

Working smarter while working harder



Achieving true logistic visibility from planning to completion may seem like something of a pipe dream for offshore operators, but can digitizing and automating many processes and linking procurement and operations make it a reality? Jim Hededal Nielsen, CEO & Founder of DECK1, tells PES why he believes it can.



PES: A very warm welcome to PES Wind Jim. By way of introduction would you like to start by giving a brief insight into who DECK1 are and what it is you do?

Jim Hededal Nielsen: DECK1 is a software development start-up based in Denmark. We are building tomorrow's digital trading and operations platform for the offshore renewables industry. Having worked as an aviation consultant and search and rescue pilot in the offshore renewables industry for over two decades, I experienced at first hand the logistic, contractual, safety and compliance challenges and in-efficiency within the offshore industry today. This, together with a high increase in offshore capacity in the coming decade fostered the idea of creating an open and transparent trading and operations platform, connecting the entire ecosystem of stakeholders within the offshore renewables sector.

A platform making previously time consuming and sub-optimal procurement and operation processes truly digital and data-driven and with access to a global instead of a national market. An open and connected ecosystem of stakeholders supported by user-centric designed digital tools contributing to a smarter, safer and more effective industry. That is our vision and what drives us on a daily basis.

PES: With the race towards the zero-emission targets of 2035 and 2050 now well and truly on, how do you see digital technology such as that offered by your company helping?

JHN: By far the most important aspect of offshore wind farms is reducing downtime. Offshore wind capacity for 2035 is already planned to be 10 times today's capacity. At the same time, the wind turbine generators are getting bigger and floating wind structures are changing the game by enabling new areas further offshore to be utilized. A digital solution will provide complete transparency in operations through a live map, reduce administrative work and time for each procurement process and enable a faster response to unforeseen and extra tasks.

The visibility of the operation and the transparency of the marketplace, enables wind farm operators to react without delay and get the most out of their offshore wind farms by providing more clean energy to our onshore grid.

PES: How important do you think the redundant logistic chain is in reaching these zero-emissions targets?

JHN: Very important! Just imagine we could save 80kg CO₂ for every minute a 7 MW was operating at full capacity. Having easy and fast access to the right transportation solution, at the right time and at the right place would reduce downtime from potentially days to a few hours. Add Brexit,



Covid travel restrictions etc, and a day's downtime can easily become longer. By using the DECK1 Live Map the offshore wind farm operations-centre would be able to track personnel, vessels, helicopters and drones and quickly be able to find the closest and most suited means of transportation when ad hoc or emergent needs appear.

Effectively, this will reduce the time spent from problem inception to problem solving. 8900 wind turbine generators represent today's capacity. That capacity is expected to be 10-fold in 2035, just 14 years from now. Looking at just one wind turbine generator, the effects may seem minimal, but taking an industry-wide outlook the effects will be significant.

PES: What do you see as the biggest drivers in contracts and how important is it that offshore wind farms have the right logistics setup?

JHN: Price, safety and environmental impact are some of the big drivers in contracts. To stay competitive in a rapidly developing industry, this might become even more the case within the next couple of years.

Price will always be a big factor both for the buyer and the seller. By providing the

possibility of buying a service, the buyer only has to pay for the actual usage and not the availability, since the market is more open and there are multiple available options.

Safety is for the workers that actually fly or sail every day. Unions have a big impact on this. Especially with the projected increase in offshore activity, there will be a battle for offshore workers with the right skills, and it might become a workers-world where the unions could demand more safety when activity increases. Having a digital marketplace linked to the operations reporting would give decision makers a tool to ensure the required safety is provided.

Environmental impact will become more and more important. National and International political goals, regulations and executive management in leading companies are pushing for greener solutions already. With a marketplace that includes drones, helicopters and vessels in one place, all linked to a digital and automatic daily progress report system, it will be possible to track the green impact in real-time during operations, as well as see the CO2 impact by each transportation solution before procuring.

PES: Will everyone benefit from a digital solution such as DECK1?

JHN: Most will. We have heard arguments such as 'personal contact is lost', and 'we want to have sole use assets for best availability', giving the impression that a digitalization will replace today's world. It will not! It will just be a new way of negotiation, monitoring and selling offshore transport assets, making one person able to manage more operations, which will become more evident with the planned increase in offshore activities in the coming years.

