

# Collaboration history between France and Norway on CCS

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## Background

- Norwegian and French collaboration on CCS go way back...
  - TOTAL through its Norwegian subsidiary Total E&P Norge was involved in Sleipner (1996) and Snøhvit (2005) field development
- Carbon Limits performed a review of the projects granted European Commission funding from 2004 to 2018 to assess the activity of France and Norway at the European level on CCS (*not considering the latest awarded CCS projects*)

**Presentation focus: EU funded projects under 3 R&D programmes**

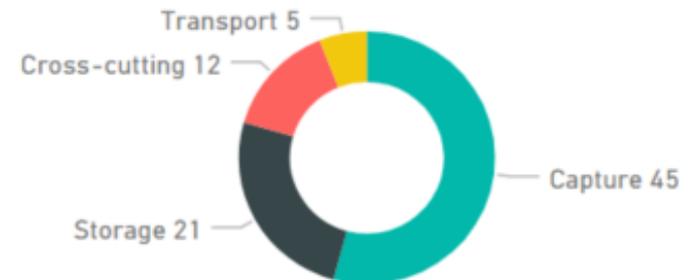


## Since 2004, the European Commission has supported 83 CCS R&D projects contributing with over 400 M€

Total funds allocated by year for CCS R&D (€)



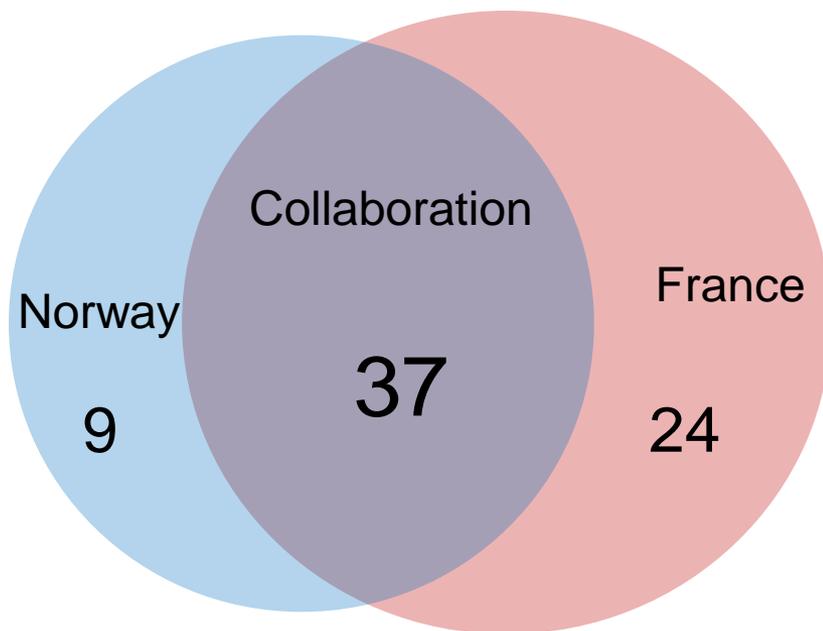
Projects funded by type (#)



CO<sub>2</sub> Utilization has been a focus only under H2020  
24 projects have been funded and received ~95 M€ (CCS ~145M€)  
Limited involvement of France and Norway on this topic at European level  
(Norway: 2 projects / France 5)

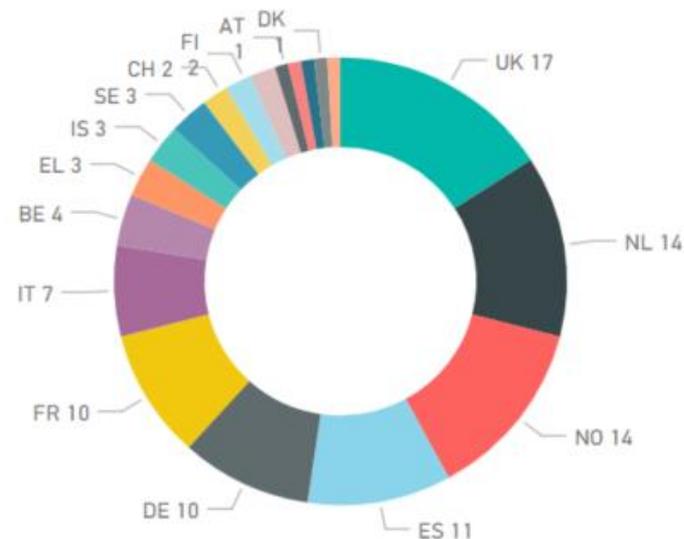
France is one of the most active participants in EU funded projects (after UK)

