



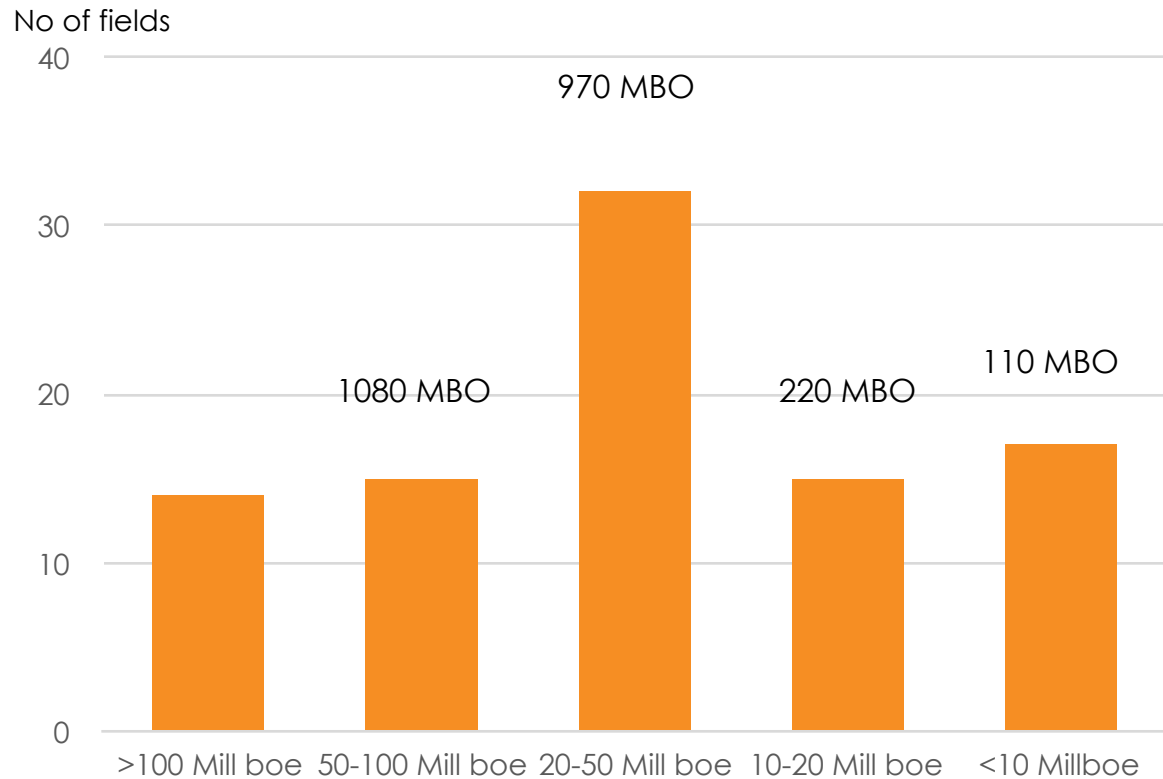
# Orkangerkonferansen

Ola Borten Moe 01.06.17

# Non-developed resources on NCS

7050 MBO (Resources likely to be developed as classified by NPD)

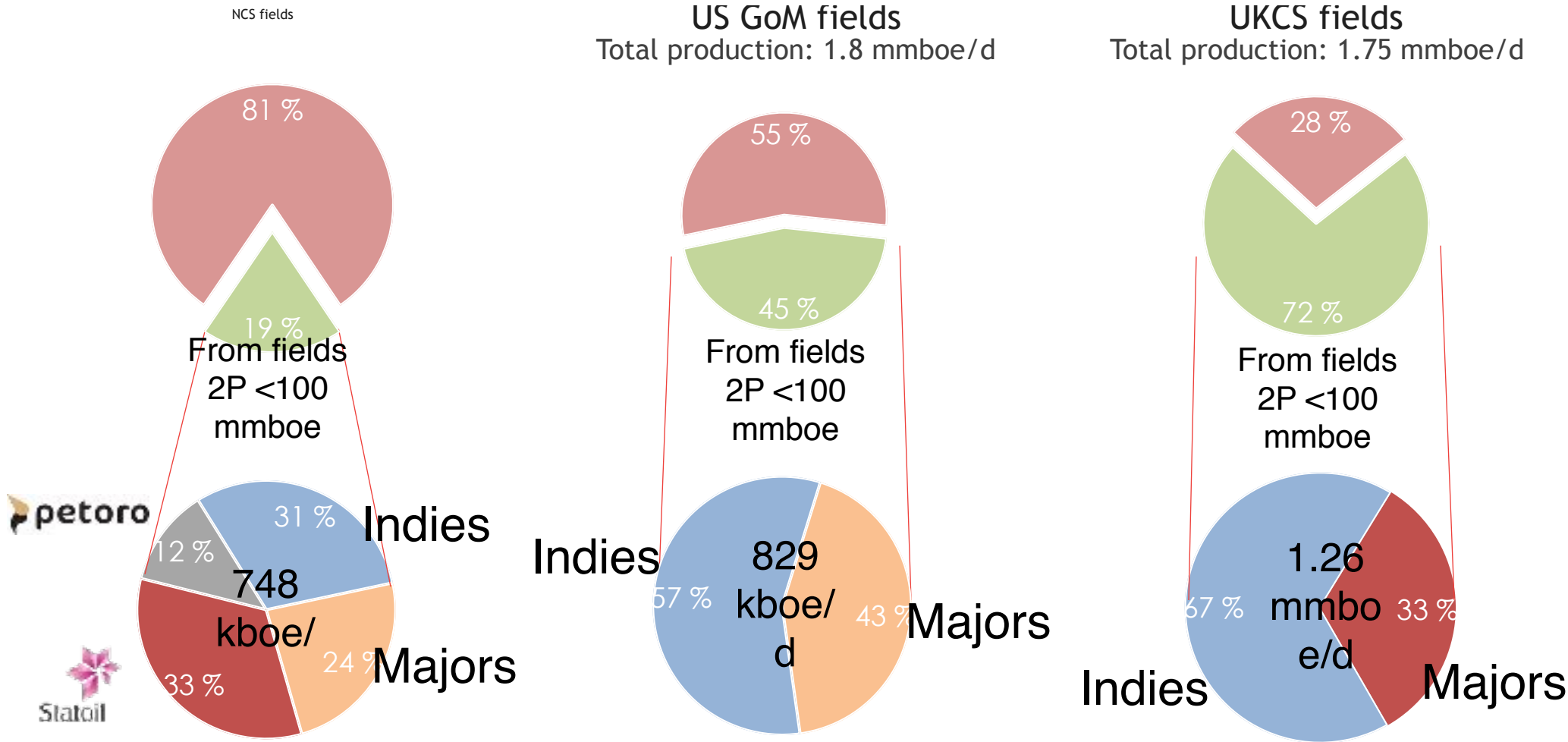
92 undeveloped discoveries



Reserve intervalls MBO

