


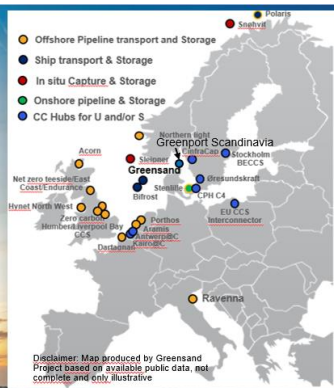
INEOS Energy Denmark CCS activities

INEOS Energy



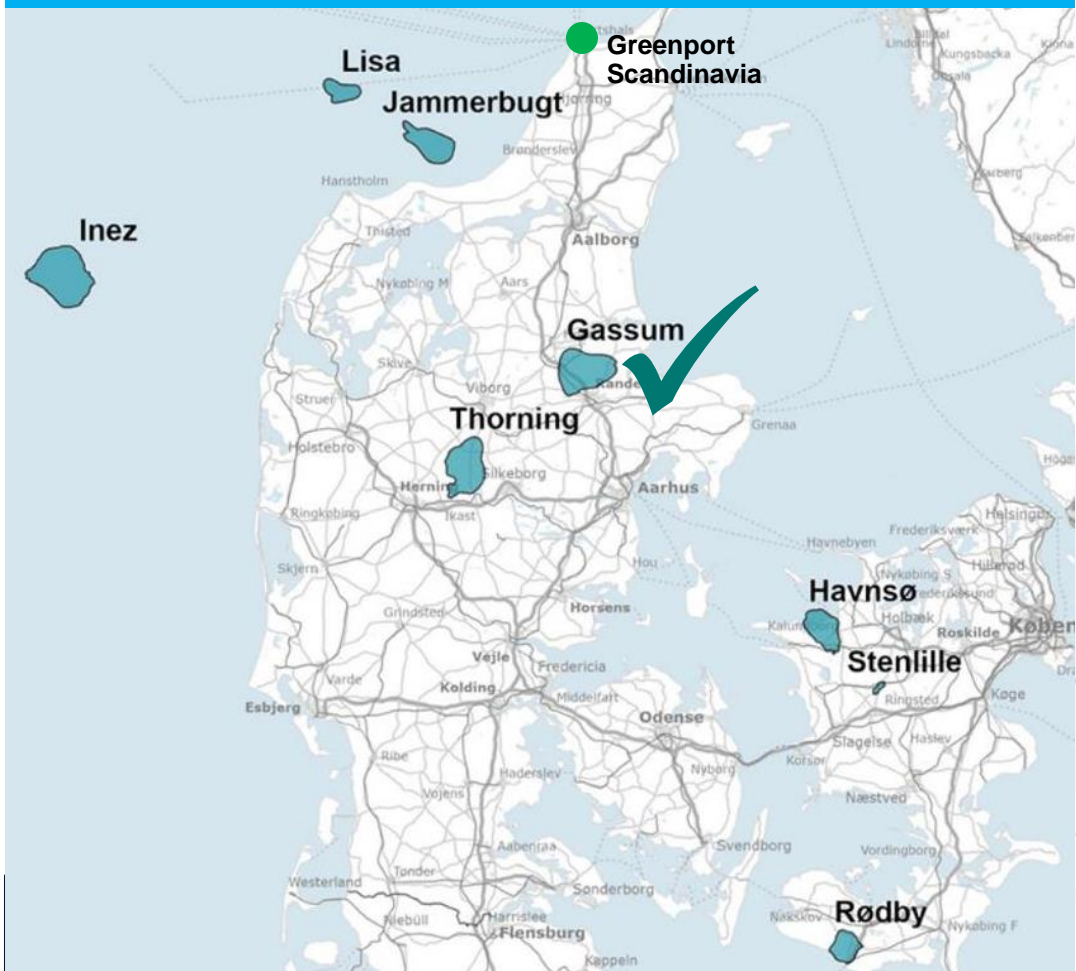
Greensand Project
Safe and Reliable Offshore Transport and Storage of CO₂ in the Danish Sector of the North Sea

A project underway by INEOS Energy, Wintershall Dea and Nordsøfonden



Disclaimer: Map produced by Greensand Project based on available public data, not complete and only illustrative.

CO₂ Exploration in Denmark – Gassum (now renamed to Greenstore) awarded to Harbour Energy, INEOS and Nordsøfonden



Greenport Scandinavia



Co-funded by the European Union



GREENPORT SCANDINAVIA
Gateway to the Danish CCUS infrastructure

The project Greensand Journey towards first commercial project

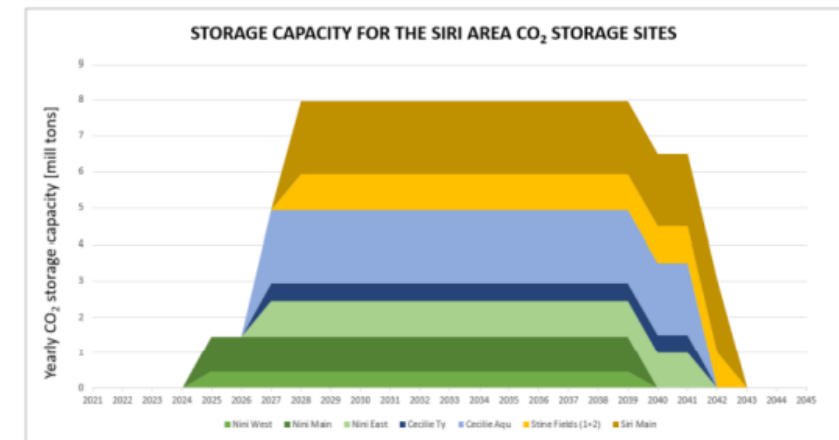
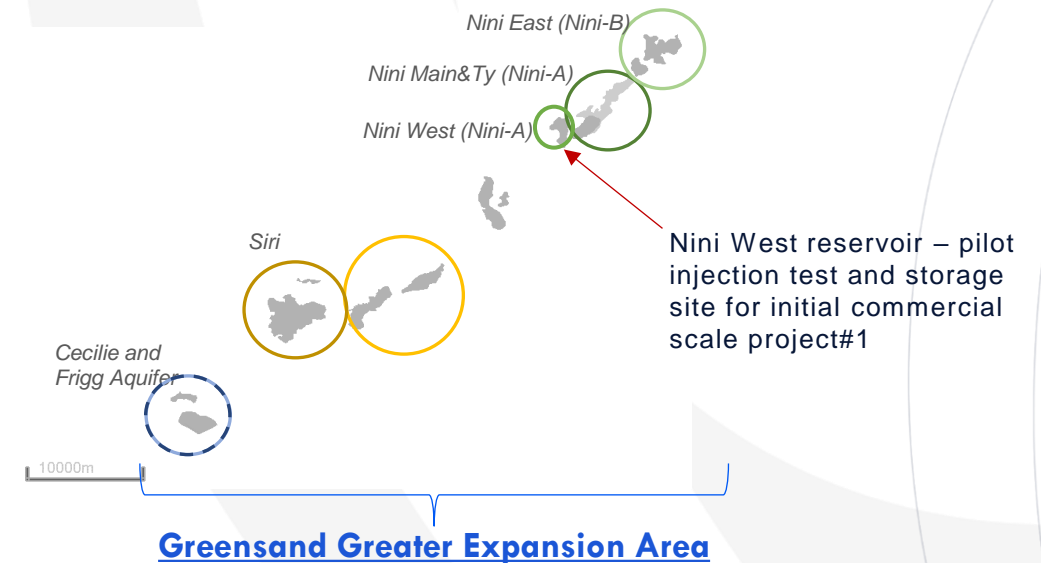
Greensand Project – Offshore Transport and Storage of CO₂

