



Summing up the SUCCESS years

Inaugurated January 1st, 2010, the SUCCESS centre for CO₂ storage formally closed December 31st, 2017. The centre has been part of the Norwegian Centre for Environmental friendly Energy Research (FME) scheme, launched by the Norwegian parliament to help reduce the CO₂ footprint in Norway. This report concludes eight years of dedicated research aimed at solving critical issues for CO₂ storage, in order to enable effective, large-scale deployment of CCS.

A key to public acceptance and successful deployment of CCS, the FME SUCCESS centre has focused on effective and safe storage of CO₂. To meet with regulatory requirements for Measurement, Monitoring and Verification (MMV), the SUCCESS centre has sought to provide a sound scientific base for CO₂ injection, storage and monitoring. The research performed by the FME SUCCESS Centre provides increased insight into small-scale processes related to CO₂ storage and upscaling to field-scale modeling and prediction.

Importantly, the steady progression of projects into operations in recent years demonstrates that CCS technologies work. Projects that have not progressed, rarely cite technical barriers to operation of the technology as a reason; on the contrary, they highlight

regulatory, commercial and risk-sharing hurdles as a key to accelerate global deployment of CCS. An unprecedented signal that governments in developed and developing nations understand the scale of the challenge and the necessary speed of the response, the Paris agreement lays a sound foundation on which the world can build its climate change mitigation actions. This includes (a) limiting the temperature increase to 'well below' 2°C and pursuing 'efforts' to limit such increase to 1.5°C, and (b) achieving net-zero emissions in the second half of this century.

It is our firm belief that the efforts of the SUCCESS centre have contributed to fill in gaps in strategic knowledge on CO₂ storage, which is vital to ensure Conformance, (agreement between observed and predicted behavior), Containment (proving storage performance in terms of security of CO₂ retention) and Contingency (leakage quantification and environmental impacts). It is our humble hope that, thereby, the centre has contributed to accelerating time to market for CCS.

Arvid Nøttvedt, Center Manager FME SUCCESS

SUCCESS Centre in brief

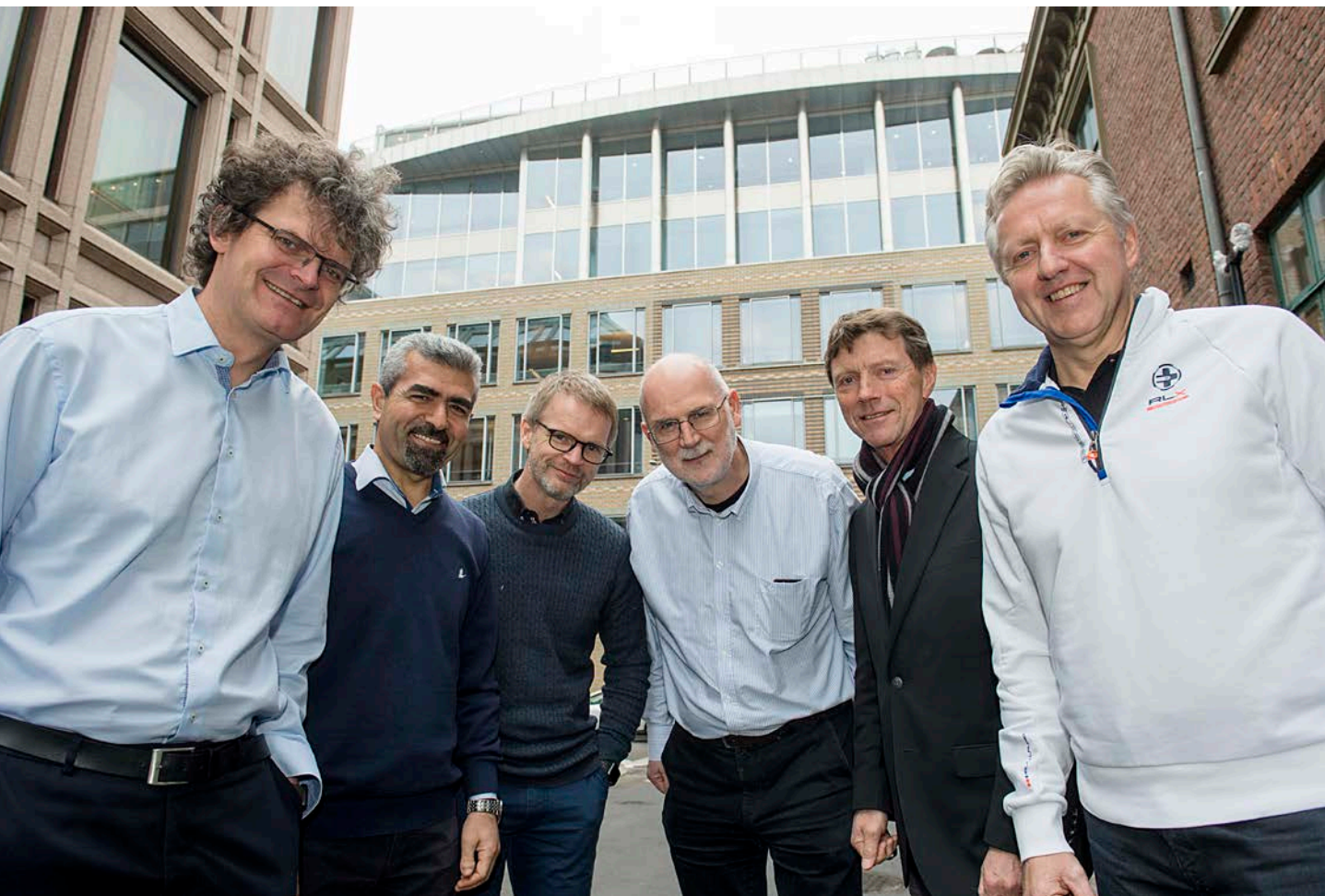
Research Partners (2010-2018)

