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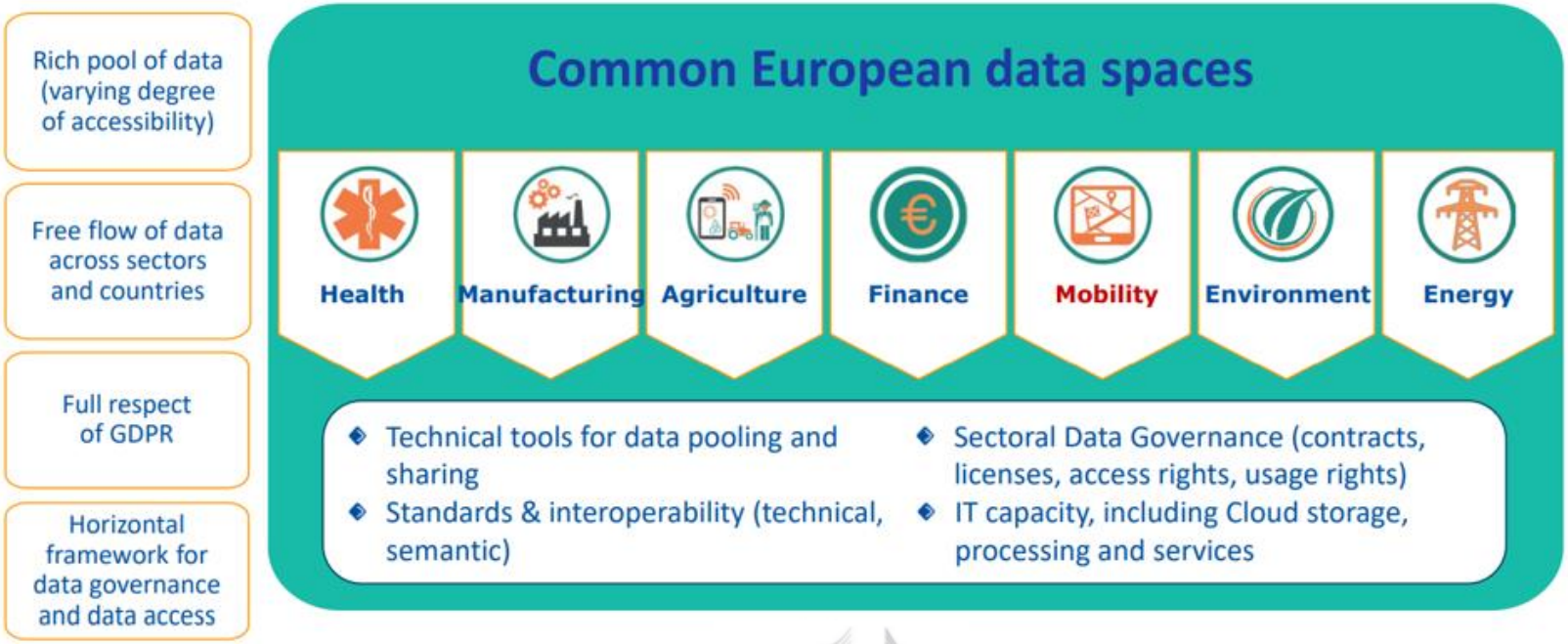