- 11 Barents Sea,
- 30 i Norwegian Sea
- 51 in the North Sea

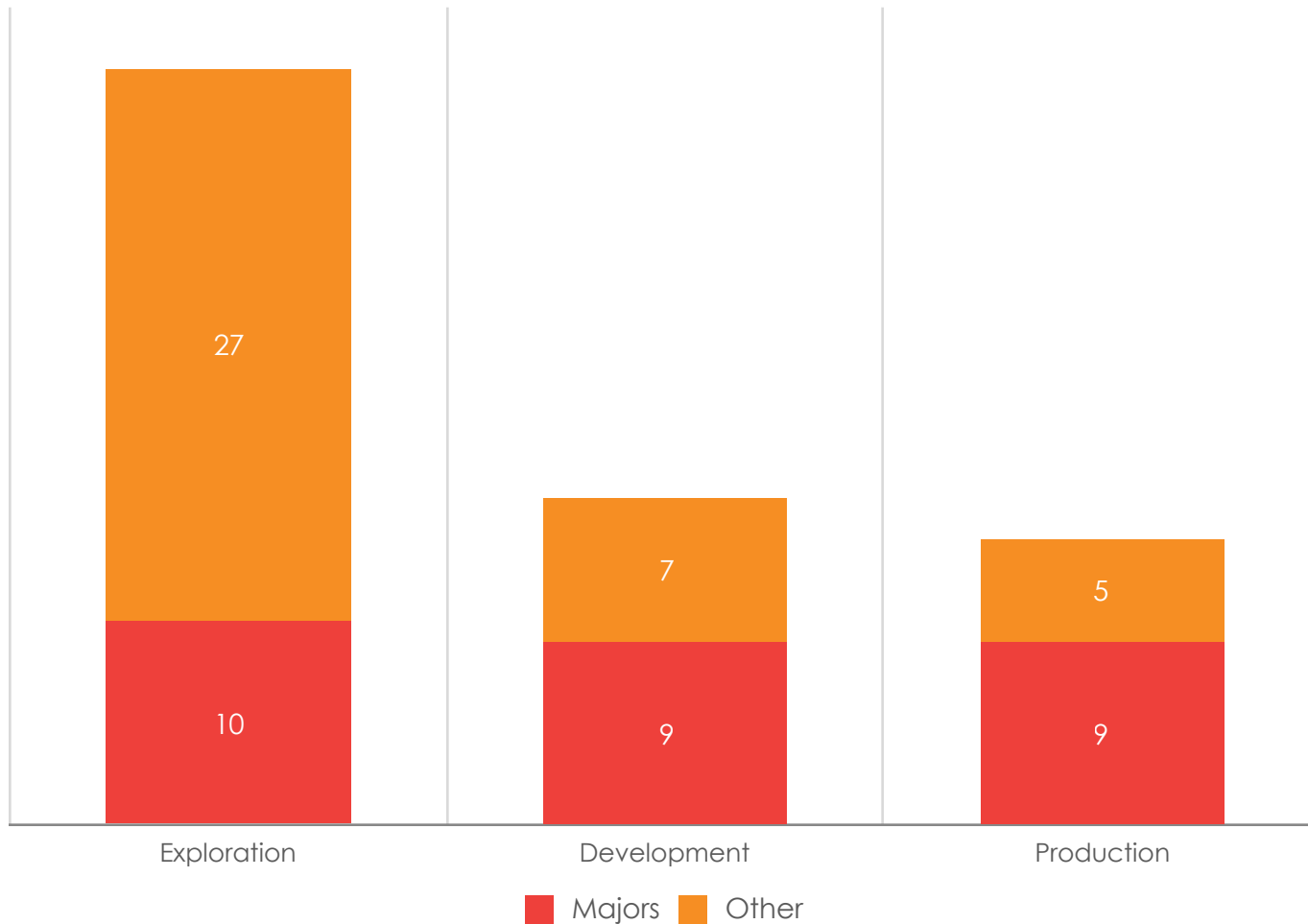
In more mature O&G provinces like GoM and UKCS, the independents own significantly more of the production from fields with 2P of less than 100mm bbl compared to the NCS.



