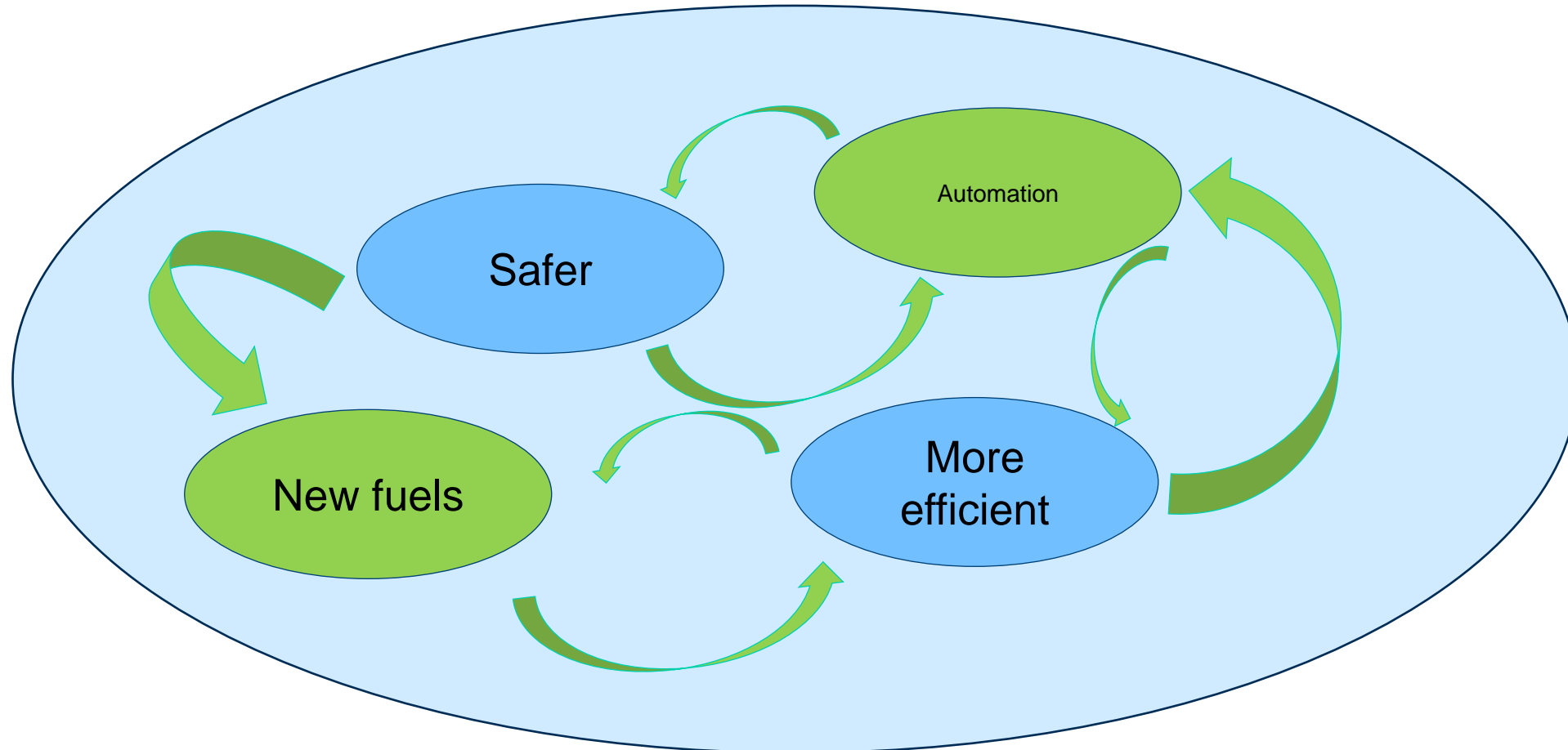




Regulating for New Technology

Nils Haktor Bua
Head of Section New Maritime Technology





IMO

Net zero

-50%

2050

2030



The instructions from the ministry for 2024

- NMA shall contribute to maintain Norway as a leading maritime nation, especially through the green transition and digitalization.
- NMA shall meet the need and demand from the sector due to the transition, and develop competence regarding new green technology.