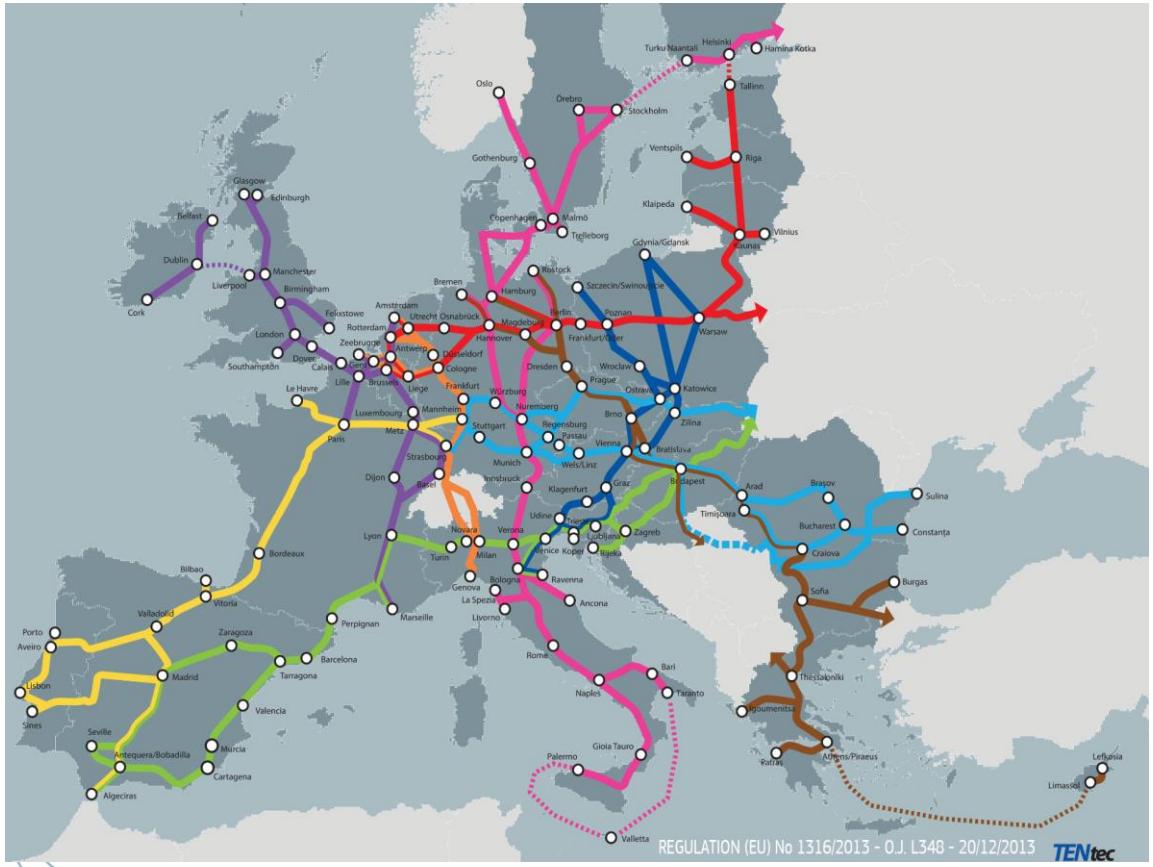
Evolution and the future of maritime mobility – are we there yet?

