

For the past 10 years, OWI-Lab has been preparing the wind energy sector for the future

06 July 2021, 02:00

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Belgian wind energy companies today enjoy an excellent reputation worldwide. They can count on the support from OWI-Lab, the innovation and knowledge platform with researchers and engineers from Sirris, VUB and UGent, founded 10 years ago now. The cross-fertilisation between the industry and the academic world turns out to be the key to the success of our Belgian companies.

Ten years ago, Sirris and VUB joined forces. At the time, VUB had already built up a European reputation in wind energy. Sirris received more and more questions from the industry regarding research for offshore wind farms. The forces were joined in OWI-Lab, with the support of the Flemish government. In 2020, UGent also joined the partnership.

Specific Belgian know-how

Belgian companies specialising in the installation and operation of wind farms at sea are highly exposed to international competition. Specific know-how was therefore built up within the OWI-Lab to support the sector. Through knowledge and innovation, we ensure that the companies in the Belgian wind energy sector strengthen their competitiveness and become top in their niche. Through our open platform, we support the entire industry value chain in industry-driven research, development and innovation. After 10 years, the cooperation comprises three main pillars of

activity: services and expertise, R&D projects and knowledge sharing.

OWI-Lab has also launched new projects and research programmes in recent years. We were the first to carry out large-scale measurement campaigns at sea. Based on these insights, we set up innovative experiments that allowed us to increase the efficiency, reliability and sustainability of the sector. We have also put this knowledge into practice, and this led, for example, to the spin-off 24SEA. Above all, we created a real community of innovation-driven companies in a difficult, highly competitive sector.

New challenges

In the years to come, the sector will face a whole series of challenges. In addition to increased international competition, the turbines are becoming larger and are more often installed at difficult to access locations. OWI-Lab will also respond to this with specific activities, in order to further strengthen the market position of companies in the coming years by introducing new technologies. For example, we will soon be able to simulate wave behaviour in a brand new infrastructure at the Ostend Science Park and also test new concepts of floating turbines. Our customers operate internationally in places where we have to take typhoons, earthquakes and seaquakes into account.

Finally, OWI-Lab aims to provide further solutions to increase the reliability and performance of the installations. For example, we want to introduce new technologies to reduce maintenance costs. In addition, we will investigate how to solve the temporary nature of wind energy. This can be done, for example, by storing the energy in batteries. We are also working hard on circularity and looking into the possibilities of giving old blades a new life. All these initiatives will help to ensure that our companies continue to play a pioneering role in the world.

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