



Technical Sessions descriptions

Main Sponsor Technical Sessions:



Supporting Sponsor Technical Sessions:



Monday 27 August

Timing to be confirmed

NCS-projects: technology requirements

- 6-8 speakers: TBC

Meet the Innovation Awards finalists

In this session we present the ONS 2018 Innovation Award finalists.

- 10 speakers: TBC

Tuesday 28 August

10.00-12.00

ICT & cyber security

Digital technologies are available and extensively used in most industries, including the entire value chain in the oil and gas business. In this session we focus on the new initiatives, trends, and applicable technologies within the upstream industry. What are the security challenges which follows the rapidly growing digitalisation of offshore operations?

Company	Topic
Siemens	Cybersecurity in Offshore Oil and Gas
Capgemini	A hacker's view on connecting the ICS to internet
ExNor (Aegex Tech. Rep.)	IoT Platform for hazardous area
Petroleum Safety Authority	Digital Technology and ICT-Security
DNV GL	Creating value from data - what does it take?
Jakob Hatteland Solutions	A Norwegian hacker story

*Moderator: **Linn Cecilie Moholt**,
PMO and external partnerships Digital Centre of Excellence, Statoil*

Improved concepts for drilling operations

Drilling operations has over the last decade accounted for the lion's share of offshore costs, both in exploration, production and development. How can operators take advantage of new and efficient approaches to reduce their capital costs?

Company	Topic
Schlumberger	MPD integrated riser joint - floater applications
National Oilwell Varco	Automation for industry, performance in wells
TWMA	Minimisation of drilling waste at source
MH Wirth	beAware, a visual and technological interface
Wintershall	Maria development drilling
Baker Hughes, a GE company	Managing risks: combining engineering and geology

*Moderator: **Helga Gjeraldstveit**,
Research Director, IRIS*

NPD's IOR Awards

The Norwegian Petroleum Directorate (NPD) present their IOR Awards finalists.

- Speakers: TBC

- Moderator: TBC

Condition based maintenance

Condition-based maintenance (CBM) can help oil and gas companies reduce costs while driving efficiency and productivity. Modern techniques allow for proactive and predictive maintenance of plant assets for optimal health. CBM has been a buzzword for operating fields for some time now, but how do we approach it?

Company	Topic
DNV GL	Risk based optimisation of IMR for coating in tank
DNV GL	Risk based management of CUI
Emerson	Condition based maintenance for Smart Flowmeters
MRC Global Norway	Condition monitoring across disciplines
IMI Precision Engineering	Advances in Partial Stroke Testing technology
Vestteknikk	Complete personal monitor
ABS	Condition Based Class Model

Moderator: **Ole Jørgen Melleby**,
Head of HSE management section, Petroleum Safety Authority

Barents Sea opportunities and challenges

The Norwegian Barents Sea brings opportunities for oil and gas production. But the harsh, dark and cold operational conditions requires adaption of new technology and high expectations for safe and sustainable operations. In this session we focus on development concepts for the Barents Sea.

Company	Topic
Sintef	Arctic drilling well stability challenges
TechnipFMC	Harsh Environment Concrete FPSO
SBM Offshore	Benefits of Ship Shaped FPSOs
Petroleum Safety Authority	Study-Suitable drilling facilities Barents sea East
Schlumberger/Statoil	EMLA and Seismic Look Ahead Operation on WDP
Lundin	Experiences from test production at Alta/Gotha

Moderator: **Nina K. Jonassen**,
Project Director, Petro Arctic

Tuesday 28 August

13.00-15.00

Digital operations and AI

The application of robotics or autonomous technologies in offshore oil and gas is seemingly endless and the industry has only scratched the surface of what is possible. What is the potential for more effectiveness and autonomy in operations of offshore oil & gas facilities?

Company	Topic
Eldor Technology	Artificial Intelligence for real time control
Cybernetica	Adv. automation? the digital control room operator
National Oilwell Varco	Intelligent Digital Services
IRIS	Well Data Analytics from case studies to solutions
Cyberhawk Innovations	Visual inspection: digitisation in asset management
Schlumberger	A Digital Platform for collaboration in the E&P Industry

Moderator: **Dr. Edmary Altamiranda**,
Principal Engineer Subsea Control Systems, Baker Hughes, a GE company

New downhole technologies

What goes on in a well can make or break your project, so real time data – and the ability to react with agility – is key.

Company	Topic
Schlumberger	Photorealistic borehole imaging-while-drilling
BiSN Oil Tools	A new approach to downhole sealing
ALTUS Intervention	E-line tool repair damaged completion components
Baker Hughes, a GE Company	Case history: 'Swarfless' section milling
Sintef	ElectricCasing: A concept enhancing well integrity
Welltec	Precision surgery for well P&A

Moderator: **Hans Magnus Bjørneli**,
Statoil Account Manager Drilling Operations, Schlumberger

Zero-emission upstream technologies

How can we develop and maintain systems and technologies that can reduce operational discharges and emissions, improve management of safety barriers and minimise impacts of accidental spills?