Overview

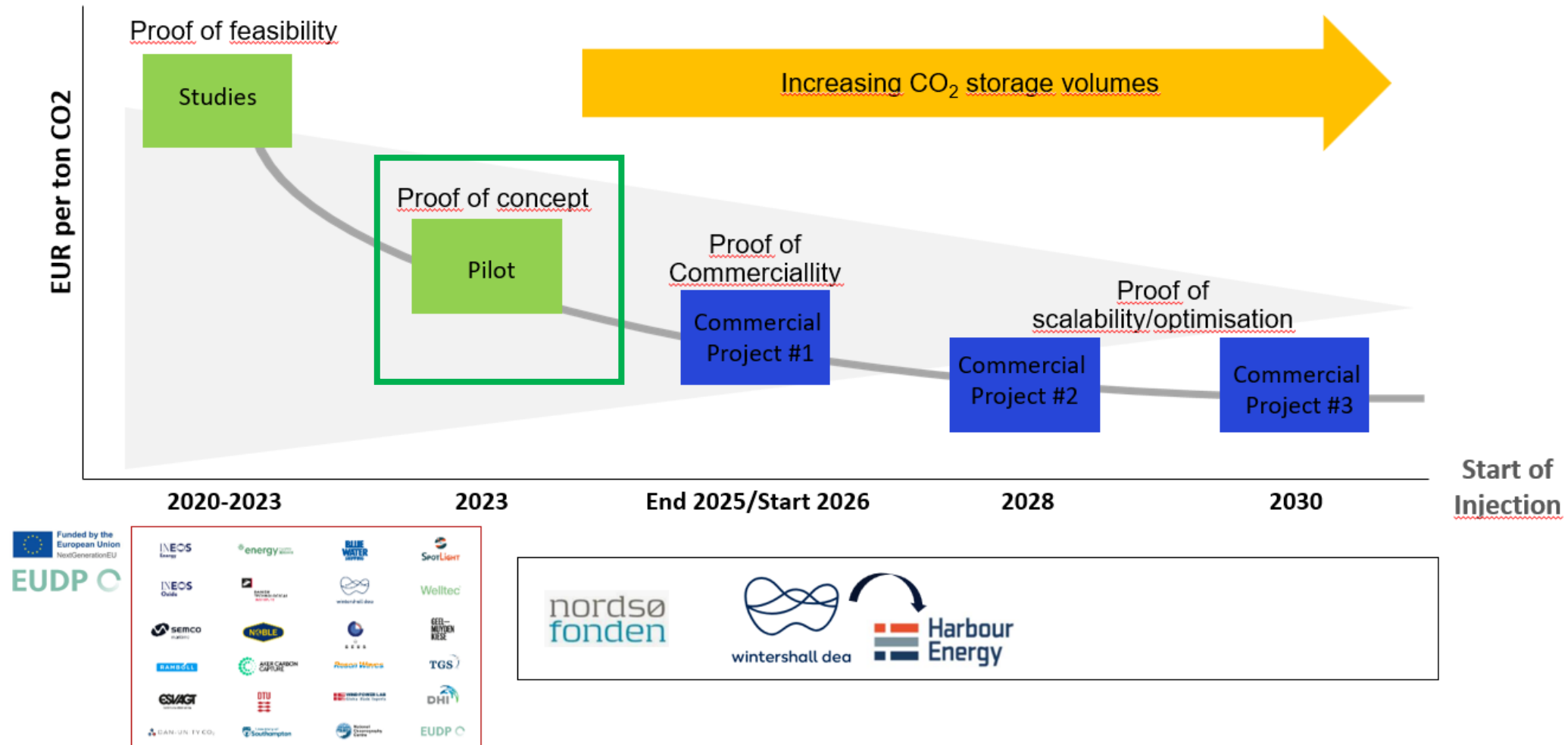
Turning the Siri area into a CO₂ storage hub



