



Port industrialization is a

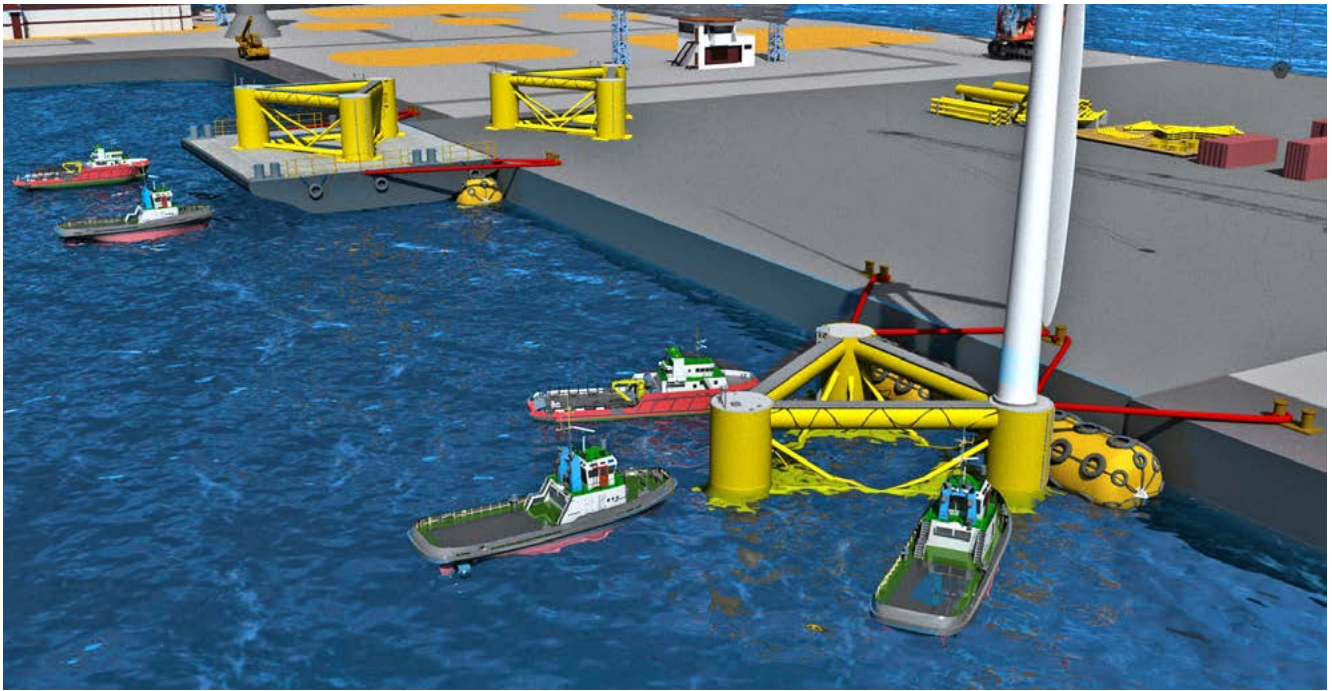
MULTI-BILLION DOLLAR NET-ZERO COMMITMENT.

Modern pragmatic solutions reduce risk, emissions, and levelized cost of energy at gig scale.

Traditional methods of port industrialization entail 24/7 use of numerous tugs, unsafe working conditions, and operations limited by weather.

The opportunity to improve schedule, reduce risk, and eliminate greenhouse gas emissions lies in considering a new method.





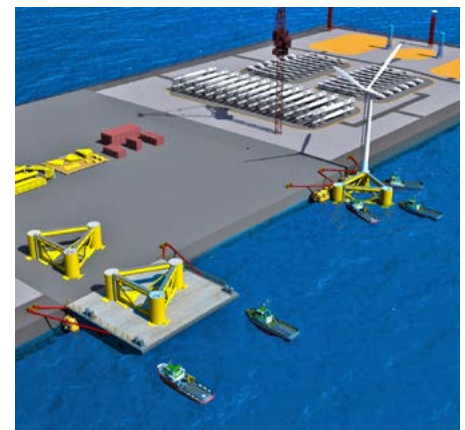
Semi-submersible barge load-out and quayside tower installation at gig-scale

THE MORE DIFFICULT PATH

Traditional thinking had its place. Diesel-driven heavy equipment was fine in the not-too-distant past, but we have evolved. The infrastructure of the global energy transition demands cleaner and more efficient technology. At gig-scale, we need to look to LEAN manufacturing solutions.

With traditional thinking, the path to move forward may be familiar and well-traveled, but at what price?

- Costs in the billions of dollars
- Excessively large fleet of tugs, heavy machinery, and ballast water management systems, resulting in excessive diesel consumption, increased project costs, and a substantial carbon footprint
- Increased risk to workers and assets: stored energy in quayside moorings, SIMOPS, working over water
- Slow production process
- Grounding of floaters for tower installations: time + money + risk
- Loss of infrastructure investments and jobs at the port once the installation phase is completed
- Delays and bottlenecks due to weather



Stabilizing tugs increase cost, fuel consumption, and will need maintenance themselves.

To be successful – to prove the naysayers wrong – the modernization of ports needs something other than traditional thinking. There are too many complexities lurking in the shadows of the known.

IF YOU WANT TO GO FAR, GO TOGETHER

Imagine what would be accomplished if we simply ask, "How might we approach things from a fresh perspective?"



The Bardex OmniLift reduces both financial and HSE risk.

- Billions of DEVEX, CAPEX, and OPEX dollars saved
- Improved operational safety from working on a stable platform and reducing the number of operations
- Schedule Assurance to reduce risks and contingencies
- LCOE driven down
- Reduced CO2 footprint of every offshore wind platform installed

All with a technology and market-agnostic solution that also can be used for other purposes, offsetting the capital expenditure.

The OmniLift™ is the only solution that can:

- Launch and retrieve platforms for repair, decommissioning, and life extension, addressing a major concern of local communities regarding what evidence of offshore floating wind will be left behind at the end of a project's lifecycle
- Allow for dry storage of fully integrated turbine and floating foundations
- Provide a solution that supports a circular economy



Eliminating and streamlining operations: The combination of OmniLift, rail transfer, and Bardex OmniCrane™ significantly reduces GHG emissions, creating a pragmatic solution true to the spirit of the global energy transition.

3 TECHNOLOGIES INTEGRATED INTO 1 POWERFUL MULTI-PURPOSE SYSTEM

The OmniLift™ Launching and Retrieving Platform, Rail Transfer System, and OmniCrane™ combine to provide a full-service suite of technologies custom designed for the individual geographical and geometric challenges of each port location.

Mitigating risks to safety and scheduling, minimizing emissions, and optimizing costs for the serial production of floating offshore wind turbines at gig-scale allows investors, developers, and port authorities to sleep soundly at night.

The expected service life of the investment is at least 50 years.

This revolutionary integration of proven technologies leverages the strengths of each technology to create a lifting device that expands heavy-lift capability beyond what was previously thought possible.



Photo credit: Oceantic Network



SEE BARDEX'S OTHER SOLUTIONS FOR O&M PORTS AND MONOPILE LAUNCHING.

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