Floating Offshore Wind Turbines

Designing for commercial scale

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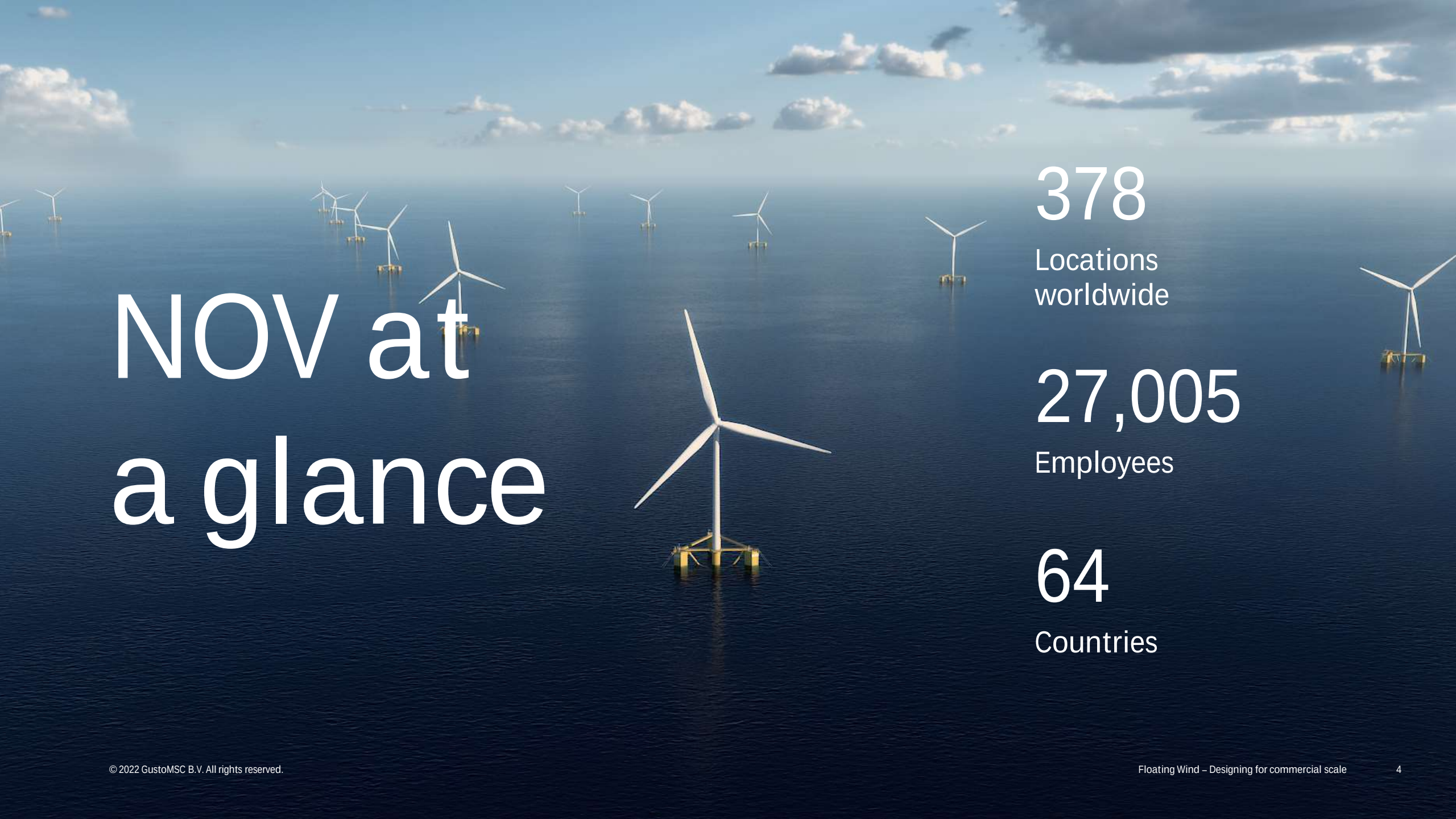
April 21, 2022

GustoMSC | NOV

Agenda

- GustoMSC & NOV
- Design
- Manufacturing
- Installation
- Operation
- Maintenance

