

Statoil

Statoil's technology strategy
Technology to shape the future of energy

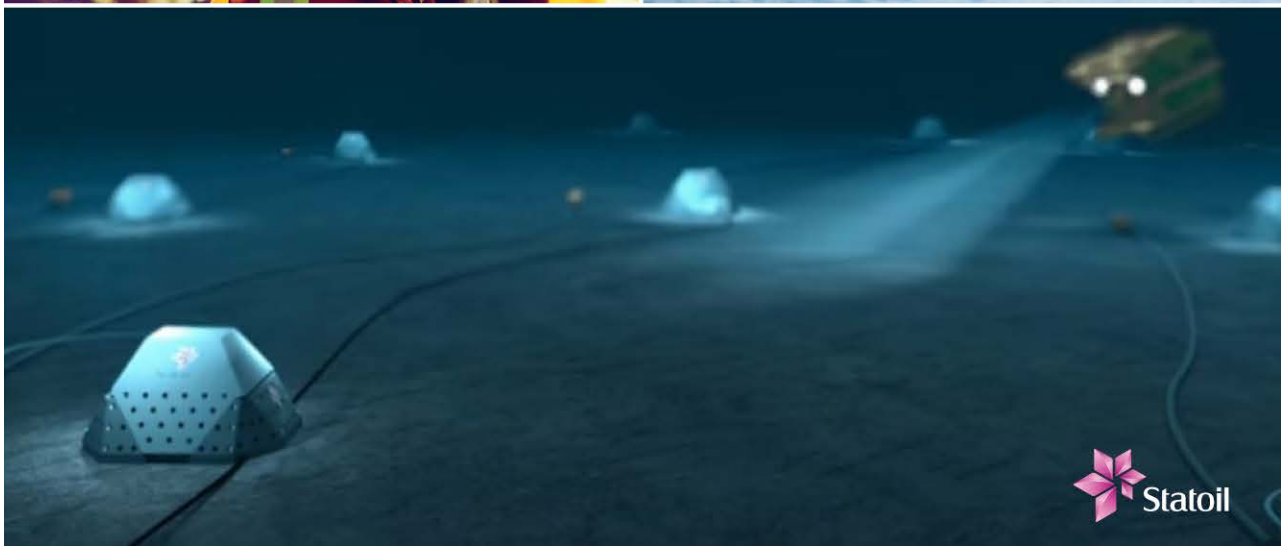


TECHNOLOGY TO SHAPE THE FUTURE OF ENERGY

We are an energy company committed to long term value creation in a low carbon future.

Statoil's strong technology base and ability to apply new technologies, constitute a competitive advantage for us.

Our sharpened strategy highlights innovation & technology as one of four key enablers to deliver.



ADDRESSING NEW REALITIES, NEW OPPORTUNITIES



Energy system
transitioning



Liquids resource
replacement
challenge



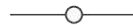
Markets remain
cyclical



Winners transform
their cost base



Low carbon creates
opportunities



Prepare to be surprised

FORMING A FUTURE-FIT PORTFOLIO

The technology strategy sets the long term direction for technology development in Statoil. The future-fit portfolio will demand new solutions for oil and gas, reductions of carbon emissions, and renewable energy.

New energy solutions

Create a material new industrial position

Norwegian continental shelf

Build on our unique position to maximise and develop long-term value

Always safe
High value
Low carbon

International oil & gas

Deepen core areas and develop growth options

Midstream and marketing

Secure premium market access and grow value creation through cycles

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INNOVATION

CROSS-DISCIPLINE SOLUTIONS

DIGITALISATION

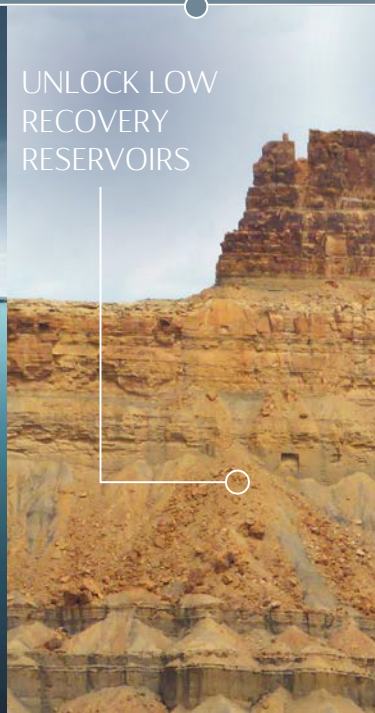
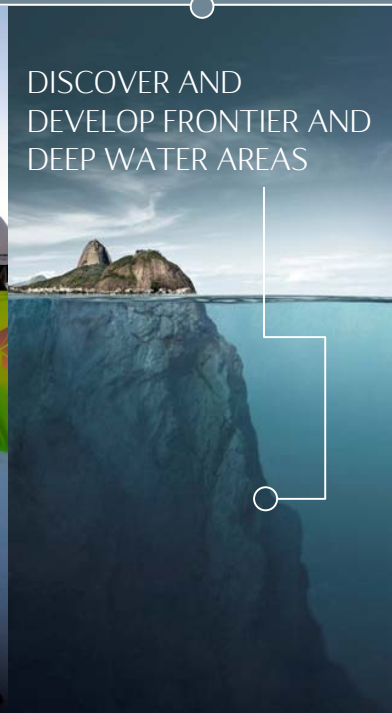
OPTIMISE PRODUCTION
FROM EXISTING AND
NEAR FIELD RESOURCES

