



WHEN TRUST MATTERS

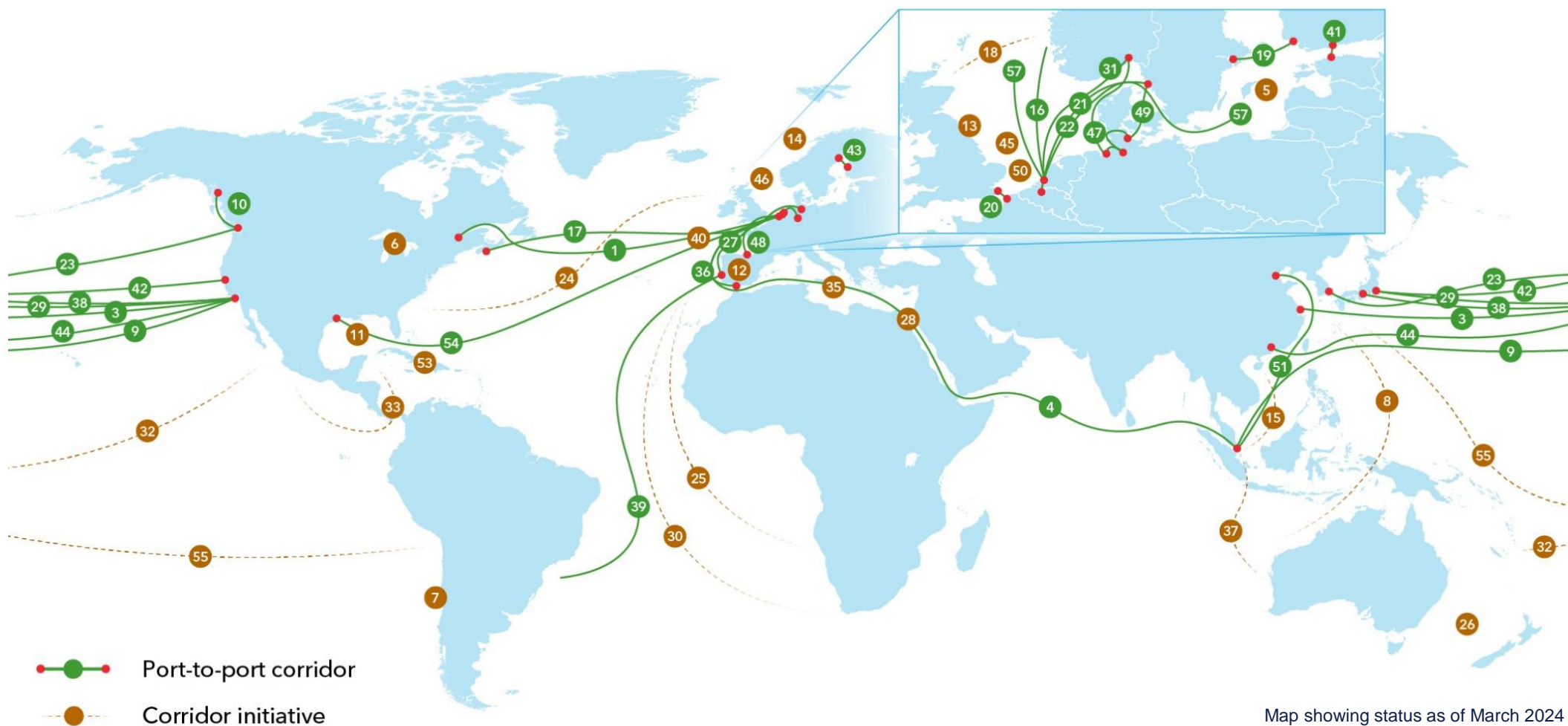
Green shipping corridors and experience from the Nordics