Pioneers don't tell stories, they write history

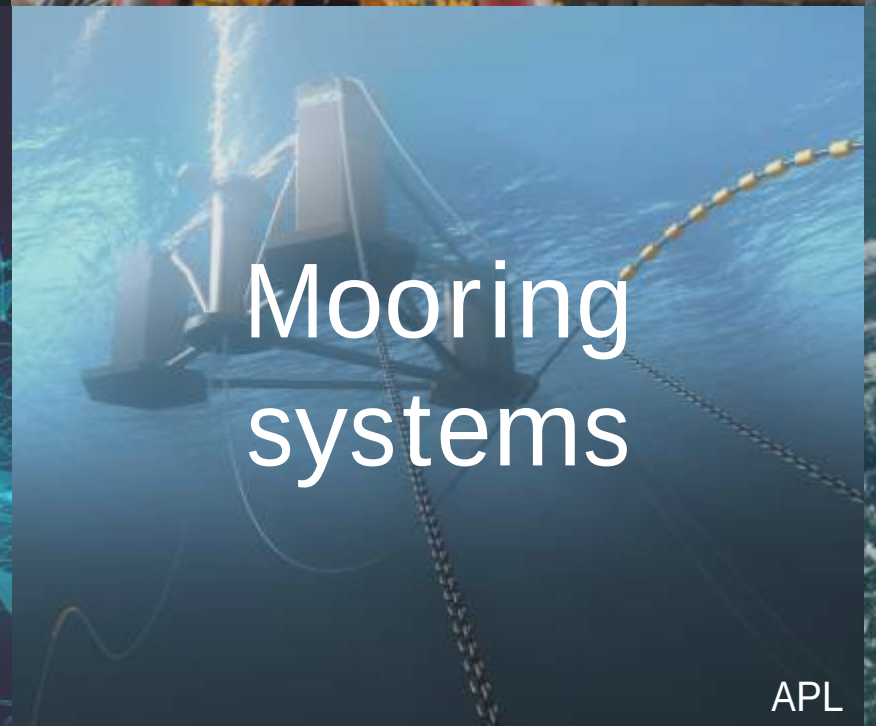


NOV at a glance

378
Locations worldwide

27,005
Employees

64
Countries



Tri-Floater development

2002

2013

2021

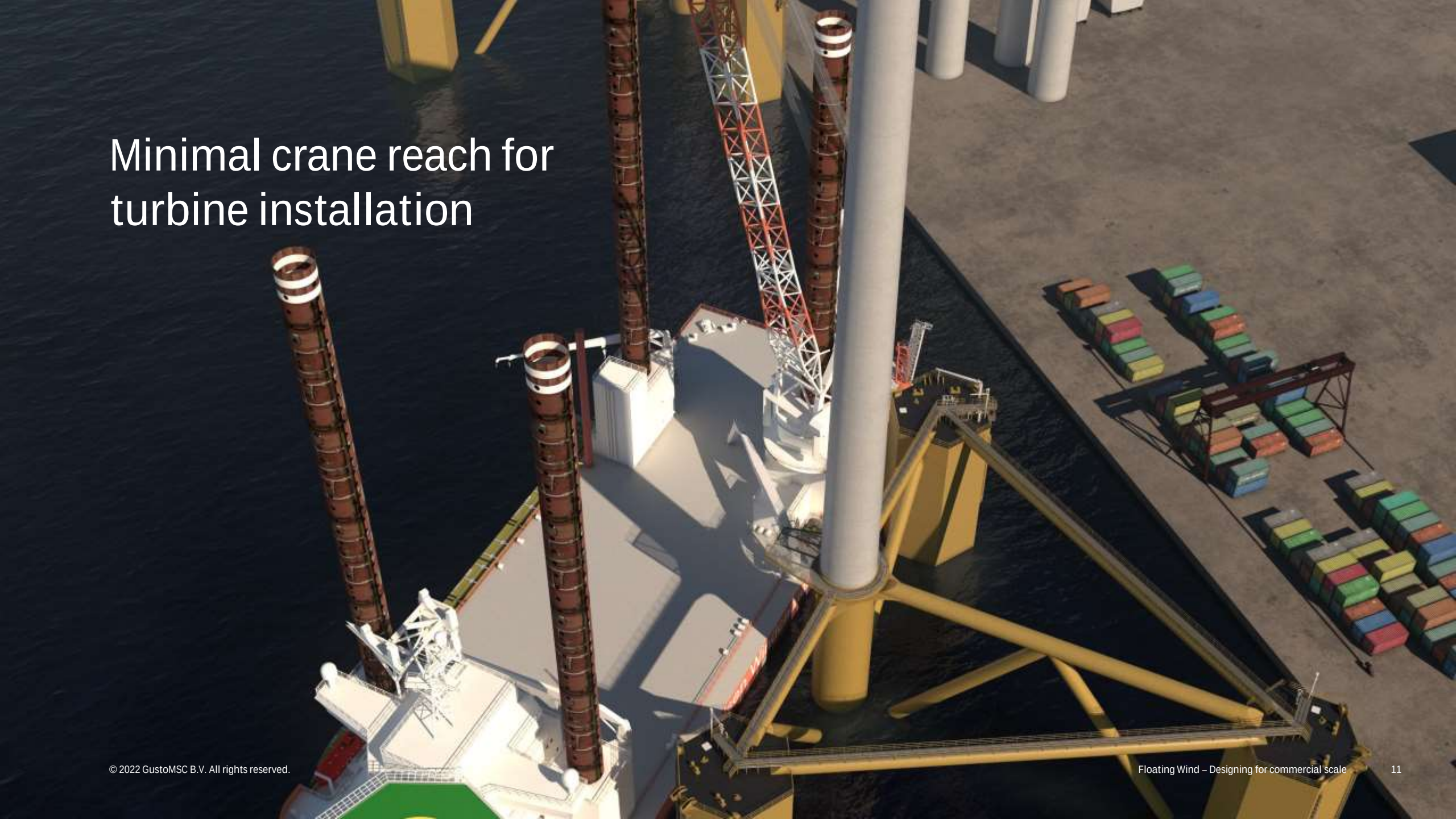
Structural design to withstand combined wind and wave loading

