



Waterborne Transport Workshop

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Mission Innovation



Mission Innovation is a global initiative catalysing a decade of action and investment in research, development and demonstration to make clean energy affordable, attractive and accessible for all. This will accelerate progress towards the Paris Agreement goals and pathways to net zero.

Zero-Emission Shipping Mission

The Goal: For ships capable of running on zero-emission fuels to make up at least 5% of the global deep-sea fleet by 2030.



The Coalition – Public Private Partnership

Co-leads

- Denmark
- United States
- Norway
- Mærsk Mc-Kinney Møller Center for Zero Carbon Shipping
- Global Maritime Forum

Core Mission Members

- Morocco
- The United Kingdom
- India
- Singapore

Mission Support Group

- France
- Ghana
- South Korea



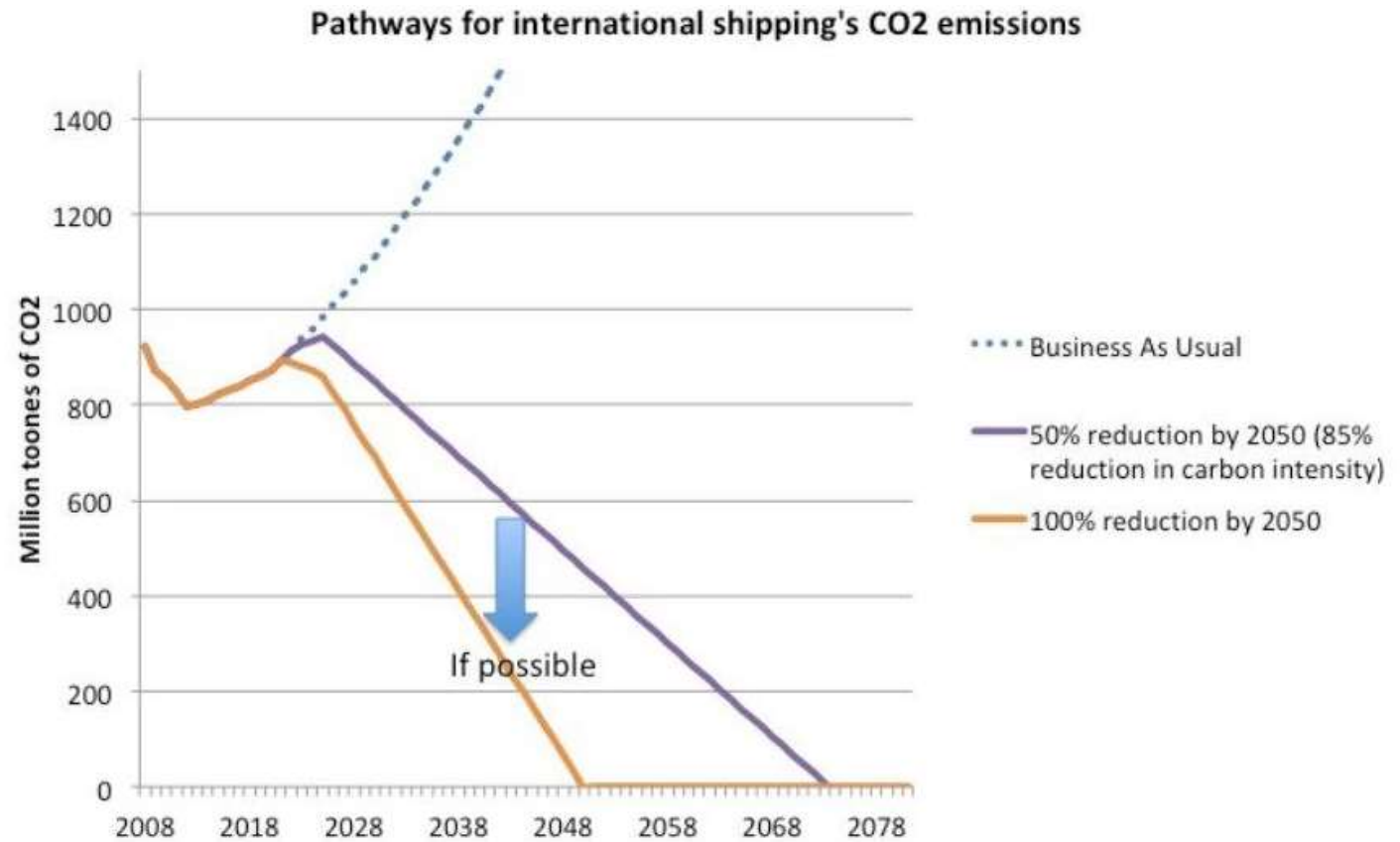
Mærsk Mc-Kinney Møller Center
for Zero Carbon Shipping