(1) Source: Wood Mackenzie

# Large exploration diversity, but development monopoly

Number of operators in different phases

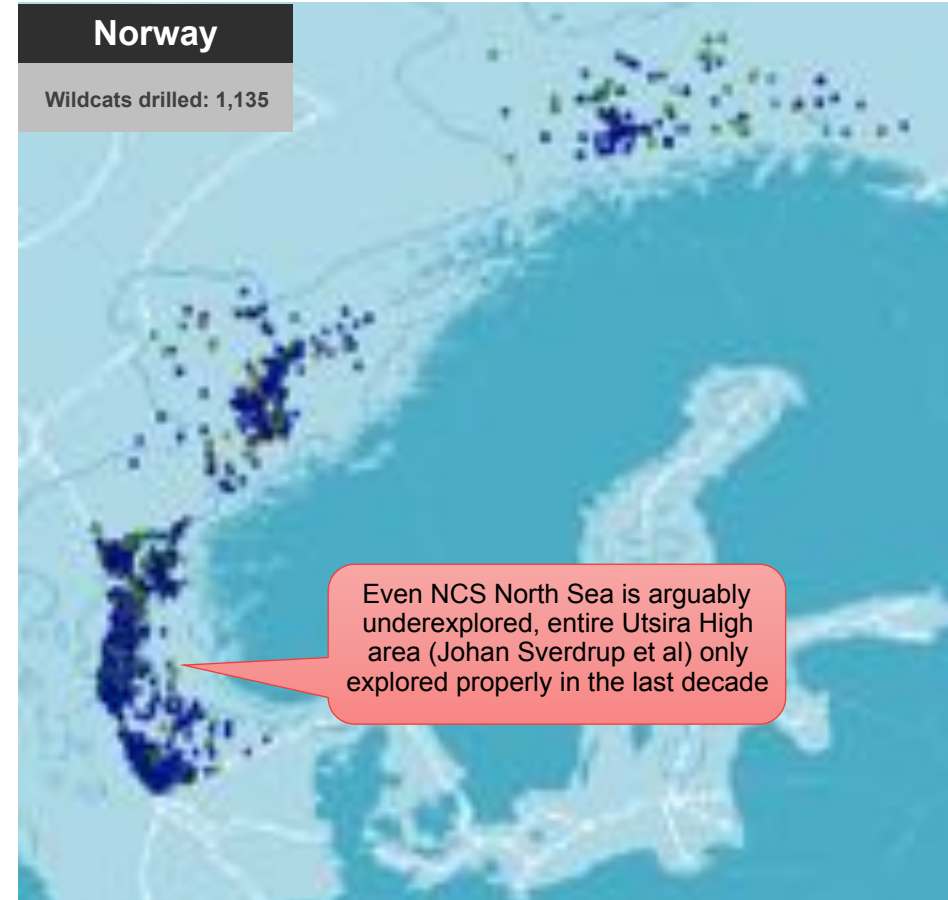
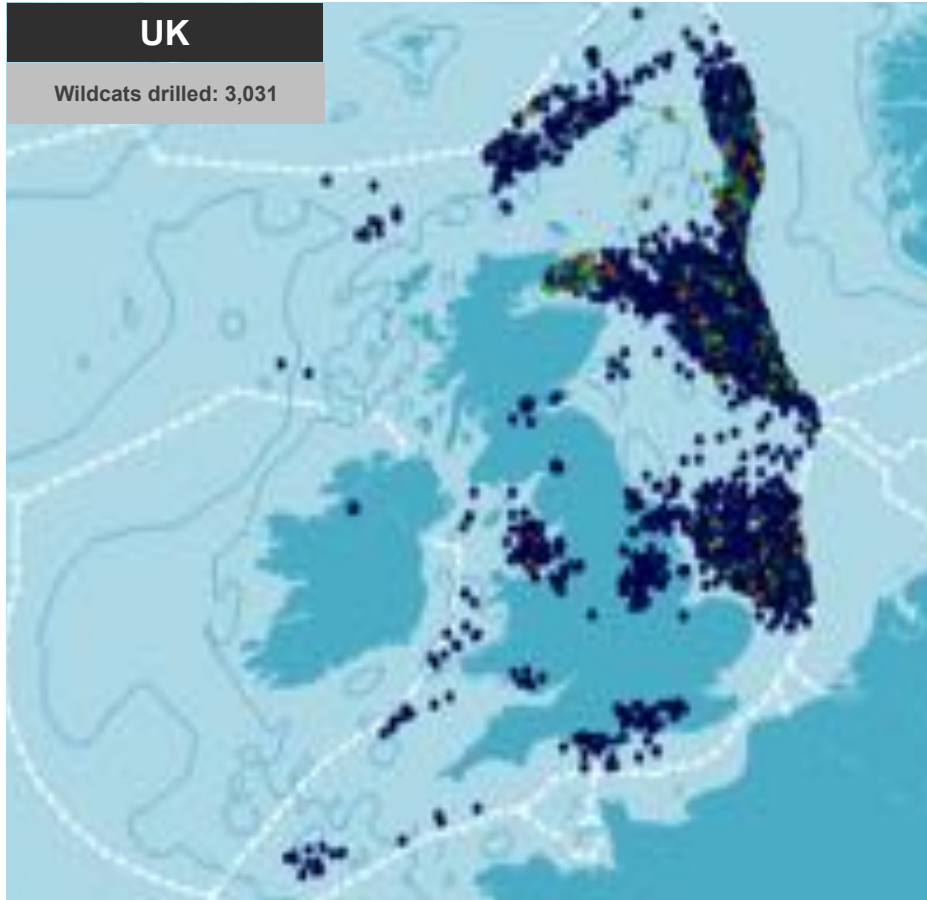


Number of operators in different phases

- Large increase in number of exploration operators
- Effectively a decline in active development operators
- New challenges for the NCS
- Many undeveloped discoveries are below 100 mill boe and fall outside the majors' core business strategy
- Number of decommissioning projects will increase

