

MOSES



MOSES Project Overview



MOSES Facts

- **Project Title:** AutoMated Vessels and Supply Chain Optimisation for Sustainable Short Sea Shipping
- **Call identifier:** H2020-MG-2.6-2019
- **Topic:** “Moving freight by Water: Sustainable infrastructure and Innovative Vessels”
- **Duration:** 01.07.2020 - 30.06.2023 (36 months)
- **Funding scheme:** RIA – Research and Innovation Action
- **EU contribution:** EUR 8 122 150
- **Coordinated by:** National Technical University of Athens (NTUA), Greece



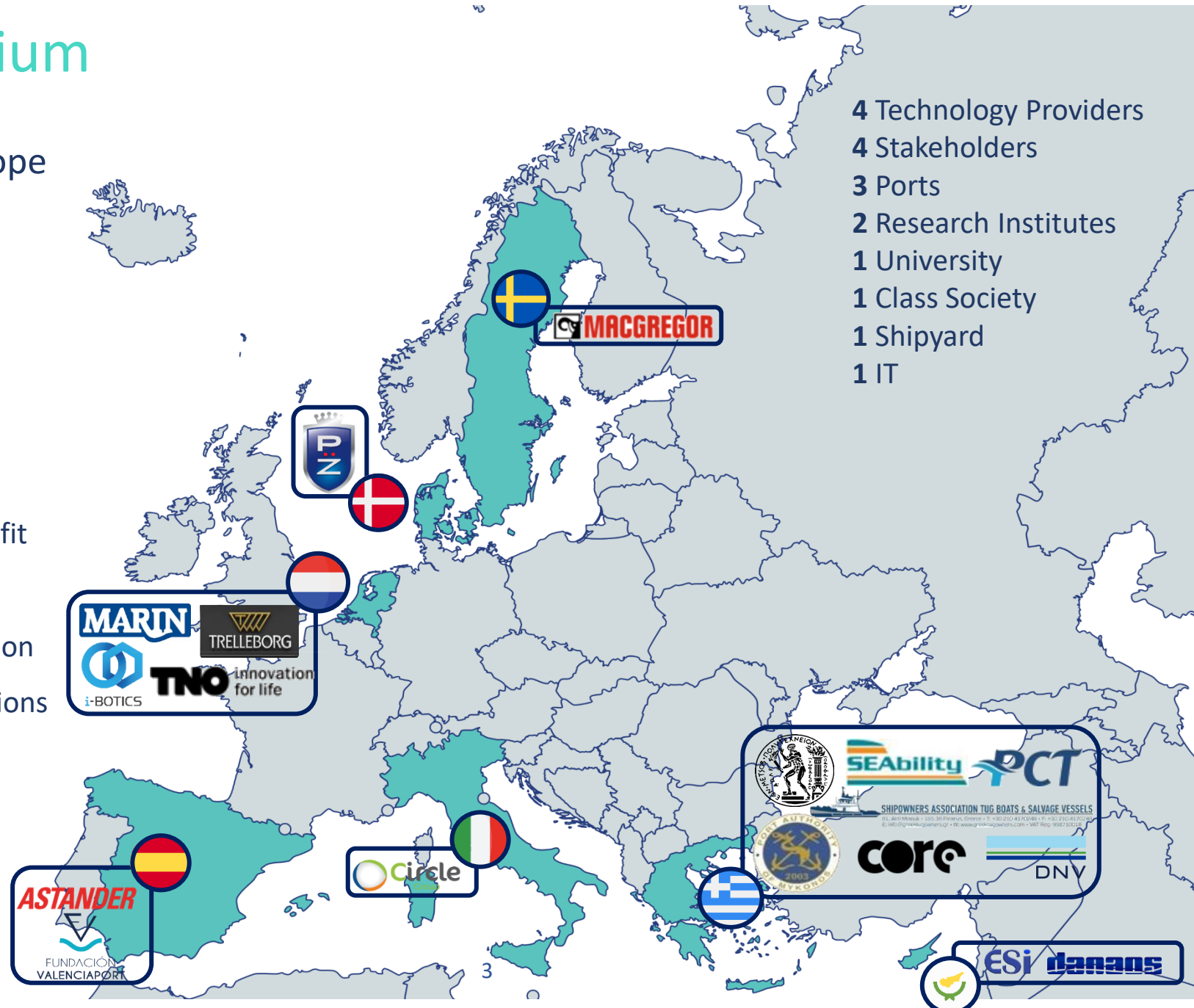
MOSES Consortium

17 Partners across Europe

Expertise in:

- Naval design
- Maritime Logistics
- Risk, Safety, Environmental Assessment
- Sustainability and Cost-benefit Analysis
- Autonomous System operation
- Port Infrastructure & operations
- Business Modelling
- Innovation Management

4 Technology Providers
4 Stakeholders
3 Ports
2 Research Institutes
1 University
1 Class Society
1 Shipyard
1 IT



MOSES Vision

The aim of MOSES project is to enhance the Short Sea Shipping (SSS) component of the European supply chain by addressing the vulnerabilities and strains related to the operation of large containerships.

