



Concept illustration – work ongoing

Gismarvik CO₂ Terminal

Kveldsseminar CCS Haugalandet, 26.10.2023



Horisont Energi er et norsk energiselskap som leverer ren energi, transport- og lagring.

Vår misjon er å akselerere overgangen til karbonnøytral fremtid gjennom storskala industriprosjekter.



Et norsk selskap innen produksjon av ren energi, karbonfangst og lagring



Grunnlagt 2019 med hovedkontor i Sandnes, Norge

Erfarent og dedikert team på ~ 50 personer

Rendyrket karbonlagring og ren ammoniakkaktør med ledende industripartnere

Forpliktet til å akselerere energiovergangen

Industrielt eierskap med **E.ON** som største aksjonær med 25% eierandel

FINANSIERING: Seed \$ 1M, Series A \$ 15M, Series B \$ 42M



KARBONFANGST
OG
LAGRING

REN
AMMONIAKK



PROJECT Barents Blue

Europe's first world-scale clean ammonia plant with CCS

HAMMERFEST | EST. START 2028

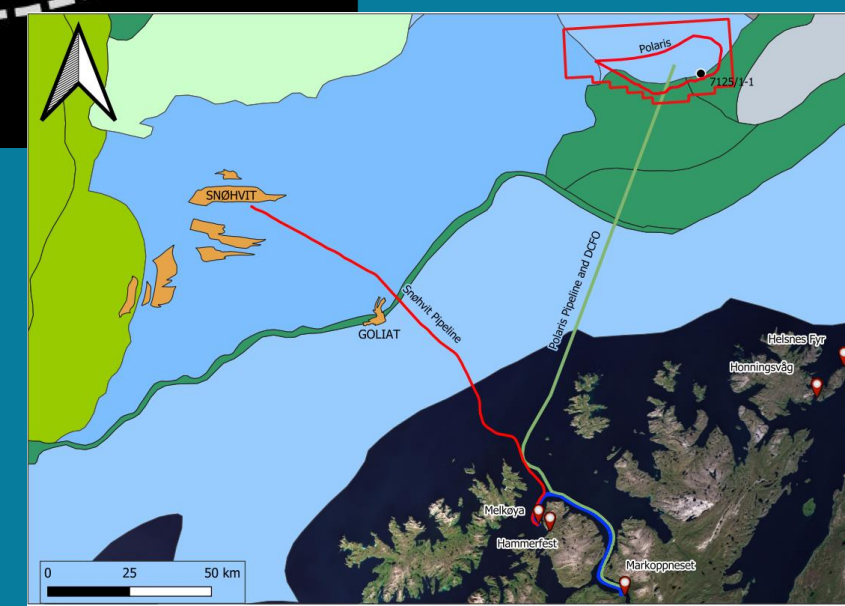
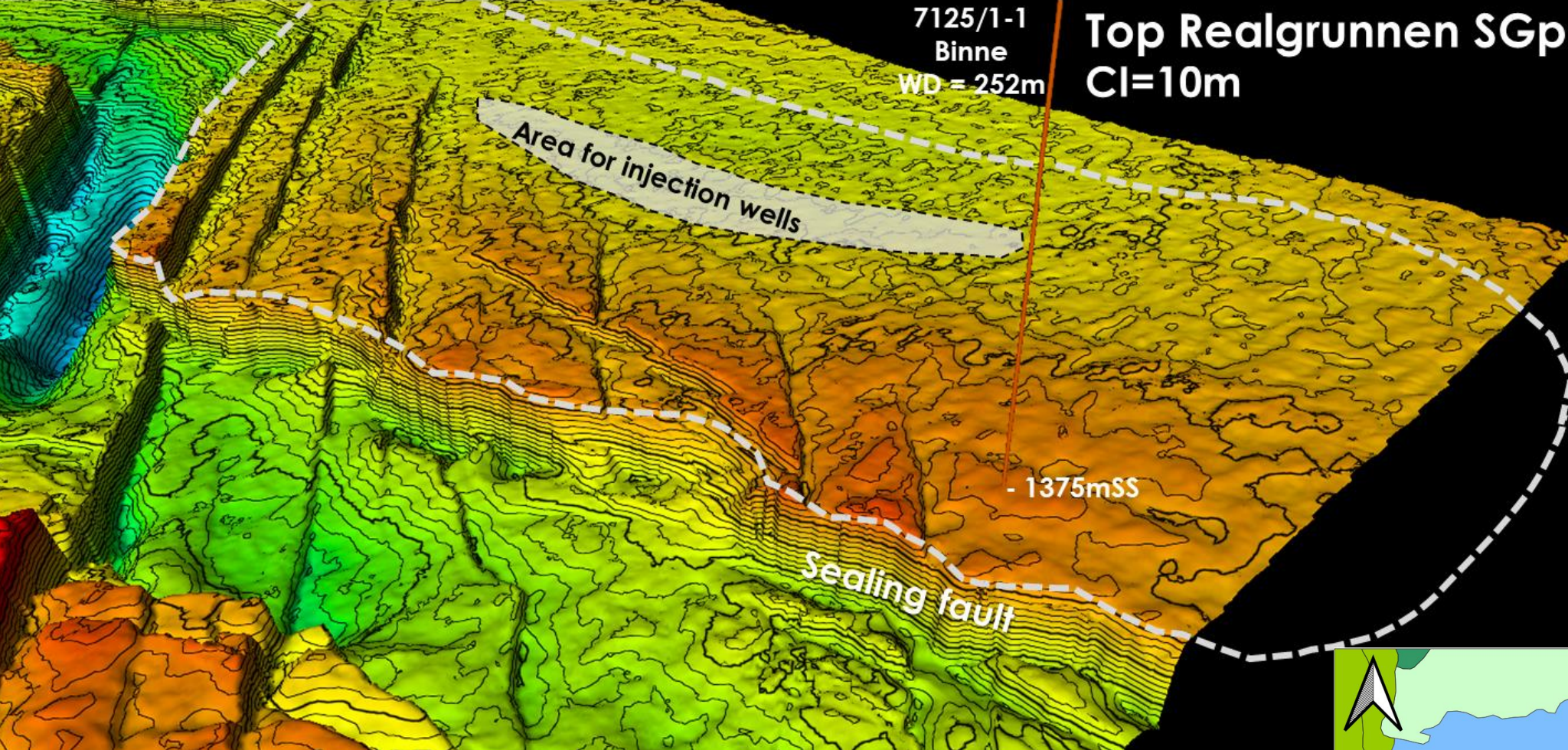