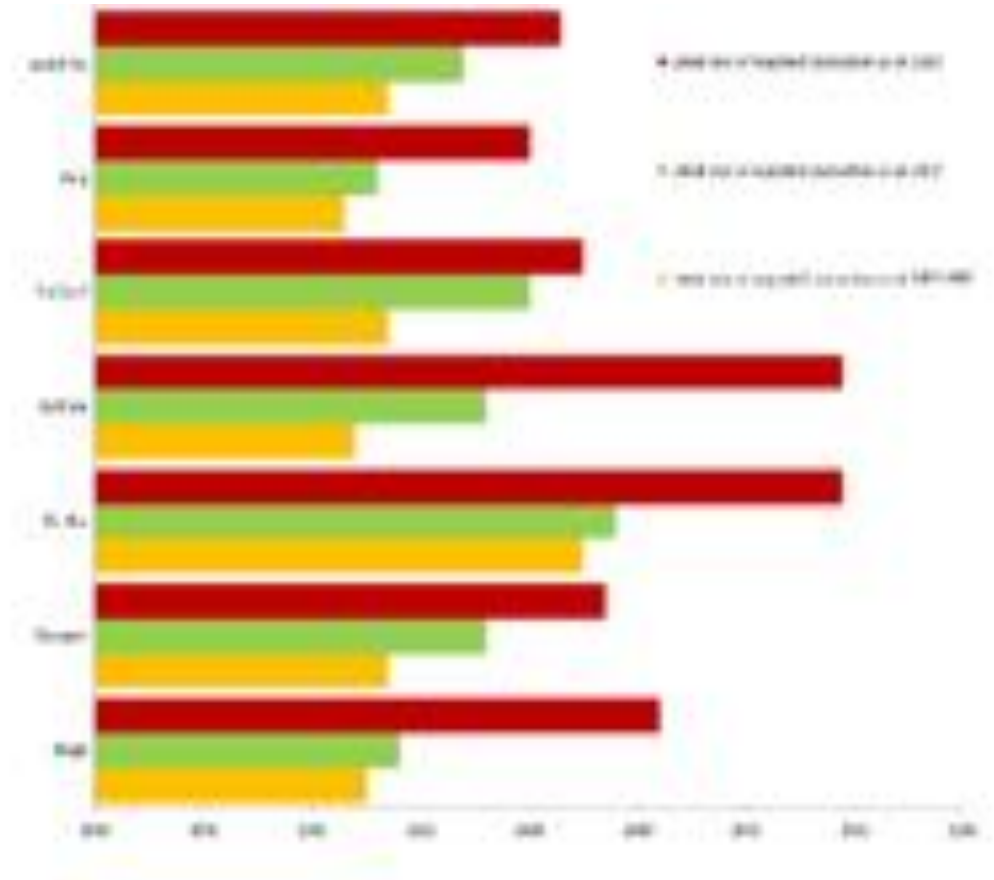
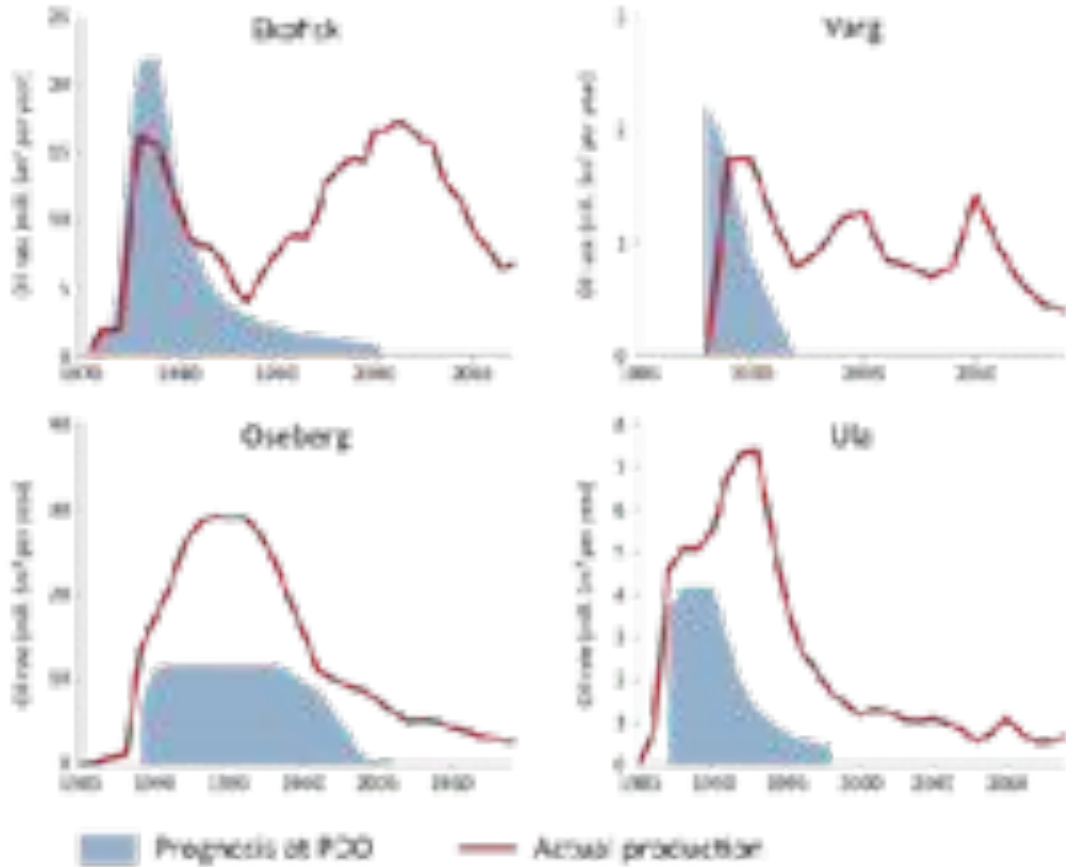
Today, Norway still has huge remaining oil and gas resources, with less than half of the potential of the province already produced and virtually all of the NCS underexplored vs its North Sea peers such as the UK

