Port of Kalundborg

Largest industrial cluster outside of Copenhagen

Kalundborg Symbiosis – September 2025

KALUNDBORG PORT

- Self-governing Municipal Port
- Operating on commercial terms with independent finances, reinvesting profits in development of the port
- Working under the regulations of the Danish Harbour Law.
- Relying on quality complementary services to generate new business, be competitive and attractive
- Facilitator of:
  - Business growth
  - Sustainable development
  - A circular approach in collaboration with the Industrial Symbiosis
- We are only as good as our partners and clients with the right mindset, providing complimentary value to our value chain

Port of Kalundborg

Largest industrial cluster outside of Copenhagen

KALUNDBORG PORT

Port of Kalundborg

Largest industrial cluster outside of Copenhagen

Kalundborg Symbiosis – September 2025

KALUNDBORG PORT

Total cargo turnover in the 25 largest Danish Commercial Ports

- Average cargo turnover per year between 2018-2022
- Geographically connected port areas are merged (Kalundborg, Aalborg, Aabenraa & Stigsnaes)
- These 25 ports have had a share of 90% of the national cargo turnover in the period
- 2/3 of the cargo have been handled by 10 ports

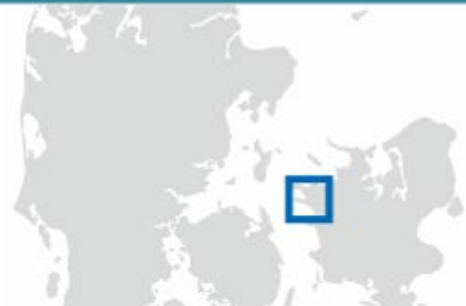
	De 25 største godshavne	Godsomsætning (1.000 tons)	Andel af samlet godsomsætning	Akkumuleret andel
1	Kalundborg Fjord Havne	10.498	11,1%	11,1%
2	Aarhus Havn	9.260	9,8%	20,9%
3	Rødby Havne	8.568	9,1%	29,9%
4	Fredericia Havn	6.507	6,9%	36,8%
5	Københavns Havn	6.077	6,4%	43,2%
6	Helsingør Havne	5.277	5,6%	48,8%
7	Aalborg Havne	4.952	5,2%	54,0%
8	Aabenraa Havne	4.308	4,6%	58,6%
9	Esbjerg Havn	4.277	4,5%	63,1%
10	Stigsnæs Havne	2.880	3,0%	66,2%
11	Frederikshavn Havn	2.467	2,6%	68,8%
12	Odense Havn	2.215	2,3%	71,1%
13	Gedser Havn	2.091	2,2%	73,3%
14	Hirtshals Havn	1.967	2,1%	75,4%
15	Køge Havn	1.759	1,9%	77,3%
16	Thyborøn Havn	1.729	1,8%	79,1%
17	Grenaa Havn	1.406	1,5%	80,6%
18	Rønne Havn	1.385	1,5%	82,0%
19	Randers Havn	1.270	1,3%	83,4%
20	Kolding Havn	1.222	1,3%	84,7%
21	Stålvalseværkets Havn	1.210	1,3%	85,9%
22	Avedøreværkets Havn	1.175	1,2%	87,2%
23	Vordingborg Havn	894	0,9%	88,1%
24	Studstrupværkets Havn	859	0,9%	89,0%
25	Horsens Havn	780	0,8%	89,9%

National Cargo Turnover

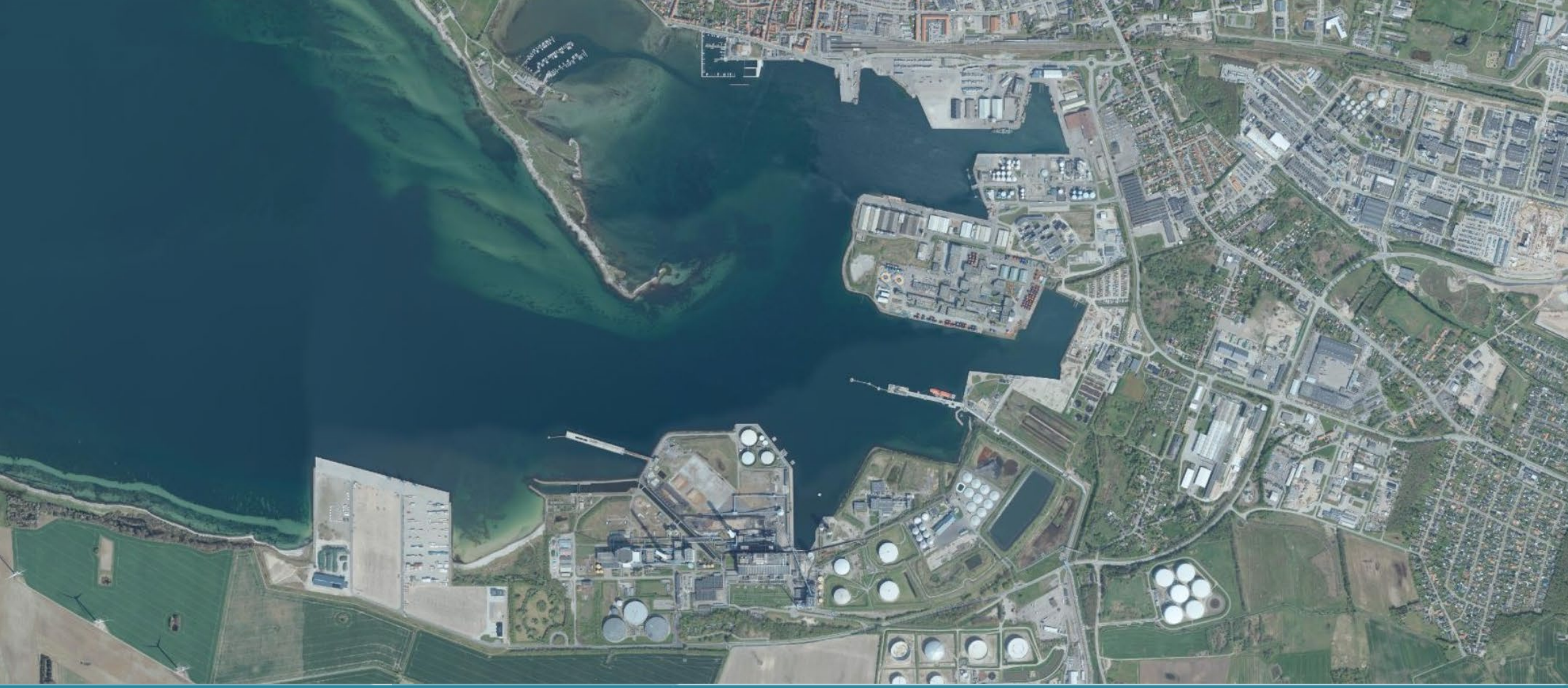
KALUNDBORG PORT

The Ideal Location

- Ideal location in the center of Denmark, and at the entrance to the Baltic Sea
- A deep-water port, just next to the T-route
- Naturally sheltered inside Kalundborg Fjord
- Easy access to the Zealand region
- Perfect location for import and export of all types of commodities
- Good location for transshipment operations
- Approved for road trains
- Long history of a sustainable mindset (Kalundborg Symbiosis)

