

## Skisser til Forskningscenter for petroleum (PETROSENTER) 2026

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### 364096 Centre for context-aware AI in sustainable subsurface operations

Skissetittel	Centre for context-aware AI in sustainable subsurface operations
Prosjektansvarlig	UNIVERSITETET I OSLO
Kontaktperson	Anita Torabi
Partnere	Norske Shell, OKEA, CMG Blueware, NGI, NORSAR, UiB, UiO, University of Groningen, Federal University of Rio Grande do Norte & Campina Grande and UiO Informatic
Sammendrag	
<p>Norway possesses some of the world's most extensive and high-quality subsurface datasets from decades of petroleum exploration and production. Yet much of this information remains underutilized due to fragmented data infrastructures, limited contextualization, and lack of trustworthy AI methods for safety-critical decision making. The SAGA Petrocenter will address this challenge by developing a new generation of context-aware data infrastructures and trustworthy AI systems for subsurface analysis and decision support. By integrating advances in geoscience, data engineering, and artificial intelligence, the centre will transform petroleum data into a strategic national resource that enables safer operations, more efficient resource management, and new opportunities in emerging subsurface applications.</p>	

### 364102 NORGAS - Norwegian Gas Resource and Competence Center

Skissetittel	NORGAS - Norwegian Gas Resource and Competence Center
Prosjektansvarlig	UNIVERSITETET I TROMSØ
Kontaktperson	Jochen Knies
Partnere	UiO, UiB, UNIS, NORCE, VBER, Exploro, APN, NORSAR, Cognosic, IFE, GEOMAR-Kiel, IWE-Kiel, Equinor, AkerBP, Okea, Vår Energi
Sammendrag	
<p>NORGAS' potential to generate innovation, sustainable value creation and benefits to society. Ensuring a secure and sustainable energy supply for Europe has become an urgent societal priority in light of escalating geopolitical tensions and the need to reduce dependence on Russian energy sources, particularly natural gas. As a major exporter of natural gas produced on the Norwegian Continental Shelf (NCS) under stringent environmental and regulatory frameworks, Norway plays a critical role in safeguarding Europe's energy security while contributing to emission reductions relative to coal-based energy systems. The centre's activities and results will be instrumental in sustaining this role by generating innovation, strengthening competence, and enabling long-term, sustainable value creation within its thematic priority areas. Maintaining this role requires not only access to resources, but demonstrable subsurface integrity, environmental responsibility, and technological leadership.</p>	

Solution and societal value creation NORGAS will address these challenges by bridging the emerging geoscientific expertise gap and advancing both fundamental and applied knowledge in natural gas systems. Through the education of more than 40 PhD and MSc candidates, the centre will deliver long-term human capital, innovation capacity, and knowledge transfer to industry and society. Leveraging big data and AI-supported analytics, novel field data acquisition, and advanced numerical modelling, the centre will generate results that enable smarter exploration, cleaner gas value chains, and improved subsurface integrity. The centre's work is structured around three cross-disciplinary geoscientific objectives – O1: Existing Gas Plays; O2: New Gas Plays; and O3: Subsurface Integrity – integrated through O4: Technological Advances and Data Integration. Together, these activities will create sustainable value for participating user partners, strengthen Norway's strategic role in European energy security, and contribute to addressing major societal challenges in O5 – Societal Impact and Governance – on public acceptance and long-term industrial competence development. The educational program in O6 will be the overarching platform and knowledge builder for future value creation for our industry partners and eventually the society.

