



Oil & Gas  
Authority

# UKCS resource development

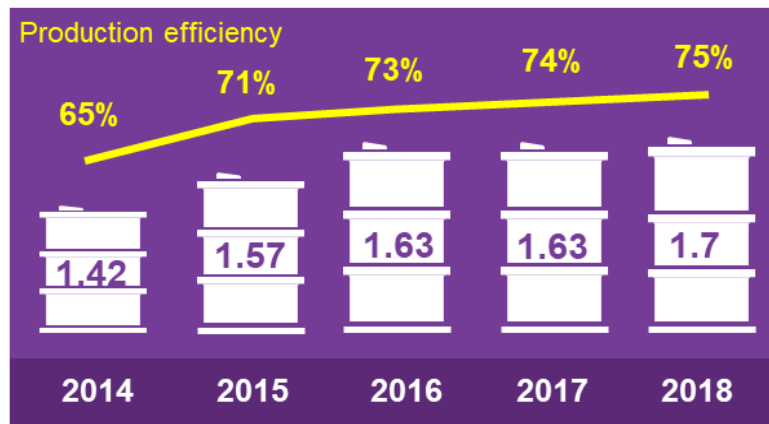
**Big prize... new thinking**

Carlo Procaccini  
OGA Head of Technology

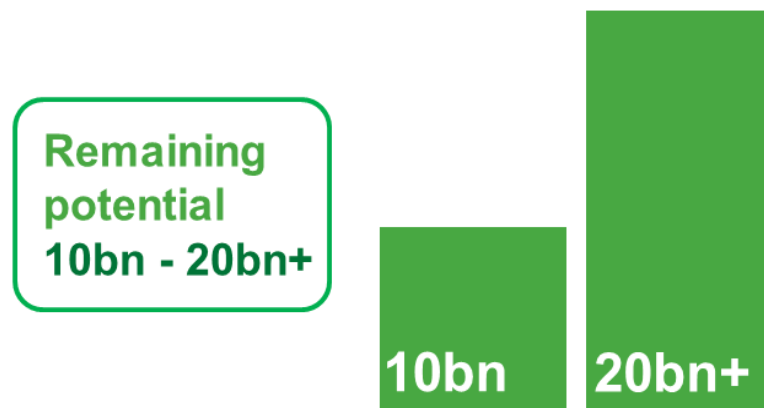
11<sup>th</sup> February 2020  
Subsea Expo  
Aberdeen TECA