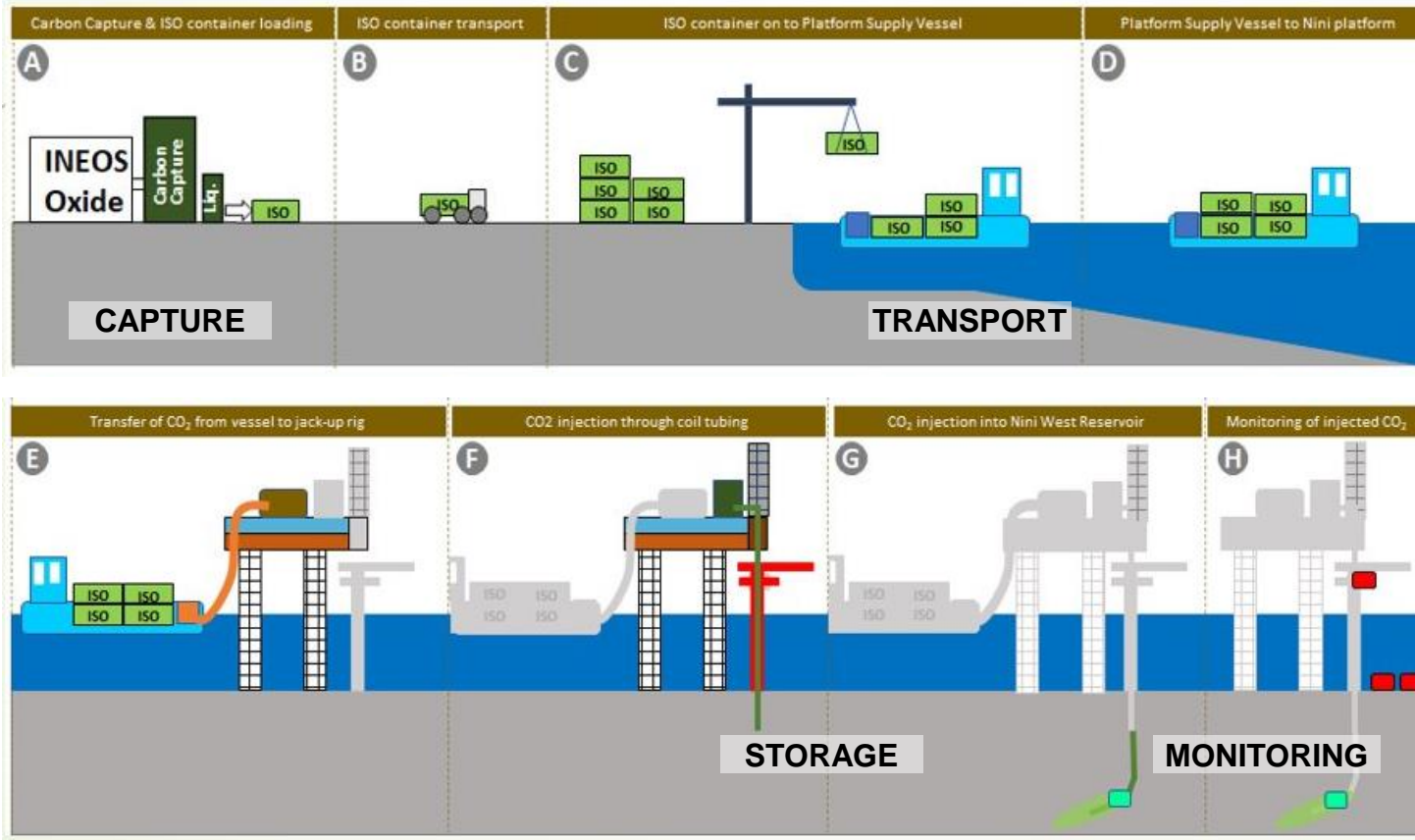
- Use of Siri Area for CO₂ storage
INEOS has experience and huge data set from exploration and production activities in Siri Area over more than 20 years
- EUDP Phase 2: Offshore Pilot CO₂ Injection and Monitoring test in 2023, lab work, modelling, materials testing, etc to support potential storage site application
- Initial Greensand work focused on CO₂ storage in Nini West – **Proof of commercial Scale/Greensand Commercial Project#1**
- Greater Greensand Expansion Area includes remaining Siri area suitable reservoirs – harvest economies of scale



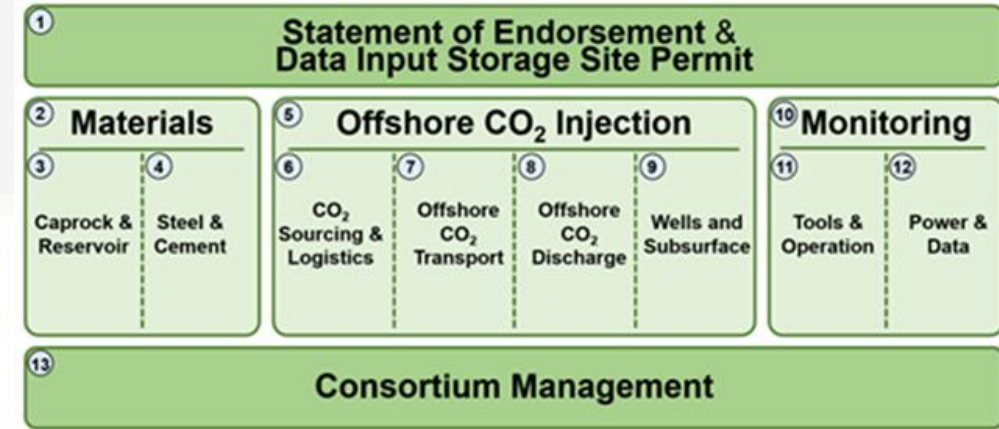
The Greensand Phase Approach Journey: Build Competence, Learnings and Scale Up Commercial CO₂ Storage Capacity



