

NEMO

Seafarms

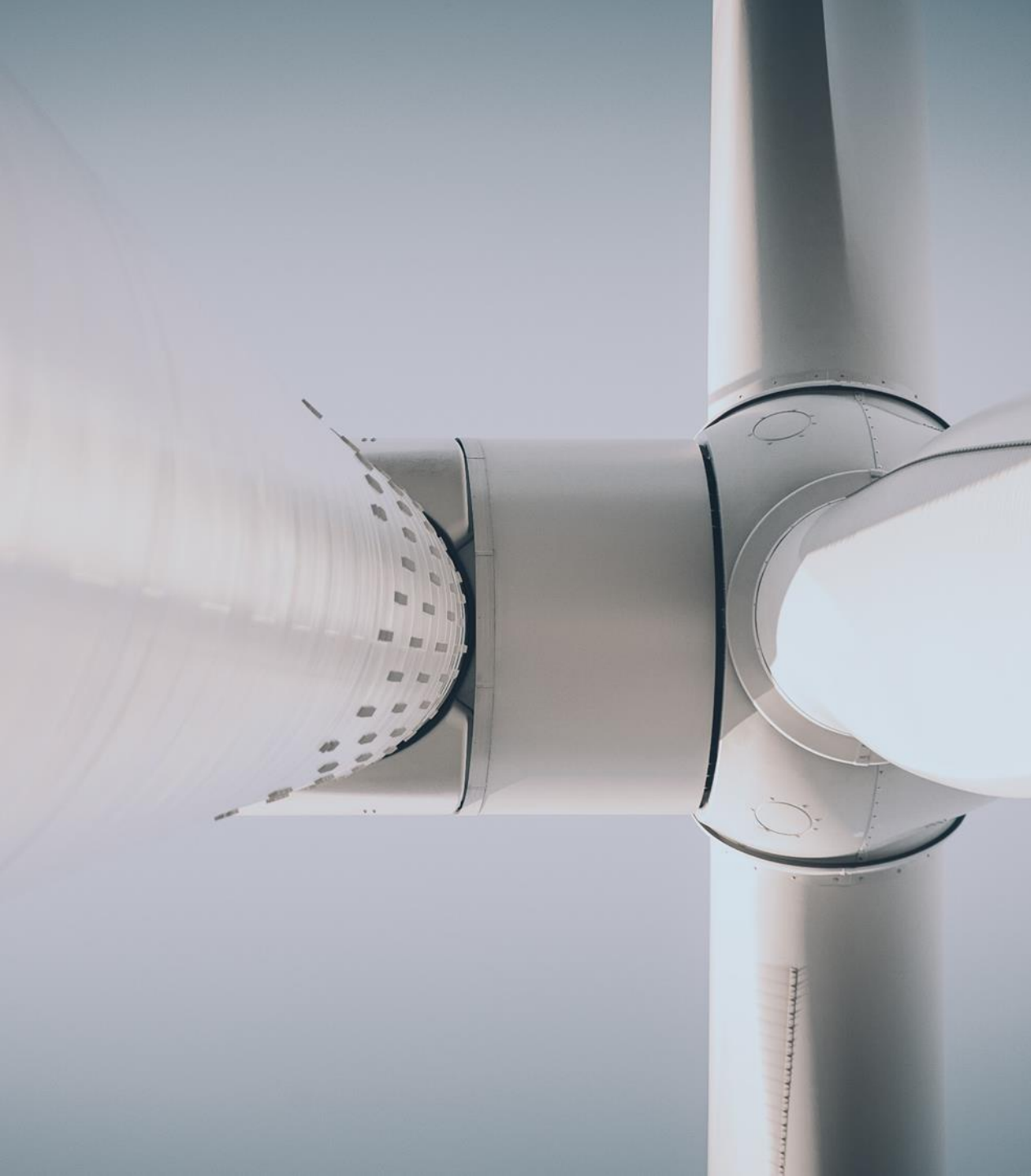
OX2

UNDER

MULTIUSE OFFSHORE WIND
AREAS



IN THE BALTIC SEA REGION



Agenda

1. Company Introduction
2. OX2 and Offshore Biodiversity
3. Potential and Solutions
4. Project Björkskär Presentation
5. Conclusions