Sail



Engine
1897



Foto: Arvid
Fimreite
Battery
Ampere 2015



Hydrogen Hydra
2023



Oars



Steam engine

LNG Glutra
2000



Foto: Bjarne
Amble



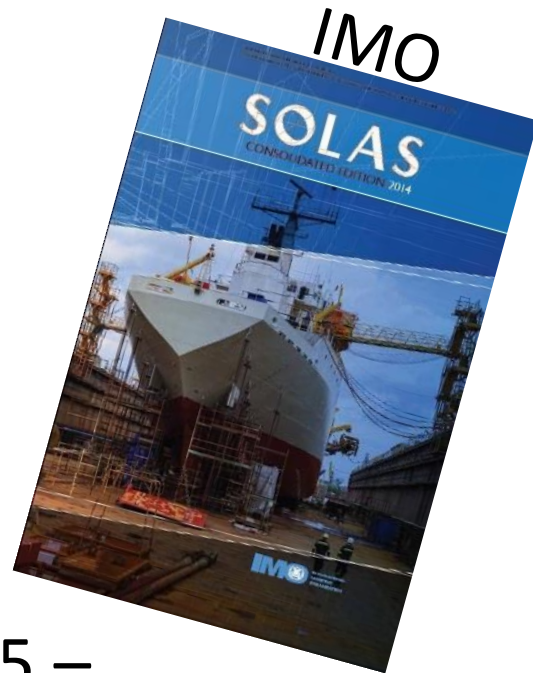
Methanol Leikanger
2016

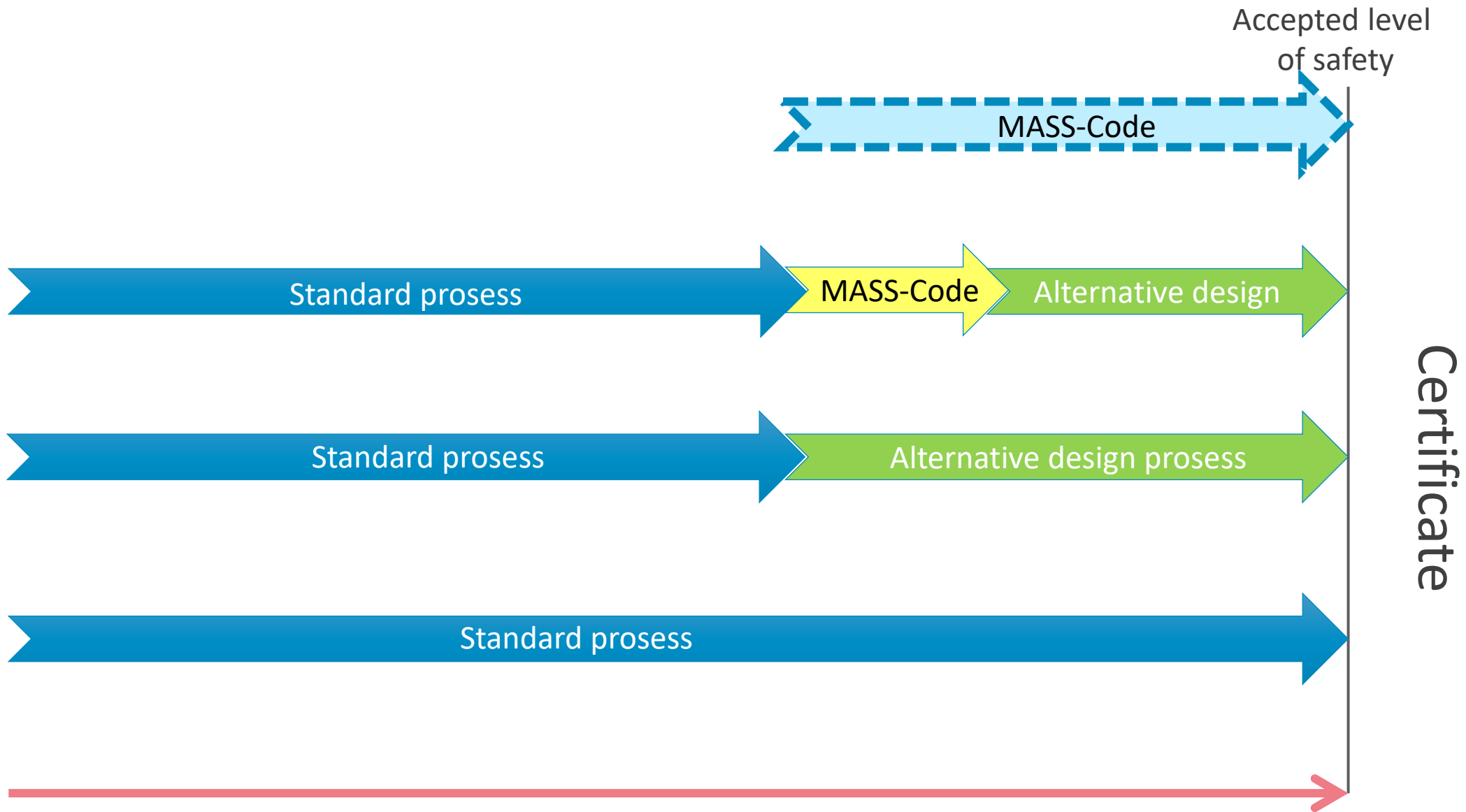
Ammonia –
2024/25?

