TADEK
Ocean Engineering

Offshore Expertise in Action

15th of October 2026

Charles Smith

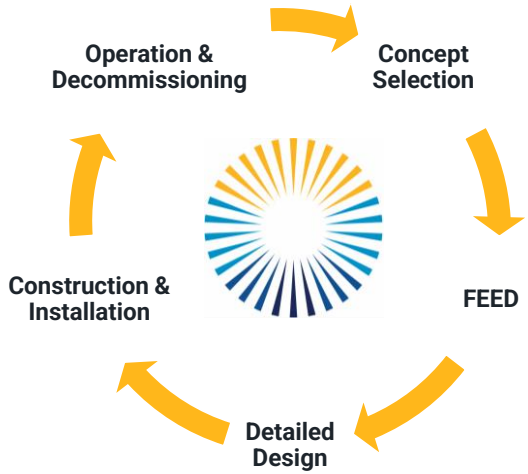
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Overview

- Dynamic design & engineering consultancy established 2010.
- ~45 permanent staff.
- Over 500 projects worldwide (Europe, Africa, Americas, APAC).
- Origins in Wave and Tidal Projects
- Expertise in traditional O&G to cutting edge renewable energy.
- ISO9001 Quality Management Certified UKAS BAB.







Tadek Cornwall

Office 3,
Chi Gallos,
Hayle Marine Renewables
Business Park, North Quay,
Hayle,
Cornwall,
TR27 4DD



Services

Project Management & Engineering

Marine projects are a core expertise.

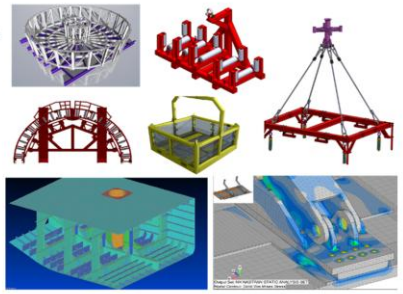
- Project Planning & Execution Engineering
- Vessel, Equipment & Interface Management
- Full Campaign Management
- •Design & Engineering Support
- Offshore Field Engineering & Site Support



Structural & Design Engineering

Tadek deliver innovative installation aids, class approved designs and upgrades for floating and fixed offshore assets, temporary works and seafastening designs .

- Seafastening Design
- Installation Aids & Bespoke Tools
- Temporary Works & Deck Layouts
- Supplier, Fabrication & Testing Management
- Naval Architecture & Structural Analysis
- FEED & Concept Development



SURF & Cables Engineering

Industry leading CPS, Cable & Flexible Systems Design.

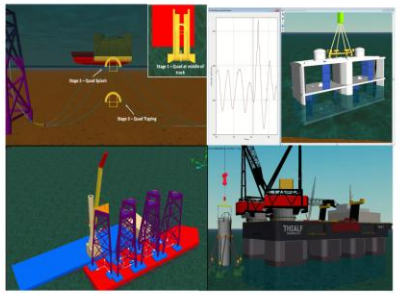
- Global Analysis
- Fatigue Analysis
- Local Analysis UFLEX /. DNV Helica
- On-Bottom Stability
- Remedial Assessments



Installation Engineering

Advanced engineering analysis.

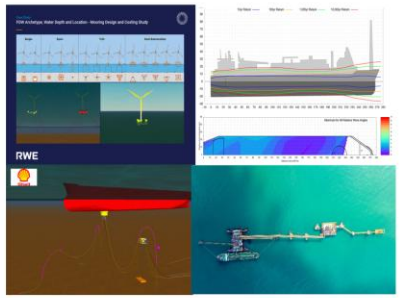
- Cable Lay
- Heavy Lift
- Pipelay
- Operability
- Complex Analysis



Naval Architecture, Mooring & Floating systems

Naval Architecture is key discipline. 60% of the team are formally trained naval architects.

- Hydrodynamics
- Mooring Analysis
- Stability Analysis
- Structural Analysis – Local
- Structural Analysis – Global



Consulting & Advisory

Tadek brings a broad and grounded perspective to derisk & support successful project delivery.

