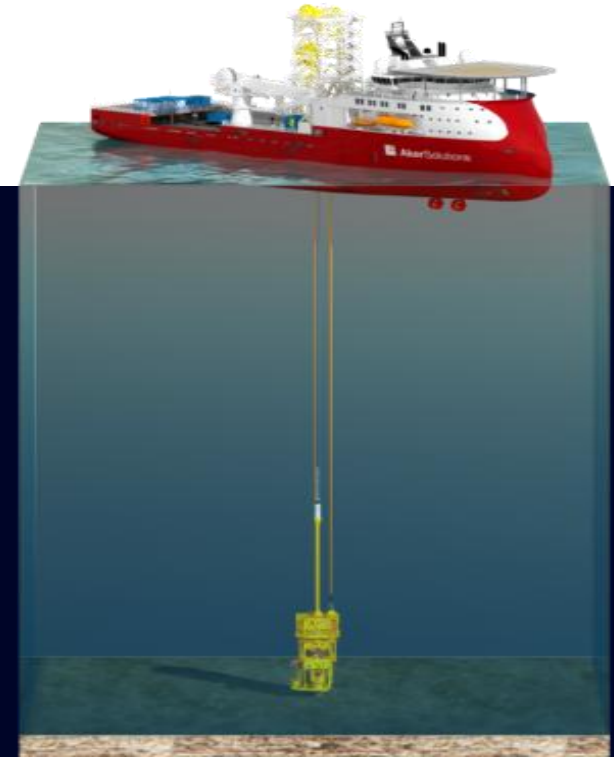
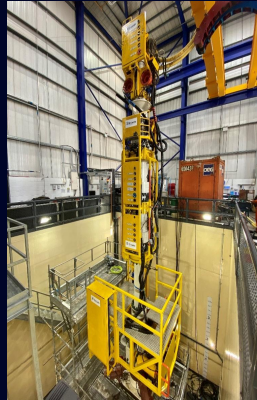


Subsea Intervention

Well Decommissioning 2025
New technologies, novel
approaches & alternative designs



About OneSubsea – Well Access



Drill Pipe Riser



Riserless



CWORS



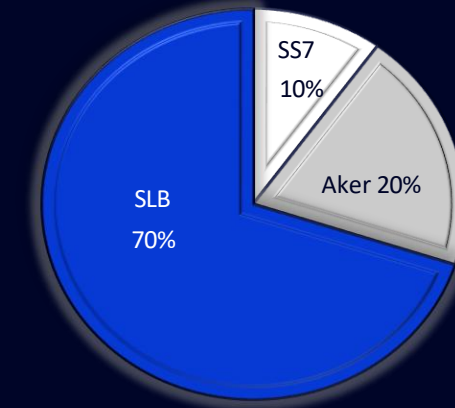
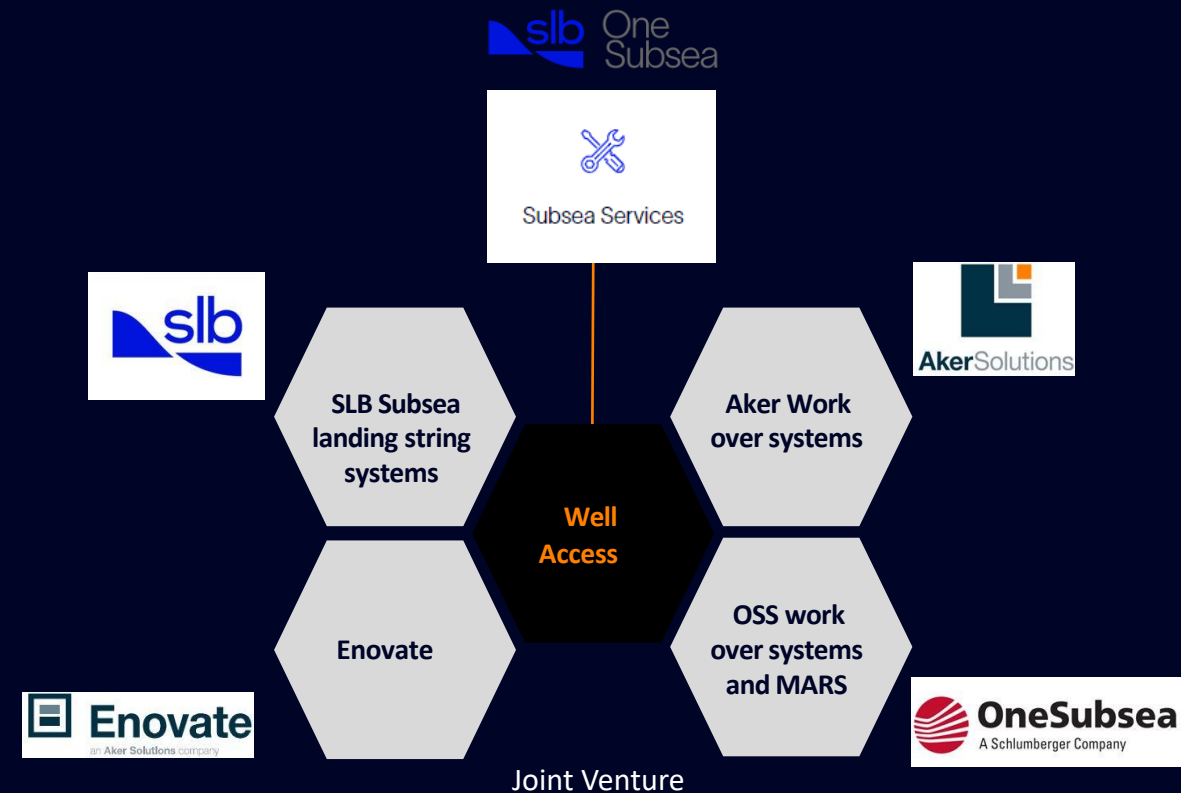
Landing String



