

HARNESS THE
POTENTIAL OF
FLOATING WIND.

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LET'S RENEW
RENEWABLES.

ENTER



ACTEON



INTRODUCTION

HARNESS THE POTENTIAL OF FLOATING WIND

Floating renewables developments tend to be large and often complex projects that present significant technical challenges. At Acteon, our focus is always on finding innovative ways to reduce project footprints and overall costs.

[Next page ►](#)



HARNESS THE POTENTIAL OF FLOATING WIND

WITH AN EMPHASIS ON...

- ▶ early engagement
- ▶ advanced engineering for cable arrays and mooring systems
- ▶ efficient procurement, installation, logistics, operations and maintenance

we deliver reliable marine services to de-risk floating wind systems throughout the life cycle of each project.

FIND OUT MORE



[Or continue to the next page ▶](#)



DISCOVER HOW WE DO IT...

01 / DOMAIN EXPERTISE



02 / TRACK RECORD



03 / INNOVATION



04 / INTEGRATION



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LET'S REACH
NEW DEPTHS BY
APPLYING DOMAIN
EXPERTISE.

[Next page ▶](#)

DOMAIN EXPERTISE

TRACK RECORD

INNOVATION

INTEGRATION





7 CHALLENGES OF FLOATING WIND

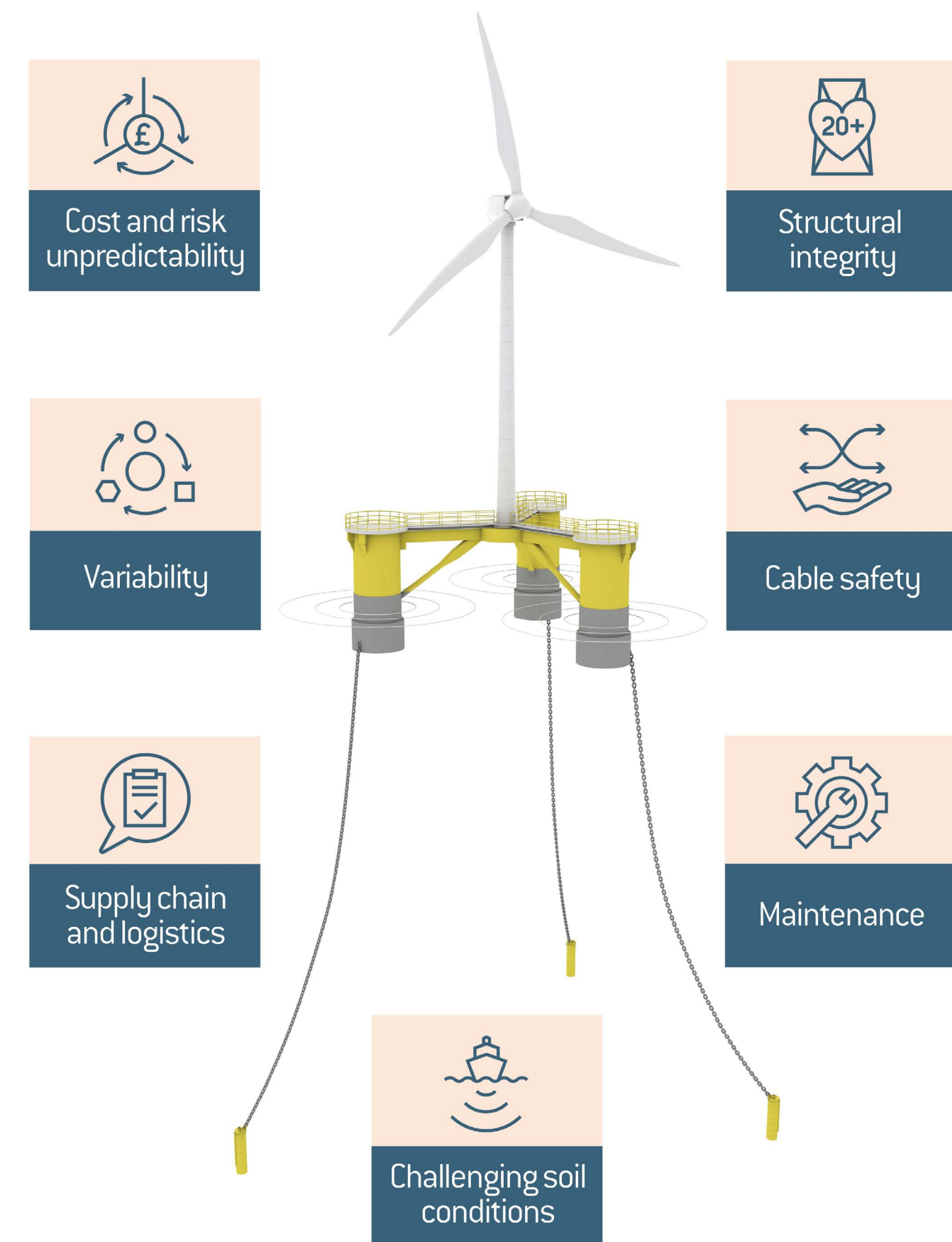
WE HAVE A DEEP UNDERSTANDING OF THE CHALLENGES

From dynamic power cable feasibility and challenging soil conditions to supply chain and logistics, cost and risk predictability, to structural integrity and maintenance, we have a comprehensive knowledge of the challenges and relations between key elements of design and engineering across a project life cycle.