Company Introduction



SEK
7.5_{bn}
LTM Net sales

14.9%
LTM Op margin

Powering the great
shift

42,755 MW
Total portfolio
as per Q1 2023

| | |
|---------------------------------------|--|
| Portfolio (Q4 2022) | |
| Development | |
| Onshore wind 10,464 MW | |
| Offshore wind 17,750 MW | |
| Solar power 4,300 MW | |
| Energy storage 581 MW | |
| Construction | |
| Under construction 1,173 MW | |
| Asset management | |
| TCM 4,077 MW | |



Our Finnish Projects



Halla

- Area 575 km²
- Up to 160 wind turbines, max height is 370 m
- Up to 12 TWh/year \approx 2.5 M households

Laine

- Area 450 km²
- Up to 150 wind turbines, max height is 370 m
- Up to 11 TWh/year \approx 1.5 x Olkiluoto 2

Tyrsky

- Area 480 km²
- Up to 95 turbines, max height is 370 m
- Annual energy production of 6 TWh

- Noatun South and North also developed in Åland
- The Finnish energy production in 2020 was 66,6 TWh
- Projects will be up and running by or around 2030
- Offshore hydrogen production a possibility in all three projects

What We Do

From acquisition and greenfield development to realization, construction and management of energy solutions



While focusing on four primary

SDG's:



OX2 and Offshore Biodiversity

- **Project Björkskär – combining OWF with algae farming**
 - Pilot project located in the Åland archipelago together with Nemo Seafarms and Under Ytan
- **NID (nature inclusive design) and foundation types**
 - Including engineers and biologists in the ongoing discussions
- **Oxygenation** – using the bi-product from hydrogen production in order to restore life to dead areas of the Baltic Sea (Swedish projects)



Potential and Solutions



ELECTRIFICATION



INDUSTRY TRANSFORMATION



DIGITALIZATION & GROWTH IN POPULATION

- The weather conditions in combination with shallow waters and large industries along the coast provides the Baltic Sea area with a huge potential for renewable energy utilization and electricity production (93.5 GW by 2050, WWF)
- The areas needed for offshore windfarms are huge, but the turbines are far between (1,5-2 km)
 - The rest of the space could be used by other industries or actors, for example for algae farming
- For these multiuse areas (and offshore windfarms in general) to be realized, there is a need for cooperation, support and clear guidelines for developers
 - For example, studies regarding cumulative impacts from different windfarms

PROJECT BJÖRKSÖSKÄR

The Team



Joel Lindholm (Under Ytan): Co-founder and CEO with a background in the food industry and sustainability work at both a theoretical and practical level with a focus on biodiversity issues and marine environments.



Magnus Hanstén (Nemo Seafarms): Co-founder and CEO. Master's degree in biological and environmental sciences, specialised in coastal and marine areas, and natural resource management.



