

# MOSES

## The MOSES Project Innovations and data importance

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BMVI-Workshop series  
"Data Innovations for Smart Mobility in Europe"

Workshop No. 4:

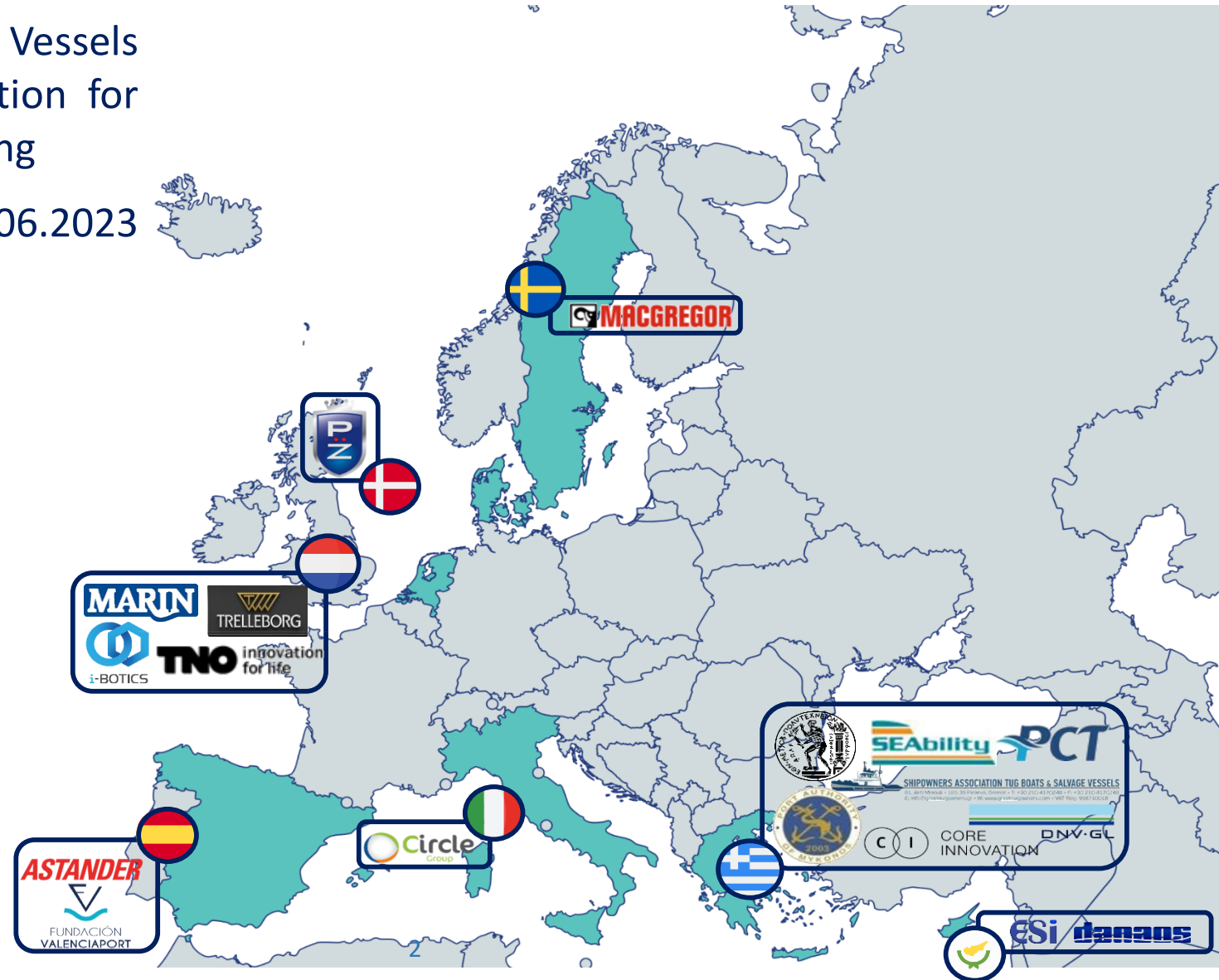
**Data use for planning and operations in Logistics**  
– improving efficiency and reducing emissions

