DigiMon
Norwegian-US bilateral meeting

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NORCE (project manager)		TNO	
OCTIO Environmental Monitoring		GEOTOMOGRAPHIE GmbH	
CRES Centre for renewable energy sources and saving		LLC Lawrence Livermore National Security	
UNIVERSITY OF BRISTOL		SILIXA ltd	
NTNU		EQUINOR Energy AS	
HELMHOLZ – Centre for Environmental Research (UFZ)		REPSOL – Norge AS	
SEDONA Development srl		UNIVERSITY OF OXFORD	

Early warning system for CO_2 storage

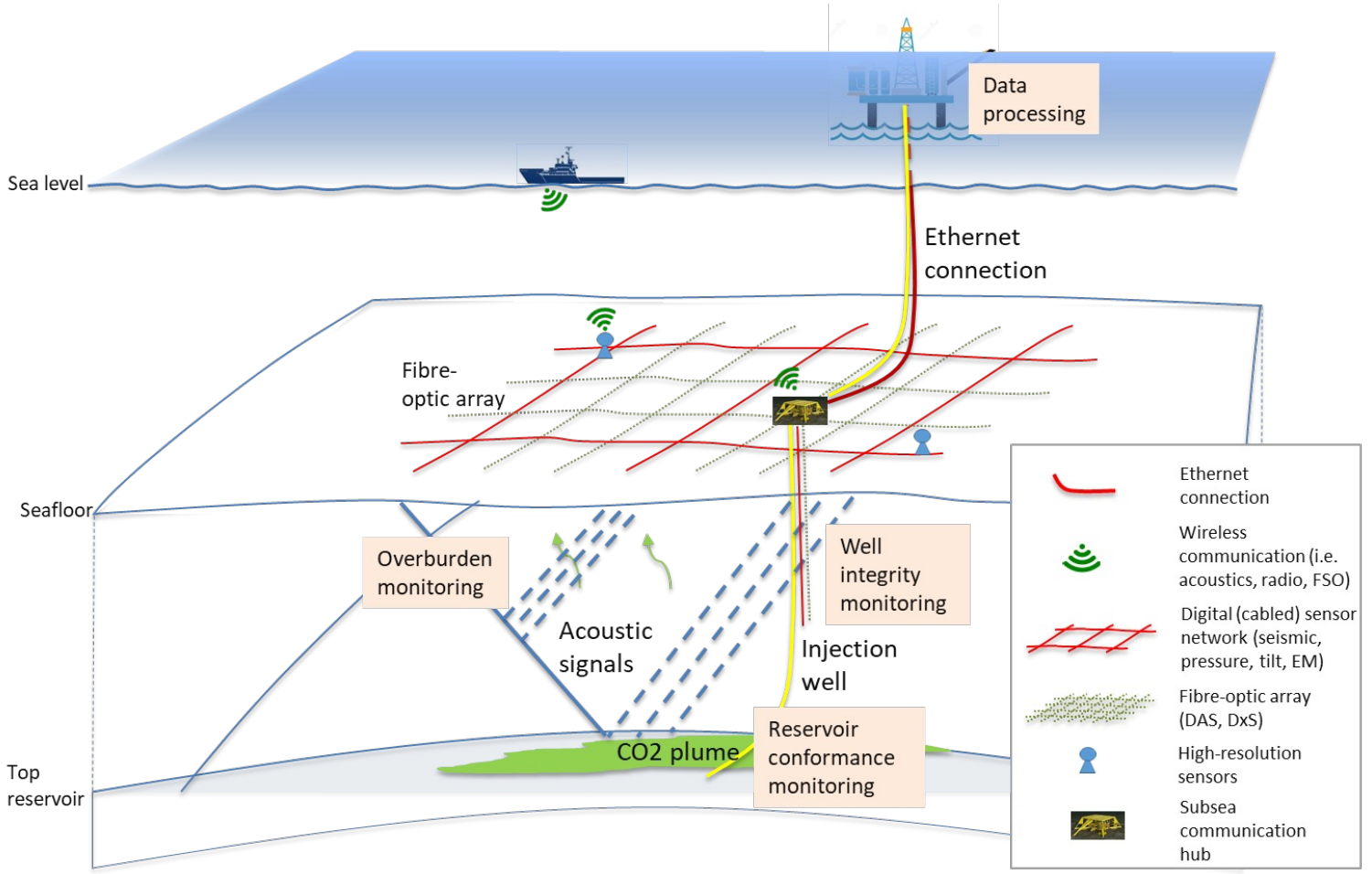
The overall objective of the DigiMon project is to "*accelerate the implementation of CCS by **developing and demonstrating** an affordable, flexible, societally embedded and smart Digital Monitoring early-warning system*", for monitoring any CO_2 storage reservoir and subsurface barrier system, receiving CO_2 from fossil fuel power plants, oil refineries, process plants and other industries.