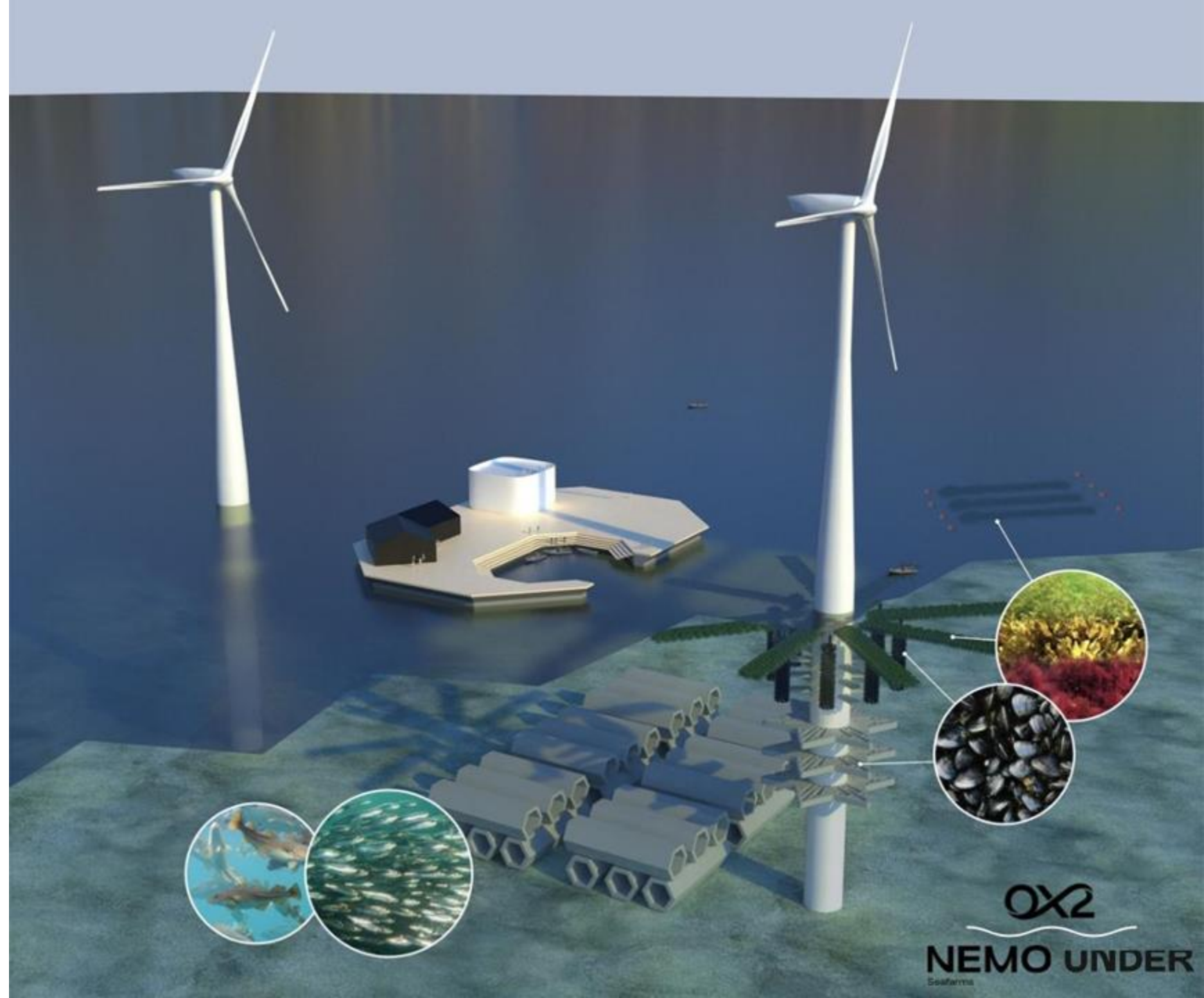
Lotta Nummelin (OX2 Åland): Permit Manager at OX2 Åland. Marine biologist with experience from academia, third sector, administration and the foundation world with a focus on Baltic Sea issues.

Vision

"We want glass-bottomed boats to bring visitors to the park. Show what we do out there. How life below the surface is thriving. That it is even healthier and more vital than before the park was established.."

"The idea of a Marine Park at sea was not new. What was new was making it transparent, accessible and public. Our plan was crystal clear. How we could increase biodiversity through organised cultivation of algae and seaweed. Whilst rapidly restore the vitality of the Baltic Sea.."

"We would make it public. Invite dialogue. Show how we gained knowledge. We wanted to get many people out to Björkskär. All year round. We called what we created "event-based research". Were we the first in the world?"



Project Björkskär

NEMO
Seafarms

UNDER



- 3-year project, co-financed by OX2, Under Ytan and Nemo Seafarms
- Builds new business and enterprise models combining:
 - Offshore wind industry
 - Macroalgae cultivation
 - Marine ecosystem restoration
- Björkskär, an island north of Åland, serves as a base for our tests and experiments
→ Innovation and scalable models for the rest of the Baltic Sea
- Eutrophication and biodiversity are seen as resources and opportunities
 - Eutrophication contributes to nutrition for the algae industry
 - Low biodiversity increases the possibility of scalable restoration practices
 - Wind farms provide the required marine areas for the long term

Project principles



Agile operating principle

- Tests and experiments in accordance with the latest knowledge and best available practices.
- Allows us to follow the latest research and streamline techniques while working according to nature's conditions.
- We see the state of the Baltic Sea as a resource that is key to our regenerative project and business concepts