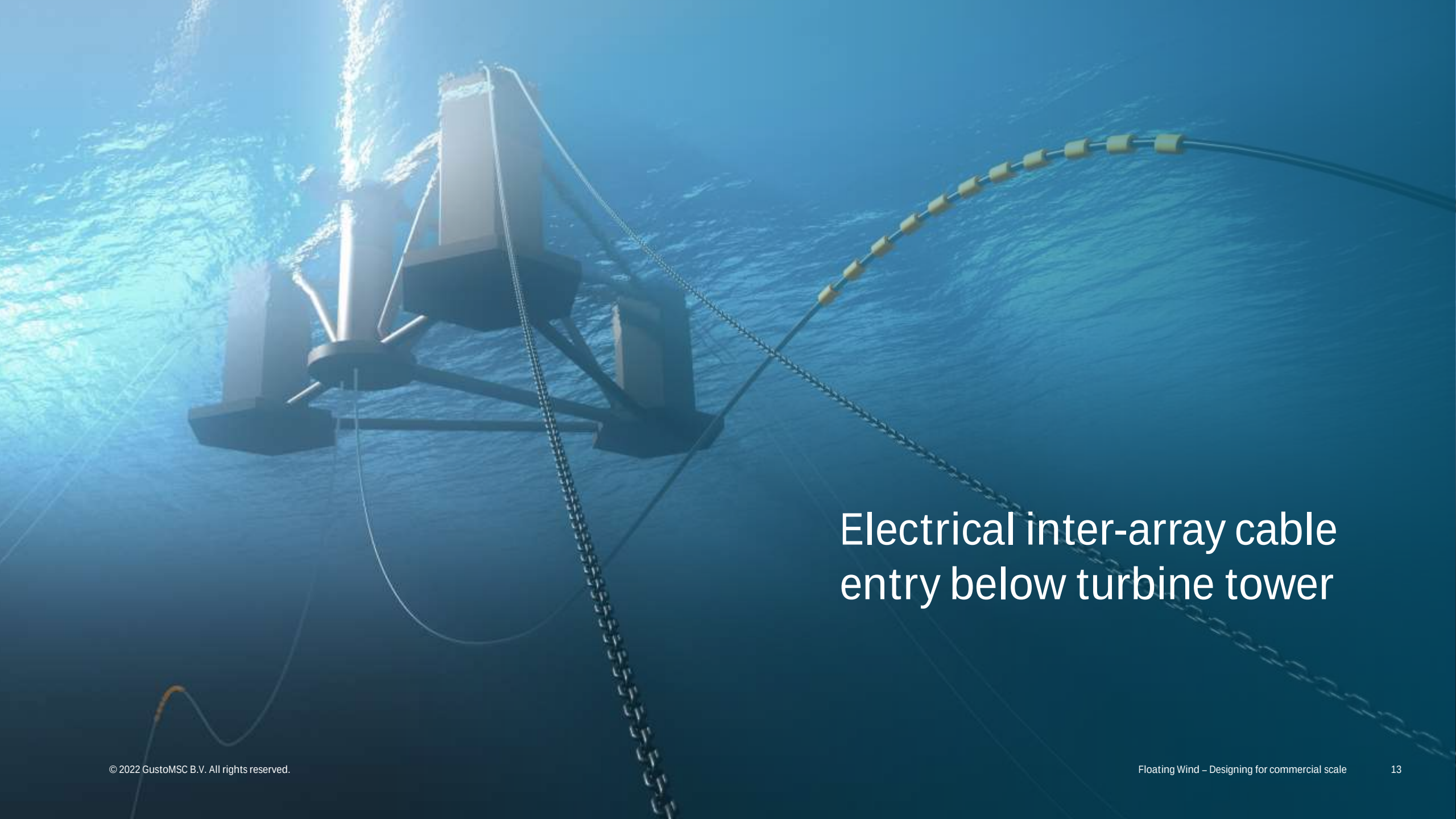
Manufacturing & industrialization using existing supply chain

