

# BLUE MISSION BANOS

Supporting the Mission  
Ocean Lighthouse in the  
Baltic and North Sea Basins

EU MISSIONS  
RESTORE OUR OCEAN & WATERS



## 3rd MISSION ARENA 26-27 November 2024 Amsterdam

### REGIONAL FOCUS ARENA 3

The Netherlands  
BELGIUM  
DENMARK | West  
GERMANY | West  
FRANCE | North





**3rd MISSION ARENA**  
26-27 November 2024 | Amsterdam

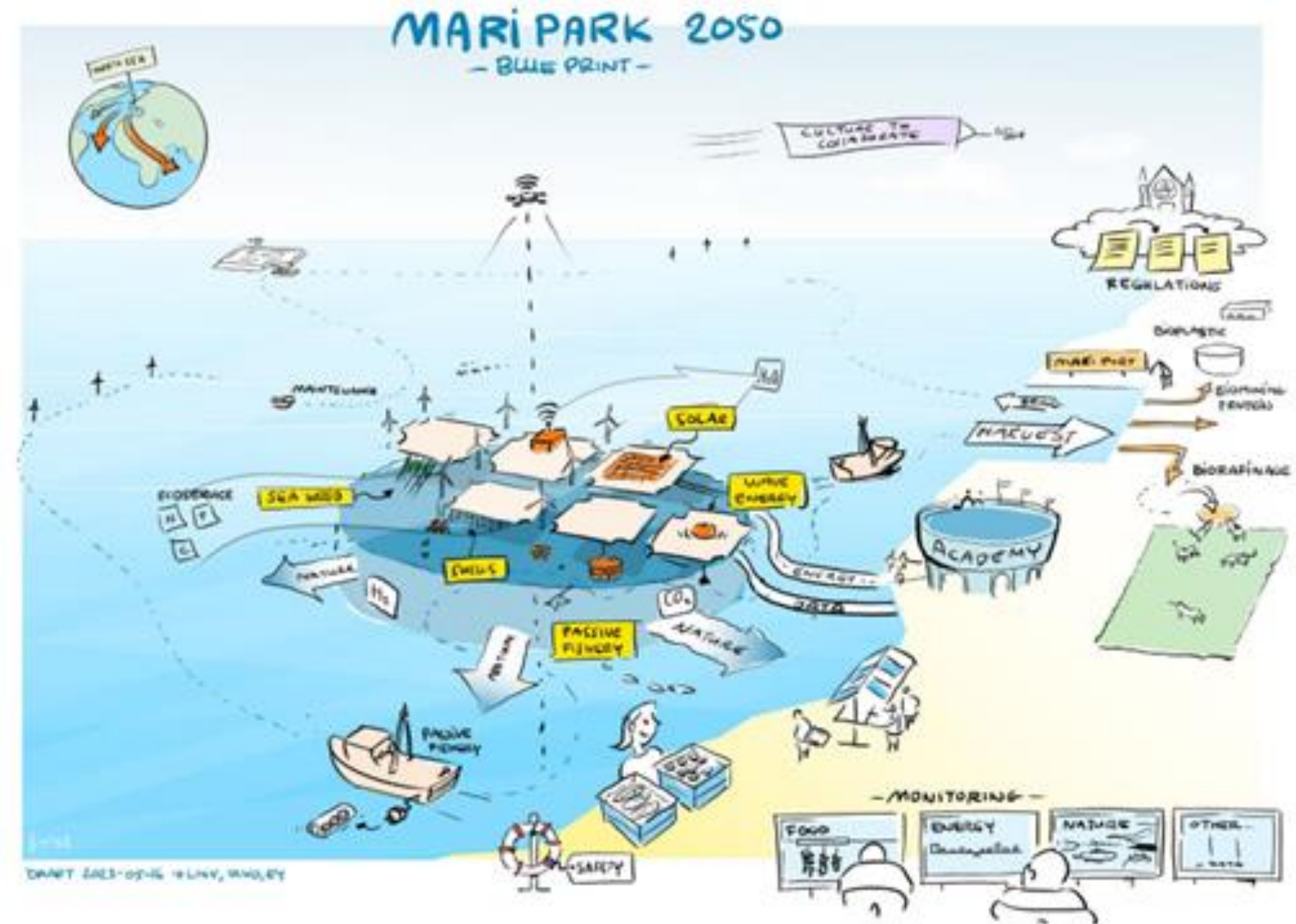
# MULTI-USE I

**De-risking entrepreneurs and a Sustainable Blue Economy**

26 November, 11:15-13:00  
Hall 1 plenary

# Multiple use: ideal in theory, difficult in reality

- Boosting sustainable blue economy is only possible if we find synergies
- Blue economy can foster most by colocation
- Environmental improvement is key (NID)
- Policy needs to force multi-use (eg in tendering)
- **“Multistakeholder” by definition**
- Governance in line with ambition





During the session, some questions will appear via slido.

Join at  
**slido.com**  
**#2725 651**

<https://app.sli.do/event/fsitkESEGKi8DdfFVU83f1>



# slido



**Who are you?**

# AGENDA

## Part 1 BUSINESS

11h15 welcome and intro  
11h20 Maripark the concept  
  
11h35 Maripark the blue print  
Octopus  
North-C-Neutral

Marijn Rabaut (BC)  
Kinnie De Beule (BC)  
Marjoleine Nascimento da Silva Karper (RVO)  
Date Pijlman (E&Y)  
Jacob Brands (ZB)  
Timothy Vanagt (ORG)

## Part 2 BREAK OUT

12h10 intro  
12h15 workshop  
12h45 way forward!  
12h55 wrap-up  
13h00 lunch!



# Important steps and leverages

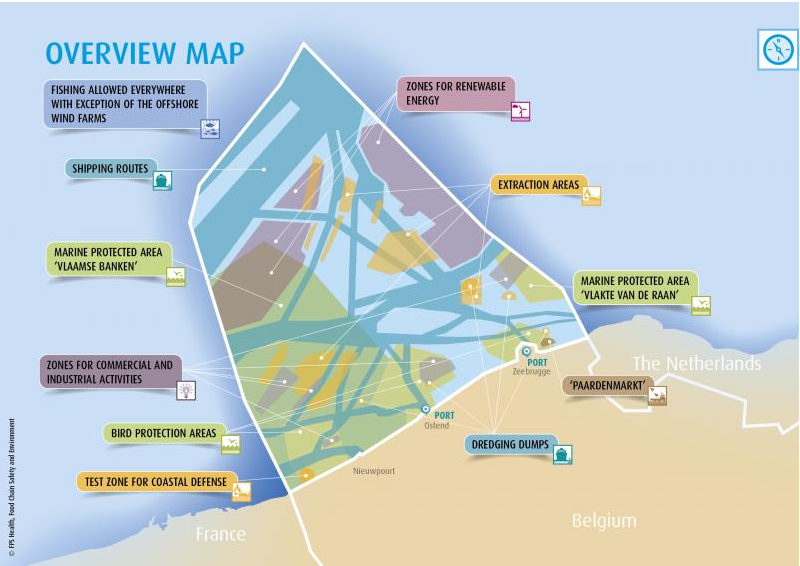
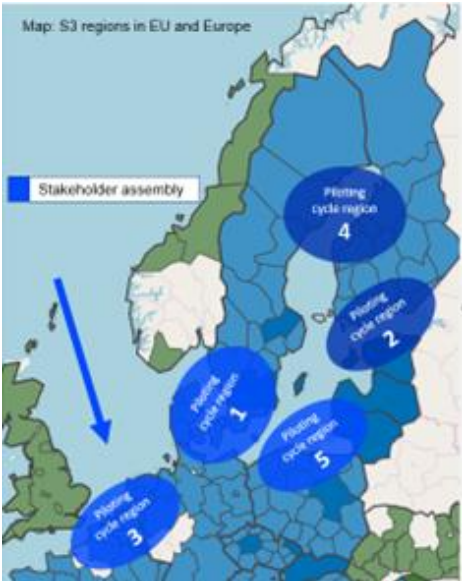
EU targets Energy, Food, Biodiversity, CC

Mission Ocean and Waters  
BMBanos and Innovation cycles

New activities coming up  
Security!  
Innovation and multi-use zonation

Project results:  
eMSP (policy briefs!)

What we need  
De-risking business  
One governmental pillar for a SBE  
...