UKCS has c. 3x the exploration wells of the NCS in a smaller area



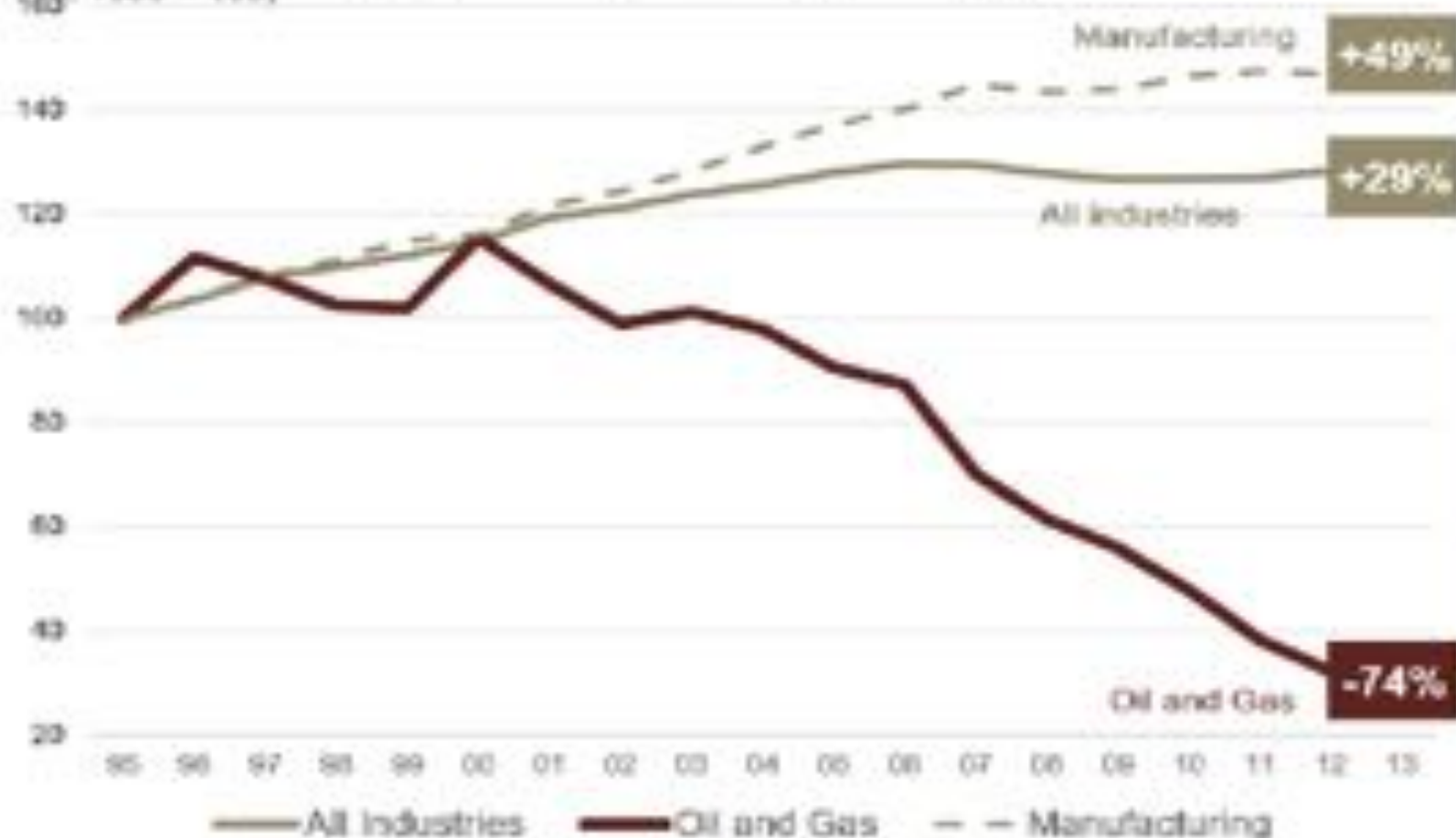
(1) Source: NPD, Rystad

# Fields live longer than expected, biased uncertainties



## Productivity in Norwegian O&G has had a depressing development

Development in productivity by industry:  
Wages and salaries, employment and productivity, by industry (1995 = 100)



## Key drivers

### Growth focus

- Limited focus on costs
- Lack of standardization and industrialization
- Organizations that has grown too large

### Increased regulation

- HSE standards
- Increased requirements for documentation
- Contractual standards

### Increased complexity

- Large, more complex, projects
- Limited cooperation across suppliers and the value chain
- Lacking planning competences

### Extreme poverty rate in developing countries



### Global number of extreme poor

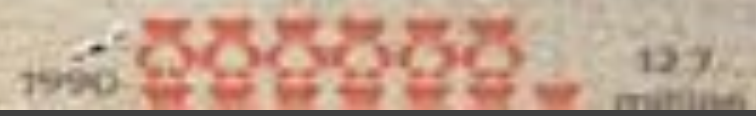
1.9 billion people have gained access to piped drinking water since 1990



