

Over The Horizon windfarm bathymetric survey for monopile and inter array-cable inspection

DriX was used to perform a bathymetric inspection of a windfarm site (France). The operation, entirely supervised from a Remote-Control Center, included cable routes and monopiles inspection.

CHALLENGE

OTH operation with no support vessel on an offshore windfarm.

SOLUTION

Drix equipped with a Kongsberg EM2040-07 multibeam echosounder, communication over the horizon via Starlink.

Newly developed survey features including precise cable route following.

RESULTS

Efficient survey operation in a complex environment conducted without support vessel.

PARTNERS



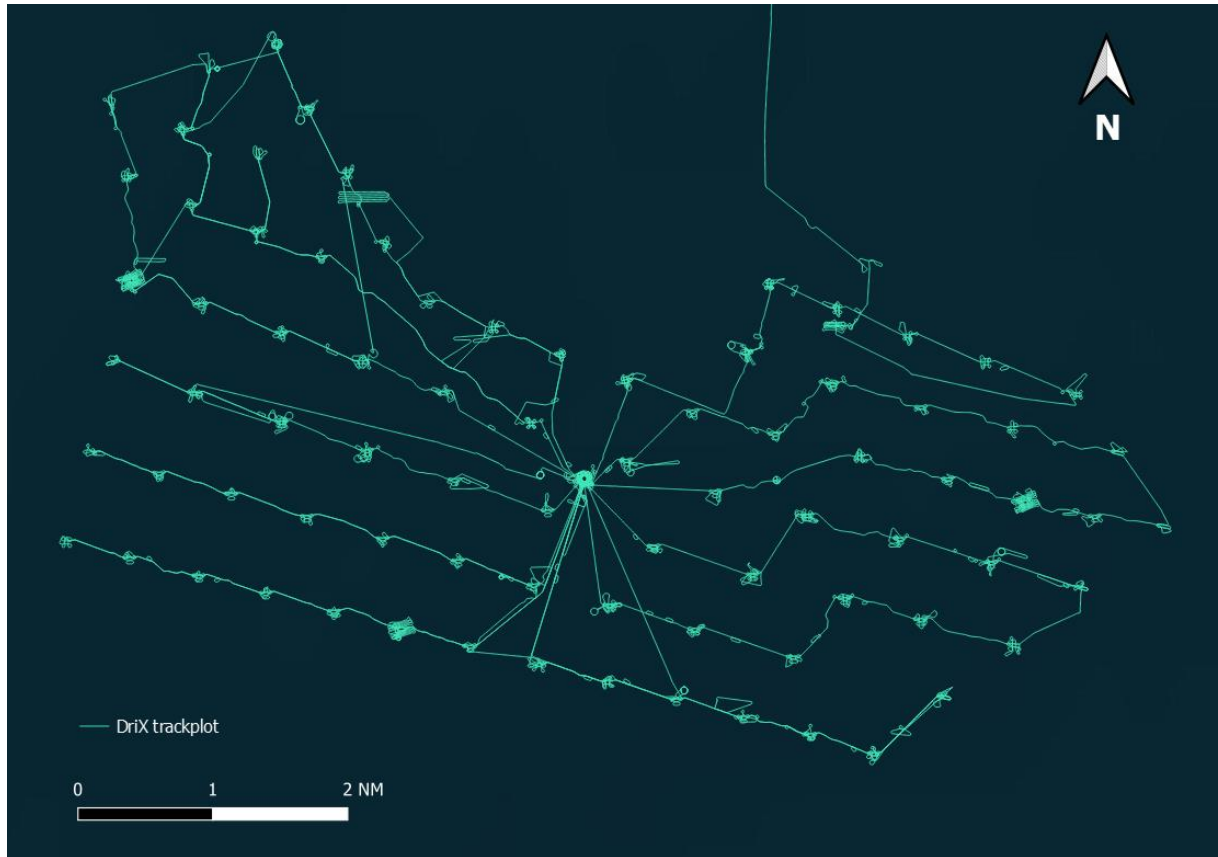
Maintenance bathymetric survey on windfarm

In July 2023, Exail completed the bathymetric survey of the windfarm, off the French Atlantic coast, using the Uncrewed Surface Vessel (USV) DriX, in Over The Horizon (OTH) mode. The operators, located in a shore control center approximately 800 km from the survey site, monitored the multibeam data quality and navigation parameters for the operation, which lasted approximately 60 hours.



CASE STUDY

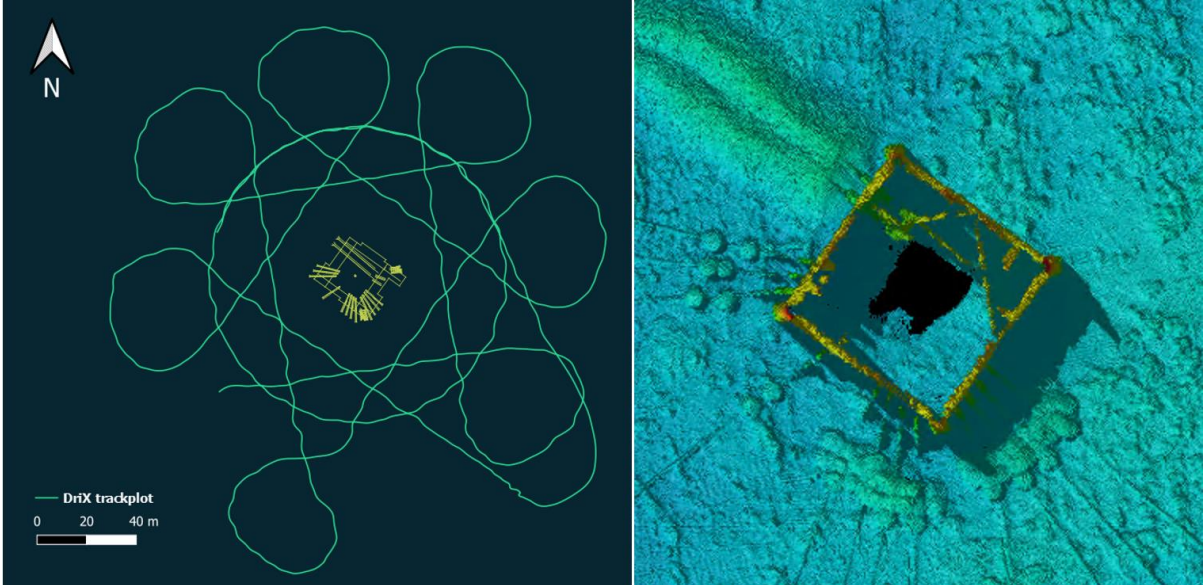
During the 60 hours of data acquisition, DriX sailed 250 nautical miles on the windfarm site alternating between cable route following and monopile inspection. With data requirements as strict as 5 soundings per 20 centimeter-cell and to meet the IHO's Exclusive Order, it was of crucial importance to be able to follow the cable routes perfectly. This was made possible by the latest version of CortiX (the software at the heart of the USV autonomy), allowing DriX to follow each cable section with a 1-meter accuracy and minimal offtrack even under strong winds and tidal currents.



DriX tracking on the offshore windfarm.

All structures, including the offshore substation, were surveyed at a close distance of 20 meters. To ensure data quality and navigation safety, operators monitored all cameras, telemetry, and software acquisition in real time using the high bandwidth capabilities of the Starlink communication system. Sound velocity profiles were performed every 6 hours using the winch onboard DriX.

CASE STUDY



DriX tracking around the offshore substation and the associated multibeam shallow grid data.

