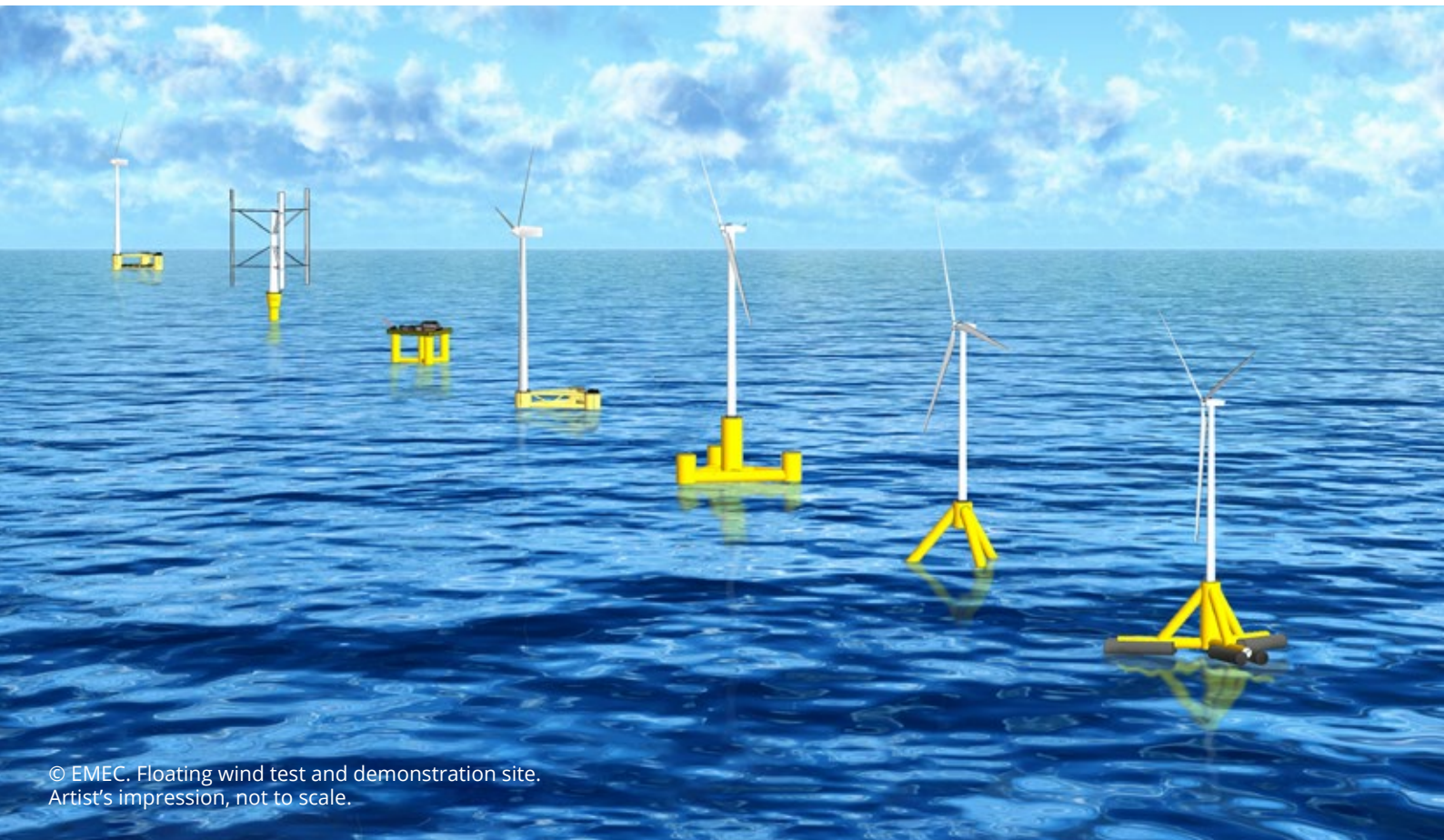


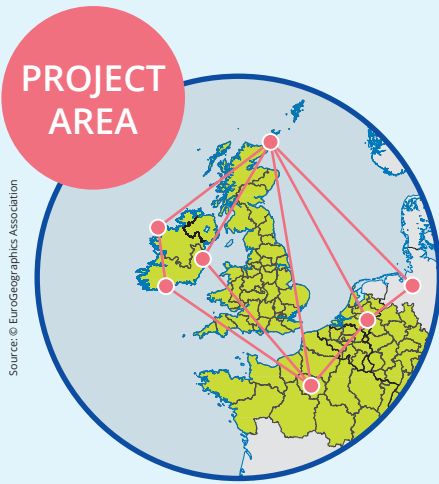
Floating Offshore Wind Development Plan

AFLOWT: Accelerating market uptake of Floating Offshore Wind Technology

AFLOWT contributes to an accelerated market uptake of floating offshore wind by engaging project developers and investors, developing an active supply chain, including five marine energy test sites, and creating a Floating Offshore Wind Development Plan for North-West Europe.



© EMEC. Floating wind test and demonstration site.
Artist's impression, not to scale.



Amount of ERDF received from Interreg North-West Europe:
€9.3 million of ERDF

Total project budget:
€15.6 million

The AFLOWT Project

AFLOWT is an Interreg North-West Europe (NWE) project running from 2019 to 2023.

The project is looking at how this new floating offshore wind (FOW) industry can be accelerated to assist countries to reach their greenhouse gas reduction targets. This is done by:

- **creating dedicated test and demonstration facilities** to support further innovative FOW technologies get to market; and
- **supporting test site development;**
- **engaging investors and project developers;**
- **supporting supply chain development;** and
- **creating a floating offshore wind development plan.**

The development of five test sites for FOW technologies is supported. Further work within AFLOWT focuses on monitoring power cables and mooring lines.

