



One Sea – Autonomous maritime ecosystem

Recent development and inland navigation

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Ecosystem Lead
DIMECC**

**The One Sea – Autonomous
Maritime Ecosystem
is exceptionally advanced
and a natural step towards
digitalizing marine industry.**



DIMECC is a co-creation ecosystem that combines digitalization, internet, materials and engineering. The objective of **One Sea** is to create the world's first autonomous maritime ecosystem by 2025.

A large container ship, the Tsingtao Express, is shown from an aerial perspective, sailing on a dark blue ocean. The ship is heavily loaded with colorful shipping containers in shades of red, yellow, blue, and green. The ship's hull is dark blue with the name 'TSINGTAO EXPRESS' visible. The ship is moving towards the right, leaving a white wake behind it. The sky is a clear, pale blue.

**Global pioneers of marine
industry are leading the
business-driven project.**

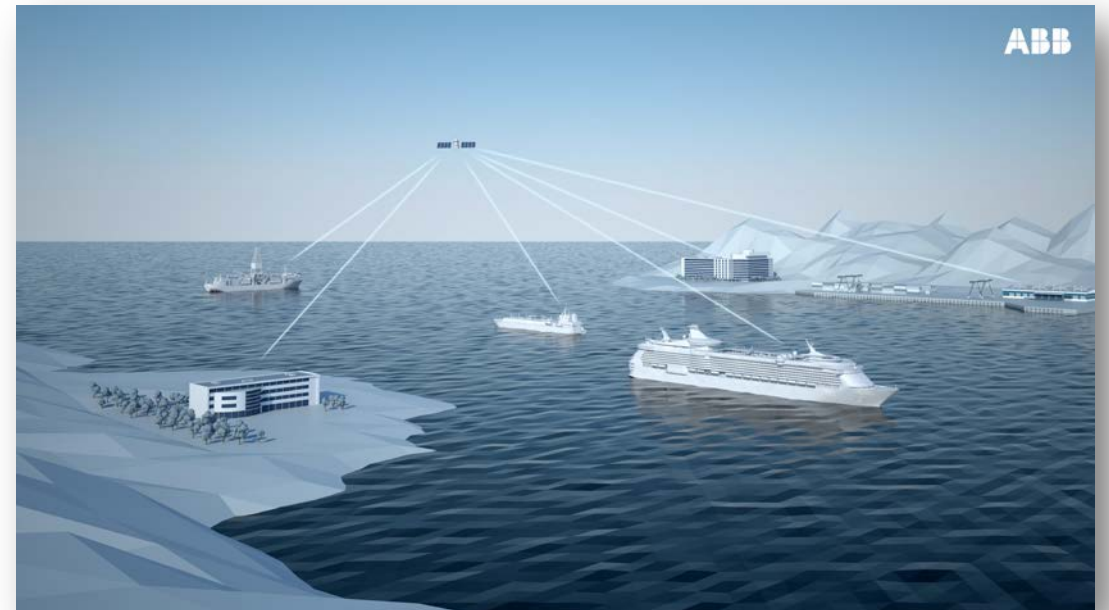
One Sea Partners

ABB
Cargotec
Ericsson
FinFerries
Finnpilot Pilotage
Meyer Turku
Rolls-Royce
Tieto
Wärtsilä



Digitalization will transform marine industry in near future and give a powerful push towards new innovations. The early adopters will get clear benefits simply by being the first ones on the market.

- **Cost efficiency & new revenue models**
- **Safety**
- **Sustainability**



Ecosystem activities

Ecosystem Core Activities	Vision & Strategy				
	Roadmaps				
Ecosystem Program Activities <i>Open to all parties</i>	Product & service creation				
	Startup ecosystem				
	Pilots, PoC's				
	R&D Programs				
	Rules & regulations				
	Test areas, Labs				