Check how well you understand the challenges of floating wind:

[CLICK HERE](#)

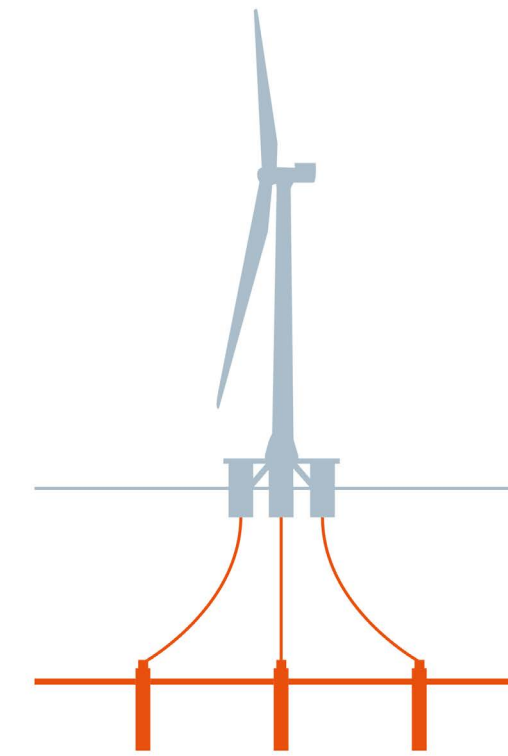
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LOGISTICAL CHALLENGES

Purchasing, storing, and mobilising very large and heavy mooring equipment are just three of the logistical challenges large floating wind farms will have to face.

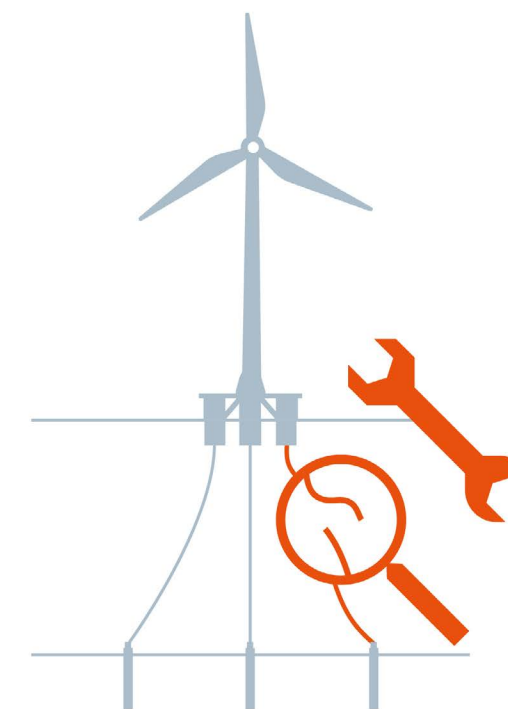


Understand how the logistical challenges for floating offshore wind are key to its development.

[READ THE BLOG](#)

O&M CHALLENGES

The floating platform, the mooring system and not least the power cables need to withstand repeated impacts from the continuous movement of the turbines and sea state conditions. Like any high-performance dynamic equipment, these structures will require a proactive approach to monitoring.



Understand how top-to-bottom monitoring is the answer to floating wind viability.

[READ THE BLOG](#)

[Next page](#)





Decades of global experience on the most technically complex subsea projects allow us to:

- ✓ Excel at advanced design methodologies and processes.
- ✓ De-risk floating wind systems with efficient procurement and logistics, and technologies that focus on delivering reliable solutions at a lower cost and smaller environmental footprint.
- ✓ Develop a deep cross-disciplinary understanding of the connections between key aspects of design and engineering across the life cycle of a project.

[Next page ▶](#)





SOME OF OUR EXPERIENCED BRANDS:



A global provider of life-of-field mooring solutions, offering a complete package of services across all marine environments.



Bruce Anchor designs and fabricates drag embedment anchors to fit a variety of offshore soil and loading conditions.



2H delivers industry-leading advanced systems engineering for the offshore energy sectors.



Providing a suite of smart solutions for the entire lifecycle of an asset, including advanced geotechnical and geophysical site investigation, surveying, subsea electronics and robotics, and asset integrity monitoring.



[Next page ▶](#)



EXPERIENCE MATTERS

Our team of engineers and mooring experts has worked on many studies for floating wind projects. Hull manufacturers and developers around the world have called on our longstanding expertise for front-end engineering, mooring feasibility, cable configuration, asset integrity management and more.

[DOWNLOAD OUR FLOATING TRACK RECORD](#) 

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TRACK RECORD

INNOVATION

INTEGRATION



PROJECTS IN FOCUS

- ▶ Measurement monitoring campaign on the TetraSpar demonstration project.

CASE STUDY [↗](#)

- ▶ Fjord moorings for Hywind Tampen turbines.