# UKCS oil and gas resources

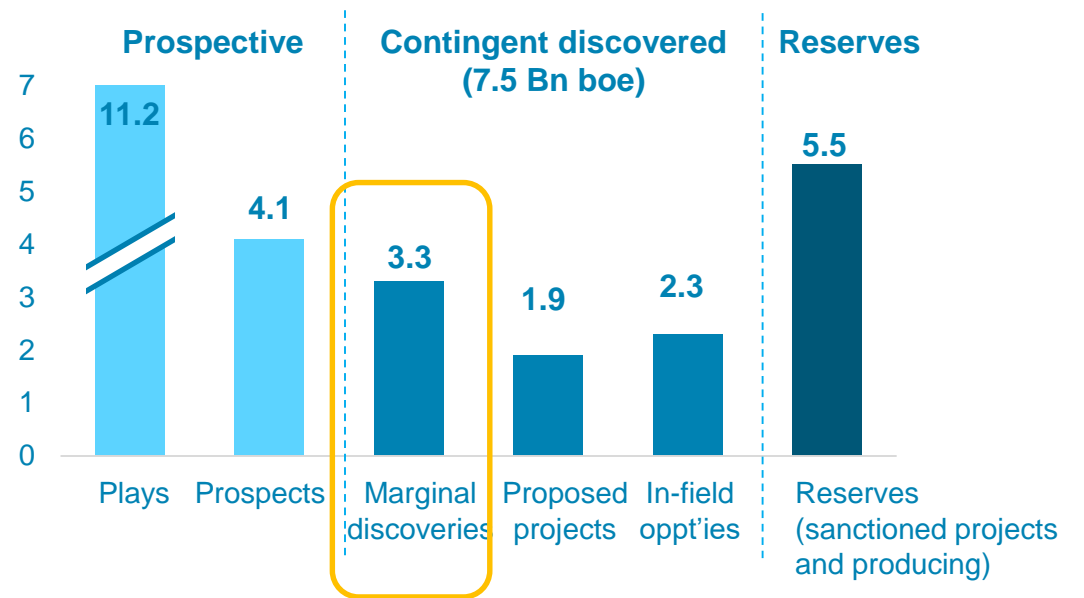
## Production: mmmboe/d



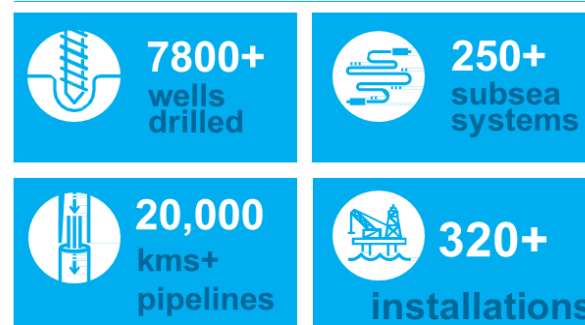
## Resources: bn boe



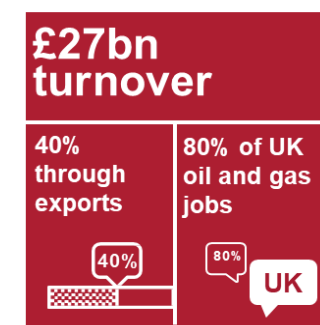
## Resources: end 2018, central case, bn boe