22/9/2021, Online



# 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
- Transshipment from Hub ports via **unsustainable land-based transportation**
- Short Sea Shipping could provide an **efficient, green, safe** alternative to land-based transshipment

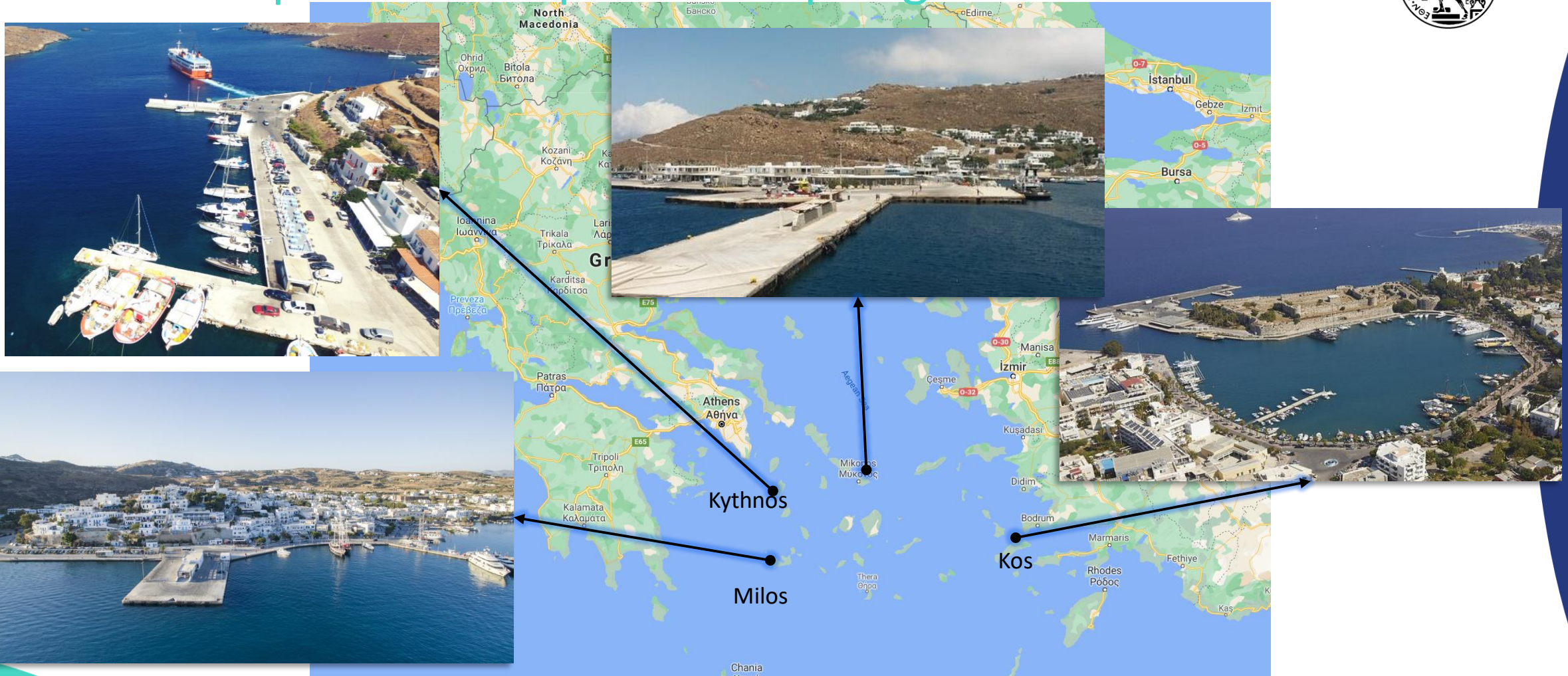


## Challenges:

- 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

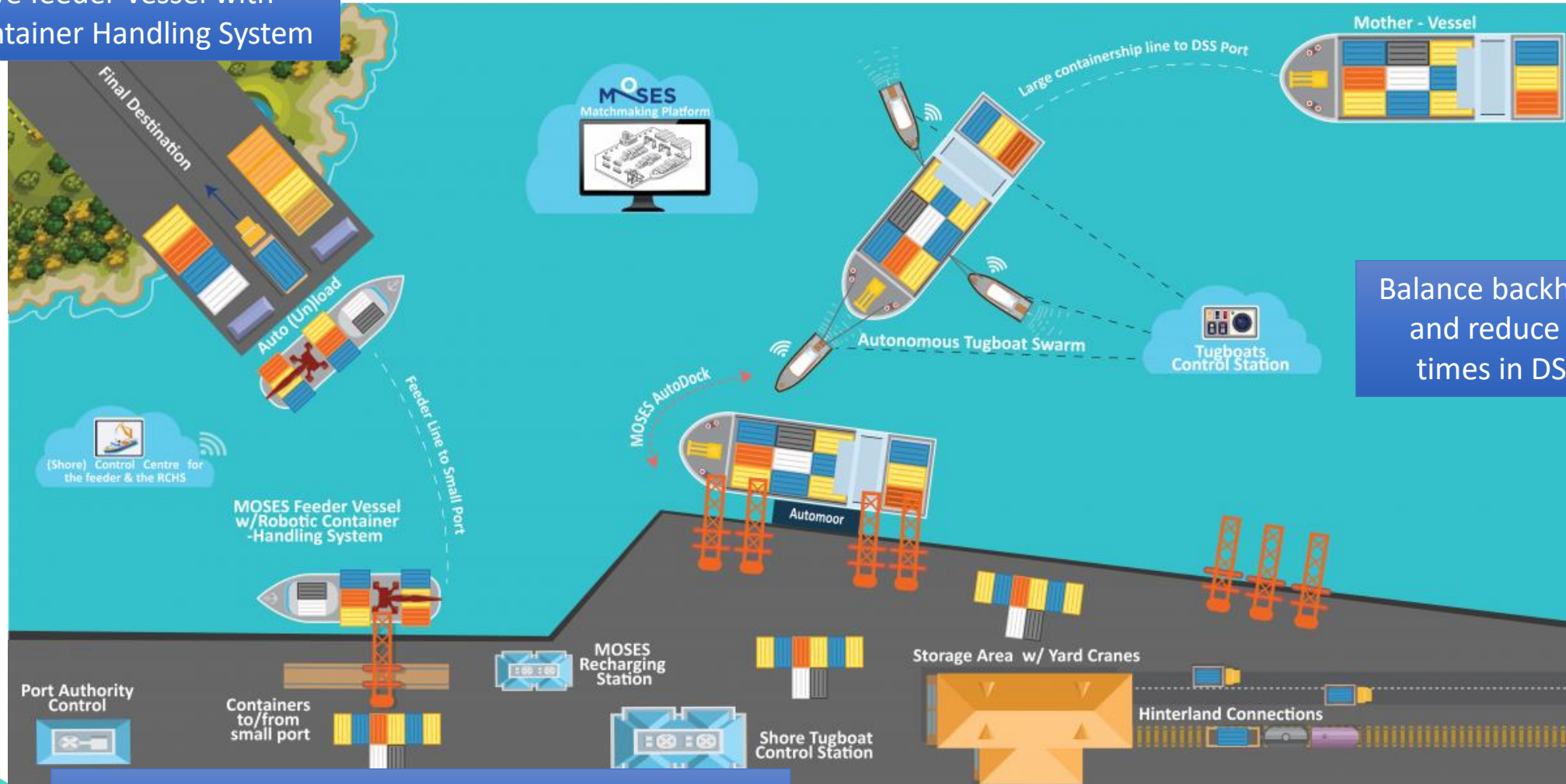


What if we could create sustainable feeder services from large container terminals to **small ports with no infrastructure?**



