

**Floating NUI**  
Unlocking Marginal Fields

**11/02/2019**

**Buoyant  
Production  
Technologies**



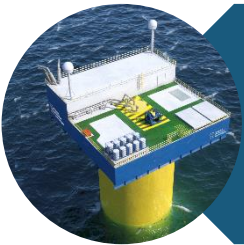
# Introduction



Buoyant Production Technologies (BPT) is a subsidiary of Crondall Energy Consultants Ltd. focussed on technology development

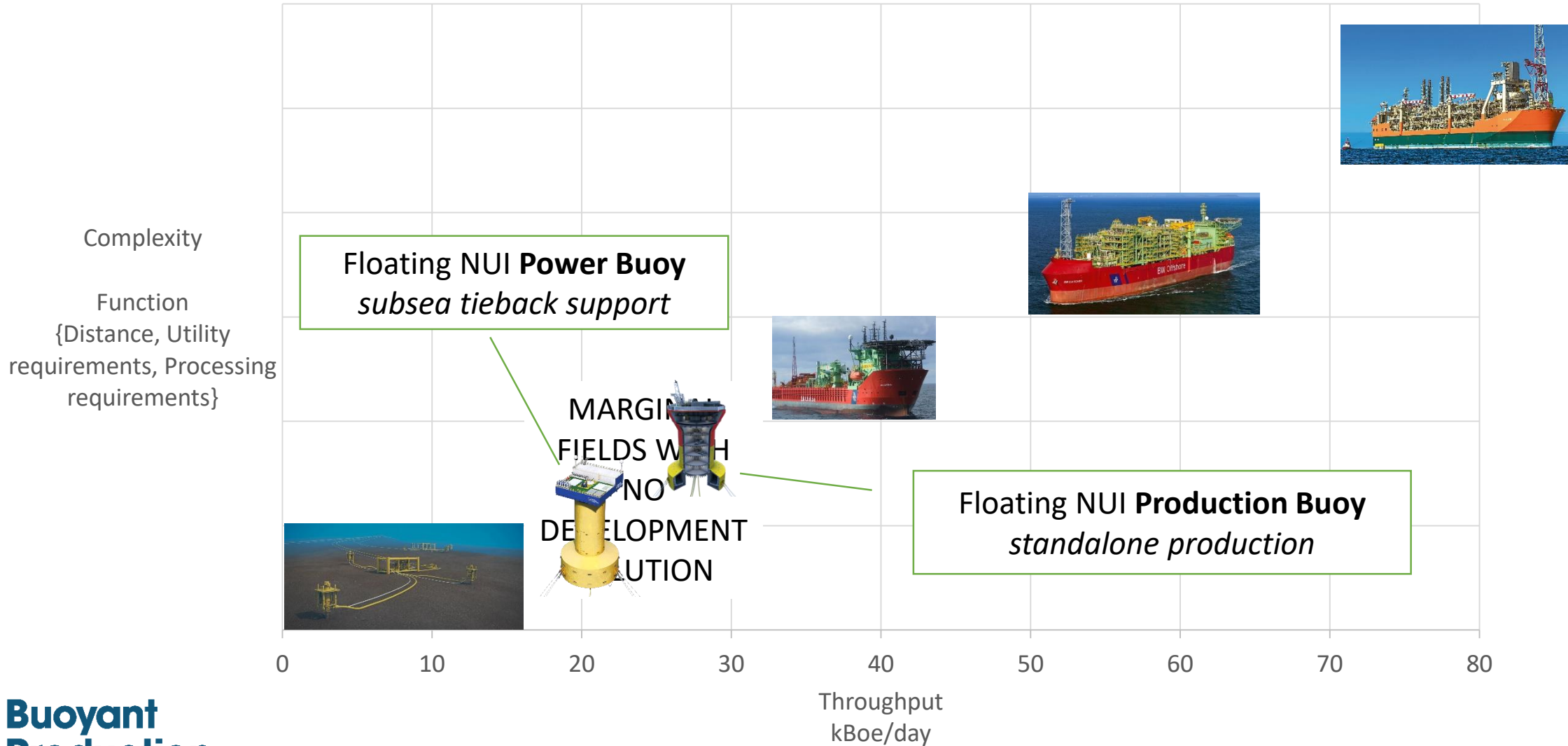


BPT has developed Floating NUI technology products offering low lifecycle cost to support marginal fields

