



Waterborne Transport



AUTOSHIP
Autonomous Shipping Initiative for European Waters



HORIZON EUROPE

AUTOSHIP

*Autonomous Ship Initiative for European
Waters*

Safe and Digital Waterborne Transport

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Consultants

The challenge

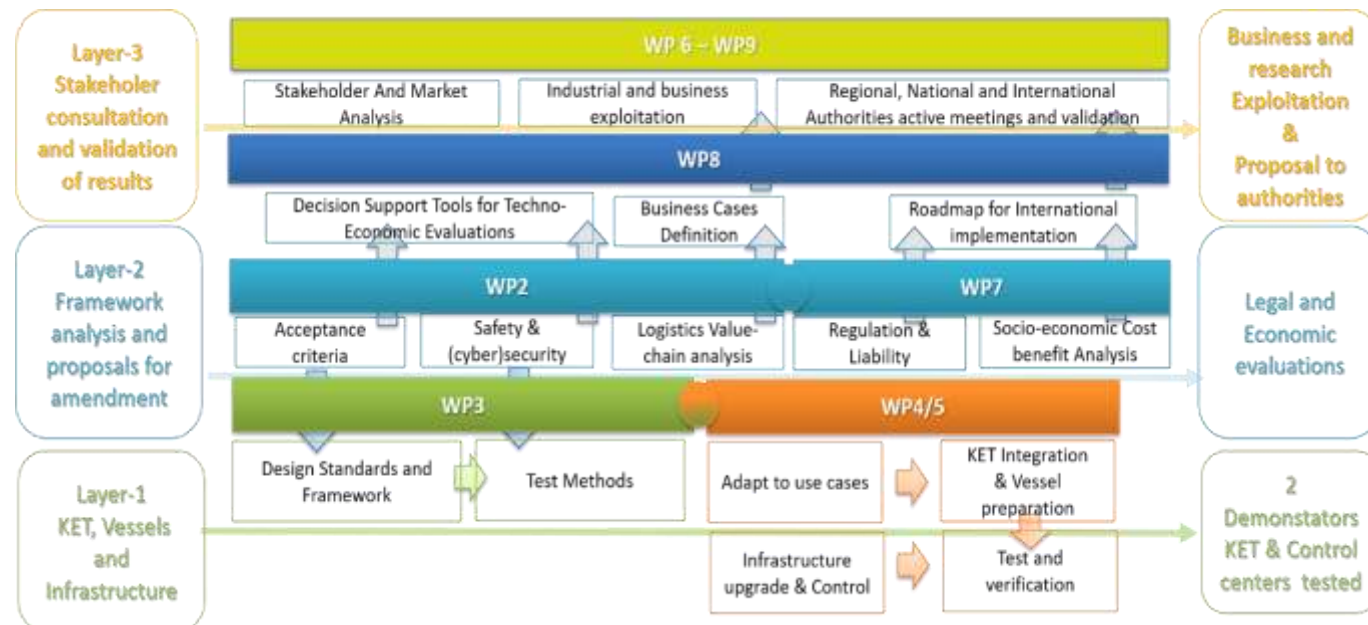
AUTOSHIP aims at **speeding-up the Next Generation of Autonomous Ships**