Annual production by 2030:
1-3 million tonnes



Awarded a NOK 482 million grant from Enova to participate in (IPCEI) Hydrogen, Hy2Use

- European-first world-scale CO₂-free ammonia production with an annual production of 1 million tonnes
- Best-in-class life-cycle carbon footprint, with above 99% carbon capture
- Modular construction strategy with focus on sustainable solutions and circular practices in design
- Mostly self-sufficient on power, limited renewable electricity from grid
- Fertiberia adding more than five decades of ammonia plant and supply chain knowhow
- EU Taxonomy compliant pursuant to delegated acts for hydrogen and anhydrous ammonia
- Barents Blue part of plant to become carbon neutral by 2035



Polaris CCS License (EXL 003) awarded June 2022

- ▶ Injection capacity sufficient for Ammonia Plant CO₂ discharge and potentially 3rd party

E.ON is our strategic partner in developing a European CCS value chain



Horisont Energi and E.ON have a cooperation agreement with E.ON acquiring 25% stake in Horisont Energi

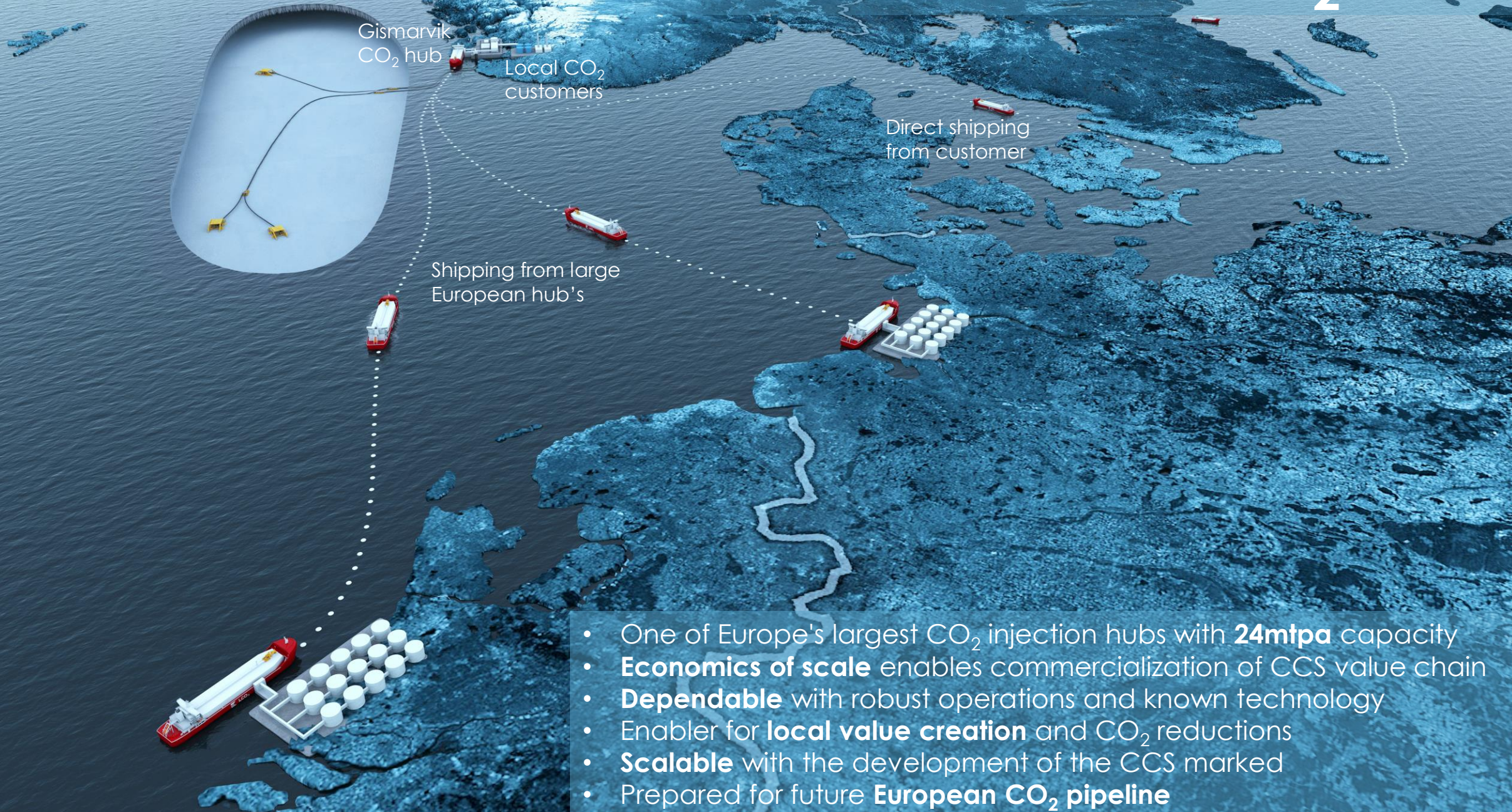


Horisont and E.ON want to play a decisive role in the decarbonization of key industrial sectors in Europe, whilst scaling up and commercializing CCS and clean ammonia