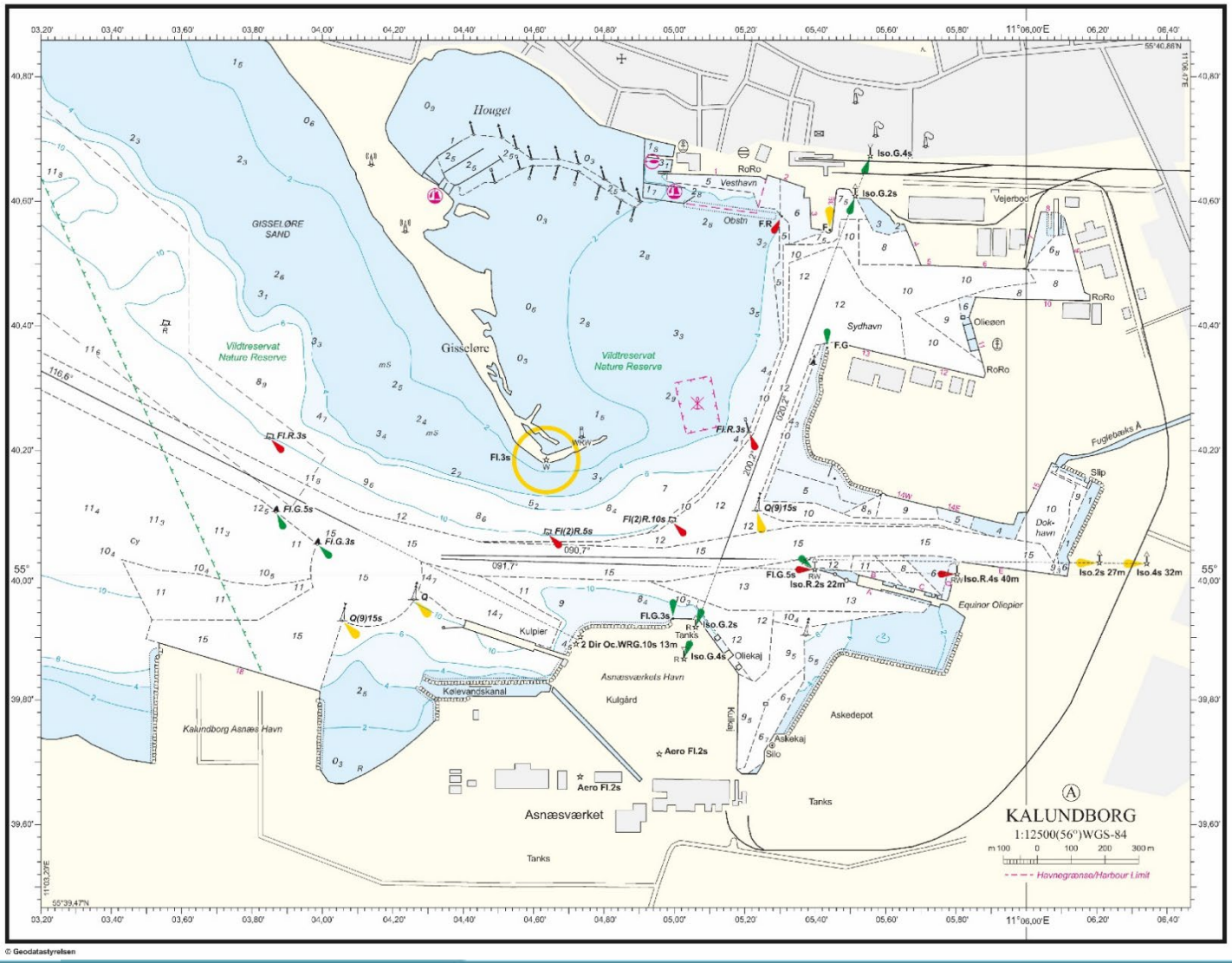


KALUNDBORG PORT



Overview of the Port

KALUNDBORG PORT



Nautical Chart of the Port

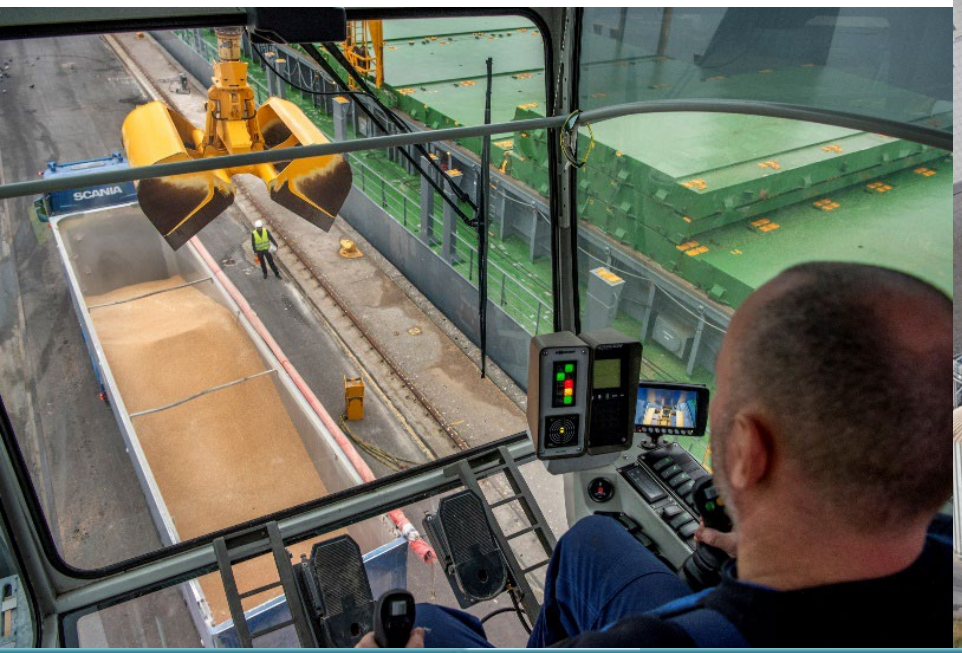
KALUNDBORG PORT

- Terminals equipped to handle all types of cargo:
  - Dry bulk
  - Breakbulk
  - Liquid bulk
  - Ro/Ro
  - Heavy-Lift/Project cargo
- Up to 12 m. of water depth
- Wide range of cranes available to handle both bulk and breakbulk