Zero Emission Shipping Symposium, 8 October 2024 – Hamburg

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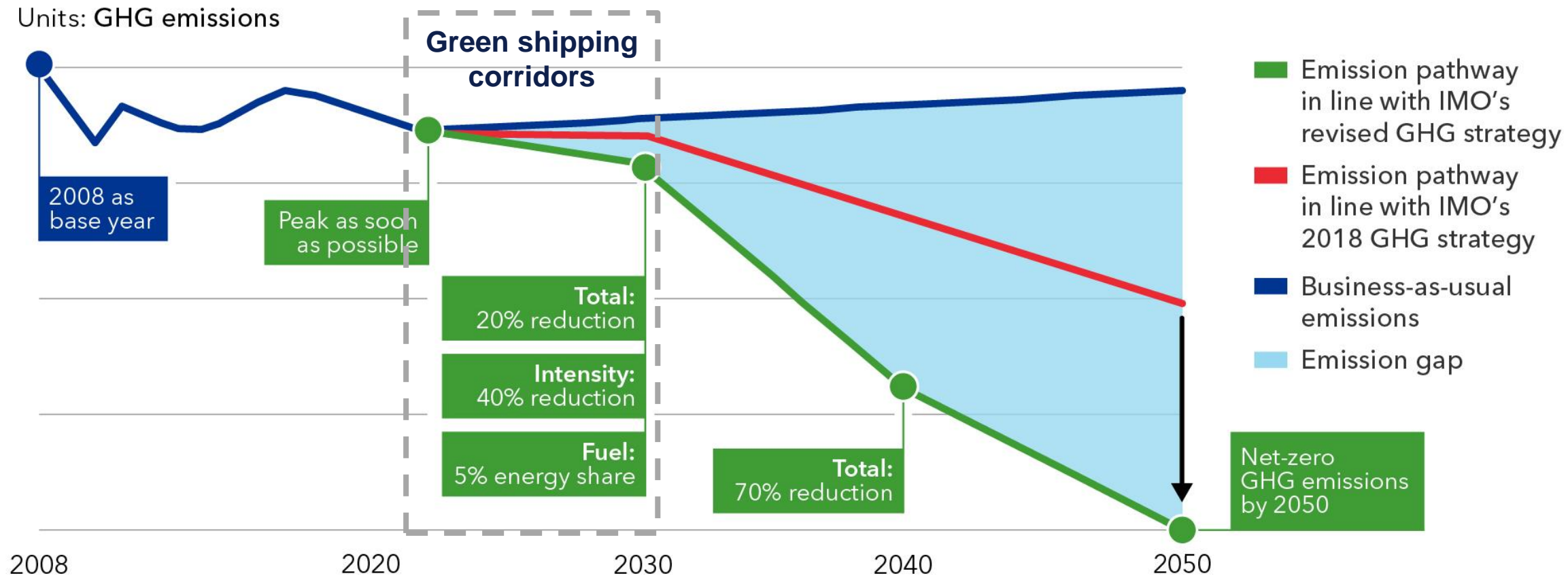


Since the Clydebank Declaration in 2021, more than 60 green shipping corridor initiatives have been announced



Strengthened IMO strategy on GHG reductions

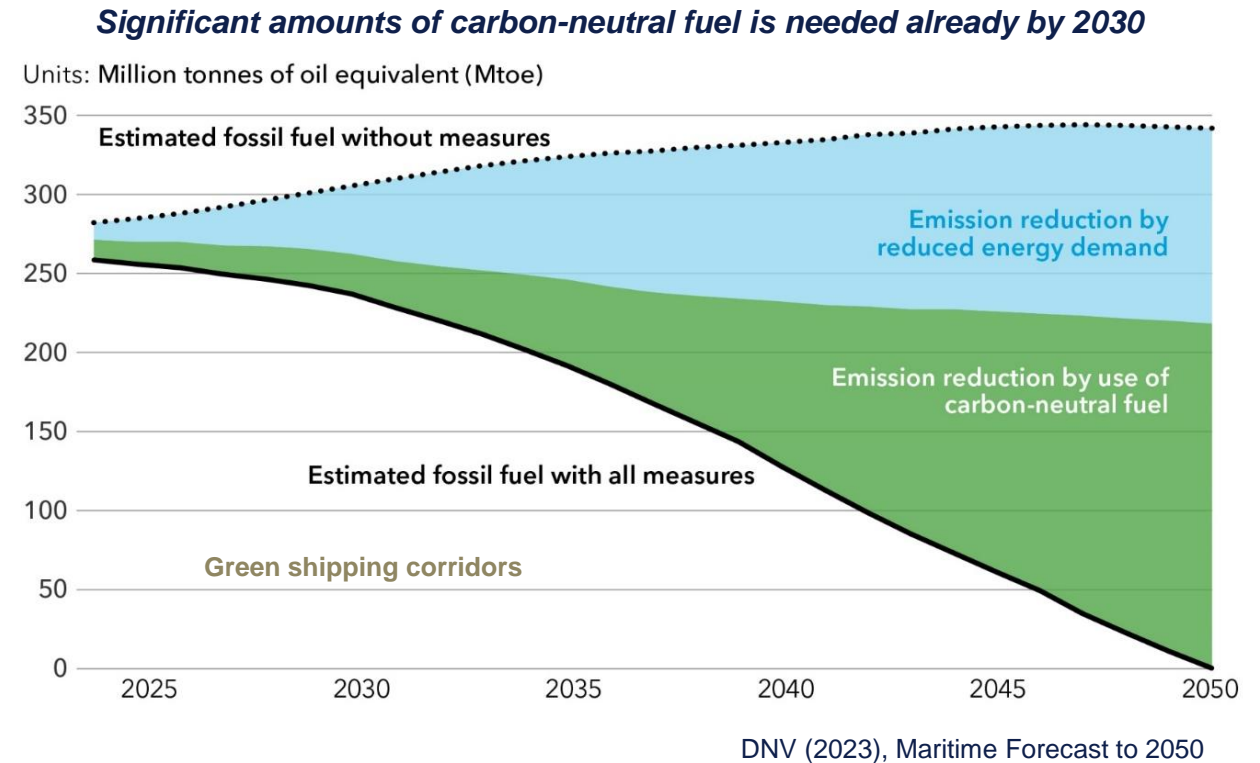
– Green shipping corridor's role in decarbonization of shipping