- **Diverse Skillsets**
- **Diverse Projects** – Prototypes to Multi-billion
- **Full life-cycle experience :** Concept, FEED, Detailed design, Installation and O&M

Great British ENERGY
CATAPULT Offshore Renewable Energy
CARBON TRUST
OW OCEAN WINDS
ERM
BALMORAL COMTEC

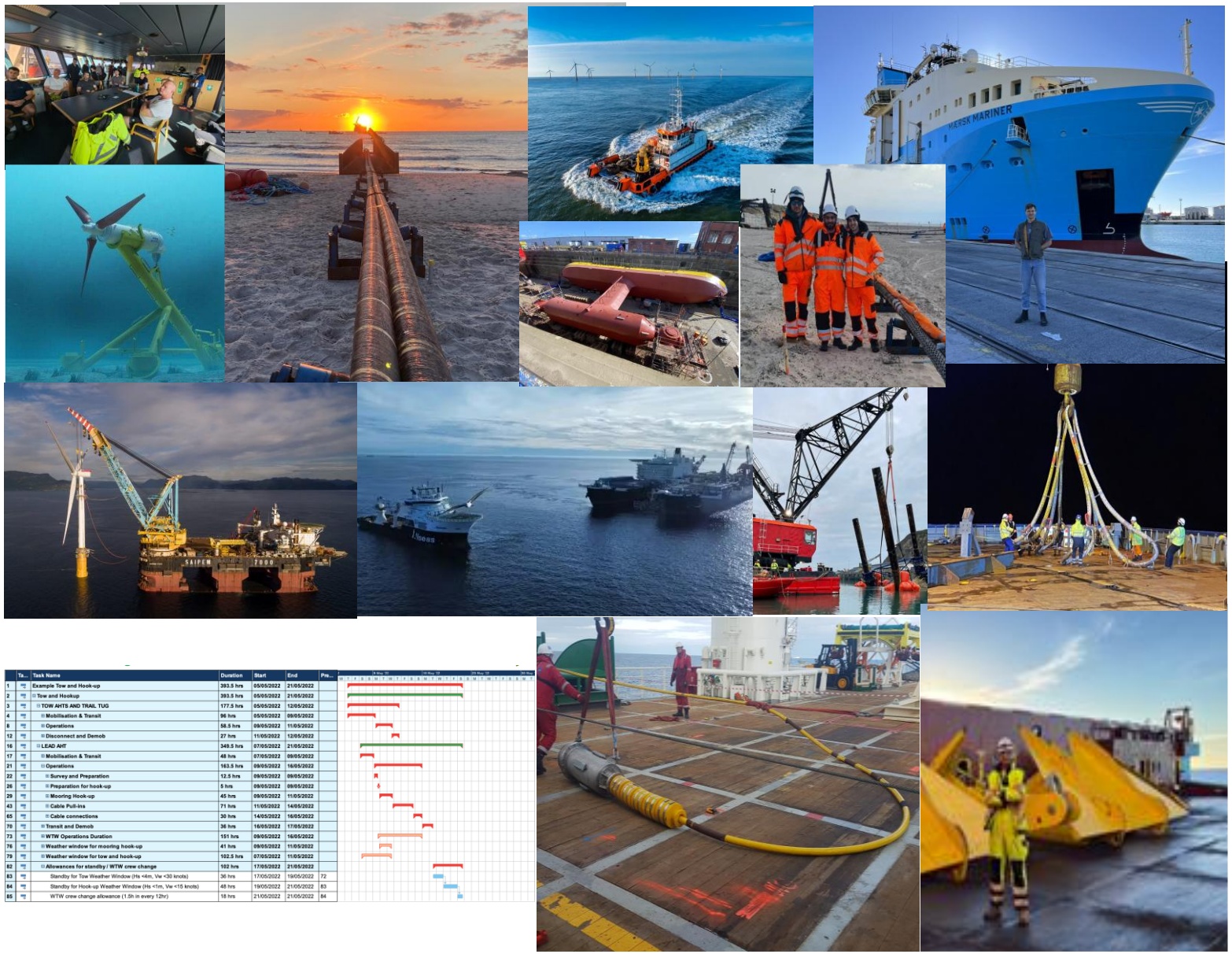
Marine Projects

Delivering projects are core to Tadek's expertise. Robust and economic solutions, backed up by engineering and analysis.

