Technology Centre Mongstad
Accelerating deployment of CCS

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Our OWNERS

GASSNOVA

equinor

Shell
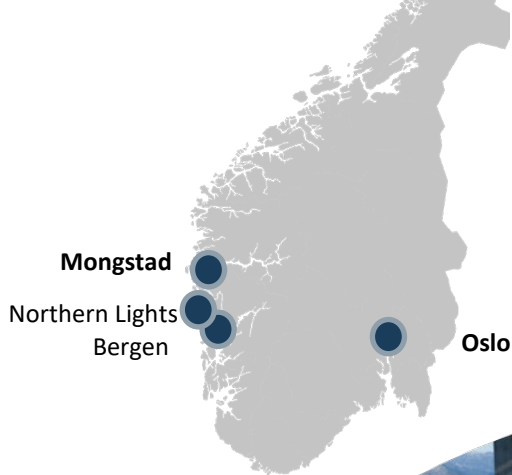
TotalEnergies

#catchingourfuture

CO2 TECHNOLOGY CENTRE MONGSTAD

WE enable carbon capture deployment

Mongstad
Northern Lights
Bergen
Oslo

Who
The world's largest post-combustion CO_2 capture test centre

Why
To create and accelerate a competitive carbon capture market

How
By offering facilities and capabilities for taking the last step before commercialization

What

- Technology testing to support technology developers

- Sharing knowledge with the public domain

- Advisory services to support technology buyers

CO2 TECHNOLOGY CENTRE MONGSTAD

Site for EMERGING TECHNOLOGIES at TCM

Industrial environment

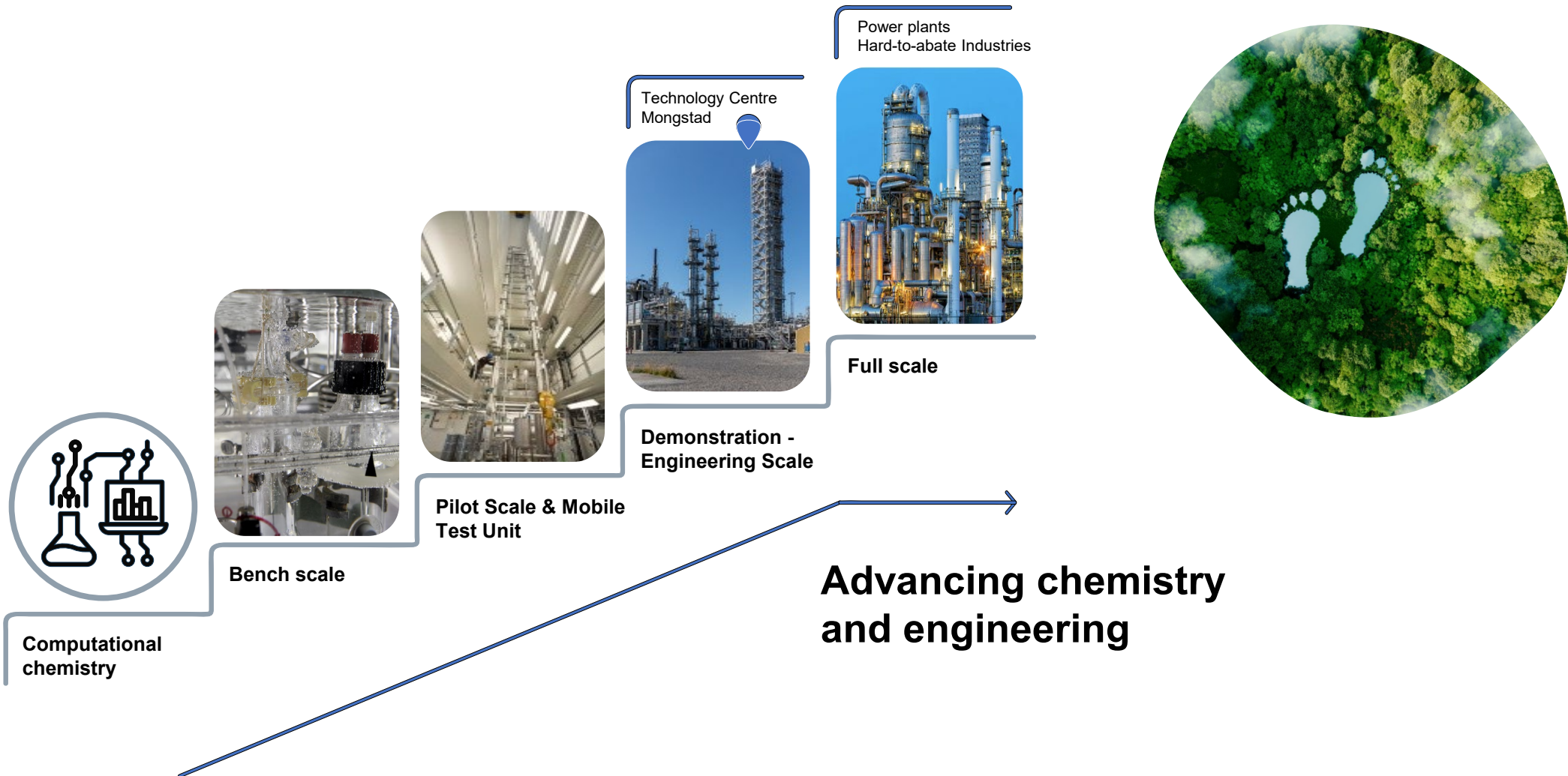Two industrial flue gas sources with different levels of CO_2 (1 – 20 %). 24/7 operations.

