Marubeni Offshore Wind Development Co., Ltd. / Akita Floating Offshore Wind LLC
Overall Optimization of Floating Offshore Wind

D-1: Overall optimization to reduce LCOE / D-3: Reduction of interface risks

Background & Challenges

- It is necessary to effectively combine the outcome of the research items throughout the project for further reduction of LCOE.
- In large-scale offshore commercial projects, the impact of any interface issue can lead to additional delays and costs, so reducing interface risks is important.

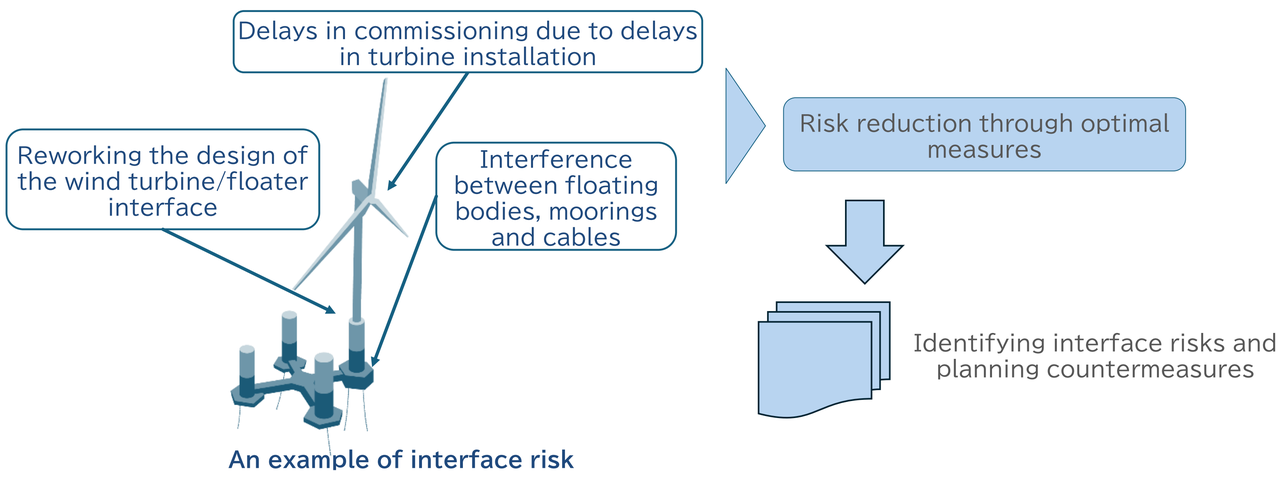
Research & Development Overview

■Overall optimization of costs and lead time

- Assuming a commercial project, we assess cost factors that increase or decrease costs and lead time, and derive the optimal combination of the results of each research and development project .