Jon Leon Ervik,
Head of Department
Navigation technology and Pilotage management

Reality or visions ?


Rich pool of data (varying degree of accessibility)
Free flow of data across sectors and countries
Full respect of GDPR
Horizontal framework for data governance and data access
Common European data spaces
Health
Manufacturing
Agriculture
Finance
Mobility
Environment
Energy
Technical tools for data pooling and sharing
Standards & interoperability (technical, semantic)
Sectoral Data Governance (contracts, licenses, access rights, usage rights)
IT capacity, including Cloud storage, processing and services

Maritime transport is a bit out of sight (from TEN-T) but also in ITS



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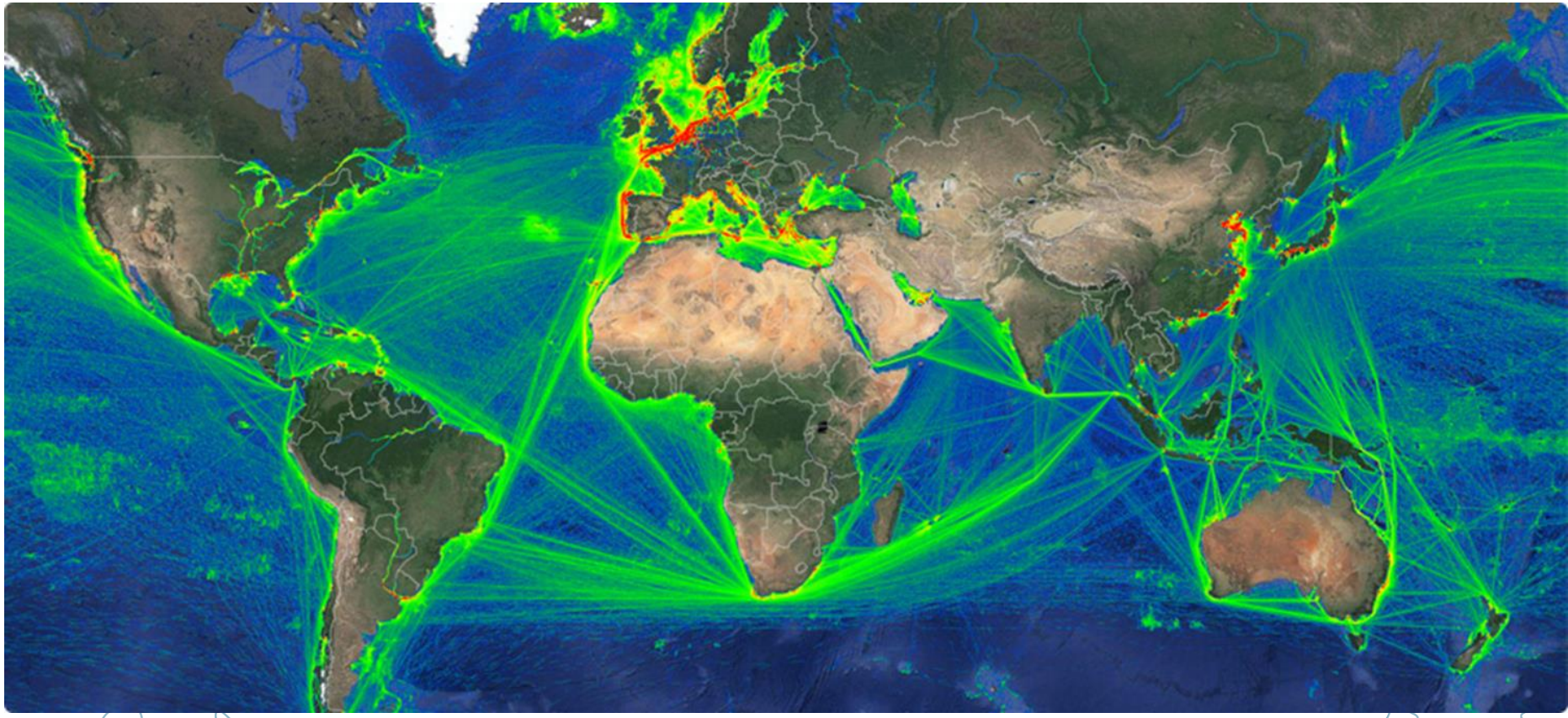
Maritime transport is global



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Factors that may affect the near future

- Depending on open markets or post-pandemic protectionism ?
- Other factors in global politics and development
- A major accident / disaster can affect the future policy
- Assume that Europe is stable
- Maritime transport will transport largely the same as today

Preventive maritime safety - an important motivator

– Vi tar ansvar for sjøvegen

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Shipping @ digital inflection point