**GLOBAL
MARITIME
FORUM**

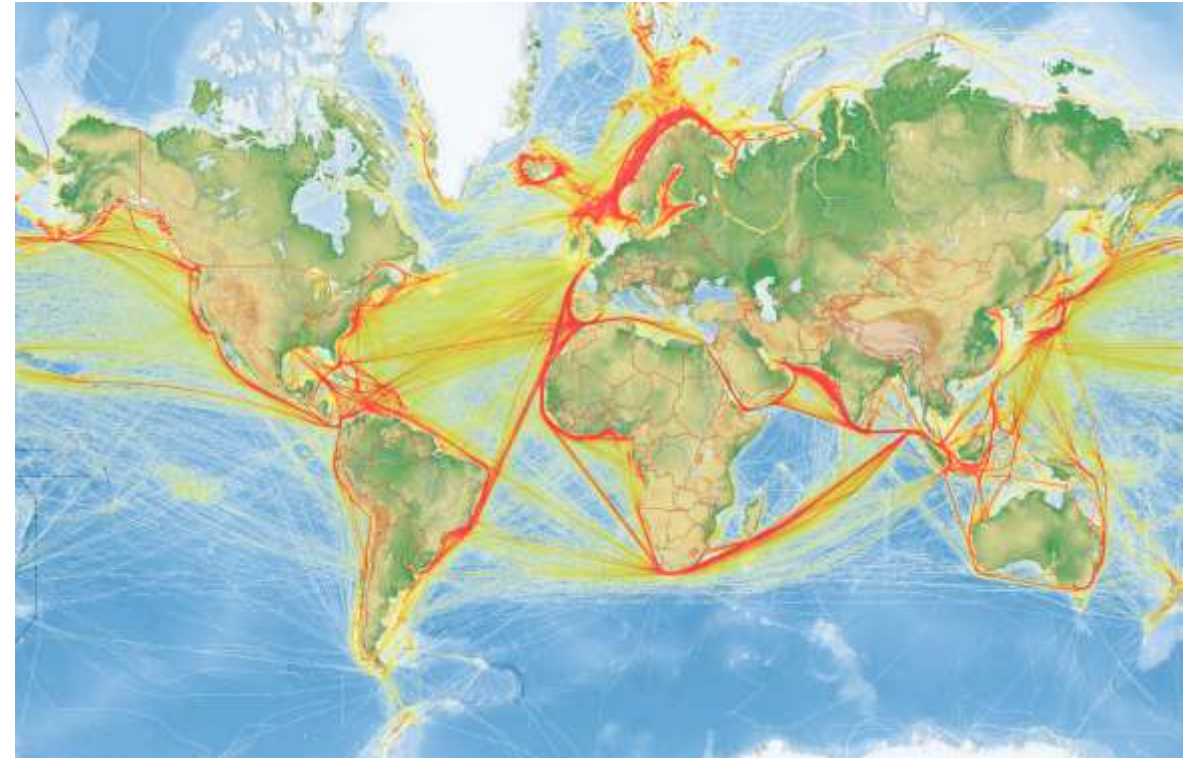
The Societal Challenge

- International shipping is the backbone of global trade
- International shipping is responsible for up to 3 percent of global greenhouse gas emissions
- Emissions are expected to grow by 50% over the next 30 years if we do not act.



The Tipping Point

By 2030 ships capable of running on zero-emission fuels such as green hydrogen, green ammonia, green methanol and advanced biofuels make up at least 5 percent of the global deep sea fleet measured by fuel consumption and at least 200 of these ships primarily use these fuels.



