

Coastal Engineering Day:
Ports: Essential for development of the Norwegian offshore wind industry
Trondheim, April 10th 2024



WINDport
Your Gateway to Offshore Wind

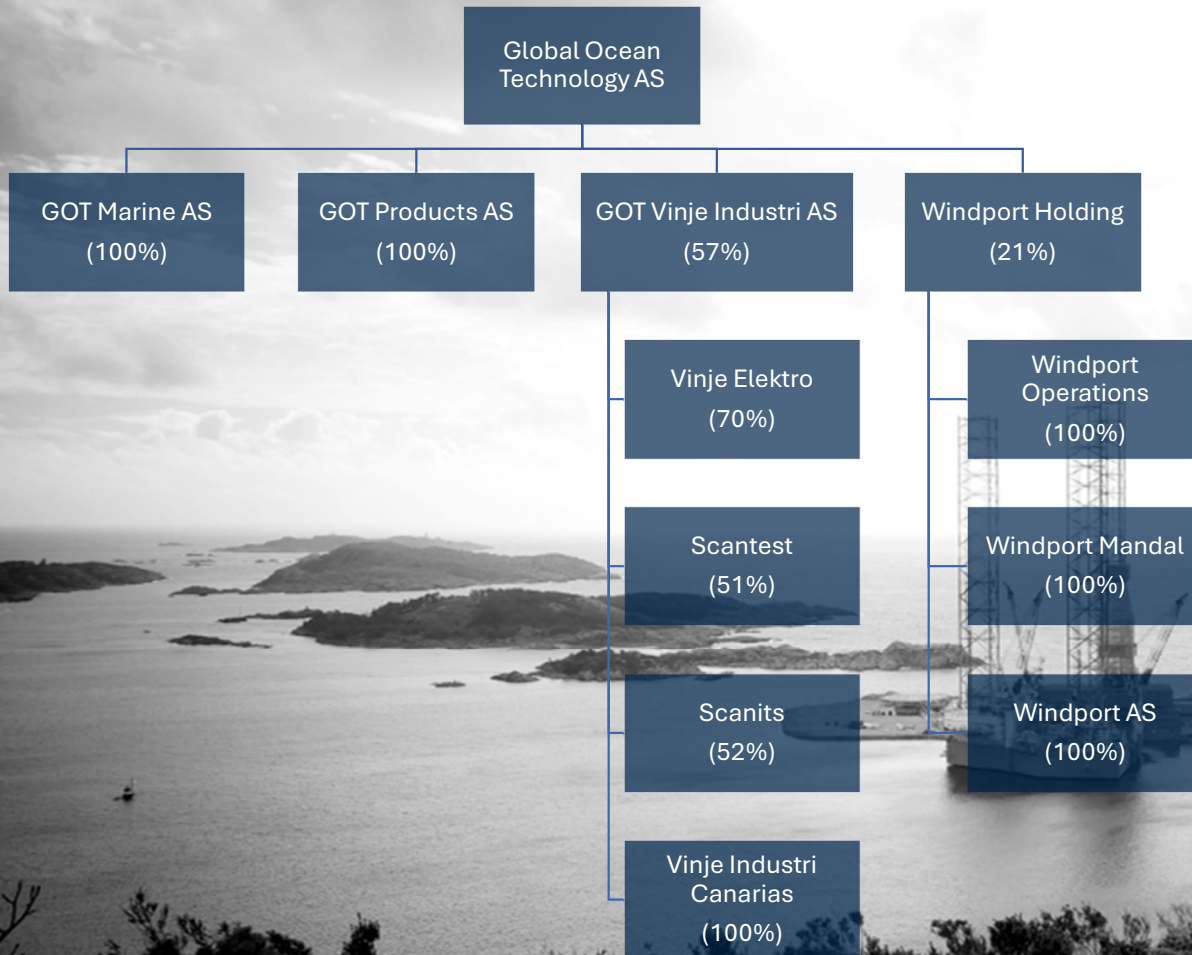
Turid Storhaug
Director Strategy & Sales
Windport AS

