



# A broad energy company

with an ambition to be a leader in the energy transition

SUBPRO Symposium  
November 27<sup>th</sup>, 2023

OUR STRATEGY

# Always safe, high value, low carbon



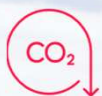
Strategic focus areas



High value growth in renewables



Optimised oil & gas portfolio



New market opportunities in low carbon solutions

# 50

PERCENT

Reduction of operated emissions by 2030

# 50

PERCENT

Gross capex investments to transition by 2030

# 40

PERCENT

Reduction in net carbon intensity by 2035

## A WORLD IN CHANGE

# The global energy system is undergoing a transformation

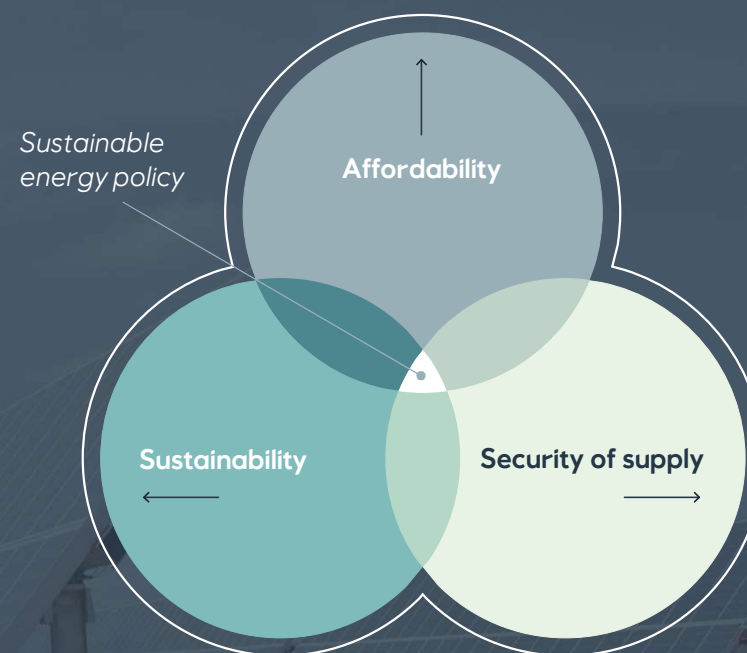
The energy transition is defined by restructuring the energy system in order to deliver sufficient and affordable energy with reduced CO<sub>2</sub> emissions.

The key enablers are:

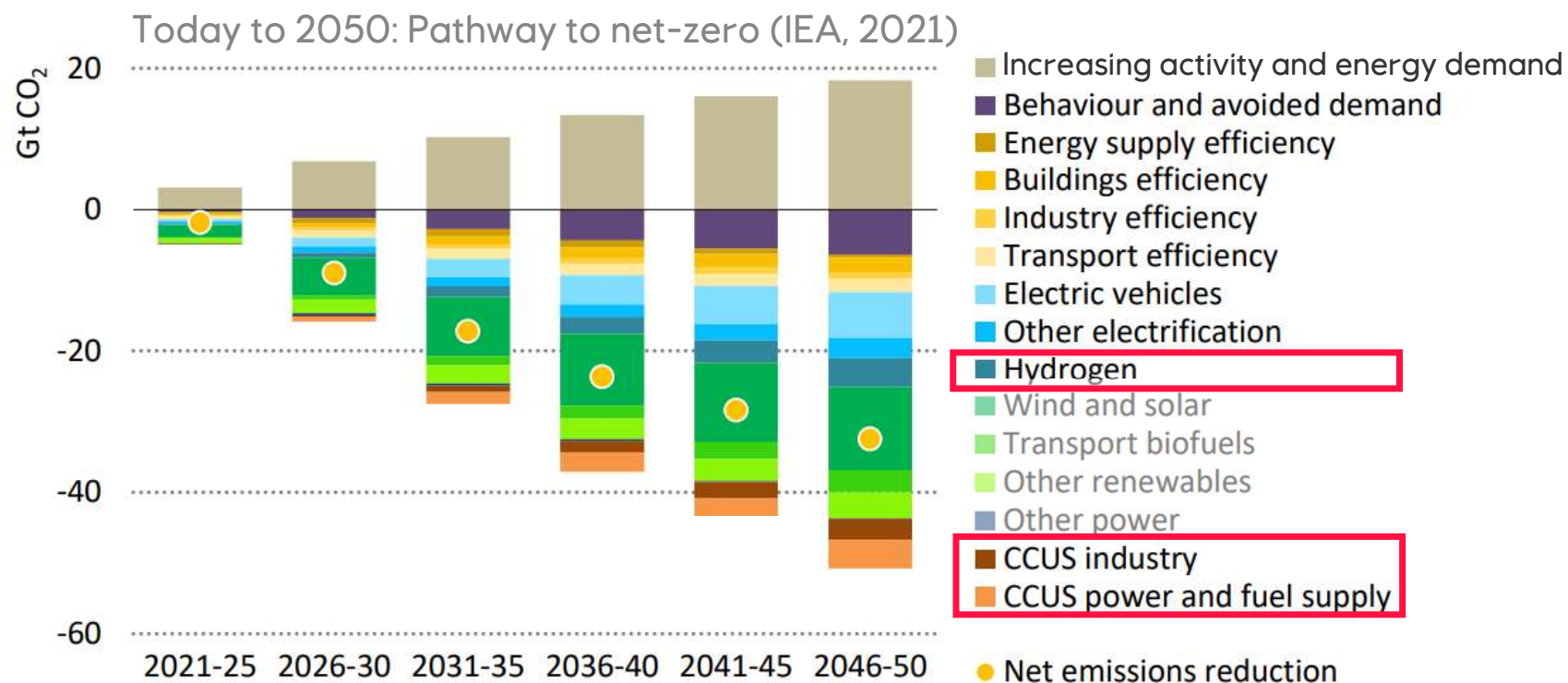
- **Energy intensity** - decoupling economic activity and energy use
- **Carbon intensity** - decarbonising energy use
- **Carbon removal** - removing carbon from the atmosphere

A balanced approach to the 'energy trilemma' together with industry, governments and society at large will be needed for a just transition.