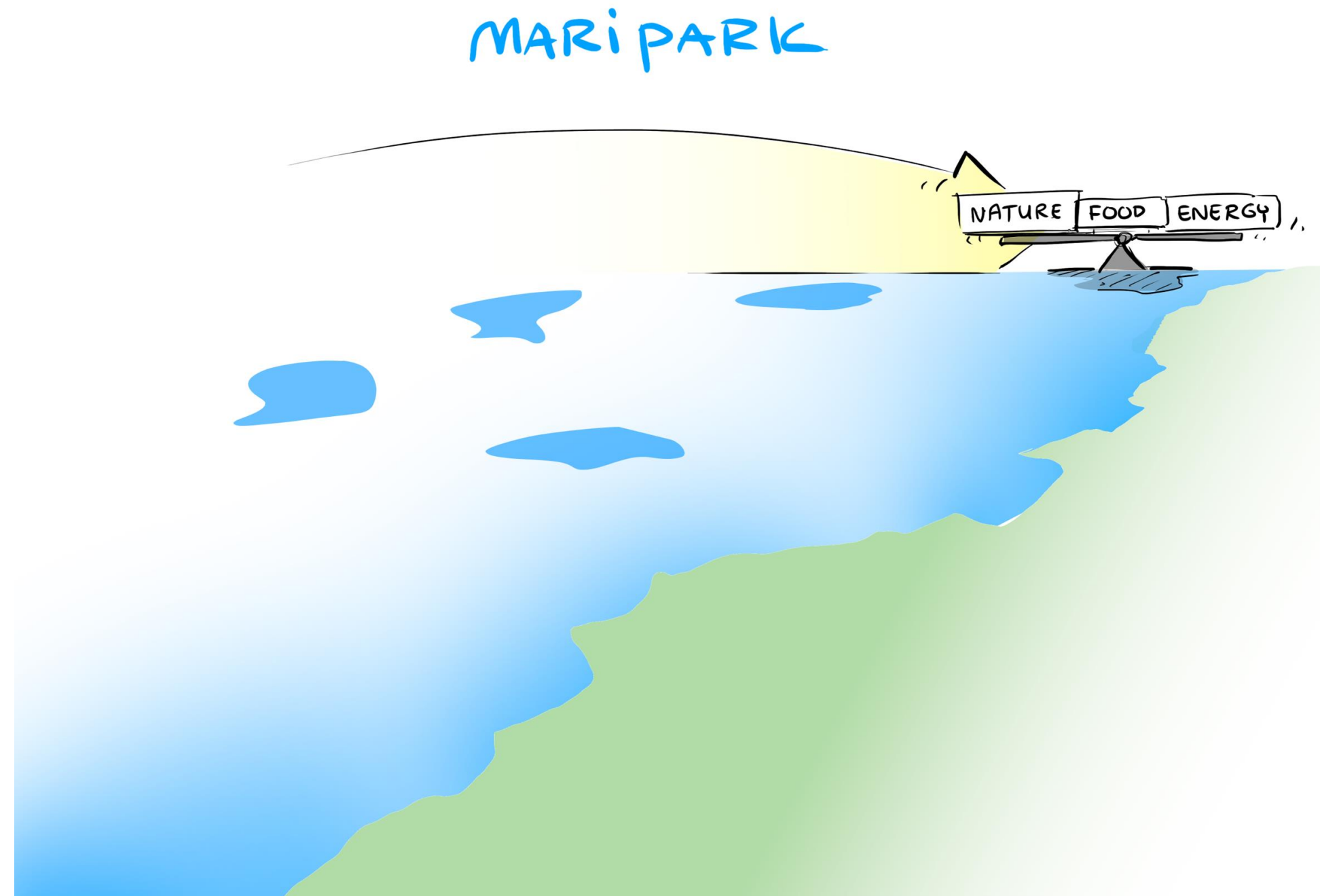


# slido



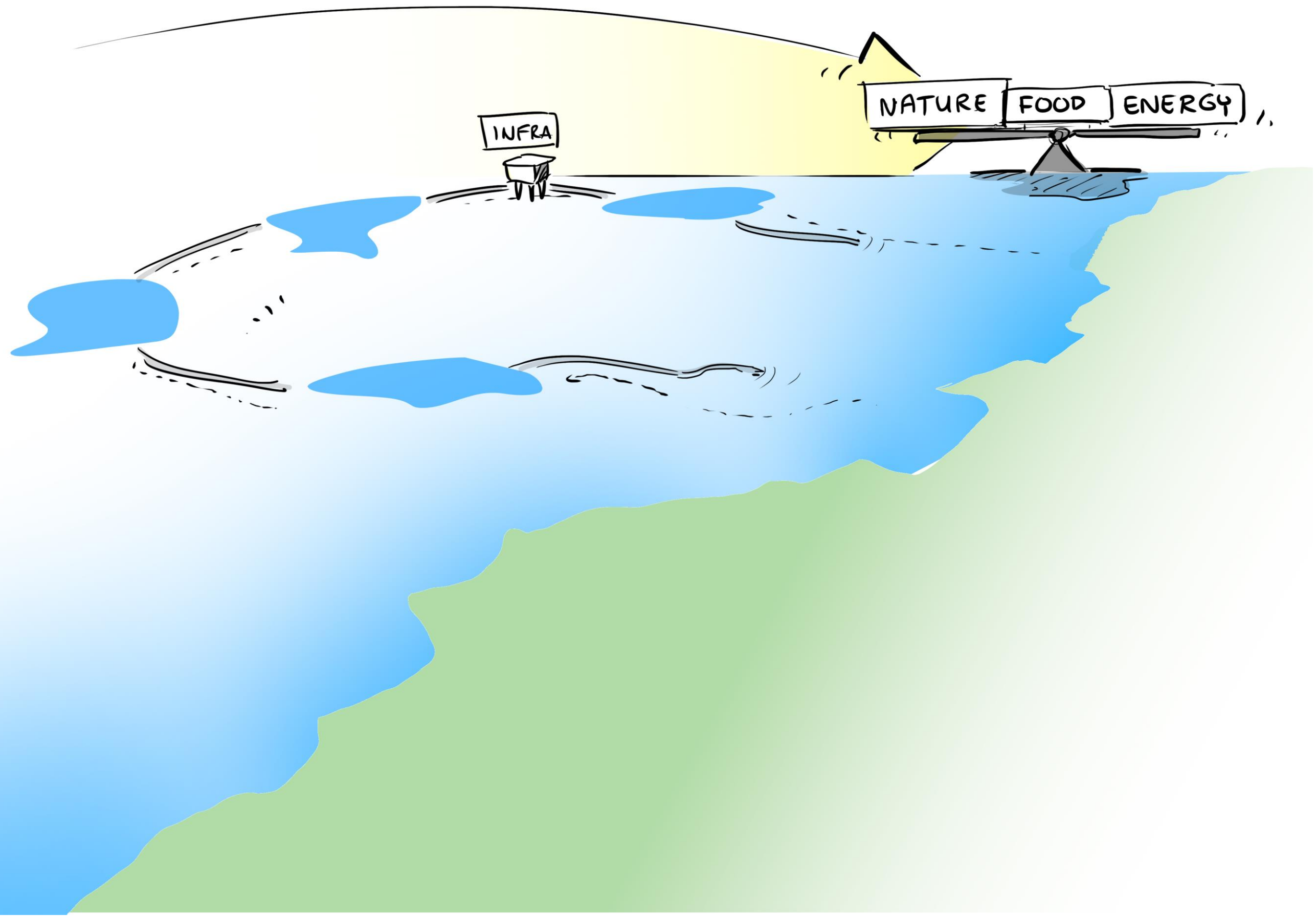
**Are you a Multi-use**

# MARIPARK the concept and efficient approach

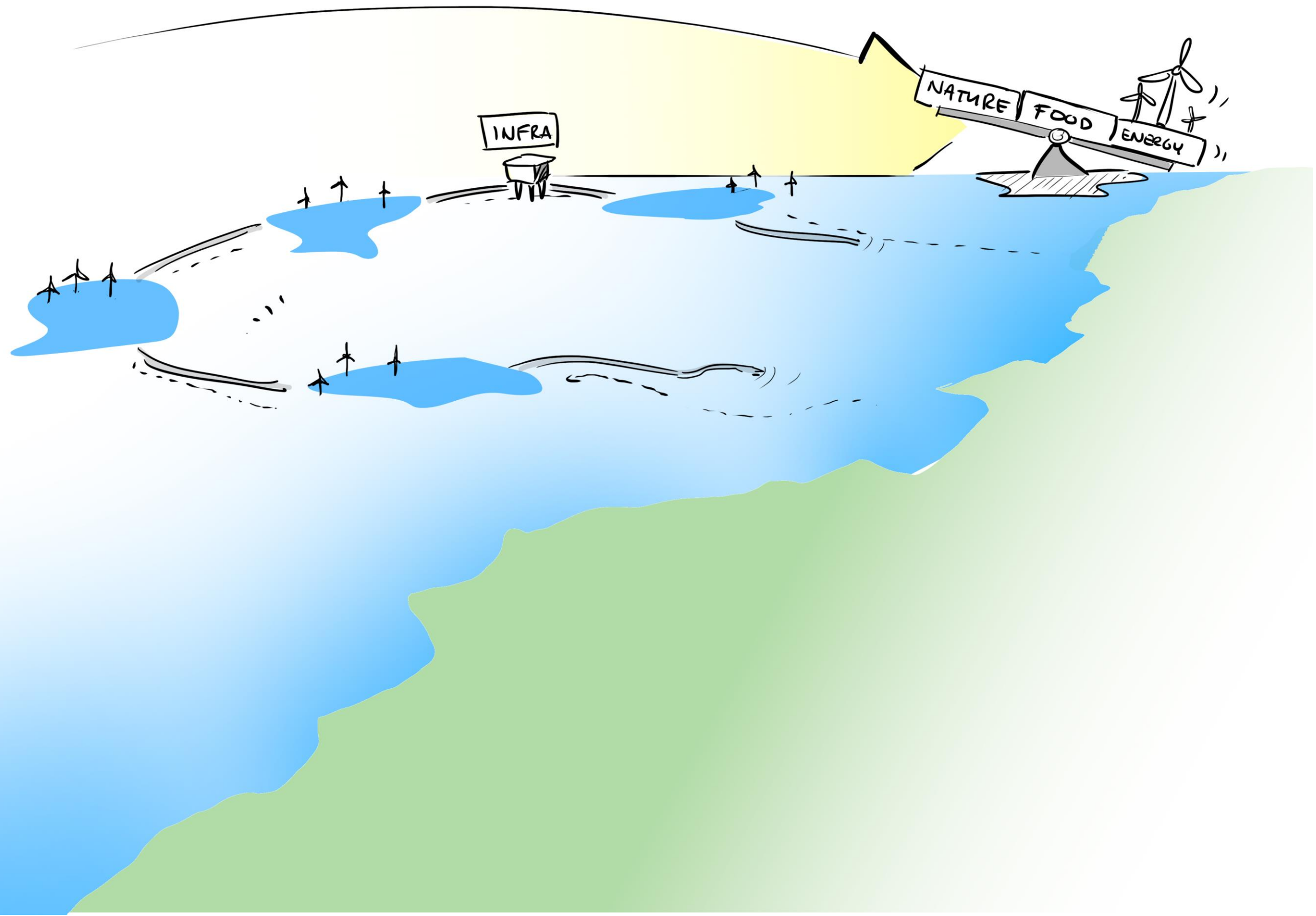




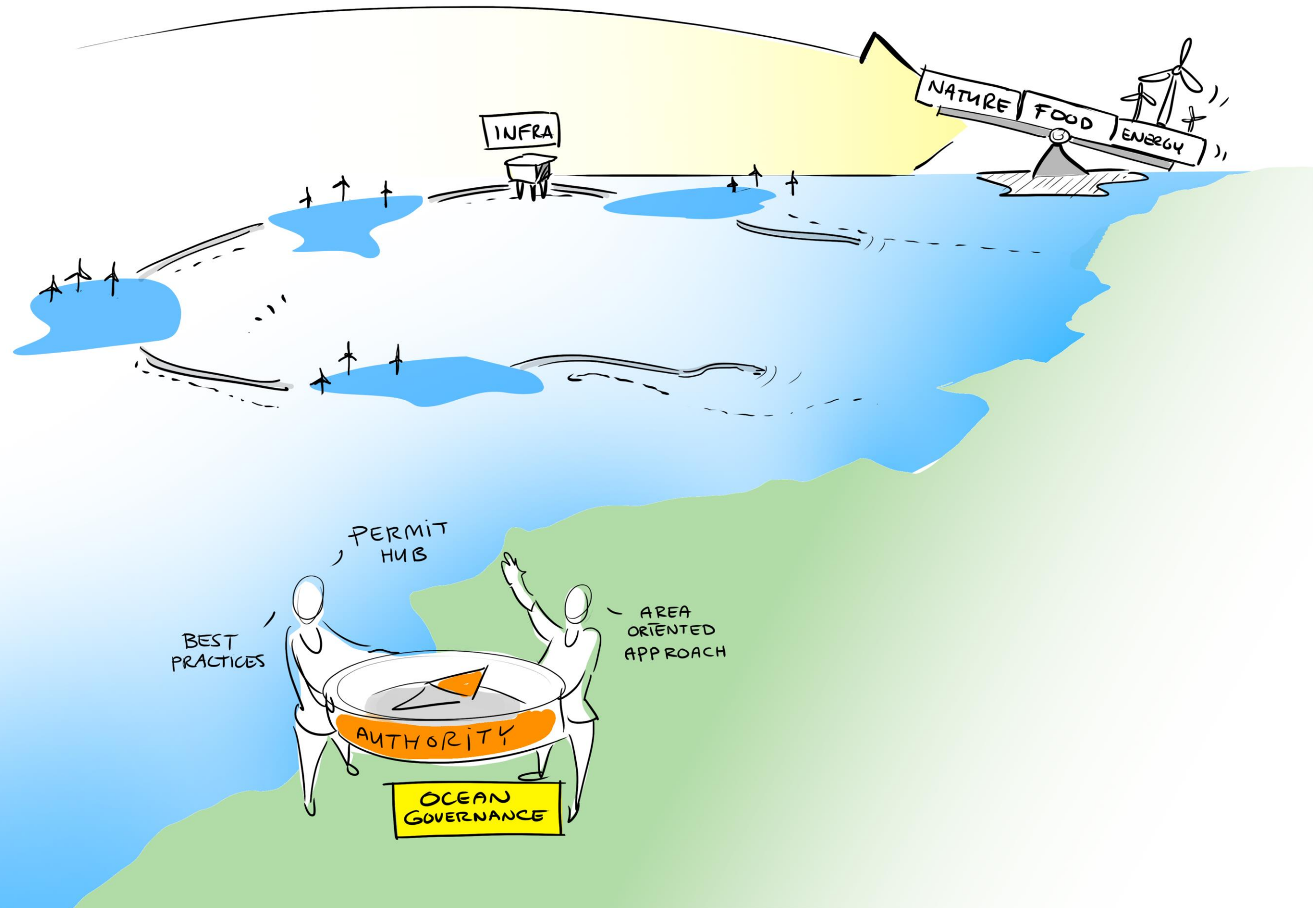
# MARI PARK



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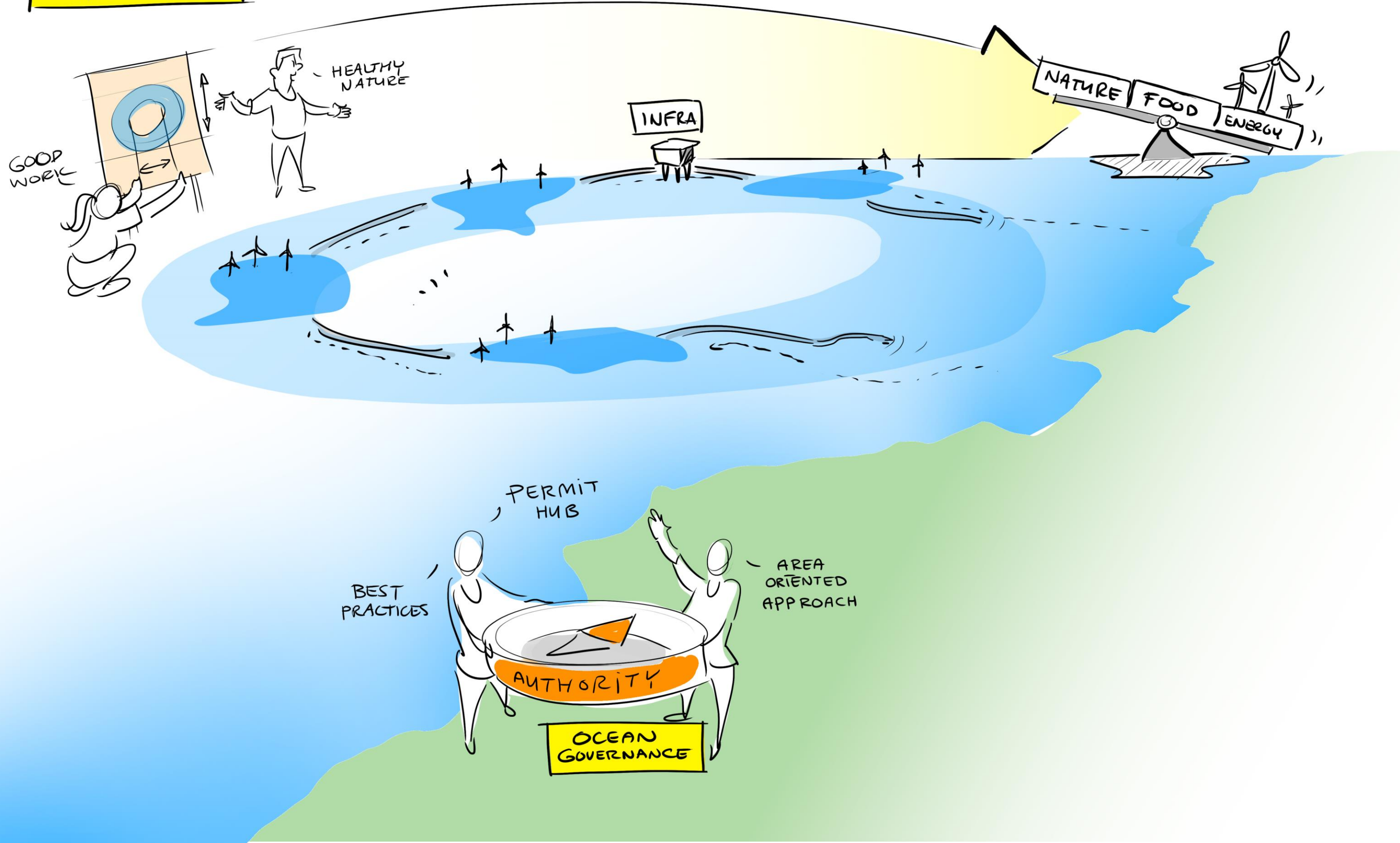
# MARI PARK