Norwegian waters VS international waters

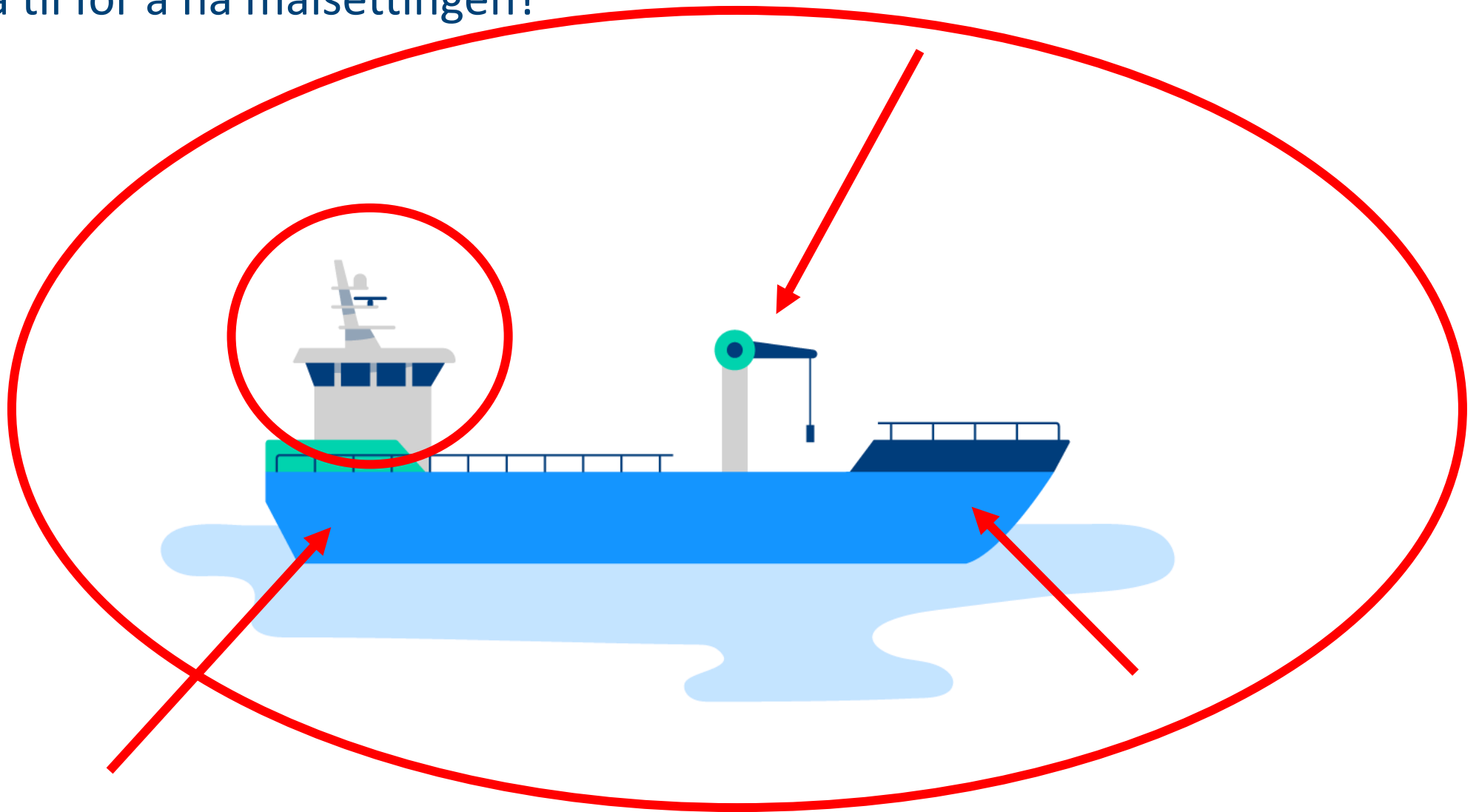
Ship Safety and Security Act

MSC.1-Circ.1455 – Alternative design





Hva må til for å nå målsettingen?