## Infrastructure

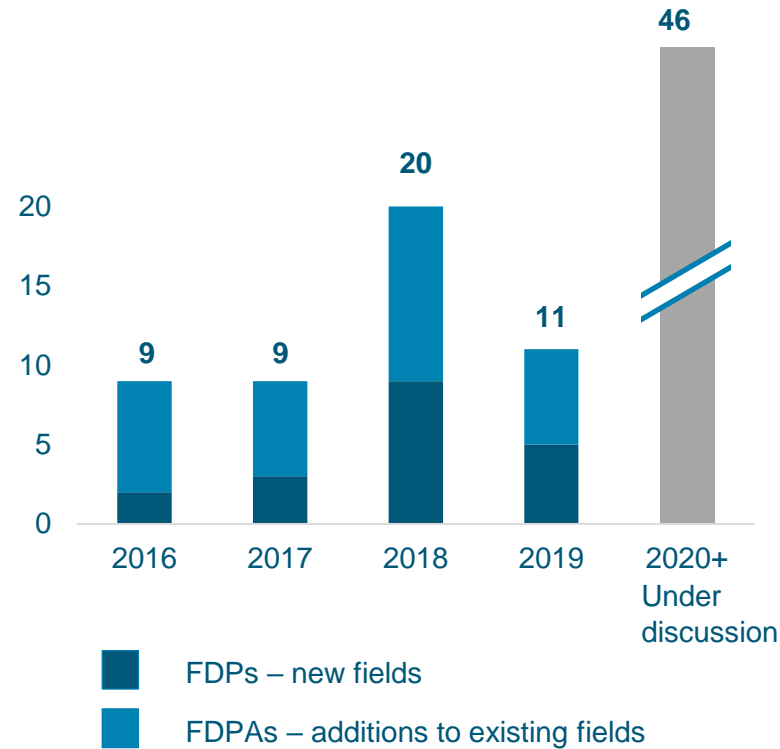


## Supply chain



Source - Oil & Gas UK and EY

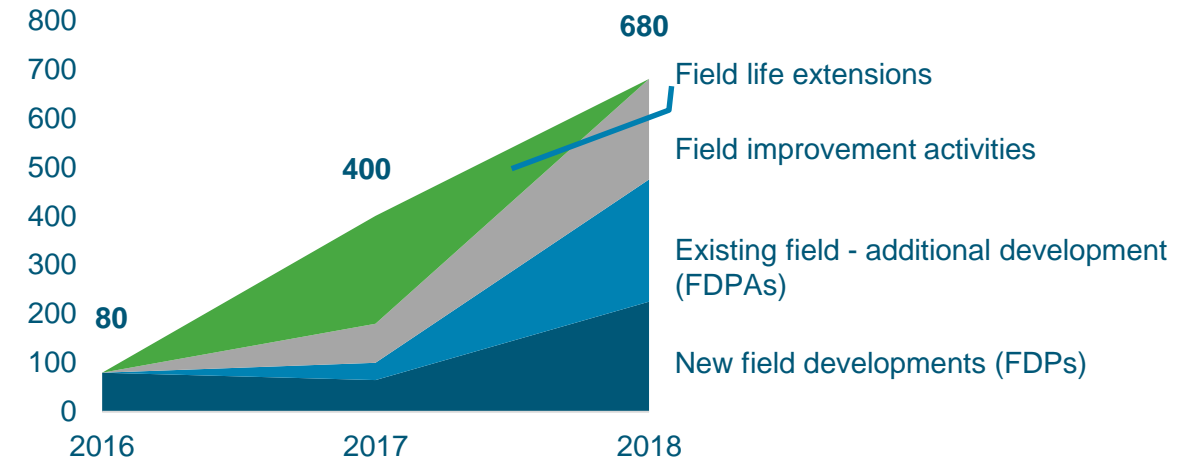
## Development project sanctions



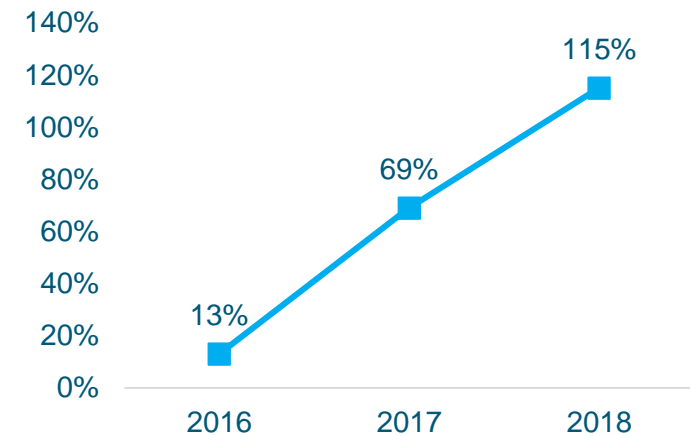
### Small field development

- 90% of the FDPs in 2016-2019 (17 out of 19) are related to fields <50mmboe

## Reserve additions: mmboe



## Reserve replacement: %



# Discoveries' inventory



## Marginal discoveries: 2016-2018 progress

~0.5 bn boe matured to projects

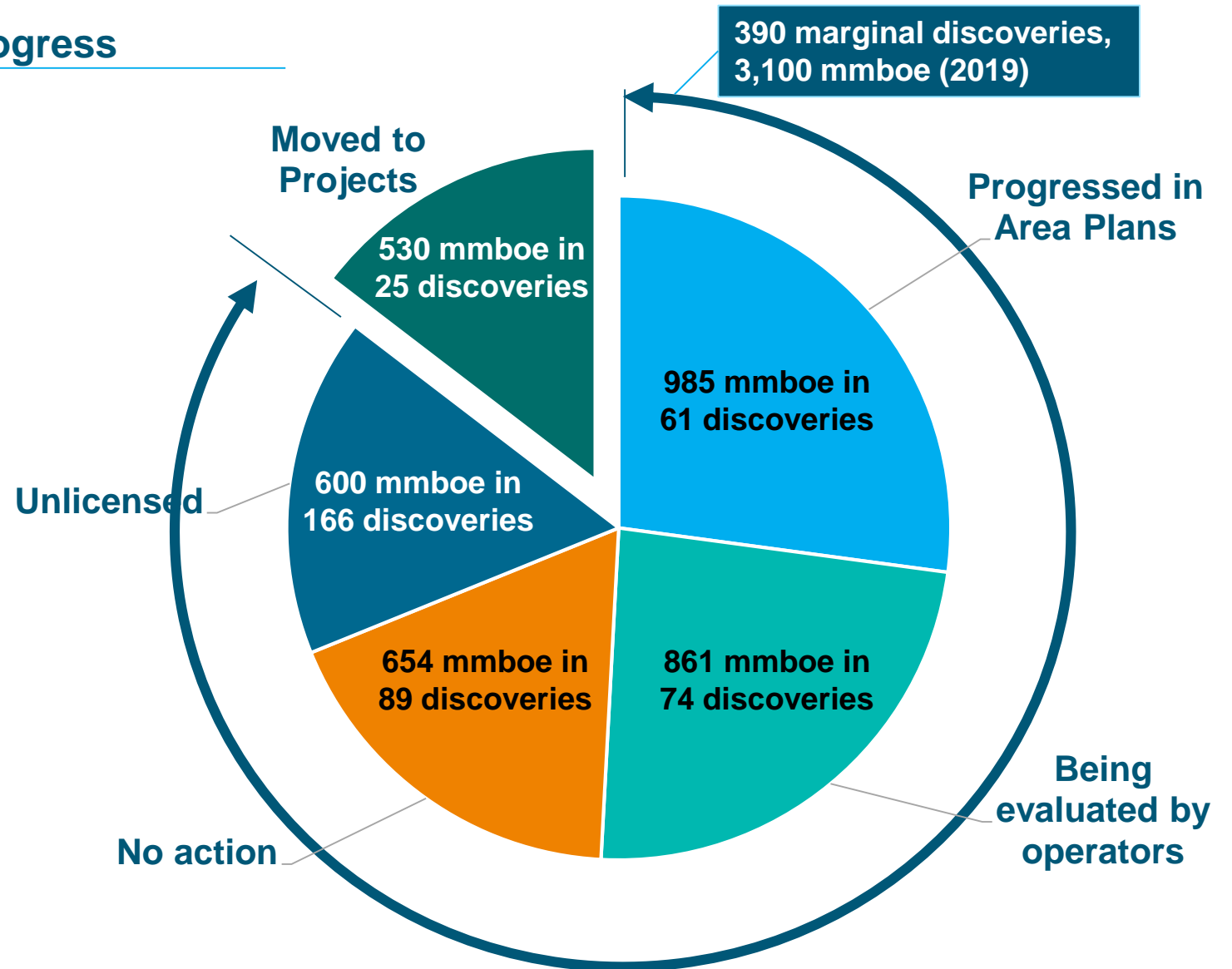