Developing
Enabling
technology

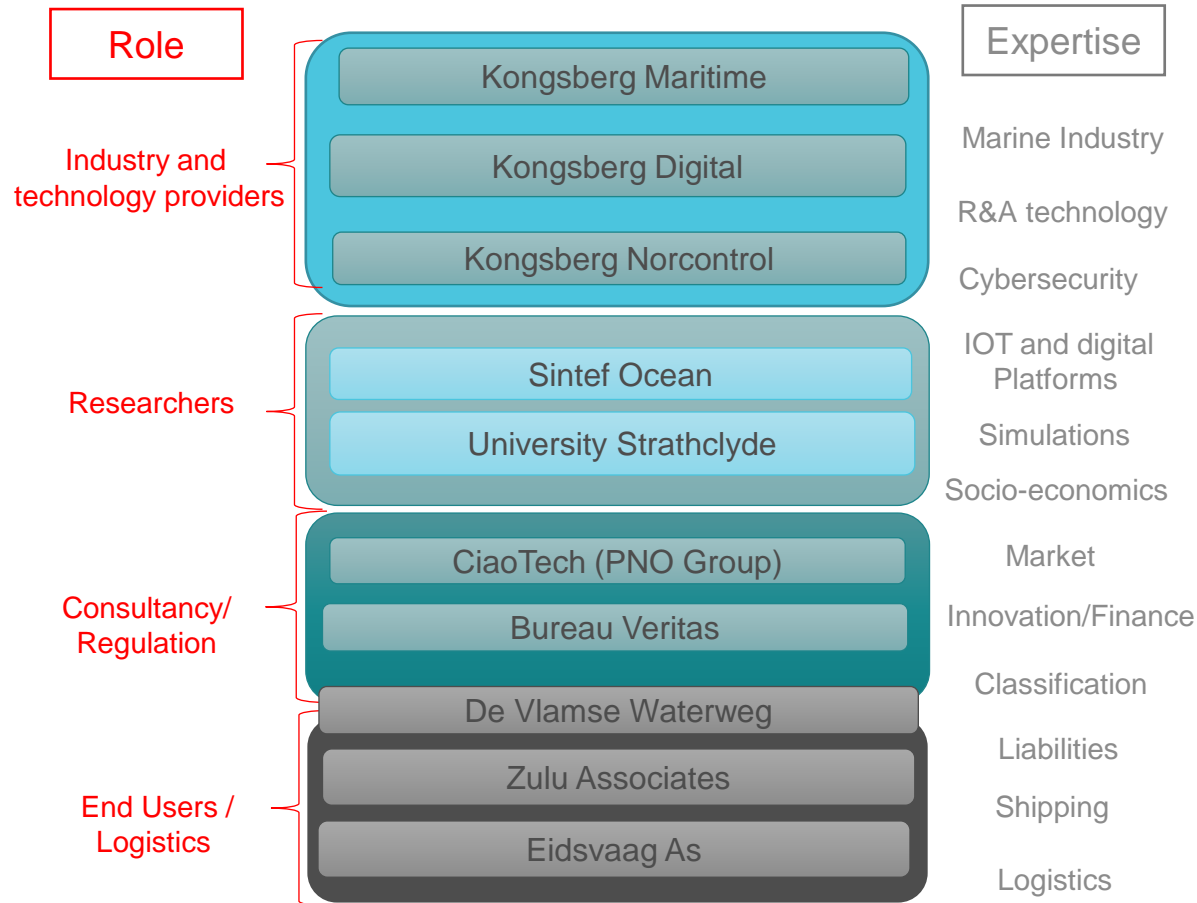
Bridge the missing gap to **integrate and develop Key Enabling Technologies up to Demonstrating autonomous vessels in real environment** Short Sea Shipping and Inland Water Ways.

Building a
common vision

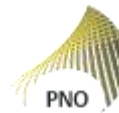
Actively **contributing to understand** business cases, regulations, standards, liabilities and **socio-economics of autonomous shipping**



The Consortium - know-how, R&I, market outreach



- ☐ **Project start date:**
1st June 2019
- ☐ **Duration:** 42 months (currently under extension)
- ☐ **Current estimated eligible costs:** € 29 M€
- ☐ **Maximum EU contribution:** € 20.109.109,13