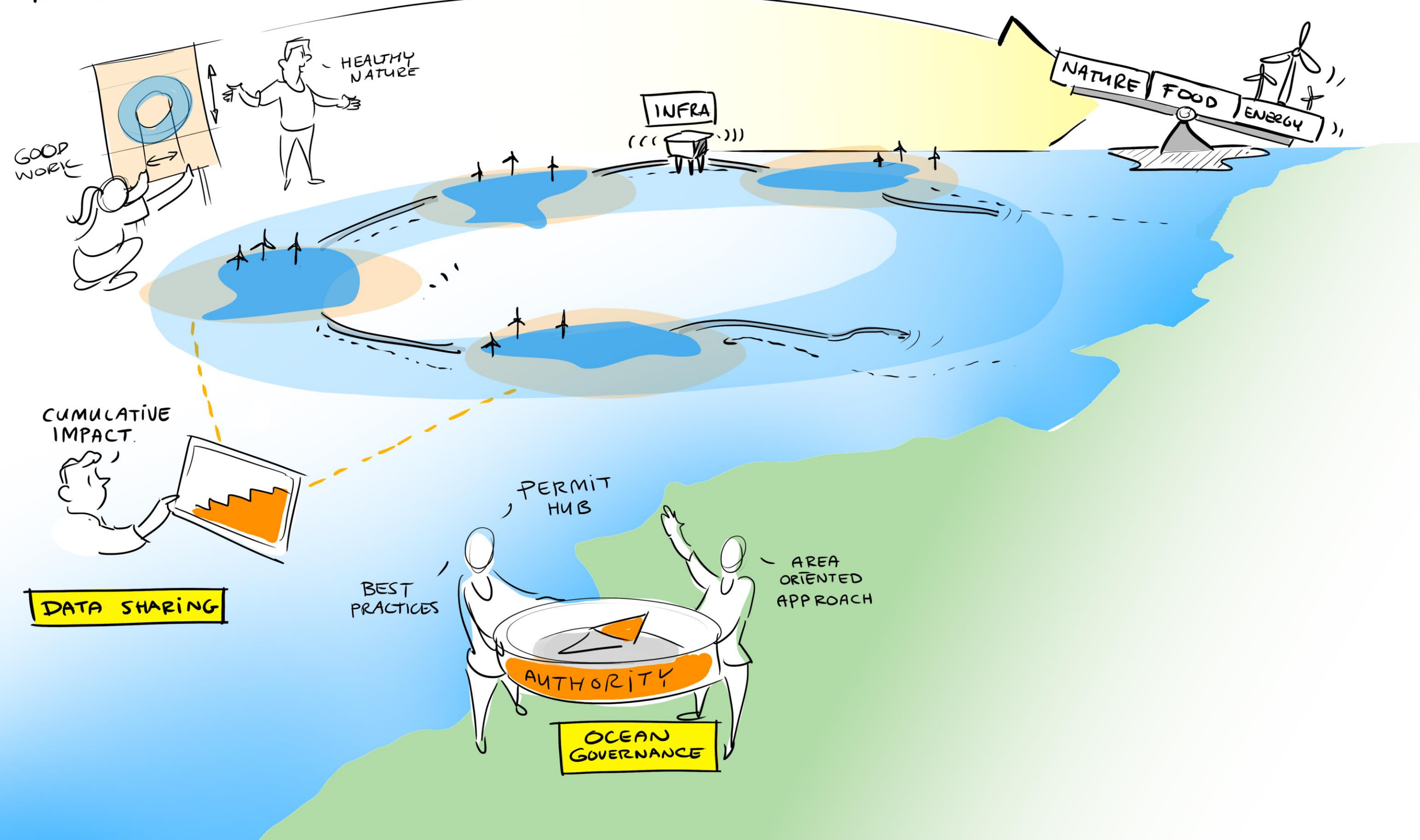
# MARI PARK

ECOSYSTEM-BASED  
APPROACH



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ECOSYSTEM-BASED APPROACH

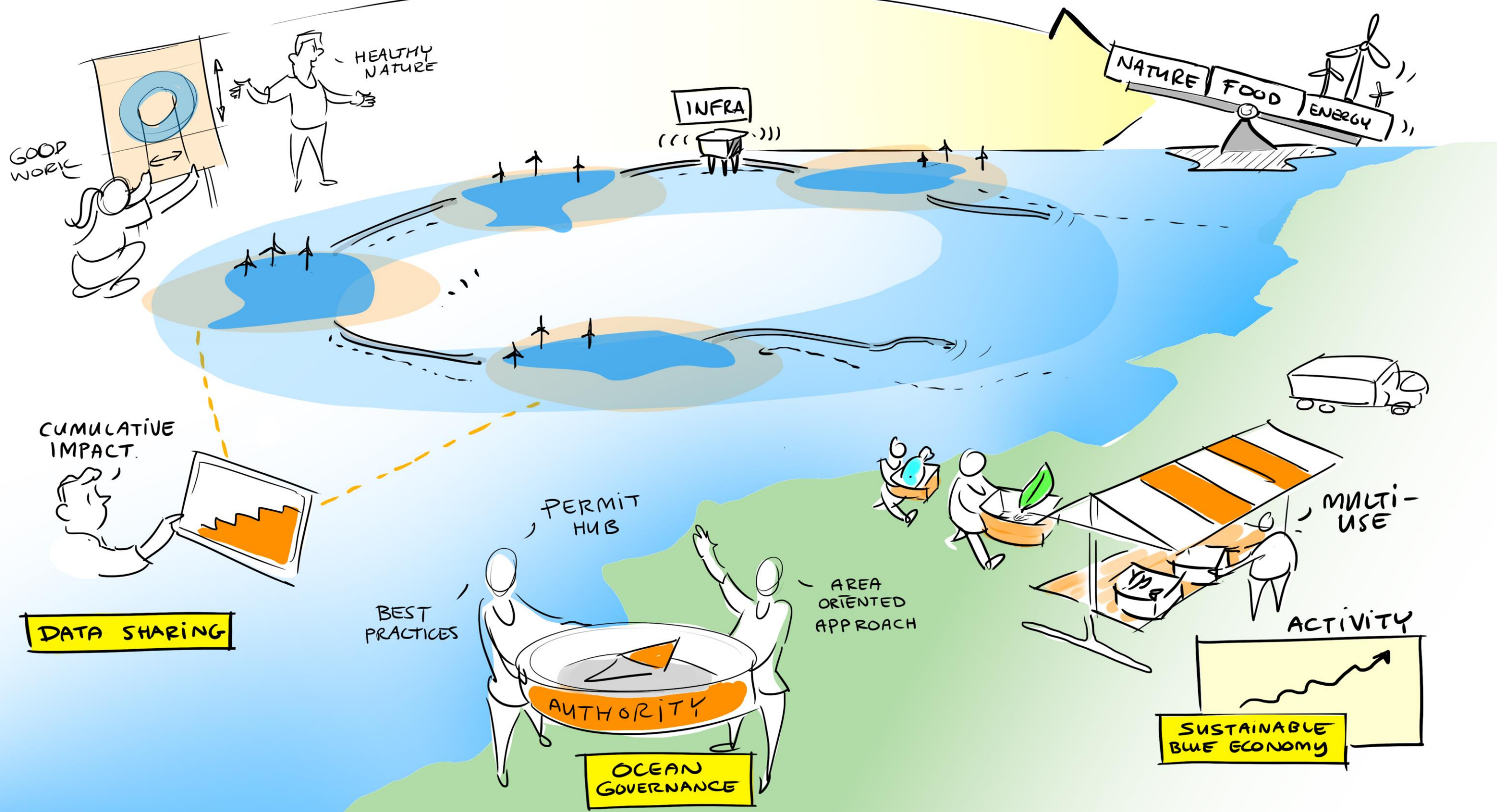


DATA SHARING



# MARI PARK

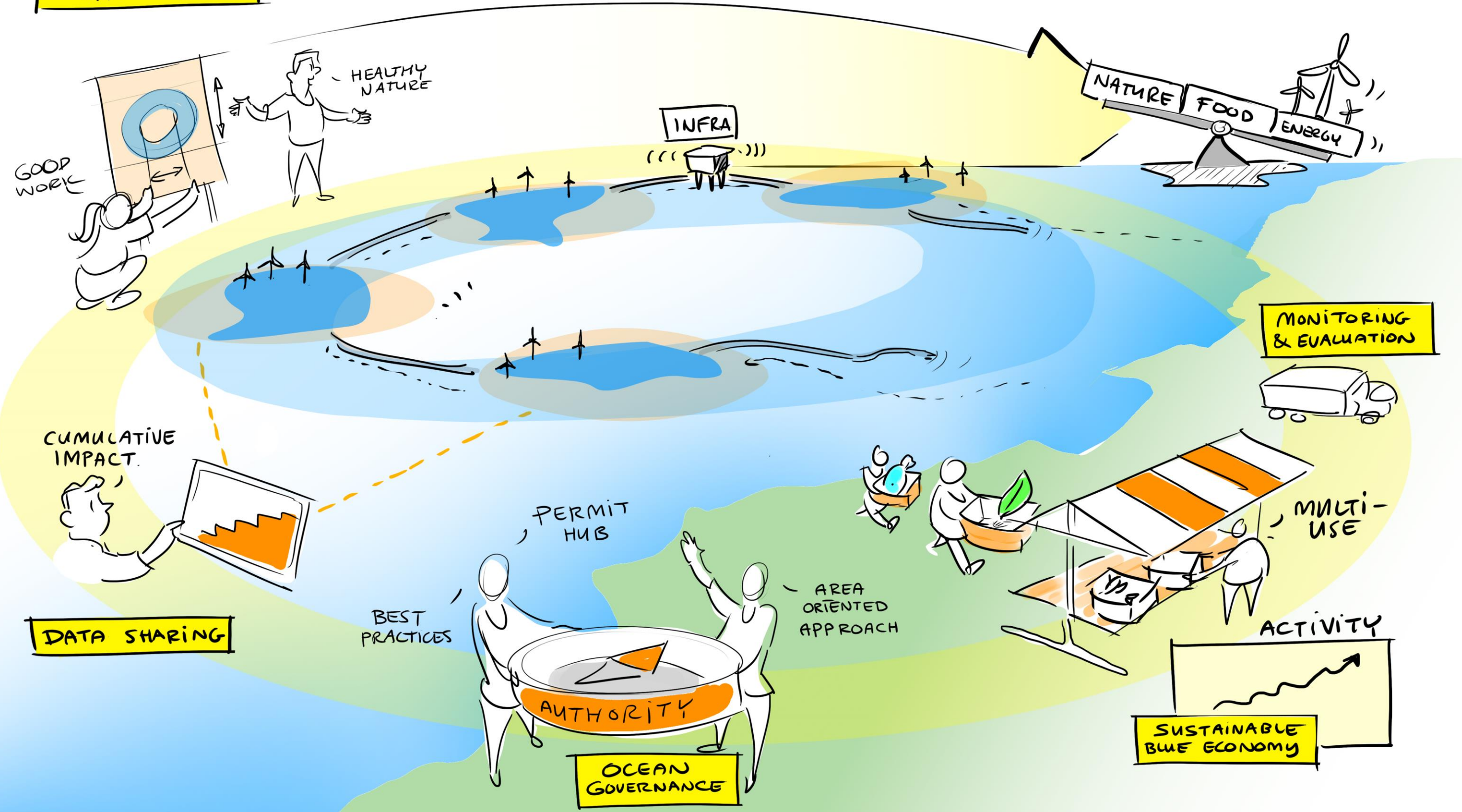
ECOSYSTEM-BASED  
APPROACH





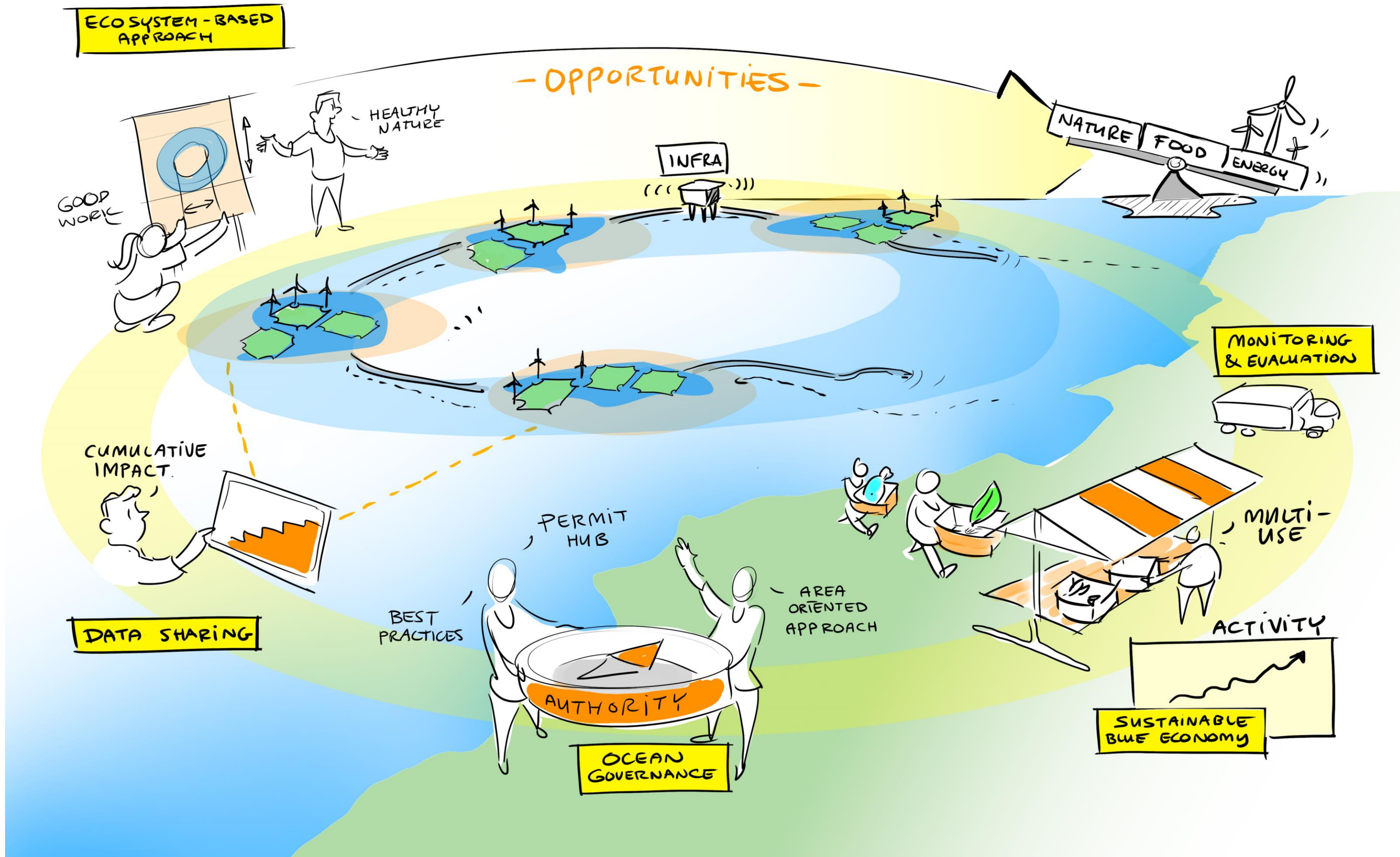
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ECOSYSTEM-BASED  
APPROACH





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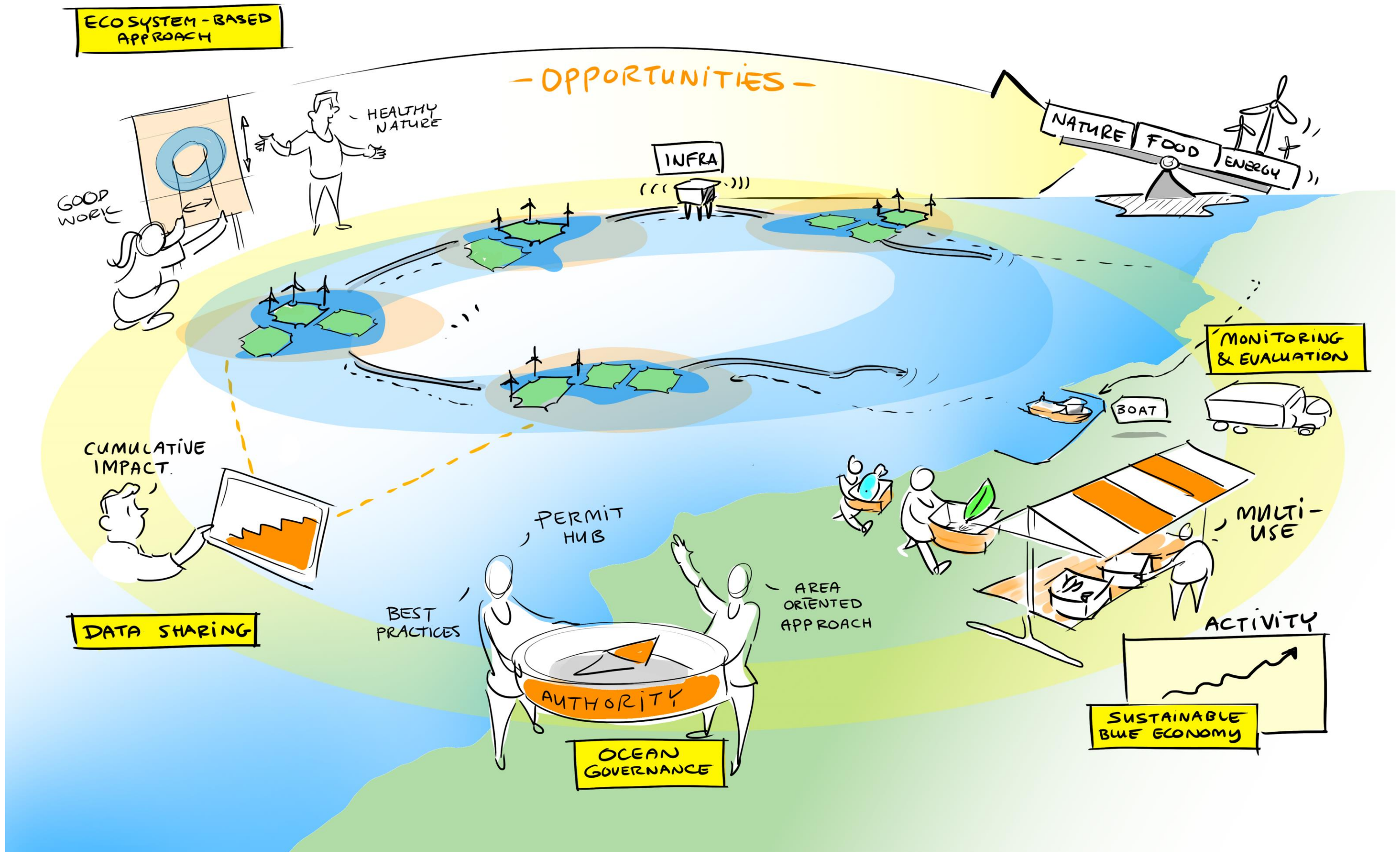