# The MOSES Concept

Innovative feeder vessel with Robotic Container Handling System

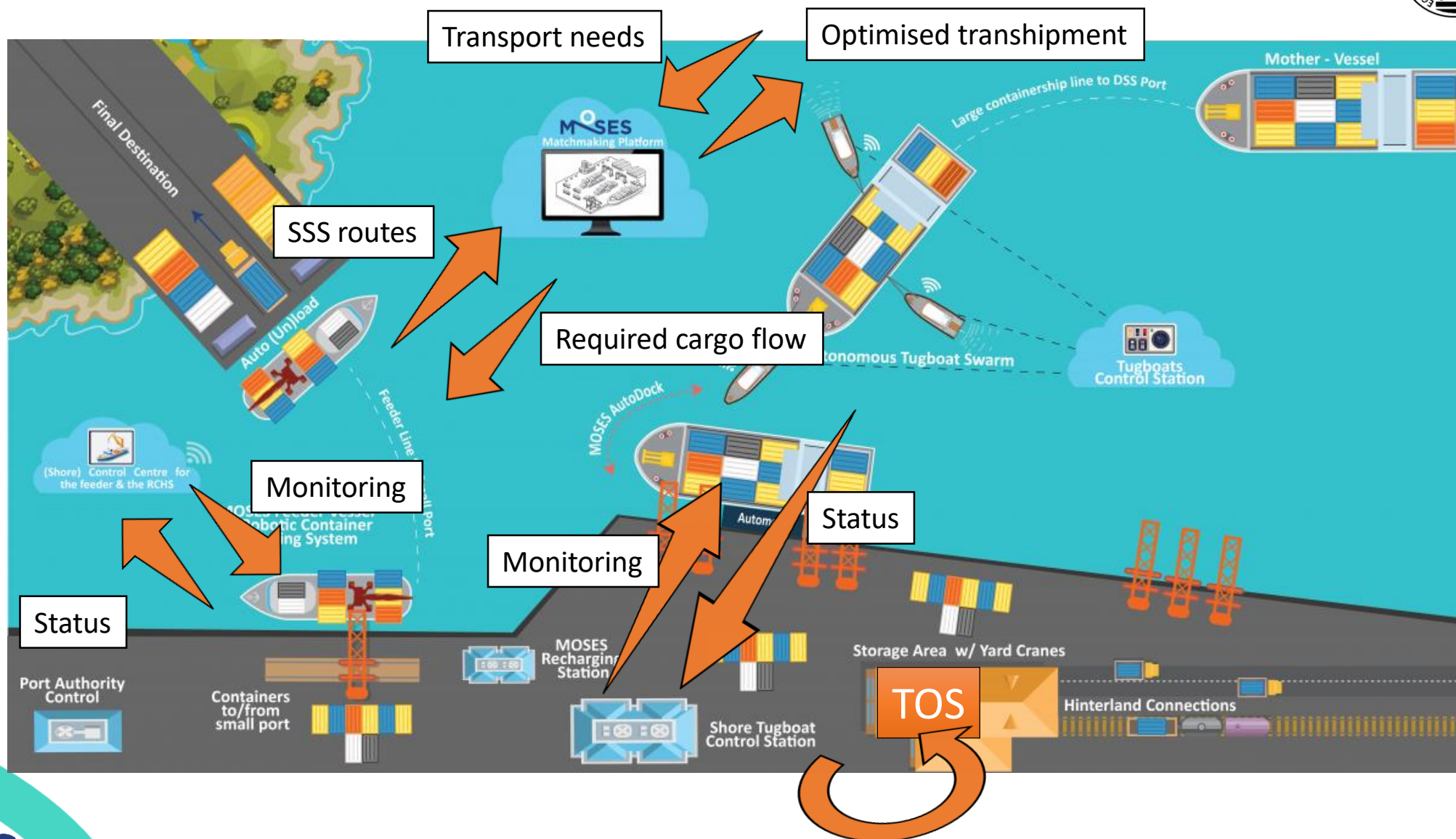


Balance backhaul traffic and reduce