Mother Company: Global Ocean Technology

Supplier of products, services and personnel to ocean-based industries



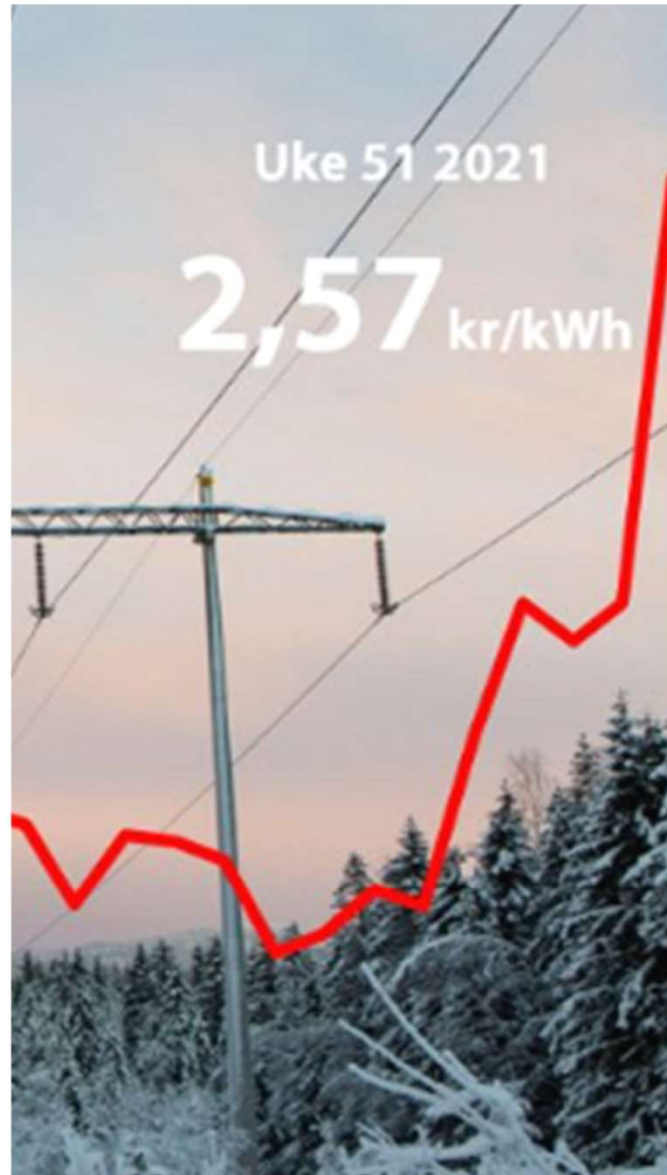
Global Ocean Technology & Windport: Organisation & Ownership



- 450 employees
- 750 MNOK revenue
- Offices in Mandal, Kristiansand, Stavanger, Florø, Las Palmas