Norway one of the most active coordinators (after UK)



Participation to EU funded projects

France is the preferred partners of Norway considering the EU funded projects, slightly ahead of UK and NL

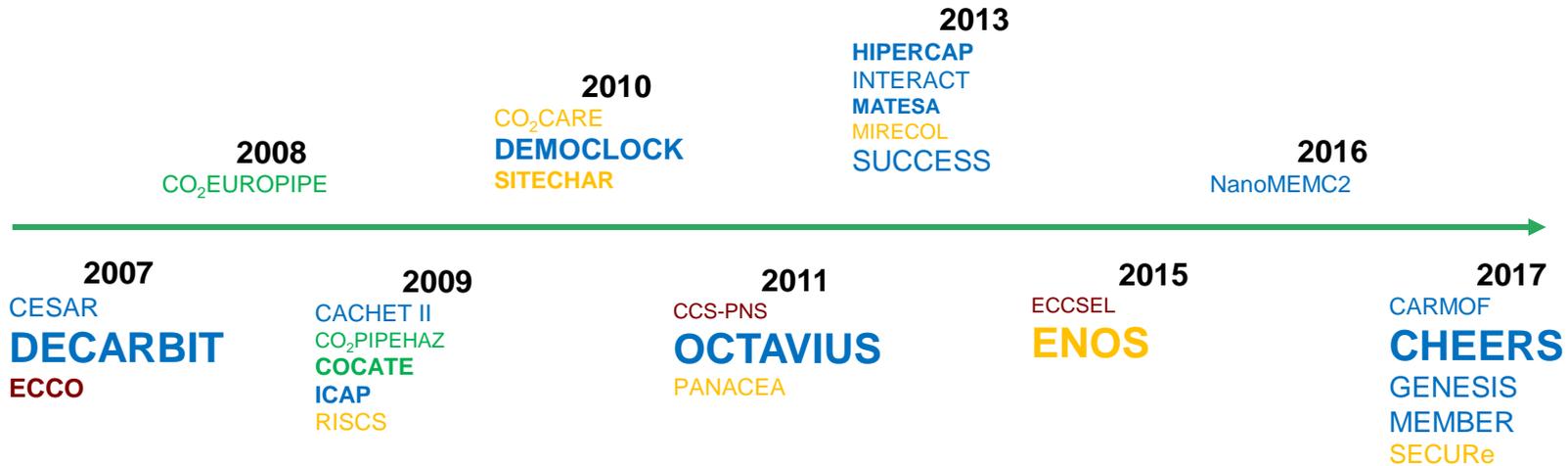


Coordinator's country

# FR/NO Collaborative Projects

Before 2007

**CASTOR**  
**ULCOS**  
 CO<sub>2</sub>GEONET  
**CO<sub>2</sub>SINK**  
**ENCAP**  
 INCA-CO<sub>2</sub>  
**CO<sub>2</sub>REMOVE**  
**CACHET**  
 CAPRICE