Value chain



Gismarvik CO₂ Hub



Gismarvik
CO₂ hub

Local CO₂
customers

Direct shipping
from customer

Shipping from large
European hub's

- One of Europe's largest CO₂ injection hubs with **24mtpa** capacity
- **Economics of scale** enables commercialization of CCS value chain
- **Dependable** with robust operations and known technology
- Enabler for **local value creation** and CO₂ reductions
- **Scalable** with the development of the CCS market
- Prepared for future **European CO₂ pipeline**

Gismarvik CO₂ Hub

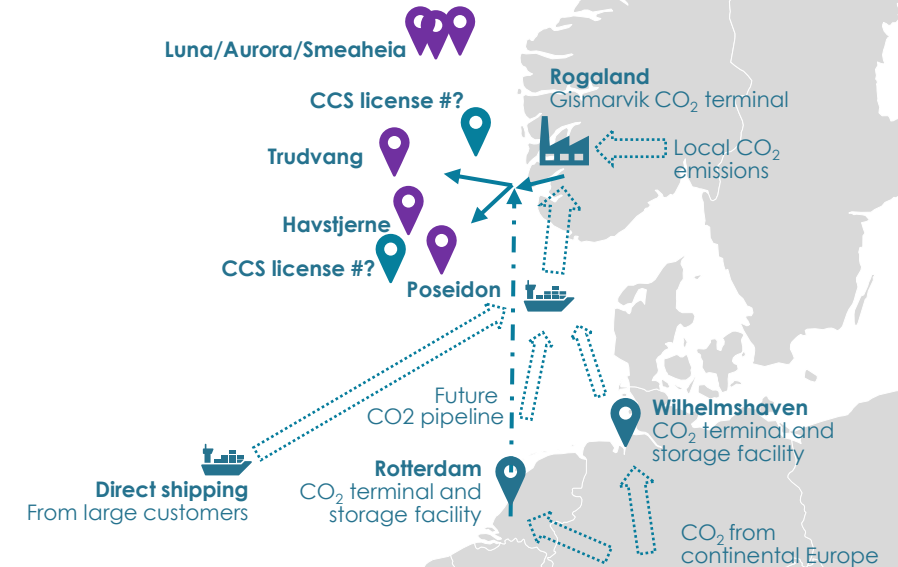
Attractive economics of scale with an area solution

- Commercial CO₂ storage with attractive tariff
- Onshore terminal enable local value creation and CO₂ capture
- Robust operations with high availability
- Low technical and execution risk
- Good fit with future pipeline from Europe as integrated part of the system
- Horisont Energi continues to mature and improve the concept for the CO₂ terminal to meet Norwegian and European demand for storage
- We have a cooperation agreement with Kooles Terminals to develop a logistic value chain for CCS together with Port of Rotterdam

Area solution technical highlights:

- Phasing of project pending reservoir and customer base
- Injection capacity up to 24 MTPA
- 2 jetties with capacity to handle large ships
- Capable to handle large span in CO₂ specifications
- Project lifetime: 25+ years

Potential tie-back candidates



Key figure



Start ?

