Porthos

Building the first large-scale CO_2 transport and storage infrastructure in the European Union

CATO conference March 4th 2025

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Co-funded by the European Union

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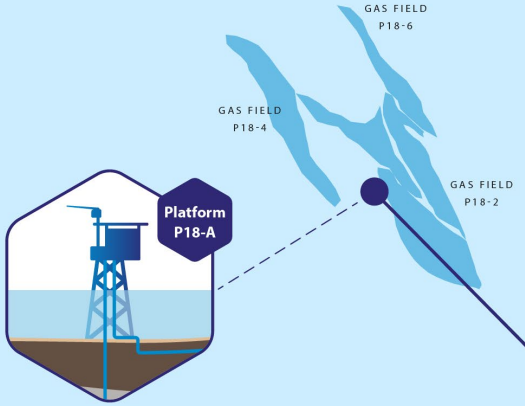
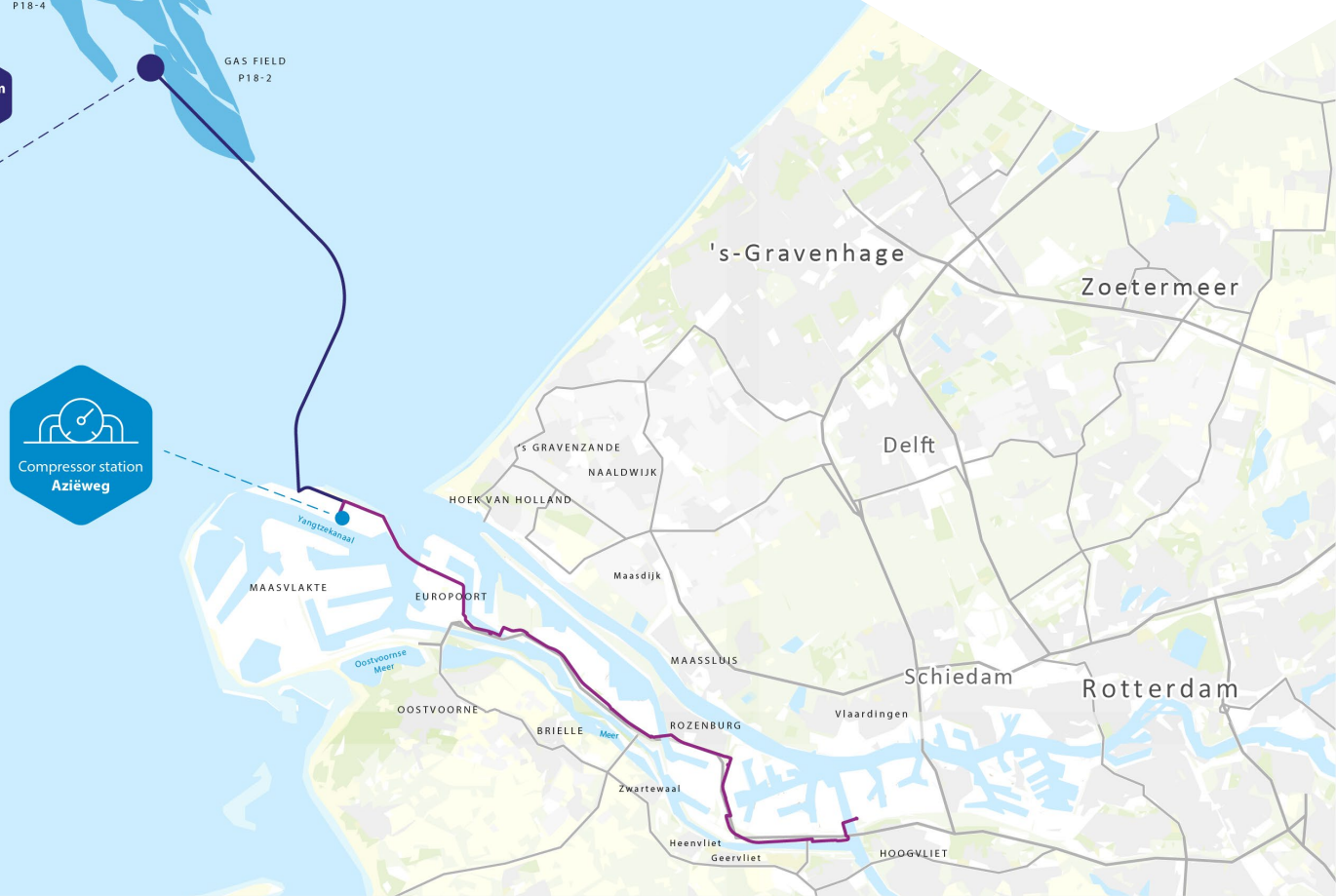
Project