# MARI PARK

ECOSYSTEM-BASED APPROACH

- OPPORTUNITIES -

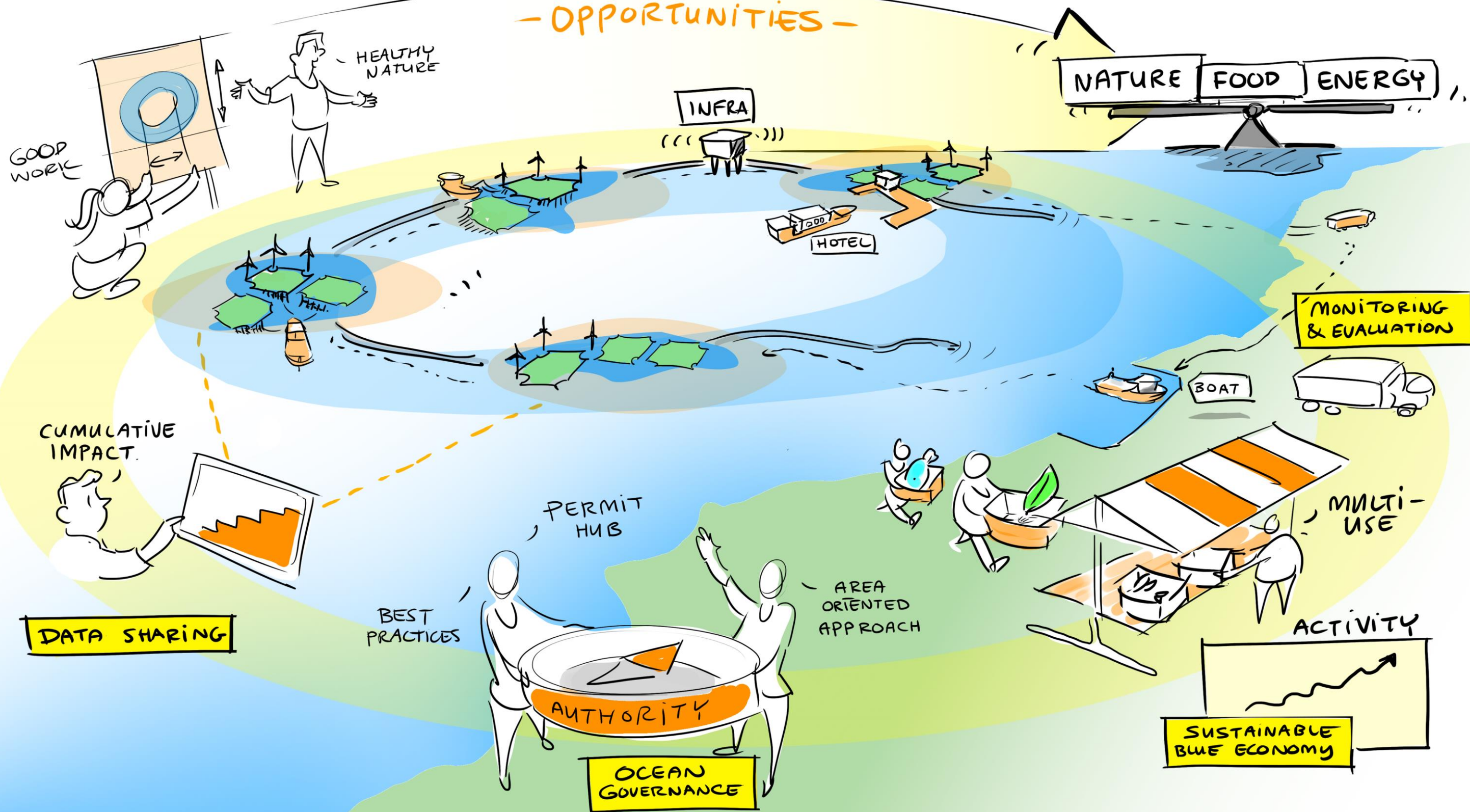




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ECOSYSTEM-BASED  
APPROACH

- OPPORTUNITIES -





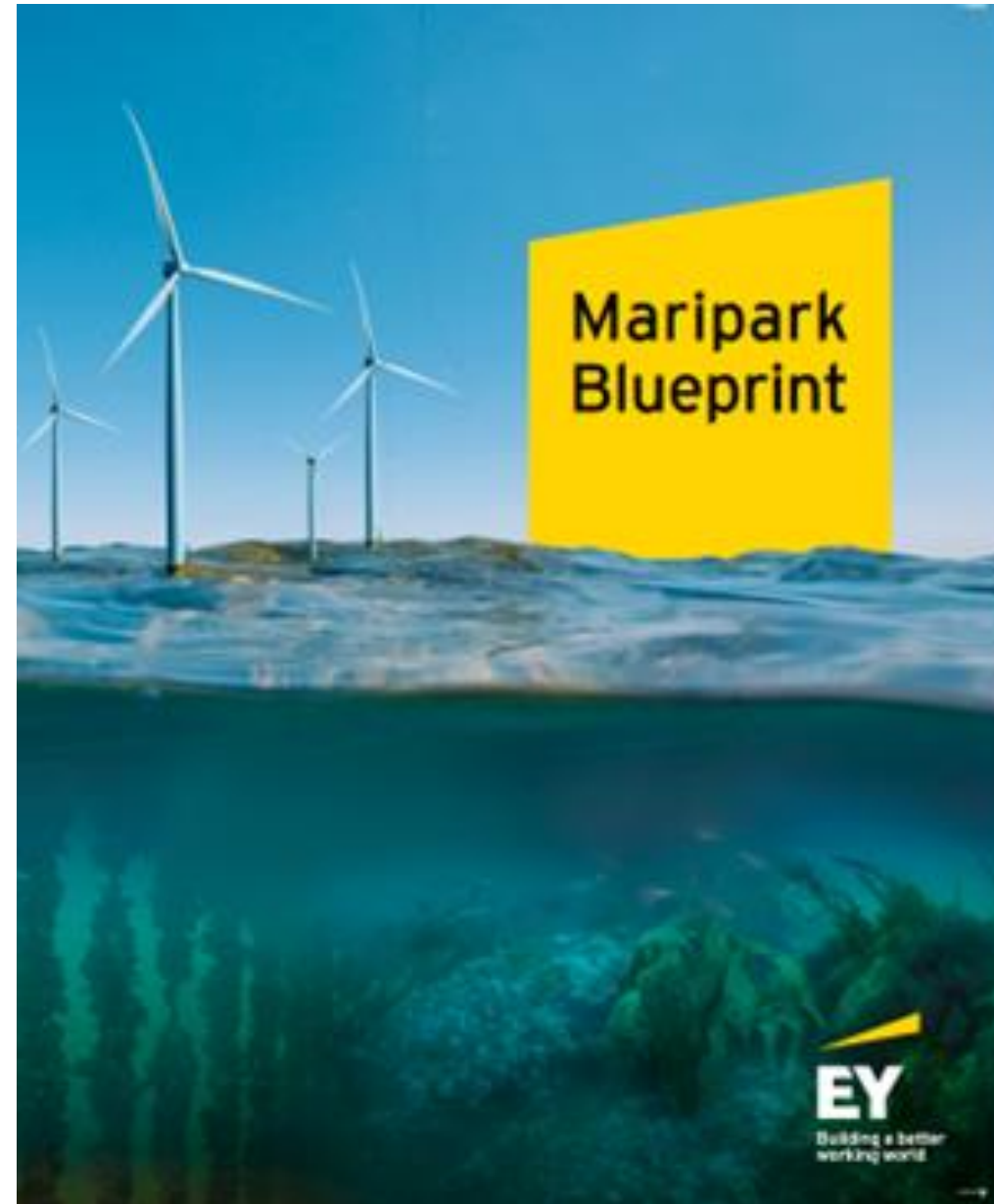
# slido



**Are you a Maripark**

# MARIPARK the blue print

Date Pijlman



# Maripark

Charting a new course for ocean use

- 26 November 2024



Date Pijlman

Manager, EY Netherlands

+31 6 2908 4170

[Date.pijlman@nl.ey.com](mailto:Date.pijlman@nl.ey.com)

# Agenda





# 1

## Context & background



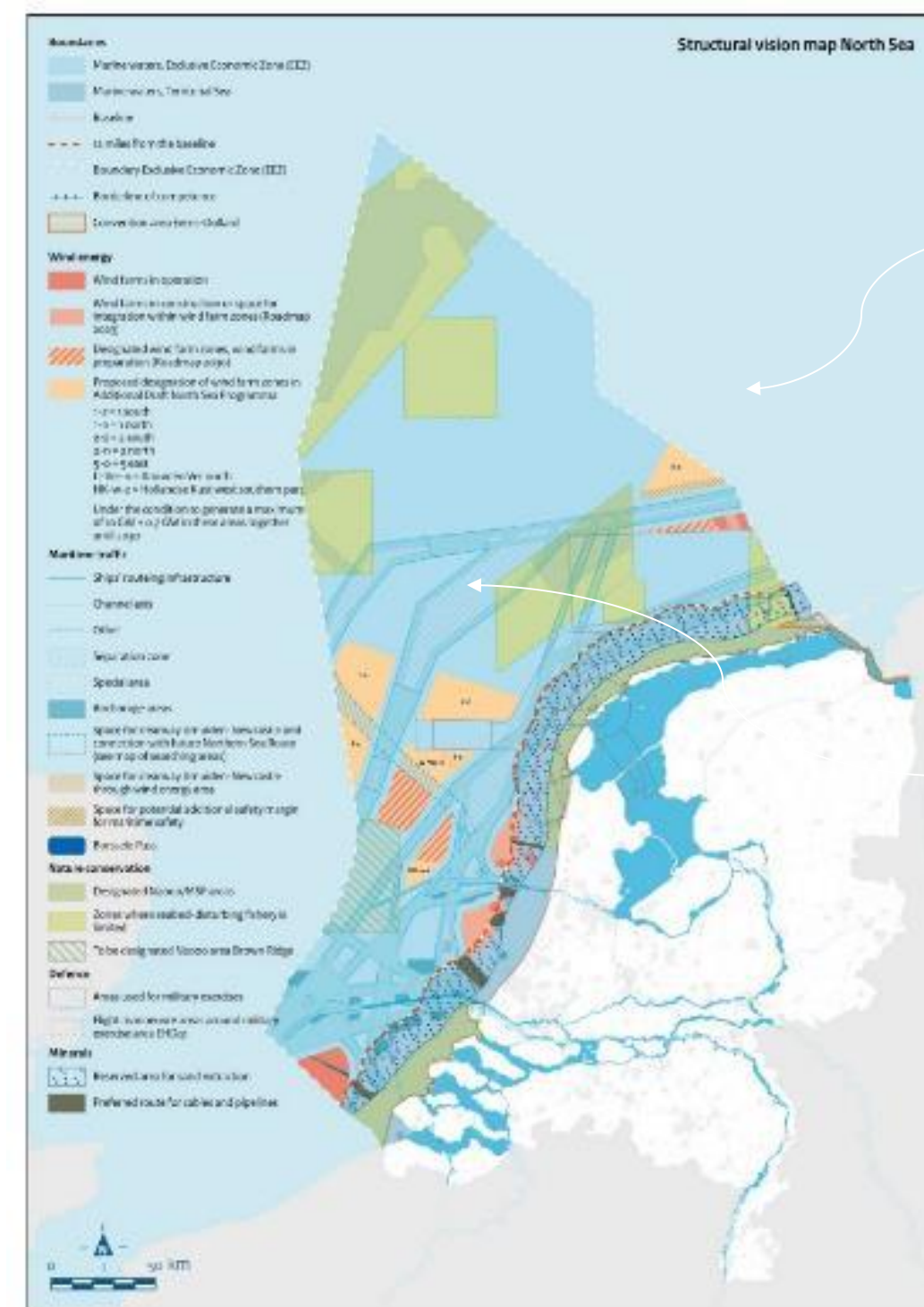
# The question of how we use, optimize and protect ocean space is more topical than ever before in light of global megatrends

## Context



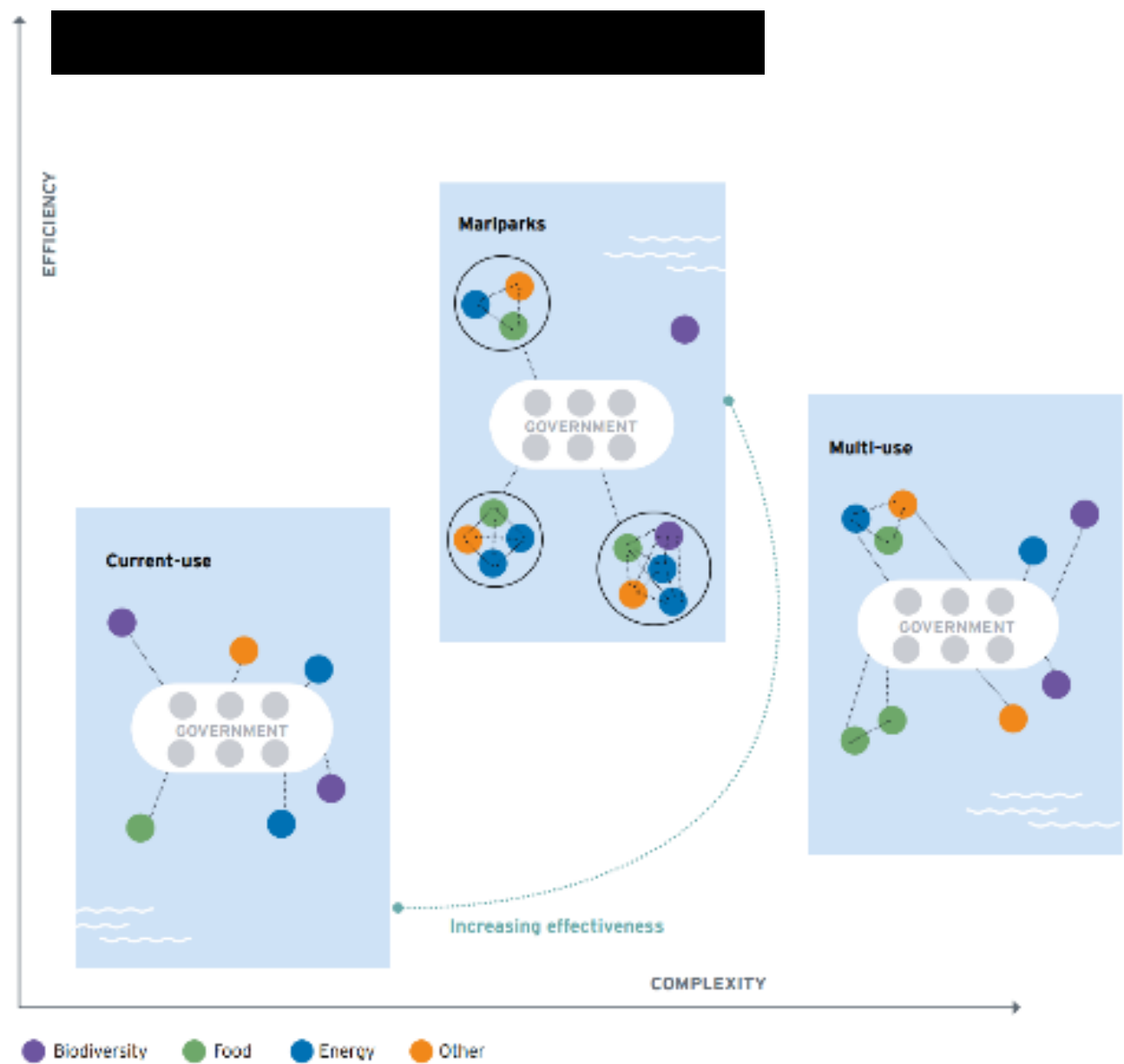
How can we maximize the use of offshore space for sustainable food production and the generation of renewable energy, while at the same time not only respecting, but also enhancing, its natural value?