Cooperation

- We invite experts from all countries around the Baltic Sea to exchange ideas and best practices
- We welcome project partnerships to develop the marine sector and entrepreneurship
- The Baltic Sea marine environment and its species are our most important partners

Goal

The project's vision includes all three dimensions of sustainable development (social, environmental & economic) and is divided into three main objectives:

Combined industries



- Creating new job opportunities
- Integrated activities at an operational level

Increased

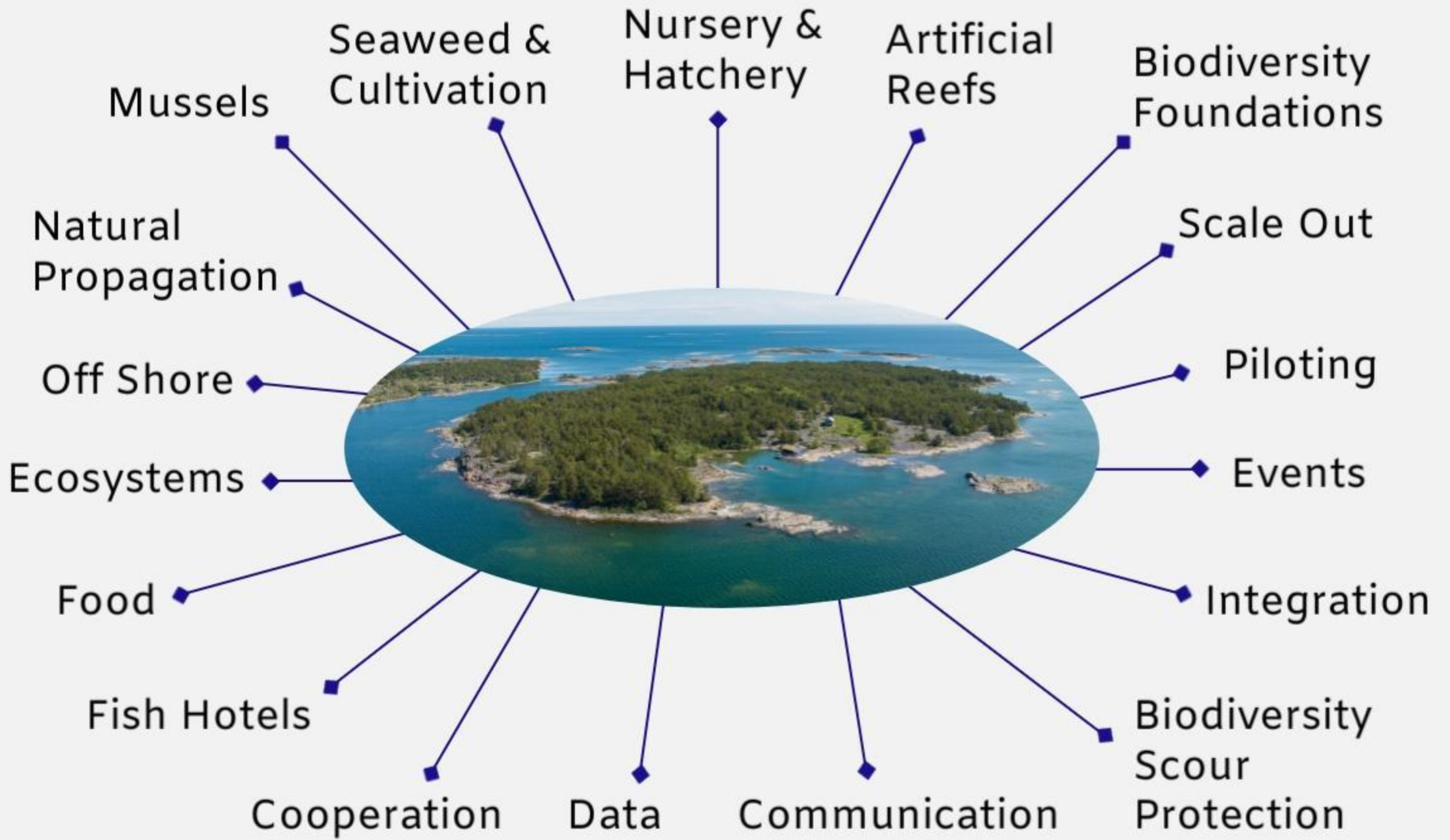


- Create habitats for different species
- Ecosystem restoration
- CO2 sink and oxygen production