In addition, the “Long Term” work package supports the overall project objective by addressing the current market obstacles that are apparent in the wide scale market uptake of FOW and taking countermeasures, such as:

1. educating project developers and investors on FOW **technology maturity and investability;**
2. stimulating a **favourable policy environment;** and
3. developing an **active supply chain.**

These topics are investigated in three working groups (WGs) with the support of an advisory board.



WG 1: Technology Maturity and Investability

To educate project developers and investors on FOW technology maturity and investability, developer and investor knowledge requirements and critical risk areas in relation to FOW developer engagement need to be identified.

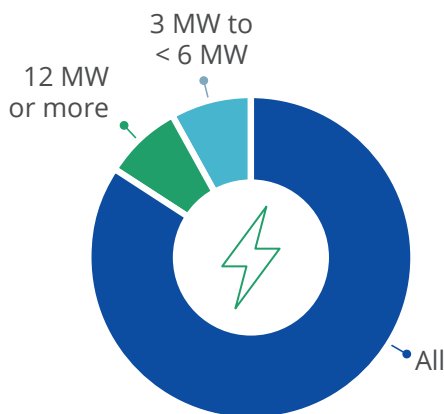
Thus, the development plan:

- demonstrates the **specific market opportunity** of the AFLOWT project;
- highlights the **significance and role of the test site** as a final stage of demonstrating technology maturity; and
- examines the **robustness and reliability** of the development process for FOW.

The readiness of FOW farm and technology developers is established by means of two surveys. Some key findings are visualised below. Further are:

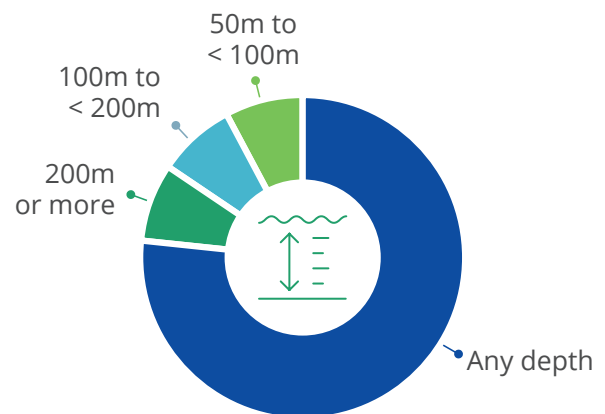
- **risks and challenges are highlighted**, e.g., supply chain, financing, port infrastructure, or skilled personnel;
- **versatile FOW platforms are designed**; and
- the **significance of offshore test sites was highlighted** with 75% of technology developers indicating open sea testing as the next step.