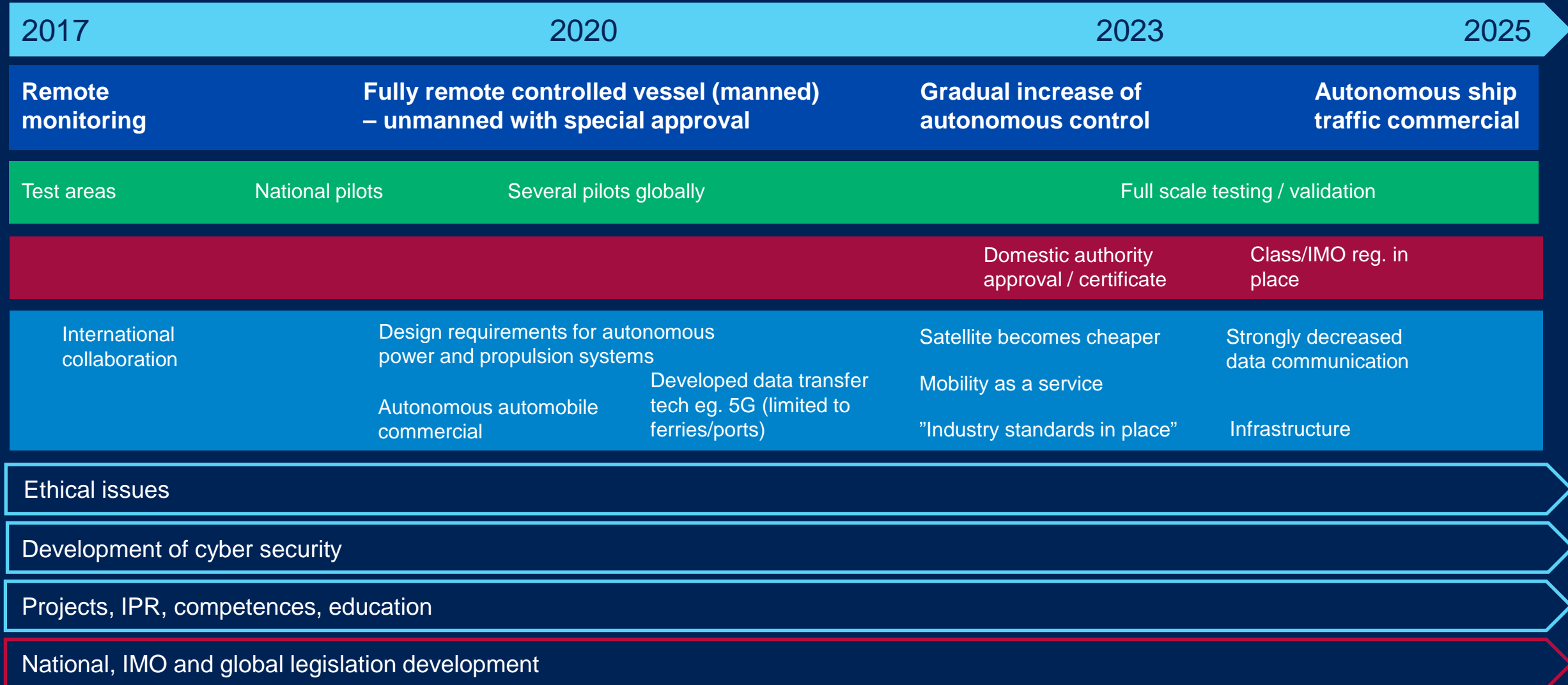
Ecosystem activities

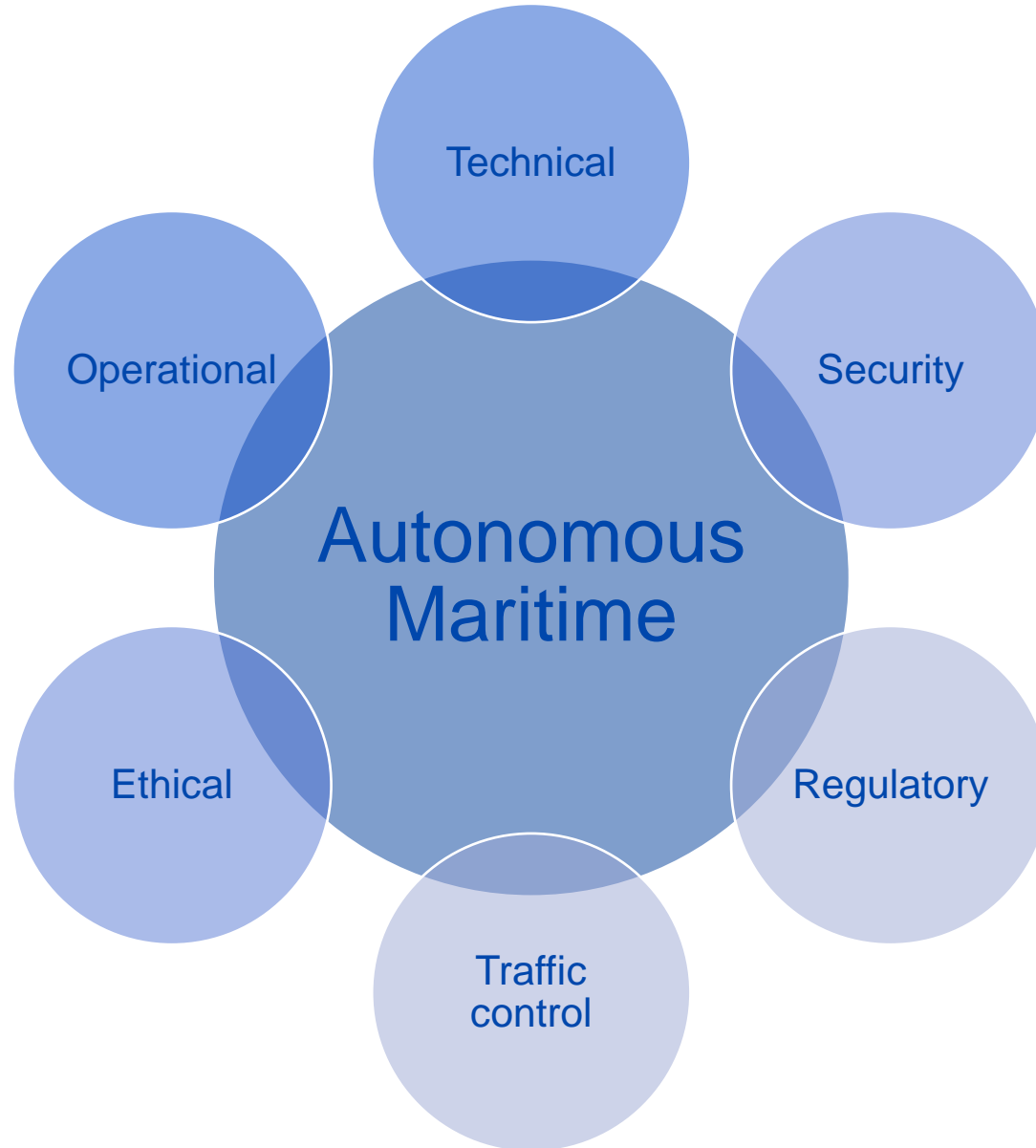