Total: Well-to-wake GHG emissions; **Intensity:** CO₂ emitted per transport work; **Fuel:** Uptake of zero or near-zero GHG technologies, fuels and/or energy sources

Developing green shipping corridors along major routes will fast-track, demonstrate and scale

1. **Uptake of zero-emission fuels**, solving the “chicken and egg” problem
2. **Uptake of cleaner** (e.g., sail arrangement, batteries) and **digital technologies** (e.g., just-in-time principles, autonomous shipping)
3. **Uptake of onboard carbon capture and storage**
4. **New logistic systems and business models** for zero-emission vessels and transport



Green shipping corridors can be an important playground for testing, proving and scaling new technology and solutions, targeting decarbonization and digitalization.

Green and digital shipping corridors already exist

2015: The battery-powered ferry Ampere



“Ampere”
Lavik – Oppedal, Norway

New contract:
Lavik – Oppedal will be the world's first ferry connection with green, autonomous ferries (2027)

Success criteria for the Norwegian ferry network's early uptake of zero-emission energy:

- Zero emission requirements set by the Norwegian Road Administration
- Forward-looking and risk-accepting ship operators and technology suppliers
- Substantial funding of CAPEX on ferries and charging infrastructure from the NOx fund and ENOVA

Commercial cargo owners have also established green shipping corridors



“ASKO's sea drones”
Moss – Horten, Norway


Green Shipping Programme



“Yara Birkeland”
Brevik – Larvik, Norway

The Nordic roadmap project (2022-2025)

The project aims to accelerate the fuel transition by developing a *Fuel Transition Roadmap for Nordic Shipping*.

Green shipping corridors will be key enablers to accelerate the fuel transition and overcome key barriers.

- 10 technical deliverables to date
- 3 ongoing pilot studies
- December 2024: Roadmap handover

More than 60 partners



For more information,
visit the project website:

<https://futurefuelsnordic.com/>



Roadmap content

Zero-emission
by 2050

Chapter 1 **Introduction**

Chapter 2 **Goals and vision for Nordic shipping**

Chapter 3 **Nordic shipping today**

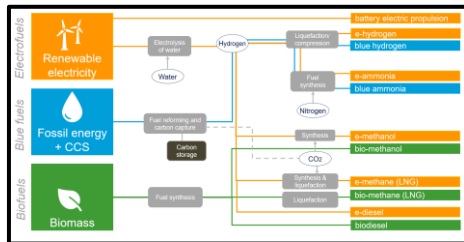
- Status on ship traffic, fuel consumption and emissions
- Current uptake of zero-emission fuels and technologies