Pending
reservoir and
customer



24 MTPA

Phased
development



**Attractive
tariff**

Economics of
scale



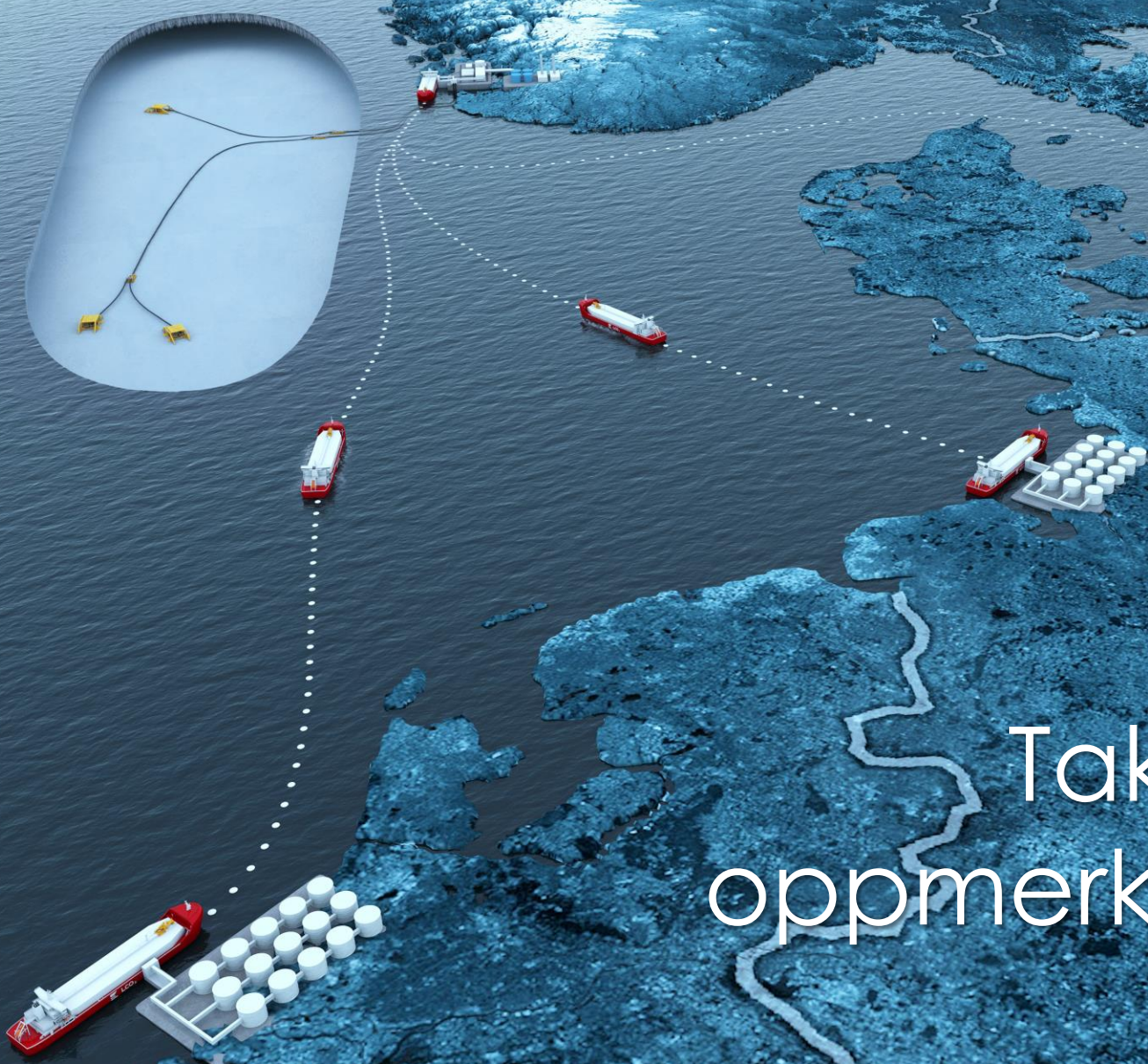
**Robust
operations**

CO₂
specification,
ships, availability

Ringvirkninger for Haugalandet

- **Nasjonal/Regional «hub» for CO₂-lagring**
 - Vi kan tilby permanent CO₂ lagring for industriparken og omkringliggende industri
- Prosjektet tilrettelegger for utvikling av grønn industri på Haugalandet
- Prosjektet passer godt inn med strategi og profil til Haugaland Næringspark og regjeringens satsningsområder i Grønt Industriløft hvor CO₂ håndtering er en prioritet
- Arbeidsplasser:
 - Anleggsfase: Ca. 2,5 år (varierende behov for kompetanse)
 - Driftsfase: 20-30 årsverk
- Lokal kompetanseutvikling
- Lokale varer og tjenester





Takk for oppmerksomheten!