- Project Management
- Tender Support
- Project Documentation
- Design & Fabrication
- Installation Analysis
- Field Engineers

For a range of scopes, amongst them:

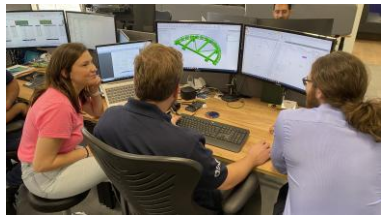
- Heavy lift
- Mooring installation & hookups
- Cable lay and repair
- Subsea installations
- Salvage

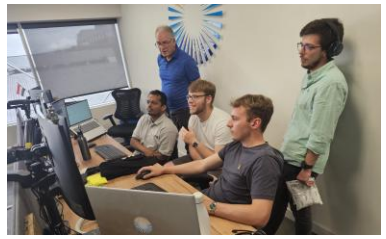


One Team - Two Disciplines

Engineering & Analysis Excellence




DESIGN & ANALYSIS

OFFSHORE DELIVERY

A continuous feedback loop between design, analysis and offshore delivery – shaping solutions for real offshore performance.

Offshore Delivery











TADEK
Ocean Engineering

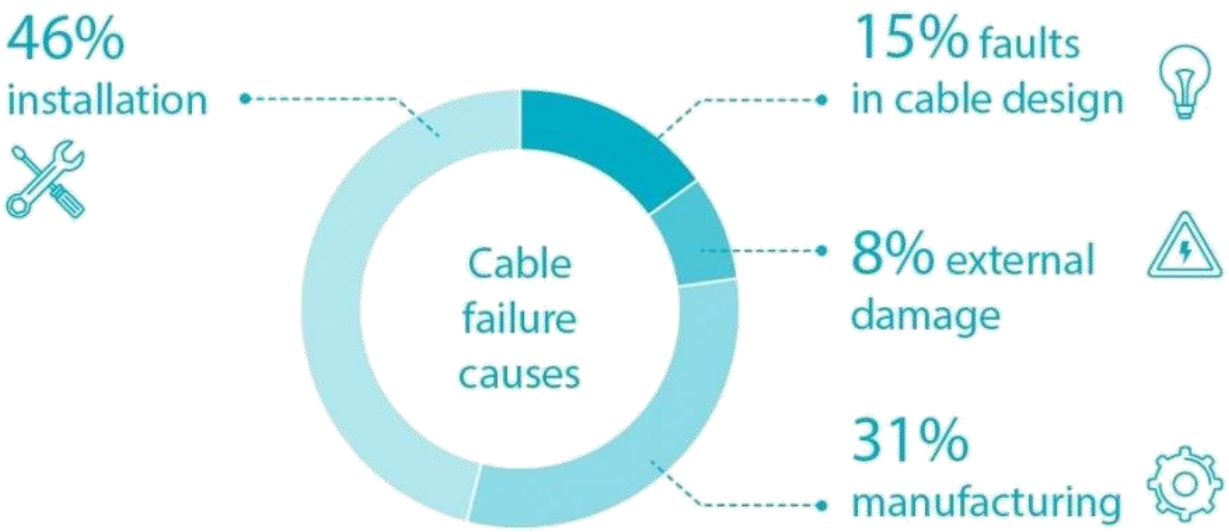
Engineering Support

Subsea Cable Installation and Repair



Cable Failure Analysis – Expert Witness

- Overall 80% of claims in Fixed wind – related to cable failure*.



*Data taken from the operational phases of offshore wind farms

- Key to preventing installation failures – is to understand the cable.
- Cable is very complex structure
- Different metals (steel, copper, aluminium, lead), polymers (XLPE, Polyesters, Polypropylene), resins, bitumen etc – all twisted together –> model as a single structure.