Capacity

18,000 tons CO_2 per year.
Possibility to test multiple technologies in parallel.

Analytical & laboratory capabilities

Sophisticated analytical methods
State of the art laboratory

CO$_2$ TECHNOLOGY CENTRE MONGSTAD

TECHNOLOGY READINESS LEVEL

Power plants
Hard-to-abate Industries

Technology Centre
Mongstad

Full scale

Demonstration -
Engineering Scale

Pilot Scale & Mobile
Test Unit

Bench scale

Computational
chemistry

**Advancing chemistry
and engineering**

Technology Developers
TESTED AT TCM

> 32.000 hrs
Proprietary Campaigns

Solvent Technologies

Start 2012

| AKER CARBON CAPTURE | ALSTOM | Cansolv 1st campaign | carbon clean | Cansolv 2nd campaign | ION CLEAN ENERGY 1st campaign | FLUOR | MITSUBISHI HEAVY INDUSTRIES | RTI INTERNATIONAL | Cansolv 3rd campaign | ION CLEAN ENERGY 2nd campaign |

2024 >

Start 2020
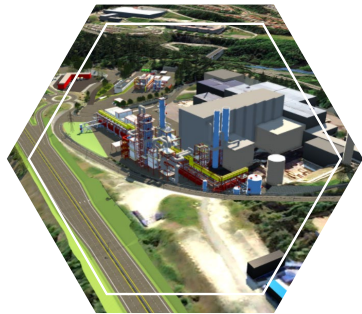Emerging Technologies

| MTR | TDA | SAIPEM ACCSESS | PROSPIN ACCSESS | MOF4AIR | Inno Sepra |

TCM crucial in commercialization of CC technologies

Most major projects in Europe selected technologies tested at TCM

Heidelberg Materials
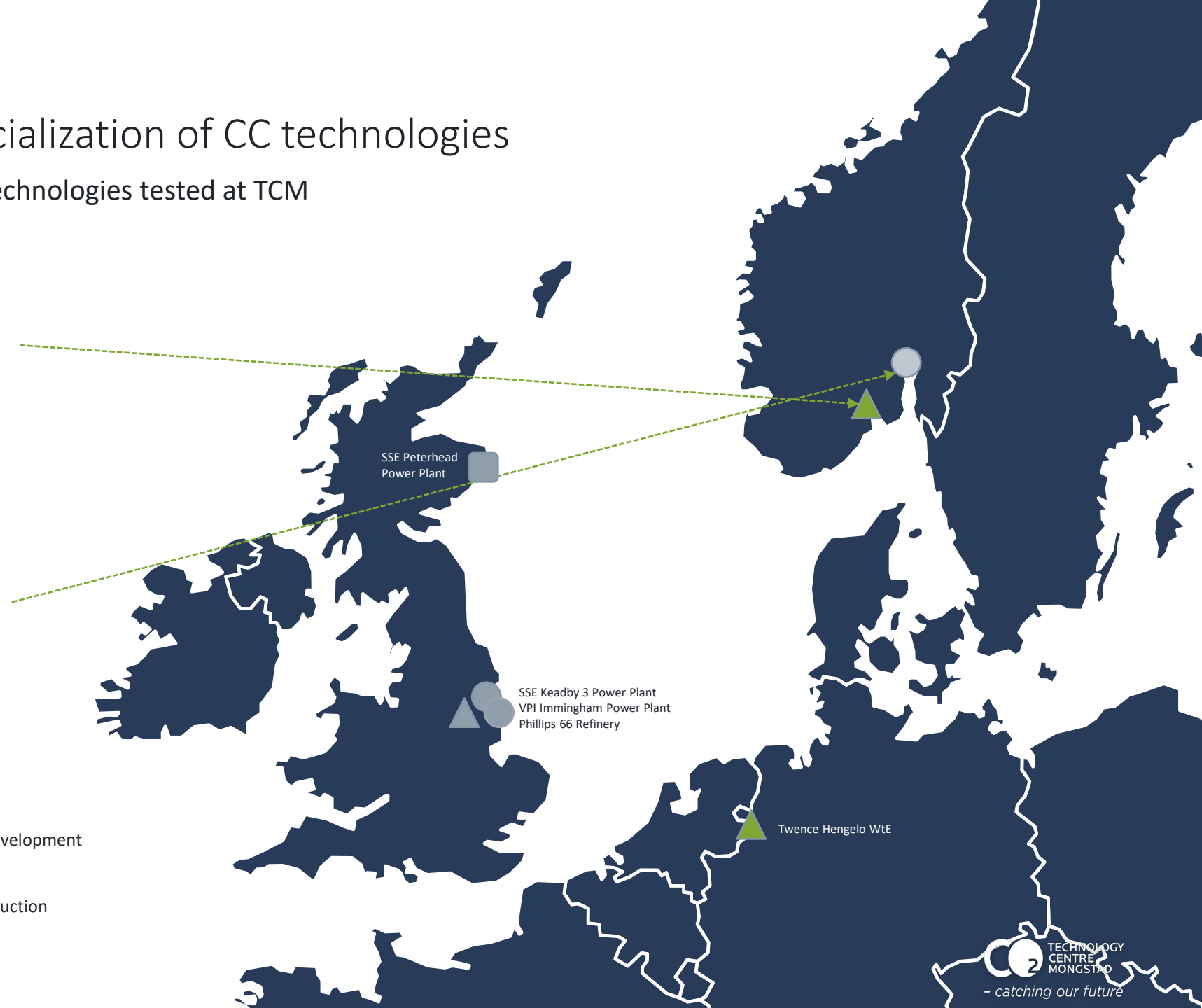Cement plant
400 kTPA of CO_2 capture
Start-up date 2025
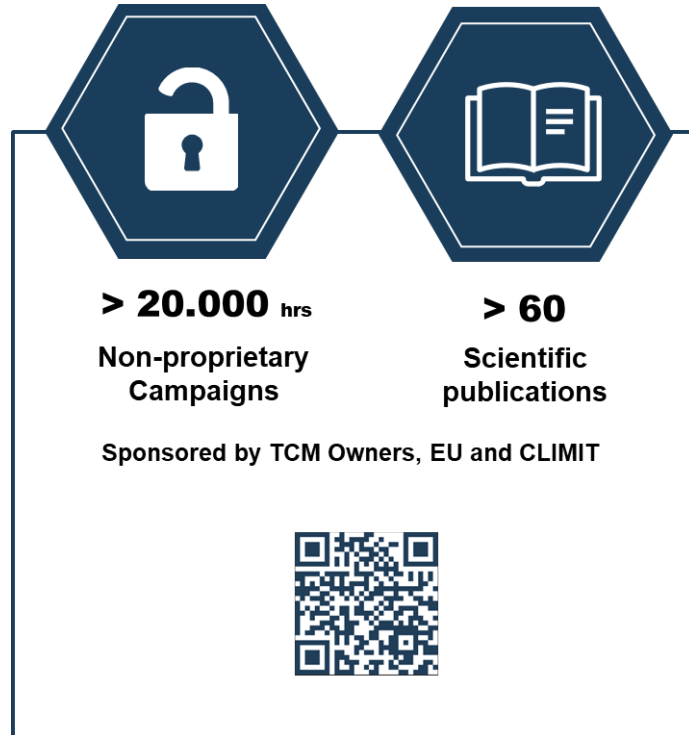
Hafslund Oslo Celsio
Waste to Energy
400 kTPA of CO_2 capture

SSE Peterhead Power Plant

