

Flexible, multi-mOdal & Robust FREIGHt Transport

Use Cases at a glance

The first year of [FOR-FREIGHT](#) project is now completed and remarkable achievements have been met towards a more effective and sustainable management of goods and freight flows in airports, ports, inland terminals and different logistics nodes. Seventeen partners from seven EU countries, from the transport and logistic sector, have been actively working on mapping their current process flows and comparing them to the optimised scenarios expected from FOR-FREIGHT implementation. In this regard, FOR-FREIGHT project is deploying three Use Cases with multimodal trial facilities to enable real life trial in operational environments covering heterogeneous multimodal scenarios: seaport logistics and last mile delivery (Spain), seaport to airport (Greece), and river-port to rail cargo (Romania).

Spanish Use Case combines Sea Port-road (truck or train) and Subway for last-mile distribution. It is divided in two scenarios: Valencia with [COSCO Shipping Lines Spain](#) and [Fundación Valencia Port](#) partners; and Madrid with [DHL Exel Supply Chain Spain](#) and [Metro de Madrid](#). Containers arriving at Valencia Port are unloaded from the vessels, then loaded either on trucks or trains, and transported to Madrid DHL warehouse where the goods are stored. Individual parcels at DHL warehouse will be picked and grouped in roller containers, and then transported by the carrier to the Metro de Madrid Depot. From that point, each roller container will be placed in the train before heading for the first station of their route, without any passengers, where the roller containers will be unloaded and the parcels distributed in lockers at the station, from which final customer will eventually pick them up. The introduction of Metro de Madrid as the last-mile transport represents a core innovation in this Use Case. Current problems that FOR-FREIGHT will seal with are the absence of track and trace systems on cargo visibility for all the stakeholders involved, blocked interactions between systems and suboptimal planning of resources.





Greek Use Case is based in Athens and focuses on the multimodal freight transportation from Sea Port of Piraeus to Athens Airport. It comprises two main areas of operation: Port of Piraeus with [COSCO Shipping Lines Greece](#) and Athens International Airport with [Goldair Handling](#) and [Athens International Airport](#). Containers are unloaded from a COSCO vessel, transported by truck, unloaded, go through Customs' Clearance and then transported to Athens International Airport where Goldair manages the unloading, screening and storage at their warehouse until the time to fly comes. With the current flow, Airport section is unable to plan their activities and accordingly manage their resources with time in advance so as to improve their operational efficiency. Effective information flow among stakeholders is reduced and several processes still depend on the manual input of information into the unconnected legacy systems in use.



In the Romanian Use Case, the Danube Galati Port and railway for transporting goods towards central Europe need to be effectively connected. Partners involved are: [Inland Shipping](#) is the responsible of the Danube transportation segment by vessel; [Technopol Association](#) integrates Port authorities and operators that manage the containers at the port; [TCCFR](#) coordinates railway segment; [BEIA](#) is the responsible of communication infrastructure between all parties. Existing process of transfer of goods from vessels to railway is not a continuous, logically integrated process, but a fragmented one pursued by independent operational systems of the various actors involved. There is no synchronization between loading and unloading and handling activities, resulting in severe delays in the railway running schedule and extra costs. In addition, intensive manual labor is still required for transshipment which results in inefficient use of resources.

FOR-FREIGHT platform differentiating innovations is to effectively integrate exiting practices and management systems still in use by different stakeholders, and allow the exchange of information among them. In particular, Spanish Use Case will integrate all the currently disconnected information from the different stakeholders and use it with a Decision Support System to optimize the entire set operations. In the Greek UC, FOR-FREIGHT will allow the Port and Airport segments to work in a much more unified and standardised way, sharing data for improved resource planning. Romanian Use Case will integrate historical data, real-time tracking data, and legacy systems into FOR-FREIGHT solution, allowing interoperability of rail and port processes.

At the current stage, FOR-FREIGHT Use Cases have been refined as well as the system architecture and technology specifications. Technical partners are horizontally working on developing the early-drop FOR-FREIGHT solution that will be released by the end of December 2023, allowing local testing on trial sites.

More information about the project can be obtained from the project website

www.for-freight.eu



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