

Hvor går veien videre for Subsea?

FFU seminar – 29. januar 2015

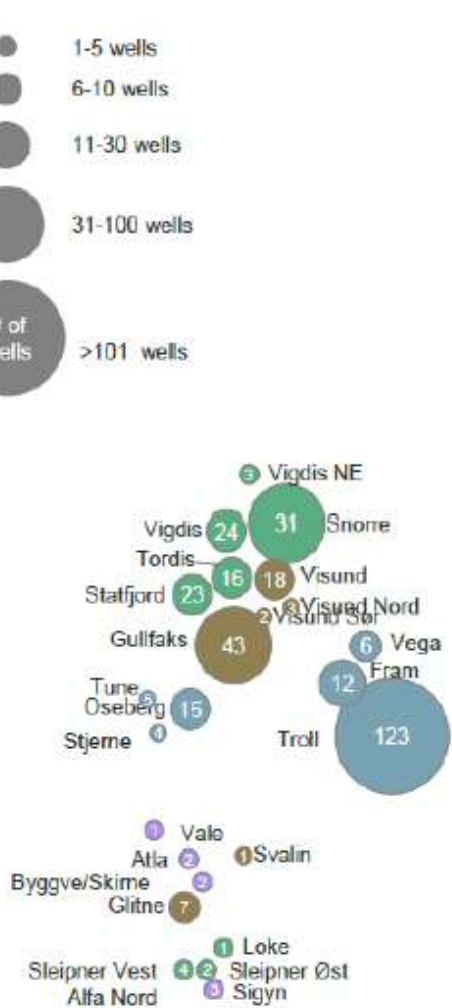
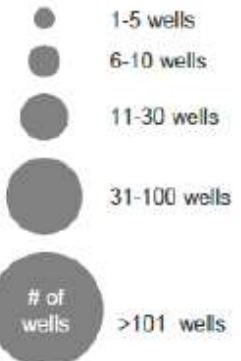
Trond S. Meling

Overview of Statoil subsea fields

Operator of 536 wells + Service provider of 9 wells (per 01.07.14)

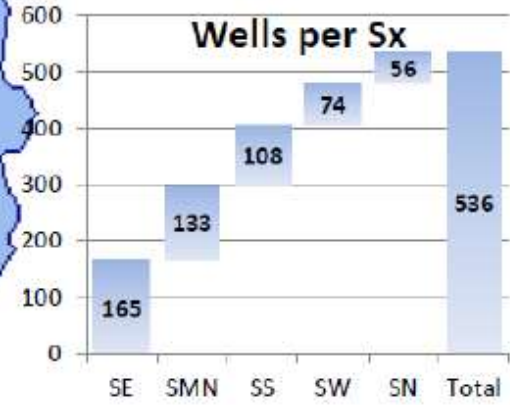
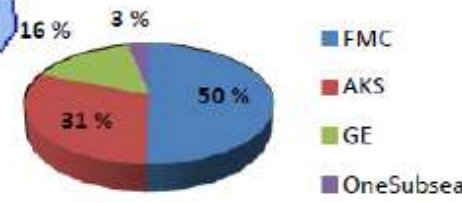
Operator

Troll	123
Åsgard	62
Gullfaks	43
Snorre	31
Vigdis	27
Norne	26
Visund	23
Heidrun	21
Oseberg	19
Tordis	16
Njord	15
Tyrhans	13
Kristin	12
Fram	12
Statfjord øst	11
Urd	10
Snøhvit	10
Statfjord Nord	10
Skuld	8
Glitne	7
Sleipner	7
Vega	6
Tune	5
Sygna	4
Morvin	4
Mikkel	3
Statfjord	2
Alve	2
Hyme	2
Svalin	1
Yttergryta	1