Analyses suggest that this will bring the shipping sector on a **trajectory to full decarbonisation by 2050.**

Shipping Mission Pillars

Ships

New deep-sea ships on zero emission fuels are produced at same price (max +5%) as comparable fossil ships

By 2030, at least 200 of these ships to primarily use these fuels across the main deep sea shipping routes.

Fuels

Prices (incl. policy support) on some zero emission fuels are at max 10-20% more expensive than fossil fuels

By 2030, at least 5% of the global deep-sea fleet measured by fuel consumption to be made of ships capable of running on well-to-wake zero-emission fuels

Fueling infrastructure

Large global trade ports need to be able to supply zero-emission fuels for ship owners to use and rely on when investing in ZEVs.

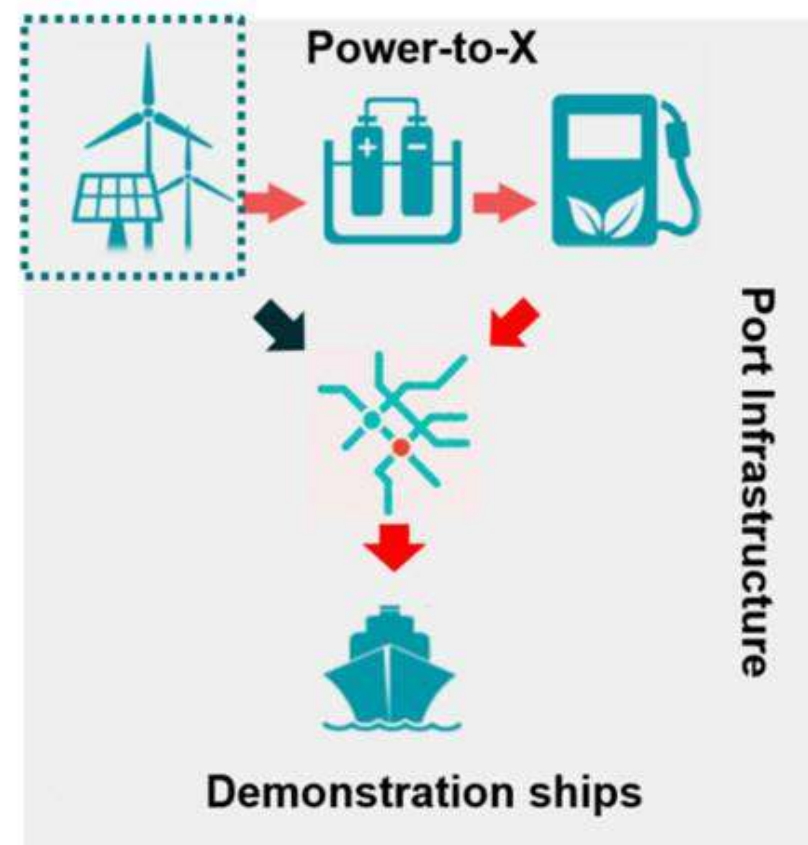
By 2030, 10 large trade ports covering at least three continents supply zero emission fuels (ammonia, methanol, and hydrogen)

→ Mission activities and upcoming pilot project will need to show how they help deliver these goals