Project overview

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Porthos joint venture

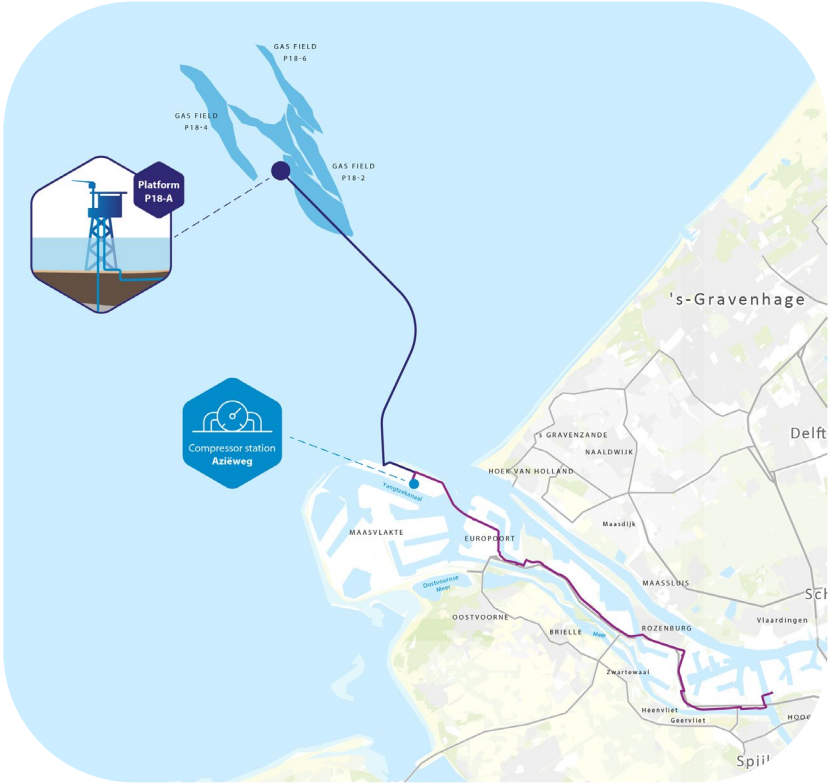
- EBN, Gasunie, Port of Rotterdam Authority

Infrastructure for CO_2 transport and storage

- Collective pipeline through Rotterdam port area
- Compressor station on the Maasvlakte
- Offshore pipeline to platform on the North Sea
- Storage in empty gas fields beneath the North Sea
- ~ 37 Mton, ~ 2.5 Mton per year for 15 years

Customers

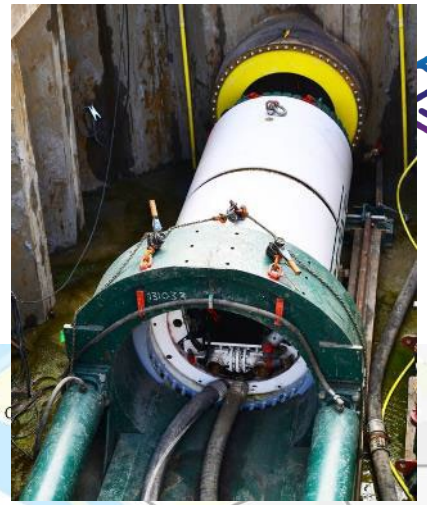
- Air Liquide, Air Products, ExxonMobil, Shell
- CO_2 capture by customers



Onshore pipeline

30 kilometres of pipe through Rotterdam's port area:

- Diameter: 108 cm (42")
- 30 bar
- Multiple tie-ins
- Overdimensioned
- 4 HDDs
- 59 special crossings



