



Hyper-collaboration is the new norm in offshore wind

Some would argue that the offshore wind industry is the epitome of efficiency. Wind turbines keep getting bigger and bigger, which appeared impossible just a few years ago, resulting in reduced levelized cost of energy. The pioneers within the sector can collectively argue that they have started a coevolution towards decarbonation and a greener world.



Meanwhile, it is the phenomena of how constant efficiency and cost reduction drive the offshore wind market that is interesting. How and when is the optimum achieved, as this could be the point where the offshore wind industry will develop fastest. These questions puzzled the management of Port Esbjerg, which has been used as an installation port for nearly two decades and

therefore has observed the changes. They believe the future is hyper-collaboration, between ports and between companies servicing the offshore wind industry.

There are numerous examples of the sharing economy in operation at the port. A prominent example involves one of the largest fleets of mobile harbor cranes. The port owns and operates the cranes that are used by both manufacturers of major components for offshore wind turbines and the various stevedore companies operating in the port.

This system is well known and helps reduce the cost of crane usage. Another example is the specially trained dockers, all members of the same cooperative group, which has been in operation since 1944. Each stevedore company requests the dockers on a call off basis, paying for the service only as and when it is needed.

The sharing economy drives down costs to the benefit of the port and the companies working here. Hyper-collaboration is the next generation for efficiency and the point at which the port can operate beyond the current optimum. A system that allows the service companies to share equipment and resources and thereby work together without coordination.

For example, where availability in a warehouse owned by one company is leased out to a competitor, or unused handling equipment is shared to achieve better utilization. This takes the availability of equipment out of the equation and allows companies to compete on information and competency, which is intrinsic to the safety

needed in the offshore wind industry.

In 2018, many of the major players in the offshore wind industry got together to develop the 'Guideline for planning and execution of WTG lifting operations', which is an example of how collaboration was achieved to ensure continued safe lifting operations, through common agreed standards. The same uniform approach to safety was recently used for road safety in Port Esbjerg, sharing and agreeing on a safety pledge when designing road junctions using knowledge of the location. Here competitors from both the original equipment manufacturers and service companies came together with the mutual goal of improving road safety in the port.

This practice of collaboration goes beyond the benefits of the sharing economy. Prior to the COVID-19 pandemic, Port Esbjerg was visited by close to 200 delegations every year. The stakeholders, from the emerging markets within offshore, all pass through the port to understand how one of the epicenters for offshore wind in Europe works.

Conversely, the heuristics to developing a port suitable for offshore wind goes way beyond seabed modifications, load on quayside and layout of roads and buildings. The true DNA is how the companies in the port have been and are able to embrace the challenges and opportunities in the industry and how they have developed their services together, both within the port and in other locations in Europe.

Hyper-collaboration is the next big thing. It requires a common goal to remain one of the

most efficient offshore wind ports in Europe, starting with a mutual approach to safety and seeking to expand towards the next offshore wind markets. To take advantage of this opportunity the companies each need to evaluate how they optimize their current competitive advantage together. The sharing of resources and material to constantly improve knowledge, efficiency and returns, while simultaneously lowering the cost of services must be the basis of any offshore wind port.

The setup in Esbjerg exemplifies this. A large area and flexibility are the norm, and collaboration for mutual benefits is the key to success. Here, the port and companies operating in the port work together, both in the surging offshore wind market, and also in situations of crises illustrated when the COVID-19 pandemic affected the port. Port Esbjerg decided to initiate a string of initiatives, where unused areas could be redelivered to the port from day to day and payment terms were postponed. This was implemented in order to support the liquidity of affected companies. The result was remarkable and offshore wind activities continued undisrupted to and from Dutch wind farms, with pre-assembly, load-out and

installation from Port Esbjerg.

There is a proven track record of efficient and cost effective installation of Dutch and German wind farms from Port Esbjerg, supported by the port activities in the hinterland.

The Danish wind industry dates back more than 45 years, whereas the first offshore farm was installed from Port Esbjerg in 2002. Both onshore and offshore wind in Denmark expanded because of this. Plus, the fact that today blades, nacelles, and towers for offshore wind are produced in Denmark and can be easily transported to the port. This combination of the logistic network to the port and the efficiency and experience of the service companies operating here means that Port Esbjerg is very competitive beyond the Danish markets.

Equally, the capacity to manufacture major components at the ports in the future is essential. Needless to say, the ports offering vast areas for the establishment of these initiatives will be in the forefront of the next step in hyper-collaboration.

Ports need to deliver a concerted approach to services, where the hub port will have to

coordinate with manufacturers delivering to the pre-assembly ports. The benefit is reduced cost and risk to port calls and load-out operations between peer ports. Knowledge sharing will be crucial to achieve this, and this trend may be argued to be the epitome of hyper-collaboration for the predicted expansion in the European markets.

Today, 148 GW of offshore wind is being screened, planned, consented and pre-constructed in Europe for the next decade or so. This should be seen in the context of the 22 GW currently installed. The surge is significant, and it could therefore be said that port competition must give way to collaboration, which is needed to support this green transition. Port capacity is required, as the market provides the opportunity for every port located close to the future wind farms.

The offshore wind industry is therefore facing the challenge to keep costs under control in a surging market, while continuing to work innovatively, safely and efficiently. This calls for a united global view, where port and companies take an active role in leading the collaboration for the green transition.

In Port Esbjerg the example of multiple





companies engaging in the goal of reducing their emissions led to the carbon pledge. This allowed the port, together with the world leading Honeywell Inc, to develop systems which determine the carbon footprint in real time. The data is used to most effectively deploy the transformer to connect the vessels to certified green power.

Similarly, it provides the example of how companies with common goals can hyper-collaborate to find new ways of working together to enhance the status quo. Working together can be envisaged in many aspects of offshore wind operations from standardized transport equipment, to sharing material handling and resources, and to the unified development of skills for the many jobs renewable energy will create in the future.

Achieving the optimum in port operations for offshore wind requires both cost leadership and efficiencies built on using the skills of those performing the work.

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