Trends in Floating Offshore Wind

Moving to commercial scale

Fons Huijs
June 15, 2022

GustoMSC | NOV

© 2022 GustoMSC B.V. All Rights Reserved.

1862

1959

1975

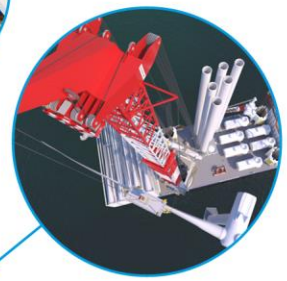
1978

1987

2011

2016

2018



2019

Pioneers don’t tell stories, they write history

1905

1972

1977

1981

2003

2015

2019

© 2022 GustoMSC B.V. All rights reserved.

NOV at a glance

378

Locations worldwide

27,005

Employees

64

Countries

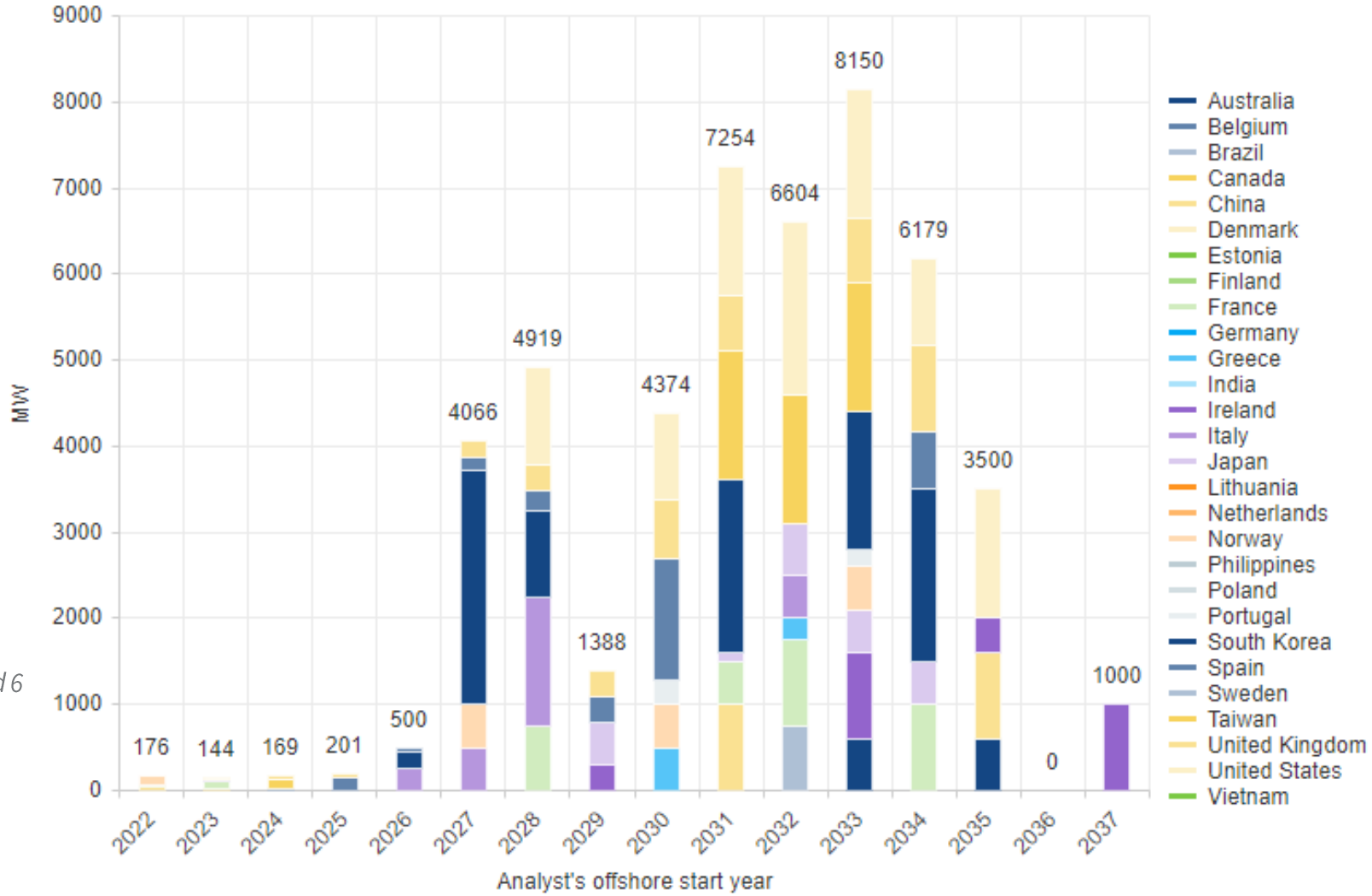
© 2022 GustoMSC B.V. All rights reserved.