The inner Port

KALUNDBORG PORT

- One of the biggest dry bulk terminals in Denmark
- Bagging facilities
- 450 m. length with minimum 10 m. water depth.
- 240 m. section with 12 m. water depth
- Both indoor and outdoor storage capacity



Kalundborg Bulk Terminal

KALUNDBORG PORT

- Short-term, or long-term tank storage for 3rd party clients
- 50/50 ownership between the Port and a local operator
- 17 tanks with a total of 38.000 m3 capacity
- Loading/discharging to/from ships or trucks
- Ships up to 200 m, and max draft of 8 m. Possibility to dredge to 10 m. water depth
- Truck weight bridge located only 200 m. from the site
- All tank capacity is currently occupied, however the terminal is open for discussions with new or existing clients, to construct additional tank capacity

Kalundborg Tank Terminal

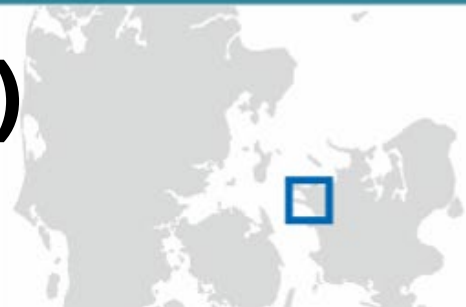
KALUNDBORG PORT

- 330.000 m2
- 500 m. long quay
- 25.000 m2 quay area
- 15 m. water depth
- Possibility for further expansion
- Located outside the city, and away from residential areas.
- 3 x multipurpose cranes for bulk, containers and heavy-lift capacity up to 150 ton per crane

Lifting Global Trade.
APM TERMINALS

- abt. 25.000 containers per year
- Abt. 30 % of the volume on Zealand
- 2 x weekly calls
- Container terminal: 50.000 m2
- Quay area: 8.500 m2
- Approved for road trains

The outer Port (new expansion)



KALUNDBORG PORT

Kalundborg Logistics Center

Workshop facilities

Customs –and Veterinary Border Control

Upcoming truck charging stations

New facilities

KALUNDBORG PORT

Nato

KALUNDBORG PORT

Cruise

KALUNDBORG PORT

One port, many destinations

Cruise

Gateway to Zealand

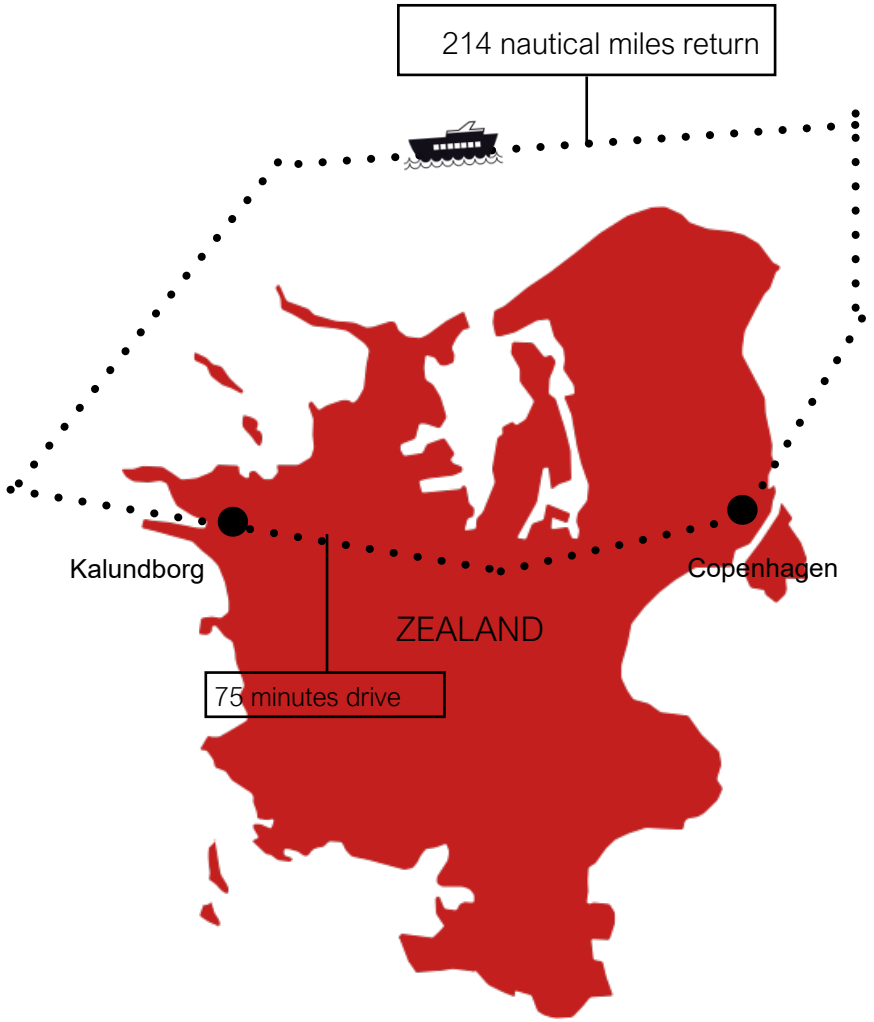
KALUNDBORG PORT

Why Kalundborg?

The sustainable and time-saving alternative.
Vessels with a draft exceeding 7.6 meters cannot pass through Drogden, south of Copenhagen, and must travel north of Zealand to enter the Baltic Sea.