100 years ago

HUMAN

25 years ago

Machine assisted/ analog

Today

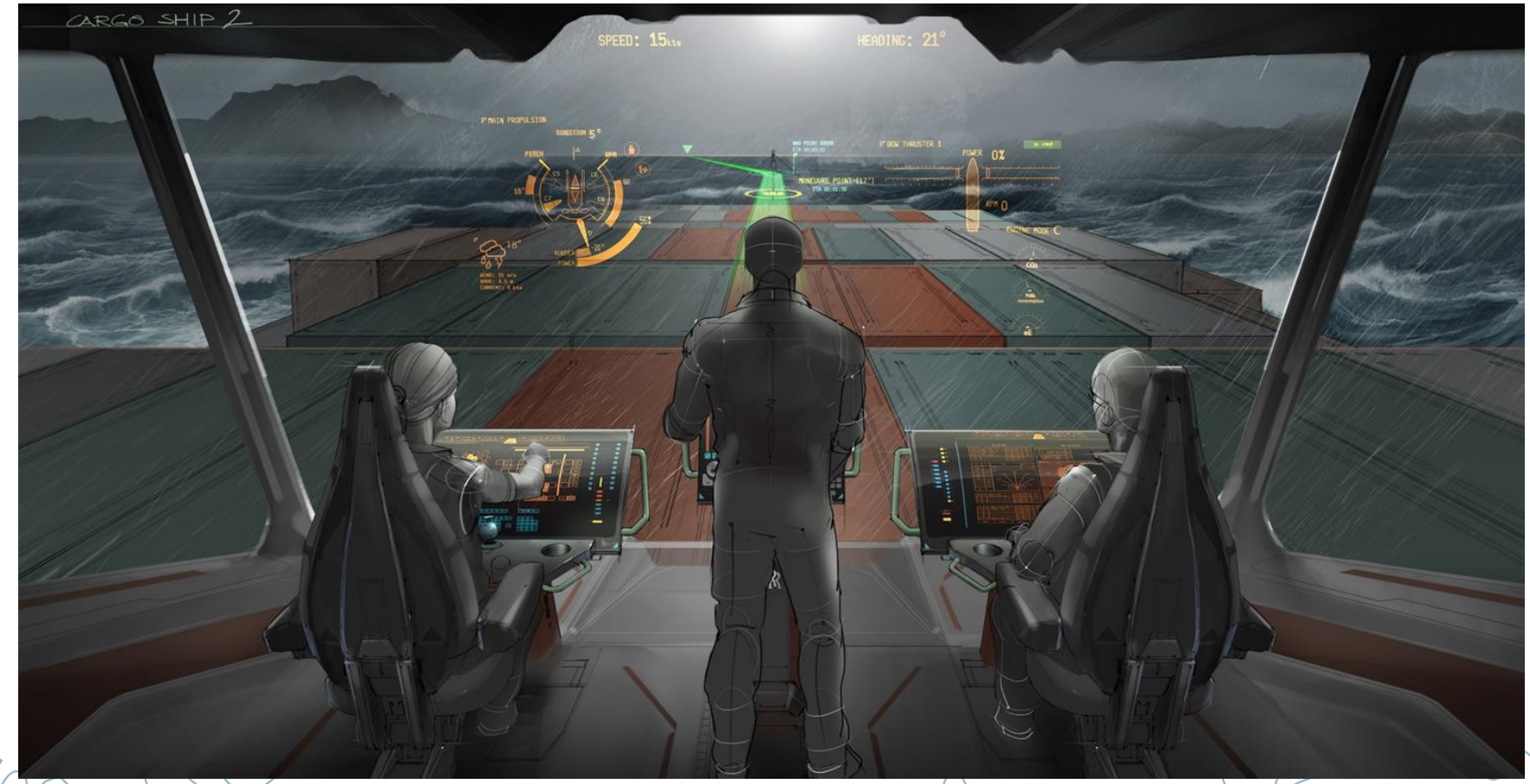
Technology enabled & digital

Trends in maritime transport

The situation for some 10-years back

The situation today

The systems will first and foremost support the human



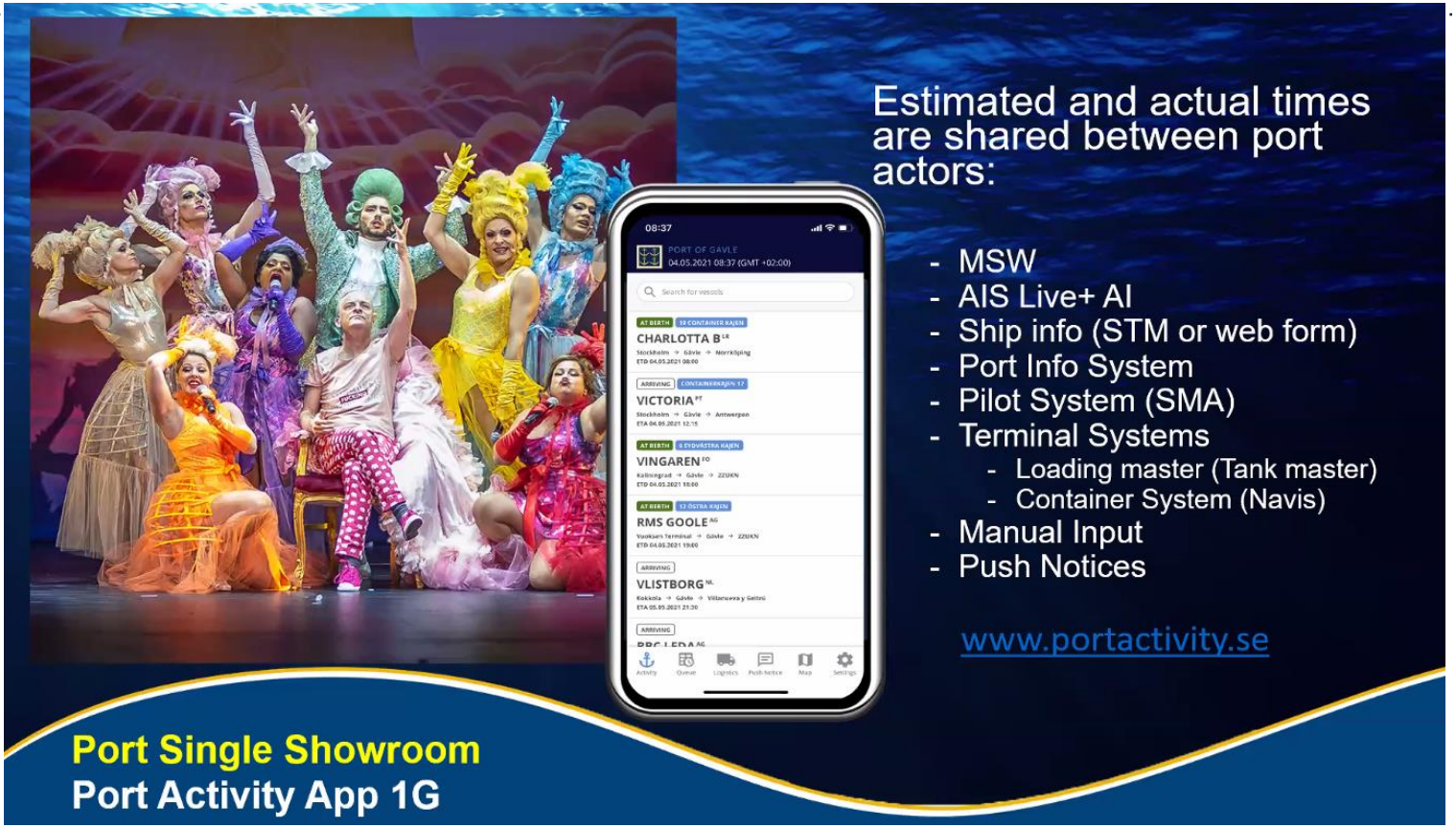
But also open up for new concepts

Several ports looking at “digital twins”

Pilot route planning

To determine whether a ship can enter, a range of information is needed. If a ship registers, this data must be combined quickly. This varies from the depth and size of the ship, the depth of the fairway and the weather conditions on the route to the physical characteristics of the berth. If it is clear when this spot is released, the next arrival can be scheduled. All this information must be 100% reliable and real-time available.

Transparency and sharing of information will increase efficiency between transport modes