Phase 2 – Proof of Concept

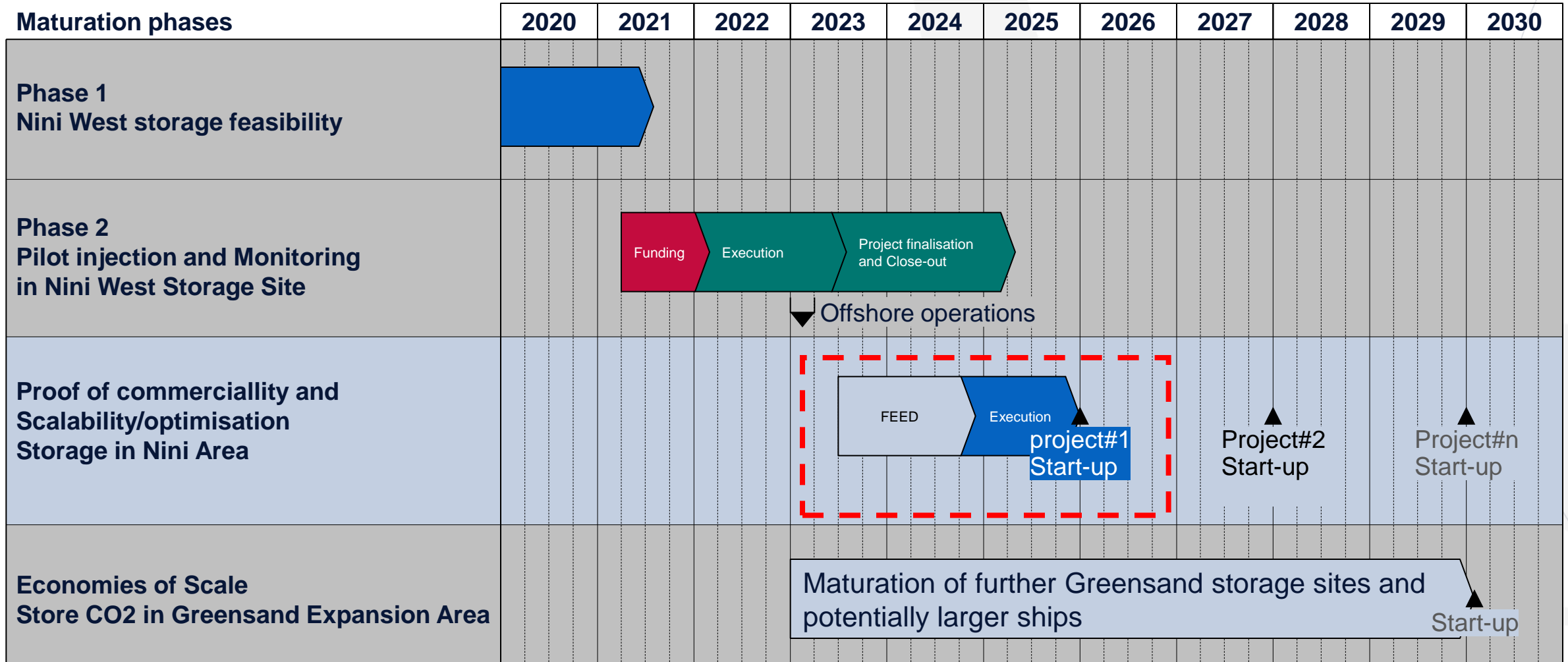


Demonstration of full value chain from capture to storage
+ test of monitoring techniques

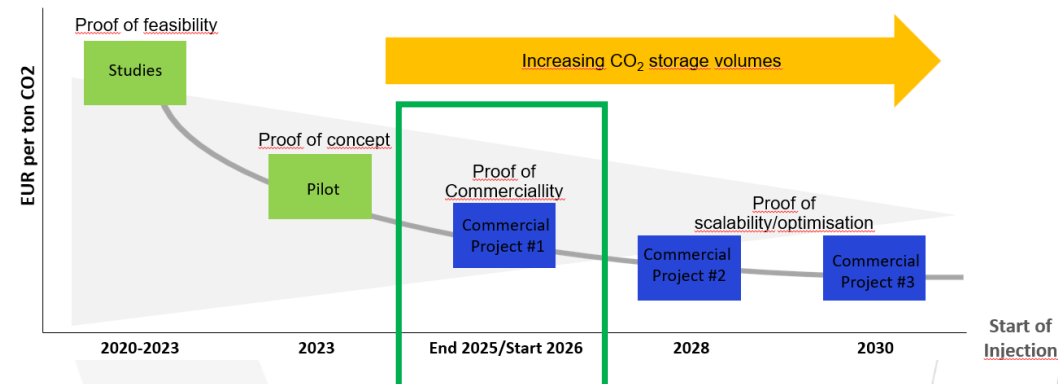
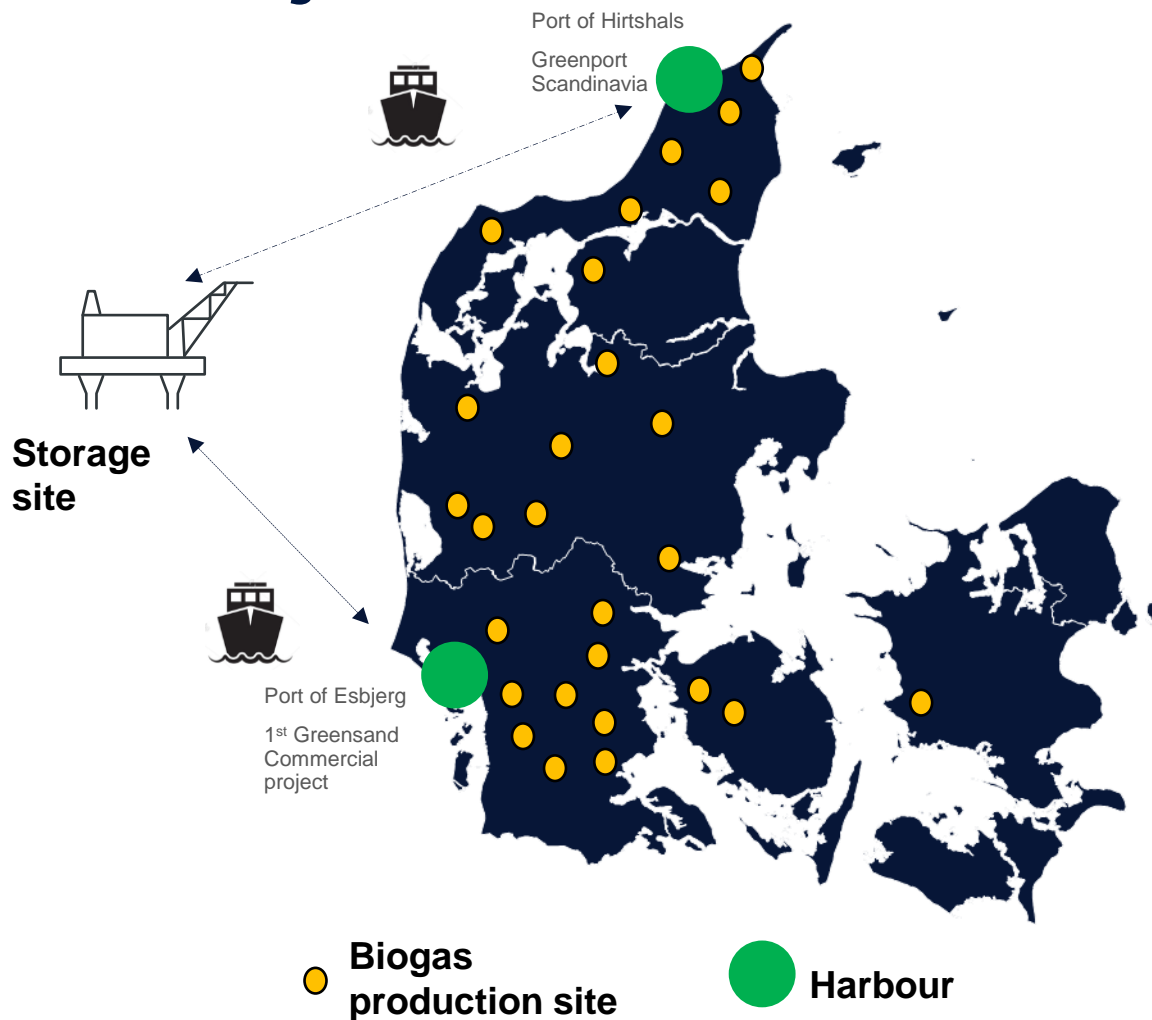