By choosing Kalundborg you:

- **Save 214 nautical miles return** when coming from the Baltic Sea, or entering the Baltic Sea in comparison to Copenhagen
- **Save 12 hours of steaming time** at 18 knots
- **Save tonnes of fuel and emissions**
- **Avoid rush hour** in Copenhagen



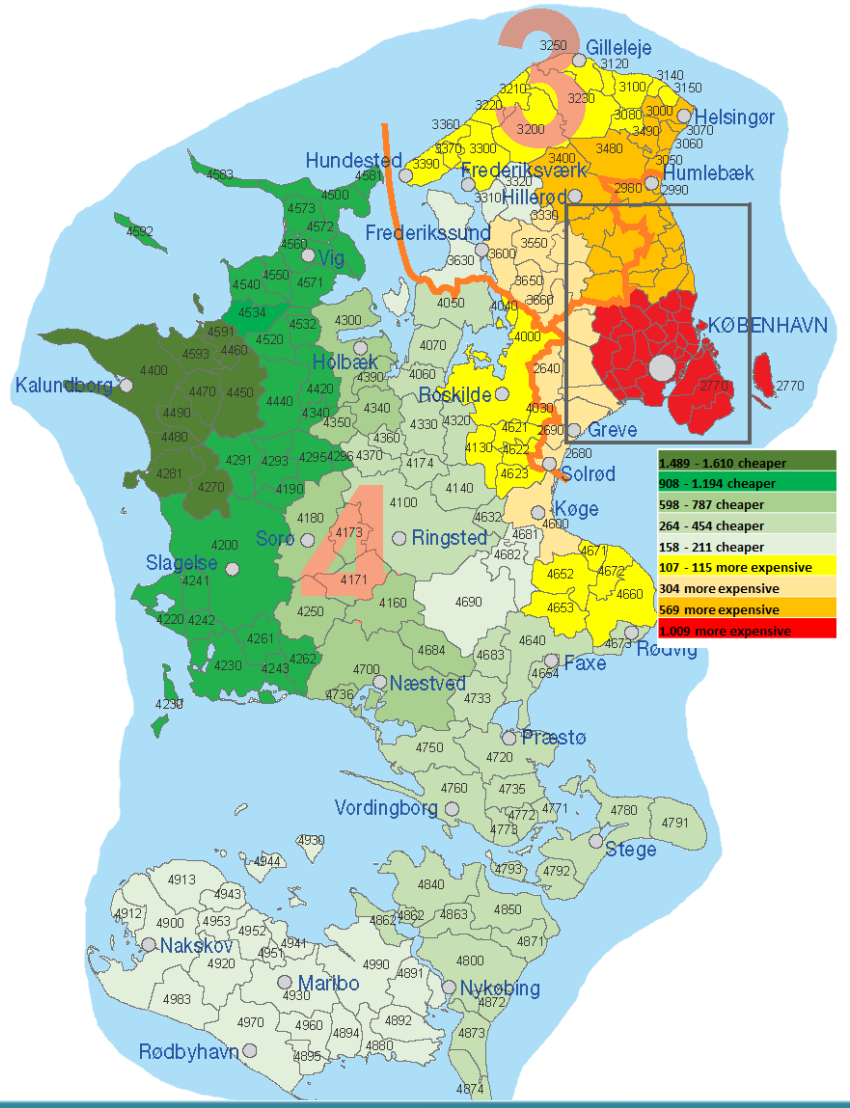
The perfect location

KALUNDBORG PORT

Why Kalundborg? - continued

Example based on container haulage

- Only based on distance, without traffic considered
- The yellow and beige area is only slightly more costly basis Kalundborg
- The orange and red Copenhagen area is more costly basis Kalundborg
- All other parts of Zealand is more cost-effective basis Kalundborg



Container haulage

KALUNDBORG PORT

Why Kalundborg? - continued

Calculation criteria

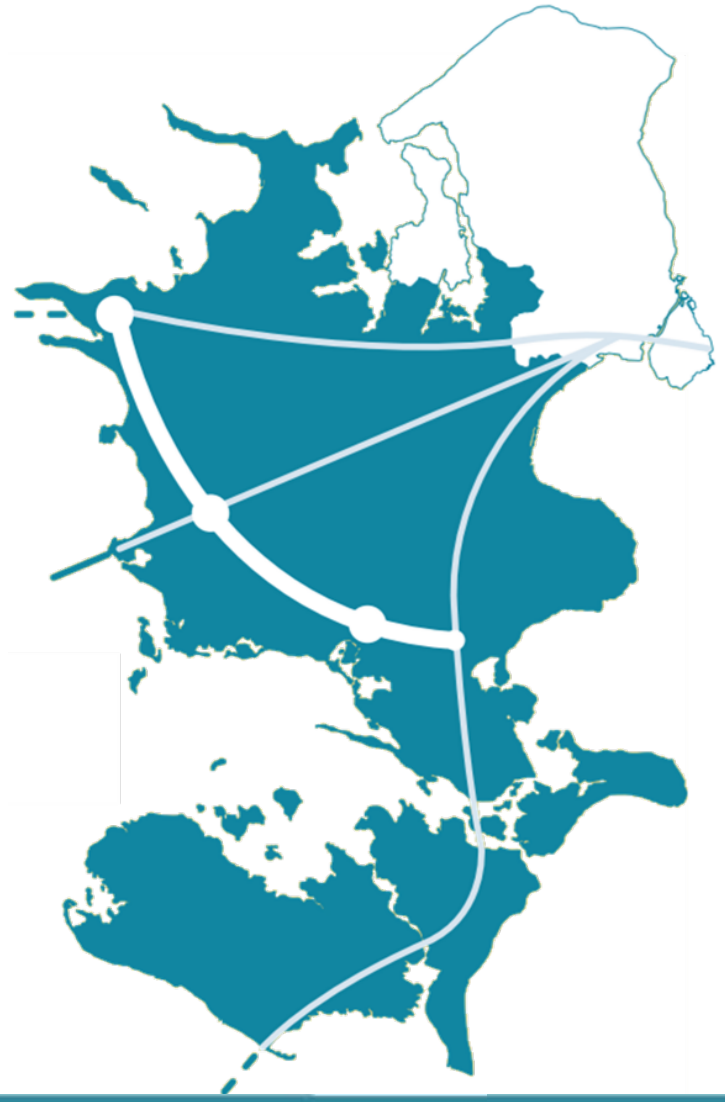
Below calculations are based on a sailing route north around Zealand.
The known terminal time of 1 hour in Copenhagen, and 10 min in Kalundborg is included in the calculations.
Rush hour, congestion etc. is not included in the calculations, even though drivers report between +30 to +90 min. delays per trip during rush hour.