CASE STUDY [↗](#)

[Or continue to the next page ▶](#)

DOMAIN EXPERTISE

TRACK RECORD

INNOVATION

INTEGRATION



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[Next page ►](#)

DOMAIN EXPERTISE

TRACK RECORD

INNOVATION

INTEGRATION





ALWAYS AT THE LEADING EDGE OF ANCHOR DEVELOPMENT

SEPLA SYSTEM (SUCTION EMBEDDED PLATE ANCHOR):

A pioneering design that combines two proven concepts: suction piles and plate anchors. In use on several floating energy projects in the world and continuously improved, the SEPLA is perfect for all sites that need suction pile precision placement and geotechnical efficiency at a lower cost of material and with a much smaller environmental footprint.

WATCH VIDEO

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ALWAYS AT THE LEADING EDGE OF ANCHOR DEVELOPMENT

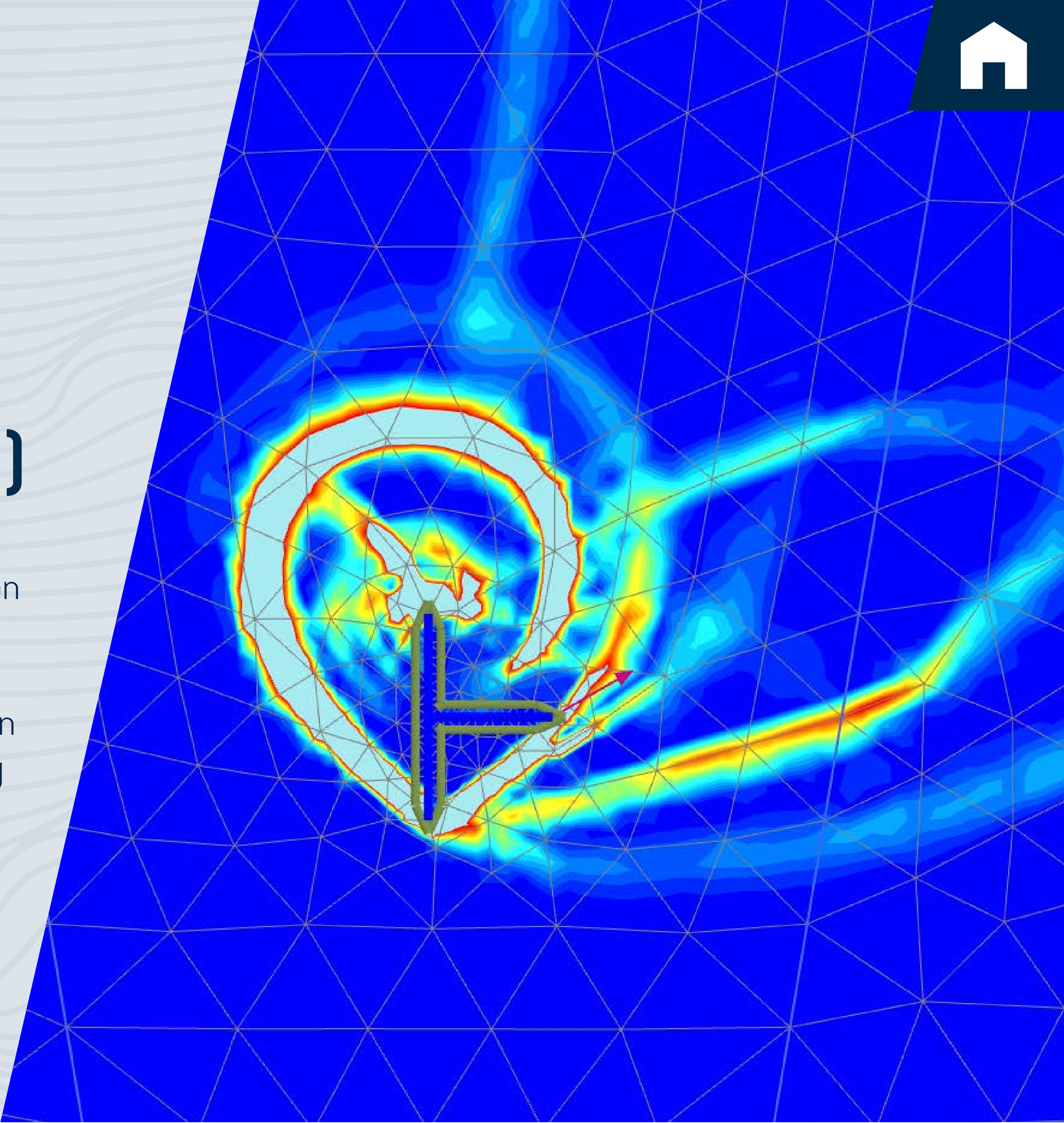
AND GOING FURTHER ▶

FEPLA (FLEXIBLY EMBEDDED PLATE ANCHOR)

SEPLA technology, like suction pile technology, is well suited to installation in soft clay conditions and deep water. However, many proposed floating wind developments are in shallow areas with sand or mixed soils. A new way for quickly installing plate anchors that do not exclusively use suction technology is needed. Read how Acteon is currently developing a Flexibly Embedded Plate Anchor (FEPLA) system to address this need.