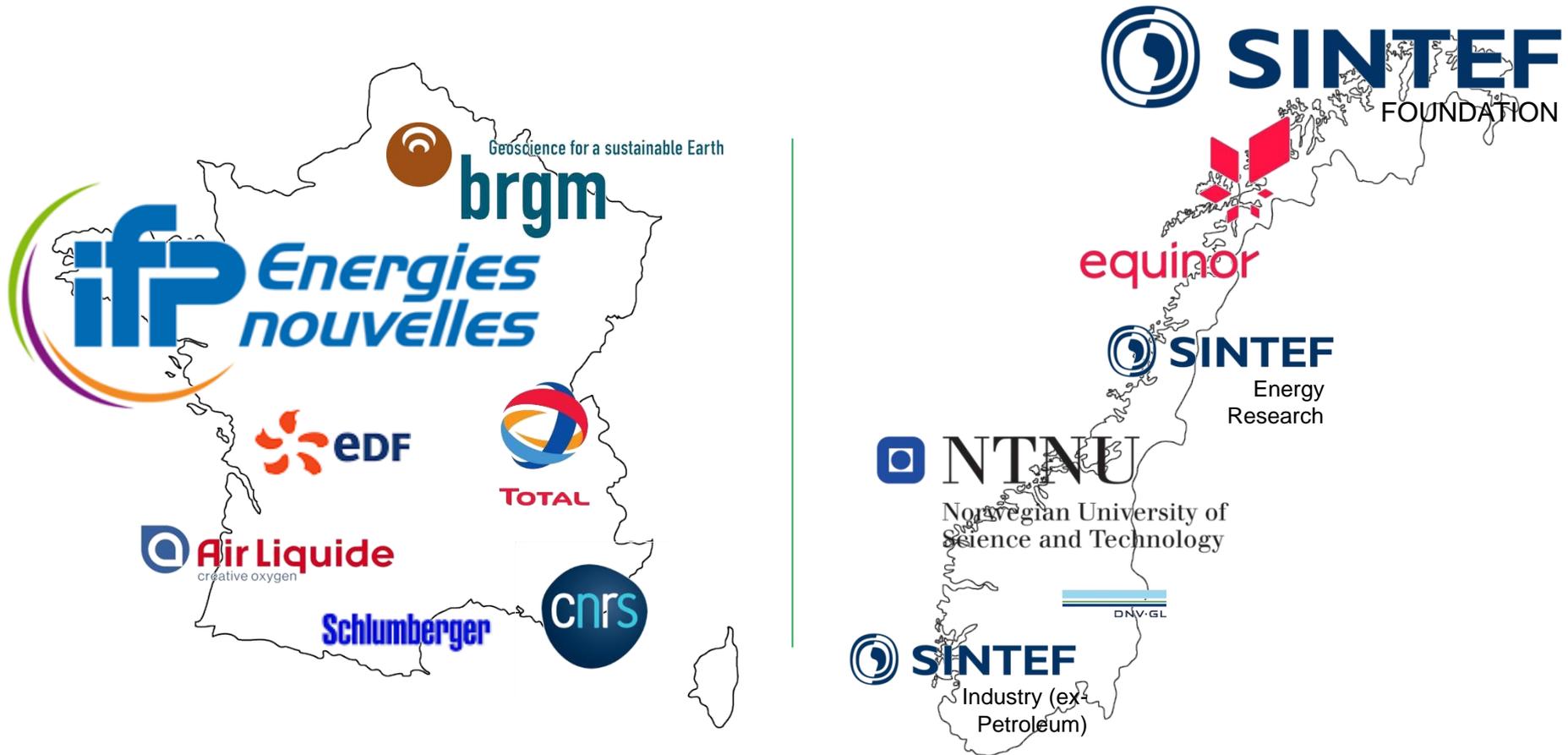


**Legend**

- Capture
- Transport
- Storage
- Cross-cutting

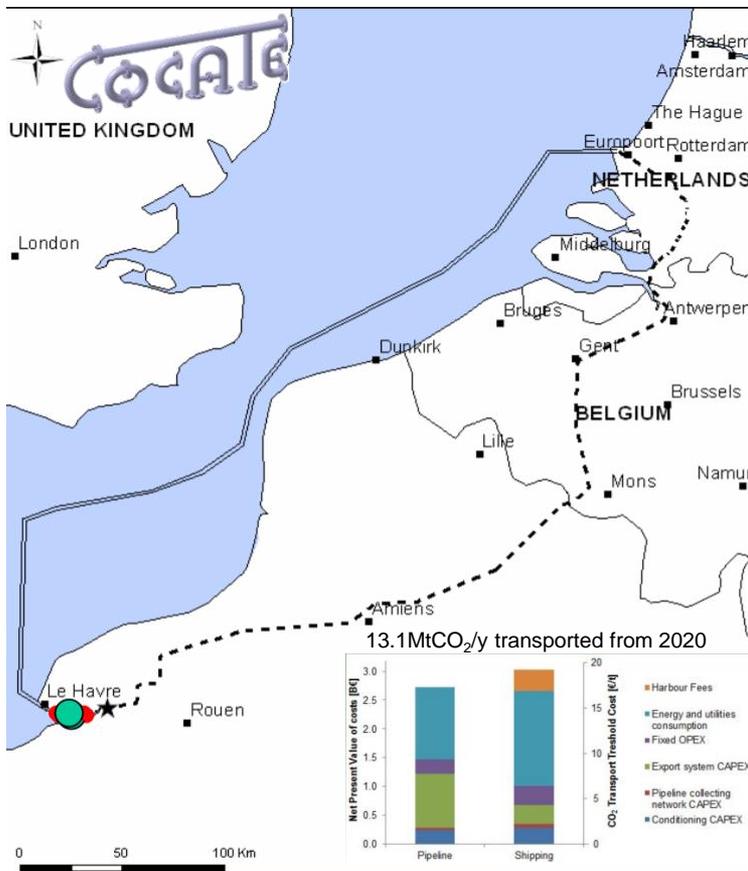
*Font size represents the project's budget*  
*Name in bold= France or Norway coordinating*