			1 TEU per truck	2 TEU per truck	3 TEU per truck
From	To	Harbor	CO_2 emissions in kg per TEU	CO_2 emissions in kg per TEU	CO_2 emissions in kg per TEU
Bremerhaven	Tåstrup	via Kalundborg	131	103	92
Bremerhaven	Slagelse	via Kalundborg	86	74	69
Bremerhaven	Kalundborg	via Kalundborg	51	51	51
Bremerhaven	Køge	via Kalundborg	146	113	100
Bremerhaven	Vordingborg	via Kalundborg	147	114	100
Bremerhaven	Kalundborg	via Copenhagen	203	166	150
Bremerhaven	Tåstrup	via Copenhagen	123	114	110
Bremerhaven	Slagelse	via Copenhagen	202	165	150
Bremerhaven	Køge	via Copenhagen	151	132	124
Bremerhaven	Vordingborg	via Copenhagen	204	166	151

Calculations by civil engineer Hans Otto Kristensen, Consulting Naval Architech

CO2 emissions per TEU

KALUNDBORG PORT



Infrastructure

KALUNDBORG PORT

KALUNDBORG HAVN

Sustainability Initiatives

KALUNDBORG PORT

Winner of

Danish Ports Association

Sustainability Award 2024

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Electricification of Port Cranes

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Upcoming truck charging stations

Charging of electric trucks

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Shore Power – Phase 1

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PORT

First container vessel sailing on green methanol

Laura Maersk

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Electrification of the Samsoe ferry

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CO_2 capture

CO_2 capture system
(process, solvent)

Compact CO_2 capture system
"CO2MPACT™"

Transportation

LCO_2 carriers

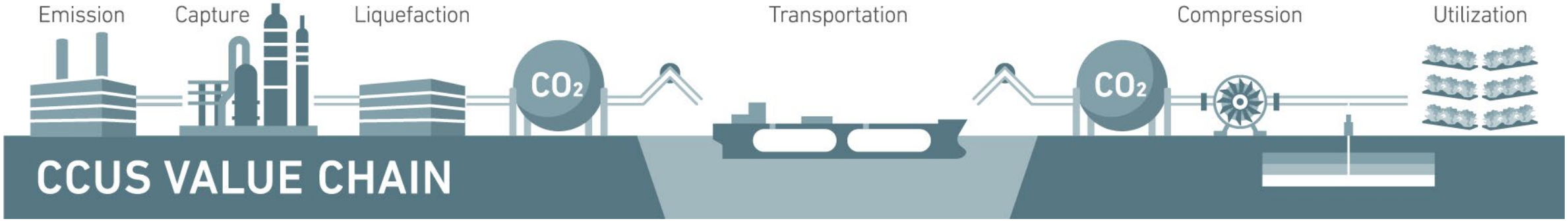
Utilization

Including Synthetic
fuels and chemicals

*Photo courtesy of Infinium

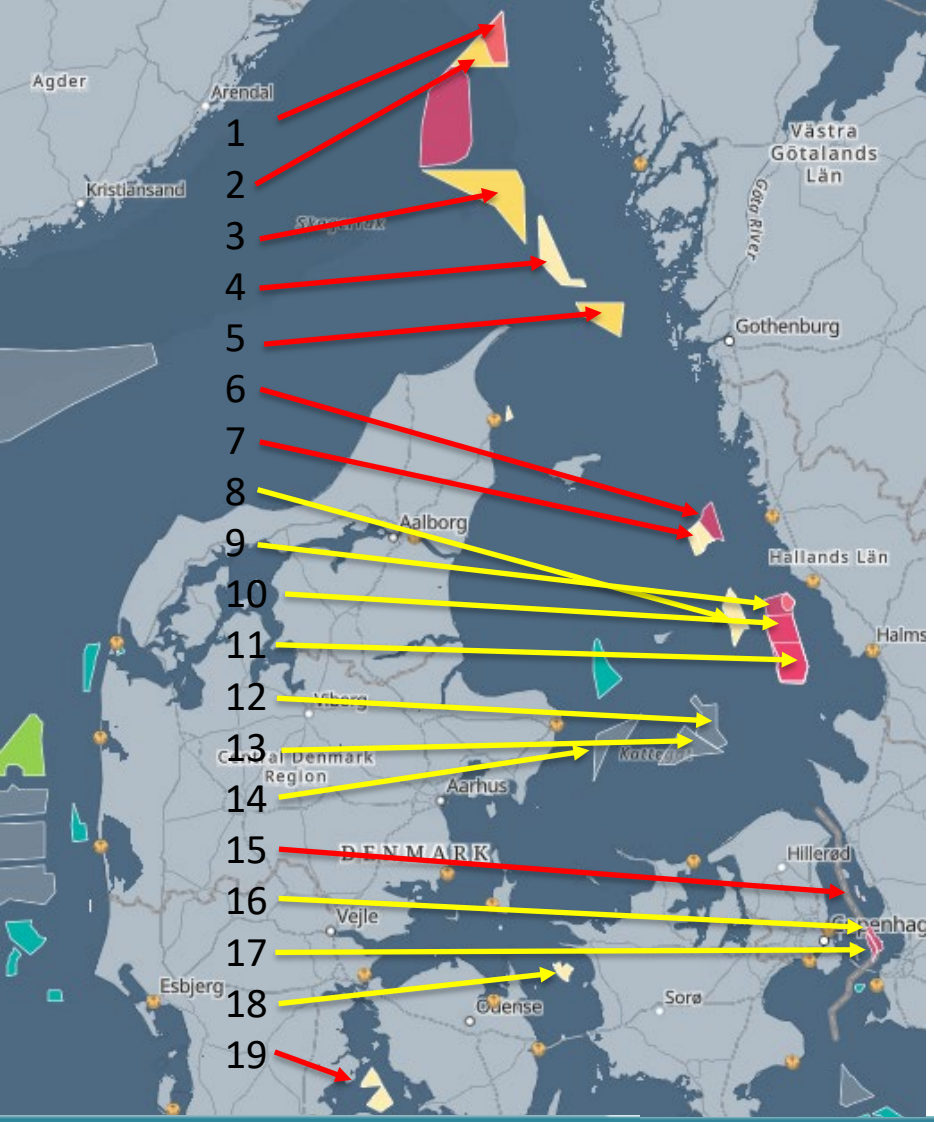
Storage

CO_2 compressor



Sustainable Business Areas

KALUNDBORG PORT



Nr. 1

Navn: Heimdall (SE92)
Land: SE
Owner: RWE Renewables
Status:Concept/Early planning
Antal MW: 1000

