AutoMated Vessels and Supply Chain Optimisation for Sustainable Short SEa Shipping

Paving the way for the future of Short Sea Shipping

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MOSES project 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. MOSES follows a two-fold strategy, in order to reduce the total time to berth for TEN-T Hub Ports and to stimulate the use of SSS feeder services to small ports (hub and spoke traffic) that have limited or no infrastructure.

**Pilots**

1. **AutoDock**: aims to showcase the automated maneuvering, docking, & mooring scheme for large ports.

2. **Innovative Feeder Vessel**: aims to showcase the innovative characteristics of the MOSES feeder vessel by demonstrating its seakeeping and energy performance capabilities.

3. **Robotic Container Handling System**: aims to showcase the (semi) autonomous operation for (un)loading containers from the MOSES innovative feeder with the Robotic Container-Handling System.

**Objectives**

- Develop an automated maneuvering and docking system for SSS ports
- Develop and promote a logistics matchmaking platform to boost SSS
- Design innovative, hybrid electric feeder vessel outfitted with a robotic container handling system
- Reduce the environmental footprint for SSS and ports
- Improve efficiency and end-to-end delivery times of SSS mode
- Promote smart port development with minimal investment
- Develop concrete business cases

**Expected Impact**

- Decongestion of road and city infrastructure
- Reduction of CO₂ and air pollutant emissions of intra-European freight transport
- Enhancement of the performance of the CEF TEN-T network
- Safety of port processes
- European policies for manufacturing and automation
- Sustainability increase freight fed from intercontinental European ports using waterborne transport
- Modernization and increase of the reliability and competitiveness of Intra European Waterborne transport
- Demonstrate that the deployment of solutions can increase the quality of freight moved by SSS by at least 10% by 2039 compared to 2010 baseline data
- Creation of new business opportunities for industry and SMEs in the EU
- Competitiveness of European ports and shipping companies

**Concept & Innovations**

**MOSES Innovations:**
1. MOSES AutoDock (MOSES Autonomous tugboats + AutoMoor)
2. MOSES Recharging Station
3. Innovative Feeder Vessel
4. Robotic container - handling system
5. MOSES matchmaking platform