Mission Outcomes

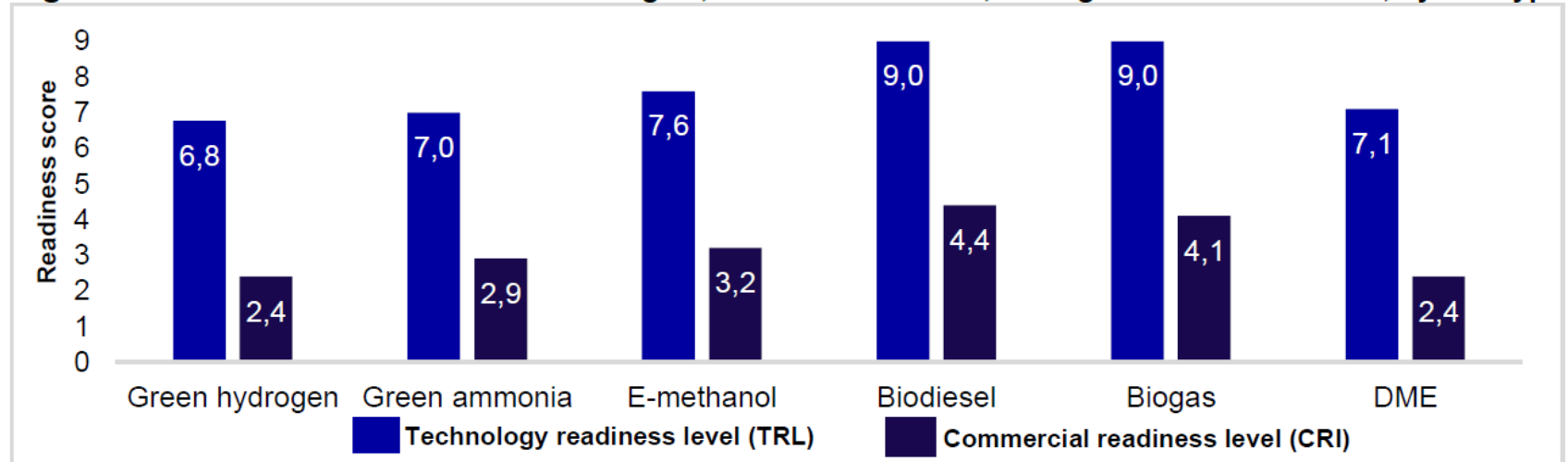
To lay the foundation for zero-emission shipping, we need to:

- Develop and introduce commercially viable zero-emission deep sea vessels.
- Promote and support the development of technologies to scale production of zero-emission fuels and lower costs thereof.
- Establish a global supply infrastructure in major ports worldwide.
- Facilitate match making and collaborative efforts among stakeholders across the value chain to promote technical and business model innovation.

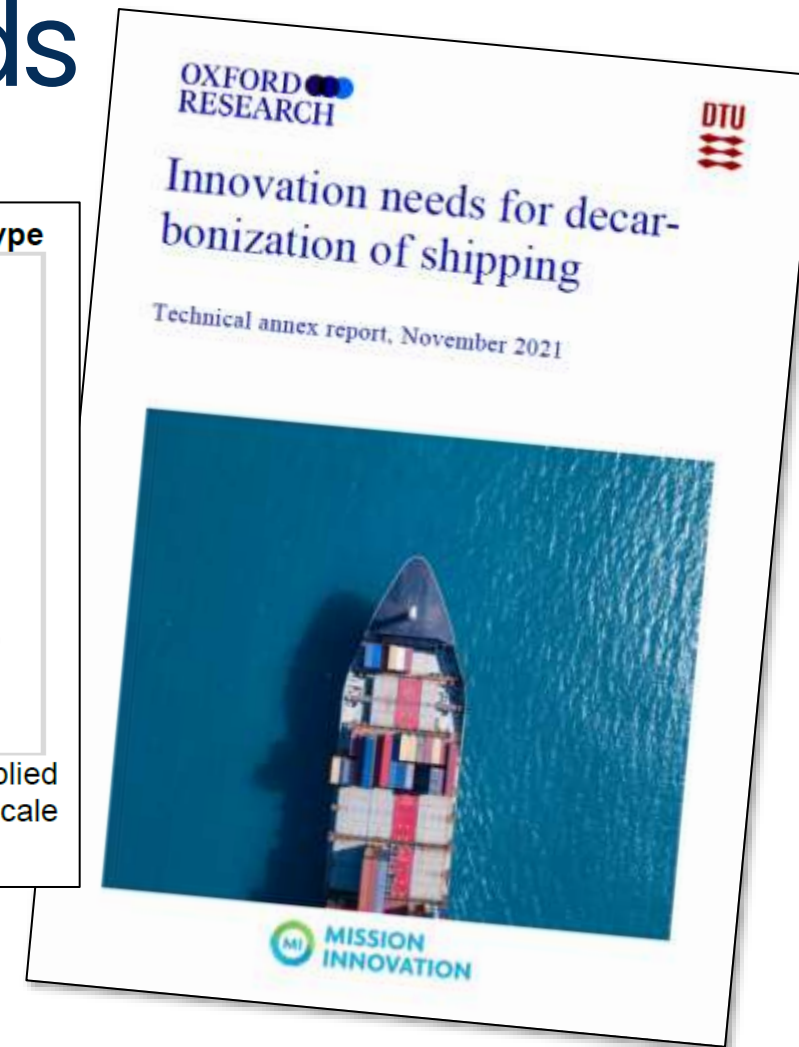


Gap report on innovation needs

Figure: Overview of assessment of technologies, on a scale from 0-9, average across value chain, by fuel type



Note: A Technology Readiness Level (TRL) index and an adapted Commercial Readiness Index (CRI) has been applied to assess the readiness of technologies. The original CRI scores on a 0-6 scale have been recalculated on a 0-9 scale for the purpose of overall clarity.