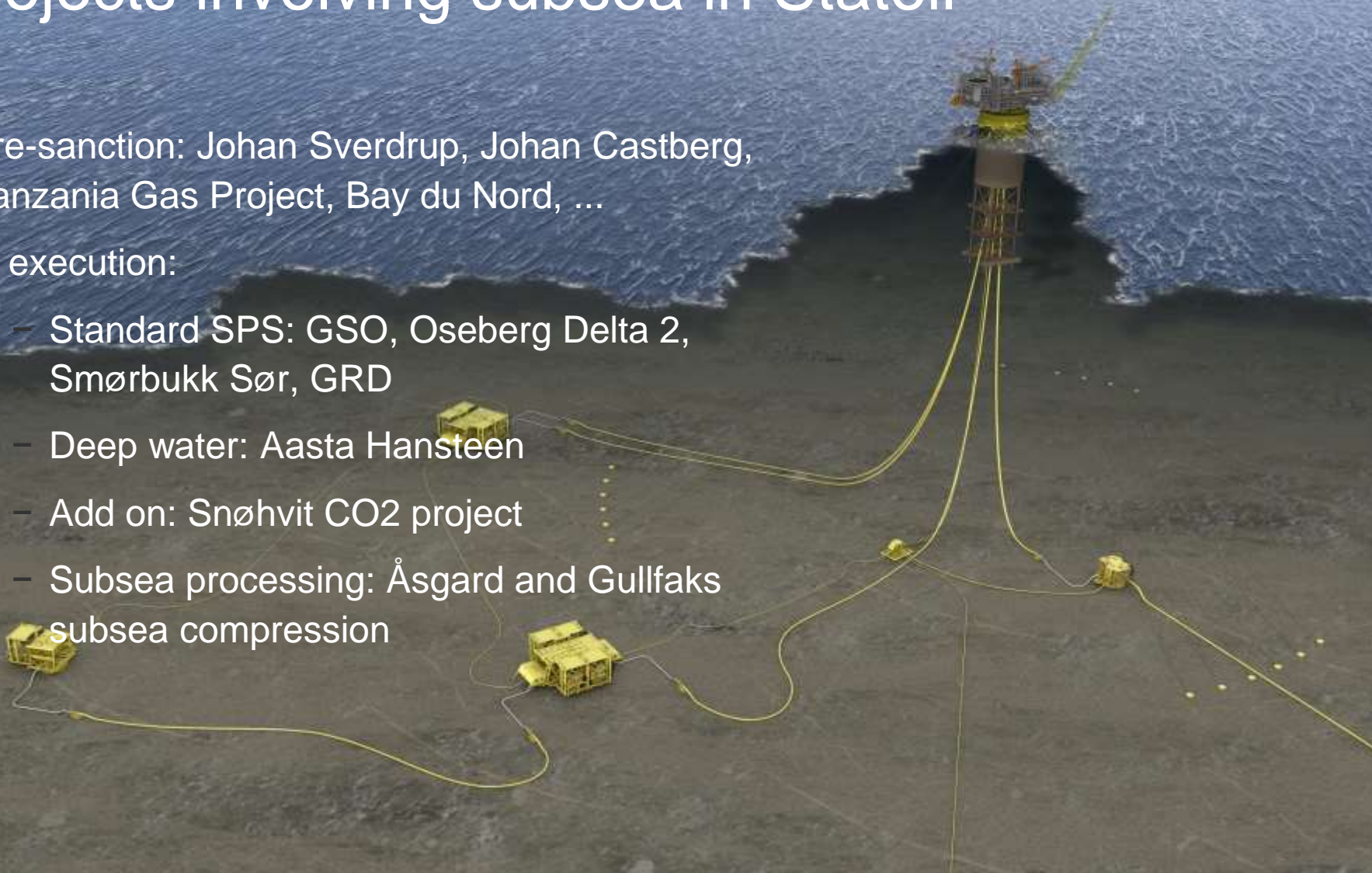
Sigyn	ExxonMobil	3
Skirne		2
Marulk		2
Vale	centrica energy	1
Atla		1