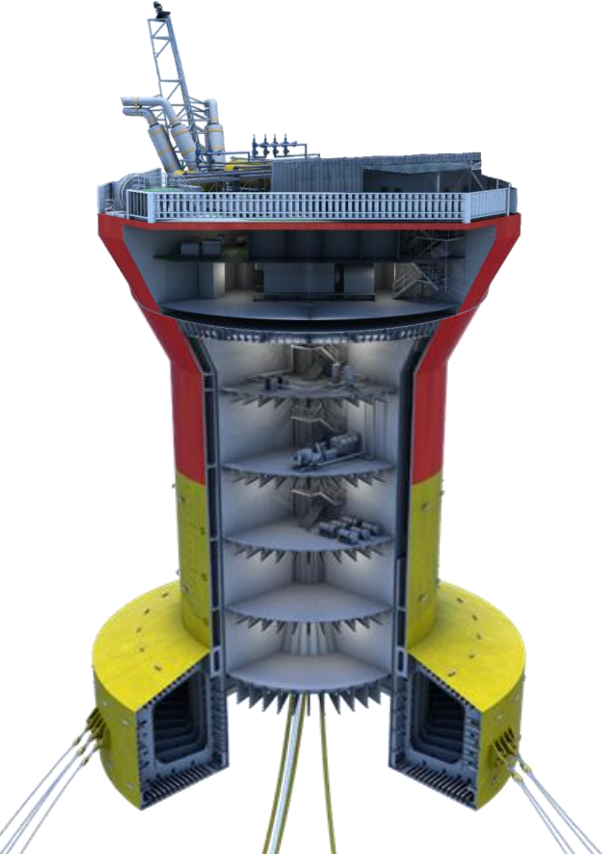


This presentation introduces the Floating NUI as a means of unlocking marginal developments in the North Sea

# How does Floating NUI help us access marginal developments



# Floating NUI



## Key Features

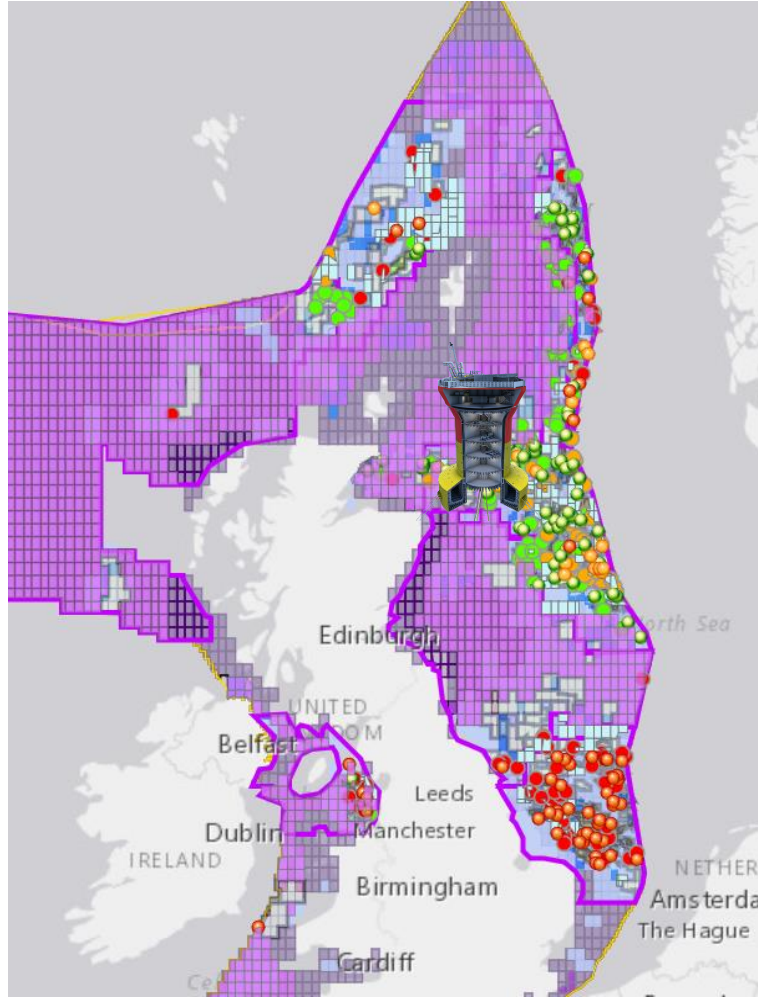
- Patented single-column floating facility design
  - Designed for harsh environmental conditions
- Configured for NUI operations:
  - Remote operations and monitoring;
  - Maintenance via walk to work campaign.
- Lloyds Register Approval in Principal (AiP);
- Lifecycle cost savings relative to traditional alternatives:
  - Digitally enabled NUI operations drive a low OPEX;
  - Compact minimal facilities achieves a low CAPEX.