Greensand Project Development Phases

Building competence, mitigate risks and phased economic exposure



Greensand – Commercial Project #1



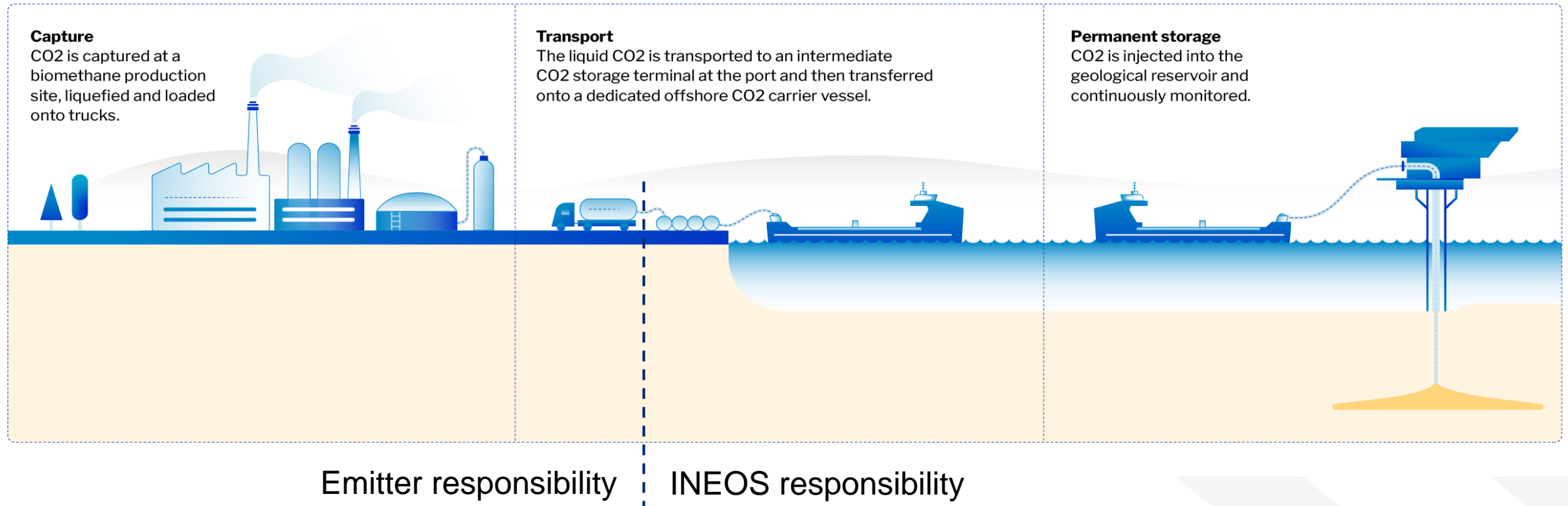
Opportunity:

- Storage of available biogenic CO₂ from biogas.
- Negative emissions – Carbon credits sale
- Modified bulk carrier design ~5.500 tCO₂/trip (1st Ship)
- Build on Phase 2 pilot learnings – hardware and operation
- 400.000 Tonnes of CO₂ per year (1st Ship from Esbjerg)

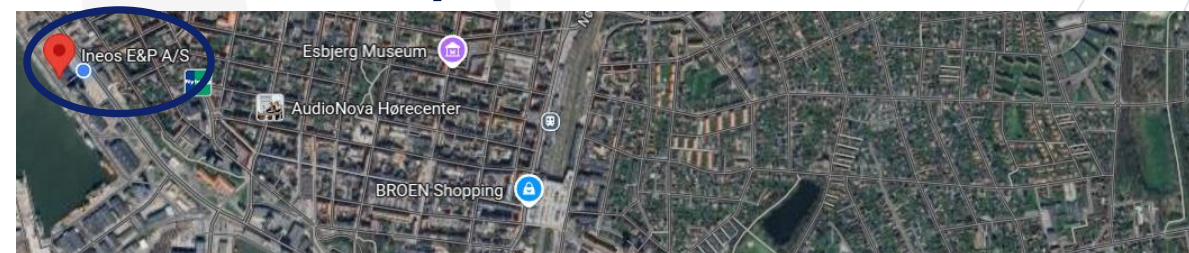
Key Milestones:

- ✓ Submission of storage site application February 2024.
- ✓ DnV: Certificate of Conformity – Site Endorsement and Storage Site compliant with ISO 27914 obtained
- ✓ Funding granted from EUIF in October 2024
- ✓ End 2024: Project sanction expected, pending necessary approvals
- End 2025/Start 2026: First CO₂ injection and permanent storage.

