MultiRELOAD: Port solutions for efficient, effective and sustainable multimodality

MultiRELOAD focusses on the specific role and challenges of inland ports & hubs as multimodal freight nodes in contributing to reaching Europe's greenhouse gas (GHG) reduction target of at least 55 % by 2030, thereby shifting a substantial part of the 75% of inland freight carried today by road in the EU to inland waterways and to rail, and by increasing operational efficiency, safety and reliability of existing infrastructures (through digitalization) - thereby significantly reducing GHG emissions.

What applies to the Fit for 55's objectives, also applies to intermodal freight nodes: the success depends on the ability to introduce system-wide sustainability. Therefore, MultiRELOAD develops a holistic approach to expand the throughput of the major European TEN-T corridors Rhine-Alpine/ Rhine-Danube towards more efficient, effective, and sustainable management of goods and freight flows. MultiRELOAD enhances the **collaboration between these intermodal freight nodes** (i.e. duisport, Port of Vienna and Port of Basel) to jointly test innovations and create favourable market conditions that enable a better integration into the overall logistic chains and increase **operational** efficiency through data-sharing between actors within and between the nodes. This allows the transformation to sustainable, efficient transshipment terminals, nodes and corridors by **optimizing the use of assets and infrastructures** at low GHG emissions, realized in MultiRELOAD in three Innovation Areas. These are in accordance with measures of the EU's Smart Mobility Strategy and ALICE's vision to realize the Physical Internet by 2030 to pave the way to Zero Emissions by 20502):

A) Smart multimodal logistics: MultiRELOAD will develop innovative inter-/multimodal transport solutions linking all relevant modes, using transshipment technology with different intermodal transport units (ITU's) (incl. transport of bulk cargo using multimodal containers), and concepts for an optimized, standardized global goods transport system based on the concept of the Physical Internet (WP2).

B) Digital and automated multimodal nodes: MultiRELOAD transforms intermodal freight nodes into interconnected data platforms to connect actors, physical and digital infrastructure, assets, resources and services on three levels: terminal, node and corridor. These innovations support the ongoing shift to multimodal service optimization, creating door-to-door transparent supply chains by enabling tracking of freight locations and better and more efficient use of resources. (WP3).

C) Innovative Business models: MultiRELOAD will develop innovative multimodal freight business models removing legal, regulatory, and contractual barriers to uptake of demonstrated solutions. MultiRELOAD has a particular focus on defining and demonstrating how the business models for the three interconnected freight nodes as part of the Corridor Management System can be expanded to entire TEN-T networks. As part of this work, MultiRELOAD will develop policy recommendations and address the resilience and security of data and management systems, including security against malicious or accidental interventions (WP5).

Project background

The MultiRELOAD project is funded by the European Union within the HEu programme and will run for 36 months (September 2022 – August 2025). The project will be implemented by a transnational consortium of 22 organisations.

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