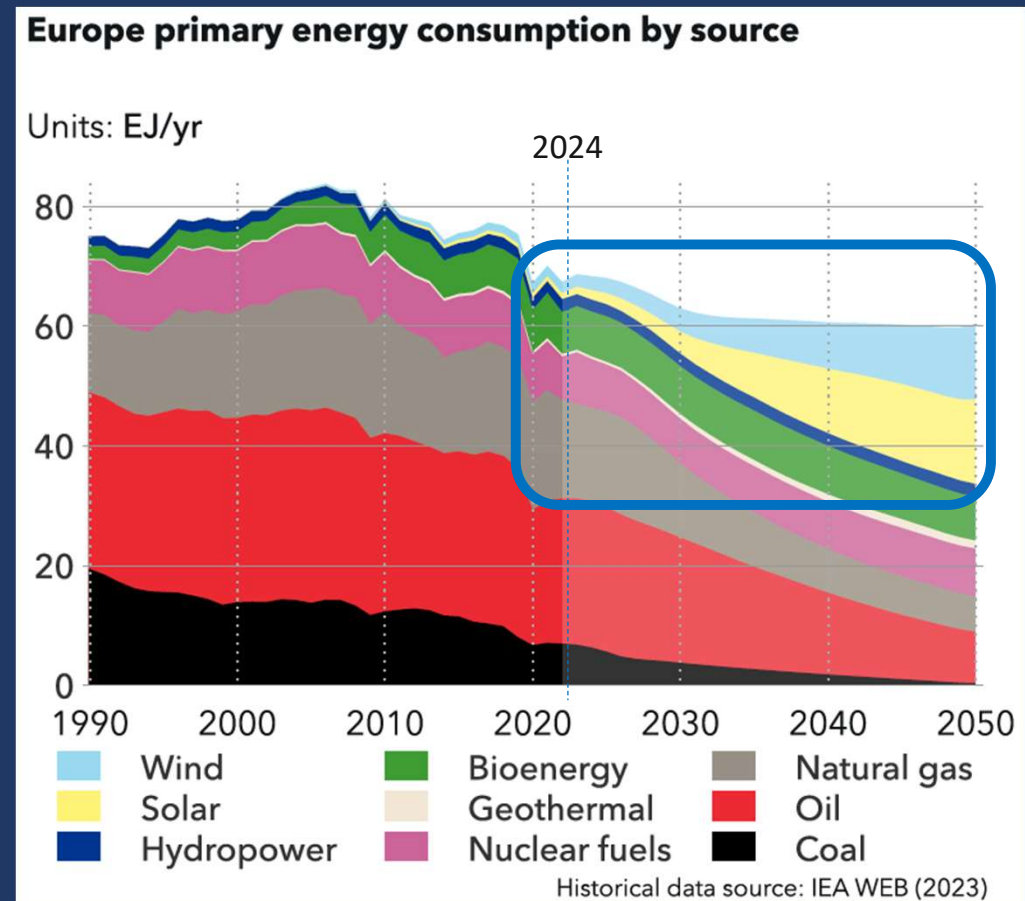
Long term local industrial owners:

- Glastad Capital AS
- Leif Hubert AS



The Energy Transition in Europe:

- ✓ It is speeding up
- ✓ Wind and sun energy will grow rapidly



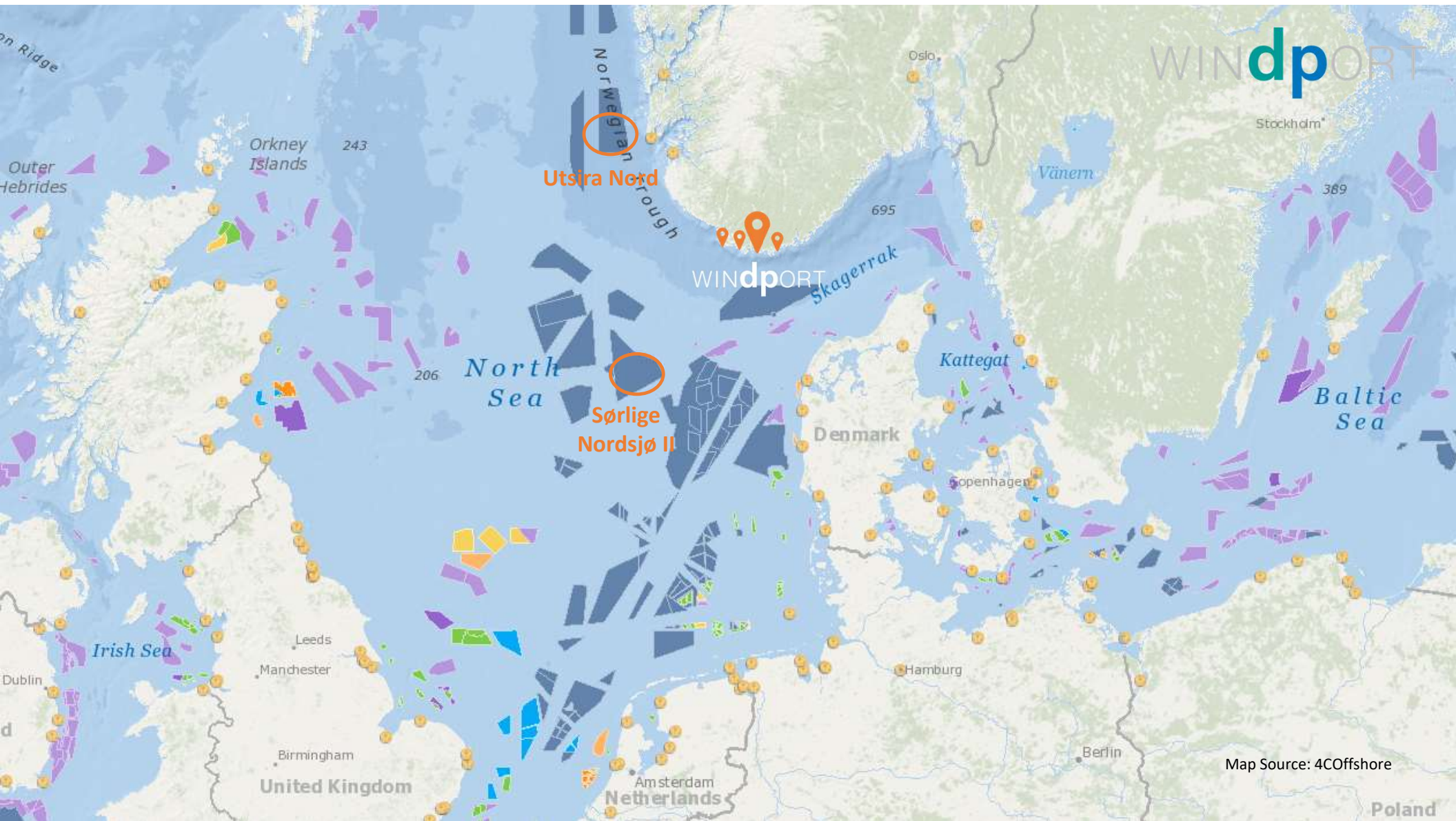
Installation of 13MW
turbines at Doggerbank, UK

WINDPORT

One rotation of
this turbine can
power a UK
household for
two days

Picture: Equinor





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Utsira Nord

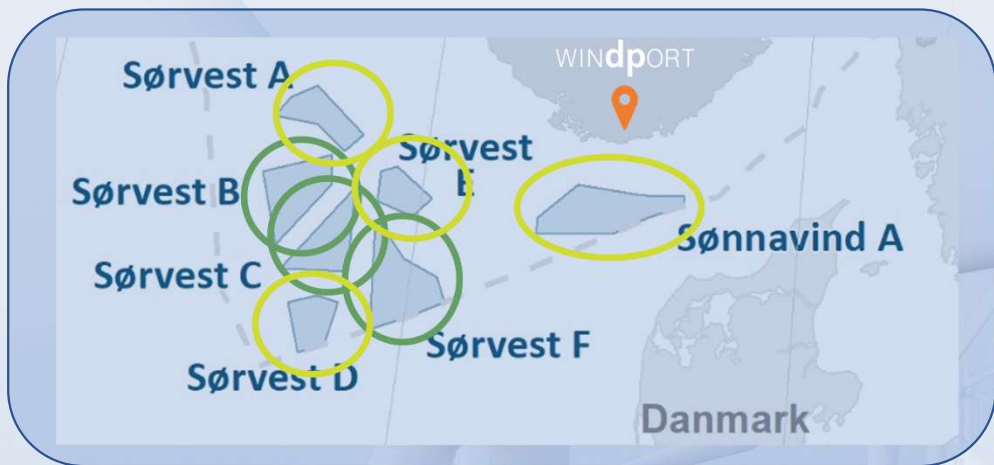
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Sørlige Nordsjø II