waiting times in DSS ports

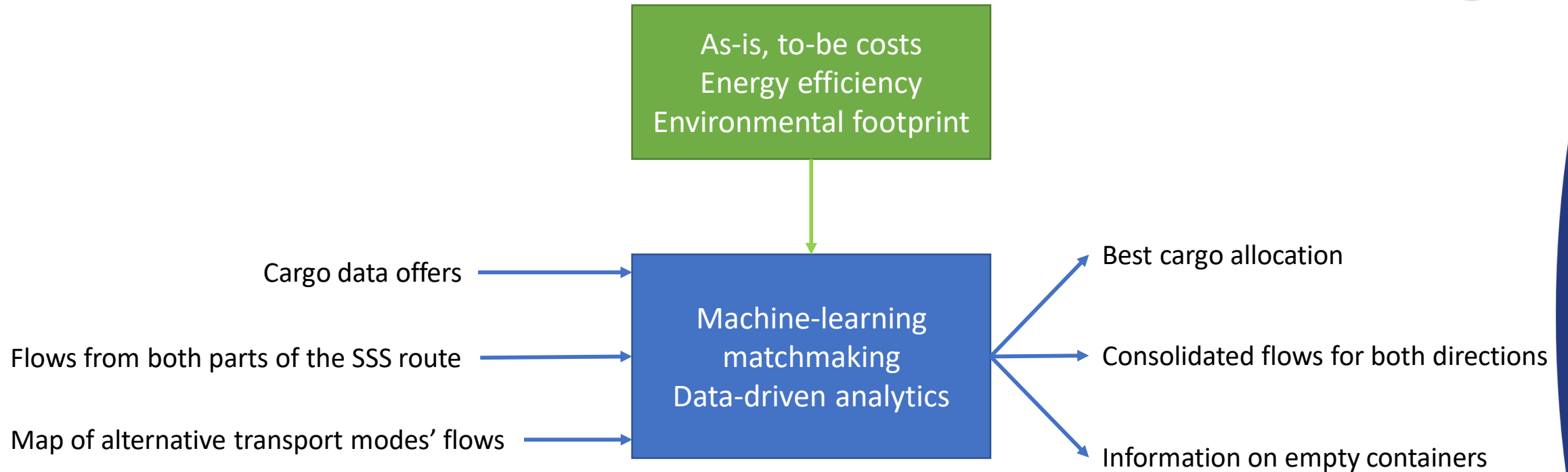
Stimulate synchronicity with interconnected collaboration between shippers and port operators