- Currently supporting undisclosed client against claim of failed Export CPS
- Review of what caused failure
- Prevention of causing failure again
- Decide on corrective measure to ensure cable integrity



* Source ORE Catapult

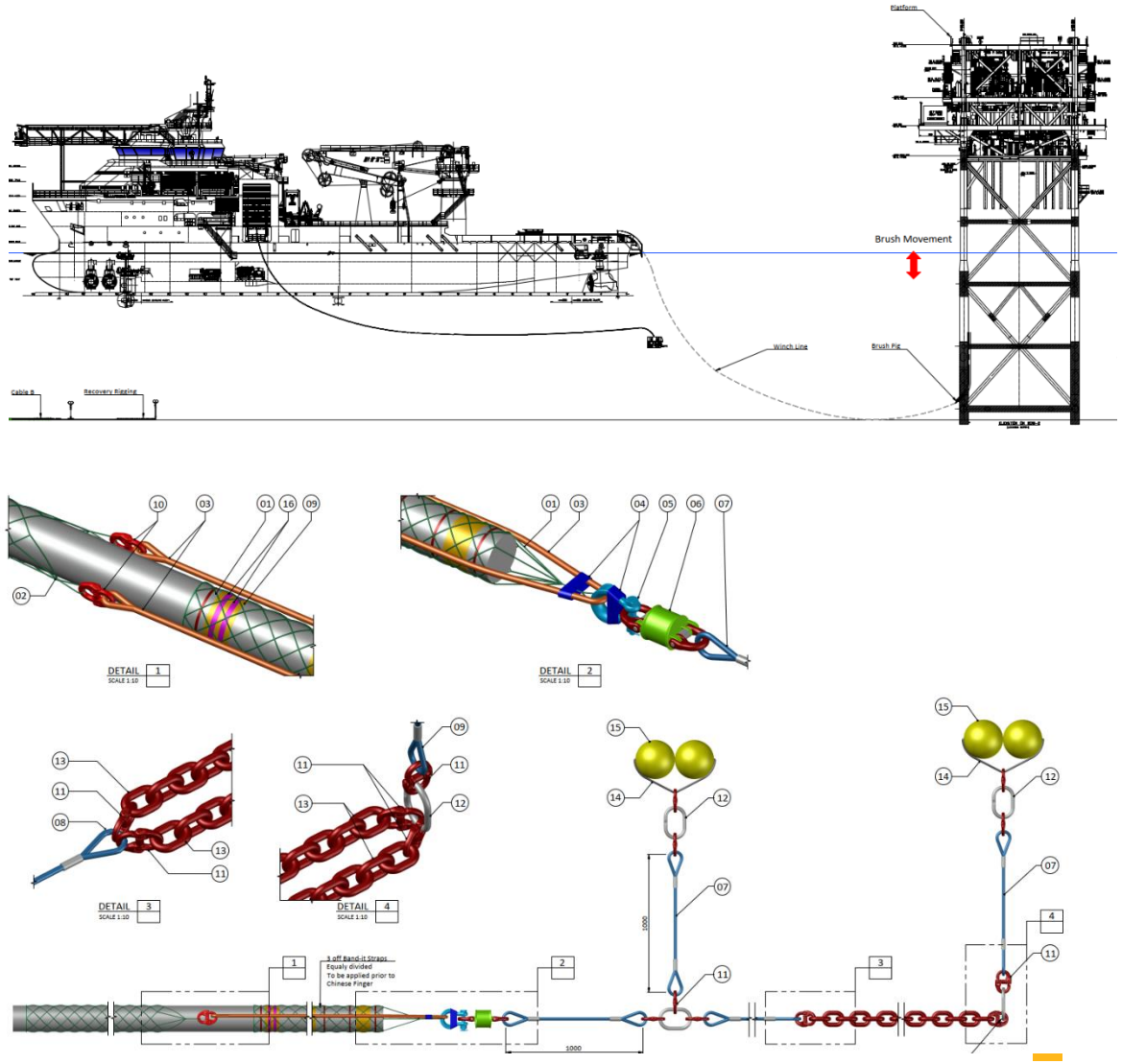
European Cable Repair Readiness

Tadek Project, Analysis and Structural Engineers have been working on repair readiness engineering for IAC, AC and DC Export cables in the Netherlands, Germany, Norway, Denmark and the U.K

- Over 4000km of cables assessed, current and future

Key contributions include:

- Optioneering and Scenario Identification
- Procedures & QHSE Deliverables
- Cable deburial and recovery, pull-in, lay and joint overboarding analysis methods pre-approved by MWS
- Dedicated repair vessel mobilisation support