Umbilical-less
TH installation

Well Access Market Leaders

- Extensive in-house field proven products to configure any system
- Global market footprint
- Provided >40 open water systems & >1,531 landing string operations
- World's 1st 20k landing string and 3,103m water depth record



Universal Light Weight Bore Selector System Development

Introduction

2018 North Sea Operator started planning to Plug & Abandon Subsea Wells

Challenge

UMC field remaining 3" x 3" x 2" (2 production & 1 annulus) triple bore completion

Legacy dedicated triple bore CWORS required extensive overhaul, not economical for 1 well



Innovation



Reduce Manual Handling

Excessive riding belt work from triple bore riser

Cost Effective Solution

Compared to overhauling legacy triple bore CWORS

Capacity

Ability to hop from well to well

Light Weight

Reduce fatigue concerns on aging subsea assets

Adaptability

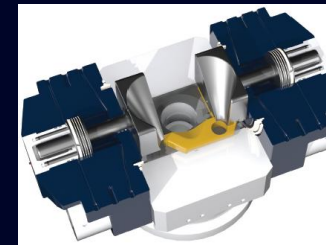
System enable dual bore & monobore trees

Enabler – En-Balance Bore Selector

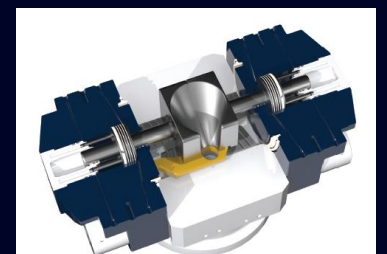
- 1 Ability to switch between production & annulus bores
- 2 Allows for a monobore drill pipe riser
- 3 Enables compact lightweight well access system
- 4 Universal circulation sub to crossover to any tree bore spacing
- 5 Incorporates a circulation sub for annulus fluid access
- 6 In-house dynamic simulation analysis to verify all toolstrings



