



Ports & airports

Automation
(physical) and
robotics

Smart rail cargo flow monitoring for inland terminals



Funded by the
European Union

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Developed by :



Project by :



MultiRELOAD
PORT SOLUTIONS FOR SUSTAINABLE MOBILITY

Operational fields

Technologies

Solutions



SMART RAIL CARGO FLOW MONITORING FOR INLAND TERMINALS

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Solution description

This digital solution improves cargo handling in inland terminals by using camera sensors at the rail gate to capture loading and unloading activities.

It feeds data into a Digital Twin, offering real-time visibility of cargo status and location.

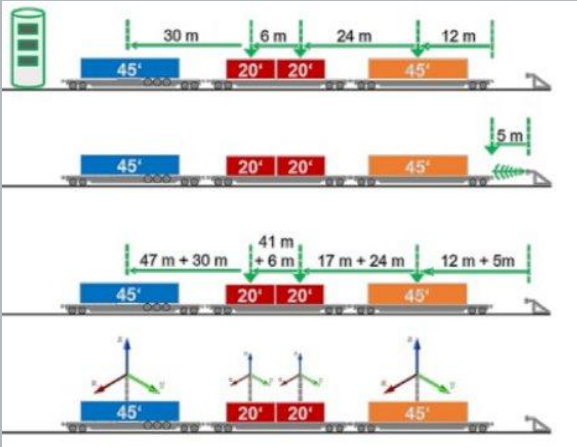
The system also detects and stores the total train length and wagon positions through buffer analysis, enhancing terminal efficiency.



Benefits

KEY BENEFITS	VALUE DRIVERS
Operational efficiency	Faster processing, reduced idle times & automated documentation
Cost savings	Lower manual labor, optimized resource utilization, reduced operational costs
Sustainability	Reduced CO ₂ emissions & energy consumption, rail freight promotion
Safety & Transparency	Real-time tracking, error prevention & more precise planning
Technological Innovation	Digital Twins, camera sensors, seamless IT integration

Main beneficiary:
TERMINAL OPERATORS



Technology readiness level : 8
Implementation stage : *Pilot*

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Share your contact
details and we'll get
in touch
with you!



Would you like to know more?
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