Greensand Future Concept



Intermediate storage at Esbjerg Port (6000 m³ CO₂)

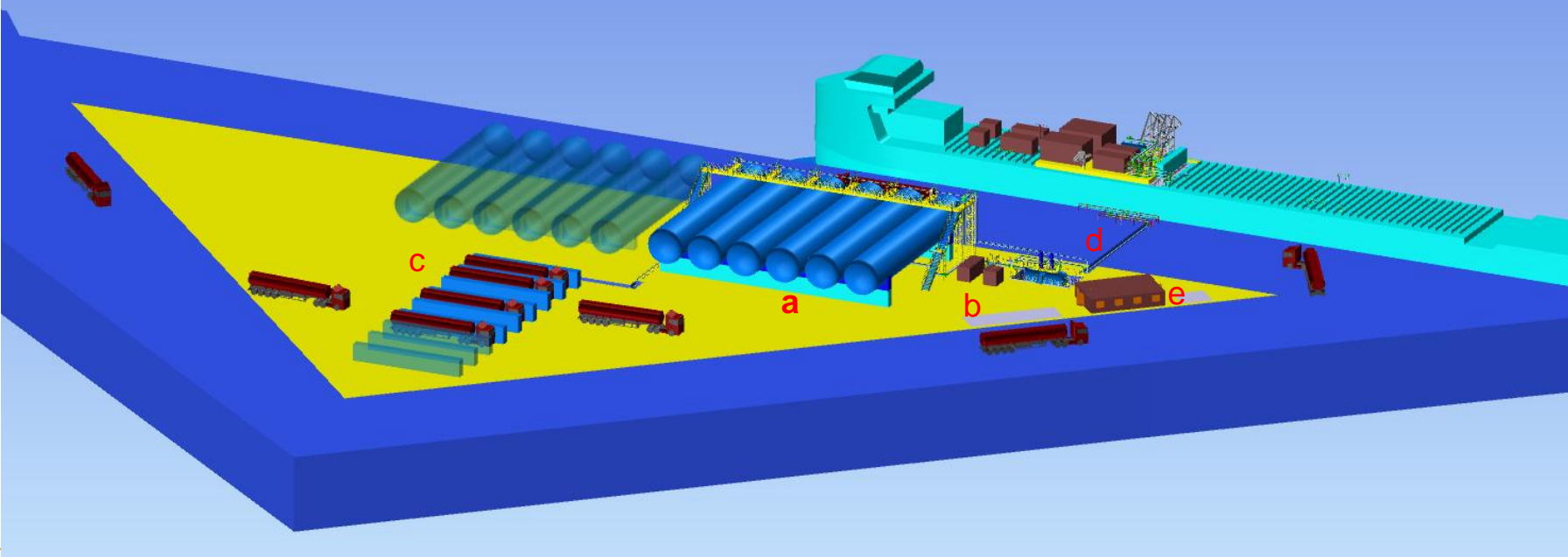


Harbour facilities located close to INEOS office

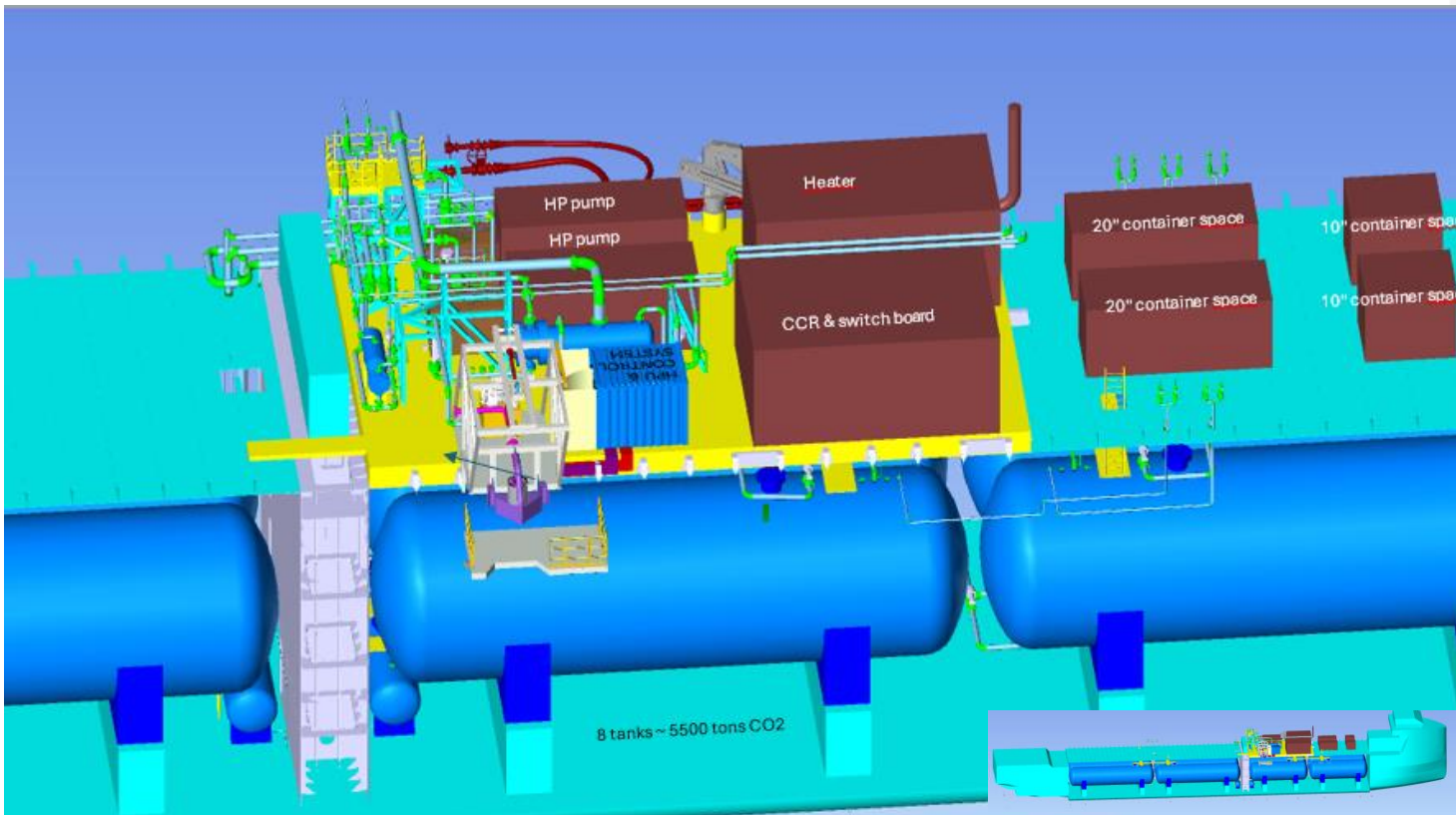


- a) 6x 1000 m³ CO₂ tanks
- b) Cooling plant
- c) 6 Offloading stations for Trucks