Floating wind market projection

Forecast 2022 – 2037

- ~ **48 GW** projected
- > 3000 units at 15 MW/unit
- average > **350 units/year** (2027 – 2035)
- ~ **1.4 million ton steel / year**

Data source: 4COffshore
Numbers exclude:
- *30 GW Norway ambition, ScotWind II and UK Round 6*
- *North Sea decarbonization (INTOG) and other O&G initiatives*



© 2022 GustoMSC B.V. All rights reserved.

Floating offshore wind turbines

A variety of solutions

© 2022 GustoMSC B.V. All rights reserved. Picture source: DNV

GustoMSC Tri-Floater

Design evolution

© 2022 GustoMSC B.V. All rights reserved.

Structural design to withstand combined wind and wave loading

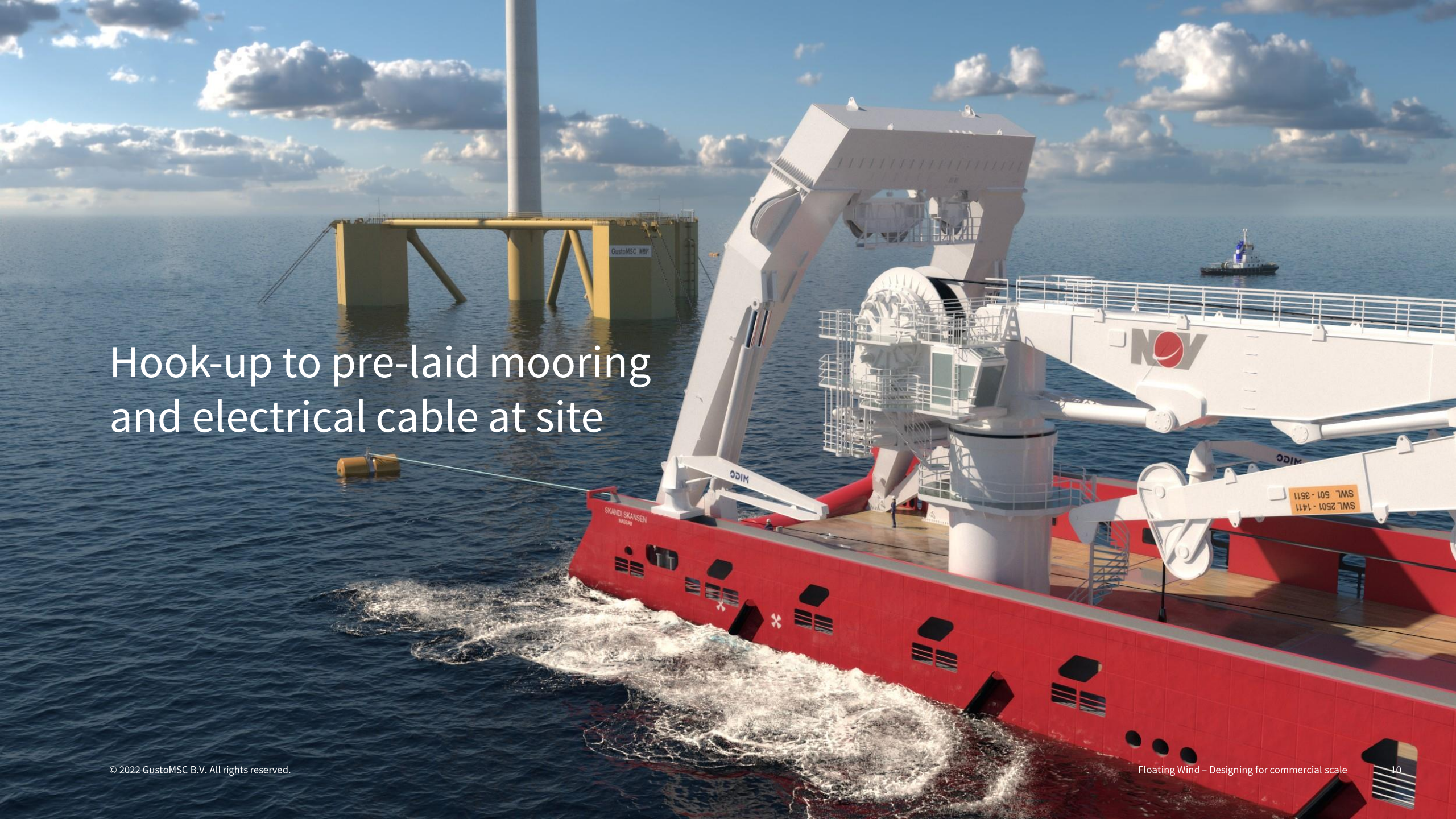
© 2022 GustoMSC B.V. All rights reserved.