### 364108 ORACLE: Open Reservoir Analytics and Collaborative Learning Environment

Skissetittel	ORACLE: Open Reservoir Analytics and Collaborative Learning Environment
Prosjektansvarlig	NORCE RESEARCH AS
Kontaktperson	Geir Evensen
Partnere	SIMULA, Norsk Regnesentral, UiO, UiB, Aker BP, Vår Energi, Harbour Energy
Sammendrag	
<p>The petroleum sector faces growing difficulty in discovering and producing hydrocarbons due to tighter reservoirs, increasingly complex subsurface environments, and stricter low-carbon and zero-emission requirements. Despite advances in modelling, data acquisition, and analytics, the industry still needs a multidisciplinary, holistic, vendor-independent workflow that enables truly integrated, adaptive, and uncertainty-aware subsurface reservoir management. Existing solutions remain fragmented, and it is difficult to incorporate new multimodal data and to adapt decisions in response to new information.</p> <p>ORACLE will enable more reliable and transparent reservoir management decisions by developing an open, flexible framework that integrates physics-based simulation, artificial intelligence, domain knowledge, and digital workflows into a modular, open-source platform. The framework will unify prior knowledge and multimodal data within a consistent, uncertainty-aware workflow, enabling robust, traceable decision support across an asset life cycle.</p> <p>A core objective is to create "ORACLE," an expert-in-the-loop AI advisory system that simplifies crossdomain collaboration and enables experts to make environmentally responsible, value-</p>	

optimized decisions. Key ORACLE deliverables include adaptive, zero-emission production-optimization methods that couple reservoir strategies with low-carbon energy systems; AI-enhanced asset-scale planning, geosteering, and production decision support; and uncertainty-aware AI models that integrate expert knowledge with ensemble representations. An open-source implementation of ORACLE will ensure effective research-based collaboration. At the same time, continuous involvement of subsurface experts and planned demonstrations on real field cases will build trust and early adoption among operators. In summary, ORACLE will deliver a much better understanding of the subsurface, enabling higher energy efficiency, lower emissions, and greater value creation for operators.

### 364112 Fast-Track Subsurface Decisions for Mature Offshore Fields

Skissetittel	Fast-Track Subsurface Decisions for Mature Offshore Fields
Prosjektansvarlig	NORGES GEOTEKNISKE INSTITUTT AS
Kontaktperson	Manzar Fawad
Partnere	Equinor AS, ConocoPhillips, Halliburton, Viridien, GeoSoftware, PSSGEO, UiO, OsloMet, Stanford University, Colorado School of Mines, University of Wyoming
Sammendrag	
<p>Mature offshore provinces increasingly depend on rapid, defensible subsurface decisions, where the main constraint is uncertainty rather than data availability. These decisions call for integrated workflows that both shorten evaluation cycles and strengthen the reliability of subsurface evidence from pore-scale measurements to well- and field-scale interpretations. FAST-TRACK will reduce both uncertainty and decision cycle time by integrating (i) uncertainty-aware imaging and NCS-calibrated rockphysics templates for infrastructure-led resource maturation (FA1), (ii) coupled geophysics and geomechanics workflows for challenging reservoir settings to improve well delivery and production decisions (FA2), and (iii) evidence-based well integrity and plug-and-abandonment (P&amp;A) verification supported by monitoring calibration and 4D geomechanics, and research on subsea well-foundation technology enabling efficient, stabilising, and cost-effective rig-less top-hole installation (FA3). A centrewide laboratory acceleration programme will deliver standardised QA/QC, minimal-sufficient test designs, and operator-ready reporting, while decision-focused modelling will translate laboratory evidence into uncertainty-tagged decision products. FAST-TRACK will provide reproducible benchmarks, validated case studies, and training of early-career researchers to strengthen competence, safety, and value creation in mature offshore field operations.</p>	

### 364119 Petroleum Safety Centre

Skissetittel	Petroleum Safety Centre
Prosjektansvarlig	UNIVERSITETET I STAVANGER
Kontaktperson	Øystein Lund Bø
Partnere	NTNU, NORSAR, Norsk Regnesentral, Vår Energi, Harbour Energy, Gassco, Havtil, Texas A&M, LSE-London School of Economics, Luelå Technical University
Sammendrag	
<p>The PetroSafe Centre will be a national research and innovation hub dedicated to preventing major accidents, strengthening the resilience of petroleum infrastructure, and safeguarding Norway's role as a stable energy supplier in an increasingly uncertain geopolitical and digital landscape. By combining leading expertise in risk analysis, safety and security, advanced sensing technologies, and AI-driven modelling, the Centre will develop new frameworks, methods and technologies for detecting emerging threats, understanding complex accident pathways and improving operational decision-making. Through close collaboration between research institutions, industry partners and authorities, PetroSafe will deliver innovations that enhance safety, reduce downtime, and support robust, secure- and sustainable operations on the Norwegian Continental Shelf.</p>	