LOW CARBON
SOLUTIONS FOR
OIL & GAS

DISCOVER AND
DEVELOP FRONTIER AND
DEEP WATER AREAS

UNLOCK LOW
RECOVERY
RESERVOIRS

DEVELOP
RENEWABLE ENERGY
OPPORTUNITIES



OPTIMISE PRODUCTION FROM EXISTING AND NEAR FIELD RESOURCES

Capture value of digitalisation,
infrastructure and people

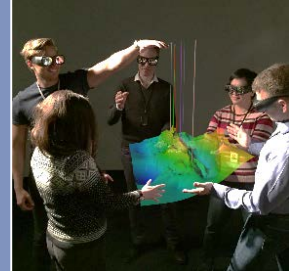
Maximise value from NCS and international
operations:

- Unlock existing and near field hydrocarbon potential
- Prolong infrastructure lifetime
- Safe and efficient operations

Some examples



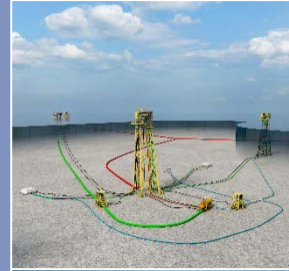
Subsurface
data
integration



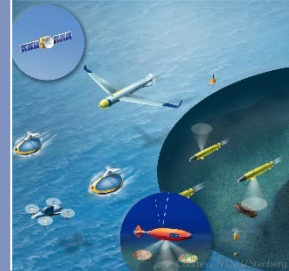
Automated
drilling
control



Remotely
operated
factories



Autonomous
inspection



LOW CARBON SOLUTIONS FOR OIL & GAS

Reduce emissions and decarbonise processes and products

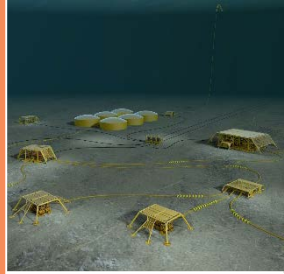
Value chain perspective reducing emissions from reservoir to market:

- Energy efficient field development and operation
- Low carbon power and heat supply
- Value chains with carbon capture, utilisation and storage

Some examples



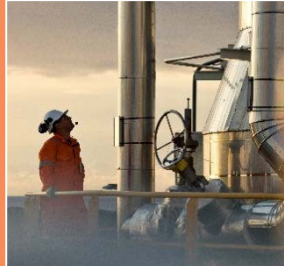
Energy efficient subsea processing



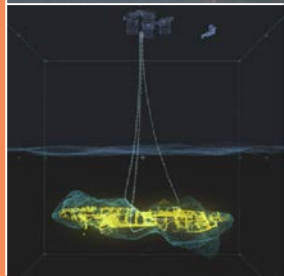
Maximise power generation efficiency



Optimise electrification



Hydrogen from natural gas with CCUS



DISCOVER AND DEVELOP FRONTIER AND DEEP WATER AREAS

Expand sub-surface
competence and competitive
new field development solutions

Enable production from frontier and deep-water areas:

- Improved exploration evaluation methods
- Improved reservoir predictability
- Facilities technology enabling deep -water field developments
- Environmental technology and competence to provide license to operate

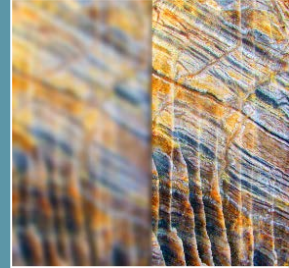
Some examples



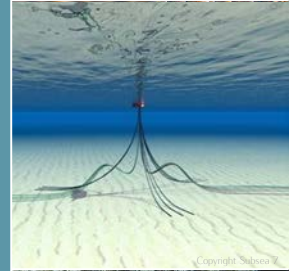
Exploration
regional
evaluation



Seismic
interpretation
and analysis



Deep-water
risers



Environmental
impact
assessment



UNLOCK LOW RECOVERY RESERVOIRS

Utilise multi-discipline competence for new recovery solutions

Maximise value of low recovery reservoirs:

- Improved fracking and lift solutions
- Improved reservoir characterisation and early production solutions for tight reservoirs
- Increase recovery and process solutions for heavy oil fields