Manufacturing & industrialization using existing supply chain

© 2022 GustoMSC B.V. All rights reserved.

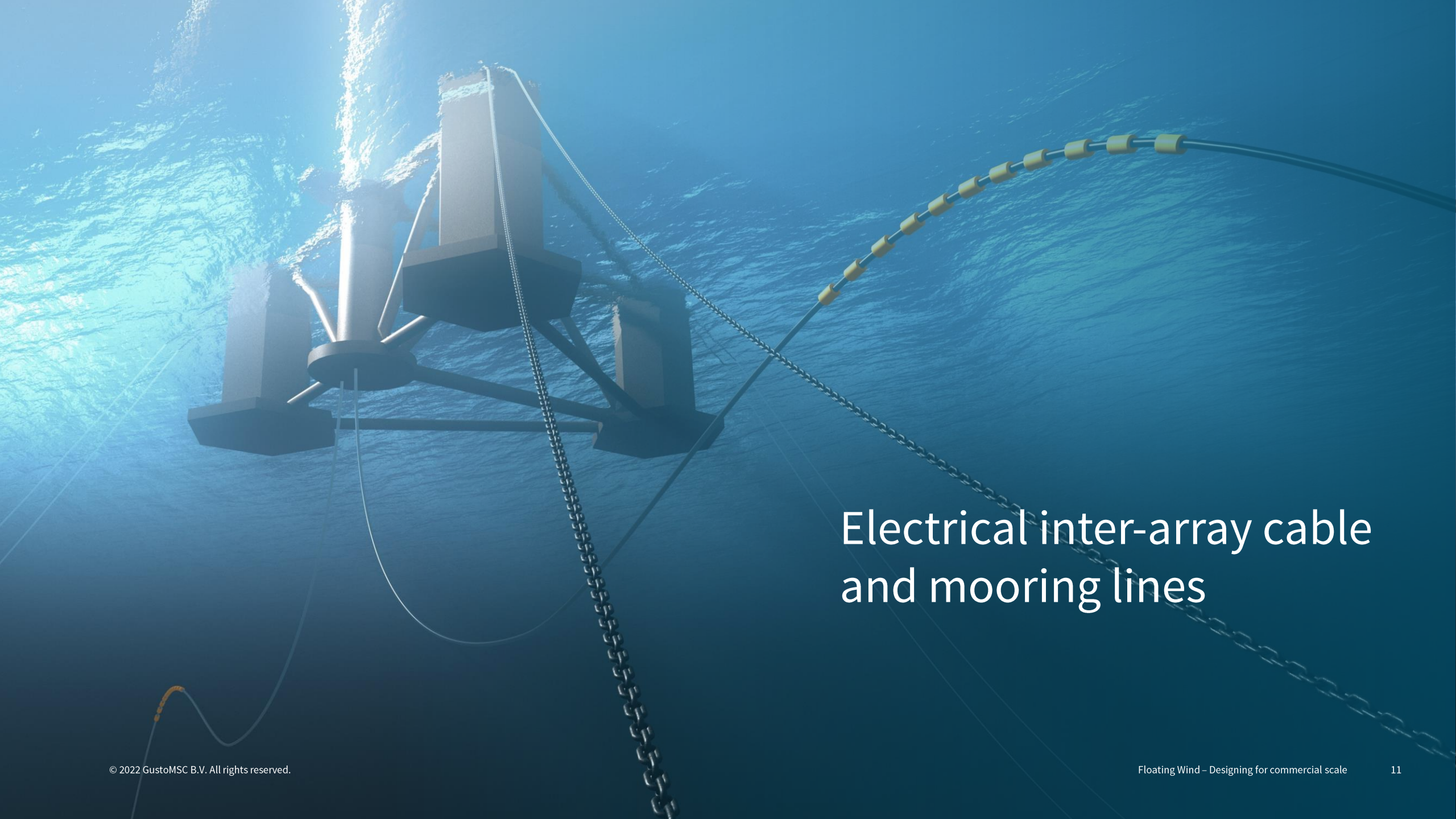
Local assembly at quayside

© 2022 GustoMSC B.V. All rights reserved.



Hook-up to pre-laid mooring and electrical cable at site

© 2022 GustoMSC B.V. All rights reserved.



Electrical inter-array cable and mooring lines

© 2022 GustoMSC B.V. All rights reserved.

Wind turbine installation and component replacement by floating-to-floating lift

© 2022 GustoMSC B.V. All rights reserved. Picture source: Saipem

Trends in Floating Offshore Wind, moving to commercial scale:

- huge demand of floaters per year
- manufacturing initially by the existing supply chain
- innovations in mooring systems and inter-array cabling
- floating-to-floating offshore heavy lift operations

© 2022 GustoMSC B.V. All rights reserved.

GustoMSC | NOV

© 2022 GustoMSC B.V. All rights reserved.