## Energy trilemma



# IEA 2021 scenario | Pathway to net-zero



**520**  
Mt/yr



**7.6**  
Gt/yr



# New market opportunities in low carbon solutions



**15-30** MILLION TONNES PER ANNUM  
CO<sub>2</sub> transport and storage capacity by 2035  
Equinor share

**> 25%**  
CO<sub>2</sub> transport and storage market share in Europe by 2035

**3-5** MAJOR INDUSTRIAL CLUSTERS  
Clean hydrogen projects by 2035

**> 10%**  
Clean hydrogen market share in Europe by 2035

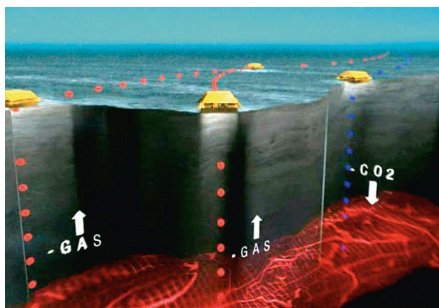
# CCS is ready to be deployed at scale

... and Equinor is one of the front-runners

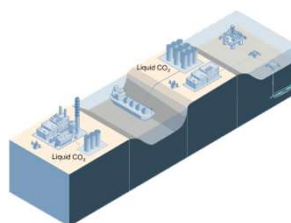
**Sleipner**  
Operation 1996



**Snøhvit**  
Operation 2008



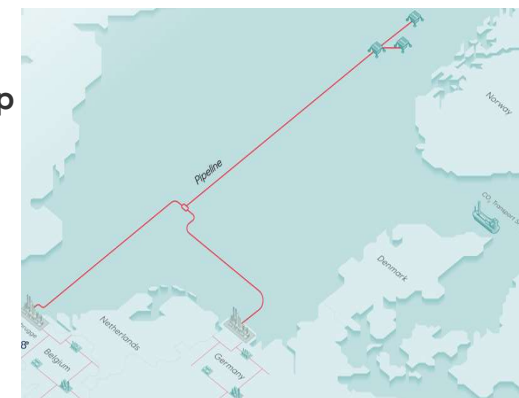
**Northern Lights**  
Operation 2024



**Northern Endurance Partnership**  
Operation 2026



**Smeaheia**  
Operation 2028



3. Scale-up to bring costs down

2. Northern Lights – Market opener

1. Sleipner/Snøhvit – Technology works!

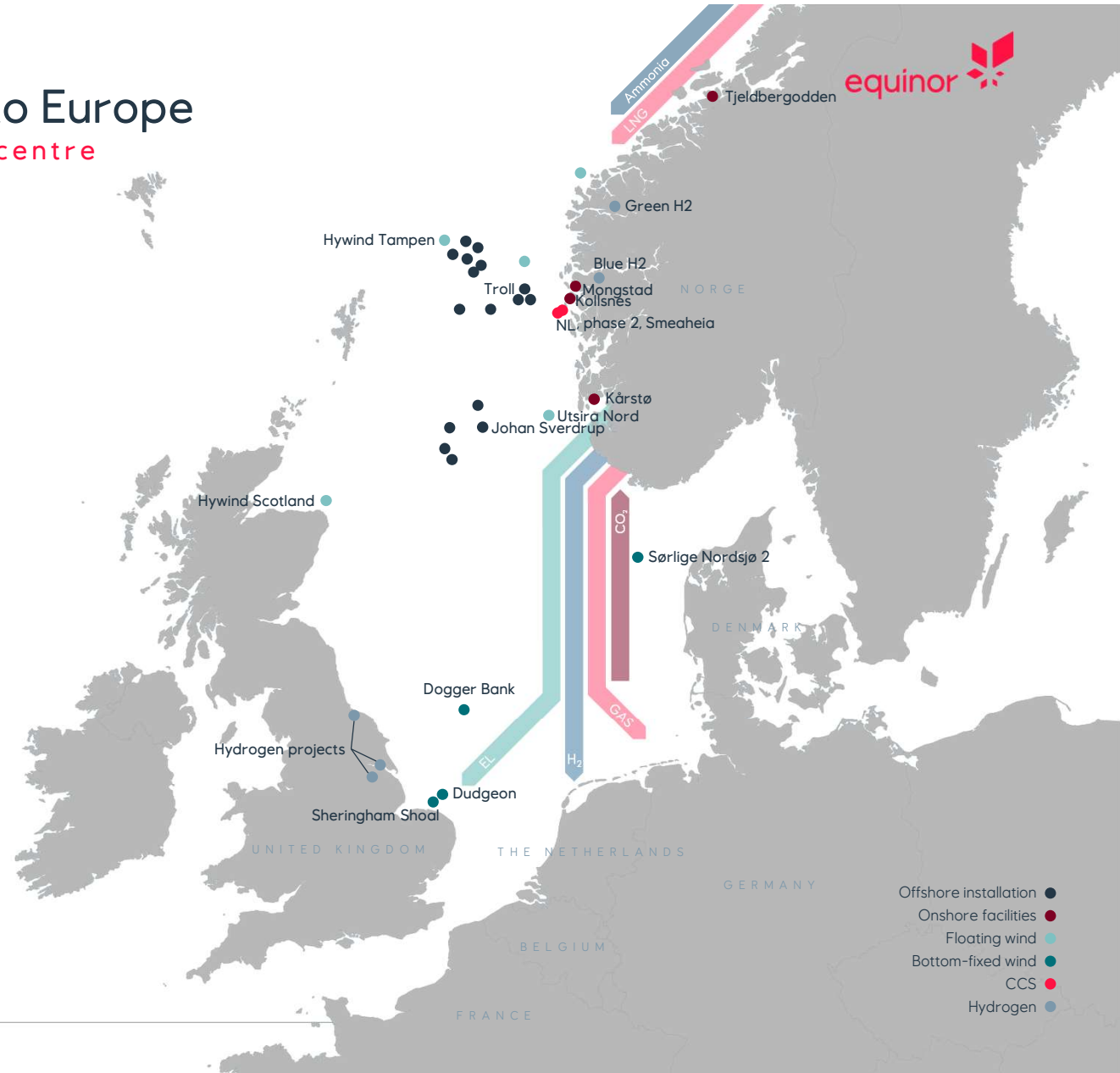
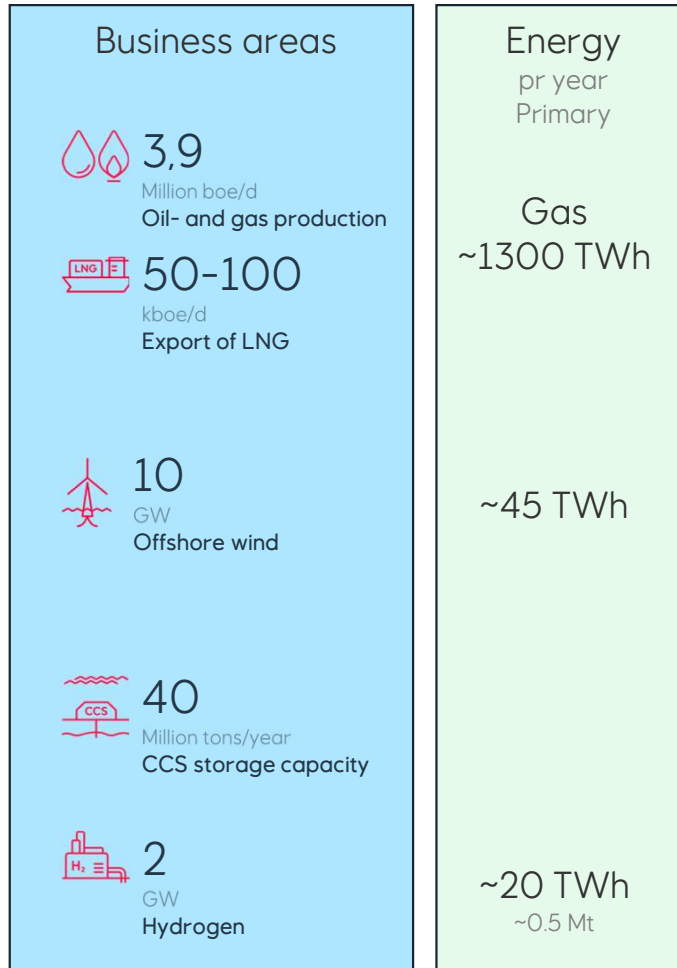
# CCS - Key activities and focus areas