En-Balance Bore Selector C/W Circulation Sub



Rams Open
Production access



Rams Closed
Annulus access

System Integration Test

SIT Facility

2020: Toolstring SIT at drill test site in Aberdeen

Equipment

Dual bore & triple bore TRT

a circulation sub for annulus fluid access

En-Balance Bore Selector c/w crossover and circulation subs

Key Verification Tool Strings

Production: Large bore sleeve 4.625" x 43.15ft

Annulus: Oilenco BS Plug 1.856" x 40.16ft



System Architecture



En-Power
Retainer Valve

SLIC
Latch

En-Power
Dual Well Control Valves

En-Balance Bore Selector
c/w Circulation Sub

System Benefits

- Bore Selector enables monobore riser
- Ball valves reduced accumulation needs
- 30T system addressing fatigued wellheads
- Enables subsea well hopping
- Universal for adapting to any TRT
- Pump through production & annulus simultaneously
- Bore Selector Fail-as-is mechanism

- Reduced Rig handling of monobore vs dual/triple bore riser
- Ability to hop subsea between wells
- Capability to interface with multiple TRT's
- Minimal downtime converting from dual to triple bore


**Technical
Benefits**


**Improved
HSE**


**Time
Saving**

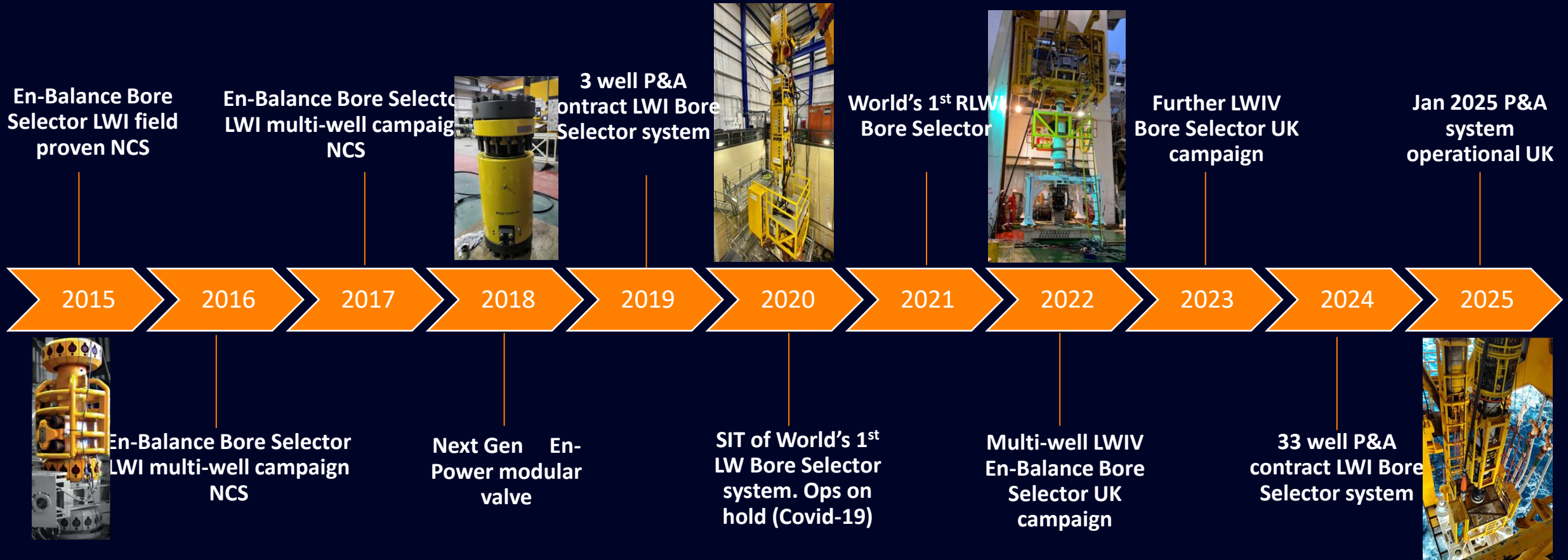

**Cost
Saving**



- Reduced activities with people in 'red zone'
- Less **heavy lifting** and handling
- Reduced pinch points with removal of dual/triple riser
- Limited handling under moonpool between wells