### Current inventory (2019)

- 390 discoveries
- 3.1 bn boe

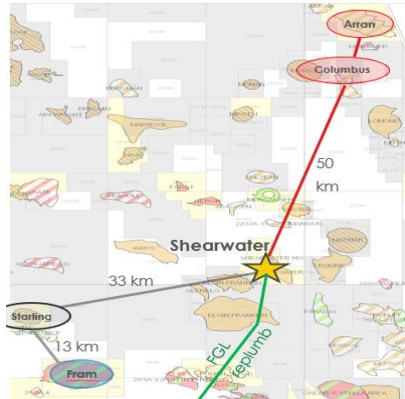
~1 bn boe being actively progressed (Area plans)

~0.9 bn boe being evaluated by operators

~1.2 bn boe idle or unlicensed



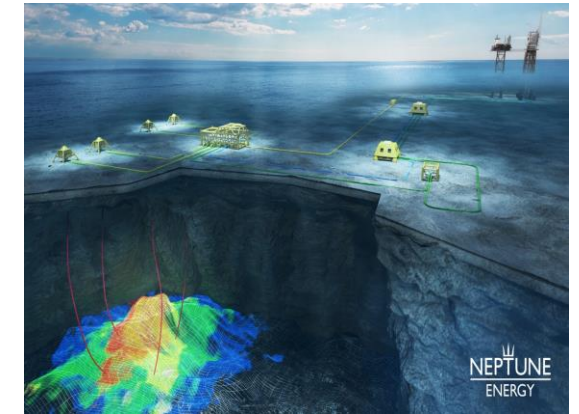
## Fram-Arran-Columbus (Shell, Serica and JV partners)



- Shearwater hub life extension through local and third party volumes
- Infrastructure sharing (Arran Columbus pipeline)
- Export route optimisation (Fulmar gas line replumbing)
- JV partners alignment