**Subpro Zero PhD project:** "Systematic methods for smart management of CO2 transport and storage"

# Norway as an energy provider to Europe

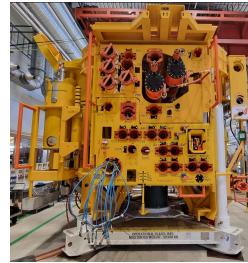
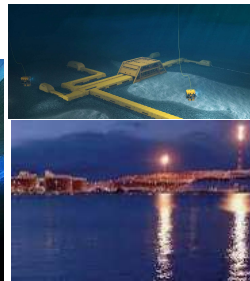
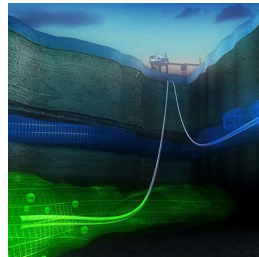
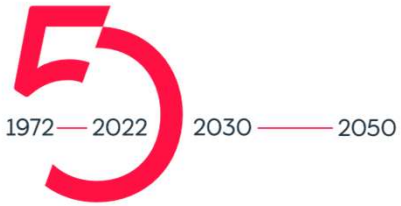
## An industrial plan for a European energy centre





Equinor's technology mission

# Transforming through technology



**1972**  
Established

Subsea  
(1st. Producer  
1986)

CO<sub>2</sub> removal  
and storage  
(sleipner)

Hammerfest  
LNG  
(Subsea to beach  
145 km)

