



## Media release

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# FS Logistics Business Unit extends fleet upgrade to include PJM's full Smart Train portfolio.

*Graz and Milan, February 2024:* Combining transport efficiency with safety is a crucial requirement in daily intermodal transport for Mercitalia Intermodal, a company of the FS Italiane Group's Logistics Business Unit. The Italian intermodal operator has therefore been focusing on digital monitoring functionalities and automated processes for several years. The transformation of the existing fleet into smart train freight wagons has been systematically implemented. This year, at least another 180 wagons will be modernized. In the past two years, around 200 wagons - mainly of the T3000 type - were upgraded and equipped. Mercitalia Intermodal began upgrading its freight wagon fleet back in 2017 and today more than one third of its freight wagon fleet is "smart".

Mercitalia Intermodal is relying on the WagonTracker system from PJM. Following a comprehensive evaluation process, the com-

pany opted for the complete digital system from the Austrian specialist for digitalized and automated rail freight transport. Reasons for the system decision included the autonomous and powerful power supply, scalability of the system, extensive monitoring functions and automated applications such as brake testing, effective in-train communication for real-time communication between wagons and train drivers as well as compatibility with a future DAC system. In monitoring, the numerous functionalities of the train components pay off, above all the real-time brake analysis and brake system monitoring while travelling and at a standstill, real-time king-pin monitoring and, subsequently, indicative derailment diagnostics.

FS Logistics Business Unit aims to develop faster delivery times thanks to automated processes in the track environment, enabling predictive maintenance logics and on-condition

maintenance models and reduce maintenance costs while increasing the resilience, efficiency and safety of the rail freight transport. For example, it is possible to detect air leakages of the brake systems (weighting valve) and to correlate wheelset damage to brake failure; the trestle monitoring system detects incorrect use of the seating device that led to damage to the component.

Maria Antonietta Zocco, Technical Director of Mercitalia Intermodal, said: *"The smart train is one of the projects that will allow Mercitalia Logistics to become a European logistics player. By leveraging on freight wagons, we can offer safer, faster and more efficient services to our customers. Our smart wagon is an enabler for the automatization of the railways processes and for the predictive and on-condition maintenance. Continuous monitoring of running dynamics, critical components' state, wear and tear, and other factors can lead to significant savings in wagon productivity, maintenance and safety which is a crucial requirement for us."*

For Günter Petschnig, CEO of PJ Monitoring GmbH, one thing is clear: *"Highly innovative companies such as Mercitalia Intermodal are driving further development and making an enormously important contribution to rail transport and society. Modern, digital rail freight is the key to achieving the important climate targets. Lean, automated processes such as the brake test make transport competitive, faster and safer and bring more goods onto the environmentally friendly railway."*

## The Smart Train functionalities at a glance

- Real-time brake analysis and brake system monitoring of overloaded brake systems and wear forecast (correct brake functionality with regards to the status of the main brake pipe, release times, loading and cylinder pressure at standstill and while travelling, brake energy analysis for early detection of defective and overloaded brake systems)
- Multi-diagnostic system for dynamic running condition monitoring to identify critical running situations and possible malfunctions (determination of running comfort, running stability and running safety)
- Monitoring of longitudinal, lateral and vertical impacts and their coordinates if limit values are exceeded
- Indicative derailment diagnosis with real-time warning to the train driver
- Real-time king-pin monitoring for reliable and safe detection of the correct setting and locking for trailer transport in the intermodal sector
- In-train communication for real-time data transfer between wagon and locomotive during the train ride to transmit safety and vehicle-related information
- Load weight monitoring to ensure that the vehicle has been loaded correctly and properly

### **About Mercitalia Intermodal, a subsidiary of Mercitalia Logistics and part of the FS Italiane Group's Logistics Business Unit**

Mercitalia Intermodal has specialized in unaccompanied combined transport within the Group. The largest intermodal operator in Italy and the third largest in Europe, it manages a group of wagon platforms used in national and international transport. Mercitalia Intermodal promotes, organizes and markets combined road-rail, maritime and door-to-door transport and manages a rail freight network connecting over 150 ports and intermodal terminals throughout Europe. The company has received several awards for outstanding innovative projects. Last year, Mercitalia's Smart Train was honored with Italy's most important logistics award (Il Logistico Dell'Anno 2023) and the VCÖ Austrian Mobility Award.

**Further information:** [https://www.mercitalia-intermodal.it/content/mercitalia\\_intermodal/en.html](https://www.mercitalia-intermodal.it/content/mercitalia_intermodal/en.html)

### **About PJM**

PJM is an internationally renowned system specialist for rail transport and has successfully implemented projects in 30 countries on 6 continents.

With its WaggonTracker system, PJ Monitoring GmbH is a technology leader in the automation and digitalization of rail freight transport. The digital overall system WaggonTracker as well as applications such as the automatic brake test or the Smart Train from Mercitalia have received 10 awards.

As an accredited test center according to ISO/IEC 17025, PJ Messtechnik GmbH carries out tests worldwide for the approval of rail vehicles.

PJ Motion GmbH specializes in the authorization and project management of track-bound vehicles.

PJM was founded in 2006. Over 70 employees at the Graz site ensure "100% Made in Austria": R&D, hardware and software development, production and administration are all based in Austria.

**Further information:** <https://pjm.co.at/>

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*Mercitalia Intermodal is continuing to upgrade its fleet with Smart Train functionalities. The WaggonTracker system makes inter-modal transport faster, more efficient, more cost-effective and safer.  
Credit: PJM, free of charge*



*Mercitalia Intermodal benefits from numerous monitoring features, among many the real-time brake analysis and brake system monitoring while travelling and at a standstill.  
Credit: PJM, free of charge*



The trestle real-time monitoring system detects incorrect use of the seating device that subsequently would lead to damage the component.

Credit: PJM, free of charge



Mercitalia's Smart Train was honored with Italy's most important logistics award (Il Logistico Dell'Anno 2023) and the VCÖ Austrian Mobility Award.

Credit: PJM, free of charge