WP4 Project management (NORCE)

WP1	WP2	WP3
Critical technology elements (Silixa)	Integrating the components (Octio EM)	Designing a human centered monitoring system (TNO)

Interdiciplinary package (IP) 1: Data collection (UoB)

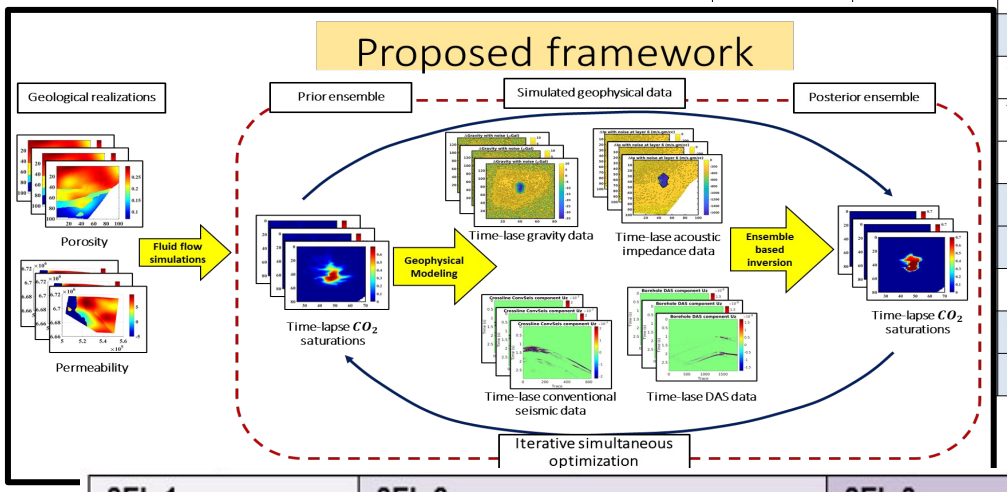
Interdiciplinary package (IP) 2: Dissemination and exploitation (TNO)



Contributing to acceleration of CCUS technologies

- Interdisciplinary, socio-technical approach
- Maturing core monitoring technologies (DAS, DCS, gravity)
- Developing framework for integration of multiple monitoring technologies and datasets (forward modelling, inversion, optimization)
- Developing methodology for embedding CCS and CO2 storage in society
- Comprehensive dissemination approach

Application	Class	CTE
Surface and seabed reflection methods	Seismic reflection surveys	Conventional hydrophone or in case of OBN multi component sensors
		Distributed acoustic sensors (DAS)
Borehole seismic methods	VSP	Conventional VSP
		DAS-VSP
	Crosshole tomography	Conventional sensors
Passive seismic methods	Microseismics	Geophone/hydrophones
		DAS
	Ambient Noise Interferometry	Geophone/hydrophones
		DAS
		Point-based, mobile, microgravity sensors
		Conventional point pressure sensors
		Tiltmeters
		Distributed strain sensor (DSS)
		Conventional pressure sensors
		Distributed Pressure Sensors (DPS)
		Distributed Temperature Sensor (DTS)
		Conventional Sensors
		Distributed Chemical Sensor (DCS)



SEL 1	SEL 2	SEL 3	SEL 4
Exploration - An idea is studied from various perspectives, i.e. technological, environmental, , stakeholder, market, legal, political	**Development** - Further development of the idea by taking into account the societal conditions of relevant stakeholders, policy and regulations, financial resources, required knowledge on impact on society, etc. Actions taken to create financial, stakeholders, policy and regulatory – support.	**Demonstration** - Innovation is demonstrated with the support of relevant stakeholders, policy and regulations and financial commitment. Societal bottlenecks that arise in this phase are coped with. An improved societal innovation is the result.	**Small scale Implementation** – Innovation is embedded in society: support of relevant stakeholders, sound societal business case, supportive policy and regulations and continuous financial commitment.

Thank you for your attention!

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