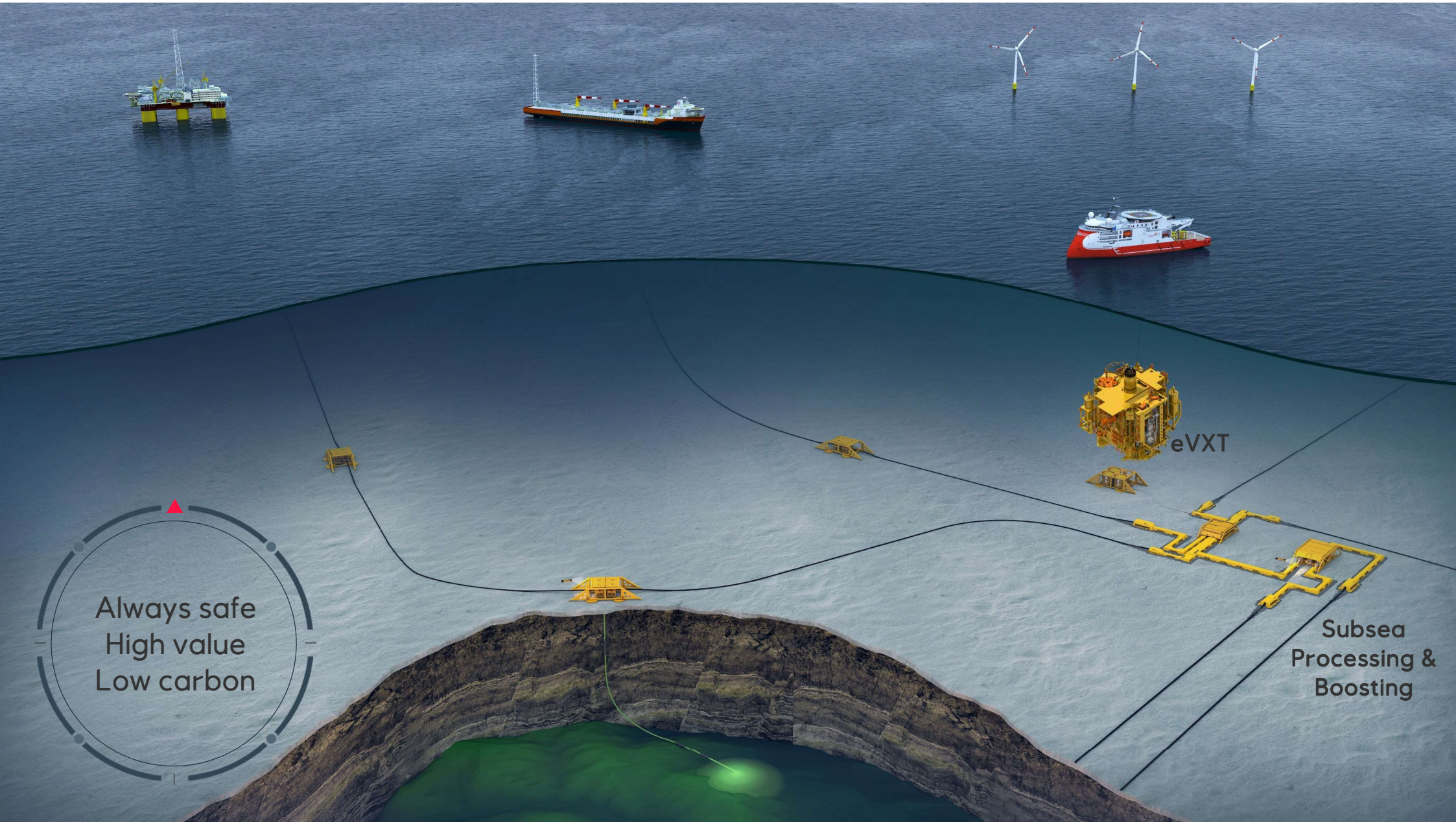
Åsgard subsea  
compression

eVXT  
DCFO

Northern  
Lights

Unmanned field  
developments

**50 years of industry history, realised by  
innovation, research & technology developments  
and project execution excellence**