% per Supplier



Projects involving subsea in Statoil

- Pre-sanction: Johan Sverdrup, Johan Castberg, Tanzania Gas Project, Bay du Nord, ...
- In execution:
 - Standard SPS: GSO, Oseberg Delta 2, Smørbukk Sør, GRD
 - Deep water: Aasta Hansteen
 - Add on: Snøhvit CO2 project
 - Subsea processing: Åsgard and Gullfaks subsea compression



Subsea Compressor Station SIT

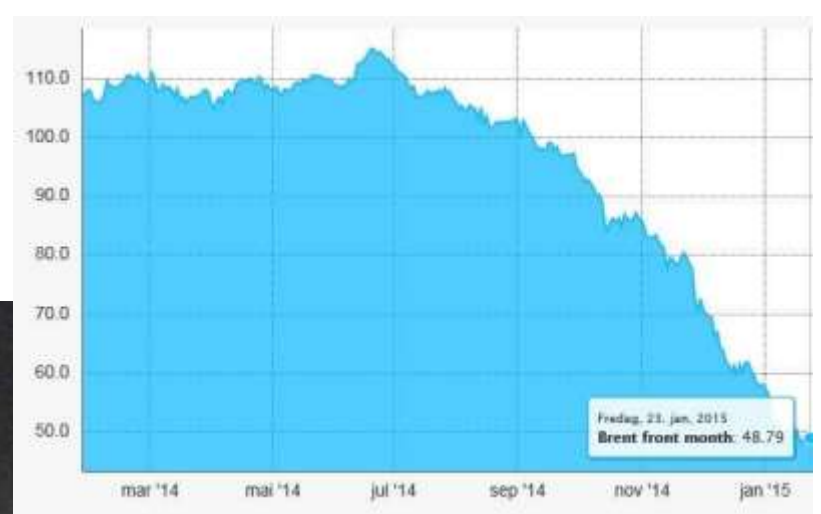




Gulfaks subsea compression



The balancing act



Standardization



Statoil søker partnere som vil bygge likt

JIP subsea forgings

JIP subsea LCI documentation

JIP with subsea power

JIP Interfaces subsea processing

A WIN-WIN FOR THE OIL AND GAS INDUSTRY

Open interfaces and standard subsea modules

as is...