Supported turbine size



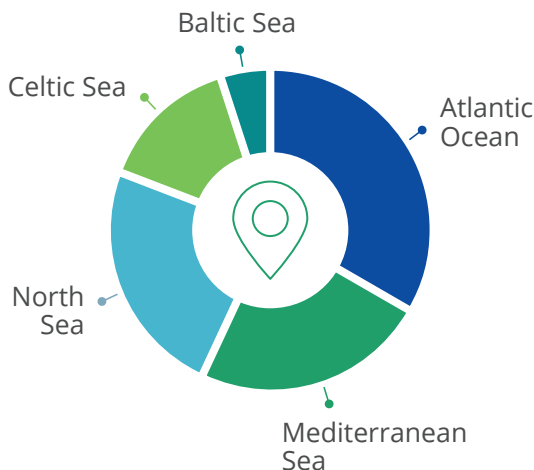
6 MW to < 9 MW: 0
9 MW to < 12 MW: 0

Operational water depth

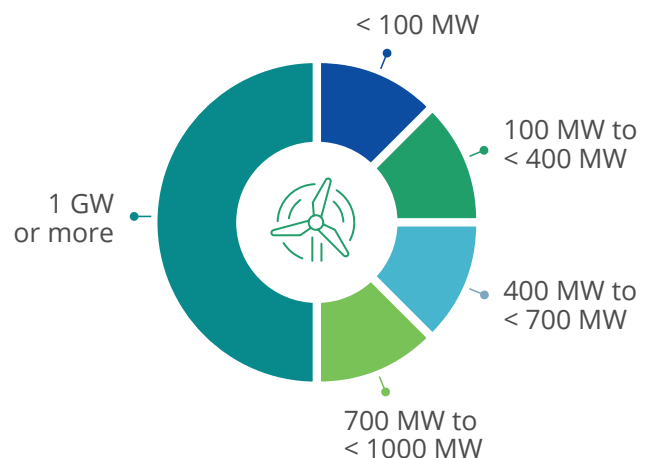


< 50m: 0

FOW farms locations



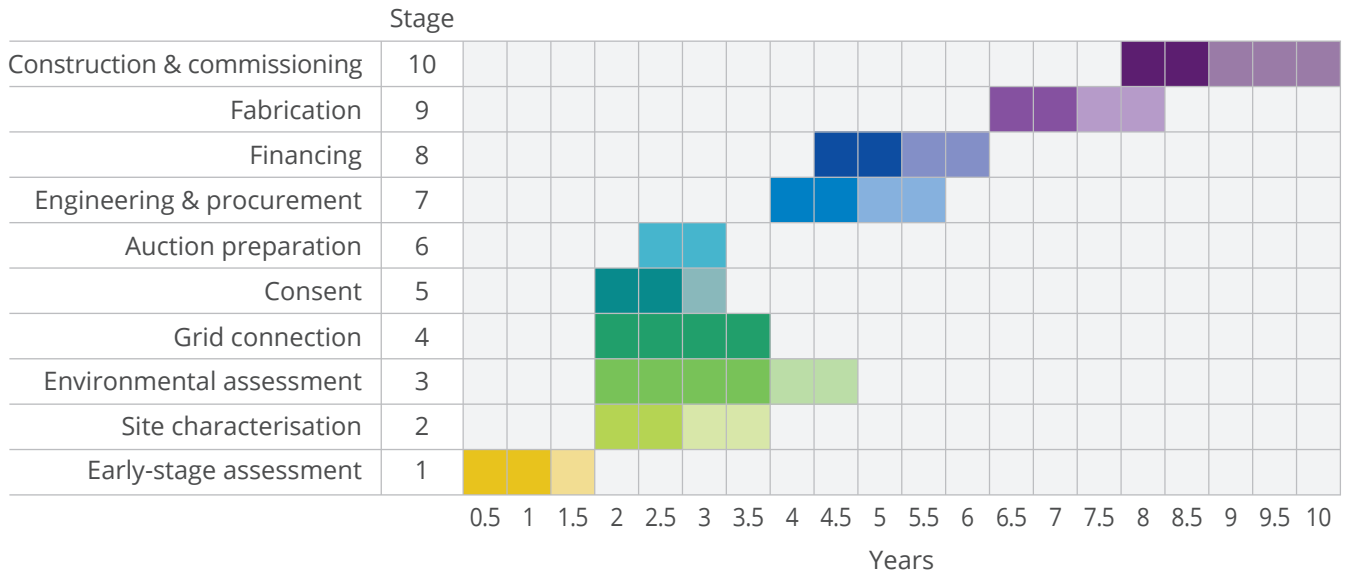
Size of FOW farms



WG 2: Favourable Policy Environment

There are many ways to develop FOW infrastructure and establish FOW projects across the NWE region.

Consent steps involved in establishing wind projects, according to Wind Energy Ireland



This WG focuses on developing policy with the objective of creating a favourable policy environment. To achieve the environmental targets as set out by the European Union,

- the policy currently in place in the countries within the NWE region are examined in order to understand the status and **determine what needs to be accomplished to encourage and progress FOW** in this region; and