- d) Offloading system to the boat
- e) Buildings for offices and welfare



Offshore transportation by Ship

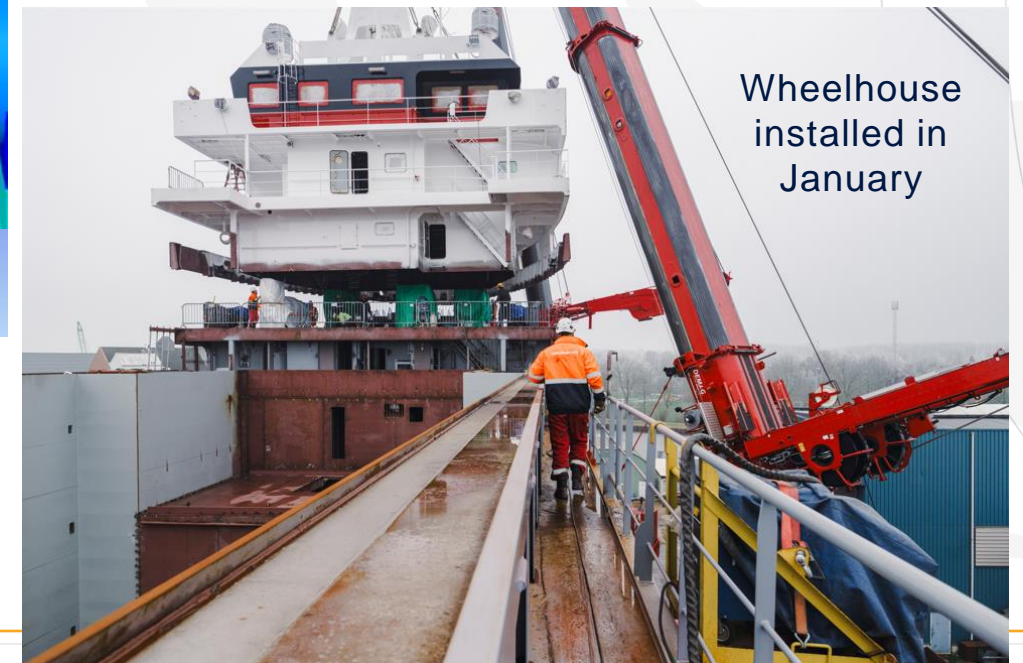
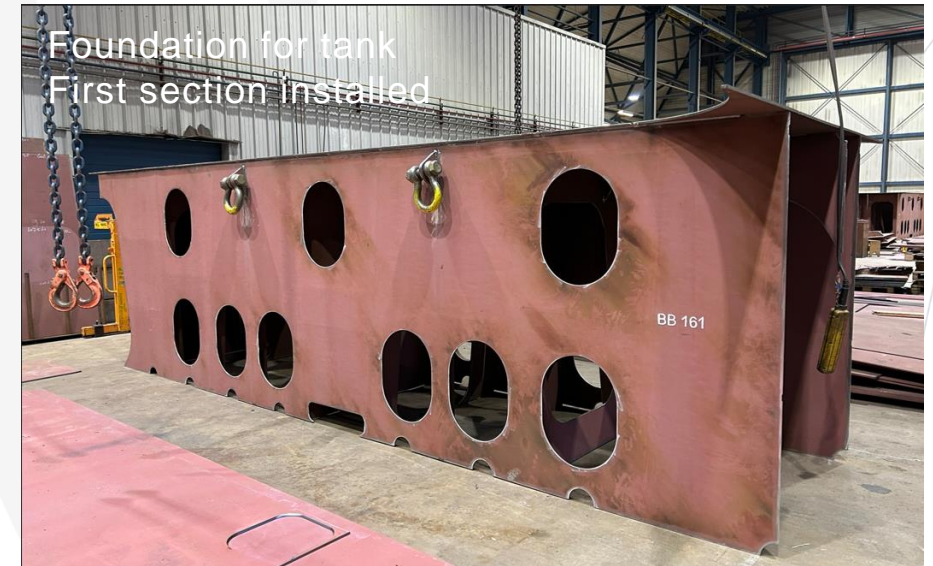