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ALWAYS AT THE LEADING EDGE OF ANCHOR DEVELOPMENT

THE BRUCE RAZOR

The Bruce Razor is our latest drag anchor design for negotiating difficult seabeds and is specifically well suited for hard bottom floating offshore wind applications.

Designed with hard soils in mind, its unique attributes allow for easier embedment and stronger holding capacity.

[Next page ▶](#)



- ▶ New 'cutter teeth'
- ▶ A reduced overall fluke area, to reduce resistance at embedment
- ▶ Removable hardened tips/'pick points'





DEVELOPING EFFICIENT TENSIONING SOLUTIONS

THE BRUCE ANCHOR CHAIN TENSIONER

A compact one-piece chain clutching device for pre-tensioning various sizes of chain attached to opposed anchors or piles.

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[Next page](#) 



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TRACK RECORD

INNOVATION

INTEGRATION



DEVELOPING EFFICIENT TENSIONING SOLUTIONS

AND GOING FURTHER ▶

THE ROCKSTEADY TENSIONING TOOL (TT)

In 2023, LDD, a brand in Acteon's Engineering, Moorings and Foundations division, was granted a patent for their novel mooring line tensioning tool. The Rocksteady tensioning tool (TT) is a subsea mooring line tensioning system to simplify the installation and replacement of mooring lines on floating offshore assets.

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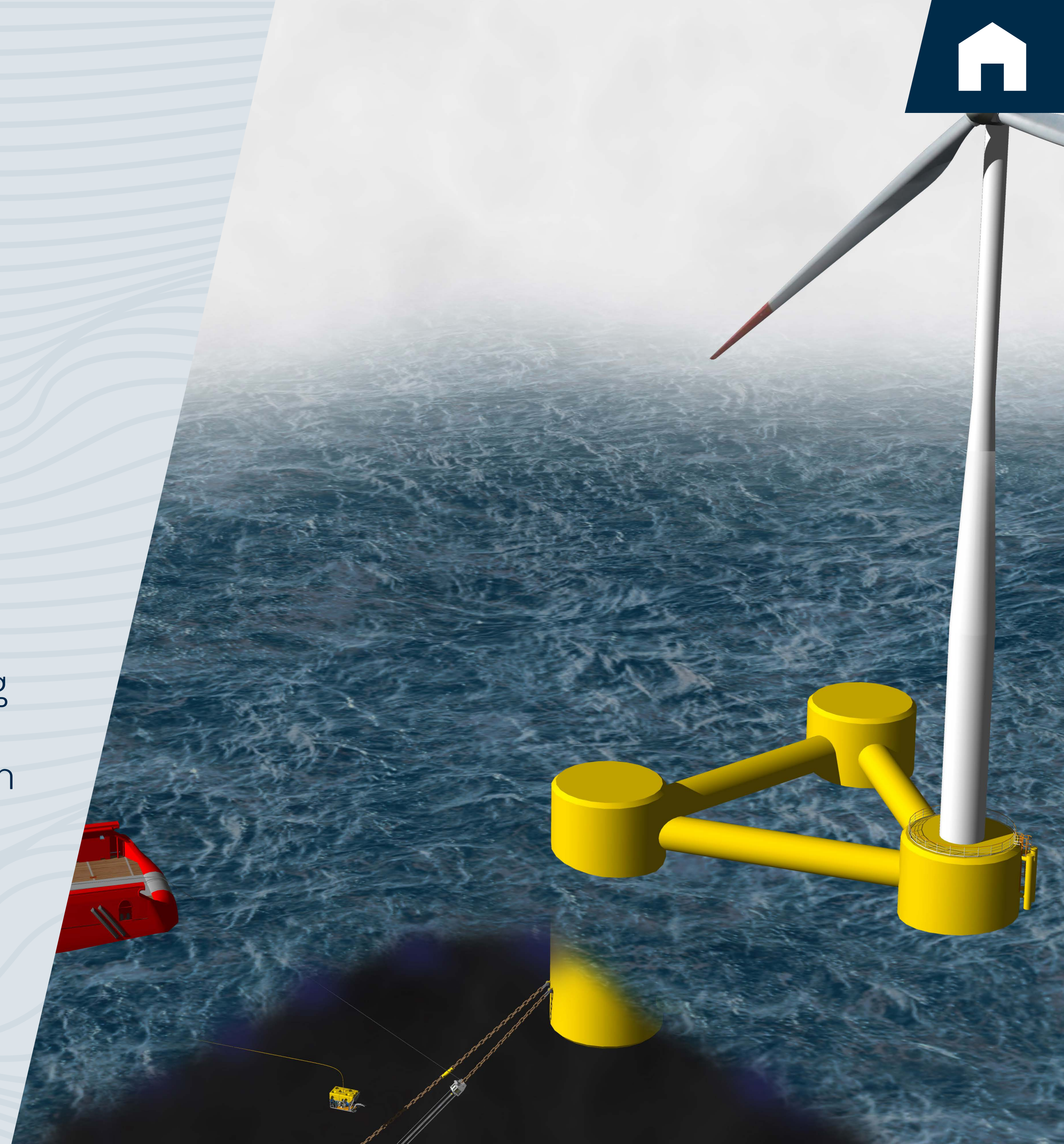
[Next page ▶](#)