Combat



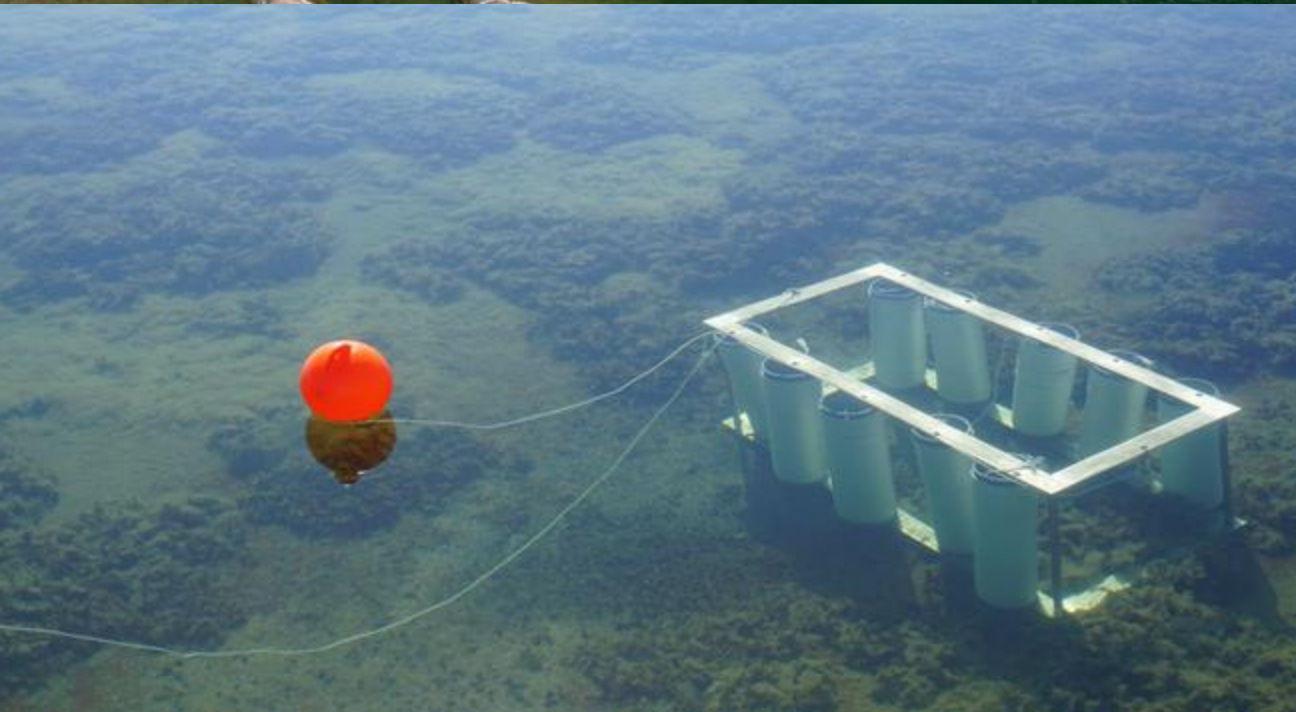
- Macroalgae efficiently absorb nutrients from the sea
- Valuable biomass



Happening now...

- Foundations as artificial reefs
- Nursery and hatchery
- Seaweed propagation
- Blue mussel propagation
- Artificial reefs / “fish hotels”
- Food and food stuff







Conclusions

- It is possible to build marine multipurpose areas where we utilize and promote
 - Wind energy
 - Biodiversity hotspots
 - Cultivation of marine resource
 - Ecosystem compensation
- The electricity production potential in the Baltic Sea is huge, but the potential should not be realized at the cost of the environment
 - Biodiversity positive wind farms is the goal, multi use areas could be the key
- In order to be realized, permit processes should be straight forward and there should be clear guidelines to follow
 - This means up-to-date research on relevant topics and enough knowledge about the current environmental state

Thank you!

Follow us!





Powering the great shift