**In other words: how can we achieve a sustainable blue economy?**



# A crucial step towards achieving a sustainable blue economy is the successful development and operation of Mariparks

## Mariparks



## Realizing Mariparks - background to the development of the Maripark Blueprint

- 
- 
- 
- 

Q Who should develop such infrastructure or provide services to the community?

A Maripark (entity)

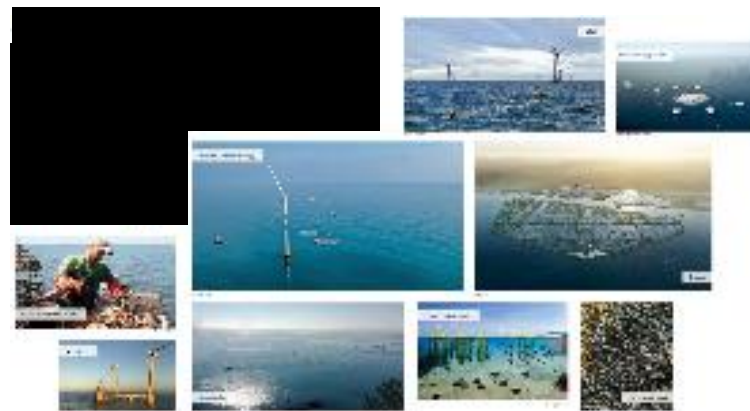
Q What should such entity look like and how should it be governed?

A Determined through the development of the Maripark Blueprint\*

# The Maripark Blueprint was developed in four key and interlinked parts, each required to reach the ultimate goal of determining how a Maripark could be governed and what the entity would look like

## 1 Baseline

A baseline study answering the question, which similar initiatives are known around the world, and what lessons can be learned from them?



## 2 Portfolio

A portfolio of potential business opportunities, through analysis of the activities and their respective high level feasibility, financial, and stakeholder value

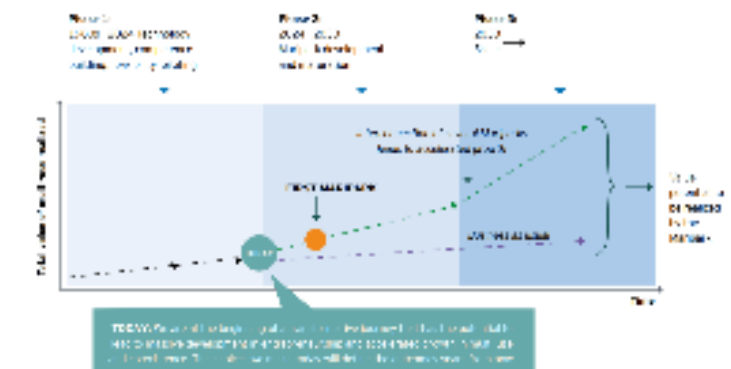
## 3 Organization & Structure

An assessment towards a recommended legal framework, followed by a high-level legal structure and tax impact assessment, leading to a proposed organizational structure of a Maripark entity



## 4 Transformation Roadmap

An indicative roadmap that will facilitate the transformation of an offshore windfarm to the first Maripark in the Dutch EEZ, which will serve as a template for subsequent initiatives



## Why?

To determine whether there are similar concepts globally to draw lessons learned and help shape the Maripark (entity)

Without knowing the viable business opportunities to be implemented and governed, how can you shape your organization?

To answer the overarching question regarding the governance and shape of the Maripark entity, considering the outputs of (1) and (2)

To determine the pathway forward and the roadmap for scaling from the first to multiple Mariparks



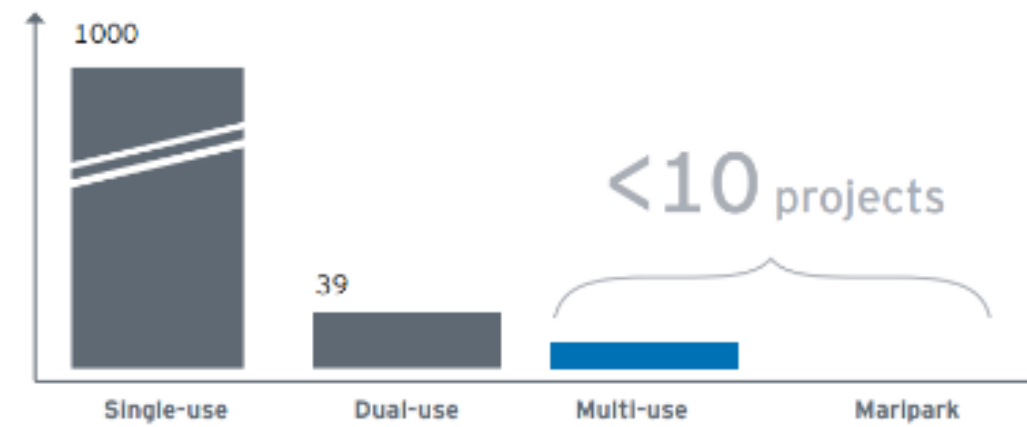
# 2

## Developing the Maripark Blueprint

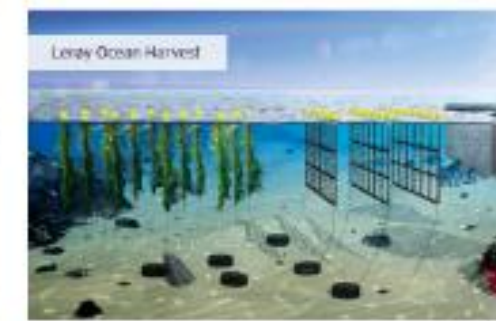


Looking globally, to date, no similar concept to the Maripark has been proposed elsewhere. Nonetheless, international dual- and multi-use initiatives provide insights and lessons learned that can help to advance the Maripark concept

Maripark would be the first of its kind as there is currently a lack of fully developed projects

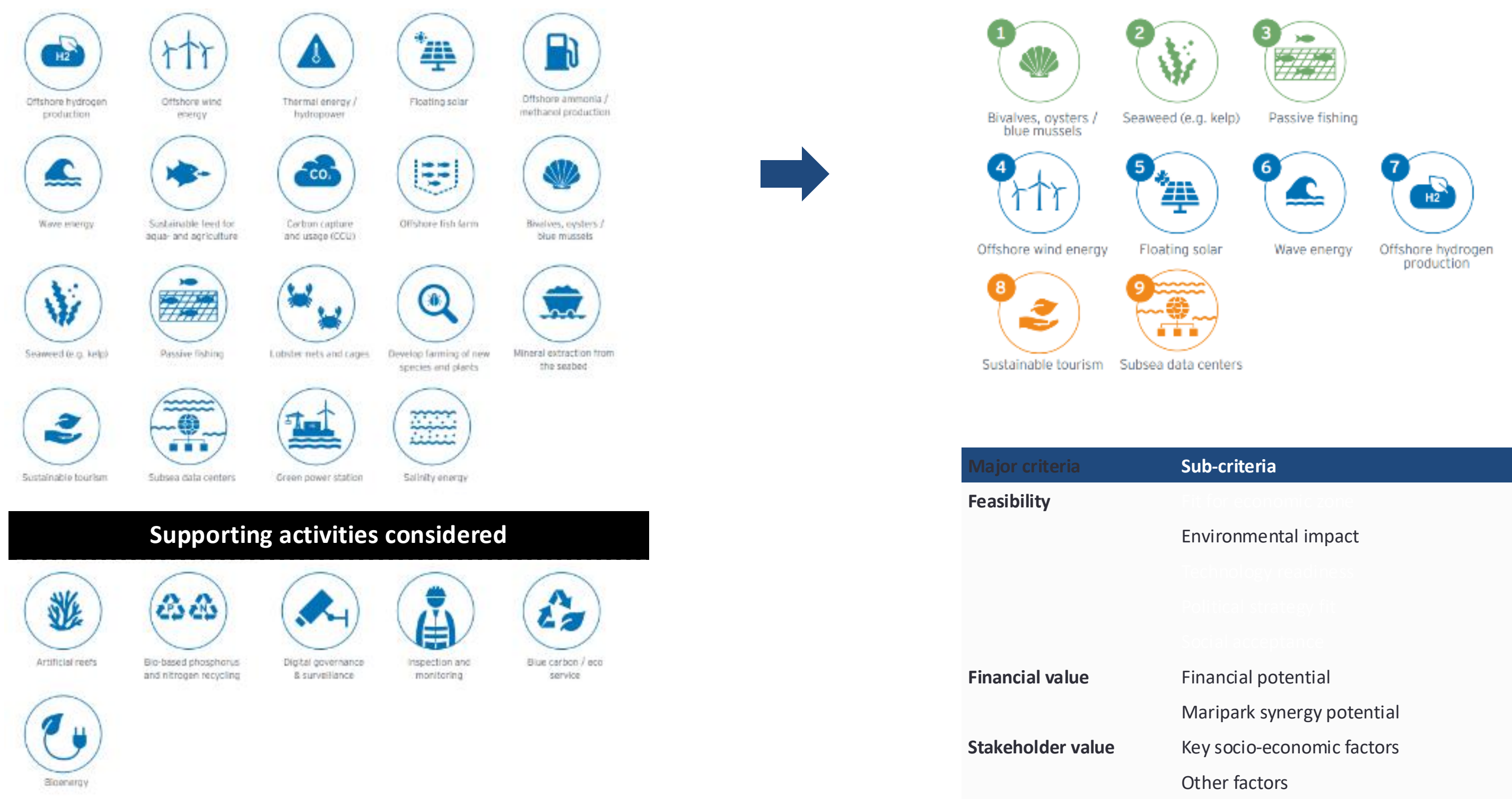


48 EVALUATED DUAL- AND MULTI-USE PROJECTS | 30 COUNTRIES



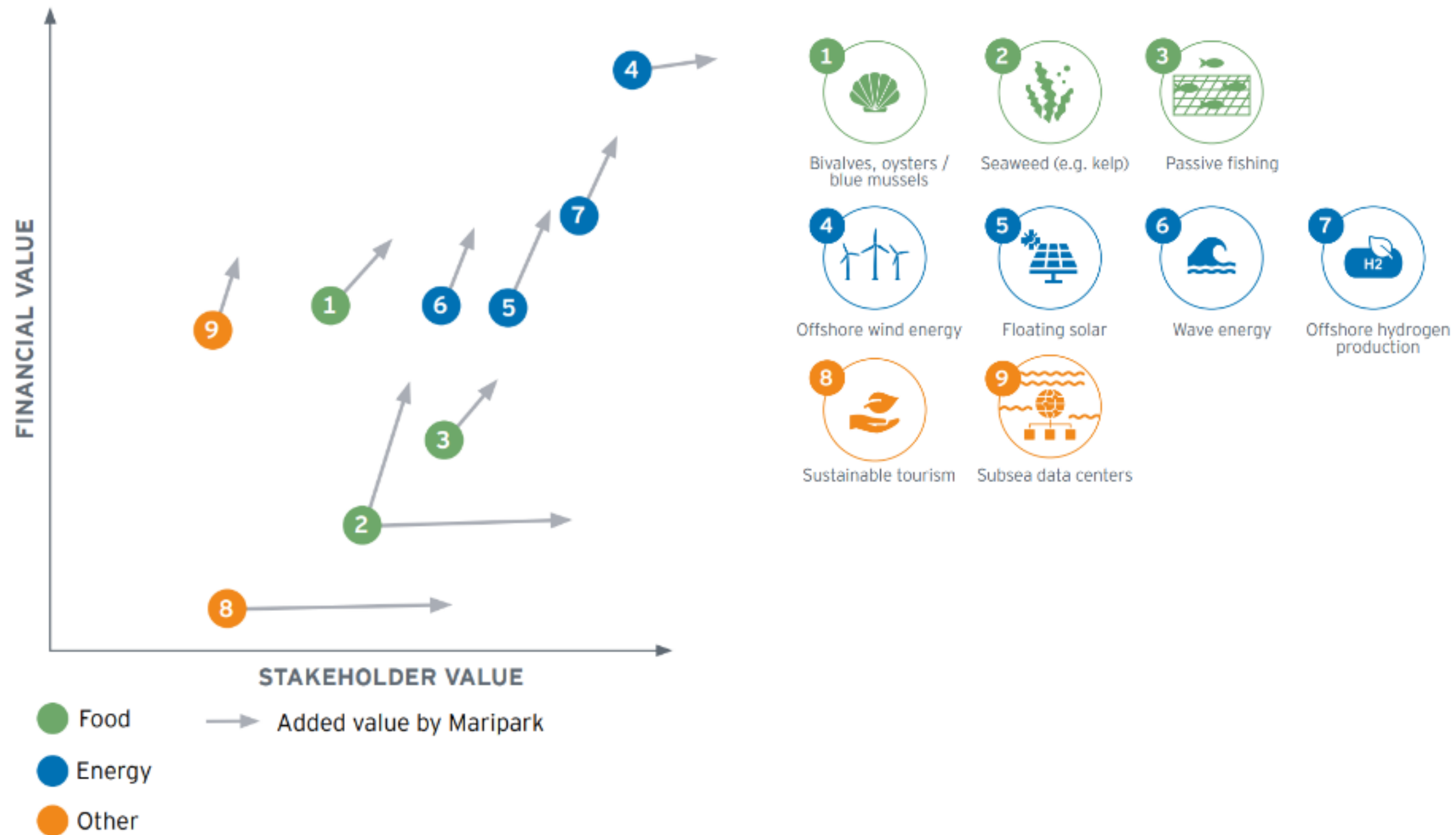


A comprehensive understanding of viable business opportunities is a prerequisite to defining a potential governance structure and transformation plan for a successful Maripark