DOMAIN EXPERTISE

TRACK RECORD

INNOVATION

INTEGRATION





TECHNOLOGY DEVELOPMENT

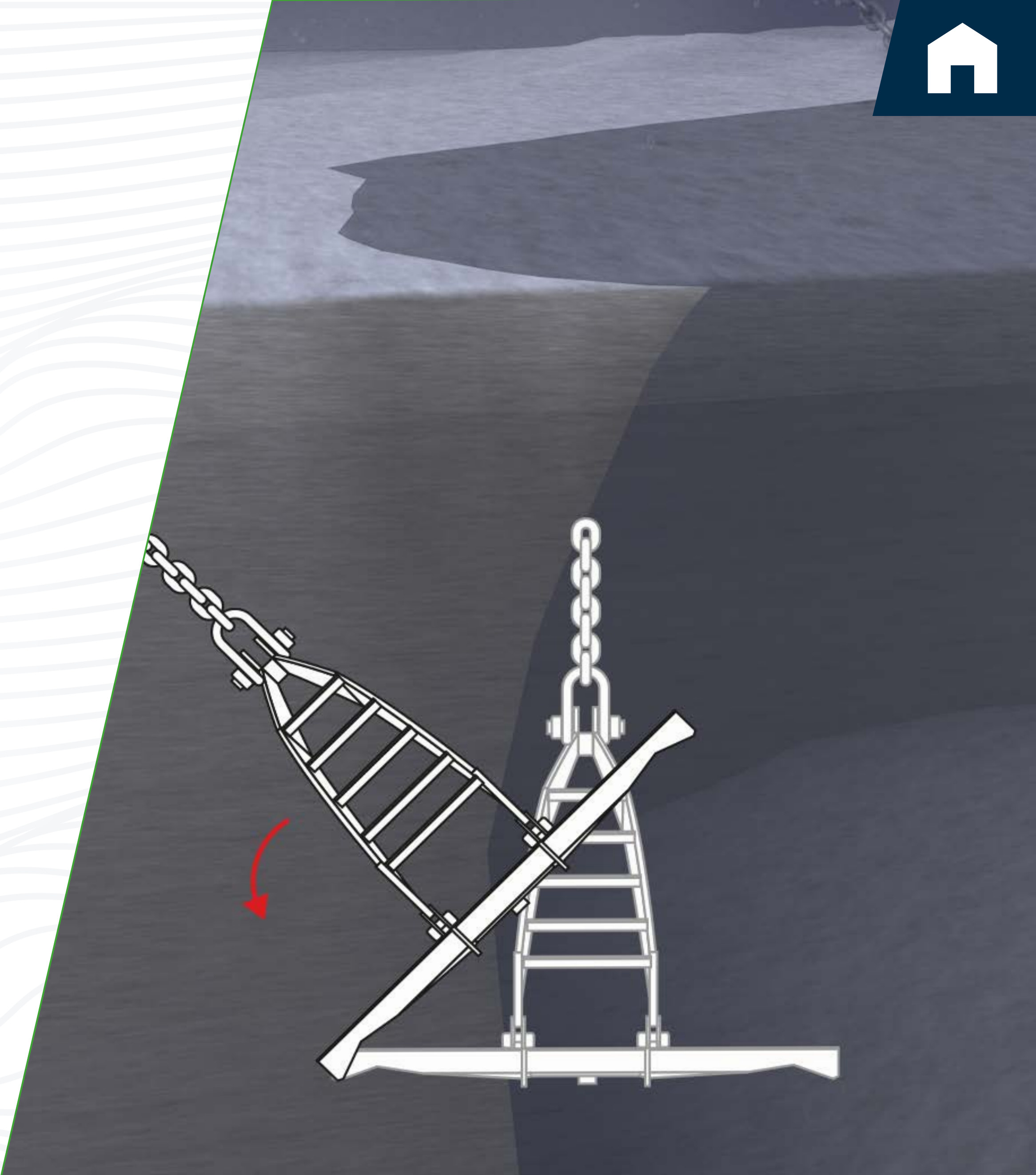
At Acteon, we know that fostering a culture of innovation is the key to delivering more commercial and environmental benefits for our customers.

From collaborating with academia to encouraging in-house technology development, we always ensure that our clients and business partners are part of the innovation process.

EXAMPLE OF COLLABORATION WITH ACADEMIA: Bruce Anchor, a brand in Acteon’s Engineering, Moorings and Foundations division, has developed a centrifuge testing method that can be used to perform a site-specific side load assessment of drag anchors. The team has been collaborating with the University of Dundee and testing the method in their centrifuge laboratory.

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[Or continue to the next page](#)



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[Next page ►](#)

DOMAIN EXPERTISE

TRACK RECORD

INNOVATION




INTEGRATION





DISCOVER OUR HOLISTIC STRUCTURAL APPROACH

From front-end engineering to mooring services and other marine operations such as towing and cable layout, Acteon provides a wide range of specialist services and equipment.

-  We engineer the most effective solution in any soil.
-  We leverage our extensive experience of handling large assets and long cable lengths.
-  We design innovative and effective mooring and asset integrity systems.