Map Source: 4COffshore

Norway's ambitions: 30GW by 2040

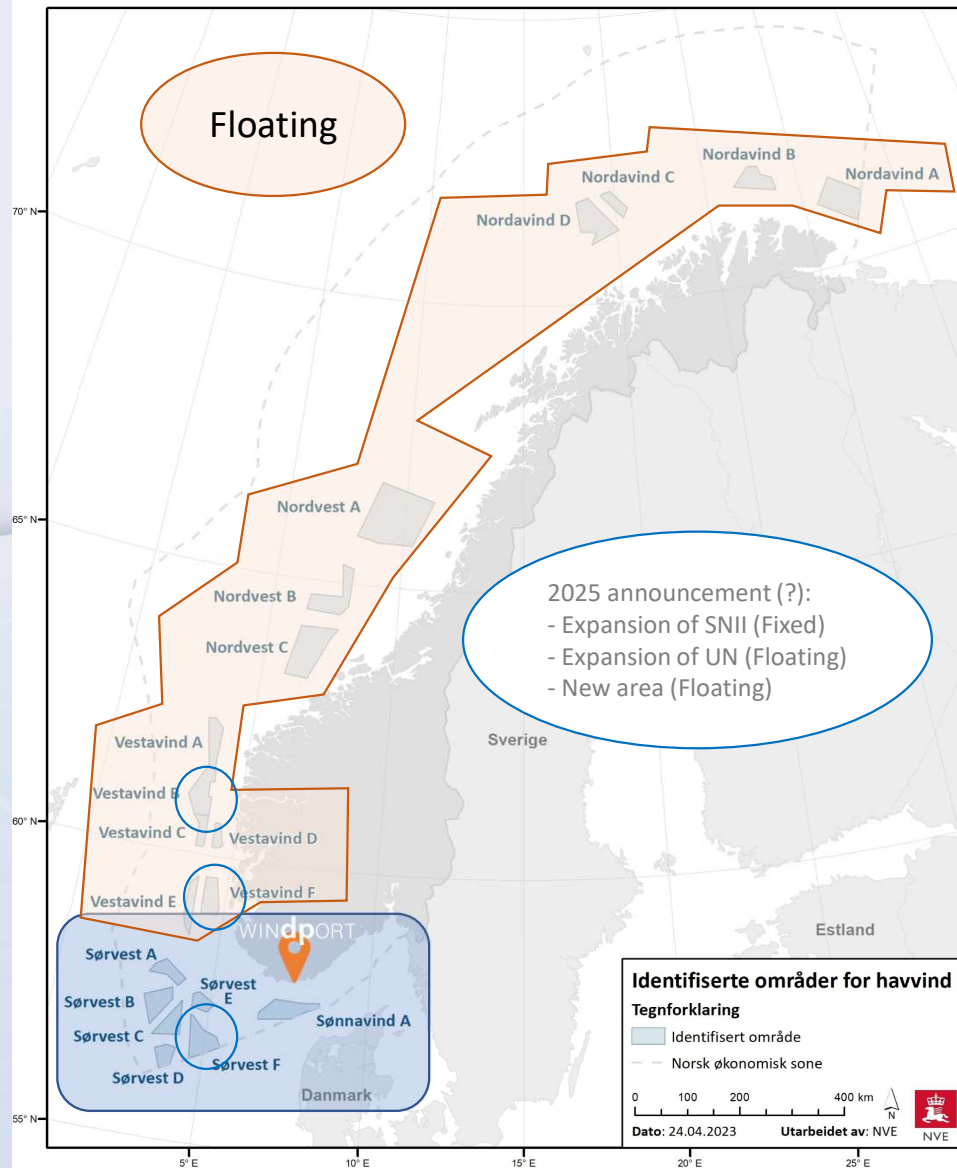
New areas identified for offshore wind in Norway



Fixed

Fixed/Floating

WINDport



Where we are
today....

