



BETTER SHIPS, BLUE OCEANS

MOSES Pilot Demonstration

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- Welcome
- Introduction MARIN
- MARIN Scope in MOSES Project
- Program



This project has received funding from the European Union's horizon 2020 research and innovation programme under grant agreement No. 861678.

Better ships, Blue oceans

Clean, smart and safe shipping, sustainable use of the seas

This scene depicts a maritime safety scenario. A large dark-hulled oil tanker is moving through the water, with a white tugboat positioned alongside it. In the background, a long line of offshore wind turbines stretches across the horizon under a clear sky.

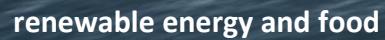
safe shipping

This scene shows a large, complex offshore industrial platform or artificial island in the middle of the sea. The platform features numerous cranes, pipes, and several large white spherical storage tanks. A long supply vessel is docked at one of the piers.

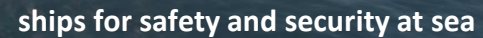
infrastructure of the future

This scene illustrates autonomous shipping. A large blue and white container ship is shown in the center, with several smaller autonomous surface vessels (ASVs) operating around it. The ASVs are equipped with sensors and communication equipment, likely for collision avoidance and data exchange.

autonomy
& decision
support

This scene focuses on sustainable maritime production. It features a large array of floating solar panels on the water's surface, with several yellow and white wind turbines interspersed among them. A small boat is visible near the turbines.

renewable energy and food

This scene depicts a maritime security operation. A large white patrol ship is leading a formation of several smaller, dark-hulled vessels. They are all moving in a coordinated pattern across the open sea.

ships for safety and security at sea

This scene shows a green-hulled cargo ship equipped with multiple large, white, parabolic solar collectors on its deck. The ship is moving through the water, leaving a white wake behind it.

zero emission ships

Seakeeping & Manoeuvring Basin

Deep Water Basin

Shallow Water Basin

The Atmosphere

Concept Basin

Offshore Basin

Full-mission Bridge Simulators

Zero Emission Lab
(including Cavitation Tunnel)

Seven Oceans Simulation centre
(under construction)

