



Enabling the offshore wind industry to thrive

Words: Dermot Kerrigan, Co-founder and Director of Active Training Team (ATT)

How do you build the world's largest offshore wind farm 89 km off the Yorkshire coast, install 165 wind turbines, and keep your workforce safe from injury or worse? According to Patrick Harnett, the newly appointed Chief Operating Officer at Ørsted, who was the Senior Programme Director for Hornsea 2 Offshore Windfarm during its construction, it takes 'visionary leadership, perseverance, and incredible teamwork'.



How safe are we?

The rapid growth of the offshore wind industry, the development and implementation of new technologies and ongoing skills shortages are all factors which can lead to compromises on safety. The boom in oil and gas in the 1980s and 90s was a similar perfect storm occasioned by several major incidents and loss of life, notably the Piper Alpha disaster which killed 167 workers off the coast of Aberdeen.

Working in the offshore wind industry is similarly physically and psychologically demanding with unique challenges and new technologies which could present unforeseen emergent risks.

The latest report by G+, the global health and safety organisation for the offshore wind industry, found the worked hours are increasing at such a rate that it cements the need for safety to be at the forefront. The time will only increase with the number of projects in the pipeline.

Lost time incident rates (LTI) are not just a metric of safety performance, but a reflection of an organisation's safety culture

and practices and ultimately how well it takes care of its workforce. High incident rates have a bearing on cost and budget of course, but the reputational damage could lead to the loss of skilled workers, issues with shareholders and impact potential repeat business.

For an expanding industry operating in a high-risk environment, safety needs to sit at the heart of business planning and investment decisions to avoid the human cost, economic and reputational damage of a major incident.

Trailblazing ambition

In 2019 energy giant Ørsted had installed the first of 174 Siemens Gamesa 7MW turbines which would form Hornsea 1 and had been awarded a Contract for Difference (CfD) by the UK government to build Hornsea 2, for what was then the lowest price ever. As Patrick Harnett commented, 'From the start, the mission was clear: to build the world's biggest and best value offshore wind farm, as well as to leave a legacy of enriched and injury free people.'

Such trailblazing ambition required a similarly innovative and radical approach to health and safety on the project. Ørsted approached Active Training Team about creating a safety leadership centre on the Humber which would not just help to keep their own workers and contractors safe but would be a legacy for the offshore wind industry and beyond.

It has long been recognised that, while adherence to regulation and technical competence are key elements of good health and safety practice, workers also need cognitive, social and personal resource skills.

Active Training Team's safety leadership programmes are built on the ethos that everyone, regardless of their role or function in an organisation, is responsible for their own safety and that of their colleagues. Human behaviour can be the biggest determinant of outcomes when it comes to safety.

We may not be aware of how our behaviour affects others; we may not feel confident speaking up or challenging others, especially if they are more senior; and when we are challenged or uncomfortable, we may not respond and communicate in the most effective or productive way.

Setting the benchmark

Ørsted was determined to set a high bar for the standards of health and safety on the project and the quality of the training that would deliver it.

Jason Ledden, Senior Project Manager for Hornsea 2, who worked closely with Active Training Team on the programme, commented at the time: 'The three key elements that have proven to be the DNA of safe, successful projects are to plan, care and

communicate to colleagues. This training will envelop all three of these elements into one impactful training session.'

Ørsted committed £1.4 million to create a purpose-built facility in Immingham for the Thrive one-day induction programme for all personnel, from senior leaders to back-office staff to front-line operatives, who would be working on Hornsea 2.

Active Training Team designed an interactive, multi-media programme using industry-leading technology and high-quality production values. Participants begin the day with a powerful immersive experience in which they witness the decisions, actions and events which lead to a fatality on a wind-power project.

They explore the behaviours and attitudes which have influenced events and take part in interactive practical safety leadership skills workshops in which they are able to practice using several communication tools. Finally, participants are parachuted back into the scenario where they are able to apply their new skills to change the ending of the narrative.

