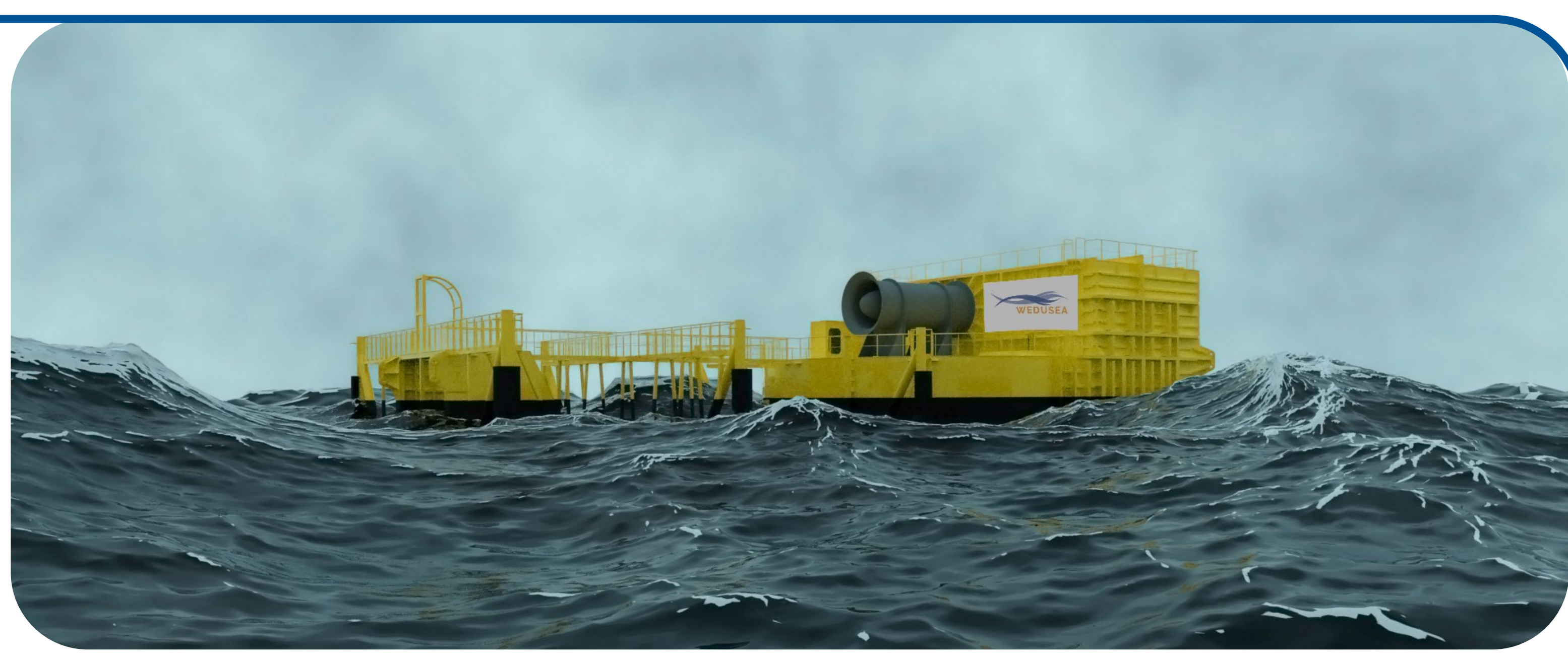


A step change for wave energy



Wave Energy Demonstration at Utility Scale to Enable Arrays

WEDUSEA has created a unique collaboration between 13 partners spanning industry and academia from across Ireland, the UK, France, Germany and Spain. Each partner brings their own leading-edge technical skills and research expertise to the WEDUSEA project. The €19.6 million project, co-funded by the EU Horizon Europe Programme and Innovate UK, WEDUSEA is set to be a catalyst for the industrialisation and game-changer for wave energy worldwide.

OBJECTIVES

1. To demonstrate that wave technology is on a cost reduction trajectory, thus stimulating larger commercial array scale up and further industrialisation, through de-risking larger scale investments.
2. To boost the development of the wave energy industry worldwide
3. To disseminate results and outcomes which enable the capitalisation and exploitation of the results

PROGRESS

- All Deliverables for Phase 1 were completed by the end of 2023 and were reviewed by external Experts in February 2024.
- Following the GO/No GO stage gate, the project restarted in May 2024.
- Operation Data from the OE35 deployment at the US Navy Test Site (WETS) in Hawaii indicated design updates could enhance performance.
- OE undertook a series of targeted tank tests to optimise potential improvements.
- These improvements were incorporated in a design update.
- Shipyard Engagement Q1 2026, Deployment Planned Q3 2026