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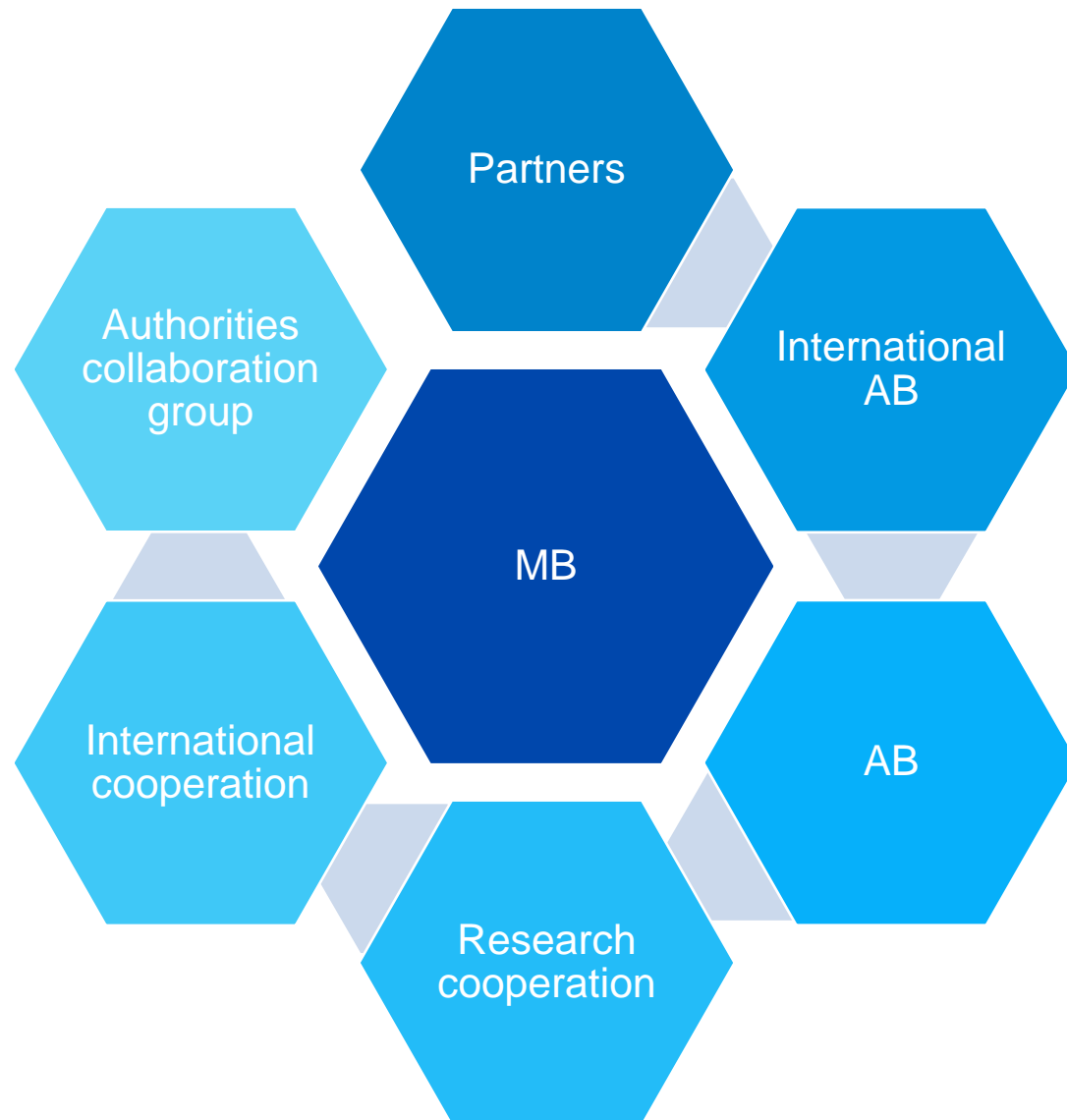
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Timeline for autonomous ships