Chapter 4 **Zero-emission fuel options and barriers hindering their uptake**

Chapter 5 **Roadmap Actions**

- The seven building blocks

Chapter 6 **Moving further: Upscaling and stabilization phases**



Actions by
stakeholders

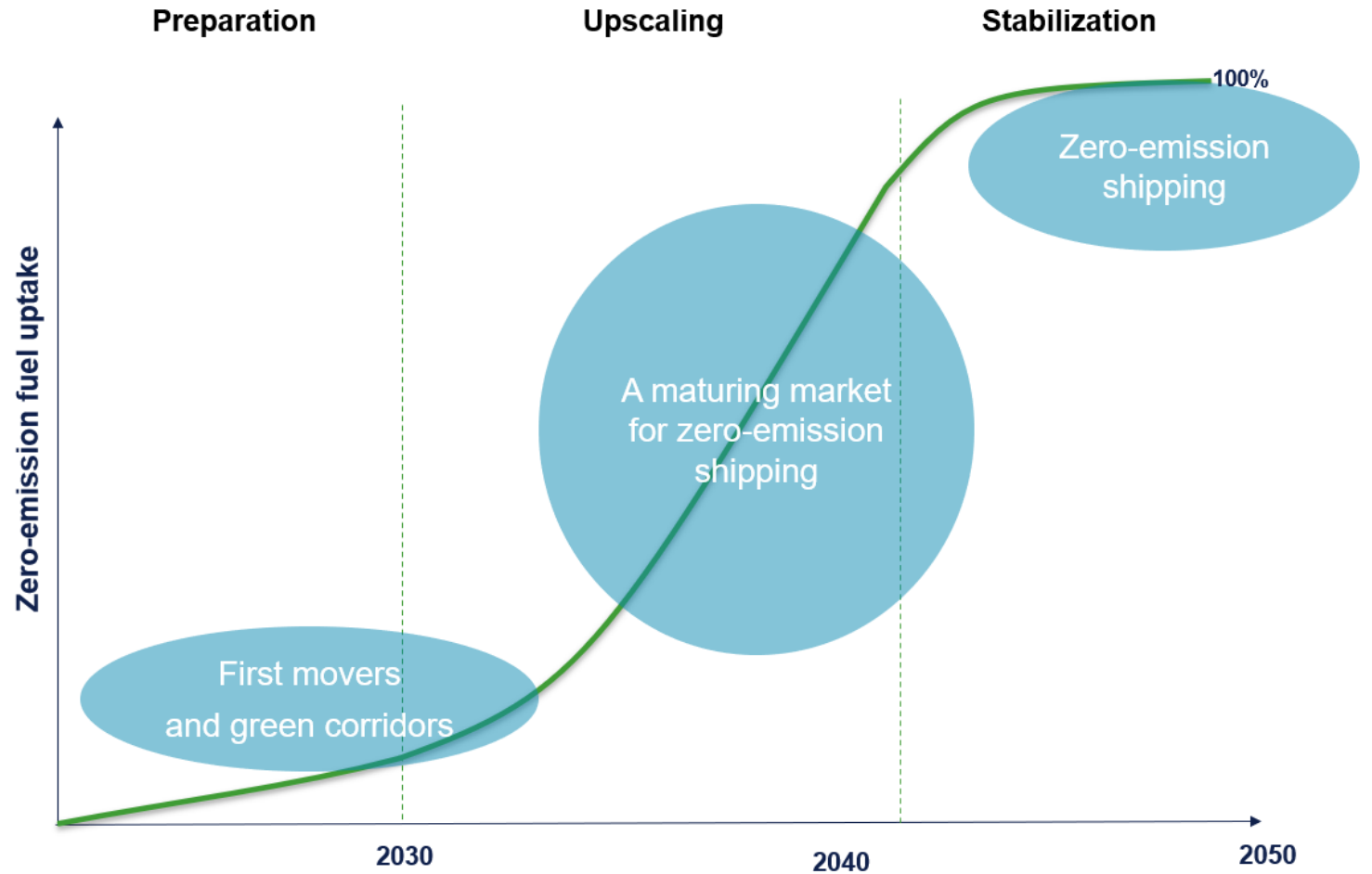


Barrier focus –
what are the key
challenges?



