FACT SHEET

MOSES: autoMated vessels and supply chain Optimisation for Sustainable short sEa Shipping

Description

About 74% of imports/exports and 37% of exchanges go through ports, making Europe highly dependent on ports for external and internal trade. In the European container supply chain, Short Sea Shipping (SSS) as well as inland waterways are not so well integrated in contrast to Deep Sea Shipping (DSS) ports (also referred to as Hub ports).

MOSES is a European project, funded under the Horizon 2020 Work Programme, which aims to significantly enhance the SSS component of the European container supply chain by addressing the vulnerabilities and strains that relate to the operation of large containerships. A two-fold strategy will be followed, that aims to reduce the total time to berth for TEN-T Hub Ports and to stimulate the use of SSS feeder services in small ports that have limited or no infrastructure.

To achieve its objectives, MOSES will implement the following innovations:

For the SSS leg: an **innovative, hybrid electric feeder vessel (MOSES feeder)** that will prevail from different vessel concepts and will be designed to match dominant SSS business cases, increasing the utilization rate of small ports. The MOSES feeder will be outfitted with a self-sufficient robotic container-handling system that will simplify the (un)loading of containerized cargo at Hub Ports and improve the operational capacity of small ports.

For DSS ports: the adoption of an **autonomous vessel maneuvering and docking scheme** (**MOSES AutoDock**) that will provide operational independency from the availability of port services. This scheme will be based on the cooperation of (i) a coordinated swarm of autonomous tugboats with (ii) an automated docking system based on an existing product.

A **digital collaboration and matchmaking platform (MOSES platform)** that aims to maximize and sustain SSS services in the container supply chain by matching demand and supply of cargo volumes by logistics stakeholders using Machine Learning (ML) and data driven-based analytics.

MOSES is an ambitious project that bears significant innovation potential in the context of European SSS uptake. Its innovation potential covers both vessel design aspects as well as software tools and accompanying governance models to improve related logistics processes.

MOSES project2020

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www.moses-h2020.eu

MOSES Project

At a glance

Full Title: AutoMated Vessels and Supply Chain Optimisation for Sustainable Short SEa Shipping

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Coordinated by: National Technical University of Athens (NTUA), Greece

Consortium

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