, the users in our EU society, and are excited to continue this journey together. We look forward to the next milestones!

Stay tuned for future updates as we work to reshape the future of rail transport in Europe!

The FP3-IAM4Rail Project Team



Founding Members



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