[Next page](#) ▶



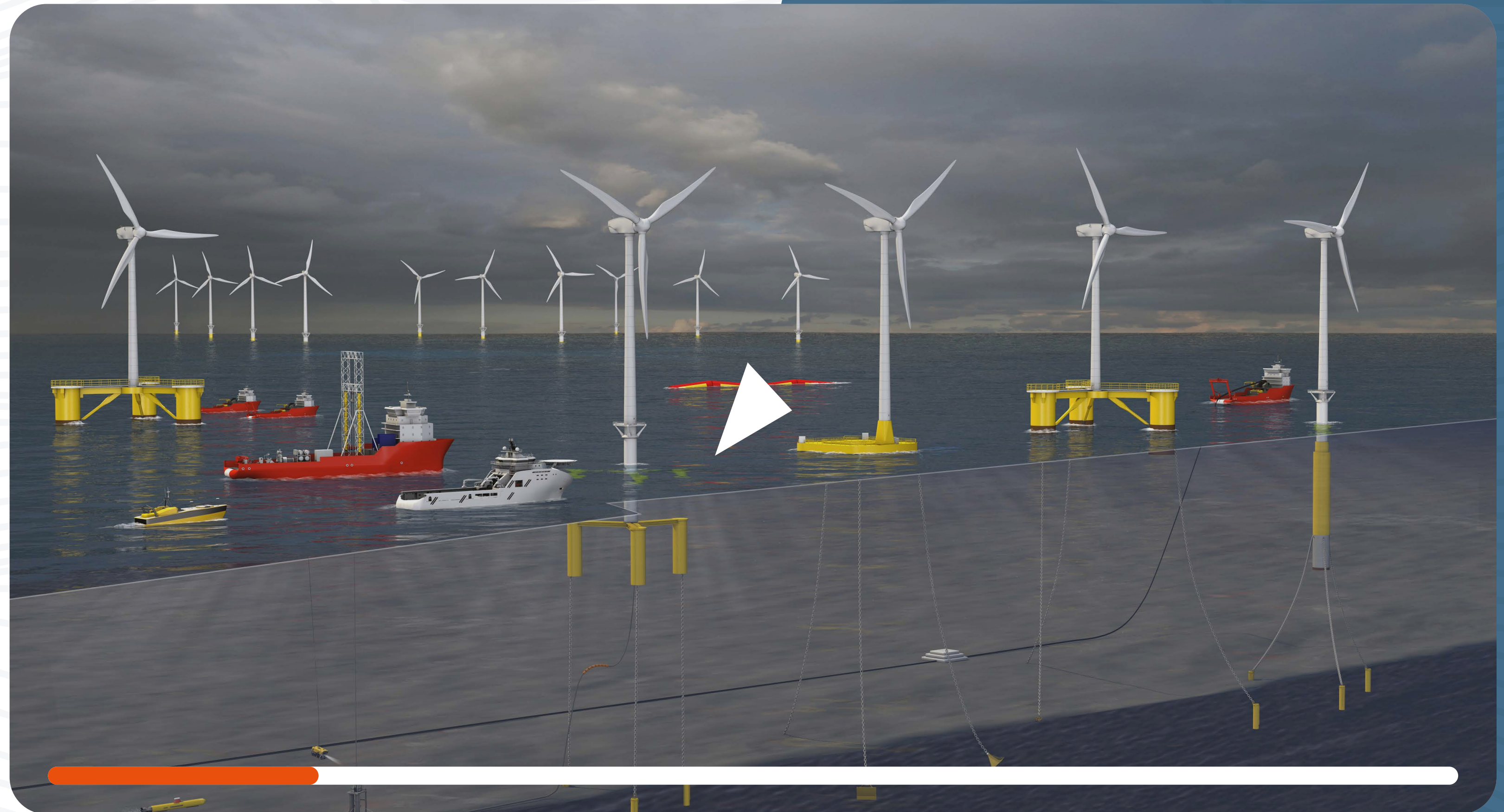


AN INTEGRATED APPROACH TO FLOATING OFFSHORE WIND

Click below to see how a single interface and a holistic structural approach can transform operations for clients:

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[Or continue to the next page](#) 



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TRACK RECORD

INNOVATION

INTEGRATION



OUR INTEGRATED PROCESS DELIVERS AN EFFICIENT MOORING DESIGN

Our mooring engineers combine soil sample interpretation, metocean conditions, and environmental concerns, to dynamic cable constraints, supply chain availability, installation vessel availability and mooring loads to deliver an optimised mooring design.