- **Removed dual bore riser for drill pipe riser**
- Time saving hopping wells subsea
- Reduced accumulation needs over gate valves
- Less time on well, reduced CO2 emissions
- Reduced materials, ability to adapt from dual to triple bore VXT
- One SFT for all operations

Timeline – P&A System



System Evolution

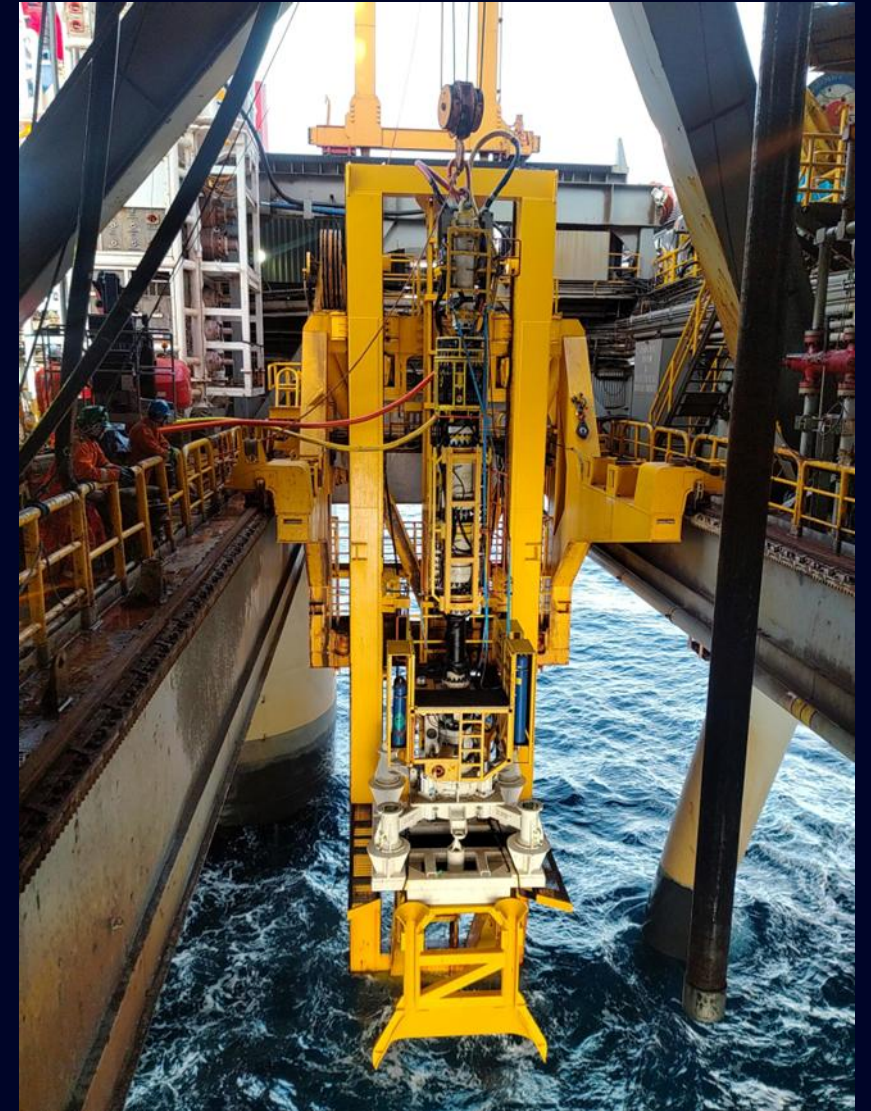
System Upgrades

- 1 SLIC latch
- 2 Guidance system
- 3 Increased crossover connector capacity



Operational Status

- 1 >6 wells completed (Inc. triple bore) of 33 well campaign
- 2 0 NPT & 30 days ahead of schedule



A wide-angle view of the ocean from a ship's perspective. The water is a deep blue with white foam from the ship's wake visible in the foreground. The horizon is straight and clear, with a bright, hazy sky above it. The text "Driving the new subsea era" is centered over the horizon line.

Driving the new subsea era

Thank you