A digital system will give optimal value in activity dense areas such as the North Sea, but for companies that operate across borders or globally, even isolated activities can be negotiated and monitored in the same system, giving the company real-time transparency to their total global efficiency and cost.

PES: Do you think there is a need for an independent trading platform to ensure an open market?

JHN: Yes, absolutely. We have conducted case studies looking at crew transfer vessels and helicopters out of three major offshore hubs in the North Sea. Results indicated that smart sharing of transportation may reduce costs 20-55% for buyers and increase income per transport asset by 10-25% for the sellers.

Additionally, the response time will be reduced in many cases when the sole-use assets are broken or in use, and a new segment of buyers will be able to get access to a pool of high-quality transport solutions.

PES: Has the Covid pandemic highlighted this do you think and, if so, in what ways?

JHN: The pandemic has had a big impact on travel restrictions and the way we use digital tools in our everyday life. Being able to restructure fast can be essential in keeping an offshore operation running efficiently.

Several companies have had contracts cancelled or had to cancel and renegotiate soon after Covid travel restrictions were implemented early in 2020. More flexible contracts based on services and higher degree of digitization would help mitigate restrictions. Virtual team meetings have become an everyday event for most managers and we believe that this digitalization will continue into other areas such as procurement, reporting, planning and project handling.

The pandemic is one type of challenge, but Brexit, the Jones act, company policies, labour strikes, harbor restrictions etc. are other challenges for offshore wind farm operators to cope with in the coming years, while their activities continue to increase.

PES: So where do you see DECK1 helping?

JHN: We have focused on creating a transparent trading and operations platform



administrative workload for the operative personnel and providing the decision makers with real-time digital transparency.

PES: Looking to the future then, how convinced are you that digital technology will help move the offshore industry towards sustainability?

JHN: Transportation to offshore windfarms could be a bottle neck in the near future. 2020 had roughly 27.000 transports, in a couple it will pass 50.000 transportations per year, and by end of the decade we might see more than 200.000+ transportation. This rapid increase would require more than just more people and more transportation assets. They also needed to be utilized in the best way possible, which is why we have developed an independent digital marketplace that enables smarter use of transportation via automated functions, efficient flow, integration of other systems etc.

where administrative processes are reduced and it is possible to compare multiple assets on price, CO₂ emissions etc. Crew transfer vessels are efficient for transporting a tech crew, spare parts etc, but are slow compared to a helicopter. Helicopters on the other hand are fast, can cover a large area, but are compliant-heavy and expensive. And then we have drones, a whole new tool for increasingly more tasks. Giving the wind farm operators the opportunity to select the right asset at the right time will provide value for all.

Besides our sales platform, we will have our daily progress report solution ready for early 2022 and our data-driven analytics solution ready by end 2022.

PES: What do you think are the main advantages of DECK1 and what would you say to those that may need some convincing to get on board?

JHN: The best convincing argument would be to try it! A digitized future for trading,

chartering and operations will inevitably find its way into the offshore renewables and oil and gas industry. It is not a question of if, but a question of when. DECK1 is not aiming at replacing or cutting out certain stakeholders in the offshore ecosystem, but works solely towards a truly digital and smarter way of working to transform current tedious, rigid processes and structures into leaner, more effective solutions, providing a win-win situation for everyone in the industry and for the environment.

DECK1 is an independent company, not owned by any major player. We provide a full oversight of the offshore transport sector, including air and sea. Additionally, we have the full circle from searching for an asset, procuring it, following-up with a highly automated daily progress report and collecting it all in a comprehensive, company owned, digital business intel module. We make it possible to stay with the projected expansion of the offshore sector, by reducing

Besides these obvious advantages such as saving money and time, we also hope this will fuel the imagination of the offshore renewable business to be conscious about their selection of transportation. Start to share across windfarms, implement new technologies such as drones faster, combine use of Vessels and helicopter for optimal efficiency etc. It is renewable energy the future needs after all, and we support the transition by enabling easy access to the transportation assets.

I strongly believe digitalization and automation will enable the reduction of previous manual and labor-intensive functions such as procurement, enable digital tracking of efficiency and green footprint across multiple operations and projects. The pandemic has changed the way we conduct meetings, and I believe the focus on green energy will require a digital shift as well. DECK1 provides one such solution for the future.

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