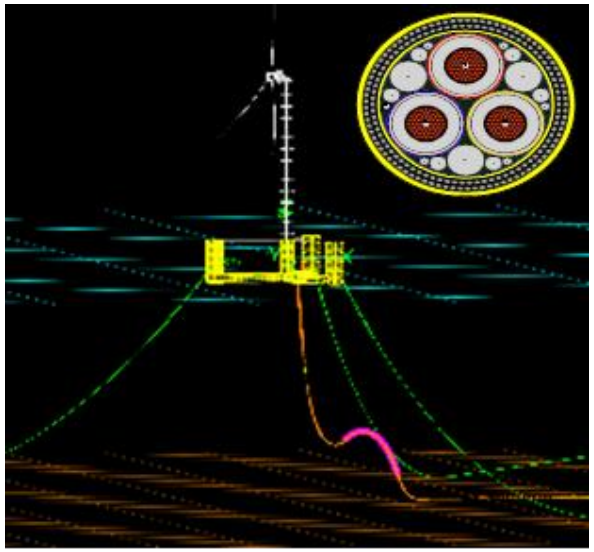
What We Deliver

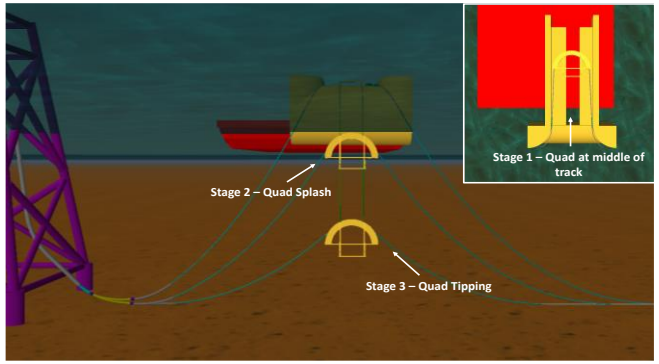
Summary

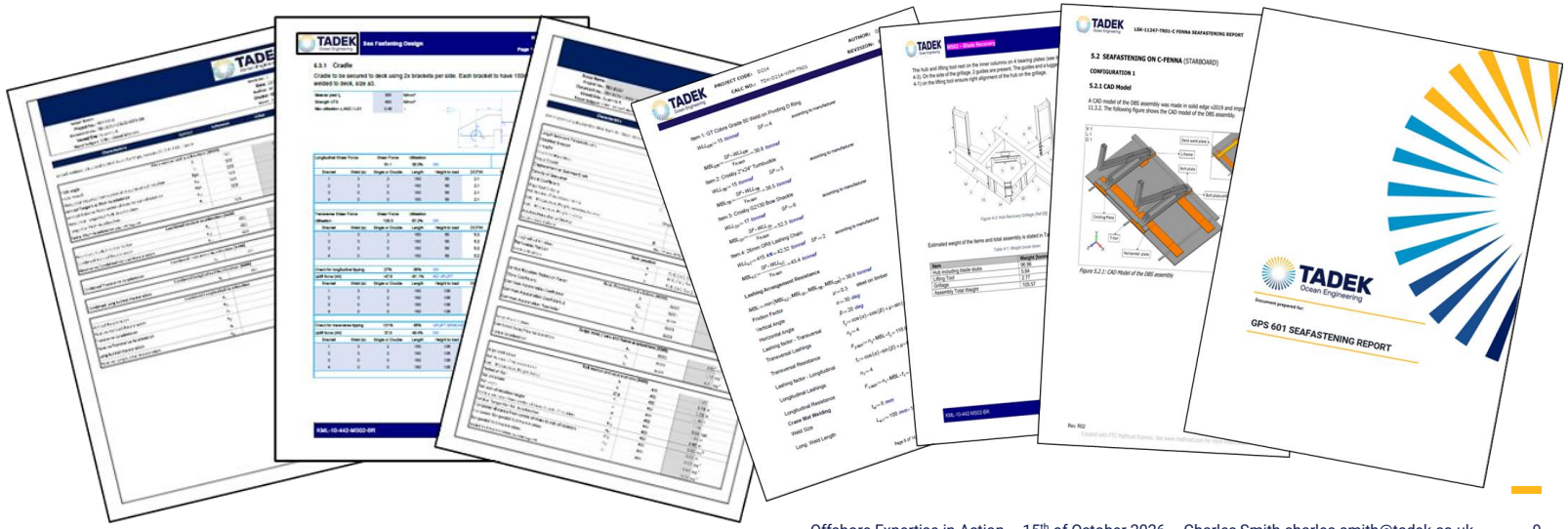
- Project Planning and Management
- All engineering documentation
- Field-Engineering
- Project