Nr. 2

Navn: Vidar (SE85)
Land: SE
Owner: Zephyr Renewable AB, Vattenfall AB
Status: Consent Application Submitted
Antal MW: 1400

Nr. 4

Navn: Mareld (SE83)
Land: SE
Owner: Hexicon AB, Aker Offshore Wind
Status: Consent Application Submitted
Antal MW: 2500

Nr. 5

Navn: Poseidon Nord (SE79)
Land: SE
Owner: Zephyr Renewable AB, Vattenfall AB
Status: Consent Authorised
Antal MW: 1400

Nr. 6

Navn: Västvind (SE88)
Land: SE
Owner: Eolus AB, Port of Gothenburg
Status: Consent Application Submitted
Antal MW: 1000

Nr. 7

Navn: Warberg Offshore Wind (SE1Y)
Land: SE
Owner: Nordic Offshore Wind
Status: Concept/early planning
Antal MW: 600

Nr. 8

Navn: Galene (SE1Z)
Land: SE
Owner: OX2, Ingka Group
Status: Consent Authorised
Antal MW: 400

Nr. 9

Navn: Kattegat South (SE62)
Land: SE
Owner: Vattenfall AB
Status: Consent Authorised
Antal MW: 1200

Nr. 10

Navn: Falkenberg-Halmstad (SE21)
Land: SE
Owner: Landinfra Energy AB
Status: Concept/early planning
Antal MW: 1210

Nr. 11

Navn: Ginstvind (SE2Q)
Land: SE
Owner: Copenhagen Infrastructure Partners
Status: Concept/early planning
Antal MW: 1000

Nr. 12

Navn: Kattegatt Havsvindpark (SE1I)
Land: SE
Owner: Ørsted Wind Power A/S
Status: Concept/early planning
Antal MW: 1500

Nr. 14

Navn: Hesselø (DK1I)
Land: DK
Owner: ?
Status: Development Zone
Antal MW: 1200

Nr. 15

Navn: Kattegat 2 (DK0M)
Land: DK
Owner: ?
Status: Development Zone
Antal MW: 2460

Nr. 16

Navn: Valgrundet (SE2N)
Land: SE
Owner: Valgrundet Offshore AB
Status: Concept/early planning
Antal MW: 375

Nr. 17

Navn: Sjollen (SE81)
Land: SE
Owner: Eolus AB
Status: Concept/early planning
Antal MW: 160

Nr. 18

Navn: Nordre Flint (DK88)
Land: DK
Owner: HOFOR
Status: Concept/early planning
Antal MW: 160

Nr. 19

Navn: Jammerland Bugt (DK72)
Land: DK
Owner: European Energy / TotalEnergies
Status: Consent Authorized
Antal MW: 240

Nr. 20

Navn: Lillebælt Syd (Lillegrund) (DK83)
Land: DK
Owner: Sønderborg Forsyning, European Energy / TotalEnergies
Status: Consent Authorized
Antal MW: 165

Wind Projects

KALUNDBORG PORT

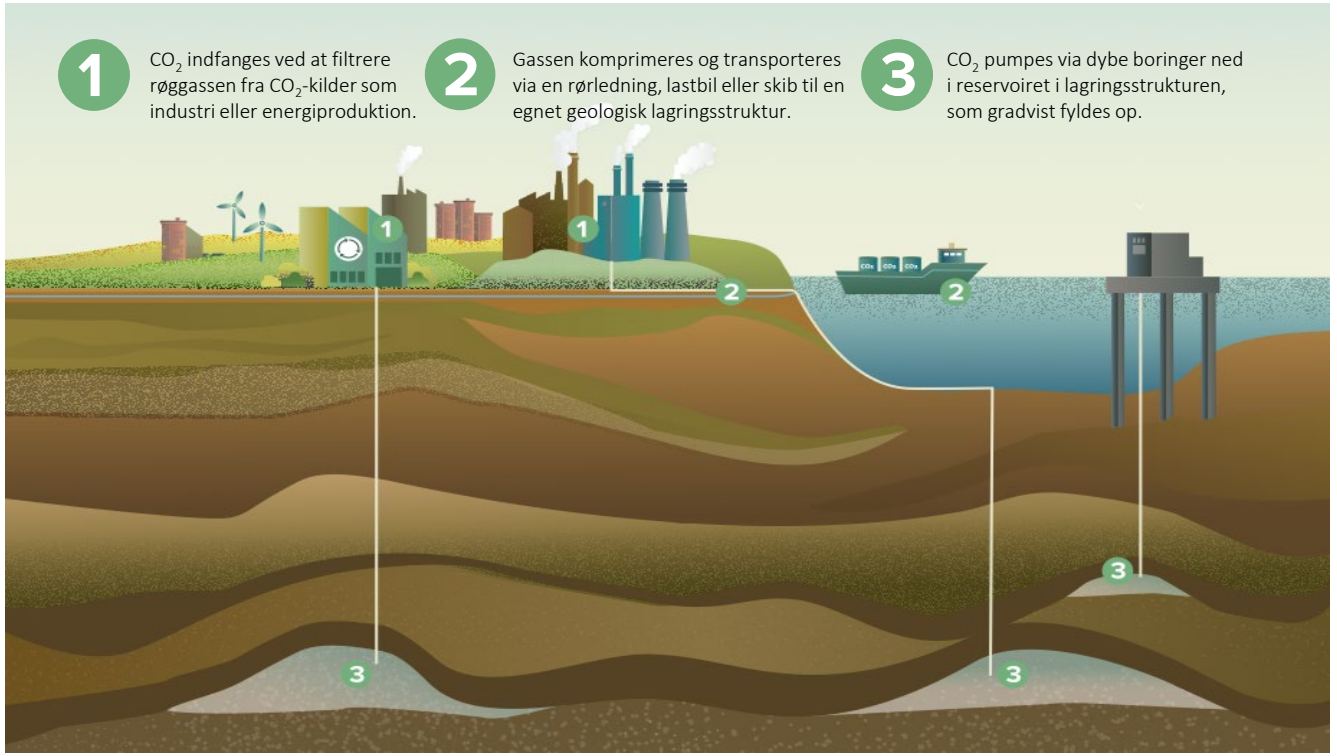
Current CO2-projects

One of the founding members of CCS Zealand and the only Port Authority among emitters, storage operators and onshore infrastructure providers.
The aim is to act as a future hub for Denmark's green transition.