### 364120 EXTended PROduction - subsurface expertise for European Energy Supply Security

Skissetittel	EXTended PROduction - subsurface expertise for European Energy Supply Security
Prosjektansvarlig	NTNU
Kontaktperson	Peder Eliasson
Partnere	NTNU, SINTEF, Norsk Regnesentral, AkerBP, ConocoPhillips, DNO Norge, Equinor, Harbour Energy Norge, OKEA, OMV, Vår Energi
Sammendrag	
<p>Most forecasts predict that Norwegian petroleum production will decline sharply in the coming decades. At the same time, the need for Norwegian oil and gas (O&amp;G), particularly piped natural gas, has become increasingly important, especially in Europe. In the Norwegian Offshore Directorate's 2024 Resource Report, the most ambitious production scenario for 2025-2050 predicts maintained production levels for another decade. Petrosenter EXPRESS will develop world-leading subsurface expertise and innovative technologies to prolong field lifetimes, maintain production levels, and operate with high margins and low emissions on the Norwegian Continental Shelf (NCS). In doing so, the centre will contribute to securing Europe's future energy supply. The</p>	

goals of the centre will be achieved by (1) advancing models and tools for resource assessment, (2) enabling profitable production from marginal and challenging targets, and (3) increasing the efficiency of field operation, including development, drilling, and production. The centre's success will rely heavily on cross-disciplinary research spanning geology, geophysics, geomechanics, reservoir engineering, production, drilling, and well technology. This will be complemented by a cross-cutting emphasis on low-emission solutions, economic analysis, AI and digitalization, and long-term competence development. EXPRESS will serve as a critical cooperation arena, where NCS operators will work together with academia, research institutes, service companies, and leading international environments to address the industry's most pressing challenges.

### **364121 HSE PETROCENTRE: Norwegian Centre for Improved Health, Safety and Environment in the Petroleum Sector**

Skissetittel	364121 HSE PETROCENTRE: Norwegian Centre for Improved Health, Safety and Environment in the Petroleum Sector
Prosjektansvarlig	FOLKEHELSEINSTITUTTET
Kontaktperson	Jo Steinson Stenehjem
Partnere	Equinor, Aker BP, Vår Energi, Shell, OKEA, Subsea7, NIPH, UiO, OUS, STAMI, NTNU, UiT, UiB, Haukeland University Hospital, Norwegian Centre for Maritime and Diving Medicine, Akershus University Hospital, University Hospital North-Norway, St. Olavs Hospital, Telemark Hospital, EPINOR, Norwegian Computing Center, NILU, National Cancer Institute (US), University of North Carolina, Chapel Hill (US), University of Toronto (CA), Occupational Cancer Research Centre (CA), Utrecht University (NL), Partnership for the Assessment of Risks from Chemicals – PARC (EU), International Agency for Research on Cancer – IARC (WHO), SAFE, LO, Forbundet Styrke, The Norwegian Shipowners' Association, Offshore Norge, The Federation of Norwegian Industries, Norwegian Cancer Society, Norwegian Health Association, Norwegian Heart and Lung Association
Sammendrag	This grant proposal advocates for the establishment of the centre "HSE PETROCENTRE: Norwegian Centre for Improved Health, Safety and Environment in the Petroleum Sector" to generate new knowledge that facilitates sustainable value creation in the petroleum sector by reduction of health hazards in the offshore working environment. Anchored in the Norwegian Institute of Public Health's large offshore workers cohort (n≈80,000) linked to national health registries, the HSE PETROCENTRE will constitute a unique research infrastructure for disease and injury prevention, and improved risk management in the petroleum sector.

In collaboration with industry, unions, and safety authorities, HSE PETROCENTRE will deliver robust, knowledge-based insights into how exposures in the offshore working environment influence cancer, cardiovascular, autoimmune, neurological, skin, mental, and respiratory conditions. Emphasis is placed on identifying preventable exposures and their pathways through a holistic approach from biomolecular studies, via epidemiology to public health, ultimately leading to targeted prevention strategies.