### Global number of extreme poor



### Global number of deaths of children under five





# Annual global liquids demand growth vs. Brent crude oil price

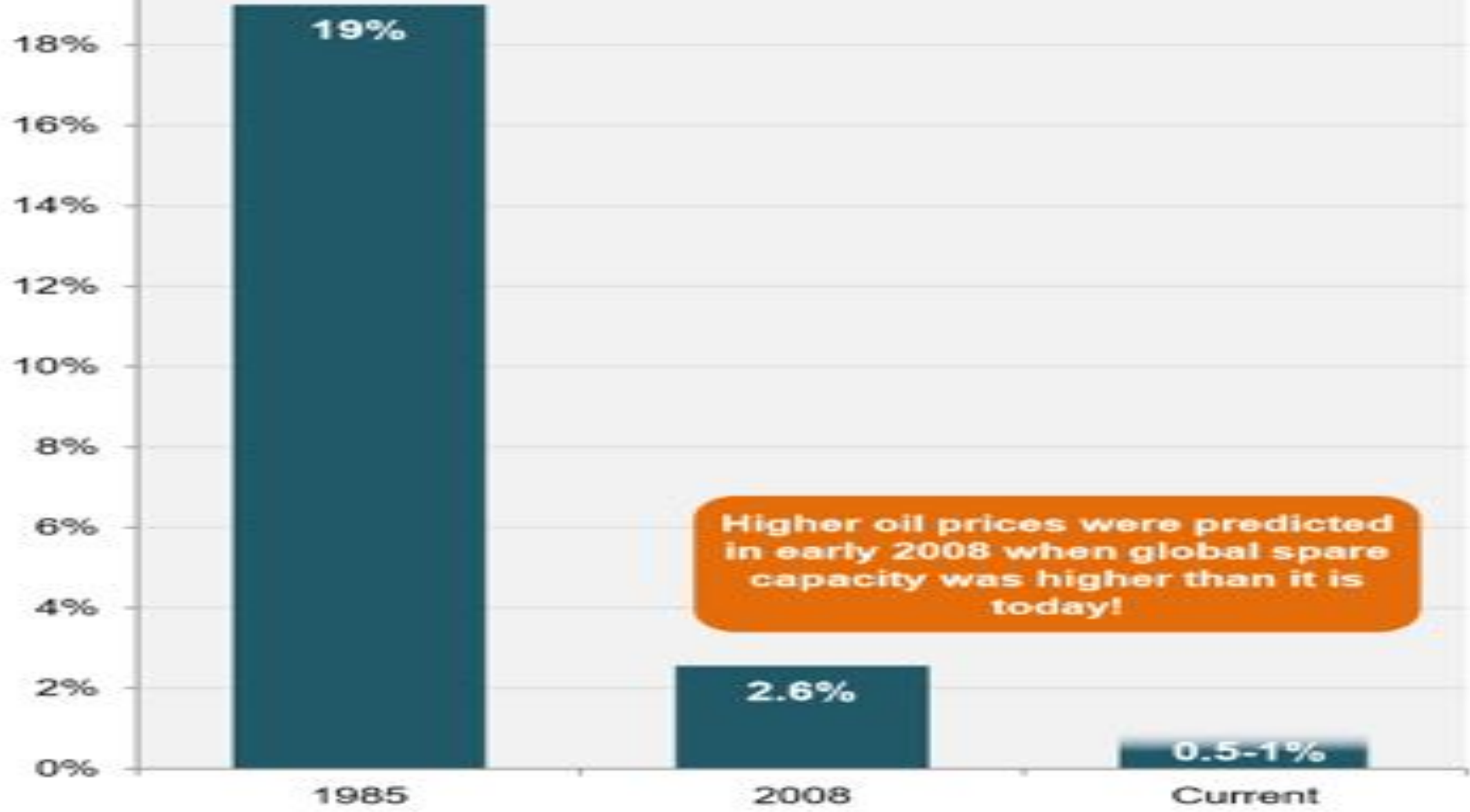
Global liquids demand change

Brent crude oil price



Source: IEA, Statistical Division of World Energy, International Energy Agency, Bloomberg

Spare capacity as a % of global demand (%)



Higher oil prices were predicted in early 2008 when global spare capacity was higher than it is today!

# Human success rest on specialisation

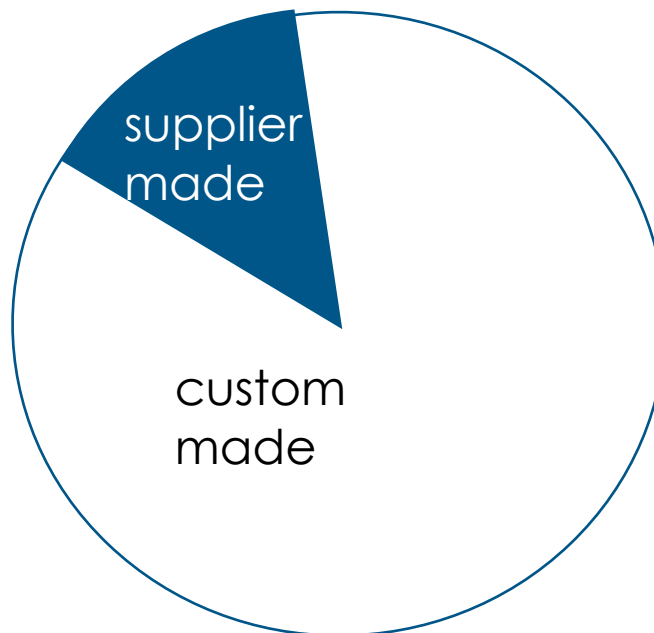


# Production line inefficiencies



Most industries

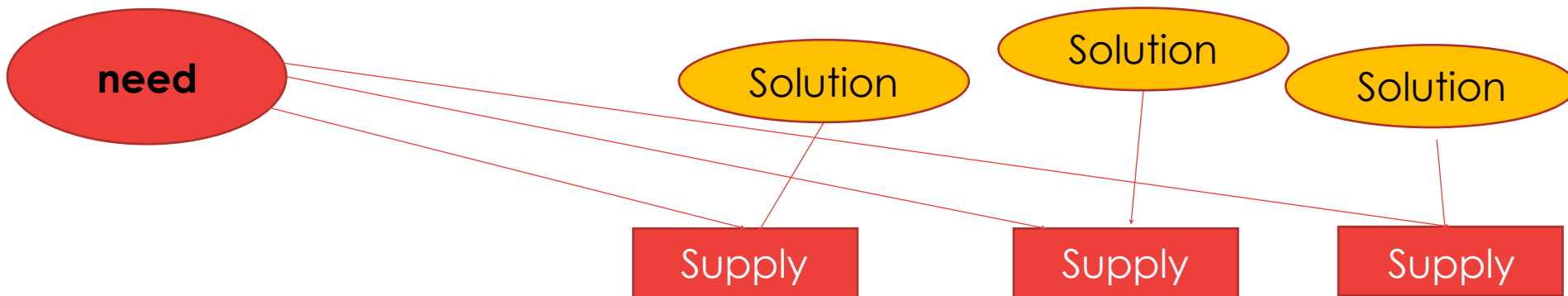
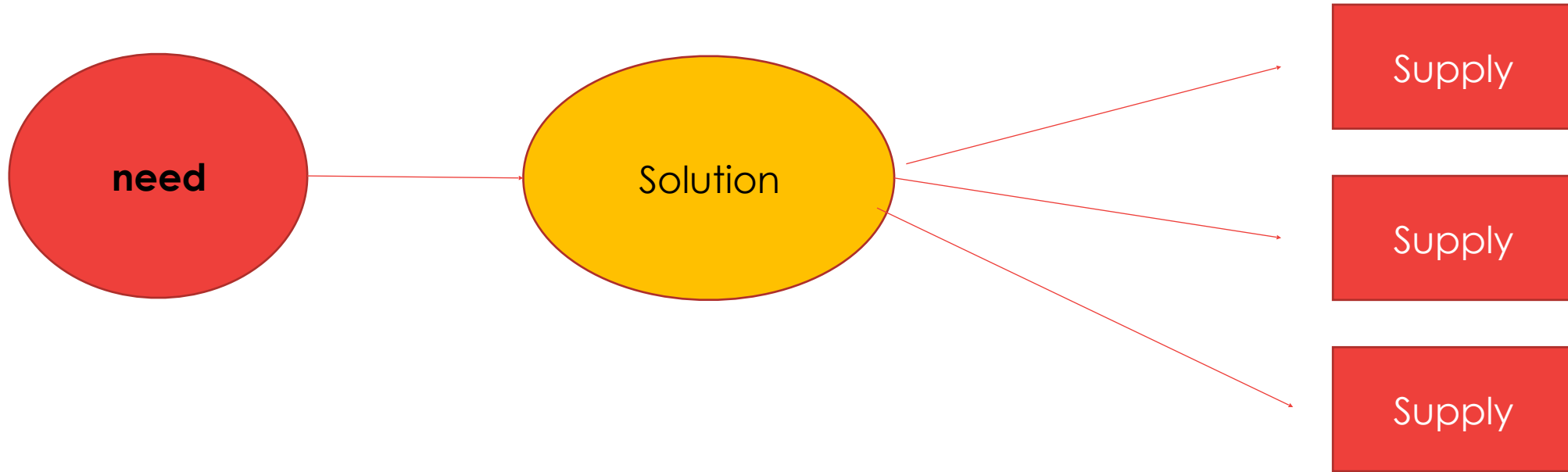
Custom solutions pay the incremental cost of special needs. Innovation is incentivised.