- gaps in consenting, funding, and support legislation** in NWE are identified and considered.

Given the geographical location, NWE has a natural potential for FOW energy. Countries are developing policy for FOW projects by building upon years of experience from bottom-fixed offshore wind turbine infrastructure, grid-connection, and a world-leading network of test centres. Policies that allow for fiscal supports, multi-use of space, and streamlined transparent application processes can help to accelerate FOW take up.



WG 3: Active Supply Chain

AFLOWT focuses on the development of an active supply chain in the NWE region with an overall objective of ensuring maximum economic benefit for the NWE region.

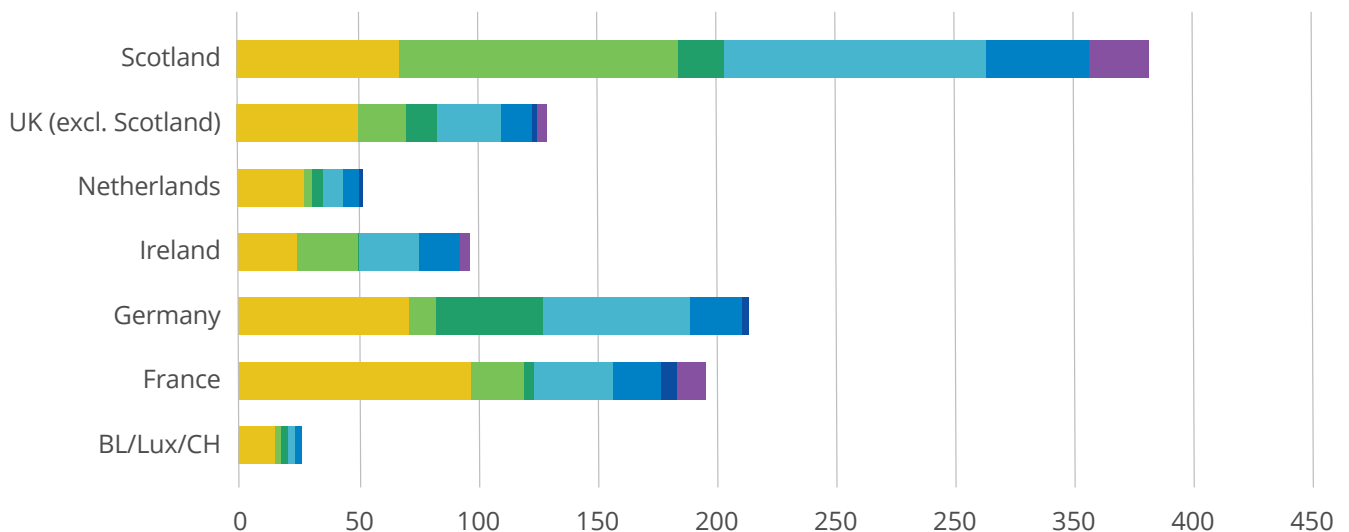
The complex and long-lasting development of an active supply chain can be broken down into single steps:

1. **Critical procurement issues** need to be highlighted.
2. The **procurement value** of different supply chain segments for the FOW market as well as the opportunities that are available for supply chain companies within the NWE region are to be defined.
3. **Investments** that could help bring down the supply chain costs have to be identified.

4. **Engagement** with key stakeholders on these issues should take place.

Within the AFLOWT project, a high-level and refined list of potential suppliers in the NWE region are identified for seven commodity groups and corresponding sets of commodity codes. Within the subsequent supply chain analysis, gaps and additional development needs are identified, which would help the FOW industry in NWE to compete on international market standards.

The supply chain in NWE



Balance of plant

- Cables
- Floater/substructure
- Offshore substation
- Onshore substation

Development & project management

- Developing and consenting services
- Environmental survey
- Resource and metocean assessment
- Geological and hydrological surveys
- Engineering and consultancy

Wind turbine

- Nacelle
- Rotor
- Tower

Operation, maintenance & service

- Operations
- Maintenance and service
- Operations and maintenance support
- Operation port
- Health and safety

Installation & commissioning

- Floater/substructure installation
- Offshore substation installation
- Onshore substation installation
- Onshore export cable installation
- Offshore cable installation
- Turbine installation
- Offshore logistics

Decommissioning

Sector support functions

AFLOWT partners and associated partners

Belgium

- Provinciale Ontwikkelingsmaatschappij West-Vlaanderen
- WindEurope

France

- Agence régionale Pays de la Loire
- Febus Optics
- Kraken Subsea
- Open-C
- Saipem
- WEAMEC

Germany

- Fraunhofer Institute for Wind Energy Systems IWES
- Steel Inspect GmbH
- University of Rostock/Chair for Wind Energy Technology

Ireland

- Atlantic Technological University
- BlueWise Marine
- DP Energy Ireland Limited
- Electricity Supply Board Engineering & Major Projects
- European Marine Energy Centre Ireland
- Mainstream Renewable Power
- Marine Institute
- Sustainable Energy Authority of Ireland
- University College Cork

Luxembourg

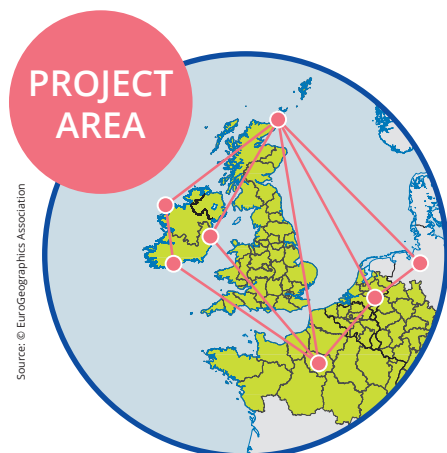
- Monterey Renewable Fund – KMG SICAV SIF SA

Netherlands

- Stichting Maritiem Research Instituut Nederland
- TKI Wind oop Zee

The UK

- Aquatera
- Carbon Trust
- Crown Estate Scotland
- European Marine Energy Centre
- Highlands and Islands Enterprise
- Offshore Renewable Energy Catapult



Duration:
5 years

Budget:
€15.6 million

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Link to plan:



Project partners:

