The MOSES Project
Innovations and data importance

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MOSES Facts

- **Project Title**: AutoMated Vessels and Supply Chain Optimisation for Sustainable Short SEa Shipping
- **Duration**: 01.07.2020 - 30.06.2023 (36 months)
- **Budget**: 8 million €
- **Consortium**: 17 Partners
EU maritime container supply chain

- **Hub-and-Spoke** networks configuration
- Transhipment from Hub ports via **unsustainable land-based transportation**
- Short Sea Shipping could provide an **efficient, green, safe** alternative to land-based transshipment

**Challenges:**
- existing feeders cannot be served by small ports
- there is little incentive for carriers to choose maritime transport instead of road/rail modes.

How can we improve the modal shift to Short Sea Shipping?
An example in a European Archipelago

What if we could create sustainable feeder services from large container terminals to **small ports with no infrastructure**?
The MOSES Concept

Innovative feeder vessel with Robotic Container Handling System

Balance backhaul traffic and reduce waiting times in DSS ports

Stimulate synchromodality with interconnected collaboration between shippers and port operators
The MOSES Concept – Data flows

- Transport needs
- Optimised transhipment
- SSS routes
- Required cargo flow
- Status
- Monitoring
- TOS
MOSES Matchmaking Platform

Objectives:
- Multidisciplinary horizontal collaboration
- Interaction between key stakeholders of the maritime supply chain
Shore Control Station (Innovative Feeder)

Intelligent Operator Support System (IOSS)
- Dynamic task allocation
- Situation awareness

3D world model
- built from data of an advanced sensor suite
- provide feedback to a human operator
  (Situation awareness)
Shore Control Station (Autonomous Tugboats)

Autonomous manoeuvring and docking supported by:
• Re-engineered version of Trelleborg’s Automoor
• MOSES Shore Tugboat Control Station, continuous monitoring for safety

Data exchanges include:
• Relative vessel position to dock
• Relative positions of tugs
• Identified objects to be avoided
• Tug motions
MOSES contribution to sustainable SSS

- **Minimise safety risk** in manoeuvring, berthing, and cargo handling in seaports

- **Reduce the environmental footprint per transported TEU** through optimisation of next-leg deliveries and modal shift to SSS and rail

- **Deployment of multiple data producing devices** that will contribute to the development of logistics applications and an automated, interconnected, multimodal transportation system
Paving the way towards the future of Short Sea Shipping!

If you have any questions or require further information, please contact us:

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