Oil industry

Custom solutions is modus operandi. Supplier made products becomes obesely expensive.





# OKEA, the first dedicated field development company on NCS

## OKEA - today

### We are

- A team that has started and operated two successful oil companies in Norway
- Pertra and Det norske oljeselskap

### First step

- Funded 200 MUSD by Seacrest
- Acquire discoveries that lack attention from existing owners

### Our team

- Building a lean operator organisation with experienced professionals
- 17 employees, growing to 35 by mid-year 2016

### Goal

- To build a low cost lean independent NCS dev. & production company
- Ally with trusted suppliers to secure minimum viable solutions

### Strategy

- Utilise low oil price environment to buy reserves/ resources
- Bring Resources to production in a cheaper and more efficient way

## Highly experienced founding team



**O**la Borten  
Moe  
CCO

- Former Norwegian Minister of Petroleum and Energy
- Former Norwegian Member of Parliament
- Recipient of Norwegian Petroleum Society's honorary award



**K**nut  
Evensen  
CFO

- VP Business Development at Det norske oljeselskap and acting CFO in Det norske oljeselskap
- Analyst at Pareto and Danske Market



**E**rik  
Haugane  
CEO

- Founder of Pertra (2001) and principal founder of Det norske oljeselskap (2005)
- Recipient of Norwegian Petroleum Society's honorary award



**A**nton  
Tronstad  
COO

- Thirty years' experience in field development and operations at Kværner and Statoil
- SVP Drilling at Pertra
- Co-founder and SVP of Drilling at the Det norske oljeselskap

# OKEA's differentiators

Our vision and presence will benefit the NSC

- OKEA will grow from a low cost base
  - ✓ Competitors have large organisations that needs trimming
- OKEA will use vendor procedures and standards when possible and a "good enough" approach
  - ✓ Other companies have large internal procedures and tailor-made solutions
  - ✓ Erase "cover my ass" decision systems
- OKEA will use proven technology and re-use equipment
  - ✓ No NCS oil company has so far managed to systematically re-use equipment or to copy existing solutions
- OKEA will seek partners with an ambition to change the way Norwegian fields are developed



54%)

boe)



- High quality producer with first oil December 2016
- O&E delivering significant learning for coming operator roles

)

boe)



- Well documented reserves and extensive existing infrastructure - NOK \$/m involved by production
- Will be modified to optimize the overall concept design

%)

boe)



- Potential low-cost greenfield development project acquired during down cycle for USD 0.12m
- At the heart of O&E's business philosophy

### Net reserves & resource

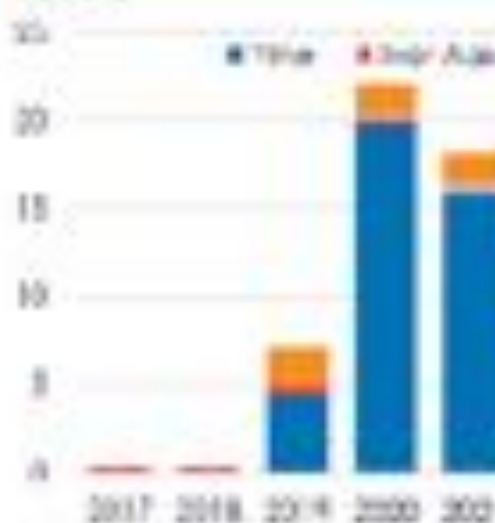
Greenfield  
10 reserves

Over Asset  
1 reserves



### Net production

MMbbl/d





# of infrastructure already in place

10-110km southwest of Stavanger, in 75 meters water depth

1987 and produced 51 mmbl/d for Statoil during 1996-2001

development of Yme submitted by Tullman in 2007

structural integrity issues with the mobile offshore production (MOPU), the field was never put in production and the facility only decommissioned and removed

launched a development concept based on a located jack-up production facilities

NOVA matured this concept and, based on this, the license of selection (DG2) in December 2016

structure and a majority of the wells have been installed - reducing capex and de-risking the development

reservoir well known due to extensive well coverage (33) and five years production history

risks only related to the MOPU facility (now removed) and associated with the reservoir or other installed infrastructure