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Picture: The worlds largest jack-up
drilling rig at Gismerøya, Mandal

Where we need to be:

WINDport



Picture: The worlds largest jack-up installation vessel at Port of Esbjerg



Picture: Windport Mandal

The Transition from Oil & Gas to Offshore Wind?

✓ We know what it takes!



Picture: Port of Esbjerg

Windport offers:

- Large quay areas and quay fronts
- 10-50m water depth
- Solid rock: High load capacity
- Short sailing route to open sea
- Good shelter from wind & waves
- No tidal range, no currents, no ice
- Efficient land logistics
- A competent workforce & supply industry

A world class competence and supply industry

- The very competent **workforce** and world leading **supply industry** are based on the long traditions in the maritime- and offshore oil and gas industries in the region.
- We have capabilities within:
 - Mechanical-, electrical-, engine disciplines
 - Inspection and surveys of lifting equipment
 - Rope access
 - Engineering, fabrication, project management
 - And more!
- **HSE** is our culture



Figure: Some services provided by Windport, GOT and local suppliers.

What are the main offshore wind challenges & opportunities?

We must:

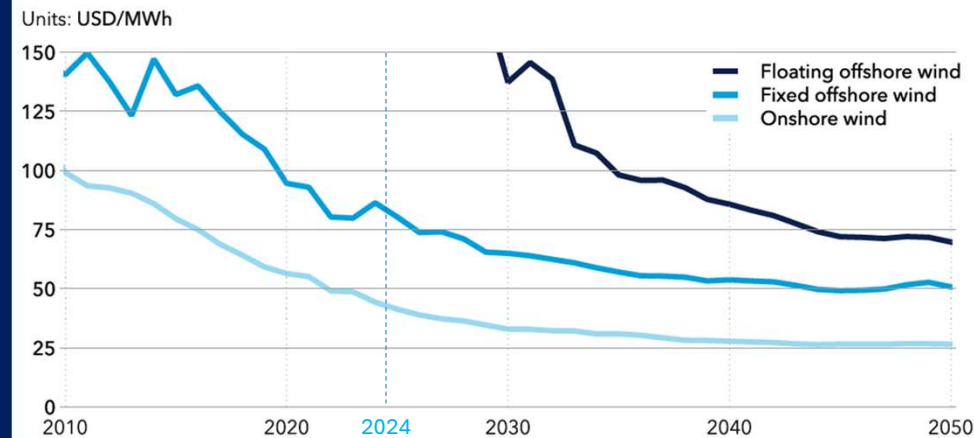
- ✓ Reduce the **cost**
- ✓ Reduce the environmental **footprint**
- ✓ Create positive **ripple effects**

How?

- ✓ **Scaling up**
- ✓ **New technology**
- ✓ **Working smarter**
- ✓ **Collaboration**

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World average levelized cost of wind energy (Historical data source: GlobalData (2023), DNV analysis)



Challenges & Opportunities:

- Port logistics
 - Autonomous handling?
 - Windy lifting operations
- Far from shore
 - Remote operations?
 - Drones?
 - 3D printing
- Sustainability
 - Marine life
 - Non-fossil fuels
 - Reuse & Recycling