...to be

INTERFACES



Requirements



Adapters

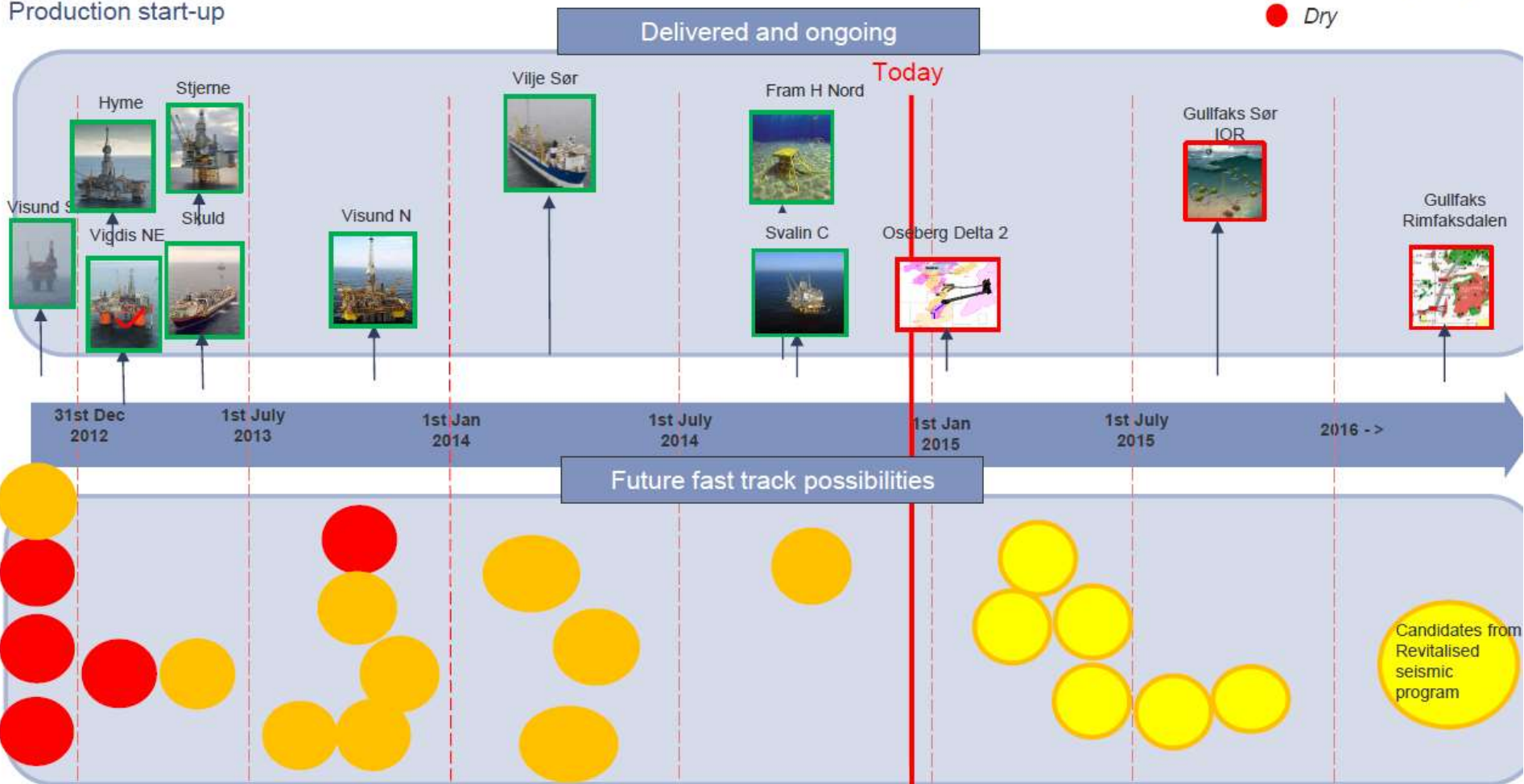


Standard, open interfaces

The fast track portfolio

- In/planned production
- FT drilling prospects
- Discovery/pending FT
- Dry

Production start-up



The Subsea Factory

Factory building blocks [new or improved]