High Performance Computing

Depressurised Wave Basin

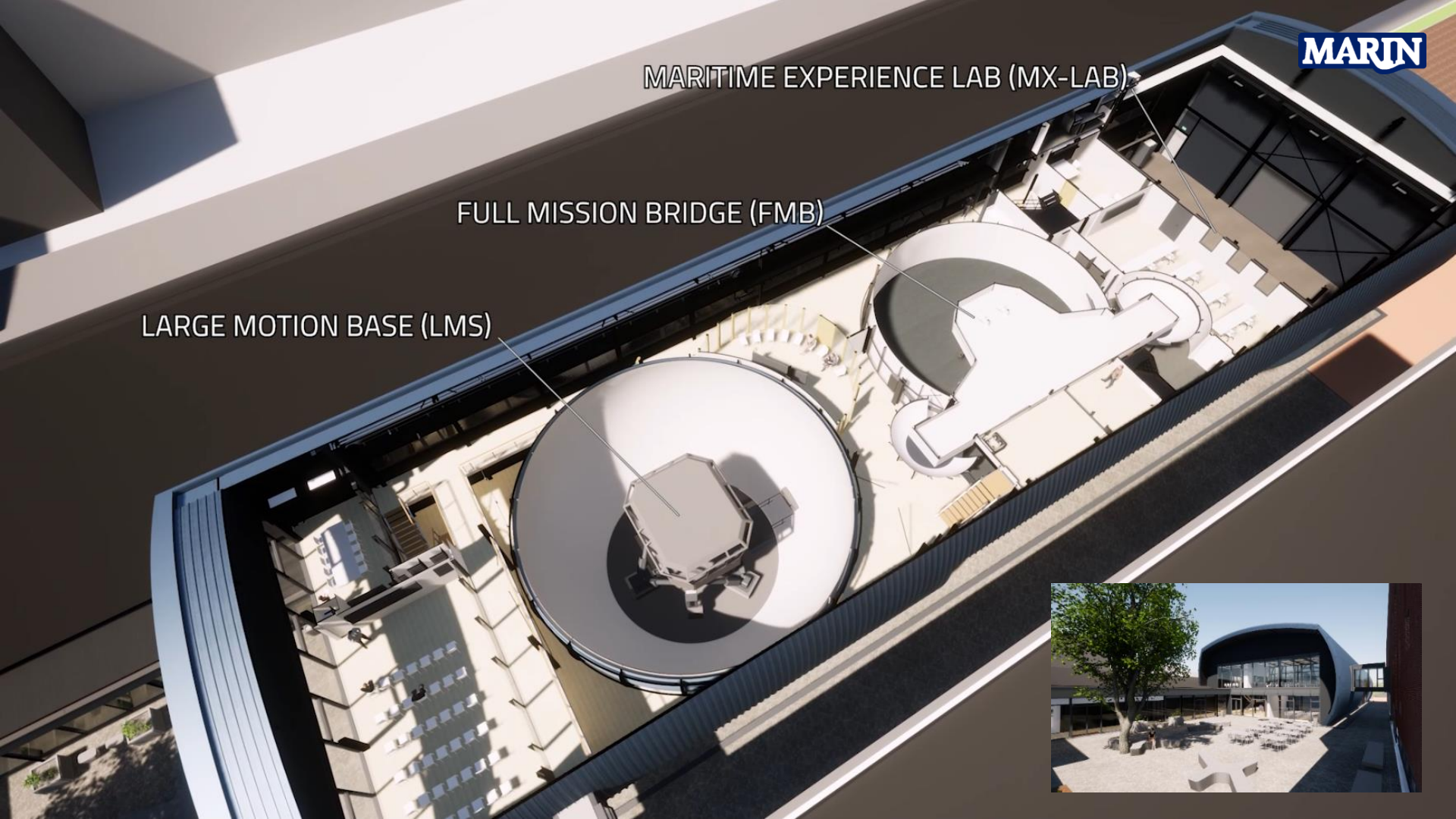
MARIN Ede



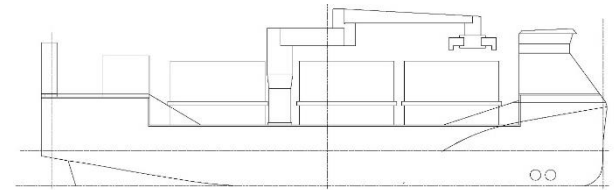
MARITIME EXPERIENCE LAB (MX-LAB)

FULL MISSION BRIDGE (FMB)

LARGE MOTION BASE (LMS)



- T3.1 - Innovative Container Feeder Design
 - Dimensions, general arrangement, hull shape
 - Energy concepts, service speed
- T3.2 - Autonomous Operation
 - Vehicle control, autonomy
 - Time-domain simulations (Mykonos-Piraeus)
- T7.3 - Pilot Demonstration
 - Scale model of the Feeder Vessel
 - Demonstration of the autonomous operation





L x B x D = 170 x 40 x 5 m
Main carriage (X) + sub-carriage (Y)
Maximum speed 6 m/s
Wave flaps on 2 sides (331)
Beaches on opposite sides
Multi-directional waves ($H_s = 0.45$ m)
Free sailing tests
Captive tests
Rotating arm tests

09:30 - 10:00	Welcome and Registration	
10:00 - 10:15	Introduction	Hans Cozijn
10:15 - 10:45	Horizon2020 Project MOSES	Nikolaos Ventikos
10:45 - 11:15	Coffee Break	
11:15 - 11:45	Design of the Container Feeder Vessel	Gerco Hagesteijn
11:45 - 12:15	Robotic Container Handling System	Hans van den Broek
12:15 - 13:00	Lunch	
13:00 - 13:30	Autonomous Operation of the Container Feeder	Bas de Kruif
13:30 - 13:45	Safety Instruction & House Rules	Hans Cozijn
13:45 - 14:00	Walk to MARIN Model Basin	
14:00 - 16:00	Pilot Demonstration - Seakeeping & Manoeuvring Basin (SMB)	
16:00 - 17:00	Drinks	

Thank You !