Maximise value in an environmentally sustainable way

Some examples



Fracking with reduced water consumption



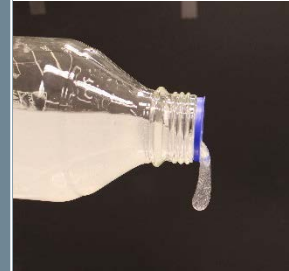
Gather dynamic data



Maximise reservoir exposure



Polymer flooding



DEVELOP RENEWABLE ENERGY OPPORTUNITIES

Accelerate competence
development to define the future

Build a material renewable energy portfolio:

- Optimise cost and efficiency for wind parks
- Build competence and respond rapidly to unlock new opportunities (e.g. solar, geothermal)
- Managing intermittent power through energy storage

Some examples



Resource
assessment



Installation
methods for
floating
offshore wind



Emerging
solar photo
voltaics



High-
temperature
geothermal
wells



Innovation



- Essential to provide new solutions with high impact
- Enabler for our strategy
- Build on our proud heritage of with close interaction between suppliers and academia
- Utilise all types of innovation from incremental to disruptive

Cross-discipline solutions



- Superior to solutions developed by individual disciplines, avoiding sub-optimisation
- Share knowledge and deliver as a team
- Strengthen our collaboration with suppliers

Digitalisation



- Drives integration of data, hardware, disciplines, value chains, industries, business models and people
- Includes big data, cognitive learning and analytics, augmented reality, smart machines and systems, robotic software and automation
- Learn from other industries and suppliers ahead of us

Technology to shape the future of energy

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Shaping the future of energy

turning natural resources into energy for people and progress for society

STRATEGIC PRINCIPLES



Cash generation capacity at all times



Capex flexibility

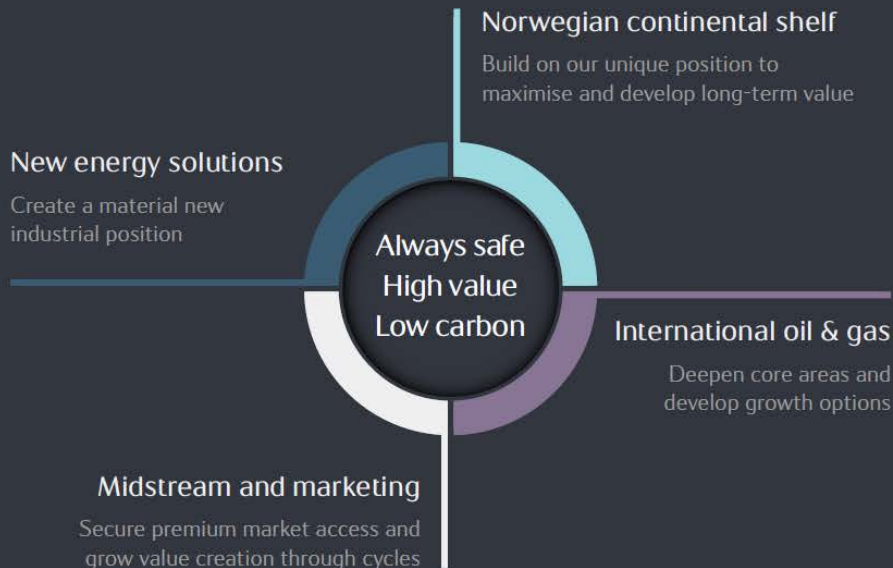


Capture value from cycles



Low-carbon advantage

FUTURE-FIT PORTFOLIO



ENABLERS



Safe and secure operations



Technology & innovation



Empowered people

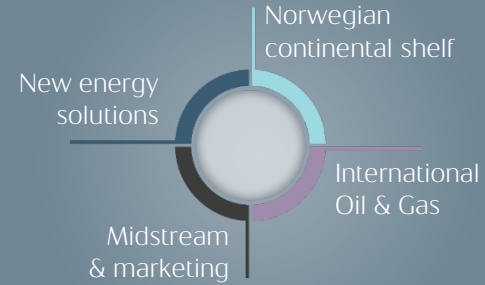


Stakeholder engagement



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ALWAYS SAFE
HIGH VALUE
LOW CARBON

INNOVATION

CROSS-DISCIPLINE SOLUTIONS

DIGITALISATION

OPTIMISE PRODUCTION
FROM EXISTING AND
NEAR FIELD RESOURCES



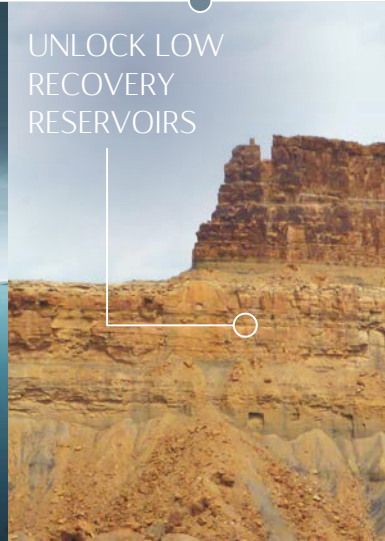
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