Inspection Maintenance and Repair – from Oil&Gas to Renewables
DeepOcean group capabilities

**Vessels**
- Owned: 3
- Chartered: 8-10

**Current Operations**
- Norway
- UK
- Netherlands
- US
- Ghana
- Mexico
- UAE

**ROVs**
- 58 ROVs

**Other Assets**
- Module handling systems
- Excavators / dredgers
- Mattress frames
- ROV tooling

**Trenchers & Ploughs**
- 5 ploughs
- 7 jet trenchers
- 4 mechanical cutters

**Talent**
- ~1,100 employees
- ~500 in IMR-SURF-Decom
- ~250 in CLT

**Other**
- Private company
- Lead investor Triton
- Recently Acquired Delta in US
Track record

More than **8 500 IMR vessel days** year in Greater North Sea

Close to **100 000km** of subsea product surveyed in water depths to **2100m**

**17 000km** of flexible product installed and trenched. **900km** of which is power cable

**900km** of large diameter pipeline trenched
Power cable operators

18,500km Subsea Cable Installed

- 500km HVDC Interconnectors
- 1000km Array & Export Cable
- 1000km Seismic PRM Cable
- 16000km Fibre Optic Cable

Water depths from 0-2000m

- DONG energy
- SSE
- IBERDROLA
- e.on
- Statoil
- Statnett
- VATTENFALL
- national grid
- western link
- Nemo Link
- Nobelwind Offshore energy
- TENNET
- POWER
- NSW
- LS Cable
- Nexans
- PRYSMIAN
- KT Submarine
- DEMAR
- ICEPCO

Europe
Mexico
Africa
Asia
Middle East
Australia
Renewables and Interconnector Contracts held in North Sea
DeepOcean cable lay & trenching

Survey Seabed Mapping
- ROV and vessel based survey
- Seabed mapping and geophysics
- Cable route Investigation
- UXO and other threat and obstacle management

Route Design & Eng
- In-house Geotechnical Expertise
- Expert route engineering service
- Installation Analysis

Subsea Installation
- Over 1200km of power cable installed
- Array, export and interconnector cables
- Offshore, nearshore and shore pull-in
- Contracted to install over 400km in the next 2 years

Cable Burial
- Leading provider of subsea trenching services
- Largest portfolio of trenching assets
- Permanently mobilised trenching spreads
- Powerful technology for cable burial to 3m
- All water depths
- Diverse seabed conditions

Maintenance & Repair
- Subsea cable integrity inspection
- Remedial burial of cables
- Cable fault identification
- Cable de-burial
- Cable retrieval
- Cable repair / replacement
- Cable protection
- Strategic IMR Frame Agreements

Feasibility & Front End Engineering

Project Management

Engineering, Geotechnical Engineering, Experienced Offshore and Operational Teams, Procurement
In-House Design and Engineering

Bringing together over 20 years of cable installation experience with the latest cable routing software to provide expert route engineering.

- Route Positioning Lists
- Straight Line Diagrams
- Cable Lengths
- Armour Requirements
- Transitions
- Slack
- Water Depths
- Crossings
- Obstacle Avoidance
Walney extension

- Client: Ørsted
- Year: 2017
- Maersk Connector, 7000te basket carousel and ACP2
- Simultaneous installation and burial of 2 x 68km HVAC export cables (including 2 x 3.5km over roller beach pull-ins). Installation of 23km of HVAC platform interlink cables and post-lay burial.
- First engineered grounding of the Mearsk Connector and first application of ACP2.
Race Bank UK

• Client: Ørsted
• Year: 2016-2017
• 91 x 33kV Array Cables
• Edda Freya, Volantis, Deep Helder & T2
• Project management, route engineering and optimisation, PLGR, cable load out, transportation and installation
Valhall IP - Conductor Centralizer Installation
Photogrammetry - 3D from video
UXO removal and detonation

[Image of underwater scene]

[Diagram showing equipment arrangement and labels: Buoyancy, ROV Tether, TMS, Towing wire, Clump weight, UXO (unexploded ordnance), Hold-back (chain) for 400m, 90m, and 5m scales]
Comparable IMR spreads?
A new generation support vessels

- Repeatability is key
Onshore Control Centre – new tools and methods become available
High ambitions – Deep knowledge

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