Company	Topic
Reinertsen New Energy	Profitable hydrogen production with CCS
Statoil	Developing an infrastructure for CO2 storage
IRIS	Wind powered CO2 and water injection at NCS
Sintef Energy Research	Large-scale decarbonised hydrogen production
Aker Solutions	Just Catch! Modular Carbon Capture Plants
Aibel	Cross-over between Offshore Wind and Oil & Gas

Moderator: **Mark Wildon**,
Project Director, A/S Norske Shell

Success factors in brownfield modification

Utilisation of existing infrastructure to develop new, smaller fields in mature areas often requires modification to host installations. Modifications are complex, as space, weight and capacity on board is limited, and because they are often carried out on installations in production. How can we remove uncertainties associated with modifications costs?

Company	Topic
PSO	PSO Mechanical Connector
Poulton	Connectors for critical & permanent applications
IK-Norway	AOGV - New method of valve and flange isolation
Visco LLC	Fit-For-Purpose visualization
Visco CG	Turning dispatched geometric data into a replica
Fuglesangs	A giant step forward for subsea structural repair

Moderator: **Marie Ravnstad**,
Area Operations Manager Skarv, AkerBP

Innovative subsea technology: boosting

Deeper waters, remote locations and a new market reality requires a new and innovative approach to subsea field development, where lean and efficient concepts form the basis for future field architecture. Is subsea boosting the answer?

Company	Topic
Fuglesangs Subsea	Dramatically increase recovery with Lean Boosting
Shell	Stones, The World's Deepest Subsea Boosting System
Aker Solutions	Maximise oil production with subsea boosting
Siemens	Industrial automation and next gen. subsea control
One Subsea	Cutting CO2-emissions through energy efficient lifting/boosting methods
One Subsea	Subsea Compression - Towards future Gas Giants

Moderator: **Mathias Owe**,
Project Manager, A/S Norske Shell

Wednesday 29 August

10.00-12.00

Digital trends

Digital technologies are available and extensively used in most industries, including the entire value chain in the oil and gas business. How have operators taken leadership in the digitalisation process offshore, and how far have they come?

Company	Topic
Statoil	Statoil's digital roadmap
BHGE	Delivering on Fullstream Digital
Visco	Digital Twin of entire Oilfields
Dresser-Rand, A Siemens Business	Fully Integrated Digital Lifecycle Approach
Schlumberger	The digital journey for Oil & Gas
ABB	Digitalization drives innovation for the new energy landscape
Bouvet	[tbc]

Moderator: **Liv Hoem**,
DNV GL

G&G: Unleashing the hydrocarbon potential – riding the digital wave

Unfolding the subsurface resource potential means continuously learning from play concepts, prospects, discoveries and production. Unleashing the hydrocarbon potential. Let's take a look at the advances in effective geological data collection, processing and modelling.

Company	Topic
iDrop	Oceanid - unleash ocean bottom seismic
Apex Spectral Technology	Updated-drilling gushers not dusters with dispersion
ExploCrowd	Accelerating exploration and value creation on NCS
Lundin	Top Seis, seeing is believing
LOTOS	Near-field, value-driven exploration: partnering for success
Sintef Industry	True Triaxial Test System for Improving Drilling
Sintef Industry	Sealing the open annulus by creeping shale

Moderator: **Dr. Astri Kvassnes**,
CEO, ReStone

Production optimisation

How can we make sure we produce oil and gas more efficiently? What are the solutions for producing oil and gas in a more efficient way? Maybe some of these companies hold the answers to some of the remaining challenges.

Company	Topic
TechInvent	Optimising Chemical Injection Performance
ABB	Non-intrusive solutions and large, but hidden, value
Solution Seeker	Real-time production optimisation
Nalco Champion	A chemical solution to production enhancement
PSE	New approach to full asset optimisation for mature
ConocoPhillips	A brilliant success story on a massive water shut off job on the Ekofisk field

Moderator: **Line Geheb**,
Asset Manager, Petoro

Extension of field life

An increasing number of installations in the North Sea are reaching the end of their design life. Technology developments and systematic maintenance have allowed these installations to extend production beyond this barrier. How can we maintain safe and cost-effective operations of assets installed many years before today's technology and regulations were developed?

Company	Topic
Point Resources	Opportunities & Challenges in Balder Life Extension
SINTEF Ocean	Digitalised mooring system integrity management
Wood	Wood structural corrosion initiative
Kongsberg Ferrotech	Automated IMR operations for risers and flowlines
Petroleum Safety Authority	Effect of supervisory activity on the risk level
ABS	The uninspectable in the life of extension of subsea

Moderator: **Kristin Kragseth**,
Vice President Production, Point Resources

Innovative subsea technology: operations and long subsea tie-backs

Deeper waters, remote locations and a new market reality requires lean and efficient concepts for future subsea field architecture. A "life of field" focus is required to meet lifting cost requirements. The session will focus on operations and long subsea tie-backs.