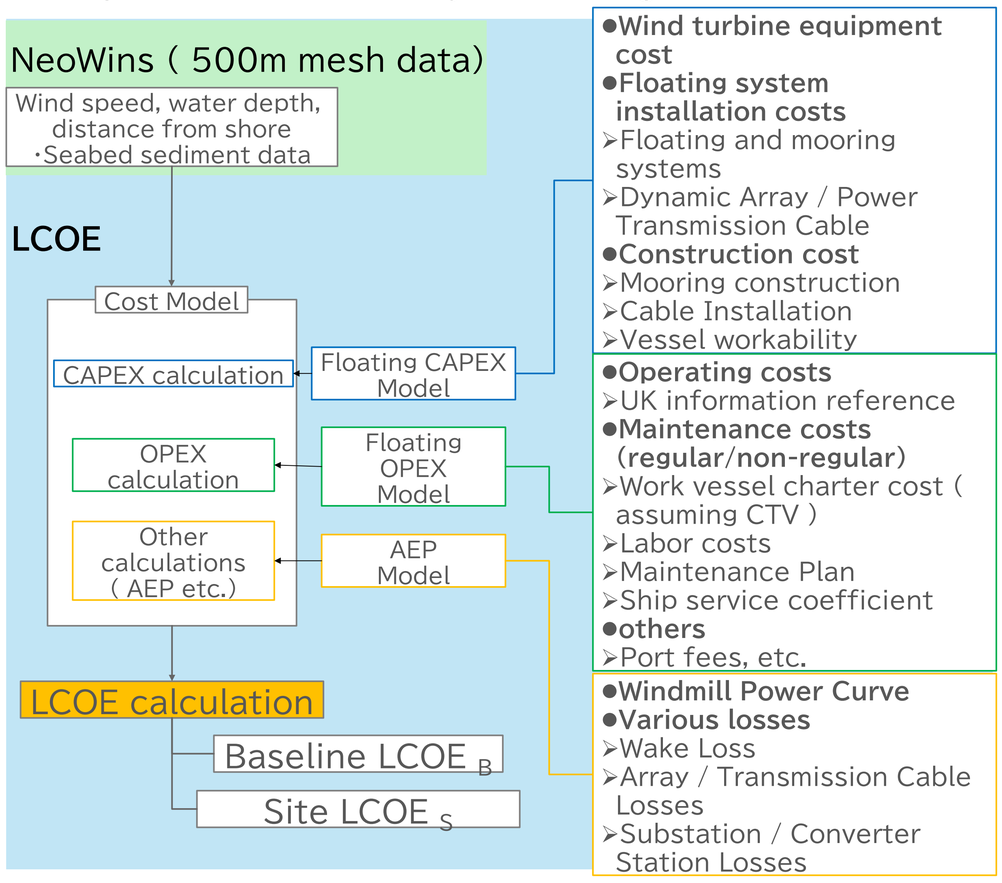
■Reducing interface risks

- Interface risks between two or more components may identified through this project, and it will make mitigation plans.



Progress

- Formulated a method to reflect each research item into the NEDO cost estimation model
- Identifying risks and considering countermeasures through business development such as surveys and designs.



D-7: Outreach to public and stakeholders

Background & Challenges

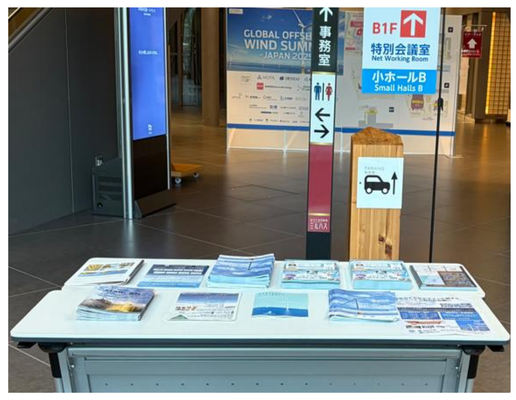
- Stakeholders' deep understanding of floating offshore wind is essential.
- To reduce impacts on vessel navigation/fishing operations, mutual communication is important

Progress

- Conducted Stakeholders/ Fishery Impact Working Group
- Conducted a lecture at the Akita Offshore Wind Student workshop 2025
- Conducted Exhibitionat Global Offshore Wind Summit Japan 2025

Stakeholders /Fisheries Impacts Working Group

Akita Offshore Wind Student Workshop



Poster presentation and flyer distribution at Global Offshore Wind Summit Japan

Research & Development Overview

■The following activities are planned as part of the "Dialogue on Science and Technology with the Public."

- Information dissemination via website etc., discussions by working groups
- Participating in exhibitions and lectures
- Lectures and on-site visits to floating offshore wind power plants