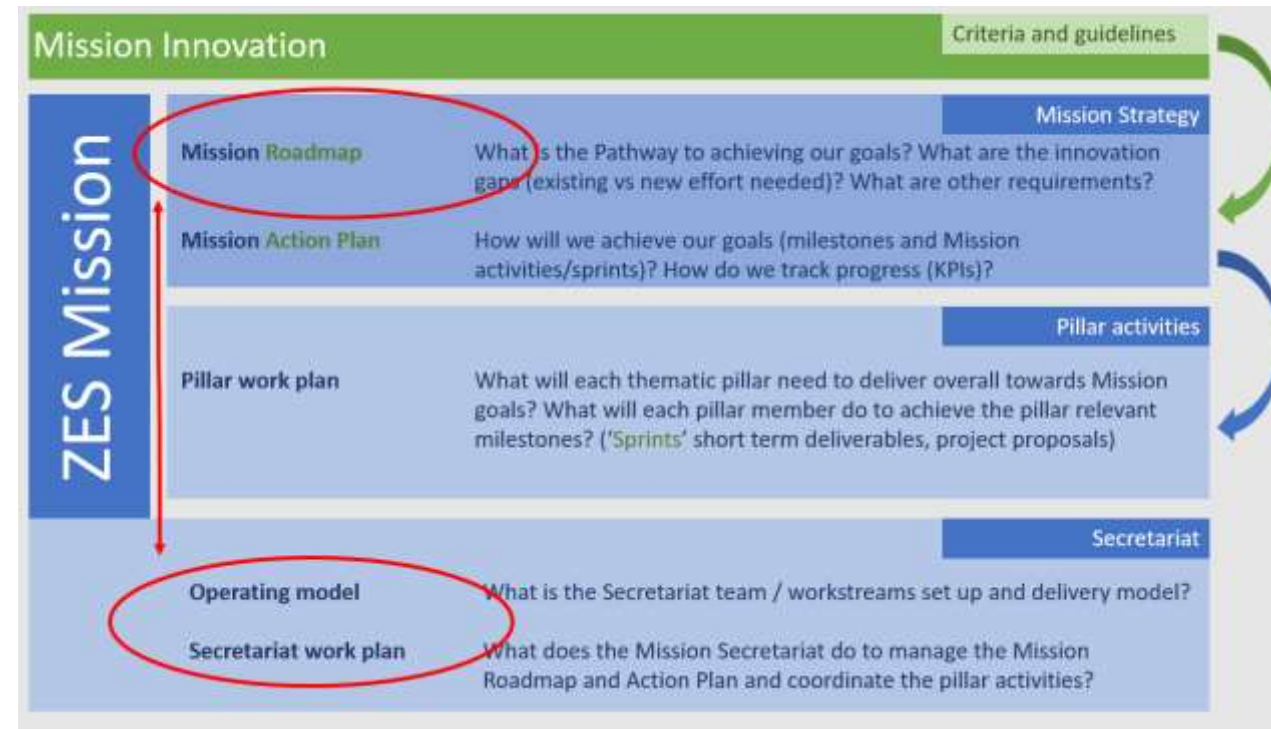


Full report can be found on the Shipping Mission webpage:

<http://mission-innovation.net/missions/shipping/>

The Mission's past, present and future

- Launch of the Mission in June 2021
- Kick-off workshops in October 2021
- Gap report, published in November 2021
- COP26 in November 2021 with two Zero-Emission Shipping Mission events in Glasgow
- Mission Roadmap (ongoing)
- Mission Action Plan (coming up)
- Pilot projects (ongoing)



Thank you.



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