

COWI Pursues Agile Transformation with Offshore Wind Customers

COWI, a renowned engineering consulting company, has embarked on an ambitious transformation journey aimed at maintaining its leading position in the rapidly growing offshore wind market. At the core of this transformation is a digital platform named COWIND Digital Toolchain and a new mindset based on DevOps principles among the company's many engineers. SCADA MINDS is supporting the entire journey.

Agility has become a keyword at COWI. As one of Denmark's oldest and foremost consulting firms, COWI possesses a vast and diverse landscape of competencies driven by specialists with deep expertise. Including offshore wind, where COWI has been one of the pioneers in designing and developing offshore wind solutions with customers around the world.

In the market for sustainable energy, not least offshore wind, development is progressing at full speed in the global race towards net zero, demanding companies to continuously optimize solutions to lead the green transition. To that end, when building a new offshore wind farm, foundations play a crucial role constituting approx. one-fifth of the capital costs.

With this in mind, COWI launched the Operation COWIND Programme, a fitting name for the digital transformation taking place in the division responsible for designing offshore wind foundations. This is no small undertaking. Designing offshore foundations is a highly complex field involving numerous disciplines and calculations. And as projects are becoming larger and more complex in nature, combined with the need for fast and efficient scaling of offshore wind solutions, COWI saw digitalization of the design process from start to finish as a natural next step enabling their customers to stay at the forefront.

Digital in mindset and action

"We have highly qualified engineers in our offices in Denmark and abroad, and we have excellent tools. However, we saw a need to fully integrate and automate our end-to-end design process to give our customers even more optimized design solutions as a basis for decisions," says **Knud Erik Thomsen**, Programme Director at COWI. He continues:

"We need to be data-driven to stay relevant. And we must utilize the cloud to facilitate an efficient design process and embrace the principles of DevOps where a product is never finalized but continually improves in line with customers' needs. This is a new way of working with software development hence we needed experienced people to assist our journey."

After an evaluation process, SCADA MINDS was chosen as a partner. SCADA MINDS assisted in building the new COWIND Digital Toolchain for the Operation COWIND Programme and has played a crucial role in the organizational changes resulting from the new methods.

"We were looking for a partner with a deep understanding of how to create software collaboratively within offshore renewables. The winning criteria for selecting SCADA MINDS were their understanding of both the industry, the disciplines involved, and the aspects of digitalization, which is crucial in a transformation process like this. When we introduce a new way of developing and maintaining software and we want people to embrace the cloud and adopt a new mindset, it is important with a partner who can communicate effectively with our project team and specialists," says **Charlotte Søgaard**, Senior Business Development Director at COWI.

"We are not a software company, and terms like Agile and Scrum are not widely used in our organisation. Therefore, it is important for us to have a partner like SCADA MINDS, who not only possesses the technical expertise but also experience in how to support agile principles like Scrum," she explains.

Entering a new digital league

The COWIND Digital Toolchain considers thousands of distinct parameters to determine optimized, predictable, and consistent designs for offshore wind foundations. And by operating in the cloud, the toolchain generates designs fast and efficiently while allowing for easy scalability and adaptability to changing design requirements.

"We have not changed our tools; we have created a digital platform for design optimization. In simplified terms, our engineers can enter data into the streamlined platform, press a button, and receive a finished report as a basis for a further detailed quality assessment. And together with our customers, smoothly evaluate, update, and run new design iterations in line with their scaling ambitions. By ensuring full traceability and standardisation according to the highest industry standards, the COWIND Digital Toolchain allows us to enter into a new digital league, making us an even more attractive partner to companies wanting to stay ahead of the development within offshore wind," explains **Knud Erik Thomsen**.

"The Operation COWIND Programme has enormous significance both in the current phase and when we plan to further roll out the digital transformation in the Renewable Energy division. It is a prestige project, headed by a bold COWI leadership team that is generating considerable attention and moving us a step up in our digital maturity," concludes **Charlotte Søgaard**.



About COWI

COWI specialises in energy concepts and implementation that meet the increasing demand for reliable, efficient and sustainable energy solutions.

With a strong focus on meeting our customers' needs, we work with all aspects of energy planning, production, and distribution including new energy systems and sector coupling

Since 1980, COWI has been involved in the development of more than 1000 wind power projects in 70 countries.

As a full-service provider within onshore and offshore wind energy, we offer our services at all stages of wind power projects from site prospecting, wind and feasibility studies to the 'ready to build' stage - as well as lifetime extension of existing wind farms.



About SCADA MINDS

We develop and deliver intelligent engineering and operational solutions. These solutions optimise the design and production of wind turbines, improve operation, and predict maintenance of wind farms.

With data-driven insights, we cut through organisational boundaries and create transparency and mutual benefits for wind turbine manufacturers and wind farm operators.

We boost the entire technology platform by integrating operational technology (OT) with information technologies (IT). You benefit from new technologies, such as IoT, Machine Learning, and DevOps for agile development. We turn your business into a digitalised, sustainable business.