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THE FINNISH SHIPOWNERS ASSOCIATION | 22.5.2019

# Dealing with the changes in the maritime industry

Eero Lehtovaara, Senior Vice President – Head of Regulatory Affairs



# How to cope with disruption?

Foundations have changed. Operations will change.

**ELECTRIC**

Decarbonization of Shipping



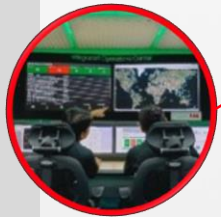
**DIGITAL**

Machine learning and augmented reality.



**CONNECTED**

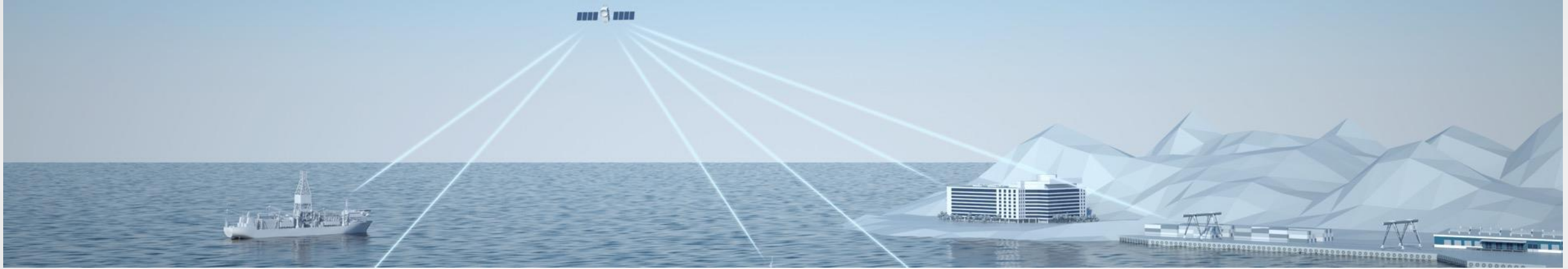
Role of the human in the loop will be different



Simplicity, Efficiency, Safety

# Marine & Ports Business

Integrated solutions to improve our customers profitability



## Marine

### Our markets

- Cruise and ferry
- Offshore
- Icegoing
- Cargo
- Specialized vessels

### Our offerings

- Propulsion products, Azipod® propulsion
- Electrical systems
- Automation and software
- Integrated operations

## Ports

### Our markets

- Container terminals
- Bulk cargo terminals
- Port infrastructure and shore-to-ship power

### Our offerings

- Automated container and bulk handling
- Port infrastructure – electrification and IT
- Remote operations

# Shaping the world through innovation

Pioneering technology



# Intelligence

Component level data



# Predictability

Underpinning business performance



# Data sharing

## Point to Point

### Maersk blockchain insurance platform goes live

Partners including EY and Microsoft claim world first in marine hull sector.

May 25th, 2018 07:58 GMT  
by Gary Dixon

AP Moller-Maersk's blockchain marine hull insurance venture is now live. The Danish giant first announced a plan to launch the platform, Insurwave, in September with EY, Microsoft, Guardtime and other industry participants. The encryption technology will support more than half a million automated ledger transactions and help manage risk for more than 1,000 commercial vessels in the first year, it said.

## Industry Wide



### Liner giants plan trade association in digital drive

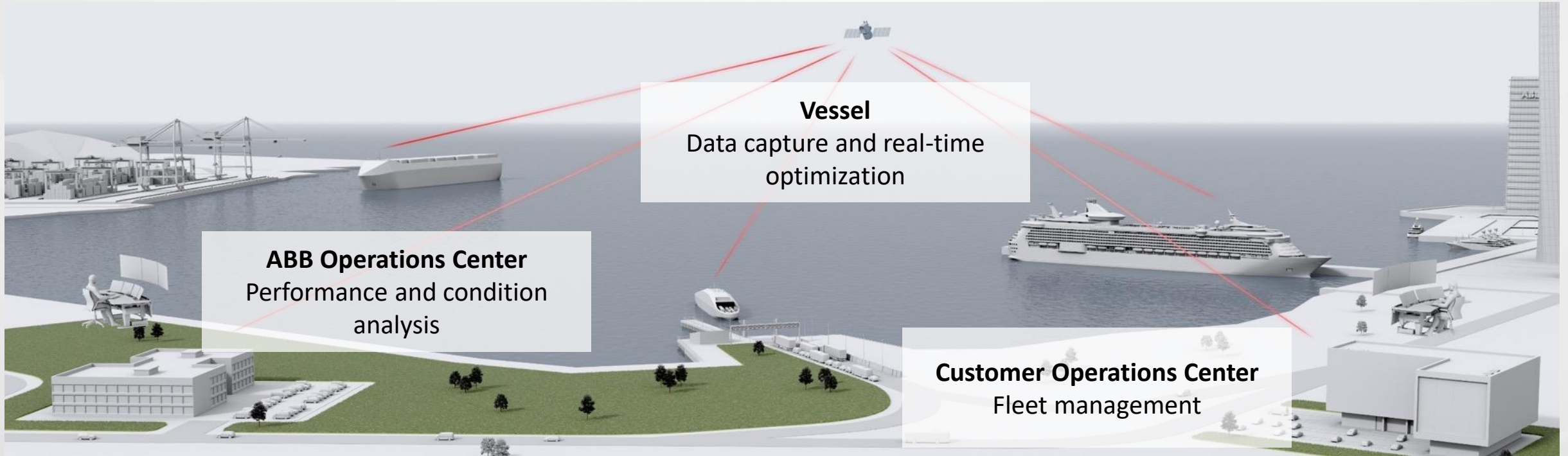
Maersk, ONE, CMA CGM, MSC and Hapag say group will strive for "less red tape and better transparency".