2025: (10-year project)
Export of 430.000 tons of captured CO2 to the Northern Light storage site at the North Sea.
Captured from the Avedøre and Asnaes Power Plants in Copenhagen & Kalundborg.

2029: (16-year project)
New CCS fund from the Ministry of Environment of DKK 28 billion over 16 years, with a requirement for operation by 2030.
2,3 mil. tons of C02 is the expected yearly volume of CO2.

2030: (30-year project)
CO2 Storage Kalundborg (the Havnsø-structure) is expected to come into operation in early 2030's, with a high expected yearly volume, primarily through import.



CO2 – New future cargo commodity

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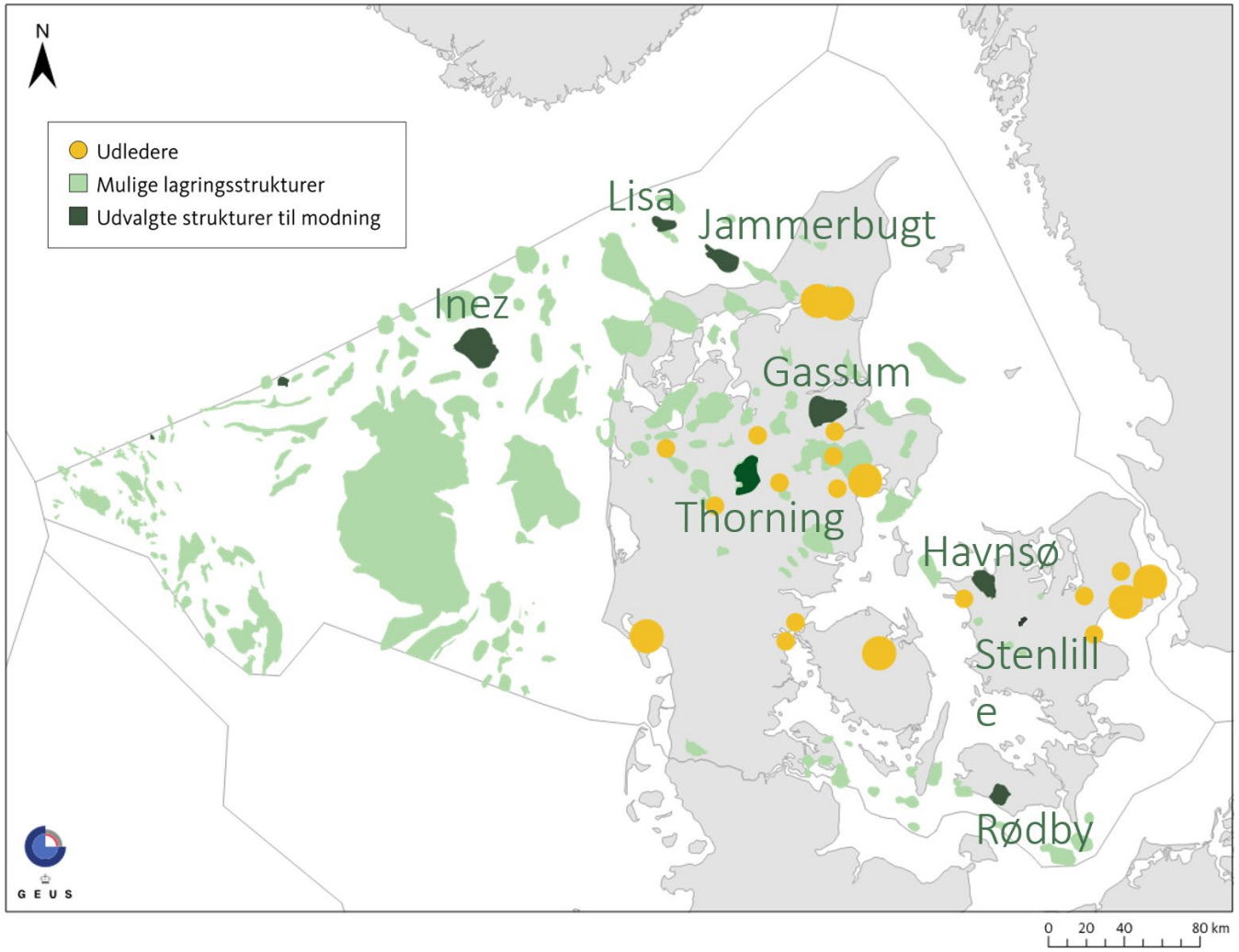