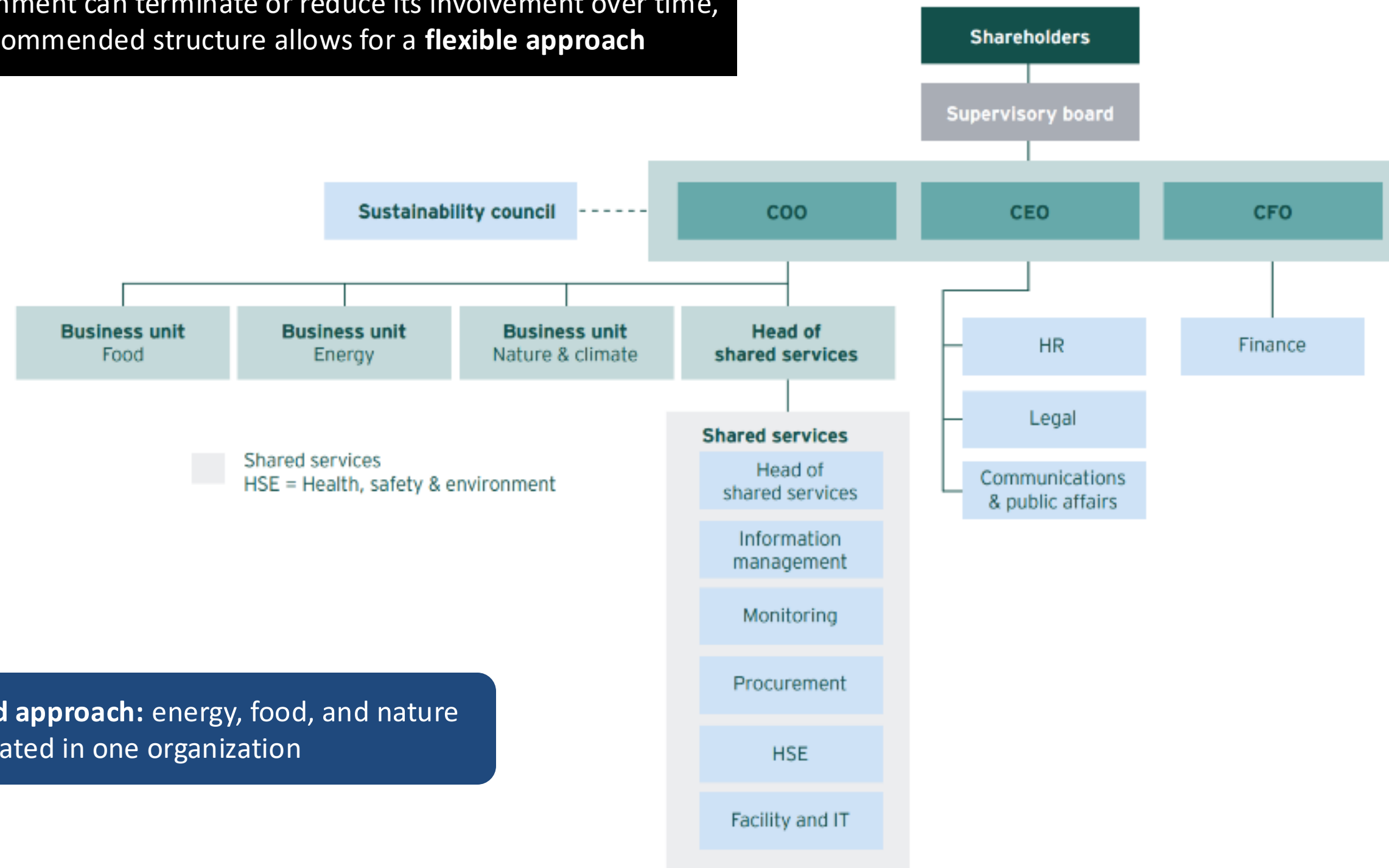
Major criteria	Sub-criteria
Feasibility	<div>Historical socio-economic context</div> <div>Environmental impact</div> <div>Technology readiness</div> <div>Political strategy fit</div> <div>Social acceptance</div>
Financial value	<div>Financial potential</div> <div>Maripark synergy potential</div>
Stakeholder value	<div>Key socio-economic factors</div> <div>Other factors</div>

It was found that all 9 business opportunities are viable in the EEZ and would benefit from a Maripark, financially and, to a lesser extent, at a stakeholder level



Knowing viable business opportunities to be implemented & governed, the organizational structure of a Maripark can be proposed, reflecting the need for strong stakeholder involvement across the domains of energy, food & nature

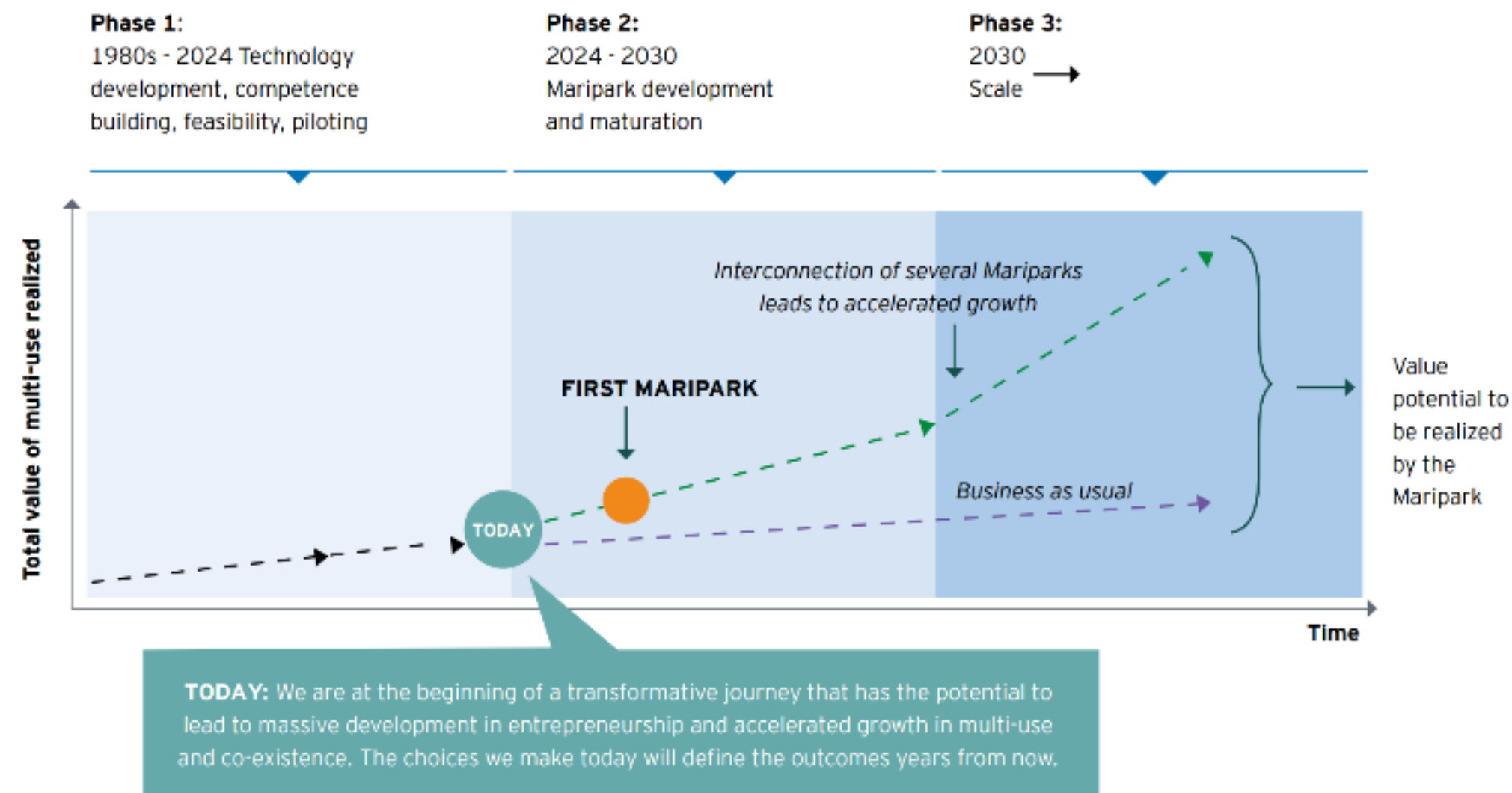
Government can terminate or reduce its involvement over time, recommended structure allows for a **flexible approach**



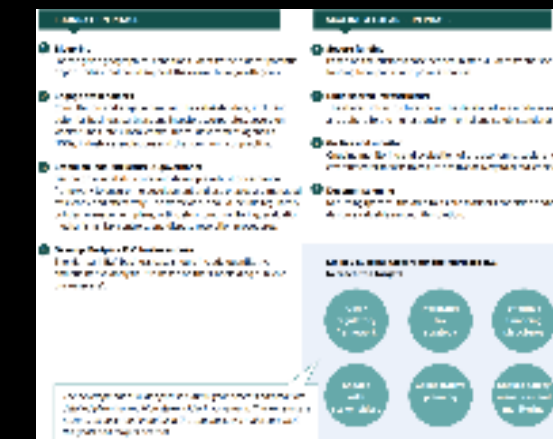
**Joint and balanced approach:** energy, food, and nature integrated in one organization

# Charting the new course via the Maripark entity: business as usual is not enough to realize the value potential that lies in multi-use

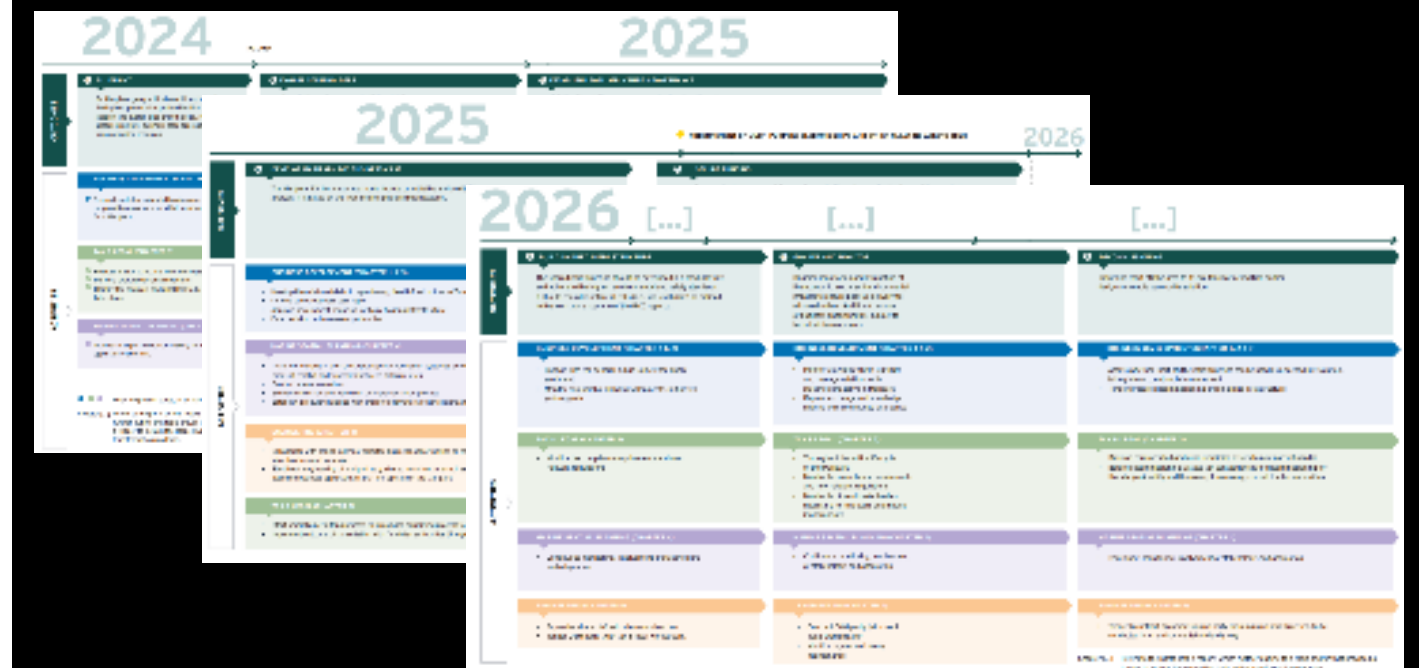
If we want multi-use to succeed, there is a need to facilitate development through a Maripark B.V.



A two-phase business strategy including a step-by-step approach to business development and six key success factors has been developed



As part of the above, a transformation roadmap for the first Dutch Maripark has been outlined





# 3

## Summary & concluding remarks



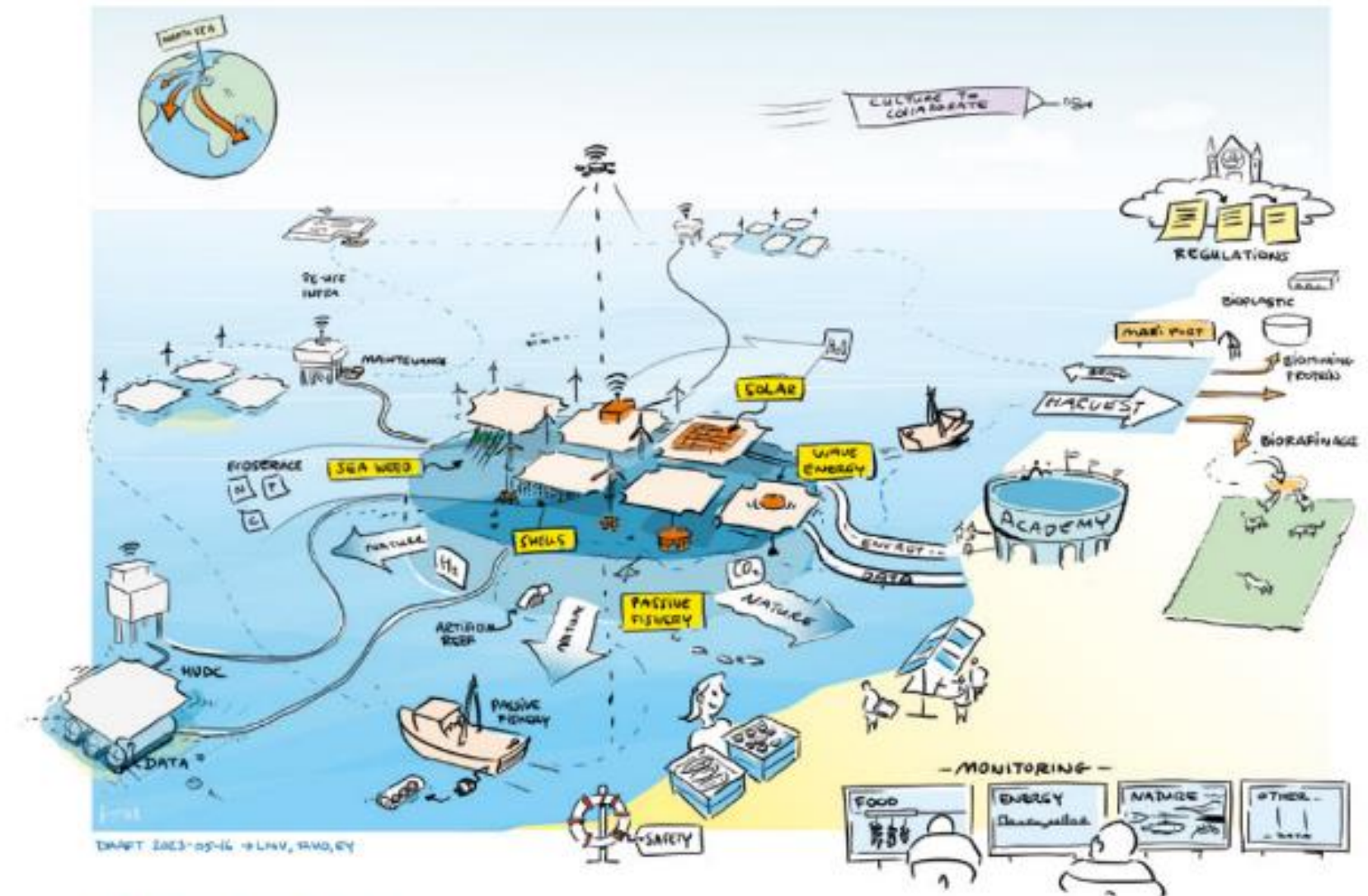
The traditional approach of businesses operating within silos and focusing on their specific sectors will not enable the realization of the full value potential of the blue economy