One Sea Working Groups



Ecosystem activities

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Rules and regulations

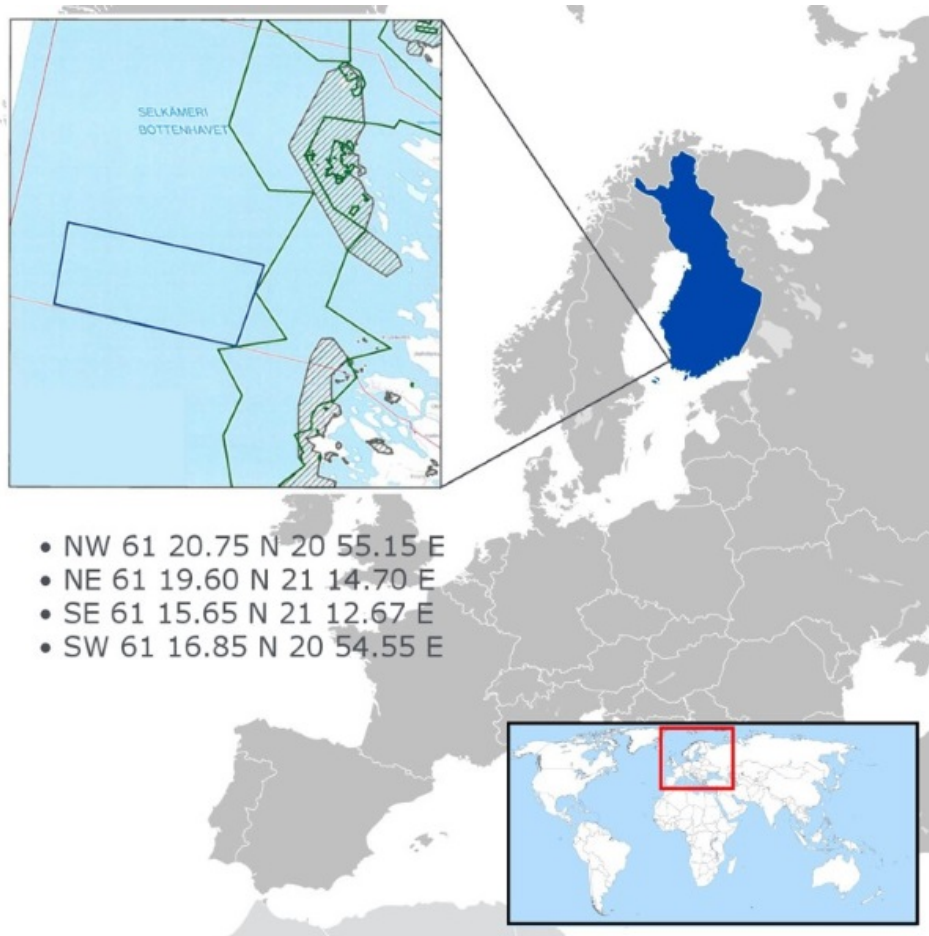
IACS
INTERNATIONAL ASSOCIATION OF CLASSIFICATION SOCIETIES LTD.



Ecosystem activities

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Pilots, PoC's, Test Areas and Labs