HSE PETROCENTRE will address major societal challenges related to work-related illness, transparent assessment of historical working conditions, and public health risks from low-level exposures. HSE PETROCENTRE will function as a national HSE hub with a clear educational profile and strong international collaboration, and will leverage Norway’s competitive advantage of mutual respect and trust, independent research, and rich health-registry data to strengthen Norway’s position as a global leader in sustainable petroleum operations where a strong emphasis on HSE is needed and expected. HSE PETROCENTRE will hence operationalize the Government’s ambition to be a world leader in HSE in the petroleum sector.

**364124 Bridging Reservoir Integration for Drilling & Geoscience Excellence**

Skissetittel	Bridging Reservoir Integration for Drilling & Geoscience Excellence
Prosjektansvarlig	UNIVERSITETET I STAVANGER
Kontaktperson	Øystein Arild
Partnere	IFE, TotalEnergies, Harbour Energy, Halliburton, Three60Energy, SolutionSeeker, EMC, IMS, Texas A&M, UFRN, IPEN
Sammendrag	
<p>Norway's remaining value creation on the continental shelf is increasingly dependent on how effectively operators manage mature reservoirs. Challenging reservoirs feature increased geological complexity, limited pressure support, breakthrough of water or gas, and narrower operational windows, making well delivery a critical factor for unlocking additional recovery. The BRIDGE Centre aims to integrate reservoir drainage strategies directly with drilling and well operations for improved recovery, using real-time data and frontiers of Agent AI while reducing emissions and costs. The centre will pursue TRL 2–5 research with strong industrial involvement and case-based learning. Through coordinated research across near well modeling, reservoir mapping and characterization, well design, smart wells and real-time diagnostics BRIDGE will serve as a national hub for drilling–reservoir integration. The outcome is improved drainage of bypassed or poorly contacted reservoir volumes, reduced water production and intervention needs, more efficient operations, and graduates trained to address Norway’s most pressing challenges on the NCS.</p>	

**364125 FutureWells – Accelerates time from discovery to production and subsequent well operations for challenging targets**

Skissetittel	FutureWells – Accelerates time from discovery to production and subsequent well operations for challenging targets
Prosjektansvarlig	NORCE RESEARCH AS
Kontaktperson	Jan Einar Gravdal
Partnere	IFE, NTNU, Aker BP, Harbour Energy, ConocoPhillips, Vår Energi, TotalEnergies
Sammendrag	
<p>FutureWells will be a PETROENTER addressing the growing complexity, cost and security challenges, of new wells on the Norwegian Continental Shelf (NCS). Future wells are increasingly characterized by marginal discoveries, depleted or shallow reservoirs, HPHT conditions, multi-target trajectories, reuse of existing infrastructure, and strict requirements related to safety, security, and emissions. These developments challenge current engineering practices, digital tools, and organizational models for well delivery and well operations throughout the well’s lifetime. Reducing time from discovery to production is essential, and there is an untapped potential in cross-disciplinary collaboration before and during operations, and the use of modern AI developments.</p> <p>The objective of FutureWells is to develop knowledge, methods, and digital frameworks for more efficient planning, and safe, secure, and low-emission drilling and well operations. The centre will cover well deliveries, including planning, drilling, and completion, and subsequent well operations such as intervention and permanent abandonment (P&amp;A). This aligns directly with the PETROENTER priority area Drilling, completion, intervention and permanent abandonment of wells (P&amp;A).</p> <p>FutureWells will consolidate and further develop national research competence in drilling and well by building on established collaborations, digital simulation environments, and full-scale test infrastructures. Through close cooperation between research partners and industry, the centre will contribute to reduced time and cost from discovery to production-ready wells, improved operational consistency and safety, and stronger cybersecurity and resilience in digital drilling and well operations systems.</p>	