Tadek Project Deliverables

- QHSE Documentation Pack
- Operational procedures
- Cable-Handling Analysis
- Mooring Analysis
- Vessel DP assessments
- Operational Storyboards
- Technical Drawings
- As-Built Documentation Packages
- Seafastening Packages





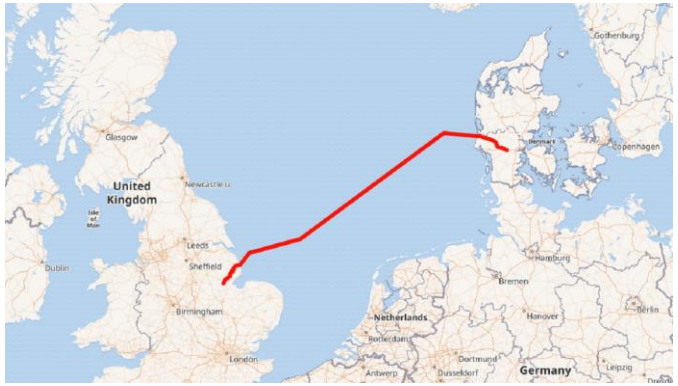


Case Studies

Viking Link – Denmark
Interconnector

- Bundled DC Cable
- 475 miles – World's longest interconnector

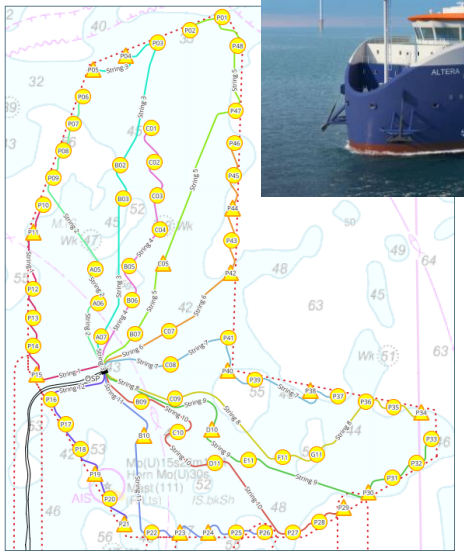




Inch Cape – U.K
Inter-Array Cable Installation

- Newbuild Cable Lay Vessel
- Full Windfarm – 72 turbines
- 160km of cable

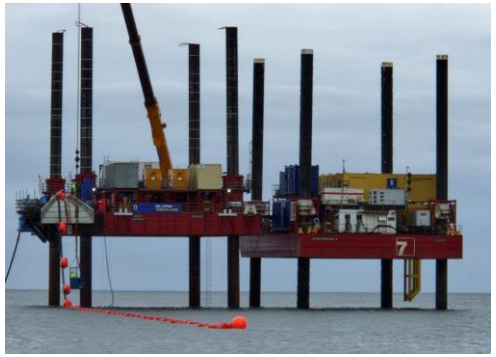




Gwynt Y Mor – U.K
Export Cable Repair

- Shallow Water, large tidal range
- Jack Up barges
- Cable Shore Landing
- Omega Joint