SSE Keadby 3 Power Plant
VPI Immingham Power Plant
Phillips 66 Refinery

Twence Hengelo WtE

Aker Carbon *Capture*

Shell CANSOLV

MHI ENG

Grey — Advanced development

Green — Under construction

TECHNOLOGY CENTRE MONGSTAD
- catching our future

KNOWLEDGE generation & sharing

> 20.000 hrs
Non-proprietary Campaigns

> 60
Scientific publications

Sponsored by TCM Owners, EU and CLIMIT

- TCM has established 4 different 3rd party verified baselines with non-proprietary solvents (MEA, CESAR1)

- Large operating windows are explored

- Different mode of operations explored: dynamic, cold and hot startups, shutdowns etc.

- HSE aspects successfully demonstrated

TCM SUPPORT PROJECTS
with its advisory services

Supporting Norwegian and EU decarbonization paths towards 2050

Advanced development of storage in North Sea driving TCM Advisory Services strategy

Map labels:
- Kvitebjørn Varme
- Statkraft
- Wartsila
- Celsio
- Heidelberg Materials
- Hoegh LNG
- BP NZT
- Ørsted
- SSE
- Phillips 66
- OGCI
- Alco Group
- Vallourec
- KVA Linth FOEN
- Crodux Energetika
- ERMA First

Legend:

Symbol	Category
●	Power
■	Waste to energy
★	Cement
◆	Regulator
▲	Other

GREEN1: Tailor-made
GREEN2: Simulations/Design
BLUE: Standard offerings (design, operational and generic learnings)

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