Christian Michelsen Research (CMR)
Institute for Energy Technology (IFE)
Norwegian Institute for Water Research (NIVA)
Norwegian Geotechnical Institute (NGI)
UNI Research (CIPR)
University of Bergen (UiB)
University of Oslo (UiO)
University Centre in Svalbard (UNIS) - UNIS CO₂ LAB

Industry partners (2010-2018)

CGGVeritas (2010-2014)
ConocoPhillips (2010-2014)
DEA Norge AS (2010-2018)
Dong (2010-2011)
Equinox -former Statoil (2010-2018)
Store Norske Spitsbergen Kulkompani (2011-2012)
Lundin (2013-2014)
OCTIO (2015-2018)

FME-SUCCESS board represented by Aage Stangeland, Bahman Bohloli, Sveinung Hagen (chair), Ivar Aavatsmark, Arvid Nøtvedt and Bjarte Fagerås. Not present: Arve Holt, Storm Niklas Kristiansen, Truls Johannessen and Niels Peter Christensen.





SUCCESS Executive Board

- as of March 2018

Sveinung Hagen, Statoil Petroleum AS (chair)
 Storm Niklas Kristiansen, DEA Norge AS
 Arve Holt, Institute of Energy Technology
 Bahman Bohloli, Norwegian Geotechnical Institute
 Bjarte Fagerås, OCTIO AS
 Truls Johannessen, University of Bergen
 Arvid Nøttvedt, Christian Michelsen Research AS
 (Centre Manager)
 Aage Stangeland, Research Council of Norway (observer)
 Niels Peter Christensen, Gassnova (observer)

SUCCESS Scientific Advisory Committee

-as of March 2018

Auli Niemi, University of Uppsala
 Marte Gutierrez, Colorado School of Mines
 Nick Riley, British Geological Survey
 Sylvain Thibeau, TOTAL E&P

Key figures

FME SUCCESS (2010-2018)	Total
Scientific publications (peer reviewed)	147 (+from 2018)
Dissemination measures for users	365
Dissemination measures for the general public	87
Number of new/improved methods/models/prototypes finalised	8
PhD-degrees completed	30 (+2 finalizing 2019)
Post docs completed	11 (+1 finalizing 2019)
Master degrees completed	29

The Work Package Team

as of March 2018

3 appointed WP leaders

Helge Hellevang, UiO (WP1)

Sarah Gasda, UNI Research/CIPR (WP2)

Joonsang Park, NGI (WP3)

Leader Integration activities (WPO)

Maria Elenius, UNI Research/CIPR

Centre manager and centre coordinator

Arvid Nøttvedt, Manager (CMR)

Charlotte G. Krafft, coordinator (CMR)

2 scientific leaders

Alvar Braathen, UiO

(Per Aagaard UiO, as deputy)

Ivar Aavatsmark, UNI Research/CIPR

Representatives from institutions

Viktoriya Yarushina, IFE

Evgeniy Yakushev, NIVA

Remy Agersborg, OCTIO

Bjørn Kvamme, UiB

Abdirahman M. Omar, UiB

Kim Senger, UNIS

Gudmund Dalsbø, UiO, CO₂ project coordinator