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Celtic Sea FLOW Readiness

Floating Offshore Wind Opportunities



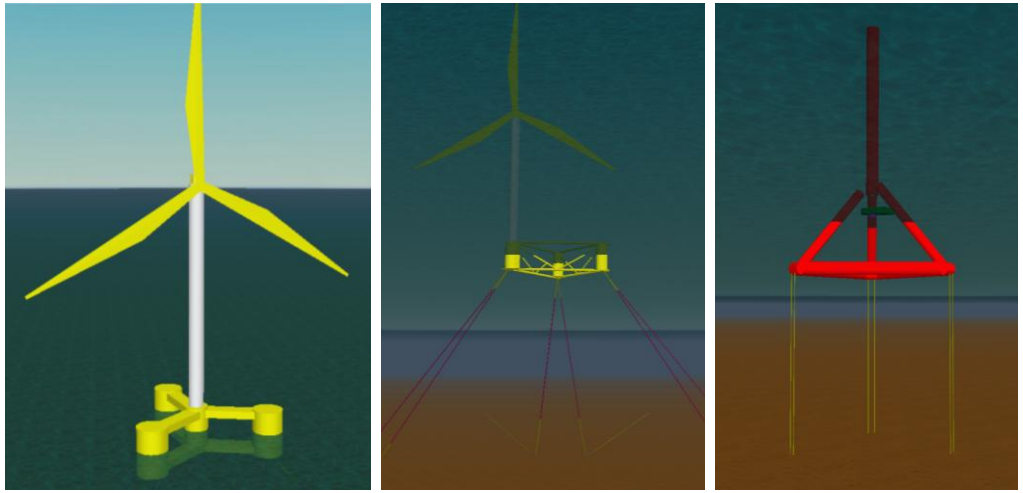
Mooring Economics

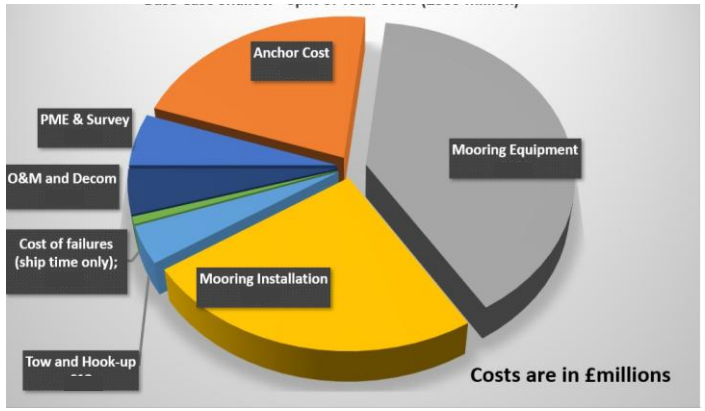
Project Management of Project Procurement

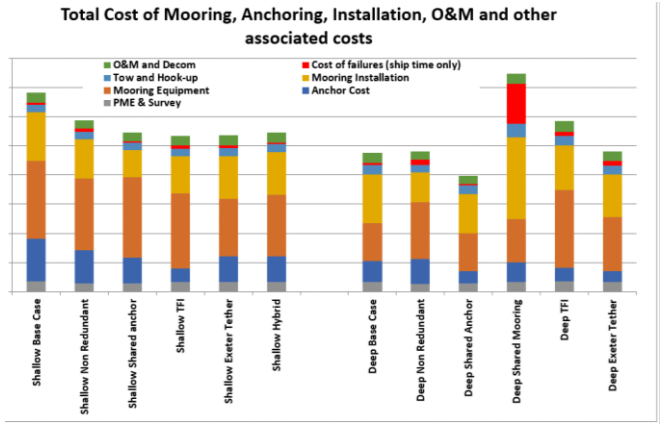
- Project experiences
- Liaising with suppliers, developing new & second-hand procurement solutions, managing logistics & installation.

Cost assessment for FEED & Detailed Design

- Our team of experts leverages their extensive knowledge and experience to meticulously assess and analyse various factors such as installation costs, maintenance expenses, operational efficiency, and lifecycle considerations.
- Our professional and market-leading CAPEX/OPEX modelling services serve as a valuable tool for enhancing financial feasibility and overall project success.







WP5: OFFSHORE INSTALLATION OPERATIONS

- **Pre-Installation Works – Anchor chain Preparation**

SCOPE	ARIOSH	CEONA	
	Supporting Vessel, Equipment & Personnel	Supporting Vessel	Normand Pacific (NP) Operations
ANCHOR PREPARATION	**Quayside equipment / personnel for:** - Lay out of chain and anchors for quickets loadout (as per Ceona spec.)	Not Required	Not Required