# Production Buoy – standalone production of marginal fields



The  
Oil & Gas  
Technology  
Centre

Your Innovation Partner



Matured during Facility of the Future Study

Design basis: pre-FEED study

- Oil 20,000 bopd
- Produced Water 25,000 blpd
- Gas 400 scf/bbl
- Water depth 150m



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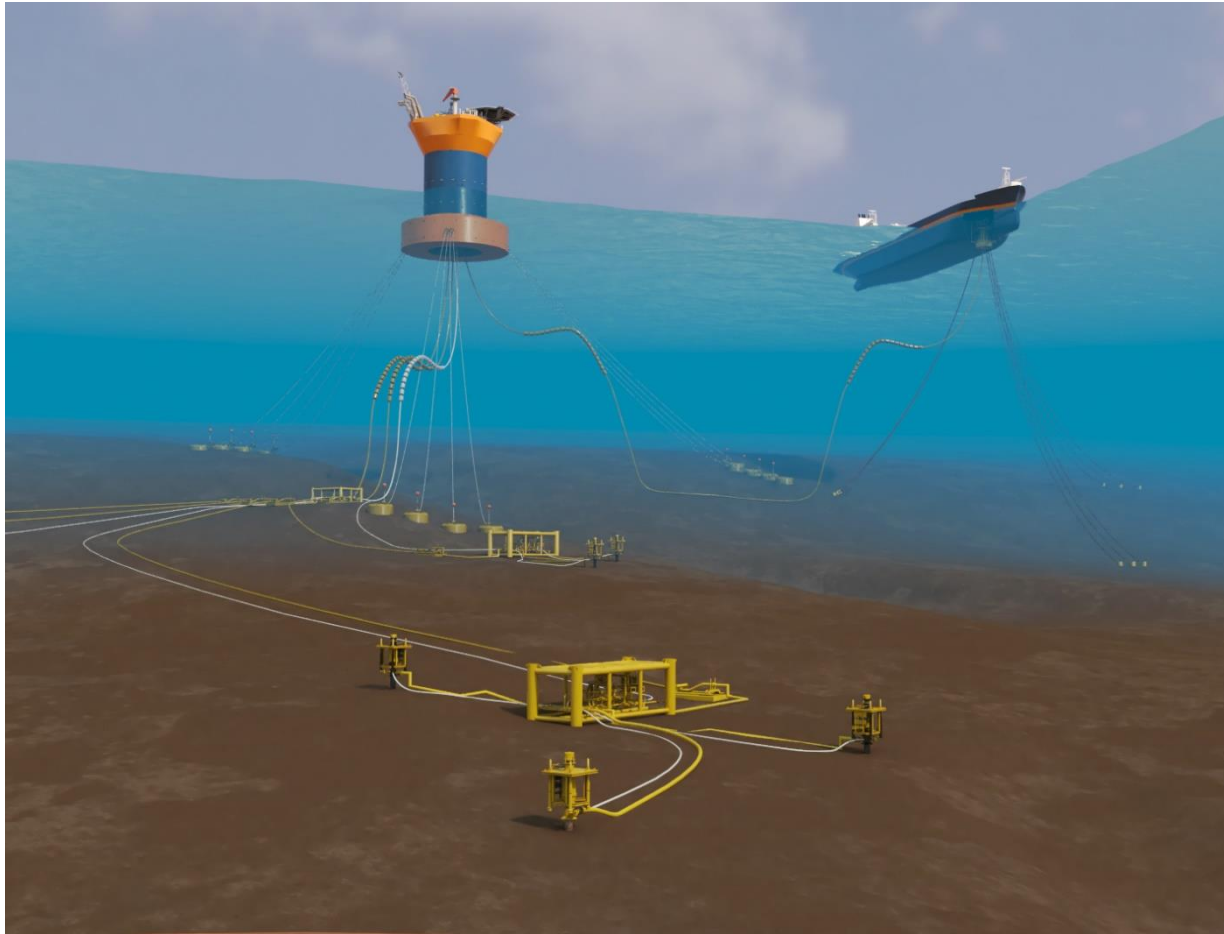
**SIEMENS**



BW Offshore



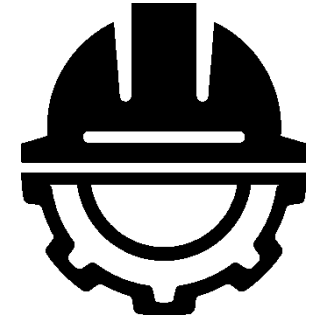
# Production Buoy – standalone production