## FR/NO Most active participants



# Have any of the EU funded projects looked into sending the CO<sub>2</sub> from France to Norway?

- CO<sub>2</sub> sent from France to Rotterdam, considered as a hub to the North Sea in COCATE and CO2 Europipe projects



## Transportation routes Offshore-only scenario

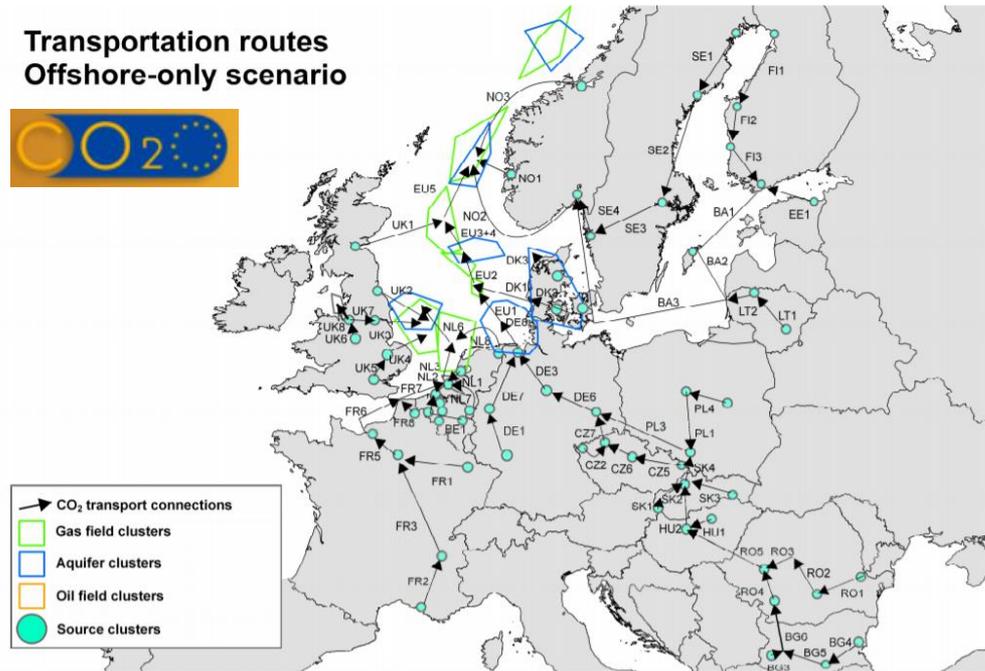


Figure D.2 Transportation routes and corresponding names for the 'offshore-only' scenario.

- The newly awarded 3D project will look into it

# The Norwegian CCS Research Centre (2017 – 2024) looks also into storing Europe's CO<sub>2</sub> in the North Sea Basin

*users*

*research institutes*

*university*

Total budget: 547 MNOK (~56 M€)

*associated partners*

*vendors*

## Key conclusions from this analysis

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- At European level,
  - France and Norway are key actors of the CCS R&D arena
  - France and Norway have been collaborating on research projects for a long time on the whole chain
  - Most active participants/coordinators are IFP EN and SINTEF
- France and Norway should rely on the findings of these projects (e.g. cluster strategies) and create some business opportunities out of them

## Some food for thoughts...

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While the European Commission has invested 400 M€ for CCS R&D, the Norwegian Ministry of Petroleum and Energy has invested more than 2 Billion Euros in CCS development since 2004... 60% of it going to Test Center Mongstad development



and 280 M€ funding to CCS R&D for the past 15 years (CLIMIT, FME)



French companies can participate to CLIMIT Projects and NCCS is open for more partners

# Thank you

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