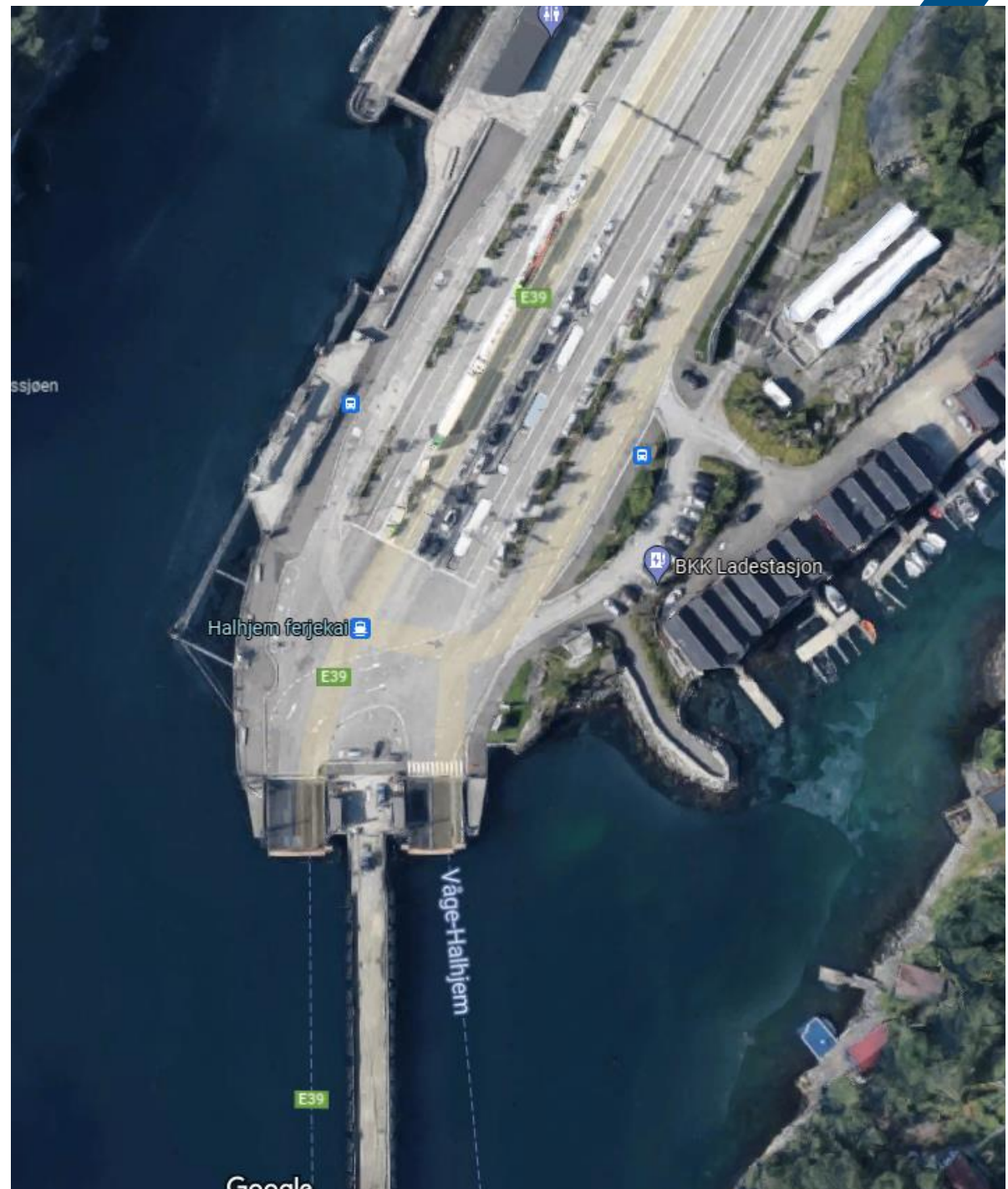


Some challenges and barriers

- Fire
- Explosion
- Leakage
- Gass handling
- Surrounding areas – third party risk
- Bunkering
- Storage
- Operation
- Marin environment
- Production and supply
- Other...

Important barrier

- Competence



Fire and explosion in battery space on MF Ytterøyningen



Har funne årsaka til brannen og eksplosjonen på MF «Ytterøyningen»

Lekkasje i batteripakka førte til brann på el-ferja. Saltvatn frå sprinklaranlegget førte til eksplosjonen, viser ny rapport.



Eksplosjon på ferje: – Vi er ikkje godt nok førebudd på slike brannar

Det lokale brannvesenet mangla sentral kunnskap for å sløkkje brannen i batterirommet på ferja i Kvinnherad. I dag er dei glad for at de valde å vera forsiktige under innsatsen.



Taubåt tok fyr med batteri frå same produsent som på brannferja

Politiet sjekkar om gamle saker kan kaste nytt lys over ferjebrannen på MF «Ytterøyningen».

Regulation in the loop

- Hydrogen and ammonia guidelines
- MASS code
- STCW revision



In the loop on new fuels

- Still new projects and concepts on ammonia, hydrogen, methanol and battery
- Cruise ships designing for partial zero emission - ready (heritage fjords)
- Offshore vessels - retrofit into ammonia
- Vessels belonging to aquaculture



Status on autonomy

- MASS code is developing in IMO
 - Norway takes an active part
- Yara Birkeland and ASKO seadrones has started the test period
- Smaller offshore support vessels
- Lavik – Opedal
- Small city ferries