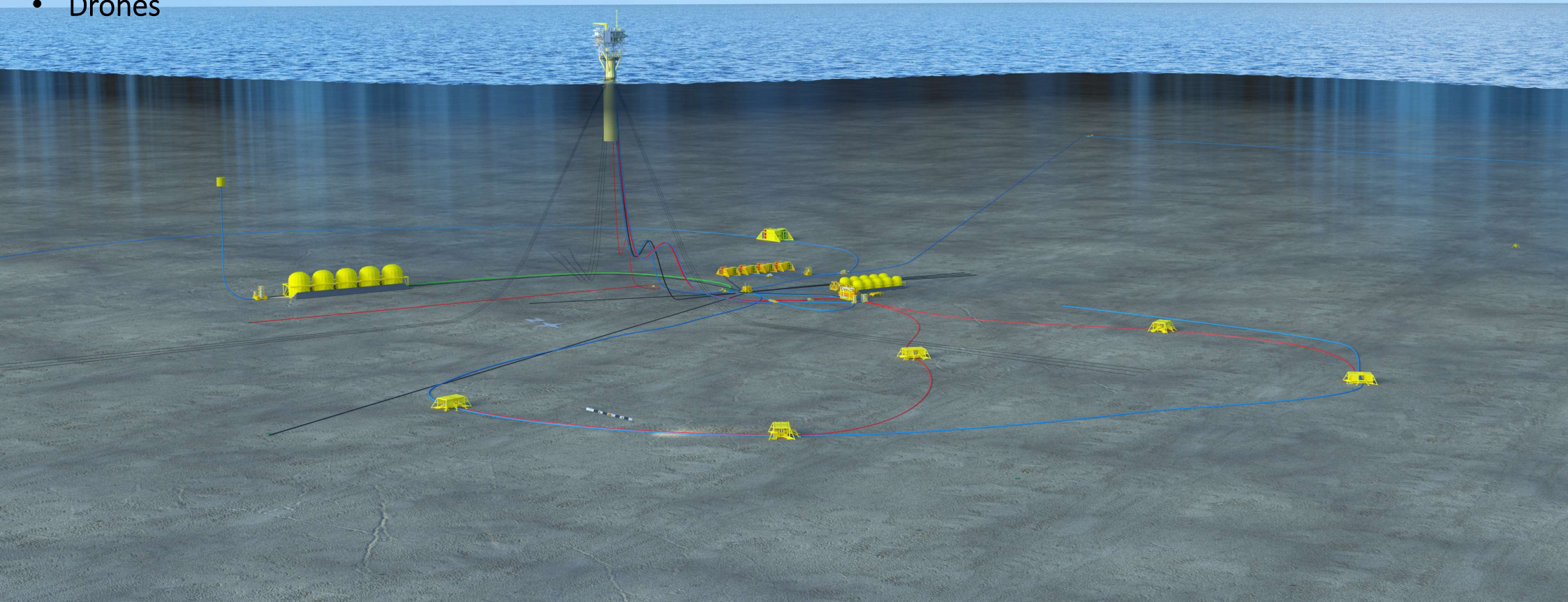


Always safe  
High value  
Low carbon

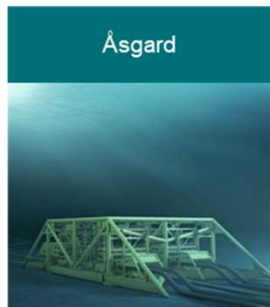
eVXT

Subsea  
Processing &  
Boosting

- Hywind SPAR
- Åsgard “subsea” compressors
- Subsea oil storage
- Subsea chemical storage
- Subsea seawater treatment for injection
- «All electric» valves
- Drones



# Remotely Operated Factory (ROF™) roadmap



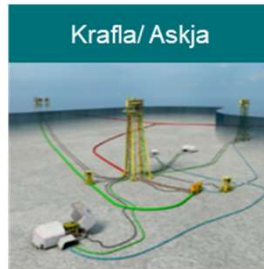
Subsea compression



Offshore floating wind



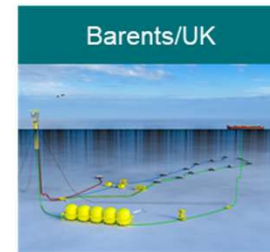
Unmanned Wellhead Platform (UWP™)