O-5 : Demonstration and improvement of underwater observation methods

Background & Challenges

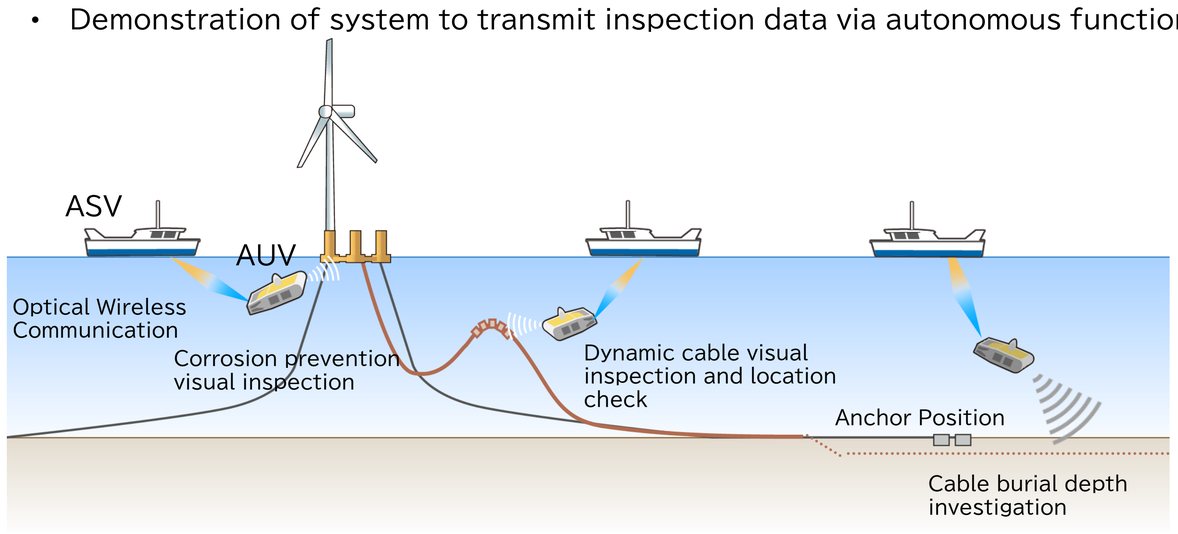
- The floating offshore wind is located far from shore, deep water and severe sea condition area.
- Unmanned operation for underwater / subbottom inspections utilizing divers /ROVs instead of AUVs/ASVs is important to reduce HSE risk , costs, and downtime .

AUV : Autonomous Underwater Vehicle
ASV : Autonomous Surface Vehicle

Research & Development Overview

■Underwater / underground structures

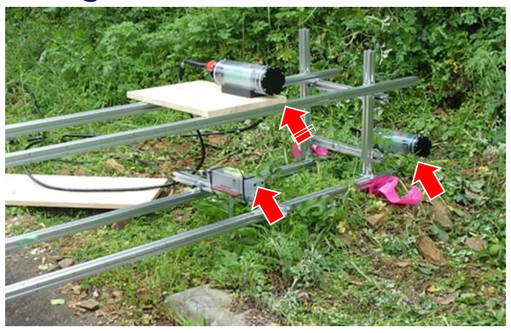
- Measurement and verification of cathodic protection status of floating structures
- Demonstration of anchor position detection, and demonstration of position detection and depth measurement of buried objects such as submarine cables
- Demonstration of system to transmit inspection data via autonomous functions.



Progress

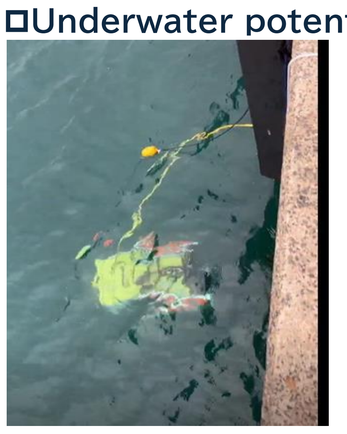
- Conducted measurement of the magnetic field and underwater anticorrosion potentials emitted by buried power cables.
- Formulated algrism to eliminate the magnetic effect from the ROV (measuring equipment) for determination of the cable burial depth and corrosion protection status .

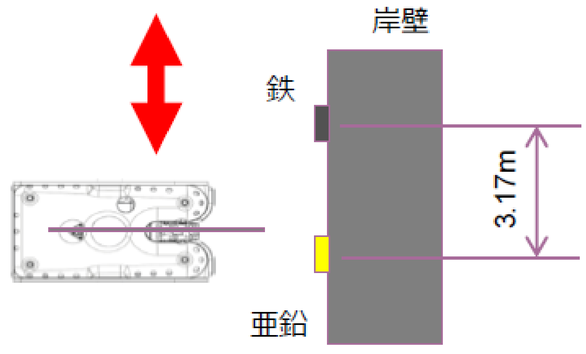
□Magnetic Measurement



Measurement of the magnetic field emitted by the buried cable (arrow indicates the location of the magnetic sensor)

□Underwater potential measurement





Underwater corrosion protection potential measurement (top view on the right)