PROJECT PHASES

2022	2023				2024				2025				2026				2027				2028					
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3			
PHASE 1												PHASE 2												PHASE 3		

Phase 1: System Design and Demonstration Planning

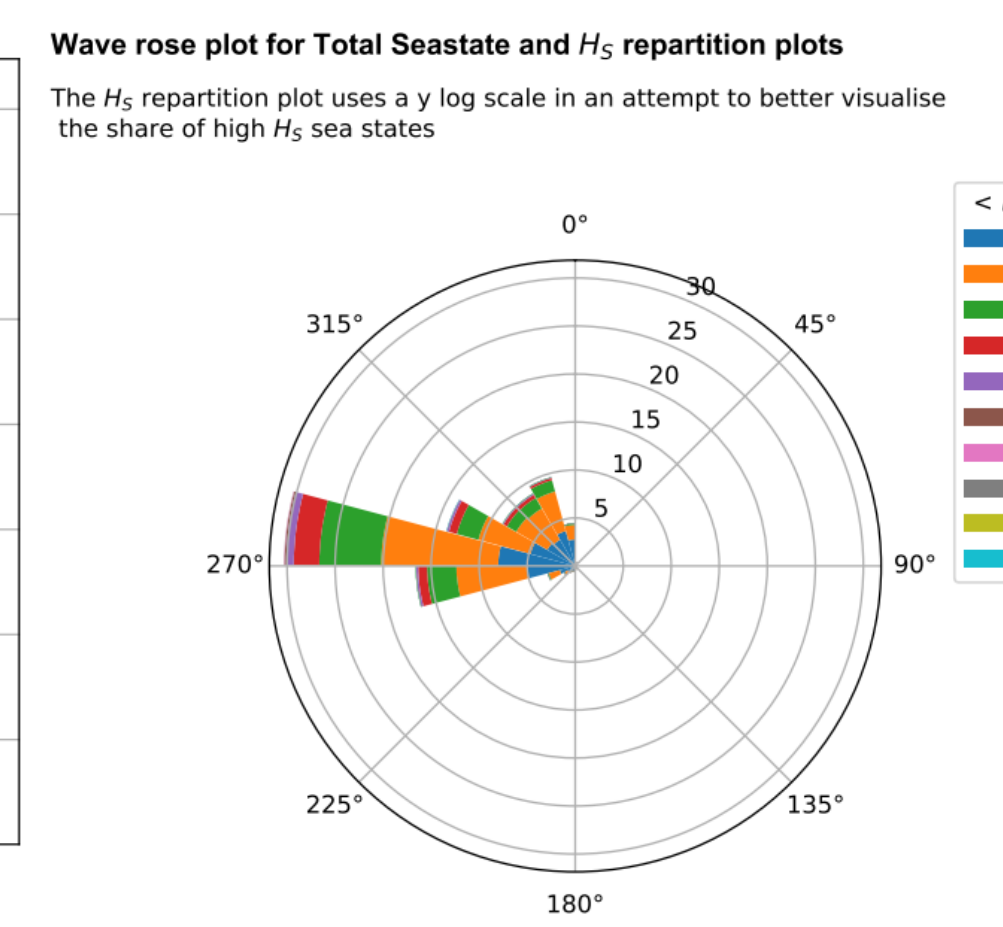
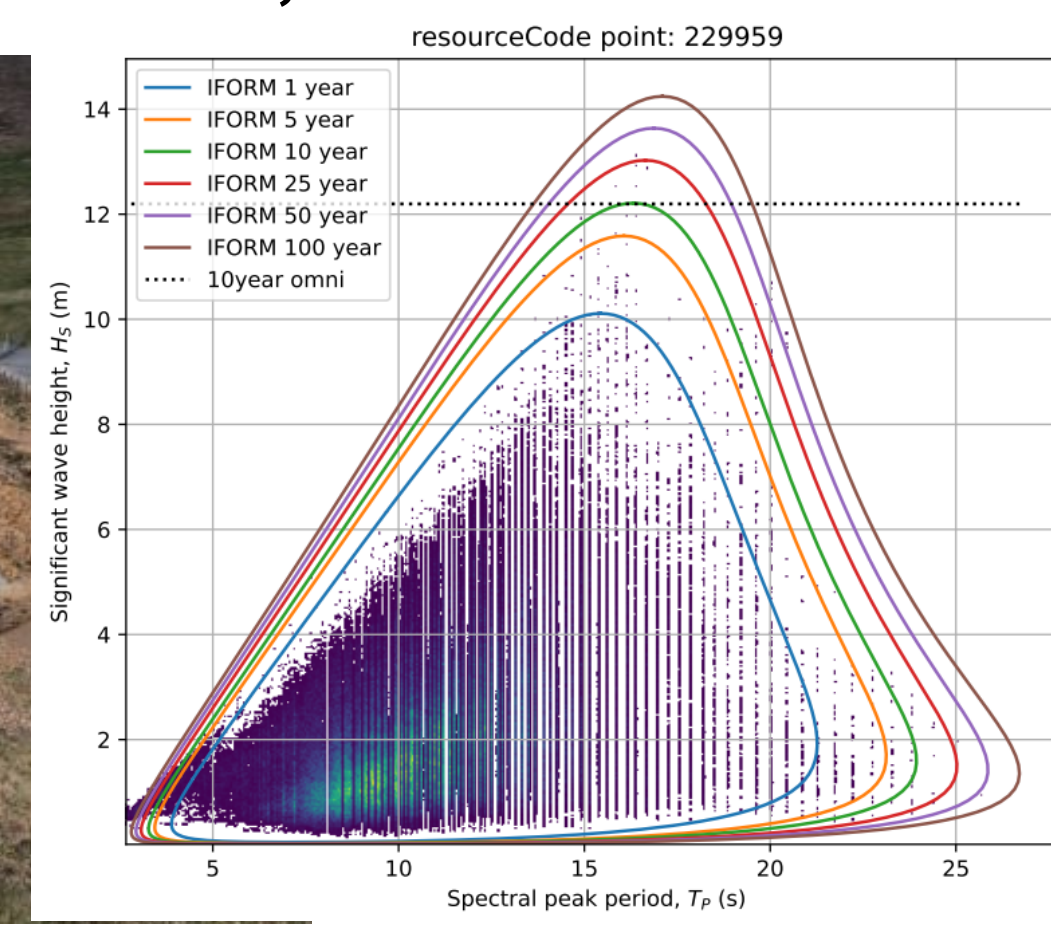
Phase 2: Deployment and Demonstration (2yrs)