### 364128 Life Extension of Offshore Petroleum Assets on the Norwegian Continental Shelf

Skissetittel	Life Extension of Offshore Petroleum Assets on the Norwegian Continental Shelf
Prosjektansvarlig	UNIVERSITETET I AGDER
Kontaktperson	Geir Grasmø
Partnere	NORCE, IFE, UiS, NTNU, TU Delft, University of Aberdeen, Equinor, Aker BP, Gassco, HMM, Odfjell, DNV
Sammendrag	
<p>Norway has committed to reducing greenhouse gas emissions by 55% by 2030 and achieving climate neutrality by 2050<sup>1</sup>. Offshore oil and gas operations account for approximately 27% of Norway's total CO<sub>2</sub> emissions, making emission reduction on the Norwegian Continental Shelf (NCS) central to meeting national climate targets. Electrification and operational optimization of offshore platforms represent the most significant near-term emission reduction measures. However, implementing these measures on aging infrastructure requires confidence that the asset's structural and mechanical integrity can sustain extended and modified operations. Without this assurance, operators face unacceptable technical and financial risk, and emission reduction investments stall. PetroLEO addresses this barrier at the intersection of three of the call's thematic areas: "production, processing and transport" through advanced condition monitoring, evidence-based lifetime extension of assets, and damage mitigating asset operations; "reducing greenhouse gas emissions, energy efficiency and the environment" by providing the integrity assurance that unlocks electrification and operational optimisation; and reducing "major accidents and the working environment" by developing autonomous operation and maintenance (O&amp;M) actions that reduce manned operations in hazardous environments besides improving knowledge of degradation and failure risk on aging assets. With electrification and operational optimisation decisions being taken on the NCS in the coming years, addressing asset integrity is urgent if Norway is to meet its 2030 and 2035 climate targets.</p> <p>PetroLEO will develop knowledge, methods, and technologies for structural and mechanical integrity assessment of mature NCS assets, enabling safe and reliable implementation of emission reduction measures and optimized asset operations and life extension decisions that contribute to Norway's climate targets. The centre's activities contribute to emission reduction through multiple pathways: Integrity-assured life extension avoids the substantial CO<sub>2</sub> footprint of premature decommissioning and new construction, predictive maintenance and optimised operations reduce asset degradation, energy consumption, and flaring, and autonomous robotic inspection reduces offshore personnel trips by helicopter and vessel. The centre brings together leading Norwegian research institutions and international partners with NCS operators and service providers.</p> <p>PetroLEO addresses a critical gap in Norway's research centre portfolio; while existing centres focus on subsurface processes (CSSR), production optimization (NCS2030), and clean energy supply (FME LowEmission), no centre systematically addresses topside and subsea structural and</p>	

mechanical integrity. PetroLEO fills this gap, ensuring that the physical infrastructure that enables emission reduction is safe, reliable, and fit for extended service.

### 364129 Life extension of offshore O&G infrastructure

Skissetittel	Life extension of offshore O&G infrastructure
Prosjektansvarlig	SINTEF OCEAN AS
Kontaktperson	Maxime Thys
Partnere	SINTEF Ocean, SINTEF Industry, NTNU, Equinor, Aker BP, Shell, Harbour Energy, Gassco, Aker Solutions, TechnipFMC, DNV, Havtil, Rambøll, Nexans, Kongsberg Ferrotech, Dr. Tech Olav Olsen, Alcatel SM, IKM Ocean design, Reinertsen New Energy, Aibel
Sammendrag	
<p>Offshore infrastructure on the Norwegian Continental Shelf is ageing, and much of it is now beyond its original design life. As future development increasingly relies on tie-backs and extended use of existing facilities, reliable methods for more accurate structural condition assessment and lifetime predictions are essential. Today these assessments are often conservative due to limited insight into the actual condition of structures.</p> <p>The centre will develop new knowledge, methods and tools needed for accurate state estimation based on inspection and monitoring data, enabling safe and cost-efficient lifetime extension. The research is organised around interacting themes of loads, structural response, materials, and digital sensing, supported by shared NTNU–SINTEF laboratory and modelling infrastructure.</p> <p>Close collaboration with operators, engineering companies, class societies and regulators will ensure rapid industrial uptake. The centre will also educate new specialists and strengthen competence in partner organisations, supporting safe and optimised use of offshore infrastructure.</p>	