## OLD WAY

- Single use
- No / few synergies
- Financial / economic focus
- Sector specific considerations
- Every activity has its own framework for safety
- Linear process

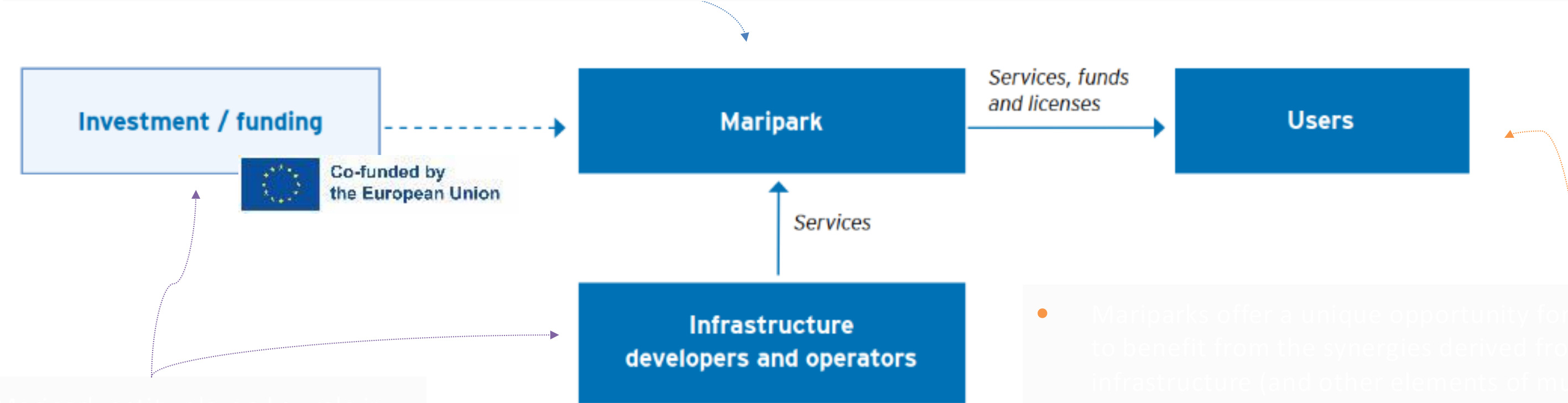
The Maripark can facilitate the transition from sector-specific, single-use activities to sector-unspecific, multi-use business approaches



## NEW WAY

- Shared use (ecological, nature-based, food aspect)
- Realization of synergies
- Innovative and attractive for numerous activities
- Holistic and sector-unspecific
- Shared resources, infrastructure and safety by design
- Circular processes as a design principle

- Like many large infrastructure undertakings, a government entity should develop and own basic infrastructure
- Over time, the Maripark must function independently as government phases out its management role. Depending on its interests, government is likely to remain involved to an extent e.g. ownership of specific infrastructure



- The Maripark entity plays a key role in securing funding from public and private sources
- Infrastructure investment and development is de-risked by the existence of a Dutch government counterparty

- Mariparks offer a unique opportunity for industries to benefit from the synergies derived from shared infrastructure (and other elements of multi-use)
- Some synergies can be realized between businesses, while others require government sponsorship
- Successfully realizing such benefits requires strong collaboration and effective governance



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ED None.

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**BLUE  
MISSION  
BANOS**

# Jacob Brands

**Owner Fishing Company Brands and  
Dronedive  
Initiator Project Octopus**

**3rd MISSION ARENA**  
**26-27 November 2024 | Amsterdam**



  
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# Project Octopus

**Multifunctional Fishing vessel**







# History of the company





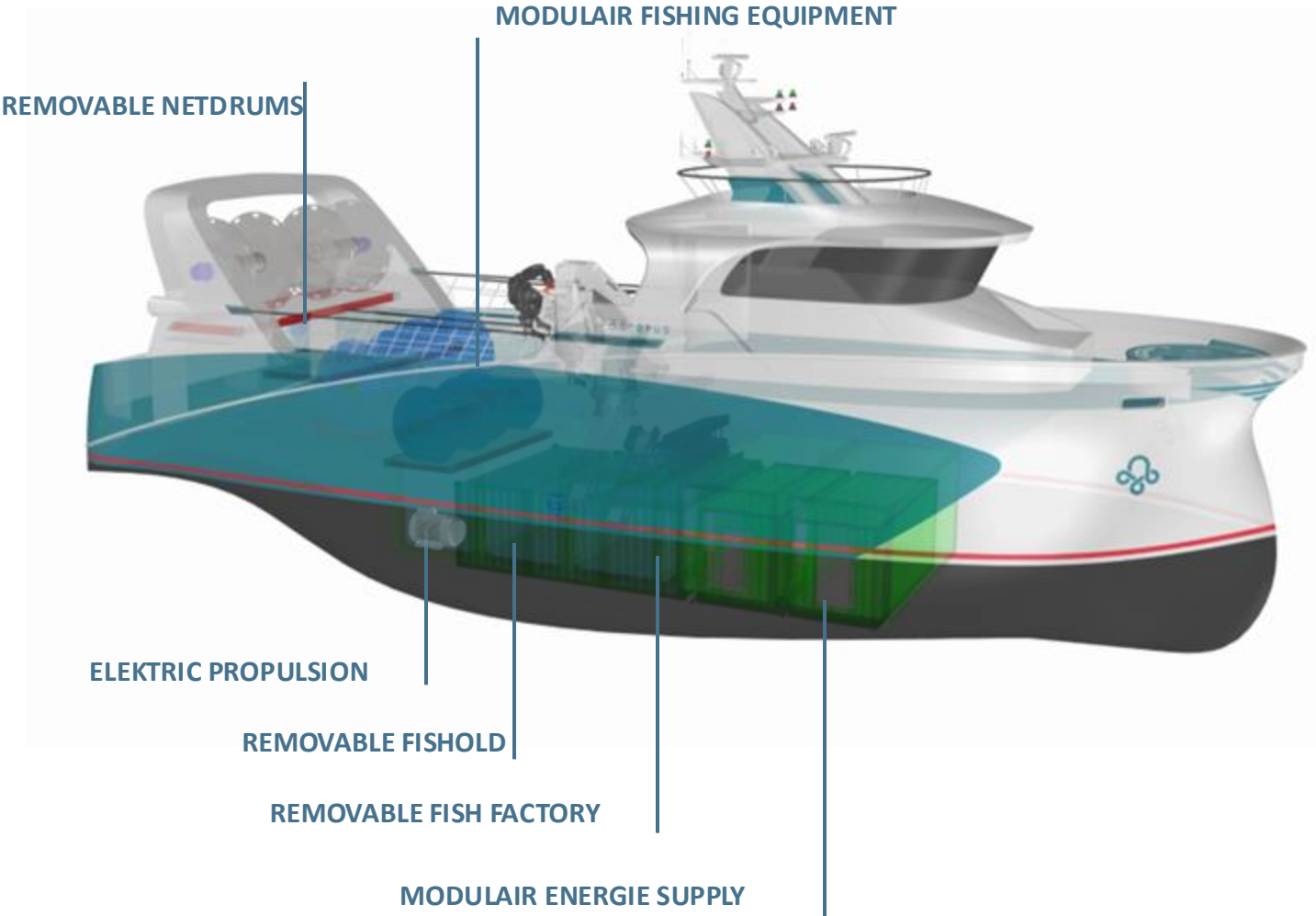


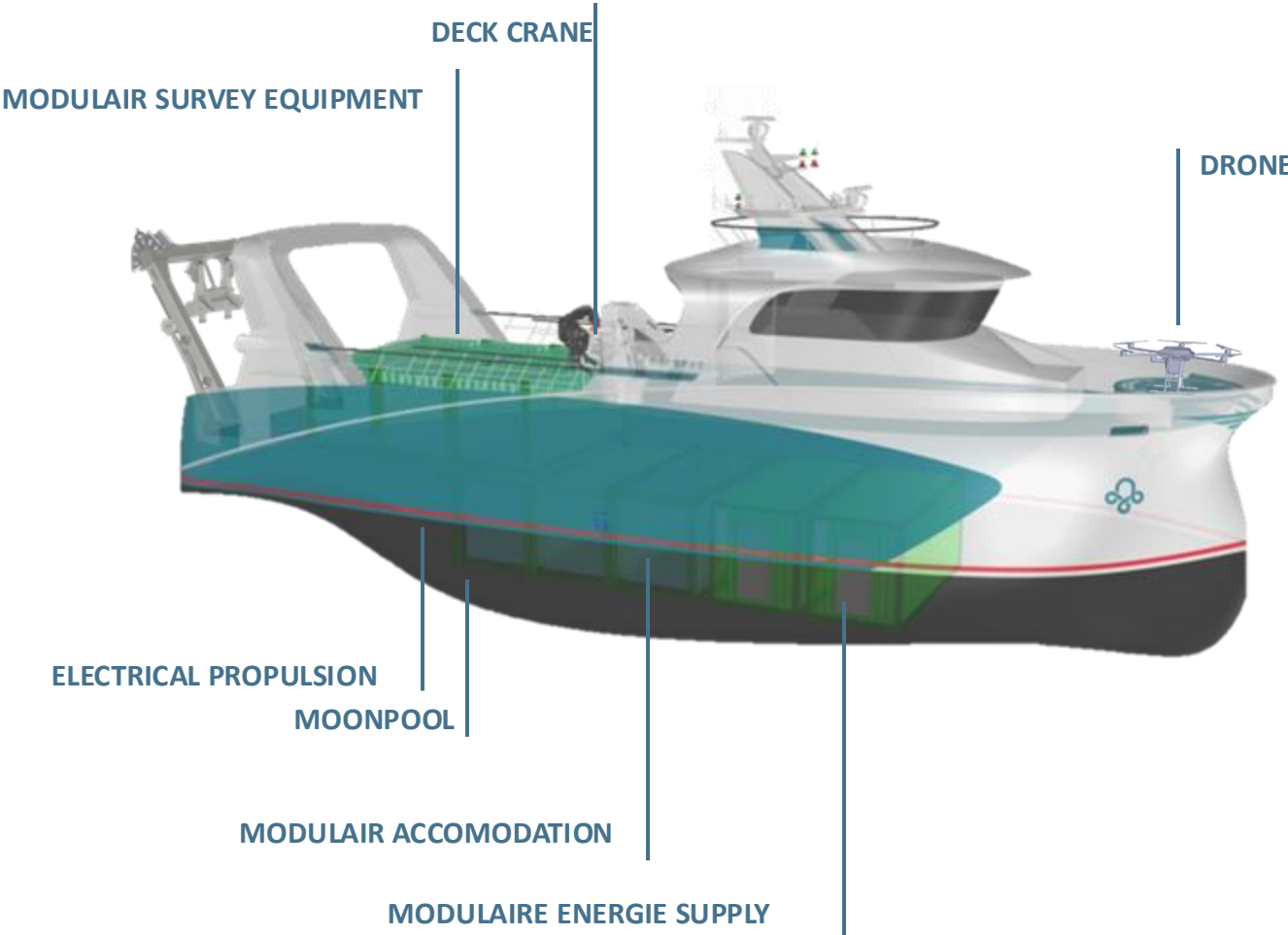


# Modular Approach

- **Demand-Driven and Seasonal Fishing:** Flexible operations tailored to market needs and fishing seasons.
- **Collaboration with Multiple Stakeholders:** Engaging diverse partners to optimize efficiency and sustainability.
- **Modular Energy Solutions:** Scalable and adaptable energy systems to meet operational requirements.
- **Periodic Operations:** Activities encompassing fishing, offshore services, and research conducted on a rotational or project basis.
- **Multi-use Windpark:** Doing all the multi-use possibilities with one ship.











[WWW.PROJECTOCTOPUS.NL](http://WWW.PROJECTOCTOPUS.NL)





# ROLE

## Senior project leader

Guiding stakeholders out of their comfort zone into solutions

# PROJECTS

## North C Neutral

Automated model to design balanced MSP's on basin scale

## Coastal Vision

Belgium's Coastal Protection Plan against +3 m SLR

## Nature Inclusive Design Princess

Elisabeth Island **Design for**

## Public Value at Sea

Storage for renewable energy

# I LIKE

**Transparency** (& Chocolate & Chips)



[t.vanagt@orgpermod.com](mailto:t.vanagt@orgpermod.com)

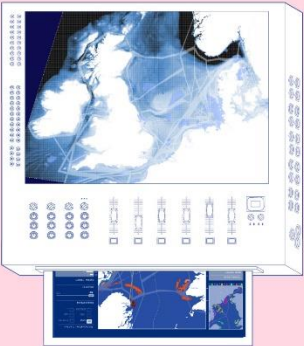
[www.orgpermod.com](http://www.orgpermod.com)