November 15th, 2018 00:39 GMT  
by Dale Wainwright

Data sharing produces exponential results across the industry

# Electric. Digital. Connected.

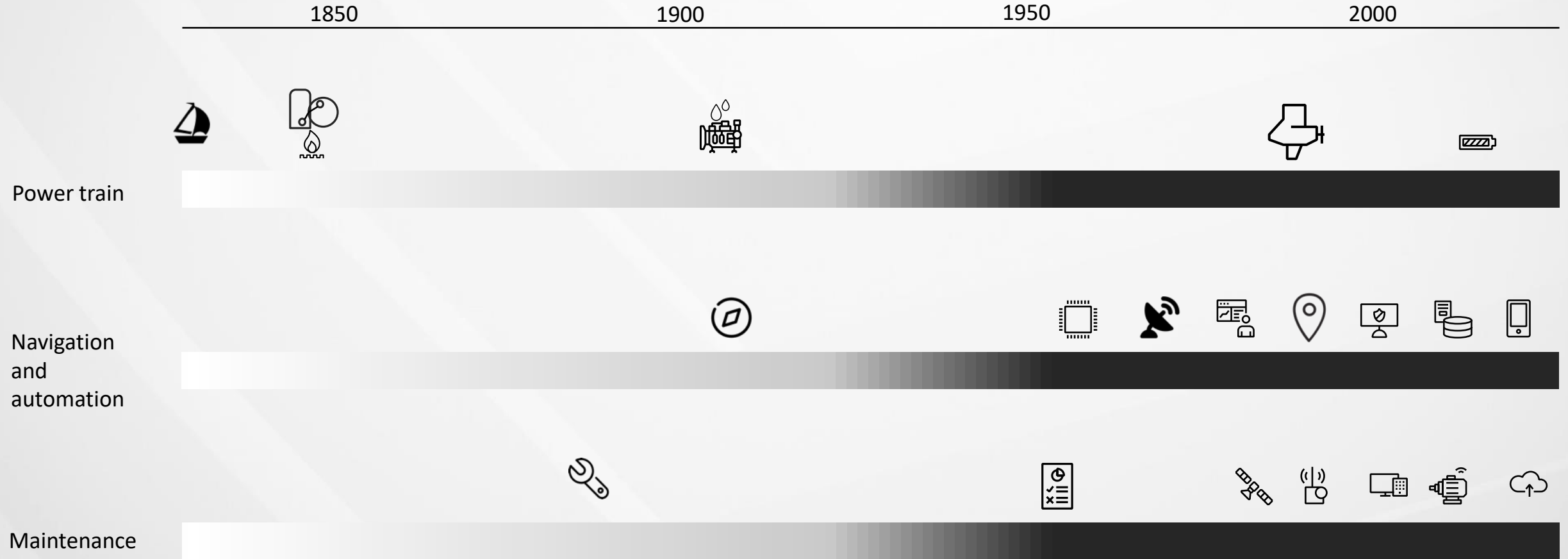
Transparency



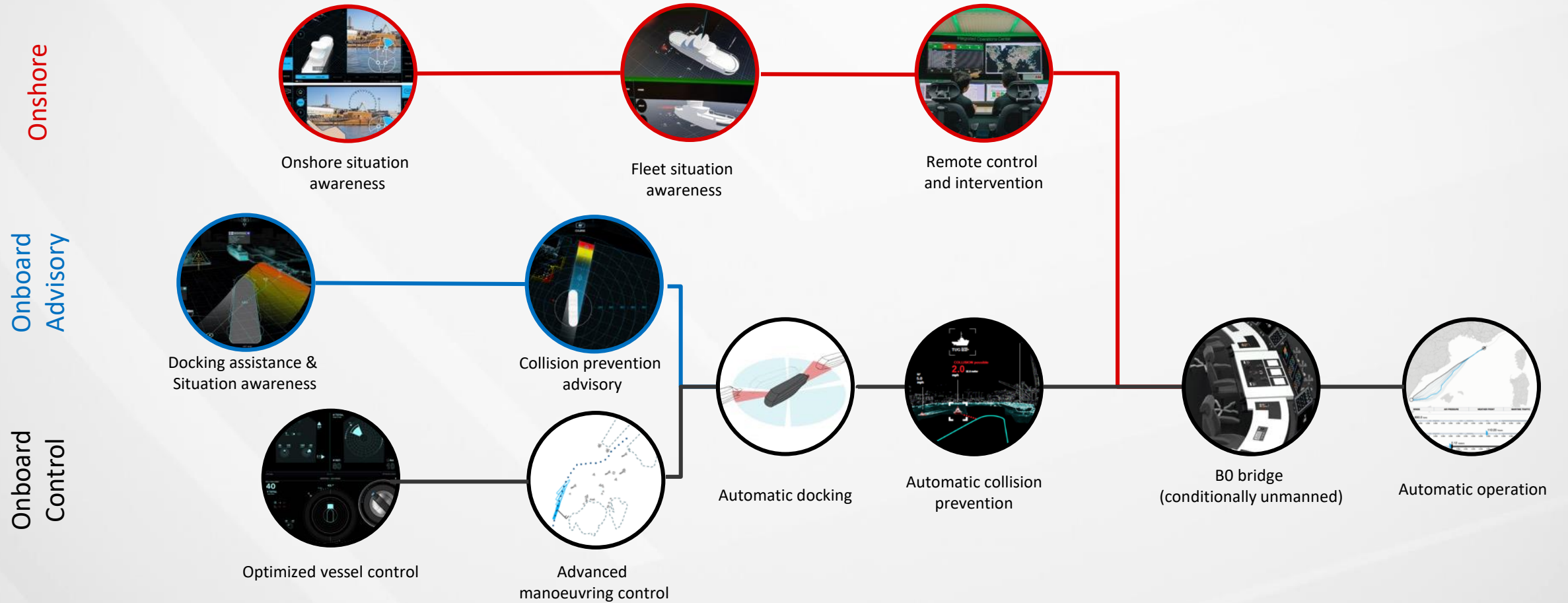
Connecting vessels and shore operations with our experts