Ecosystem activities

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DIMECC D4Value program



Ecosystem is a platform for R&D&I programs

ONE SEA

Autonomous maritime ecosystem



Ecosystem activities

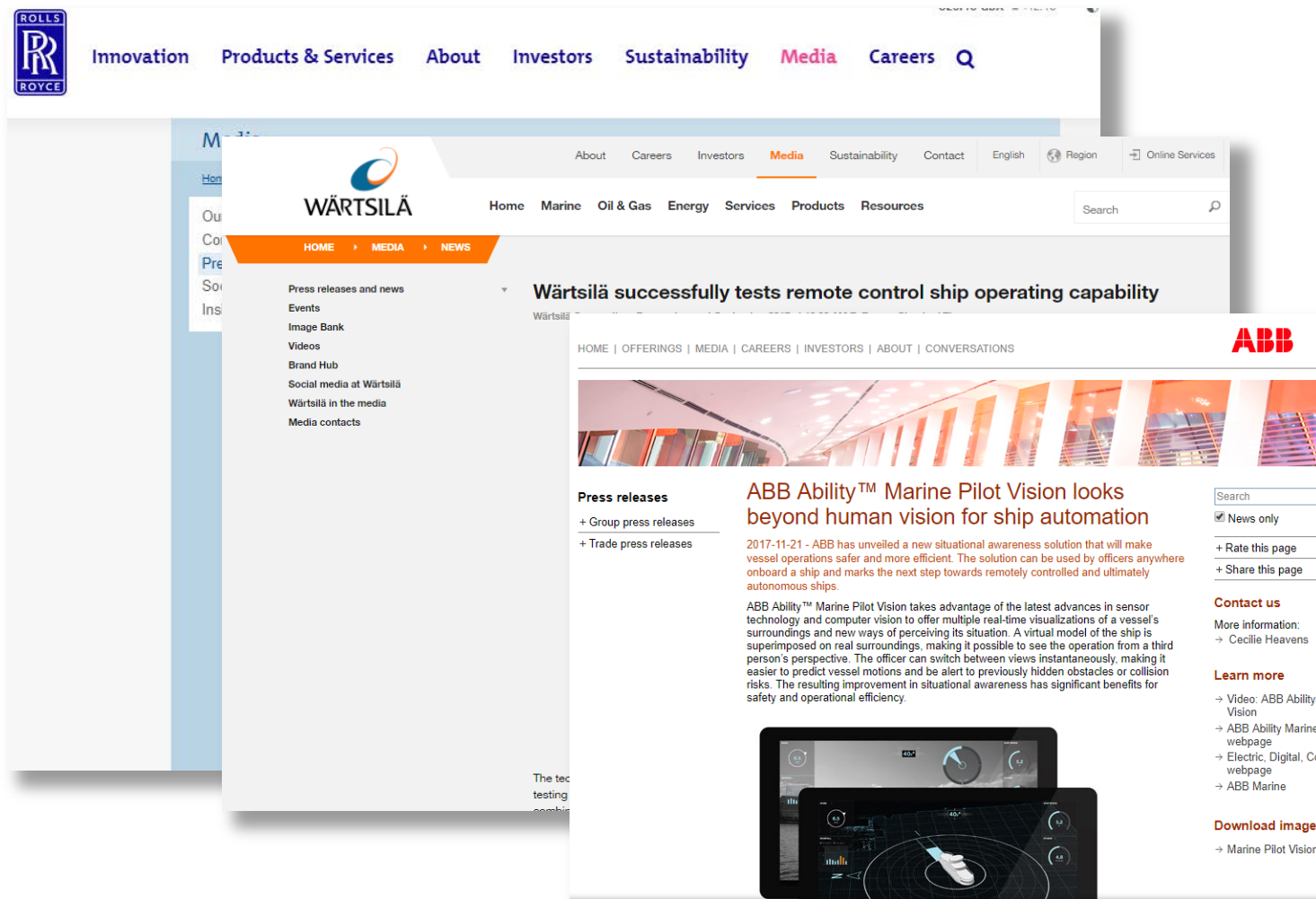
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Recent development



20th June 2017

First remote operated vessel

1st Sep 2017

First remote operated vessel over satellite

29th Nov 2017

First certified product launched

2018

More to come...

Inland navigation

- Long, narrow and shallow, compared to sea
- 29,000 km of inland waterways and 7,300 inland vessels in Europe
- Finland
 - 2,6% of Europe's inland waterways are in Finland (40km + 700 km) (E60-11)
 - 1,2 Million tons of goods per year
 - Other inland vessels mostly road ferries
 - Finland is not a big player in inland waterways
 - Finnish archipelago has challenging fairway navigation environment