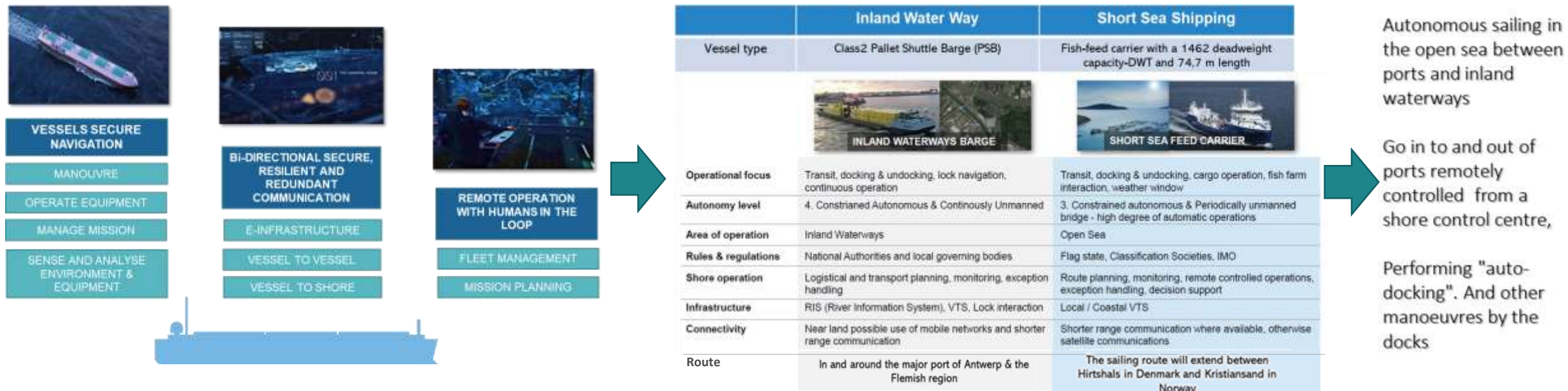


Coordinator



The challenge – the technology

AUTOSHIP is working to have the **Technical Systems ready, safe and tested with approved Concept of Operations (CONOPS)**. In parallel, **digital tools and methodologies for design, simulation and cost analysis** will be developed for the whole community of autonomous ships.



Testing will take place during **two pilot demonstration campaigns**



Achievements

- **KET** development and installation is progressing (Cameras, Sensors, Algorithms, MBR, WiGig, 4G,5G)
- **CONOPS** for IWW is finalised and demonstrations **storyboards** are being developed
- K-SIM **simulator** and validators
- Remote Control Center **Ergonomics and Design**
- Scaled Demonstrators testing
- MASS **Analysis tool** for early phase concept exploration. It can be used to study the effects of high-level design choices on transport costs and emissions, enabling comparison of concepts
- Remarkable **social media attention and response**
- SAG (Advisory Board) and Intense exchanges with EMSA
- **Contribution to Standards** (ISO/TS 23860 "Terminology related to Autonomous Ship Systems") based on work in AUTOSHIP

- Supply-chain mapping and modelling (D2.1, D7.5)
- Design standards, methods and tools (D3.1, D3.2)
- Gaps and compliance - regulatory (D2.3) and operational (D2.5)
- Security and Safety analysis and methods definition (D2.4-D2.6)
- Generic Business Case model (D8.1)
- Stakeholder and Innovators Analysis and Survey (D7.1, D9.6)