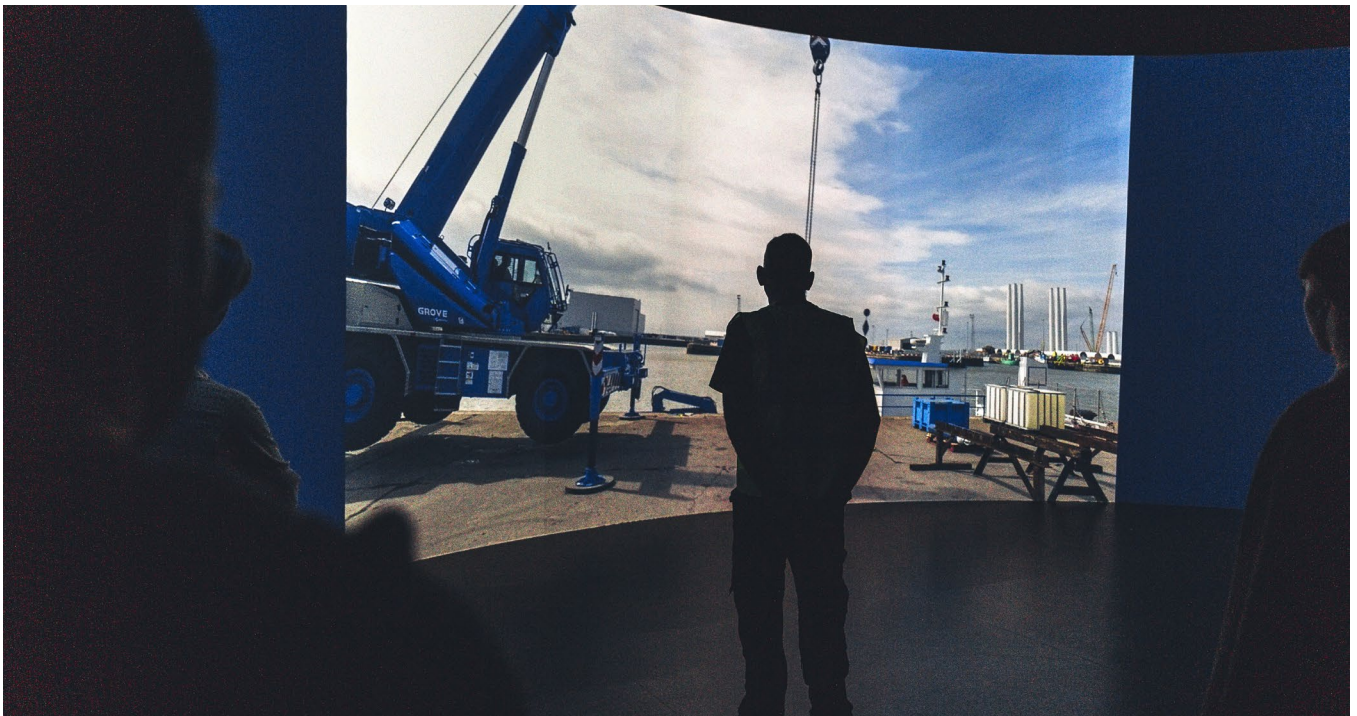
Active Training Team's multi-sensory approach is based on sound psychological, neuroscientific and learning theory principles. Active participation which engages all our senses helps embed the experience in our memory. Furthermore, when we experience something at an emotional level, the memory traces created by the sensory cortex are strengthened and contain more detail. Lessons from the day are remembered, better, for longer and positively influence behaviour back in the real world.

Duncan Clark, Head of UK Region for Ørsted, said: 'The bit that's different is the engagement of emotion, that is just in a different league. It connects people with the serious impacts of getting things wrong in a way that is very difficult to do with traditional training.'

Since Thrive opened in September 2020, over 2,000 of Ørsted's employees and contractors have attended. Feedback is overwhelmingly positive and in exit surveys the number of participants who say the day has made them feel more confident in challenging unsafe behaviours consistently exceed 85%.

Although the Thrive narrative has a wind power-themed scenario, it is relevant to sectors such as renewables and maritime. Companies who have attended or are currently using Thrive include SSE, Siemens Energy, Siemens Gamesa, National Grid, ABP, RWE, Ocean Winds, Equinor and Scottish Power Renewables.

The centre has created around 60 new jobs and contracts in the local area with production crew, actors and facilitators and construction personnel all hired from the



region. Thrive has won a number of awards including the Gamechanger Award at the Global Offshore Wind Awards in 2023, the Humber Renewables Awards' 2022 Excellence in Renewable Skills and Training Award, The Energy Institute's 2021 Health & Safety Award and the Gold Award for Best Training Event at EVCOM London Live and Film Awards

In August 2022, Hornsea 2 became fully operational as the world's largest offshore wind farm and generating enough green energy to power over 1.4 million homes. But the story doesn't stop there.

In December 2023, Ørsted committed to building the world's single largest offshore wind farm, Hornsea 3, with a capacity of 2.9 GW to power over 3.3 million homes in the UK.

To mirror the current programme of works being undertaken at Hornsea 3, Active Training Team created a second version of the Thrive scenario which is set in the onshore civil engineering phase at the start of construction of a large-scale offshore wind project.

On the horizon

The UK aims to nearly quadruple its offshore wind capacity with wind farms across the North Sea within the next seven years. Last year's report by the Offshore Wind Industry Council concluded that the sector needed to recruit and retain an average of 10,000 workers each year, to create the size of the workforce needed by the end of the decade to meet this target.

Such exponential growth inevitably presents challenges for recruitment; the potential for

churn and an increased dependence on the subcontractors adds stresses and potential safety risks.

Lord Cullen, who led the 13-month inquiry into the Piper Alpha disaster, finally presented 106 recommendations which were all, eventually, accepted by the oil and gas industry. He observed the importance, not just of procedural safety and technical competence, but of a robust safety culture.

'I was conscious that no amount of regulations can make up for deficiencies in the quality of management of safety. That quality depends critically on effective safe leadership at all levels and the commitment of the whole workforce to give priority to safety.'

'I saw those factors as intertwined with each other, and together making a positive learning culture and all that entails in the way of values and practices. It is essential to create a corporate atmosphere or culture where safety is understood to be and accepted as the number one priority.'

Although technology has been transformed over the last 30-plus years since that report was published, and the ways in which we interact with the wider world may have changed, our human instincts and behaviours are pretty much the same. Workers are subject to the same long hours, stress and fatigue as those who were working in the energy industry when they were toddlers.

However, we can enable everyone throughout an organisation to be a safety leader; to take responsibility for the safety of themselves and others and equip them with the communication tools which mean they

can challenge effectively and accept challenge graciously.

ATT is grateful to Ørsted, who shared our vision to create a centre which would not only help to embed a robust safety culture across the Hornsea projects, but across the whole renewable energy industry with perseverance and teamwork.

www.activetrainingteam.co.uk



About the author

Dermot Kerrigan is the co-founder and director of Active Training Team (ATT).

ATT is an award-winning team of professional writers, trainers, facilitators, actors, psychologists and digital learning specialists which enables organisations across the world to achieve the highest levels of safety performance.