DOWNLOAD OUR INFOGRAPHIC: ANCHOR TYPES FOR FLOATING WIND [↗](#)

[Or continue to the next page ▶](#)

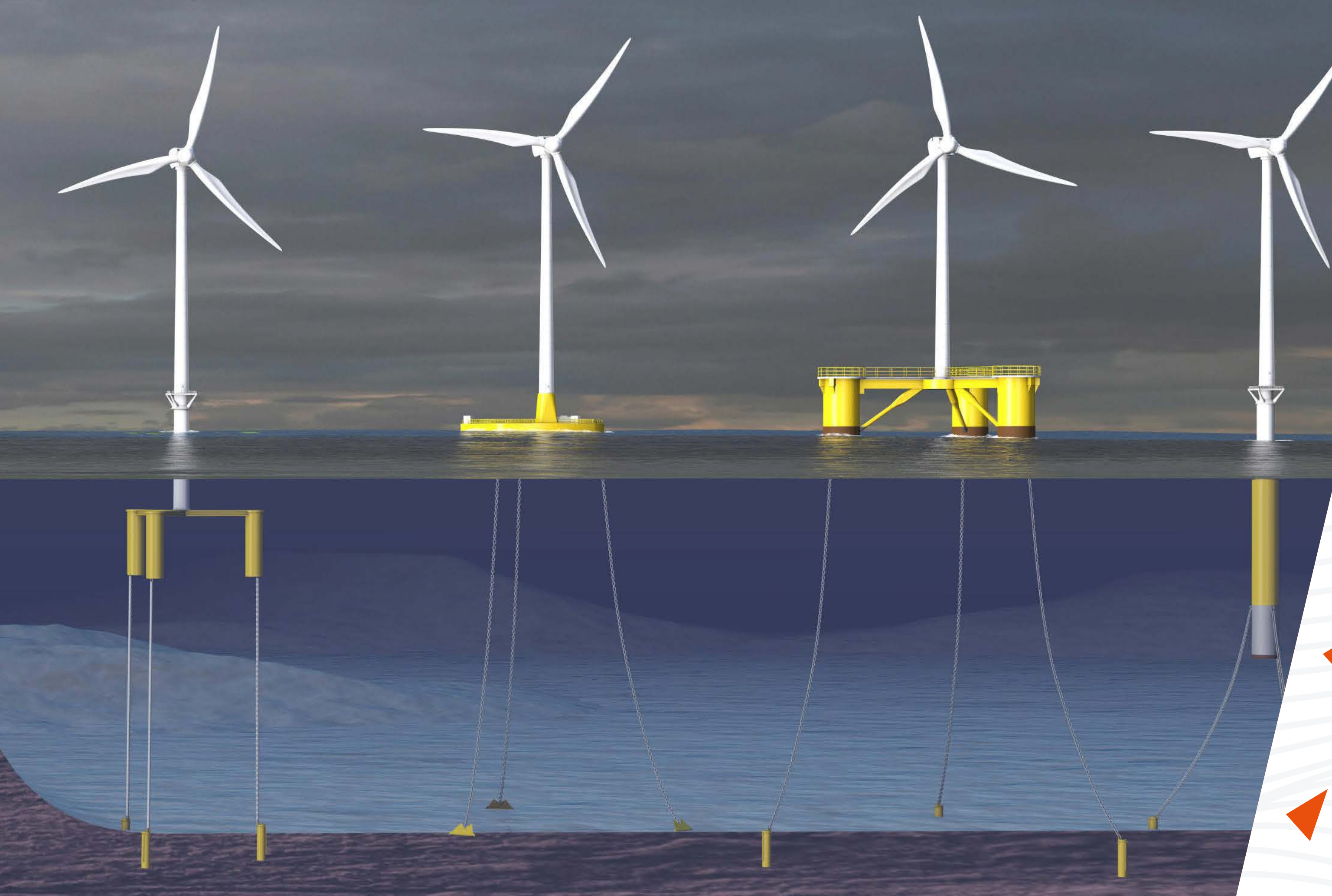
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TRACK RECORD

INNOVATION

INTEGRATION

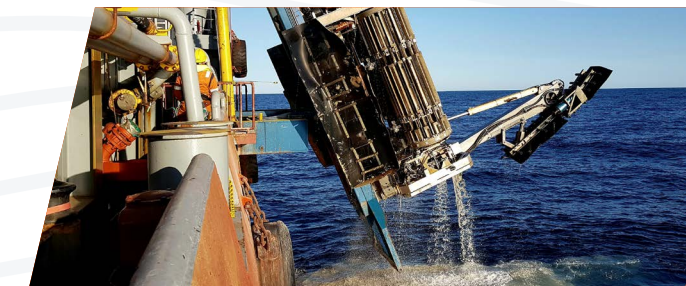




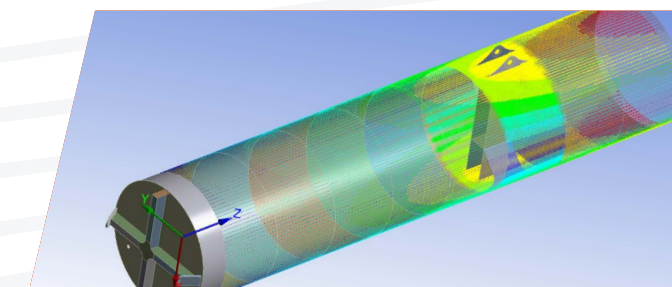
FLOATING WIND TURBINE STATIONKEEPING SYSTEM