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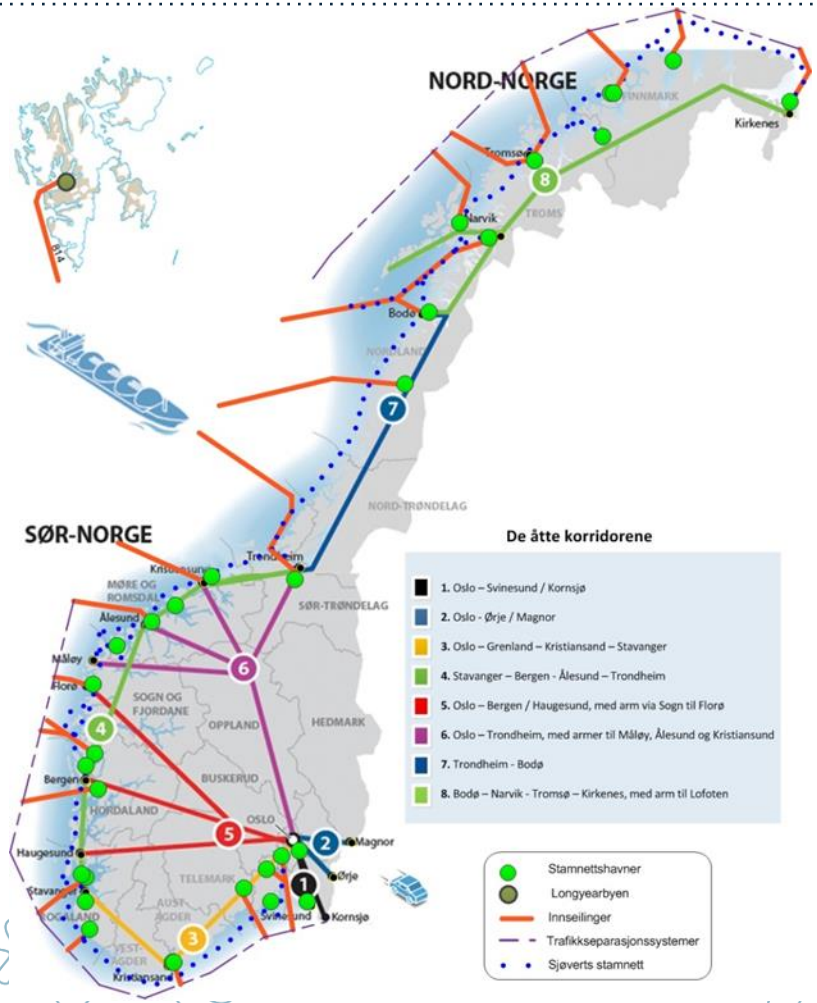
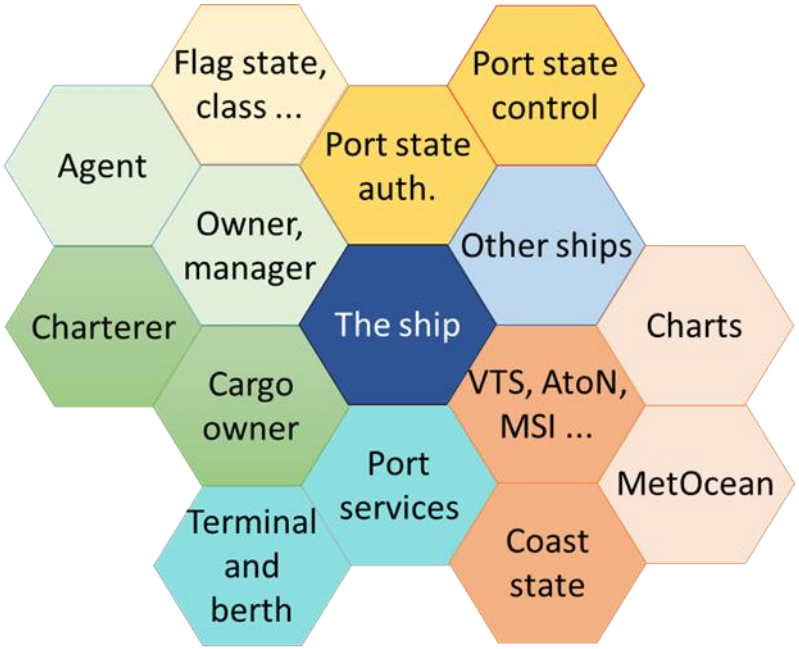
Multimodal transport





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Increasing Shared Situational Awareness through Digitization

- Within the context of cooperative traffic information sharing, digitization includes:
  - the digitization of safety, security and pre-arrival information that eliminates paperwork.
  - exchange of information between ship and all service providers involved in port operations.
  - communication technologies to provide solutions that address issues of system interoperability, standardization and automation where possible.
  - facilitating smart decision-making and optimized port operations.