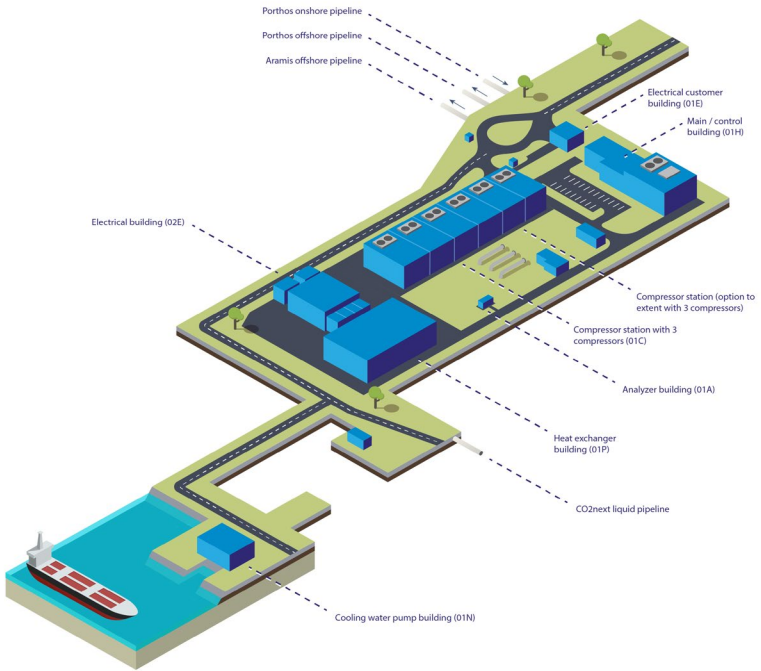
MANNESMANN

DENYS

Compressor Station

Location:

- Aziëweg (Maasvlakte)
- Plot: ~ 2 hectares



Facilities:

- Compressors
- Electricity
- Cooling installations
- Measuring and monitoring systems

Offshore pipeline

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High-pressure insulated pipe to the P18-A platform:

- Length: ~ 22 km
- Diameter: 40 cm (16")
- 130 bar
- Hard seawall
- Maasgeul

LMR

CORINTH PIPEWORKS

Allseas

Platform, wells and gas field

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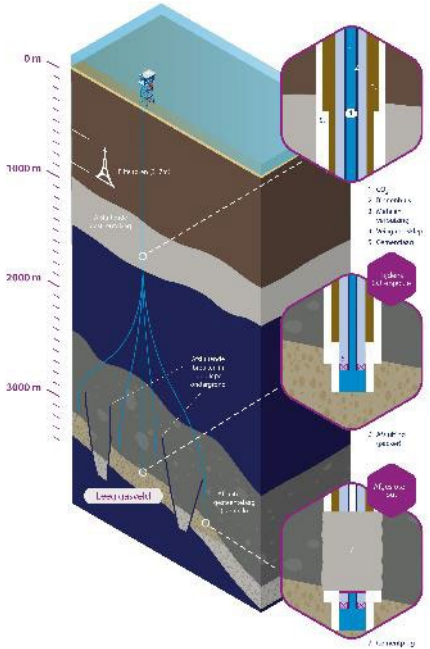
From the platform to the P18 field:

- Reuse of existing platform and wells
- Sealing remaining wells
- Natural closure by sealing layers (at around 3.5 km depth)



VALARIS

TAQA

Construction has started

- 12 August 2023: Permit Porthos irrevocable
- 17 October 2023: Final Investment Decision (FID) First activity starts end October 2023, delivering onshore pipeline
- Start construction March 2024
- 2026: system operational (RFO)


Rozenburg
BOTLEK
Oude Maas

Current planning for construction

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January 2024	Start of construction works
First half of 2024	Crossing the sea wall (drilling) Completed May 24
First half of 2024 – end of 2025	Onshore pipeline Started Februari 24, 60% done
First half of 2024 – early 2026	Compressor station Started May 24
First half of 2024 – end of 2025	Cooling water intake building Started March 24
Early 2025	Platform modifications
Early 2025 – second half of 2025	Wells modifications
Mid-2025 – end of 2025	Offshore pipeline
Early 2026	Commissioning and start-up
2026	**Porthos system operational**

Looking back:

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Important Milestones:

- Aug 2017 EBN, GU and PoR started feasibility study
- Jan 2018 Feasibility study completed, start of Concept Select phase
- Apr 2019 End of Concept select phase, Start of Define phase
- Dec 2021 JV agreements signed
- Dec 2021 TSA agreements signed (contract launching customers)
- Aug 2023 Ruling Council of State
- Oct 2023 FID
- Mar 2024 Start construction

Challenges

- *New partnerships*
- *First of its kind*
- *Permitting situation*

Positive ruling Council of State

November 2021:
Ngo MOB appeals against nature permits Porthos (nitrogen issue)

