

Moving Marine Data to the Cloud

Optimising Marine Data Management and Analysis
in the Era of Offshore Wind Exponential Growth

White Paper

As offshore wind energy capacity rapidly expands around the world, demand for subsea surveying has reached an all-time high. The industry is generating more marine data than ever before to support wind farm operators in building new wind farms and maintaining existing sites. Further exponential growth driven by ambitious new production targets for offshore wind is set to catalyse a paradigm shift in data management, analysis and sharing. The Cloud is the key, and it's easier to make the move than you might think.

More Energy Demands More Data

Global offshore wind capacity is expected to grow from 34 gigawatts (GW) in 2020 to 330 GW by 2030. Using today's industry average turbine capacity of 3.4 MW, 82,222 new turbines will need to be built, transported and installed.

Approximately 11,000 of these will come from the German government's April 2022 Wind Energy at Sea Act, a.k.a. the Easter Package, which calls for at least 30 gigawatts of energy to be produced offshore in the North Sea and Baltic Sea by 2030. Similar targets have been set by countries actively engaged in carbon reduction globally, pointing to significantly increased needs for subsea geophysical data as an enabler for the much-needed new clean energy production capacity.

Due in most part to political and social challenges the [Renewables Consulting Group \(RCG\)](#) states that only Vietnam, Poland, and Denmark are on track, among a list of the fifteen countries that have offshore wind specified development targets for 2030. Wind energy companies continue to ramp up efforts to expand production capacity in spite of this, meaning suppliers and contractors – including marine surveyors – must be ready for increased demand.

Digital infrastructure will become even more essential for both the efficient acquisition and management of exponentially more marine data for licensing, engineering, and navigational purposes during the planning, development, operational and decommissioning phases of the wind farm lifecycle.

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