Local assembly at quayside

Shallow draft in port allows for local wind turbine integration

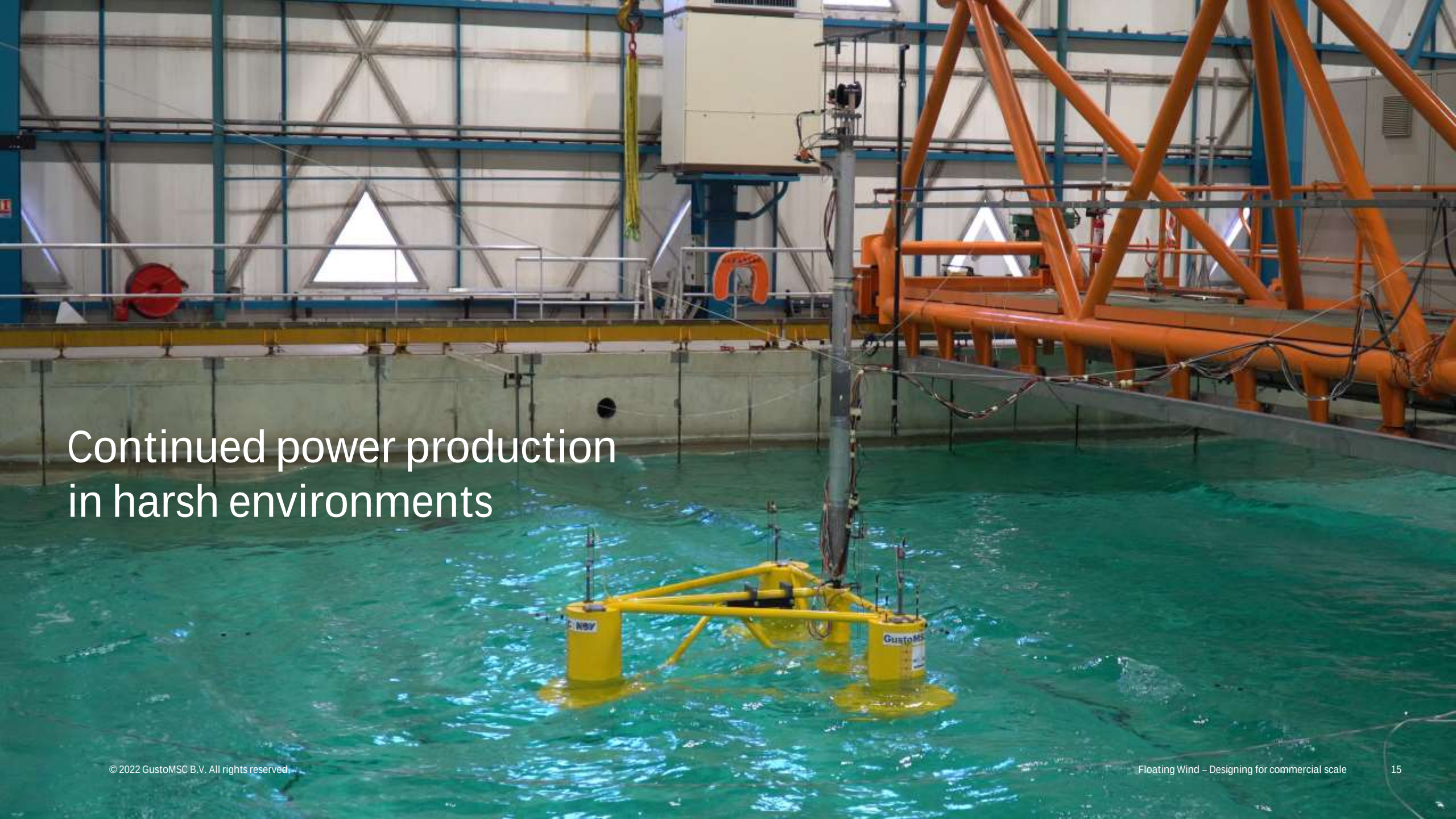
Minimal crane reach for turbine installation