November 2022:
Construction exemption lapses in ruling Council of State

August 2023:
Council of State rules positively on ecological assessment Porthos

De Telegraaf
Raad van State geeft groen licht voor CO2-opslagproject Porthos

NOS
Raad van State keurt project voor opslag CO2 in Noordzee goed

CO2-opslag Rotterdamse haven mag doorgaan, klimaatdoelen niet in gevaar

REUTERS
Dutch court rules huge carbon capture project can go ahead

deVolkskrant
Raad van State: klimaatproject Porthos mag doorgaan

rtl nieuws
Omstreden CO2-opslagproject Porthos mag doorgaan

Development of CCS in the Netherlands

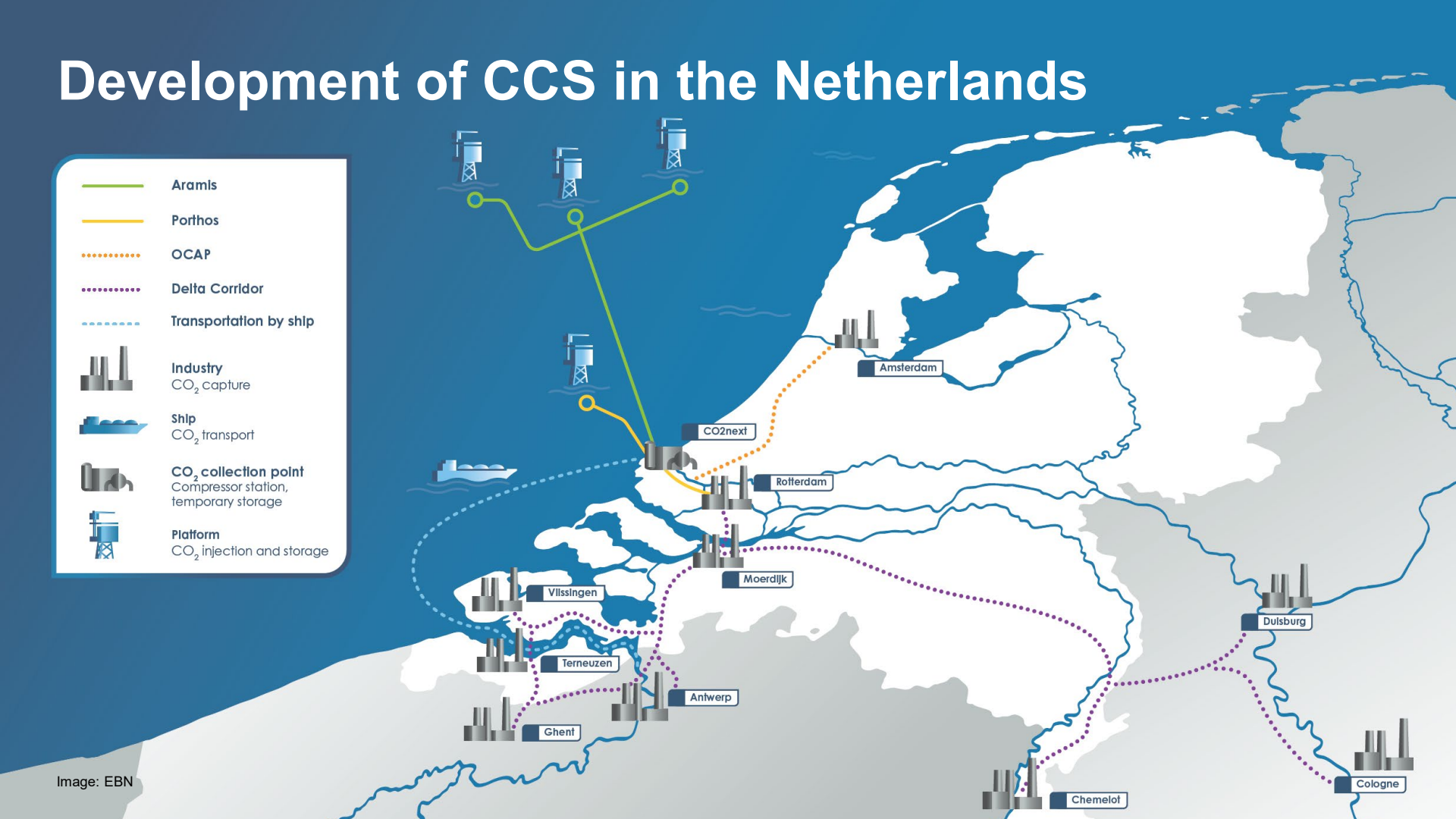

Image: EBN

Thank you for your attention!

For more information, please visit:
www.porthosCO2.nl

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