Utsira Nord

Haugesund

Stavanger

WINDdpORT

Kristiansand

190km

Sørlige Nordsjø II

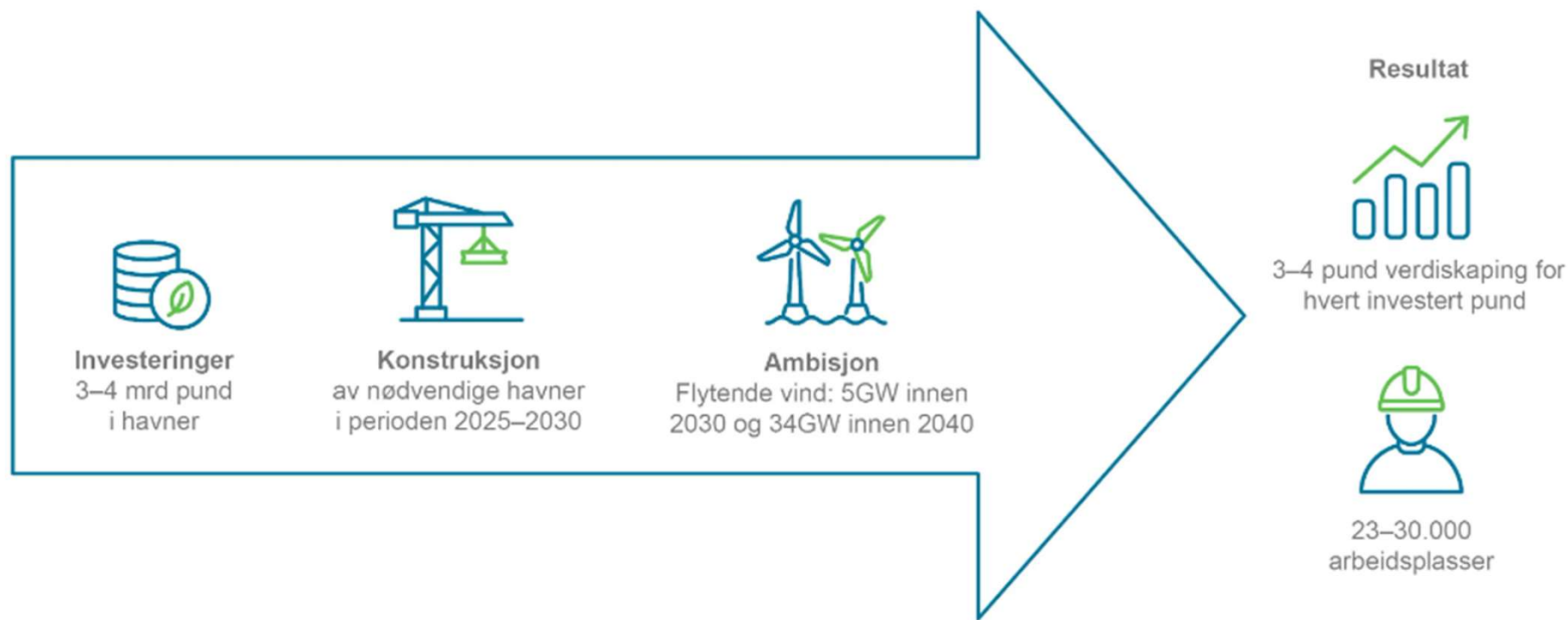
Storbritannia

Danmark

Ports Generates jobs and income

Example: Floating wind in the UK

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Source: RenewablesUK/Samarbeidsforum for Havvind

Windport HSE & Sustainability Statement

- We care for our people and our planet
- We take responsibility for our safety and for those around us
- We create sustainable local jobs
- We commit to zero emission
- We make a difference

Ports: Essential for development of the Norwegian offshore wind industry

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- ✓ Shortage of port capacity in Europe: Need to develop Norwegian ports to meet demand
- ✓ Ports are hubs for establishment of supply industry
- ✓ Ports are hubs for development of new technology and sustainable solutions
- ✓ Efficient port logistics key to cost- and time efficient project execution
- ✓ Ports generate local jobs and income

A photograph of an offshore wind farm with several white wind turbines in a row over the ocean. The sky is a pale, hazy blue.

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YOUR GATEWAY TO OFFSHORE WIND

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