Electrical inter-array cable entry below turbine tower

Low acceleration levels at nacelle

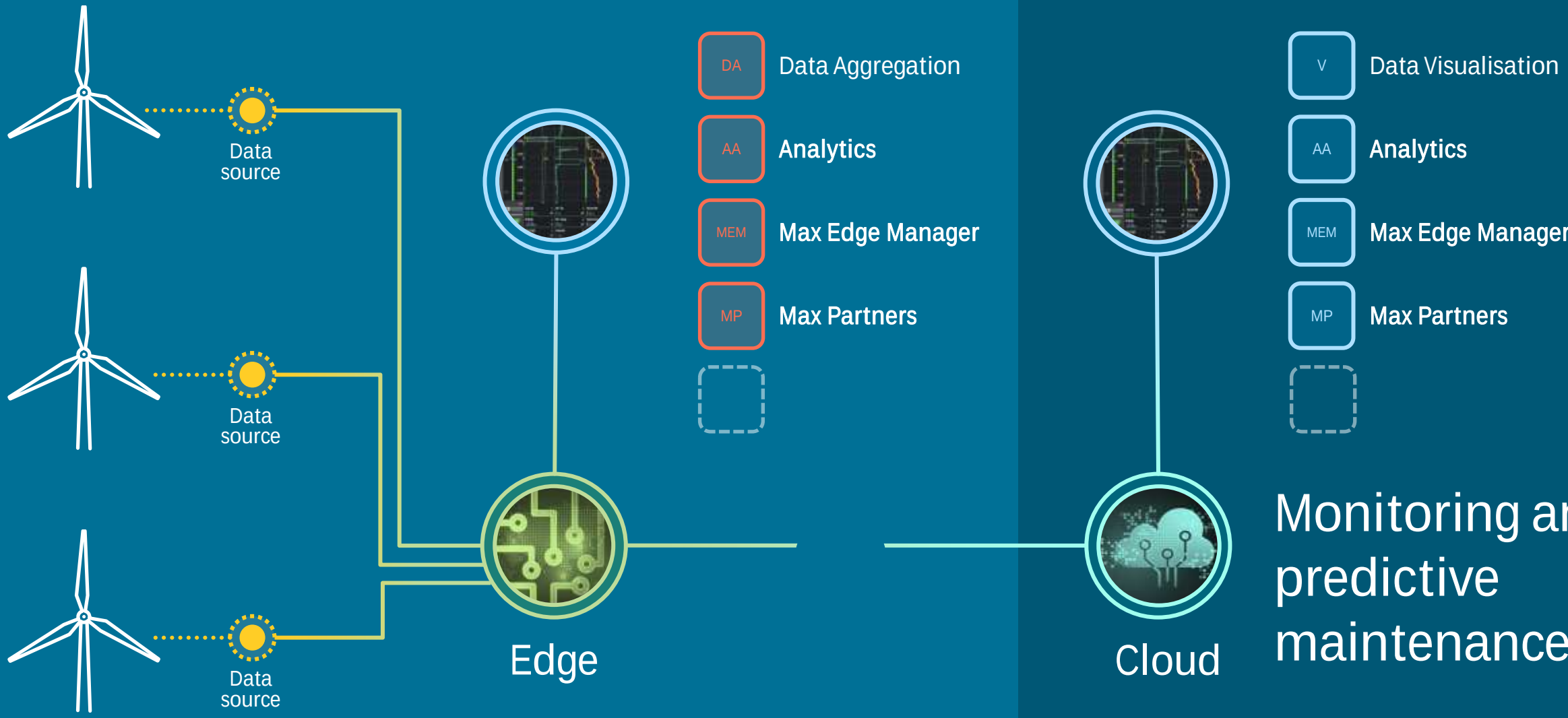


Continued power production in harsh environments

Max™ Digital Ecosystem

Wind Farm

Digital Office



DA Data Aggregation

AA Analytics

MEM Max Edge Manager

MP Max Partners

V Data Visualisation

AA Analytics

MEM Max Edge Manager

MP Max Partners

Monitoring and predictive maintenance

Moving to commercial scale poses specific design requirements:

- manufacturing by the existing supply chain
- efficiency installation
- operational performance
- low maintenance