Trends for the next 15 years

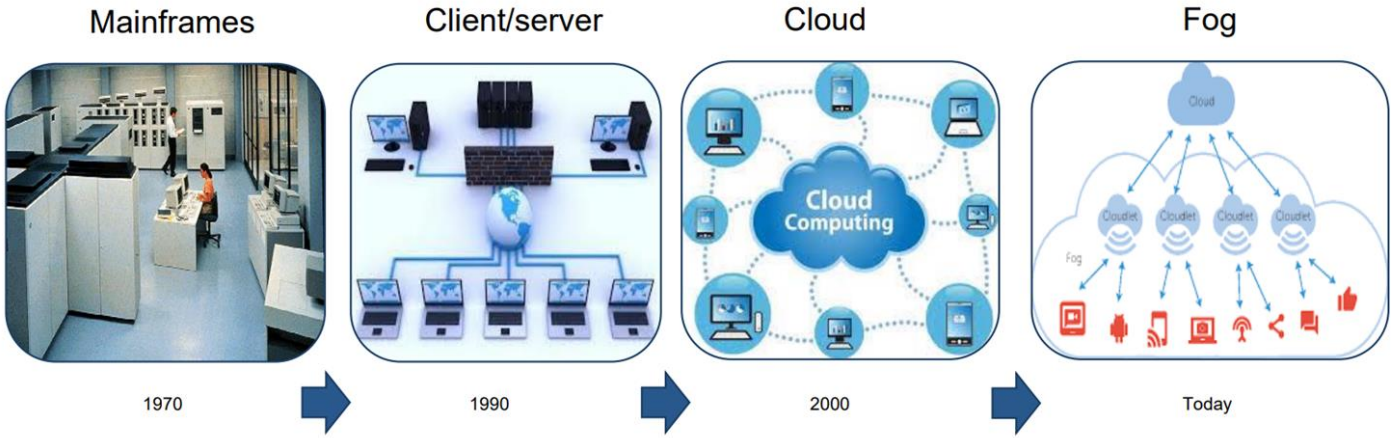
- Requirements for sustainability and environmentally friendly solutions
- Maritime transport is becoming more and more digital
- AI will first and foremost support the human
- But also innovate new concepts

Are we yet there?

We have just started a new major technology shift

Internet of Things and how we build software will totally change all industries

Wilhelmsen



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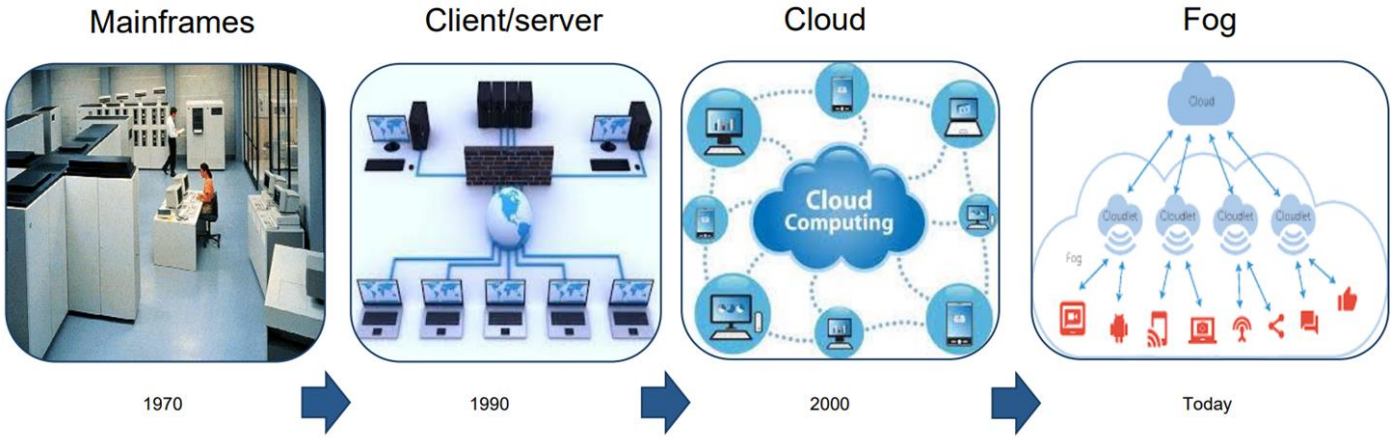
Conclusion: far from and Maritime ITS is important for the maritime digital future

We have just started a new major technology shift

Internet of Things and how we build software will totally change all industries



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