Umbilical Design Case Study –IAC Array Pre-Feed

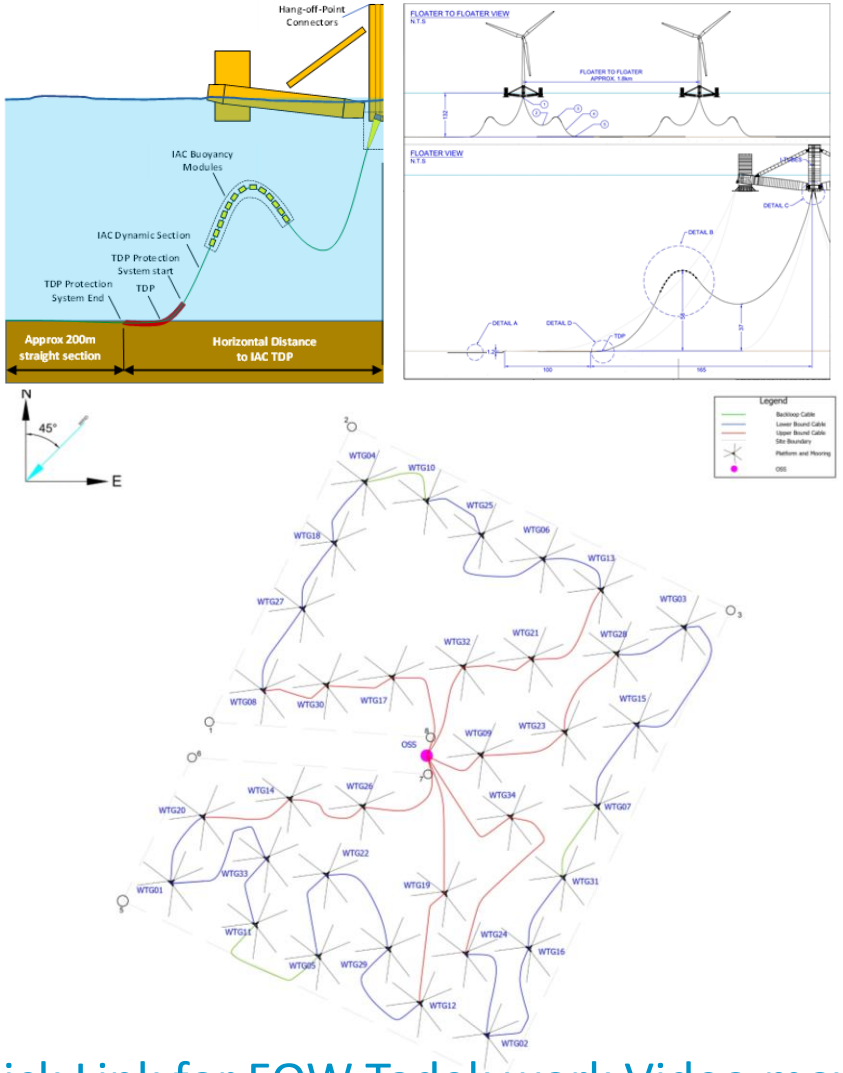
Scope

Pre-FEED design of a dynamic cable system for a 500MW wind farm.

Procurement & Costing encompassed an estimate of installation durations and costs as well as liaison with suppliers to achieve overall project cost model

Design included development of a cross section design to send to manufacturers, development of array layout, ULS & FLS analysis. Array layout was optimised based on:

- Mooring design
- IAC installation sequence
- IAC design footprint/clearances



Deliverables

- Supply chain liaison and Costing analysis (Procurement & Installation)
- Cross section design
- FOW Hydrodynamic modelling
- Mooring design & Array layout
- IAC configuration selection
- Dynamic cable strength & fatigue analysis
- Installation analysis / procedures

Click Link for FOW Tadek work Video.mov

FOW T&I Project Engineering

EFGL Project Overview

- 3x Floating Wind Turbines installed 16km offshore Leucate in Golfe du Lion, France
- Installation complete in summer 2025
- Principle Power WindFloat Floater
- Vestas 10MW Wind Turbines -> 108m nacelle height
- ~70m water depth
- Tadek worked with EPCI contractor Eiffage Metal and T&I contractor Maersk Supply Service and was involved in all operations below.









Mooring Prelay Phase 1 (Maersk) → Load-out & Float Off → Ballasting → Tow FOS-PLN → Berthing in PLN → WTG Integration → Storage Quay Works → Mooring Prelay Phase 2 → Ballasting & Diving Works → Tow PLN-Site → Hook-Up

TADEK
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Naval Architects, Project Managers, Offshore & Subsea Engineers

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