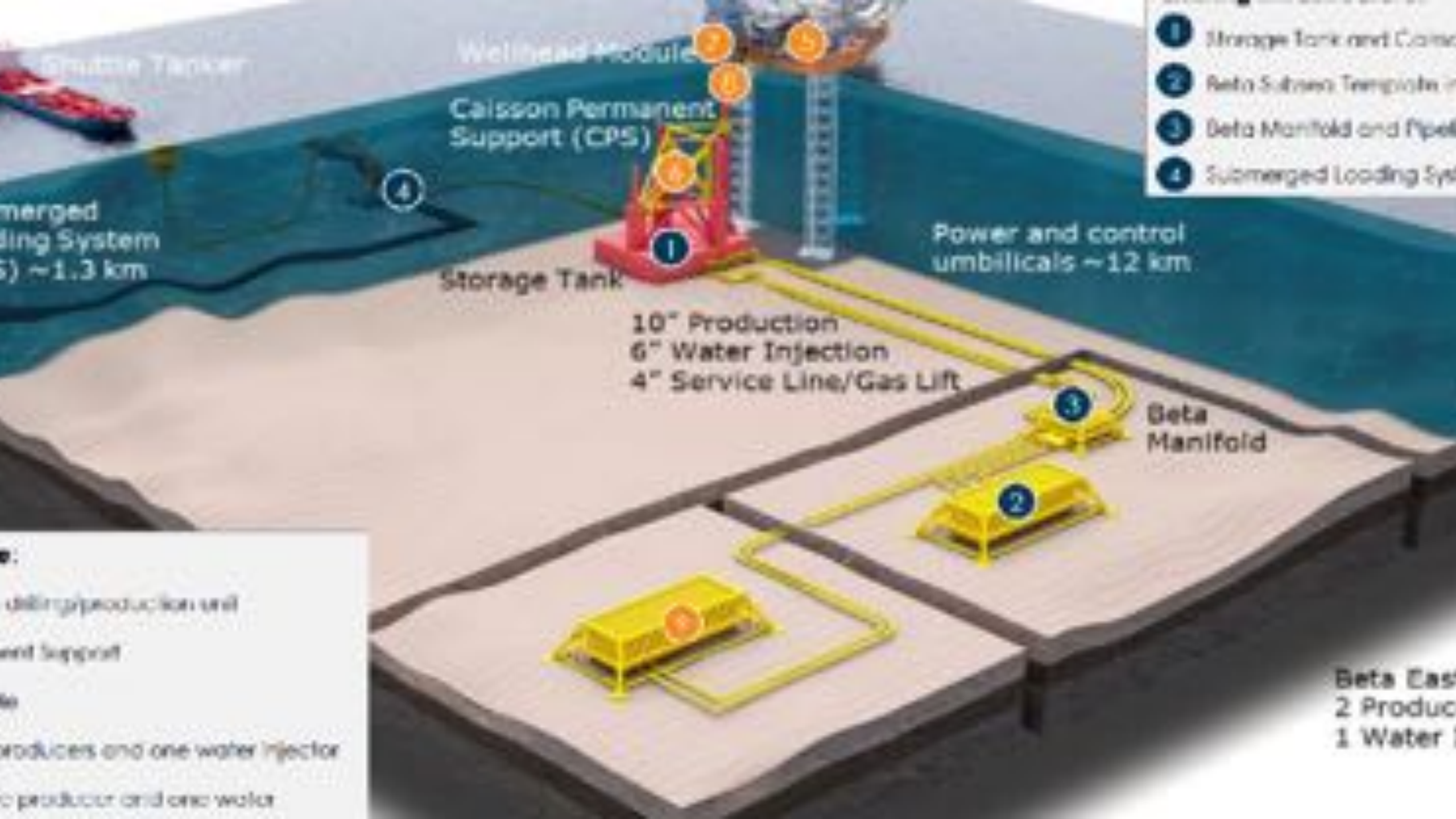
## Field facts<sup>1)</sup>



- **Partners:** Rig OCEA (50%) KUPPEC (10%)
- **Discovered:**
- **Production start:** production 5
- **2G resource:** mmobl
- **Cost life of field:**

## Field production profile (gross)





- 1 Storage Tank and Caisson
- 2 Beta Subsea Template
- 3 Beta Manifold and Pipel
- 4 Submerged Loading Sys

Submerged Loading System  
~ 1.3 km

•  
 drilling/production unit  
 and support  
 •  
 producers and one water injector  
 •  
 producer and one water

Hva kan myndighetene gjøre for mer verdiskaping og aktivitet på norsk sokkel?

1. Tilrettelegge for mer konkurranse gjennom å kvalifisere flere selskaper til utbygging og drift. Selvsagt viktig at aktørene er kvalifiserte ift miljø og sikkerhet. Men viktig at nye selskaper får prøve seg. Et for restriktivt regime vil skape innlåsingseffekter og redusere innovasjon og utvikling.
2. Legge til rette for mer effektiv utnyttning av EK. EK er en av de viktigste innsatsfaktorene på norsk sokkel. Viktig at denne utnyttes så effektivt som mulig for å redusere kostnadene, øke lønnsomheten og klarere ut flere prosjekter gjennom flere prosjekter. Min erfaring så langt er at forestillingen om at alle samfunnsøkonomiske prosjekter blir utført og at det ikke er avkastningskrav på risikofri kapital er akkurat det – en forestilling.
3. Tillate å legge igjen skattebalanser hos selger. Nøytralt for staten. Øker EK effektiviteten betydelig, tar bort systematisk skjevfordelingseffekt. I dag betyr det at mye kapital legges «død» istedenfor å settes i arbeid.
4. Tillate pantsetting av skattebalanser. Disse er garantert av staten og dermed tilnærmet risikofrie. Men så lenge de ikke kan pantsettes er de vanskelige å belåne effektivt. Adgangen eksisterer allerede innenfor leting. Hindrer bankene fra å yte kreditt til nye og mindre selskaper. Tilleggseffekt: interessant marked for norsk finansindustri.
5. Rydde opp i regelverket slik at garantiansvaret blir et etter skatt beløp i praksis. Ødeleggende for mange transaksjoner. Spesielt i helefasen der fjerning er nærstående. Paradoksalt nok kanskje også den fasen hvor det er industrielt riktigst å få inn nye aktører og ny kapital.