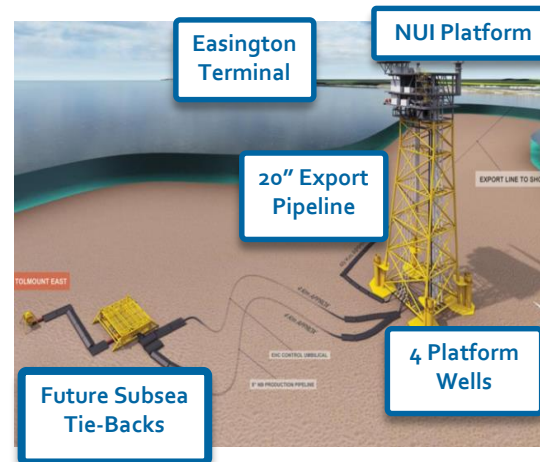
## Seagull (Neptune)

- Fast tracked development
- Commercial adaptability to maintain pace
- JV alignment
- Partnership with lead contractor (global alliance)
- Infrastructure reuse



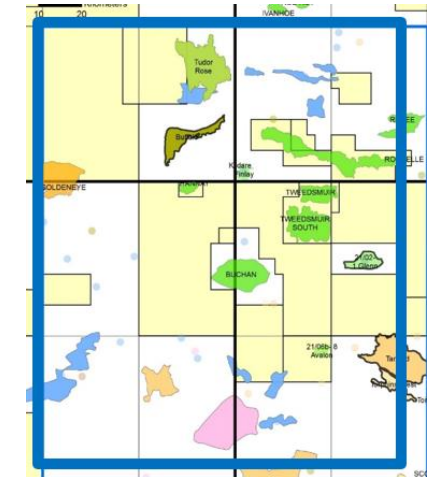
## Tolmount Area (Antin/Kellas, Premier and Dana)

- Innovative funding model with midstream enabled development to proceed
- CATS and Dana Petroleum fund portion of platform and export line
- Tariff payments once production commences
- Modifications to Terminal covered in the deal



## Buchan Area (Jersey Oil and Gas)

- OGA Supplementary Round: strategic relicensing of the Buchan area
- Diverse portfolio of discoveries and leads, potential up to 300mboe
- Needed strategic vision for the area, collaboration with other licensees, and infrastructure owners
- Jersey Oil and Gas is planning for a hub considering energy transition



## Subsea and processing

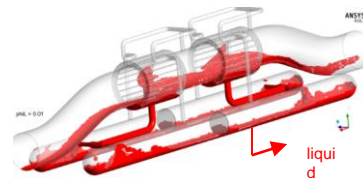
Operators are utilising efficient, clean technologies that provide for processing of complex fluids. Solutions aim to have lower costs, ability to be retrofit on existing assets and permit commingling of fluids from tie-back developments.



Retrofit modular water treatment cyclones (FMC Technip)



Mutiphase metering addressing heavy oil requirements and reduced calibration (OGTC)



Inline separation and subsea boosting (INTECSEA OGTC)

### Benefits:

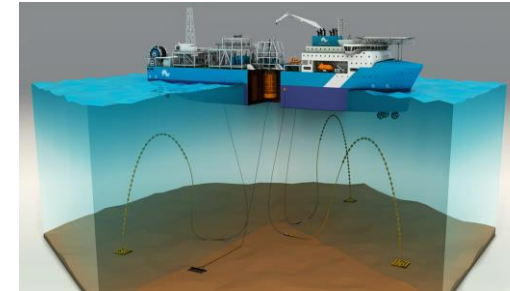
- Reduce / eliminate gas flaring and venting
- Improve fluids treatment allowing commingling
- Reduce overall development Capex

### Applications:

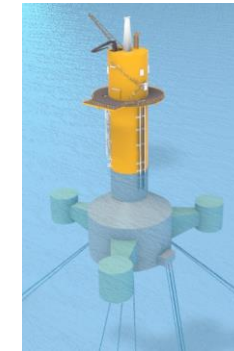
- Produced water treatment
- Offspec gas treatment
- Flow assurance and accurate subsea metering
- Subsea processing and boosting

## Versatile installations

Efficient platforms and floating units for more difficult and cleaner oil and gas developments. Will provide modular redeployable designs, and automation efficiencies



Versatile production unit (Amplus)



Unmanned production buoy (SBT Energy OGTC)



Redeployable unmanned platform (ONE Dyas)

### Benefits:

- Enable marginal developments
- Production clubs and cluster developments
- Efficient operations

### Applications:

- Versatile floating production units
- Low-cost unmanned platforms
- Subsea storage
- Unmanned production buoys

# Energy integration

## Offshore Energy Integration Concepts