➔ Excellent environment for developing autonomous fairway navigation

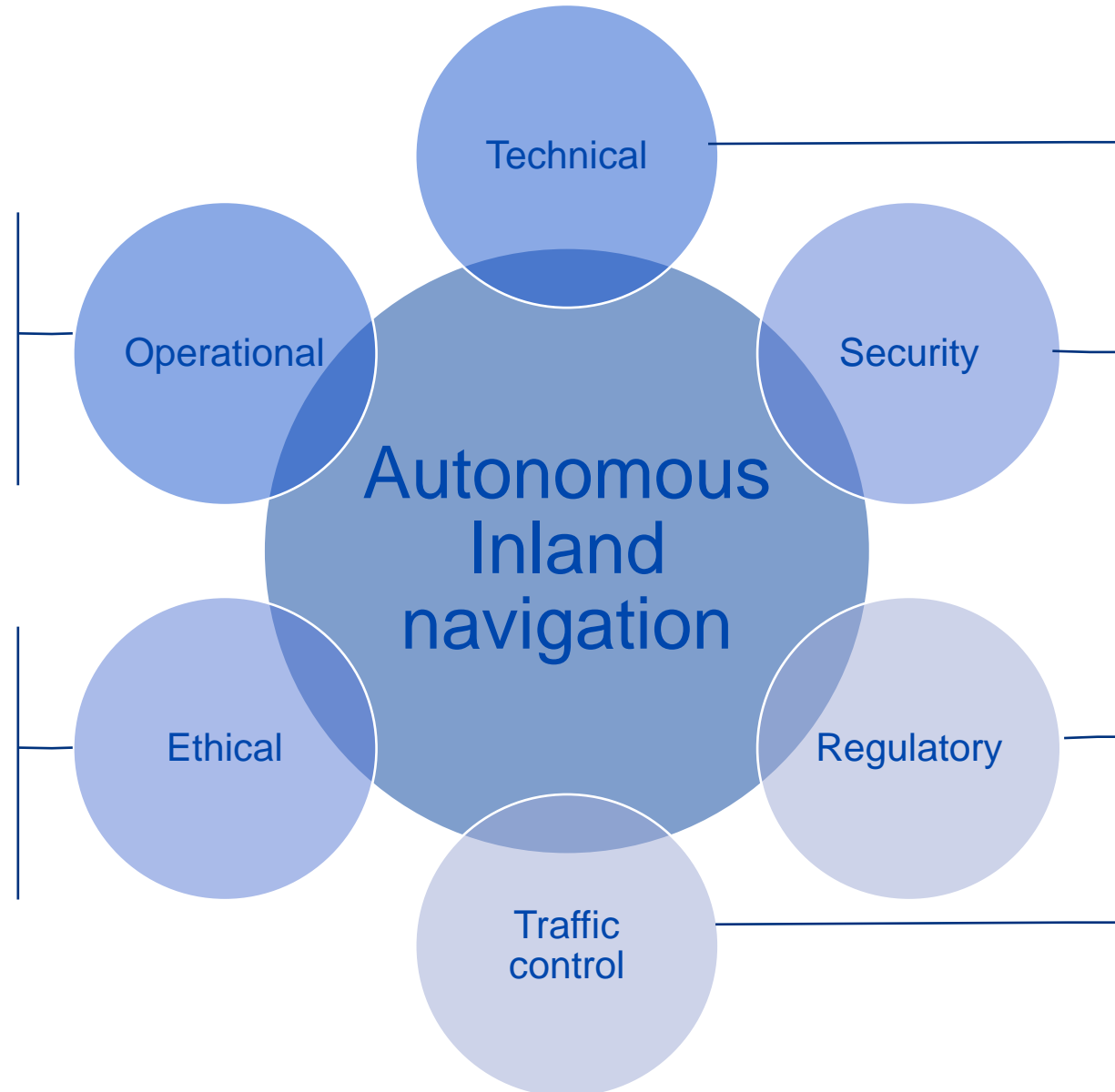


A large container ship, the TSINGTAO EXPRESS, is shown from an aerial perspective, sailing on a deep blue ocean. The ship's deck is densely packed with multi-colored shipping containers in shades of orange, yellow, blue, and white. The ship's hull is dark blue with a red upper section. The name 'TSINGTAO EXPRESS' is visible on the side of the hull. The ship is moving towards the left, leaving a white wake behind it. The sky is a clear, pale blue.

**Global pioneers of marine
industry are leading the
business-driven project.**

- Transition period from current fleets to autonomous

- Stakeholder involvement
- Enriching human contribution
- Artificial Intelligence



- Intelligent infrastructure
- Interoperability
- Data, API's and integrations: e.g. bathymetric models
- Safety and security models (decision-making)
- Interaction during transition period
- Cyber security in system-of-systems

- Compatibility between sea and inland vessels

- New models and tools for decision-making and situational awareness

“If you want to go fast, go alone.
If you want to go far, go together.”
– African proverb

**DIMECC's co-creation ecosystem
One Sea seeks global partners to join
the leading research co-creation
ecosystem.**

Join us!

www.oneseaecosystem.net

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