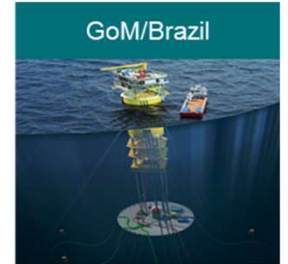
Unmanned production platform, supported from host (UPP™)



Stand alone gas/condensate development



Stand alone remote oil/gas development  
200→1500m water depth



Ultra deep water UPP™  
1500m-→4000 water depth

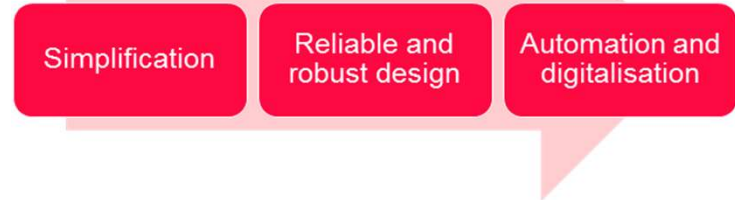
IN OPERATION

## PROJECT DEVELOPMENTS

## FUTURE OPPORTUNITIES

Capex <sup>3</sup>	Opex	Cost
-30%	-50%	-15%

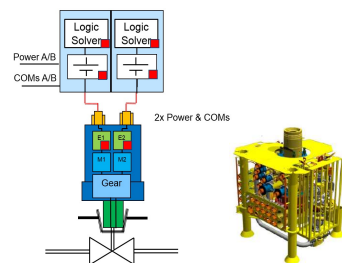
# Peon UPP concept



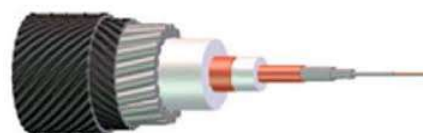
- Simplification
  - No living quarter or shelter
  - No helideck - access from Supply Operation Vessel
  - No lifeboats
  - No fire water
  - No insulation (?)
  - No hydraulics / pneumatics – all electric
  - Hywind Spar hull – no utility systems in spar
- Reliable and robust design
  - Robust equipment selection
  - High material quality
- Automation and digitalisation

# Peon - Subsea digital technologies

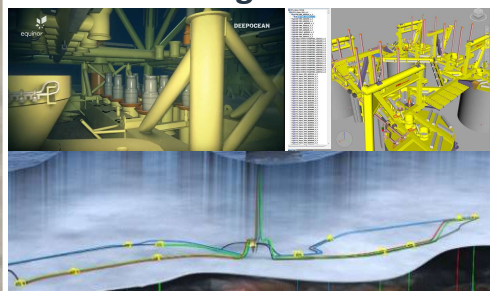
## All-electric subsea



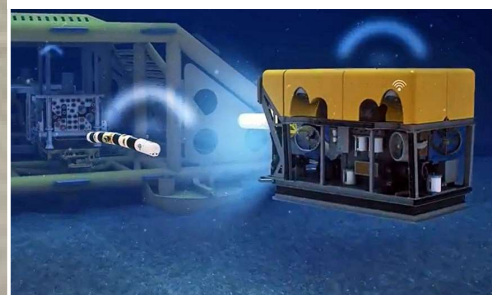
## DCFO



## Subsea digital twin



## Resident underwater drones



28.11.2023

Classification: Internal

© Statoil ASA



equinor

# Thank You

Andreas Jagtøyen,  
SVP TDI Renewables & Low-Carbon

© Equinor ASA

This presentation, including the contents and arrangement of the contents of each individual page or the collection of the pages, is owned by Equinor. Copyright to all material including, but not limited to, written material, photographs, drawings, images, tables and data remains the property of Equinor. All rights reserved. Any other use, reproduction, translation, adaption, arrangement, alteration, distribution or storage of this presentation, in whole or in part, without the prior written permission of Equinor is prohibited. The information contained in this presentation may not be accurate, up to date or applicable to the circumstances of any particular case, despite our efforts. Equinor cannot accept any liability for any inaccuracies or omissions.