

SMARTWAGONS, DEVELOPMENT OF PRODUCTION CAPACITY IN PORTUGAL OF INTELLIGENT FREIGHT WAGONS

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Summary: The Smartwagons project aims to revolutionize freight transport in Portugal by integrating advanced technologies that enable a more efficient, sustainable, and cost-effective rail transport system. With real-time monitoring and predictive maintenance, Smartwagons will reduce environmental impact and enhance the competitiveness of the railway sector.

The Smartwagons project is powered by a consortium of 13 partners, including 6 companies, 5 ENESIs (National Energy and Environmental Innovation Systems), and 1 cluster. The project is divided into five key work axes: Design, Manufacturing, Operations and Maintenance, Training and Capacity Building, and Certification, Dissemination, and Results Valorization. Each of these areas ensures that the project is not only innovative but also sustainable, efficient, and widely impactful across the rail freight sector.

The Smartwagons project equips each wagon with sensors and tracking technology, enabling continuous monitoring of the wagon's performance and cargo conditions. This realtime data allows for proactive adjustments, reducing downtime and ensuring seamless, efficient transportation across the rail network. By implementing Smartwagons, the freight industry moves towards lower emissions and higher energy efficiency. The project's advanced logistics technology supports economic growth by reducing costs associated with energy consumption and routine maintenance, making rail freight more competitive and eco-friendly. With an emphasis on both environmental and technological advancement, Smartwagons sets a new benchmark for sustainable rail solutions. The project's design aims to integrate seamlessly with existing infrastructure, offering a scalable model for rail systems across Europe to adopt eco-conscious practices while meeting future logistical demands.

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