The Fuel Transition Roadmap for Nordic shipping

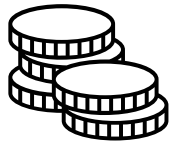
- Aims to **accelerate** the uptake of zero-emission fuels in the Nordics
- Assumes that the fuel transition follows an **S-curve**
- Details **stakeholder actions** to overcome barriers
- **Input and feedback** from all players in the maritime value chain



The Fuel Barrier Dashboard – indicative status of key barriers for selected zero-emission fuels in 2024



3 key bottlenecks hindering the uptake of zero-emission fuels



Cost remains a significant challenge



Lack of **fuel availability** and **bunkering infrastructure**



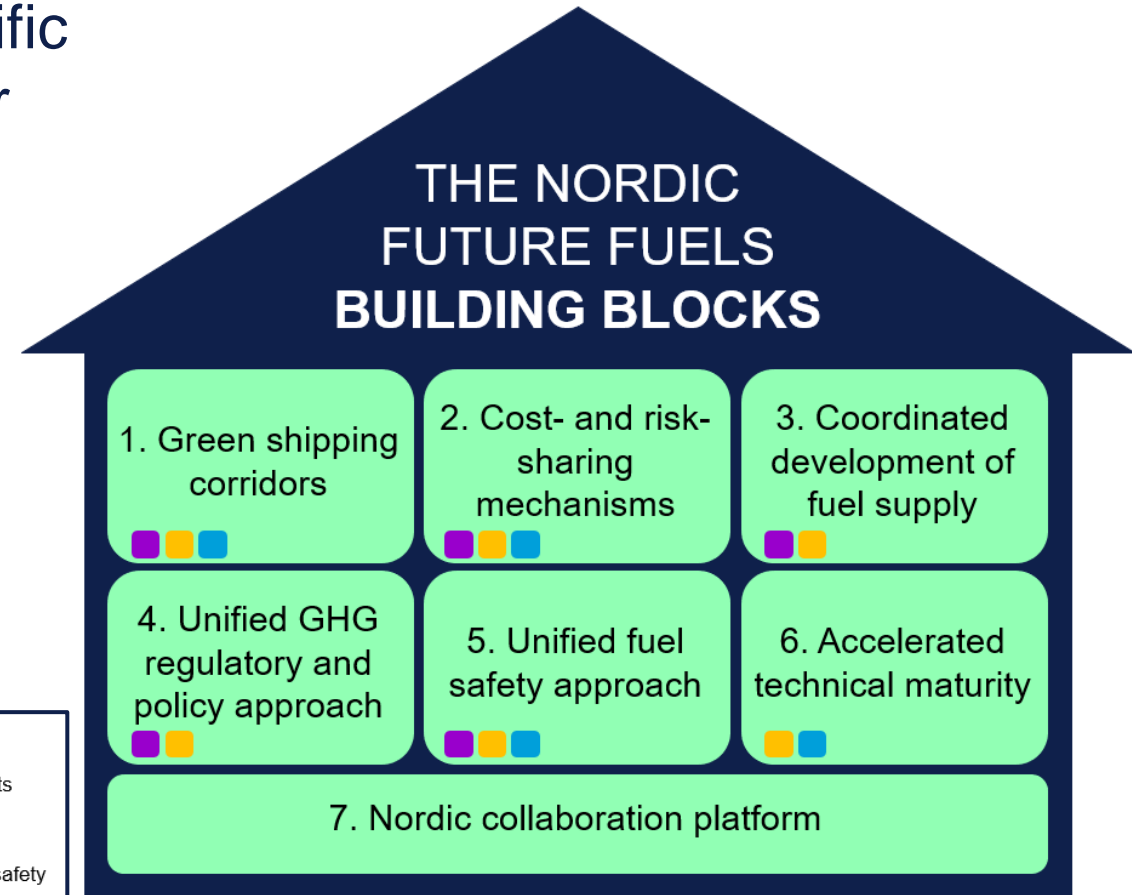
Lack of **safety requirements** and **experience** for ammonia and hydrogen, limiting early uptake

Source: DNV – Nordic Roadmap project, <https://futurefuelsnordic.com/>
DNV (2022), Insight paper on green shipping corridors, <https://futurefuelsnordic.com/insight-paper-on-green-shipping-corridors>

Creating a Nordic Playground – actions towards zero-emission shipping

7 key strategic building blocks with 20 specific actions towards 2030, laying the foundation for upscaling in the next decade.

- **Targeted collaboration** between stakeholders and Nordic governments
- **Urgent actions** to reach 10% zero-emission fuel uptake by 2030, aligned with the IMO's striving for ambitions
- Enabling the use of zero-emission fuels for first mover segments, operating in **green shipping corridors**



Thank you!

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