### 364130 Centre for Developing Challenging Resources on NCS (CENDRON)

Skissetittel	Centre for Developing Challenging Resources on NCS (CENDRON)
Prosjektansvarlig	NORCE RESEARCH AS
Kontaktperson	Ying Guo
Partnere	UiS, UiB, IFE, Halliburton, SLB Norge, OKEA, DNO Norge
Sammendrag	
<p>CENDRON addresses critical knowledge gaps and emerging challenges on the Norwegian Continental Shelf, identified jointly by research communities and industry. These include the development of marginal fields and tight reservoirs, and the integration of renewable energy and CCUS solutions. The centre will deliver: (i) improved stimulation and completion methods for tight and low-productivity reservoirs, using fluid–rock interaction modelling to design cost-effective, NCS-specific operations that sustain productivity over field life; (ii) integrated experimental data and geo-models linking geology, petrophysics, rock physics and geomechanics to reduce uncertainty and optimise drainage strategies across pore, core and field scales; and (iii) next-generation well and production solutions, including advanced completions, CO<sub>2</sub> handling and cost-efficient tie-ins to extend field life with lower emissions. The outcomes are data-driven subsurface workflows and predictive decision frameworks that accelerate responsible development before decommissioning constraints narrow feasibility.</p>	

### 364131 PREPARED - The National Research Centre for Oil Spill Preparedness and Monitoring

Skissetittel	PREPARED - The National Research Centre for Oil Spill Preparedness and Monitoring
Prosjektansvarlig	SINTEF OCEAN AS
Kontaktperson	Ingrid Camilla Claussen
Partnere	SINTEF, NTNU, MET, NORCE, KSAT, Johns Hopkins Univ., Texas A&M Univ., NOFO, Kystverket, Aker BP, Vår Energi, DNO, DNV, Shell
Sammendrag	
<p>PREPARED – The National Research Centre for Oil Spill Preparedness and Monitoring will deliver long term, high quality research to close critical knowledge gaps in oil spill preparedness and strengthen Norway’s capability for safe and cost-effective utilisation of petroleum resources on the Norwegian Continental Shelf (NCS). The centre will address emerging challenges within oil spill contingency associated with lifetime extension of offshore infrastructure, future oil types and blends with new properties, and address increasingly complex operational environments. PREPARED will develop next-generation solutions for autonomous oil spill detection, advanced</p>	

modelling tools for predicting environmental and operational oil spill consequences, and integrated decision support tools for response management. The centre will unite leading R&D organisations, industry partners, governmental agencies, vendors, and international actors to build a world-class knowledge hub for oil spill preparedness. PREPARED is focused on research addressing two of the areas of the call: "reducing greenhouse gas emissions, energy efficiency and the environment" and "major accidents and the working environment". The Norwegian Research Council's portfolio plan for Energy and Transport emphasizes that activities on the NCS must be safe, cost effective, and sustainable, which includes development of technologies and knowledge that strengthen prevention, reduce spill-related risk and mitigate the consequences of oil-spill incidents across drilling, production, and transport.

### 364132 Cost-Effective and Uncertainty Aware Tie-backs

Skissetittel	Cost-Effective and Uncertainty Aware Tie-backs
Prosjektansvarlig	NORCE RESEARCH AS
Kontaktperson	Marie Bueie Holstad
Partnere	UiB, IFE, NTNU, NHH, Aker BP, DNO Norge, OKEA, Harbour Energy
Sammendrag	
<p>Cost-Effective and Uncertainty-Aware Tie-backs (CUT) will integrate cutting-edge research in measurement technologies, reservoir modelling, subsea production and processing, and multiphase transport to optimize the design, development and operation of tie-backs to existing facilities. CUT unites world-class research groups at NORCE, UiB, IFE, NHH and NTNU, bridging disciplines. CUT's focus is on flexible tie-back solutions including real-time uncertainty management, enhanced process and transport modelling that enable faster, more cost-efficient, and lower-emission architectures and developments of marginal discoveries, while also addressing operational costs and economic risk. Key outcomes include new knowledge, improved methodologies, advanced software tools, optimized measurement systems and foundations for best-practice guidelines. These outcomes will support cost-effective tie-backs, optimized production and reservoir drainage, and enhanced safety. CUT delivers traceable, uncertainty-quantified data from sensors and reconciliation, integrated into physics-based and data-driven models for production forecasting, processing, and transport. Physical meters, virtual meters and models will be optimized and combined. These methods will enable operators to reduce design margins, improve production monitoring, and increase the economic viability of marginal tie-back developments. Industry-defined case studies will be central to maximize value creation. PhD and Master's projects, and an active innovation pipeline ensure value creation and cost reductions, lower energy and chemical use, and reduced CO<sub>2</sub> emissions throughout the Centre period.</p>	