<https://www.autoship-project.eu/downloads/>

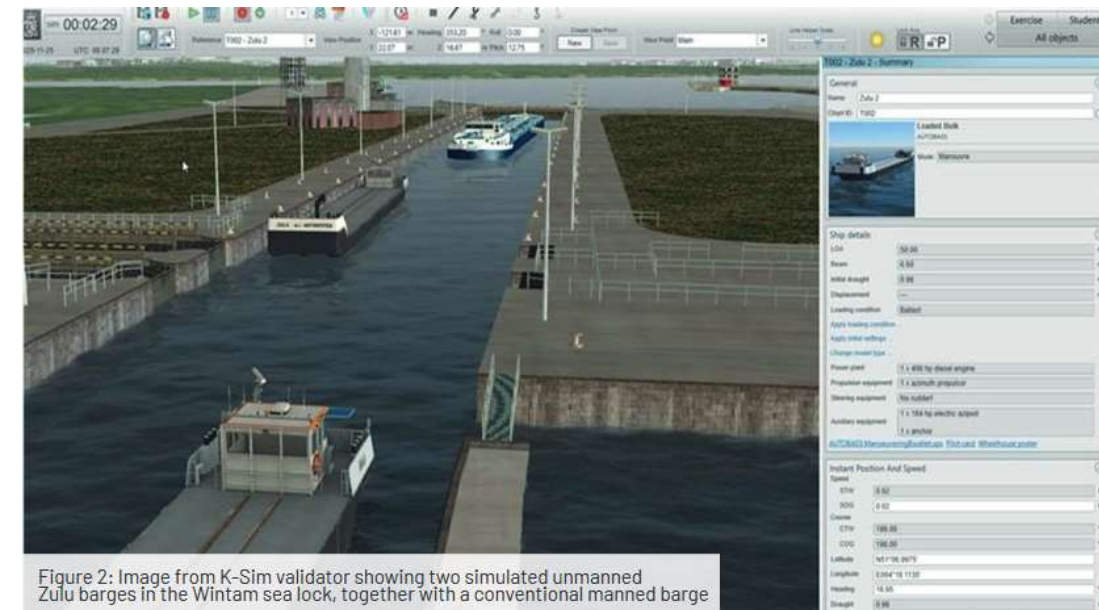
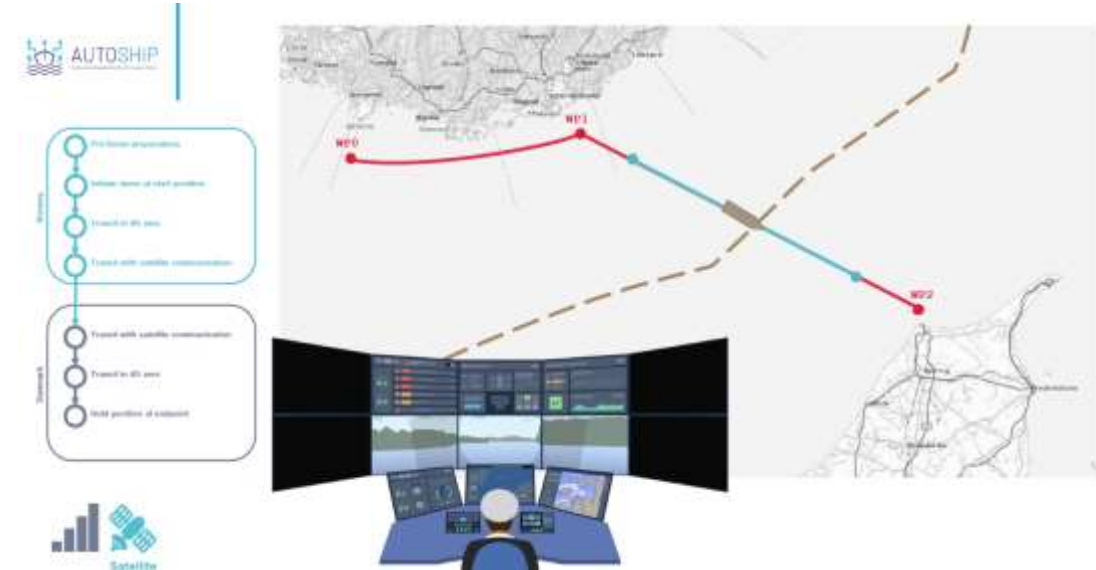


Figure 2: Image from K-Sim validator showing two simulated unmanned Zulu barges in the Wintam sea lock, together with a conventional manned barge

Next Steps

End 2022

End 2023

- Finalise the technology and ***Preparing the demo campaign and final event***
- ***Cost Benefit Analysis*** with 2 use cases based on EC standard methodology for socio-economic impacts assessment
- ***Autonomous ships R&D roadmap and up-scale scenario***
- ***Keeping contact and exchange with EC, EMSA, ISO, IMO and our Advisory Group***



Looking beyond the current boundaries and limitations: accomodating KETs, key results and lessons learnt



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Q&A ?

Speaker will be available on the stand for the remainder of the day.

Contacts:

- Link to project website: <https://www.autoship-project.eu/>
- Project Social media: <https://www.linkedin.com/company/autoship> -- <https://twitter.com/AutoshipProject> -- [Autoship | Facebook](#)
- Contact detail: m.molicacolella@pnoconsultants.com
- Horizon Europe Horizon Europe | European Commission (europa.eu)
- Waterborne TP: [Welcome to Waterborne - Setting the agenda for Maritime Research in Europe - waterborne.eu](#)