# We do not want to change

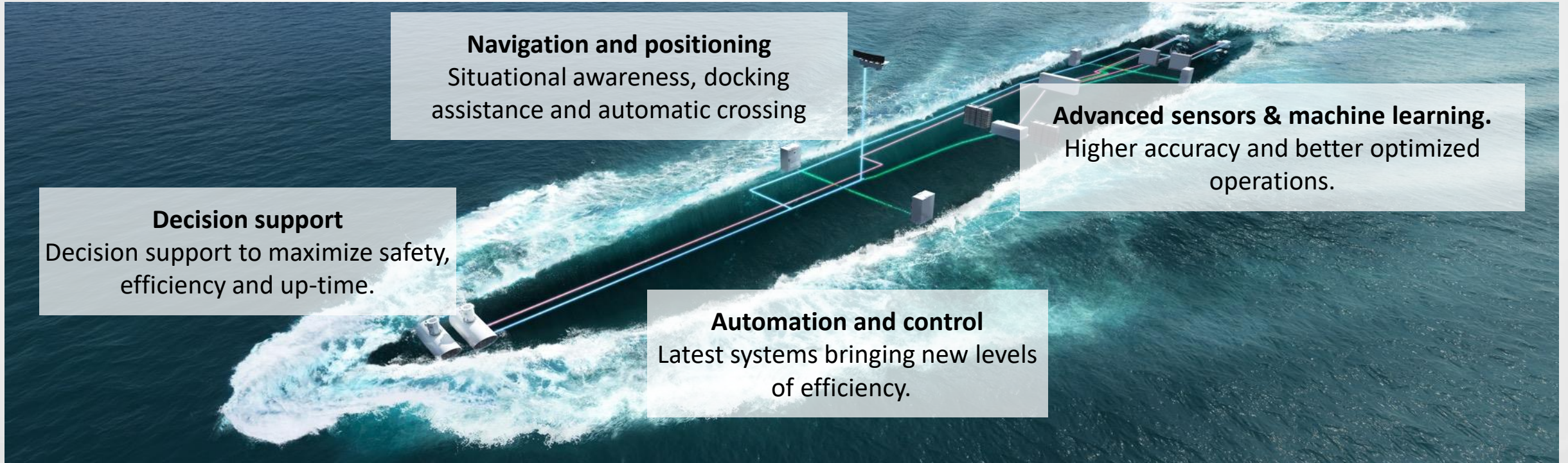


# Roadmap



# Electric. Digital. Connected.

Digital



**Navigation and positioning**  
Situational awareness, docking assistance and automatic crossing

**Advanced sensors & machine learning.**  
Higher accuracy and better optimized operations.

**Decision support**  
Decision support to maximize safety, efficiency and up-time.

**Automation and control**  
Latest systems bringing new levels of efficiency.

Digitalization is changing the way ships are designed and operated

# ABB Ability™ Collaborative Operations

Always on watch



# Market will develop gradually

## Decisive factors

### Legislation

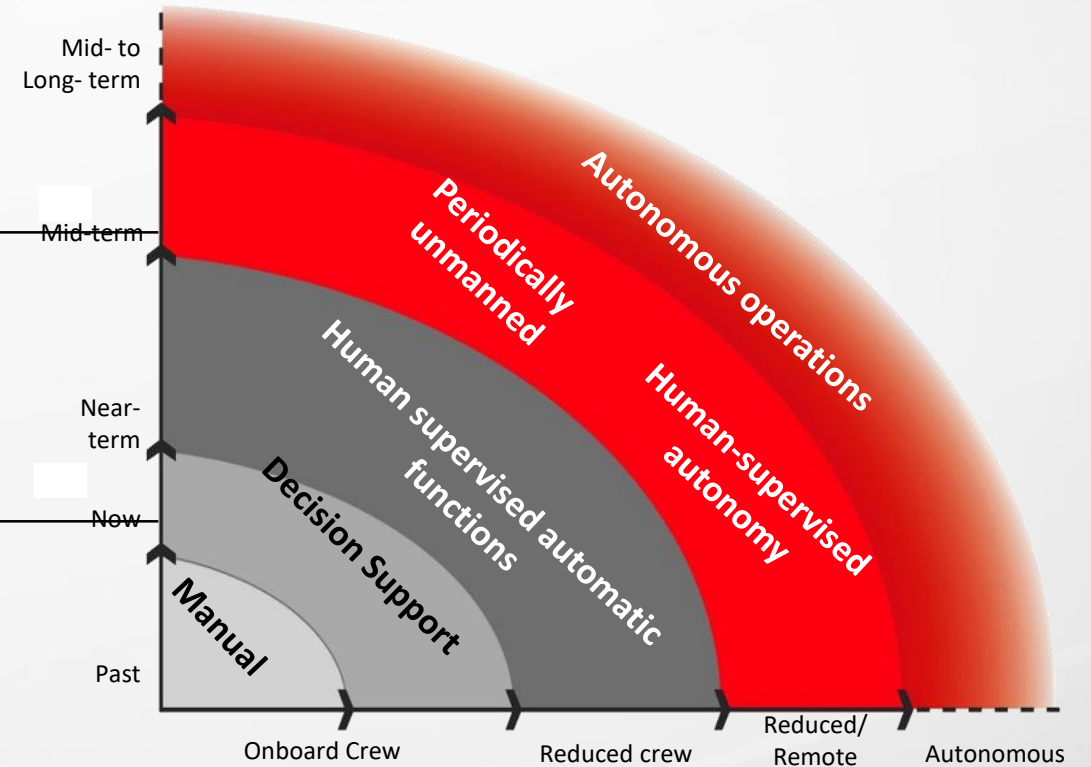
- Global conventions demand physical presence:
- United Nations Convention on the Law of the Sea
  - Safety of Life at Sea
- National administrations granting exemptions

### Business Models

- Utilization
- Revenue
- Cost
- Risk and Liability

### Technology

- “Autonomous and remote-controlled ships shall be as safe as conventional ships of the same type”
- Technology will develop at an exponential speed.



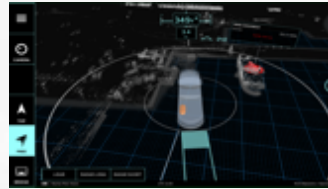
# Market will develop gradually

## Local traffic



Autonomy

## Innovations applied differently



Situational awareness



Motion control



Collision avoidance & Object recognition



Electric and self-healing machinery

## Ocean Going

Assisting



Same technology – different applications

# How to cope with disruption in shipping?

## Electric.



## Digital.



## Connected.



... something we know a whole lot about.