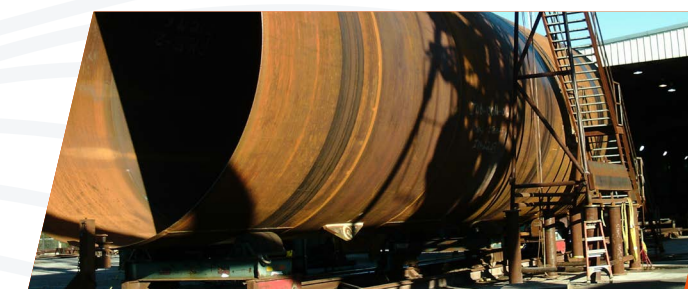
GEOPHYSICAL SURVEY



GEOTECHNICAL SURVEY



ANCHOR DESIGN



ANCHOR FABRICATION



ANCHOR INSTALLATION

[Next page ▶](#)

DOMAIN EXPERTISE

TRACK RECORD

INNOVATION

INTEGRATION



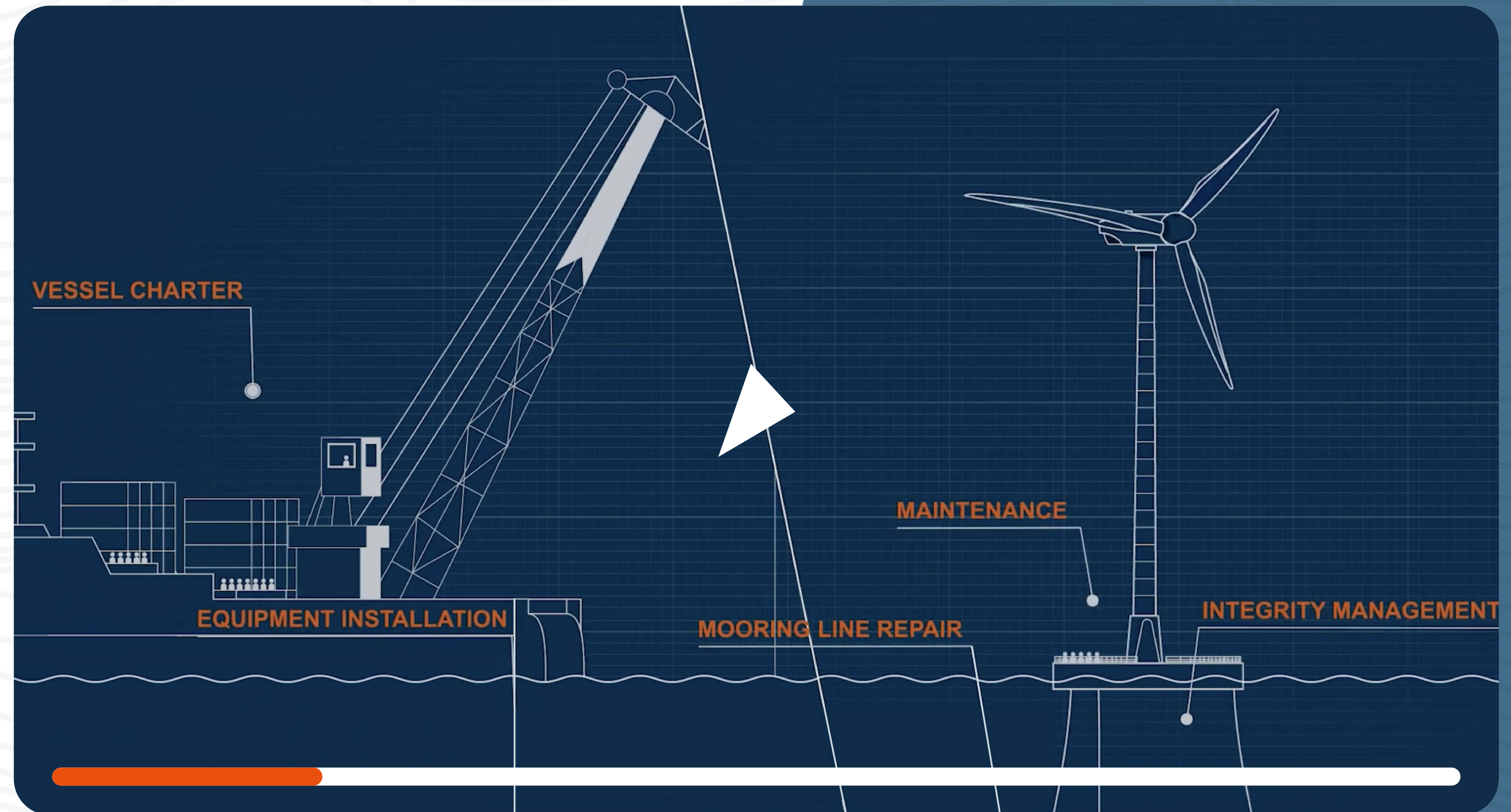


DE-RISK YOUR NEXT FLOATING PROJECT

We provide a single point of contact for your floating wind project: from site characterisation to engineering to mooring equipment and offshore installation, inspection and monitoring.

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ACCESS SPECIALIST SUPPORT TODAY!



Acteon takes a **focused approach to integration**, including a single contracting entity and a dedicated project management team to **simplify and streamline solutions**.



Our profound, **cross-disciplinary understanding** and execution of design and engineering interactions across the project life cycle, minimises client interfaces and management burdens.



Ask us how we can support your next floating wind project at: [**info@acteon.com**](mailto:info@acteon.com)

NEVER MISS AN INSIGHT FROM OUR EXPERTS 