Company	Topic
Total	Long Subsea Tie Backs- Solution for the Ultra Deep
Safe Marine Transfer	Longer, Cheaper Subsea Tie-backs
Oceaneering	ROV, AUV and subsea drone - all in one!
National Oilwell Varco	Integrated Condition Monitoring in flexible pipes
Oil Spill Response	New Technology - Responding to subsea incidents
DVN GL	Qualification of additive manufacturing for oil and gas

Moderator: **tbc**,

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Wednesday 29 August

13.00-15.00

Technological quantum leaps: how technology changed industries

How have other industries dealt with challenges? How have innovative use of existing and new technologies helped them survive the transition and achieve their goals? There are bound to be lessons to be learned for the oil and gas industry here.

Company	Topic
National Oilwell Varco	Switching the light on downhole when drilling
Statoil	Underwater Intervention Drone
BHGE	Bringing Aviation Technology into Subsea Boosting. A Game Changer
XSENS	Game changer in flow metering
Anybotics	Introducing; ANYmal
Prodrive	Additive Manufacturing for high-tech industries - and optimising processes car-racing style

Moderator: **Gordon Ballard**,
International Association of Oil & Gas Producers

Technological trends in the oil and gas industry

In a world where “digitisation,” “robotics,” “Artificial Intelligence” and “autonomy” are no longer concepts from science fiction, but a dawning reality; where is the oil and gas industry heading?

Company	Topic
Total	ARGOS. The first autonomous robot for gas and oil
Wintershall	Wintershall performing well intervention on Brage
Wood, Statoil, ABB, ApplySørco et.al.	Collaboration on digitalization in the MMO industry
Statoil, Sekal and MH Wirth	Digitalisation in drilling - the Songa Enabler campaign
AkerBP and Cognite	Digitalization use cases
SAP	Digitalization and real-time digital twins in O&G

Moderator: **Dr. Kristin Flornes**,
President, IRIS

Innovative greenfield solutions

Meeting the future demand for energy, means new developments will be necessary. How can we make sure we undertake these in a cost effective and environmentally friendly manner?

Company	Topic
Aker Solutions	Unmanned facilities; designing for safe operations
Wood	Combining RAM & Fabric Maintenance for OPEX/CAPEX
DNV GL	Subsea tie-backs, what have we learned?
Subsea 7	Solutions for clustered small developments
Expro Group	Wintershall's Maria project - a case study

Moderator: **Camilla Leon**,
VP Technology & Digitalization Projects, AkerBP

Plug & Abandonment

In the North Sea more than 100 installations/parts of installations are forecast for removal in the next decade, at a cost of more than NOK 170 billion. P&A is an important part of any decommissioning scheme. This session will present optimised P&A techniques and methods, as well as alternative documentation and verification methods of well barriers.

Company	Topic
Point Resources	Cost efficient decommissioning solutions
Romar International	Game changing technology for faster decommissioning
BiSN Oil Tools	A new twist on rigless well abandonment
Archer	Efficient P&A and slot recovery
Interwell	A novel in-well testing of temporary barriers
Aarbakke Innovation	Eagle rigless abandonment, tubing left in hole

Moderator: **Dr. Malin Torsæter**,
Research Director, Sintef

Innovative subsea technology: subsea power – all electric

How do we secure reliable power supply to subsea installations? Offshore oil wells are currently controlled using hydraulic technology. The session will focus on how subsea hydraulics are replaced with all electric solutions.

Company	Topic
DNV GL	All-electric SPS challenges traditional thinking
TechnipFMC	Electrically trace Heated Pipe-in-Pipe for Fenja
VNG	Fenja flow assurance challenges in long distance
Siemens	Subsea Power Grid; now ready for installation
Subsea 7	First use technology enables field development
Statoil	Subsea All-electric and DCFO – status and way forward

Moderator: **tbc**,
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Thursday 30 August

10.00 – 11.30

Ocean Space: aqua culture – an introduction

How much common ground is there between offshore and aqua culture? How can technology and personnel from the offshore industry be transferred to aqua culture, and how large is the potential market?

- Speakers TBC
- Moderator: TBC

Infrastructure opportunities for O&G suppliers – an introduction

Billions of NOK are to be invested in civil infrastructure such as roads, tunnels and hospitals over the next decade. What are the opportunities for the offshore service and supply industry?

- Speakers TBC
- Moderator: TBC

12.00-13.30

Ocean Space: aqua culture – new development concepts

The new fish cage concepts for offshore and fjords dwarf offshore installations in terms of size – but need the offshore industry's knowledge on the maritime side.

- Speakers TBC
- Moderator: TBC

Ocean Space: aqua culture – operations and support

How do fish farms operate, what are the trends, and are there opportunities for technology transfers from the offshore industry?

- Speakers TBC
- Moderator: TBC

Infrastructure opportunities for O&G suppliers

- Speakers TBC
- Moderator: TBC