Phase 3: Commercialisation and Dissemination

Areas Being Investigated and Demonstrated

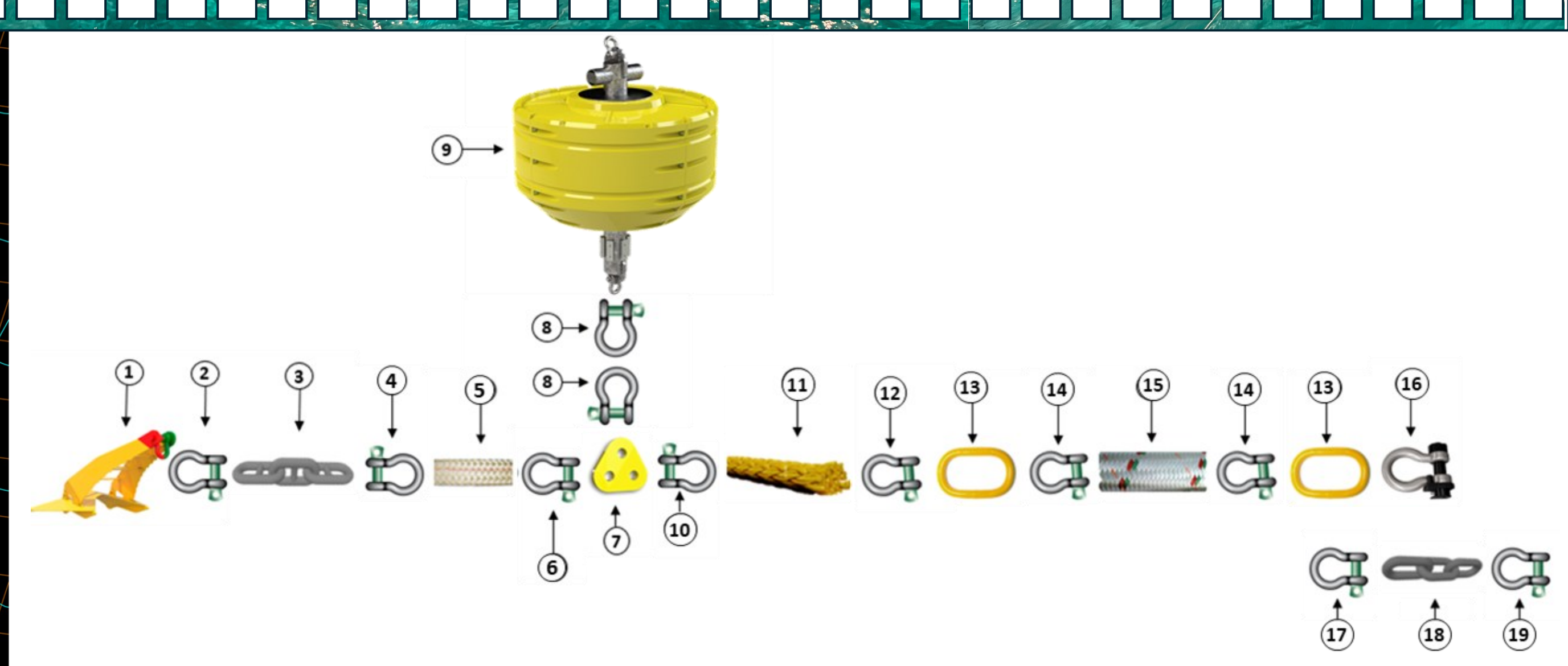
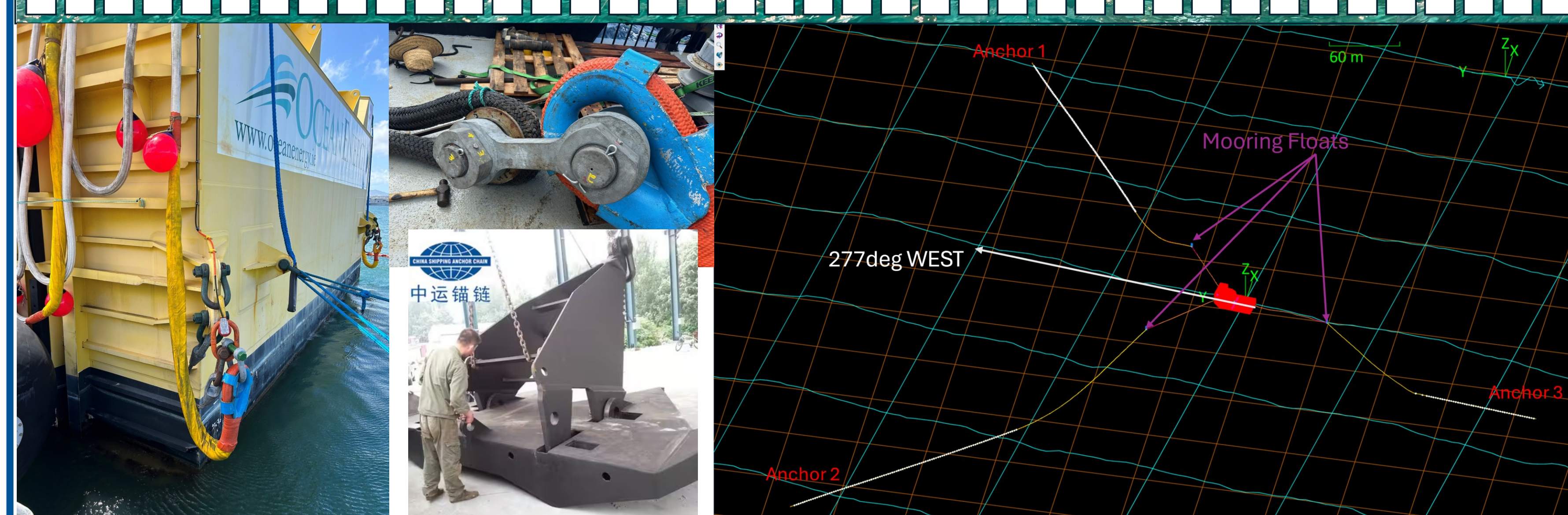
- Resource Assessment
- Floating OWC Hull Design
- Mooring Design
- Wells Turbine
- Electrical PTO
- Power Control
- Environmental Monitoring & Assessment
- Machine Learning
- IEC Standards Application and Feedback

Deployment Location: EMEC, Scotland



RESOURCECODE (<https://resourcecode.ifremer.fr/>)

Mooring Design Validated with extensive tank testing and incorporating lessons learned from the OE35 Deployment at WETS, Hawaii.



Published Papers

“Advancements in mooring systems for the OE35 wave energy converter: Dynamic design and validation” Chenyu Zhao, Faryal Khalid, Tony Lewis, Sean Barrett, Brian McSwiney, Remy CR. Pascal, Bernardo Kahn, Lars Johanning. *Ocean Engineering*, Volume 330, 30 June 2025, 121235

“Automated WEC MetOcean design basis from ResourceCode data” Remy C.R. Pascal, Bernardo Kahn and Maxime Chemineau. Proc. 16th European Wave and Tidal Energy Conference, 7-11 September 2025, Maderia.

Webinars & Blog Posts

Enabling Full Scale Deployment through Tank Testing – UCC, OE & U. Plymouth

Marine Spatial Planning and Consenting – UCC & EMEC

20x Blog Posts from Partners on Website

More information at www.wedusea.eu

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SCAN ME



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