

# Global Maritime Trends 2050

What does the future of the maritime industry look like?

Commissioned by



The maritime industry will transform over the coming decades, driven by technology adoption, the climate agenda, and intensifying geopolitical and macroeconomic shifts.

More than ever, maritime leaders and policymakers need robust insights to support critical decisions shaping the future of the industry.

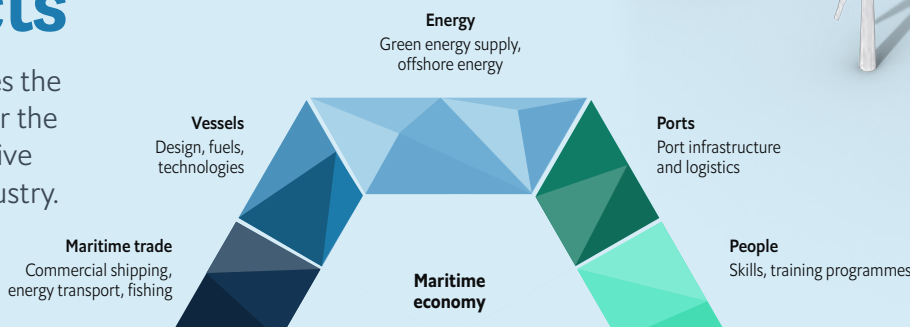


**“The renewed focus on energy security, particularly in light of heightened tensions and conflicts, is accelerating the global energy transition.”**

Global Maritime Trends 2050

## Defining impacts

Global Maritime Trends 2050 analyses the leading drivers of transformation over the next 30 years, and how they impact five key components of the maritime industry.



## Revealing futures

The research led us to four insightful futures that depict what the maritime industry of 2050 could look like.

Most notably, the outlooks consider various scenarios around speed of technology uptake and the nature of global co-operation on climate change.



## Towards 2050

Explore our four futures to discover how different scenarios will impact the maritime industry. Although fictional, each is grounded in science, historical fact and current speculation.

### 01 Just, gradual transition

#### What if nations embrace widespread adoption of green hydrogen?

The maritime industry could become a decarbonisation enabler, linking key future producers of green energy such as China, Saudi Arabia, South Africa and the US.

With further development, ammonia is likely to become the safest and most efficient way to transport hydrogen, creating many new jobs and upskilling opportunities.

**How we get here**

- Global co-operation on climate change with clear targets
- Political support through investments and incentives
- Rapid uptake of new fuel technologies by ships
- Ports redesigned for supply and storage of new fuels
- Demand for tech-savvy ship managers enables more women seafarers

**2026**  
Target date for Europe's first green ammonia facility

**90%**  
Most electricity expansion over the next five years will be renewable

### 02 Rapid tech-driven transition

#### What if automated technology solutions became widely adopted?

Remote control, automation and IoT technologies will greatly enhance the efficiency of ships and ports, creating opportunities to increase maritime trade.

Human supervision by skilled employees will be critical, with AI-powered assistants and immersive technologies such as the metaverse to simplify and enhance tasks.

**How we get here**

- Strong industry-wide technology investment
- Coordinated approach to decarbonisation
- Global harmonisation of technology protocols
- Industry training matches emerging innovation

**30.6bn**  
Number of IoT units expected to be in operation by 2025

**90%**  
Percentage of vessel data that AI-based models can process

### 03 Regionalised and fragmented transition

#### What if regionalisation and population expansion lead to fragmented maritime trade?

Localised systems of trade could lead to smaller ships making shorter journeys, with escalating costs due to varied adoption of technology in different regions.

Lack of global co-operation on governance and trade increases the risk of 'dark fleets' operating under the radar.

**How we get here**

- Shifting population dynamics drive consumer demand in Asian and African economies
- Geopolitical and supply chain challenges lead to regionalisation
- Low co-operation on innovation, data sharing and decarbonisation
- Disparate technology uptake causes port incompatibility

**50%**  
By 2050, half of the world's top ten economies will be Asian

**25%**  
Africa will contribute a quarter of the world's population by 2050

### 04 Delayed transition

#### What if average global sea levels rise by at least 40 cm?

Unchecked, climate change is set to destabilise many traditional shipping routes, prompting increased activity in the unpredictable Arctic Ocean as ice retreats.

Extreme weather and natural disasters will increase the costs and requirements for insurance, while rising sea levels could submerge many vital economic ports.

**How we get here**

- Low co-operation and action on climate change
- Slow and fragmented technology uptake
- Rising water and soil salinity disrupt supply chains
- Rising sea levels increase coastal inundation

**800m**  
Number of people already vulnerable to a 0.5 metre sea-level rise

**2030**  
Predicted start of ice-free Septembers in the Arctic Ocean

See the full picture

Read more about the scenarios in our online hub and report:

<http://impact.economist.com/ocean/global-maritime-trends-2050/>