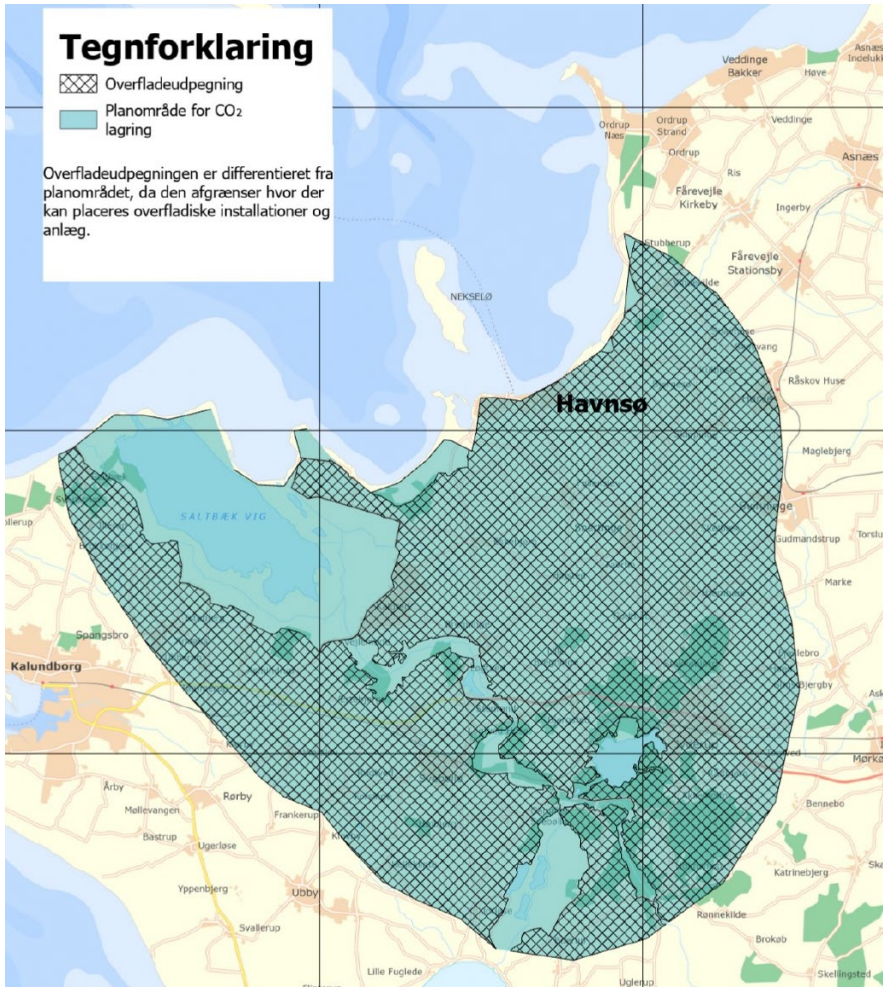

Carbon Capture & Storage (CCS)

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Future expansion possible

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Possible CO2 terminal at Kalundborg outer Port

- Vessel Combinations: 3-4 vessels as sketched
- Three berths may potentially be arranged, also including the east side, adjacent to the container terminal. Maneuvering might however be difficult and more restricted.
- Required water depth ~ minimum 13m
- Turning of vessels cannot take place in harbour basin (turning circle of approx. 275-360 m required)
- Some downtime may be expected in this solution.
- It should be expected that a safety distance of approx. 75-100m from loading point (marked yellow) will be required to mitigate CO2 emission risks, along with a number of other mitigation measures. Access within this zone will be restricted.
- If possible, very large vessels (37,000 tons) with LOA 220 m should also be accommodated.

Synergies with the Industrial Symbiosis

KALUNDBORG PORT

Locating production companies with access to deep-water

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Chr. Hansen (Novonesis)

KALUNDBORG PORT

Avista Green

KALUNDBORG PORT

Business

Our business is based entirely on processing a waste product through environmentally friendly processes into a clean product without remnant waste (only water), ready for reuse.

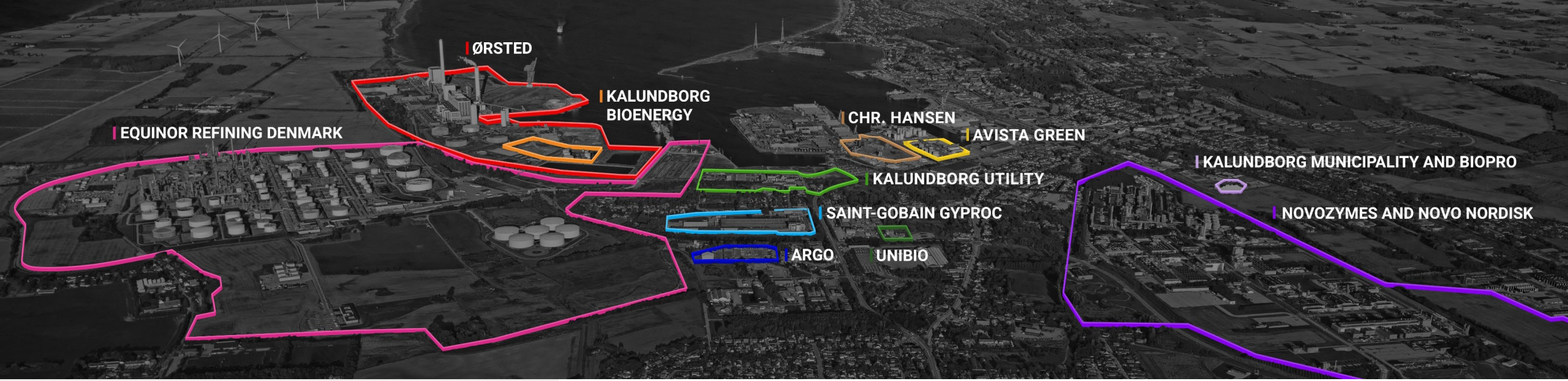
The innovative technology and processes used in our modern re-refinery are far more environmentally friendly and efficient than conventional processes and contribute strongly to sustainability and conservation of resources. Upcycled base oil emits as much as 1450 kg less CO_2 per ton than base oil produced from crude oil.

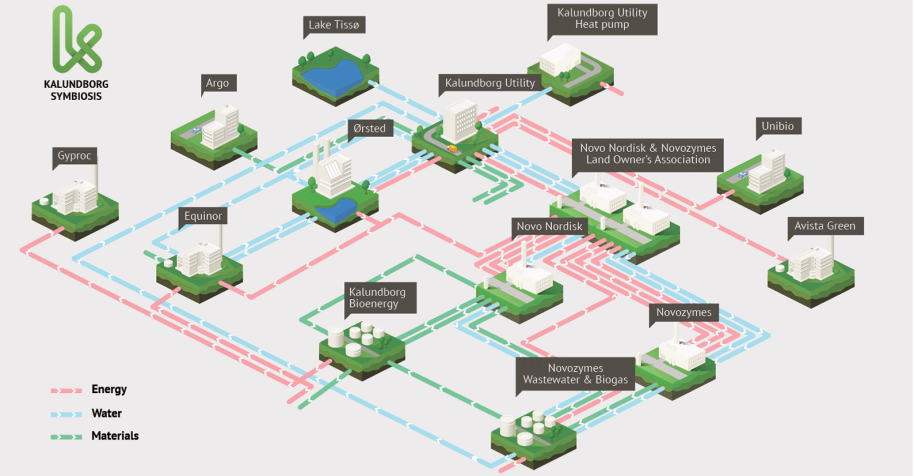
Avista Green

KALUNDBORG PORT

Cruise terminal (on hold)

KALUNDBORG PORT





The Kalundborg Symbiosis is the worlds first industrial symbiosis and is a partnership between nine public and private companies in Kalundborg. Since 1972 we have developed the worlds first industrial symbiosis with a circular approach to production.
The main principle is, that a residue from one company becomes a resource at another, benefiting both the environment and the economy.
The Symbiosis creates growth in the local area and supports the companies CSR and the climate change mitigation.

Kalundborg Symbiosis

KALUNDBORG PORT

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Any Questions?

KALUNDBORG PORT