



# Providing quick connections for floating offshore wind installation

## BUSINESS PROFILE

- Quoceant is an independent engineering consultancy based near Edinburgh, in Scotland, specialising in offshore renewables and technology innovation.
- Quoceant offers a full range of engineering design and consultancy services across various sectors, including offshore wind, wave and tidal.
- The company focuses on novel and inventive technology development within the offshore renewable energy sector, from design, engineering, build support, qualification testing, and marine operations.

## SUPPORT RECEIVED



GRANT FUNDING

Quoceant specialises in offshore renewables and technology innovation, offering a comprehensive range of professional services, including design, analysis and review of structures, mechanical systems, marine operations, and mooring and cabling systems. Founded in 2015 by seven engineers, Quoceant brings a wealth of experience and a collaborative approach to optimising existing programs, solving complex challenges, and driving innovation with fresh, informed perspectives.

In 2019, Quoceant expanded into the offshore wind sector, securing a contract with EDPR to provide structural engineering support for the foundation design of offshore wind turbines and substations for the Moray West project.

## A closer look at quick connection systems

Quoceant secured a Development Grant to adapt its Q-Connect technology for floating offshore wind applications. This project aimed to enable quick, safe, and weather-tolerant connections between floating platforms, mooring infrastructure, and subsea cables.

As part of the project, Quoceant developed two separate low-cost quick-connection systems (QCS) for the floating wind market: 'Q-Connect M' is for use with mooring lines and Q-Connect E is a high rated wet-mate electrical QCS, 'Q-Connect E' for the connection of electrical cables. Both systems build on the proven Q-Connect unit used in wave and tidal applications. The Q-Connect-based mooring connection features a unique single-moving-part latch, offering a significantly simpler and more cost-effective alternative to existing solutions without compromising reliability or structural integrity.

## Solutions for the offshore wind industry



Quoceant provides engineering consultancy services including full system solutions from concept to detailed design, expert support and review.

They excel in developing optimal strategies for offshore operations and maintenance, ensuring efficient project execution and longevity.

Quoceant's Q-Connect, a modular quick connection system, facilitates rapid and safe connection and disconnection of moorings and electrical cables.

## Impact of the support

- Increased the company's profile
- Progressed the Q-Connect technology readiness for floating wind
- Allowed Quoceant to secure additional grant support



## Before

Before engaging with OWGP, Quoceant had developed, tested, qualified and begun certification of a lower rated Q-Connect system for applications in the wave and tidal energy sectors. This work, funded by Wave Energy Scotland, was extended to complete concept level designs to adapt the Q-Connect system for higher load capacities and electrical ratings.

Recognising the critical role of Quick Connection Systems (QCS) in improving the economics of installation and maintenance by enabling rapid connection and disconnection between subsea infrastructure and floating platforms, Quoceant sought to further refine and tailor the technology for use in floating offshore wind.

## During

After reviewing Quoceant's application, OWGP recognised the Q-Connect technology as a valuable innovation to accelerate the deployment of floating offshore wind and enable safer, more efficient connections for mooring and electrical cables. OWGP subsequently awarded them a Development Grant to progress the project.

The project focused on advancing engineering design adaptations and specifying the requirements needed to up-rate and up-size the Q-Connect design for application in floating offshore wind.

Quoceant managed the project through a structured work programme, defining clear deliverables and milestones. The project manager tracked progress, acted as the primary liaison with OWGP, and ensured effective communication with external organisations, including innovation bodies, to shape the qualification requirements for the connection technology.

Quoceant's ISO-9001 quality management system ensured that deliverables were aligned with project objectives, technical content was verified prior to submission, and data management remained secure and organised throughout the project.

## After

Since completion of the project Quoceant have been successful in securing a grant from Scottish Enterprise under their Scotland CAN DO Offshore Wind Innovation Feasibility Challenge Call.

Quoceant were also winners of an Innovate UK Innovation Exchange (iX) challenge for cable quick connect and disconnect solutions. The challenge was supported by Offshore Renewable Energy Catapult's Floating Offshore Wind Centre of Excellence, in partnership with Flotation Energy and Simply Blue.

View how the Q-Connect system operates [here](#).



The OWGP project has been a great steppingstone for Q-Connect within Floating Offshore Wind and our ambitions to scale up and commercialise the technology. Through the project we have established firmer relationships with potential suppliers and customers and are excited to build on the momentum generated to drive the technology forward.



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