Short term

Medium term

Long term



BROWNFIELD FACTORY



SUBSEA-TO-HOST FACTORY
TO ENABLE TIE-BACKS



EXTENDED REACH FACTORY
FOR LONG TIE-BACKS



DEEP WATER FACTORY
TO ENABLE 3000m PRODUCTION



HEAVY OIL FACTORY
TO ENABLE VISCOUS OIL TIE-BACK



ARCTIC FACTORY/
SUBSEA TO GAS MARKET

STANDARDIZATION

SIMPLIFIED
COMPRESSION

SUBSEA FIELD
CENTRE

GAS TREATMENT

POWER
DISTRIBUTION
& CONTROLS

MONITORING &
FISCAL METERING

LONG DISTANCE OIL
TRANSPORT

WATER
SEPARATION
& TREATMENT

ESP/SIMPLIFIED
BOOSTING

COMPACT
SEPARATION

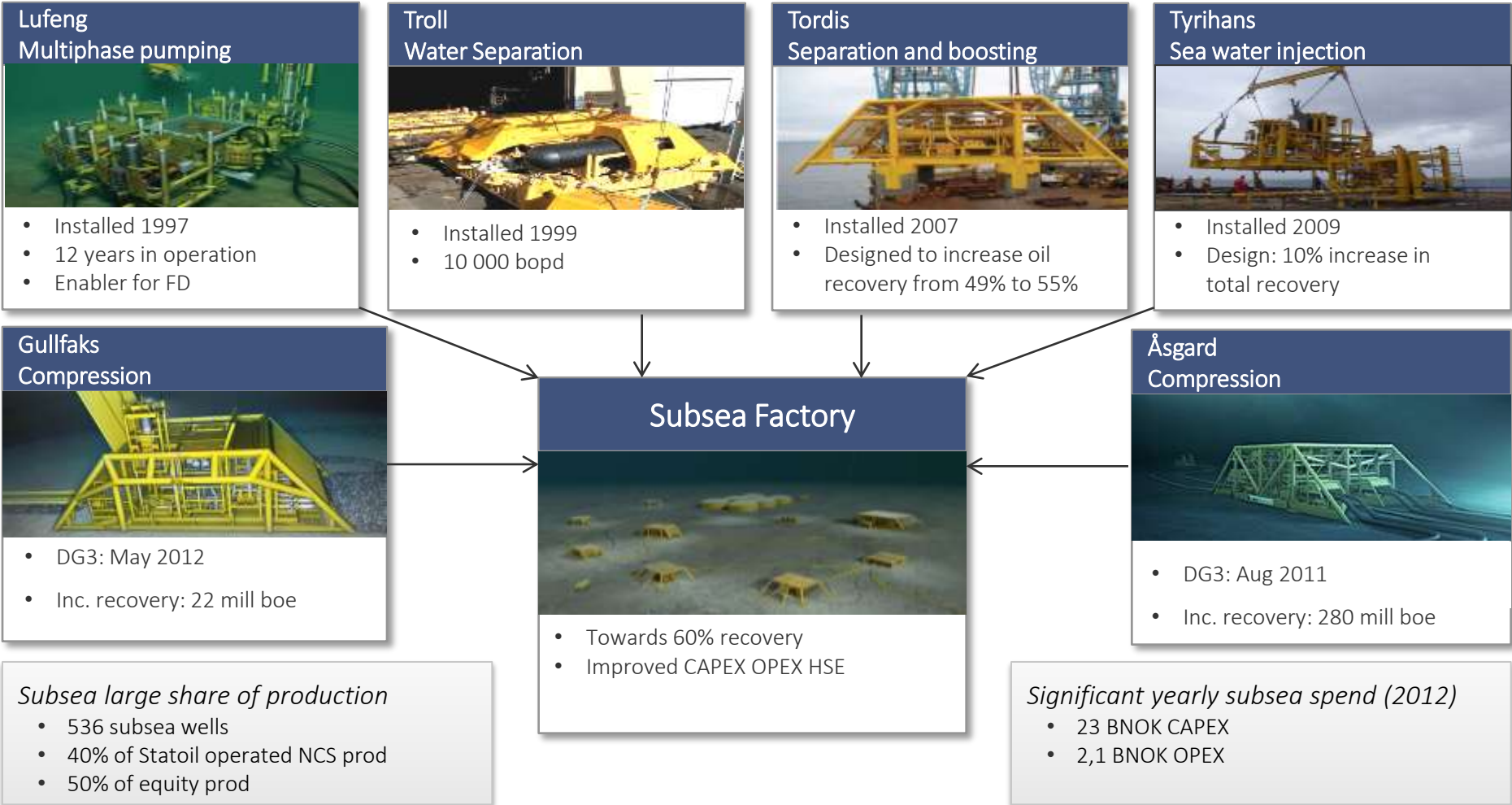
SEA WATER
TREATMENT

HIGH VISCOSITY
BOOSTING

OIL TREATMENT

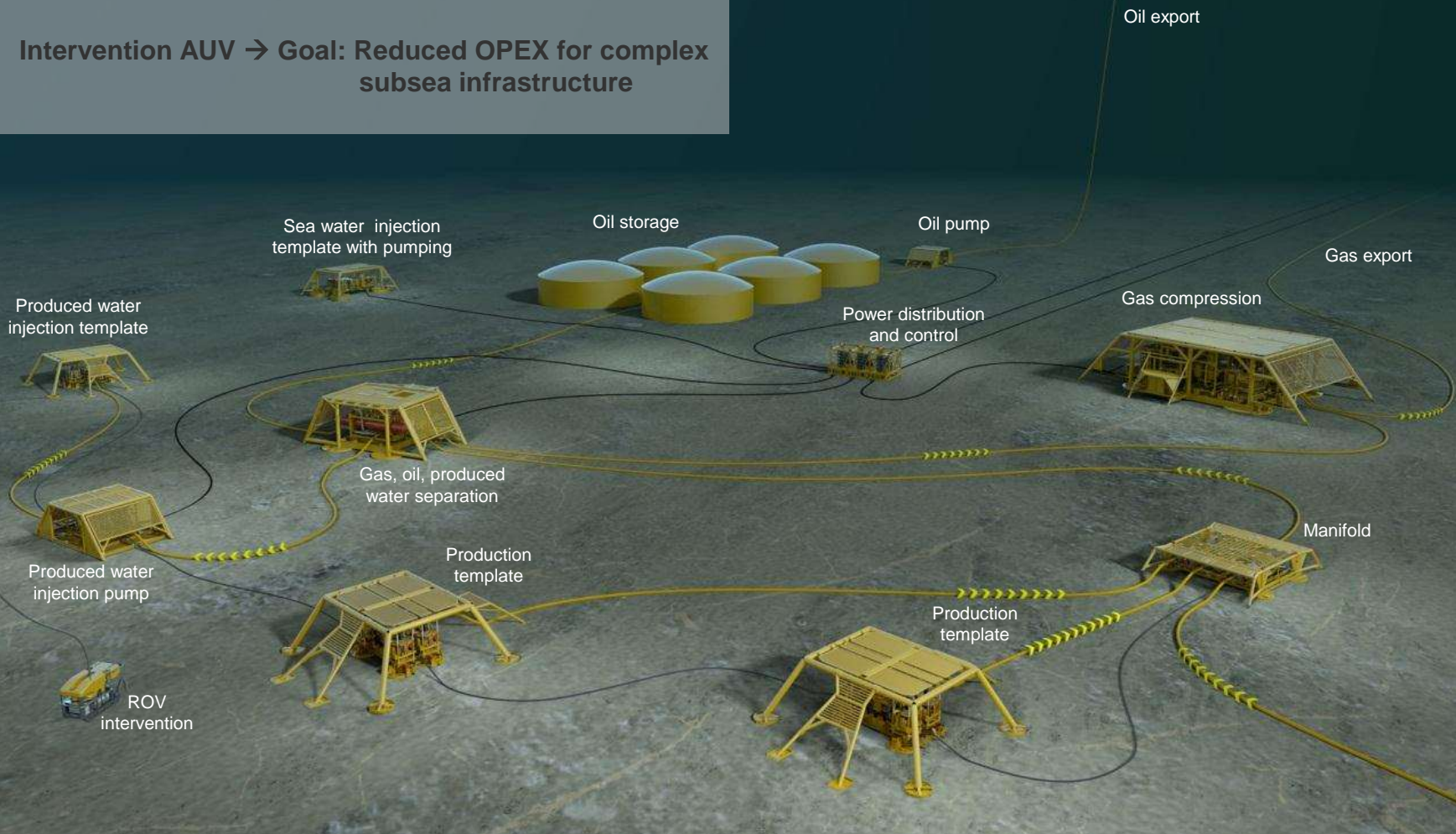
OIL STORAGE
& OFFLOADING

Building on existing Subsea Toolbox



The Statoil Subsea Factory™

Intervention AUV → Goal: Reduced OPEX for complex subsea infrastructure





New thinking



New possibilities