# The MOSES Concept – Data flows

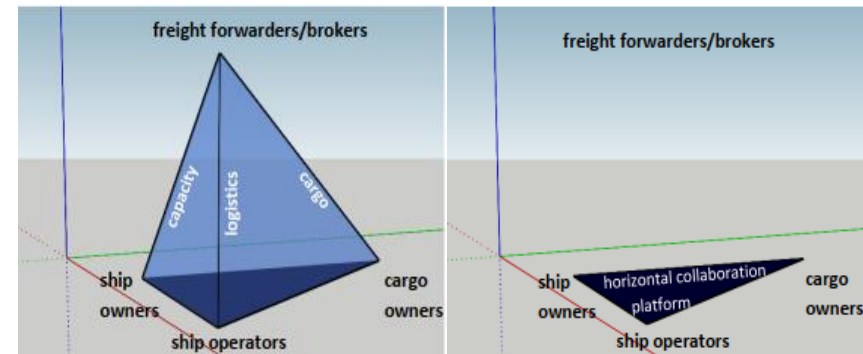


# MOSES Matchmaking Platform

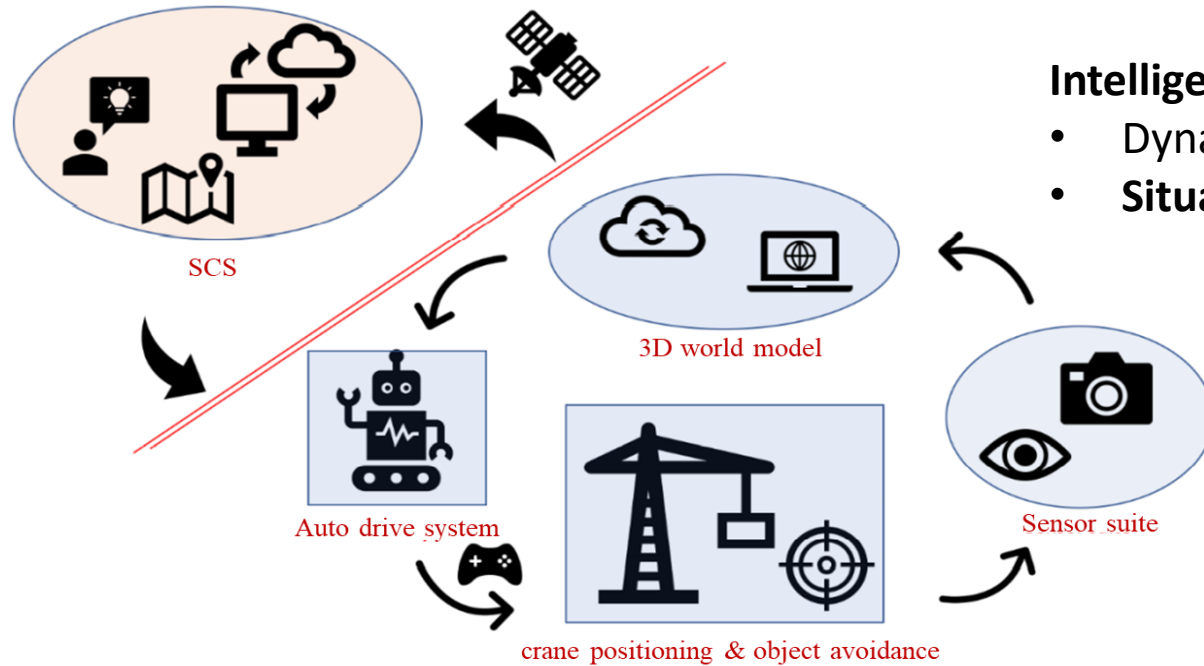


## Objectives:

- 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:**

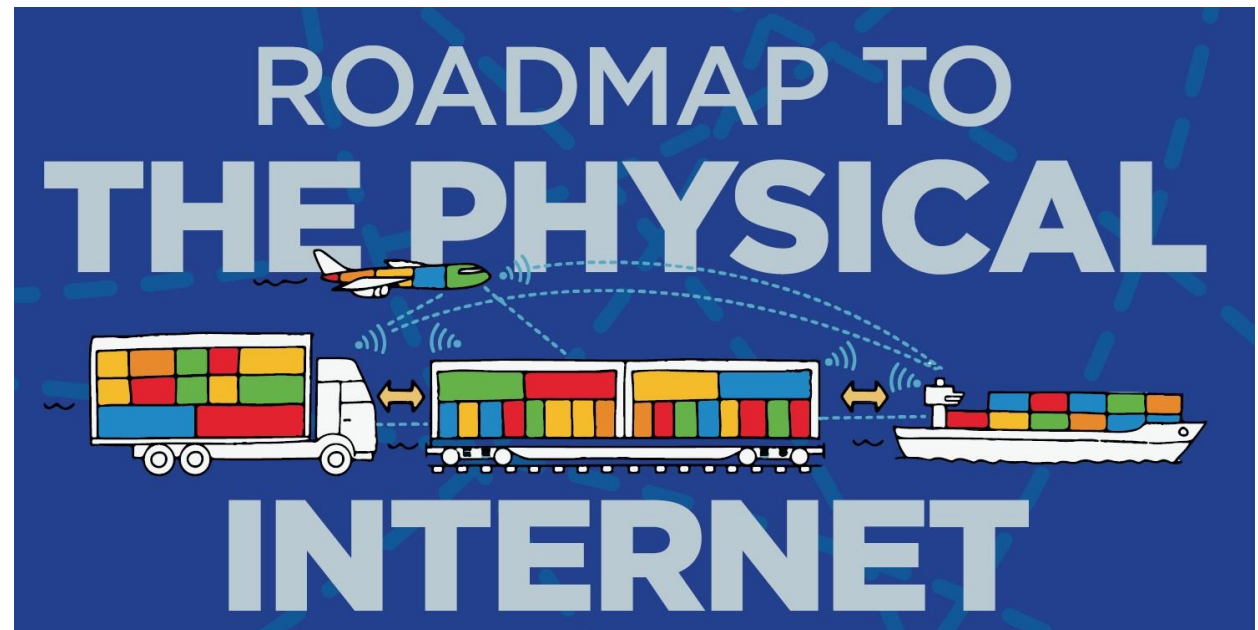
- Relative vessel position to dock
- Relative positions of tugs
- Identified objects to be avoided
- Tug motions





# 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





# MOSES

## 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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 MOSES Project



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