CO2 deck

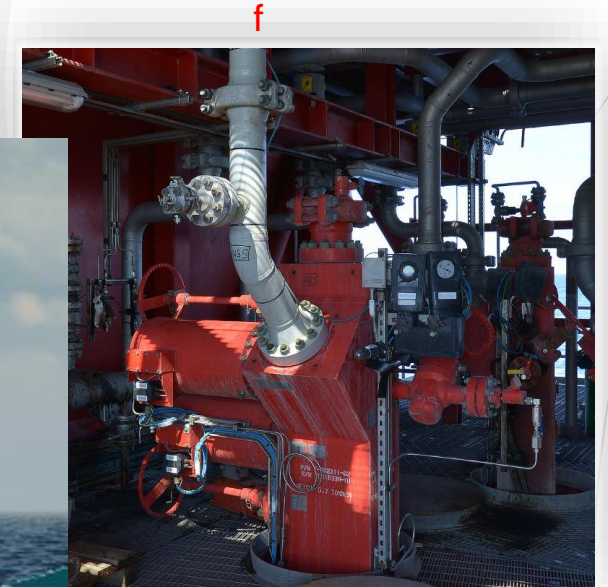
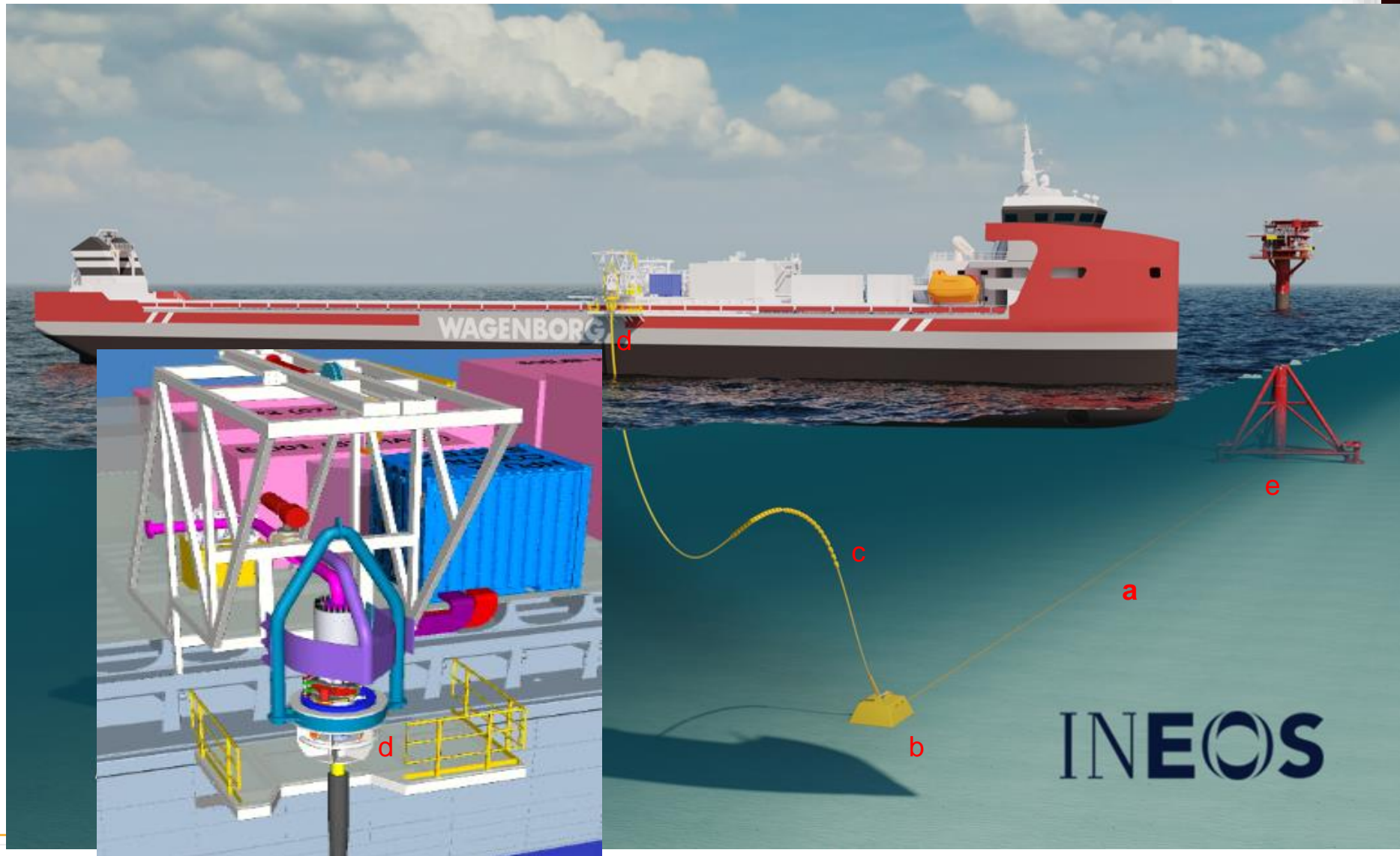
- 2 HP pumps
- CCR and Switch board room
- Heater
- Heat exchanger

Below deck

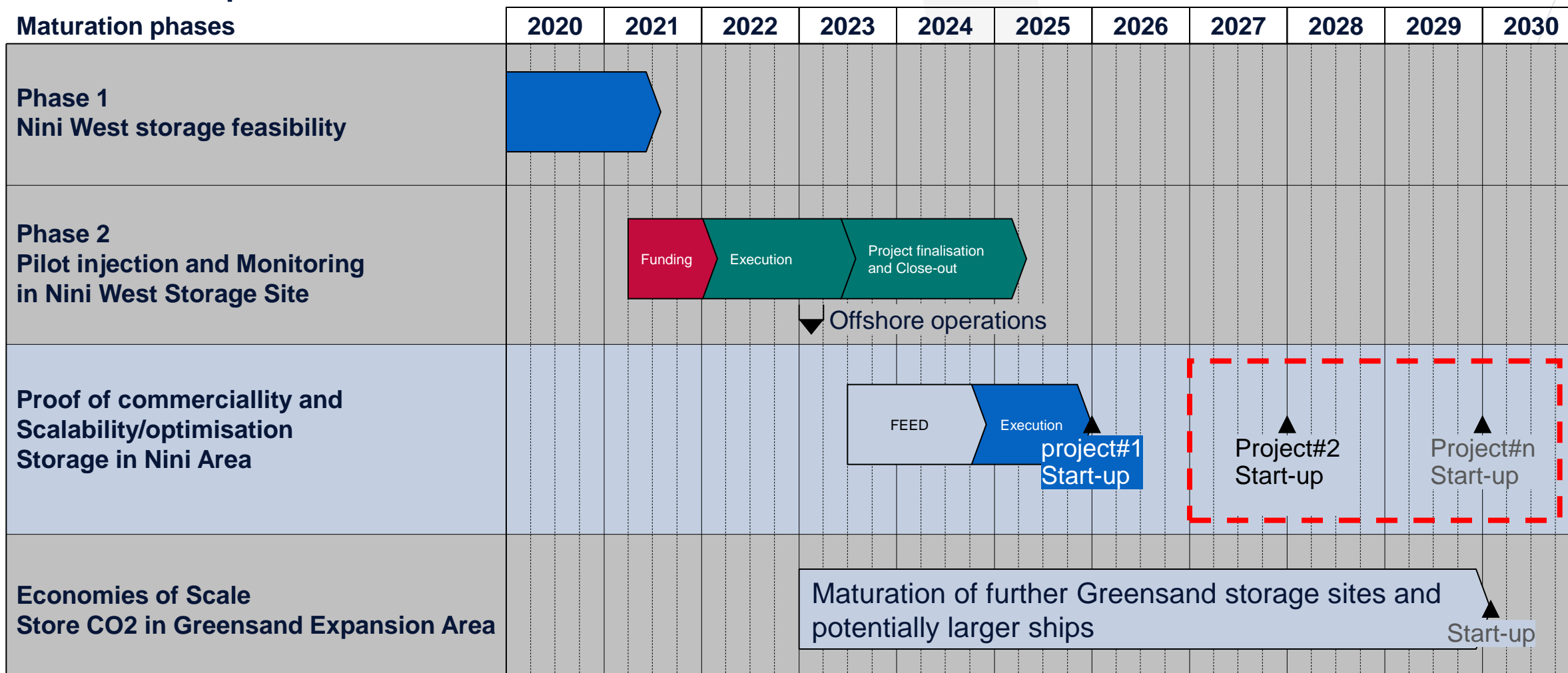
- 8 CO2 tanks below deck (5500 T)
- Suction vessel
- Transfer pumps



Offshore discharge system



The next phases



Thank You for your attention



INEOS
Energy

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