A two-fold strategy

SSS feeder services

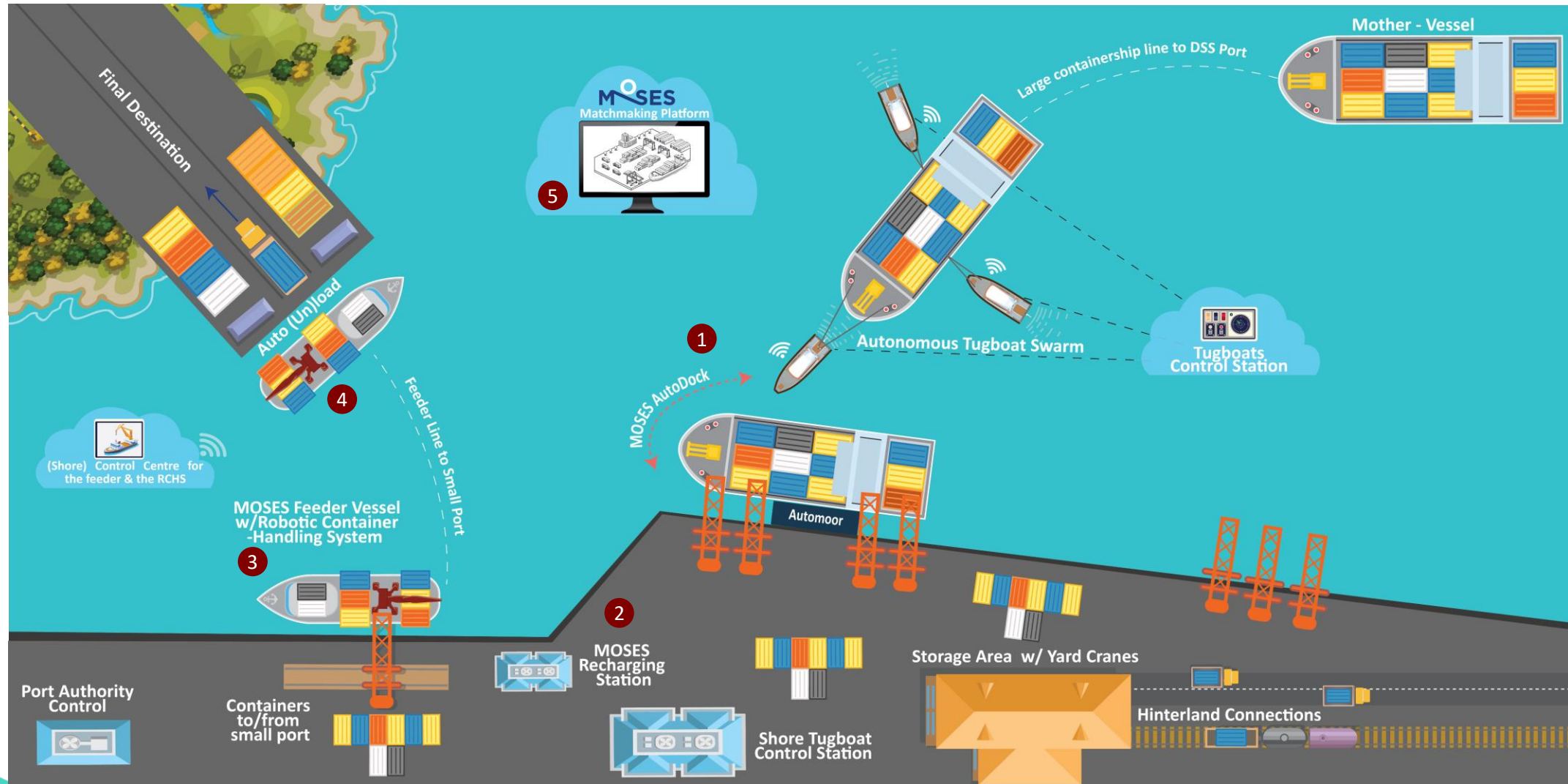
Ship design for sustainable services – no infrastructure required

Logistics solution for balancing demand-supply

DSS ports efficiency

Technological solutions for improving DSS ports inefficiencies – reduce berthing time, improve safety

MOSES Concept & Innovations



MOSES Pilot Demonstrations

Pilot 1: AutoDock

SCOPE: Intelligent cooperation of autonomous tugboat swarm to manoeuvre a large containership and dock it by collaborating with an automated mooring system.



Faaborg harbour, Denmark (TUCO's facilities)

METHOD: 2x TUCO's Pro:Zero workboats will be equipped with MOSES autonomy package. The workboats will cooperate to maneuver a floating vessel to the dock. TRELLEBORG will fabricate and install on the dock a 1-off small-scale automated mooring unit prototype, outfitted with MOSES intelligence to collaborate with the workboats.

Pilot 2: Feeder

SCOPE: Seakeeping and energy performance. Capability to be used for automated mooring.



MARIN's Seakeeping and Manoeuvring Basin (SMB), Netherlands

METHOD: A scaled ship model will be fabricated for 1 vessel design (out of the 3 evaluated in MOSES) and tested in seakeeping and manoeuvring basins.

Pilot 3: Robotic CHS

SCOPE: Autonomous container handling capability and shared control between human operator and system.



MacGregor test facility, Örnsköldsvik, Sweden

METHOD: A full-scale, operational MacGregor GLE Crane, outfitted with sensor package, will be controlled by an operator at the MOSES Shore Control Station (SCS) to handle a container. The demo will be implemented with the SCS onsite and at a remote location.

MOSES upcoming pilot activities



SAVE THE DATE

Exploitation workshop on

MOSES

the autonomous sailing of MOSES
Innovative Container Feeder Vessel



02 November 2023



10.00-12.00 CET



Online, via Zoom platform



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 861678. The content of this document reflects only the authors' view, and the Agency is not responsible for any use that may be made of the information it contains.



SAVE THE DATE

Exploitation workshop on

MOSES

Robotic Container Handling System



15 November 2023



10.00-12.00 CET



Online, via Zoom platform



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<https://moses-h2020.eu/exploitation-workshop-on-the-autonomous-sailing-of-moses-innovative-container-feeder-vessel/>

<https://moses-h2020.eu/2nd-exploitation-workshop-on-moses-robotic-container-handling-system/>



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Thank you for your attention!

 www.moses-h2020.eu

 MOSES project2020

 @mosesproject20

 MOSES Project



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