**OPEX - \$7 / bbl**



**CAPEX - \$9 / bbl**



**RAM 91%**  
**Facility availability**



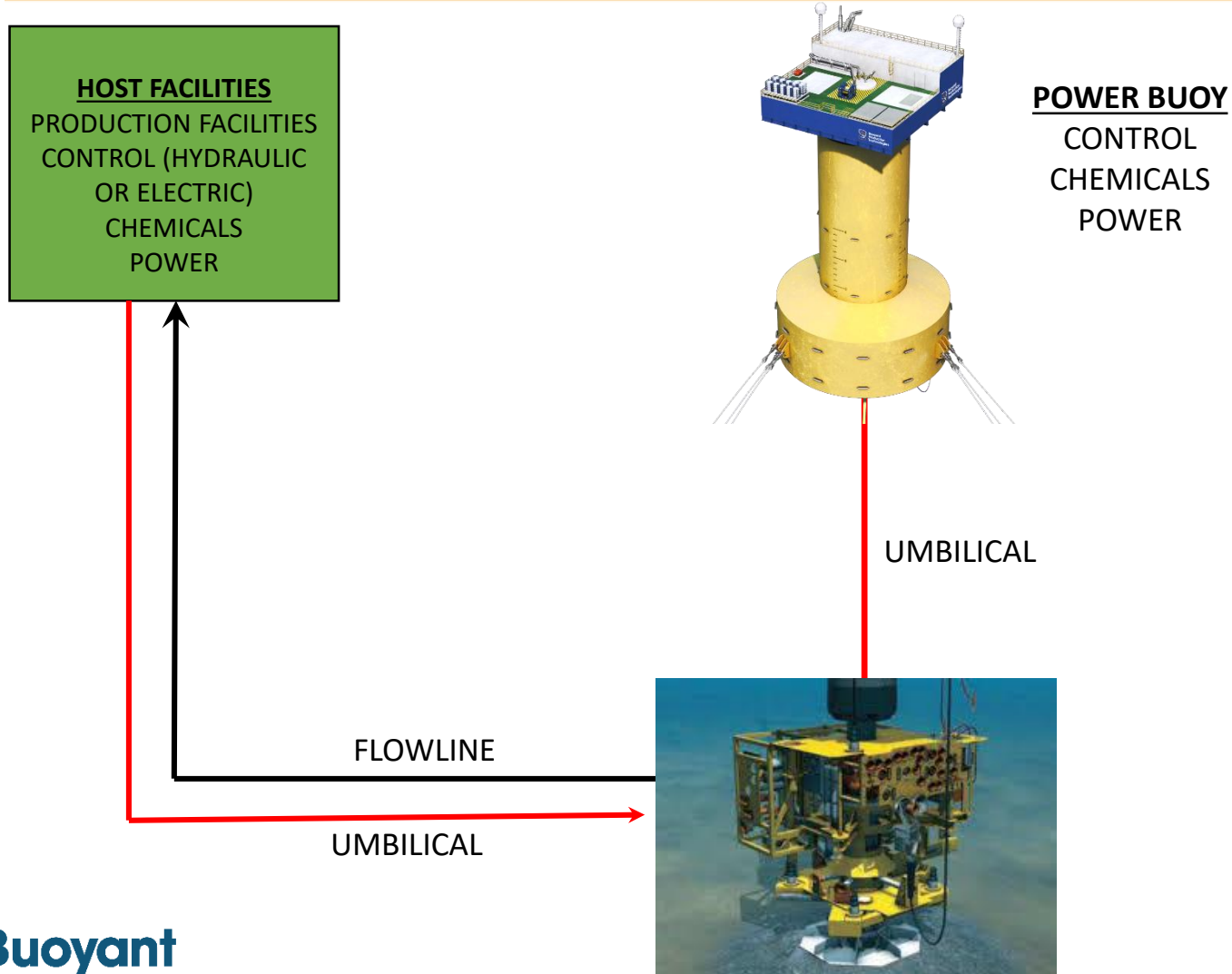
**6 mo. visit frequency**



**Example: 25M bbls over 10 years**



# Floating NUI: - enhanced subsea tieback



## Traditional tieback challenges

- Host constraints (space, upgrade CAPEX)
- Umbilical constraints (cost, availability)
- Distance (power transmission)

## Power & Control Buoy

- No umbilical is required from the host
- No utilities are exported from the host
- Brownfield modifications are minimised

# Floating NUI unlocking marginal fields

## Floating NUI

- Configured for remote operation and infrequent maintenance
- Reduced scale compared with alternatives reduces CAPEX and delivery schedule
- Unattended operations reduces OPEX

## Production buoy

- Standalone production at a reduced lifecycle cost
- Economic recovery of smaller fields <20mmbbls

## Power and control buoy

- Extending the reach of subsea tiebacks to host
- Increasing technical feasibility of challenging tiebacks
- Maximising the value of existing production hubs





## Further details:

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