**364134 Research centre for resilient and efficient resource utilisation on the Norwegian Continental Shelf.**

Skissetittel	Research centre for resilient and efficient resource utilisation on the Norwegian Continental Shelf
Prosjektansvarlig	SINTEF ENERGI AS
Kontaktperson	Petter Egil Røkke
Partnere	SINTEF, NTNU, IFE, RISE FR, Aibel, AkerBP, Altera Infrastructure, Borealis, Cognite, ConocoPhillips, CoorsTek, DNO, Havkraft, Kongsberg Digital, Kongstein, Nexans, Novatech, NORWEP, Offshore Norge, OKEA, Siemens Energy, SLB, Søkeldirektoratet, Solution seeker, TotalEnergies, Vår Energi
Sammendrag	
<p>ResilieNCS will strengthen the long-term competitiveness and resilience of the Norwegian Continental Shelf (NCS) in a period marked by ageing infrastructure and fields, smaller satellite developments, and ambitious emission reduction targets. The centre will develop integrated solutions that improve production efficiency, extend infrastructure lifetime, and enable cost- and energy-efficient development of marginal fields, while reducing greenhouse gas emissions.</p> <p>The research will focus on five interlinked areas: offshore low- and zero-emission energy systems, advanced subsea processing and transport, AI-supported production optimisation, coordinated operation of interconnected fields and infrastructure, and lifetime extension and repurposing pathways for infrastructure. Together, these efforts will increase recovery and enable more robust and flexible offshore operations, while reducing energy use, emissions, and costs.</p> <p>By combining rapid implementation potential in brownfield assets with more transformative solutions for future developments, ResilieNCS will deliver knowledge, methods, and technologies with strong industrial relevance. Close involvement from industry and research partners will ensure alignment with user needs and supports fast uptake, sustainable value creation, and societal benefits through improved energy security, reduced environmental footprint, and new transition-related business opportunities.</p>	

### 364137 Centre for Reservoir Redevelopment

Skissetittel	Centre for Reservoir Redevelopment
Prosjektansvarlig	NORCE RESEARCH AS
Kontaktperson	Ketil Djurhuus
Partnere	NORCE, UiB, OKEA, Harbour Energy
Sammendrag	
<p>The Centre for Reservoir Redevelopment will map and unlock late-life value in mature and shut-in reservoirs on the NCS by explaining and exploiting long-term gravity–capillary fluid redistribution—a fundamental but under-characterised process that can generate new, lower-emission redevelopment targets. We will deliver an integrated toolchain spanning (i) multi-scale laboratory experiments under controlled wettability, density contrast and heterogeneity; (ii) tailored monitoring (4D seismic, EM, gravimetry/pressure) for shut-in and late-life fields; (iii) upscaled models and uncertainty-aware optimisation for redevelopment and brownfield tie-backs; and (iv) legal/techno-economic assessments that benchmark redevelopment against greenfields and inform P&amp;A and future field repurposing.</p> <p>Outputs include a validated experimental–simulation framework, monitoring guidelines, case-tested digital workflows and open FAIR data/models for partners.</p> <p>Impacts are higher recovery with fewer surprises, resource growth associated with redevelopment of previously produced fields, supporting ongoing redevelopment projects, lowering unit emissions intensity, informing plug-and-abandonment planning, and opening pathways for CO<sub>2</sub> storage in abandoned fields.</p>	