# North C Neutral

Optimisation and decision support toolkit  
for the Greater North Sea Basin



# North C Neutral Optimisation and Decision Support Toolkit Greater North Sea Basin

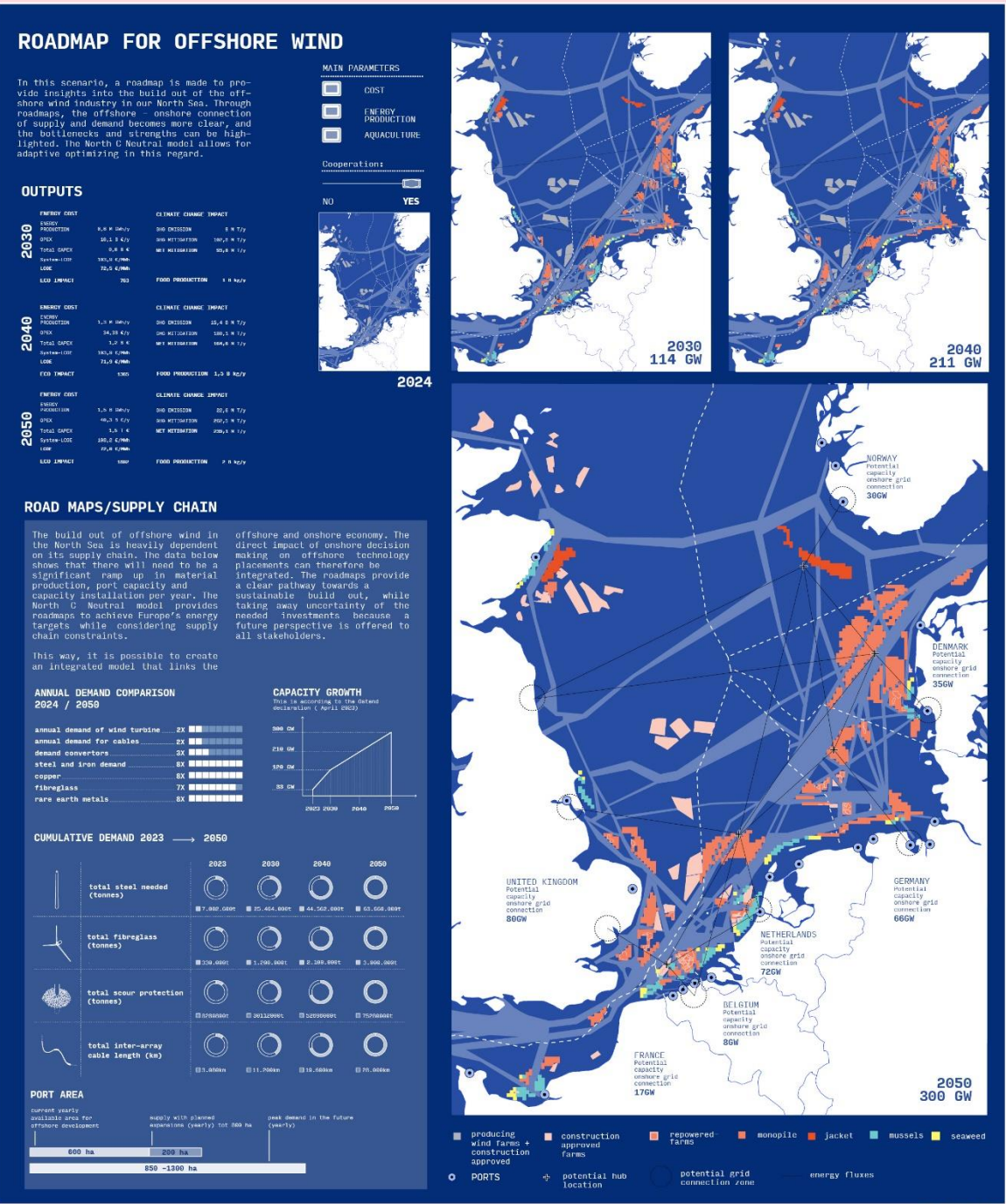
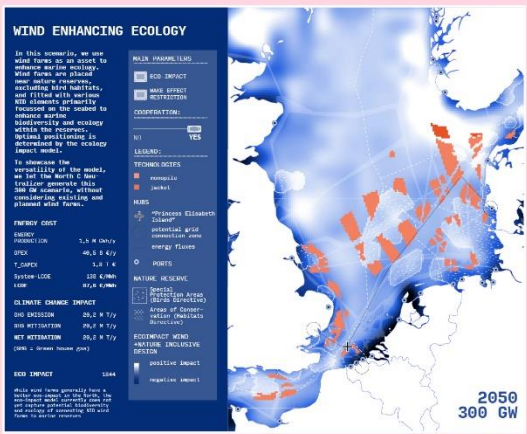
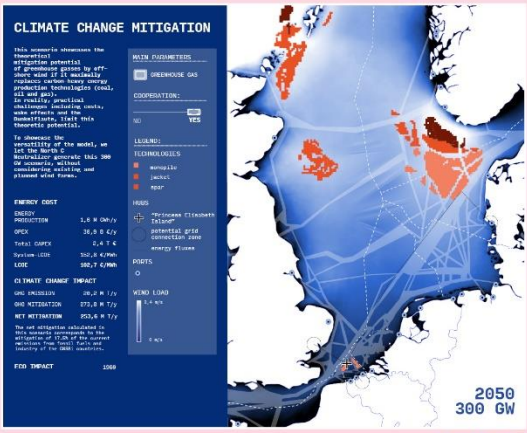


## North C Neutralizer

### Greater North Sea Basin optimization model

The North C Neutralizer is an innovative and unique optimization model developed for GNSBI. Operating at the sea basin level, it integrates stakeholder interests, leverages the best available data, and builds on existing marine spatial plans. For each desired stakeholder scenario, it seeks an optimal balance across various marine sectors.

Through visualizations and quantitative analyses, the North C Neutralizer clarifies impacts at all levels – from the Greater North Sea Basin to national and even onshore scales, including harbors and energy cable landing points. The detailed roadmaps it generates provide a robust foundation for supply chain planning and financing strategies.



## Spatial design Activate Joint Fact Finding

To “materialize” the outputs of the North C Neutralizer and initiate the joint fact-finding process, we further develop these outputs through spatial design.

In designing at various scales, we reveal hidden aspects, seek solutions, and identify synergies. Opportunities and challenges for each stakeholder group are highlighted, ensuring a transparent process that is easily and continuously accessible to all stakeholders.

Feedback loops between spatial design and the North C Neutralizer make the entire process increasingly adaptive, resulting in more robust solutions.

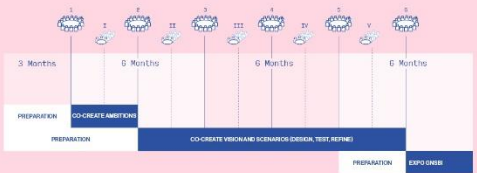


## Co-creation Harvesting Collective Intelligence

To leverage the best available knowledge and assist GNSBI stakeholders toward a unified Greater North Sea Basin strategy, we have designed a dynamic, 1.5-year co-creative process.

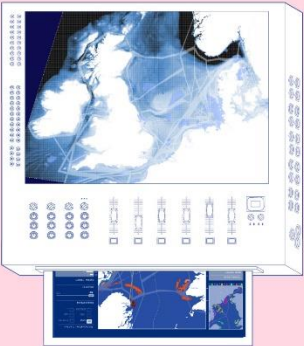
In collaboration with GNSBI stakeholders and supported by leading independent experts, we co-create, evaluate, and refine alternatives until we reach a feasible and widely supported set of options for policymakers. The co-creation methodology is designed to include experts from various GNSBI member states, enabling GNSBI to evolve into a truly pan-European project at all levels.

At the end of the process, we envision a traveling exhibition to share the results with citizens across participating countries.





# North C Neutral Optimisation and Decision Support Toolkit Greater North Sea Basin

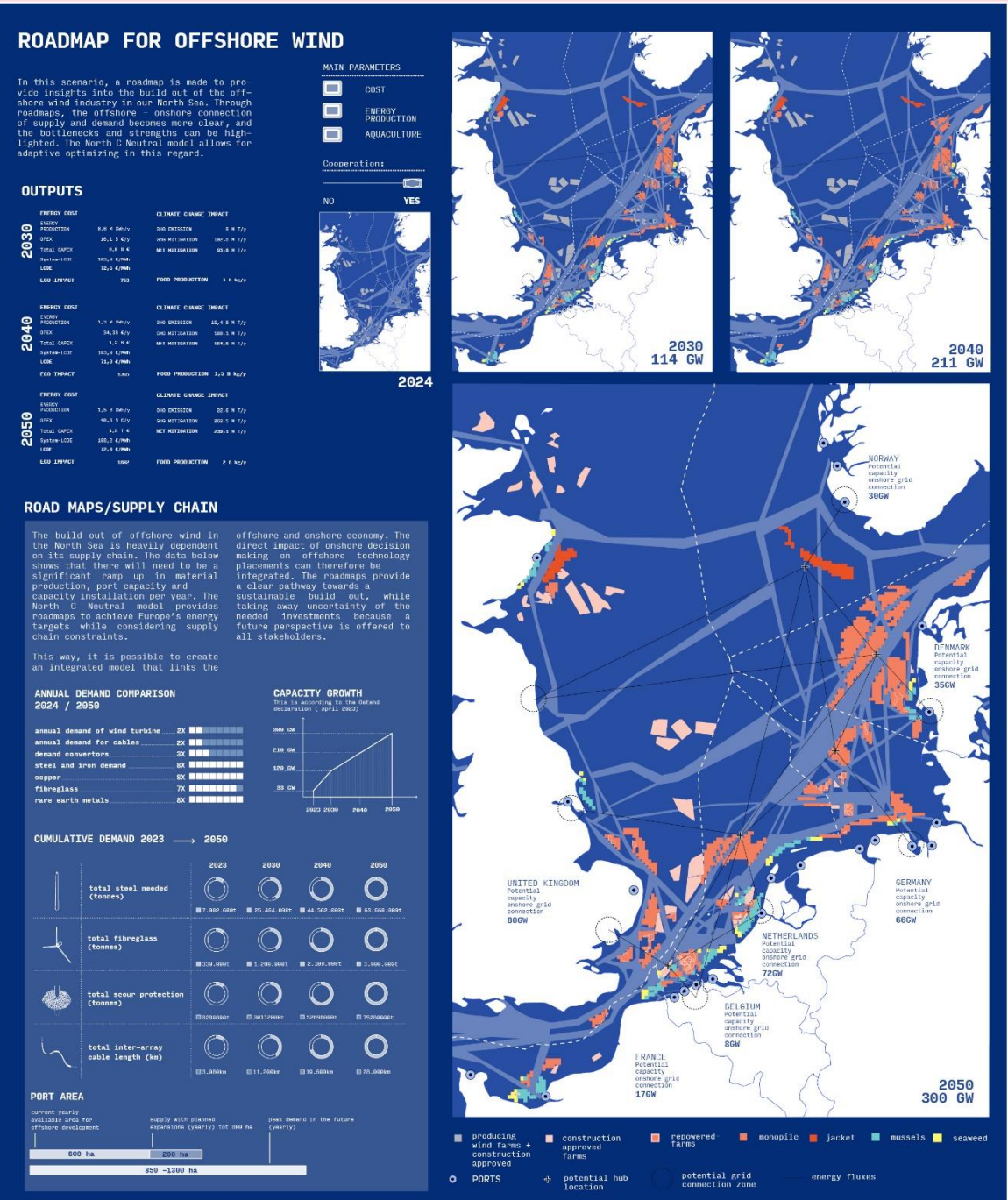
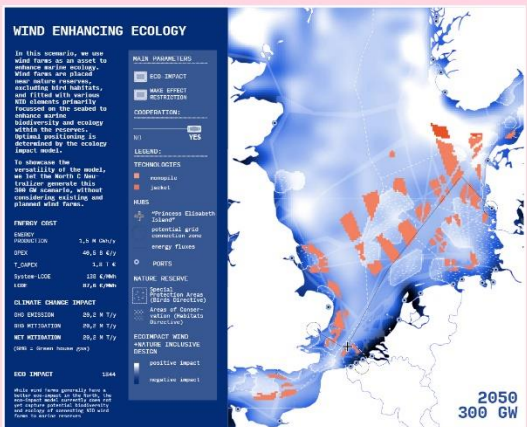
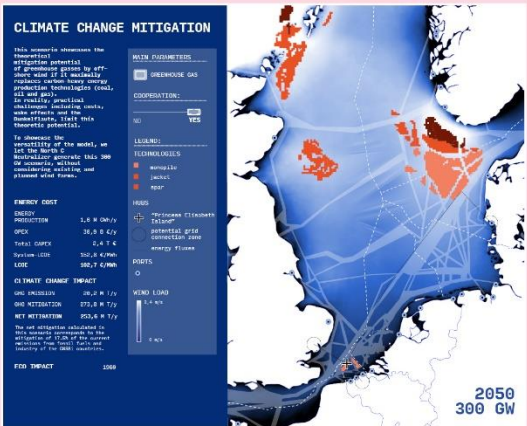


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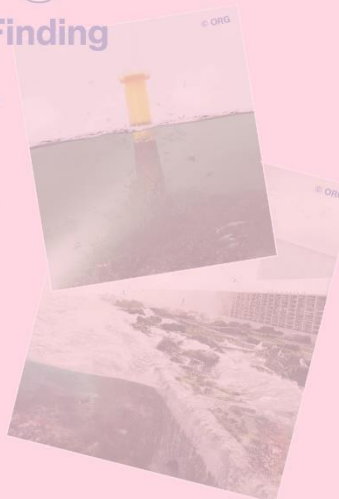
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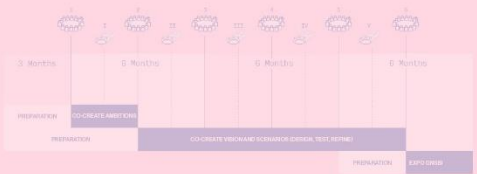
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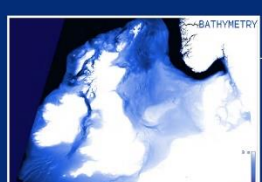




# North C Neutralizer

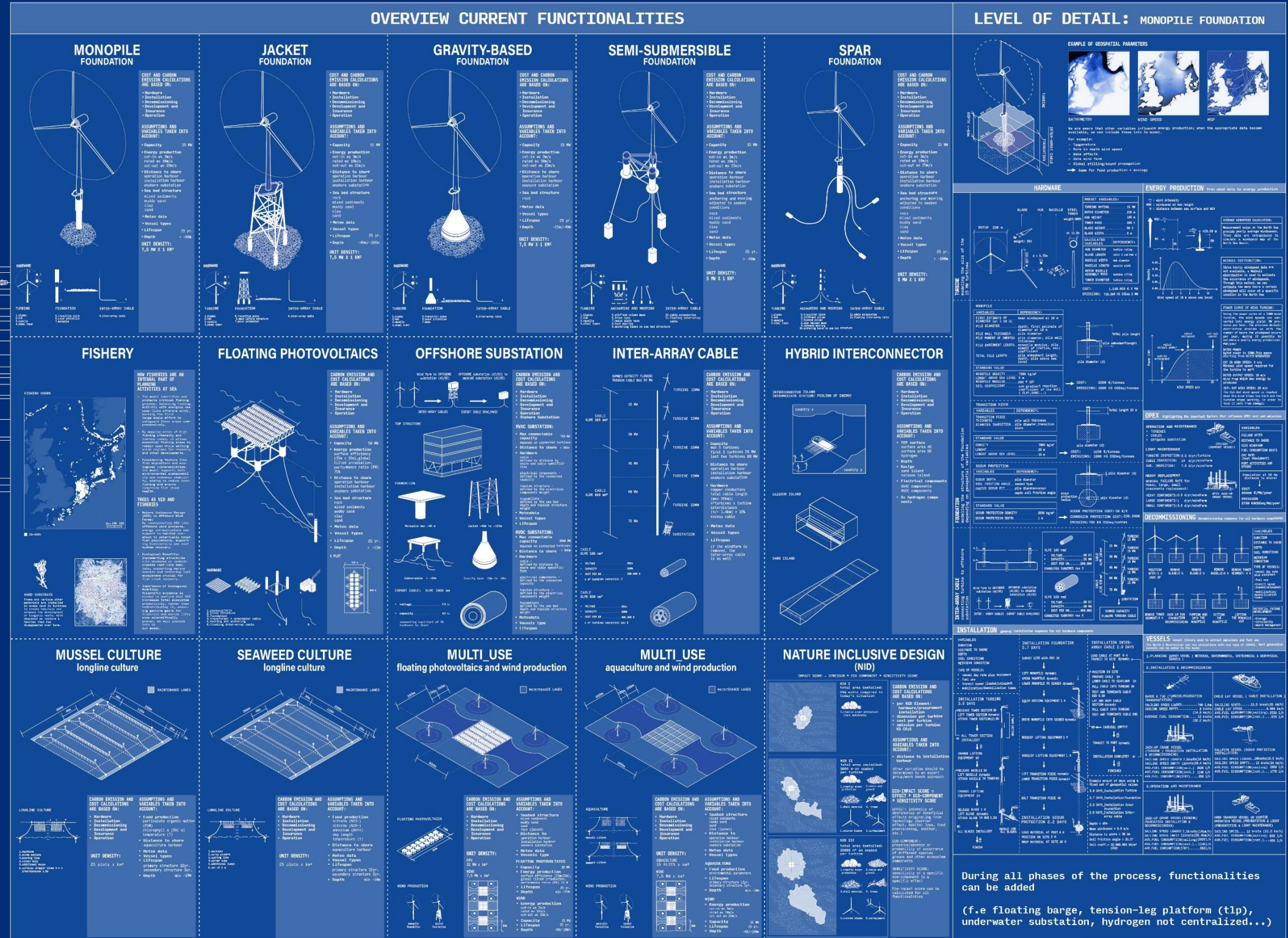
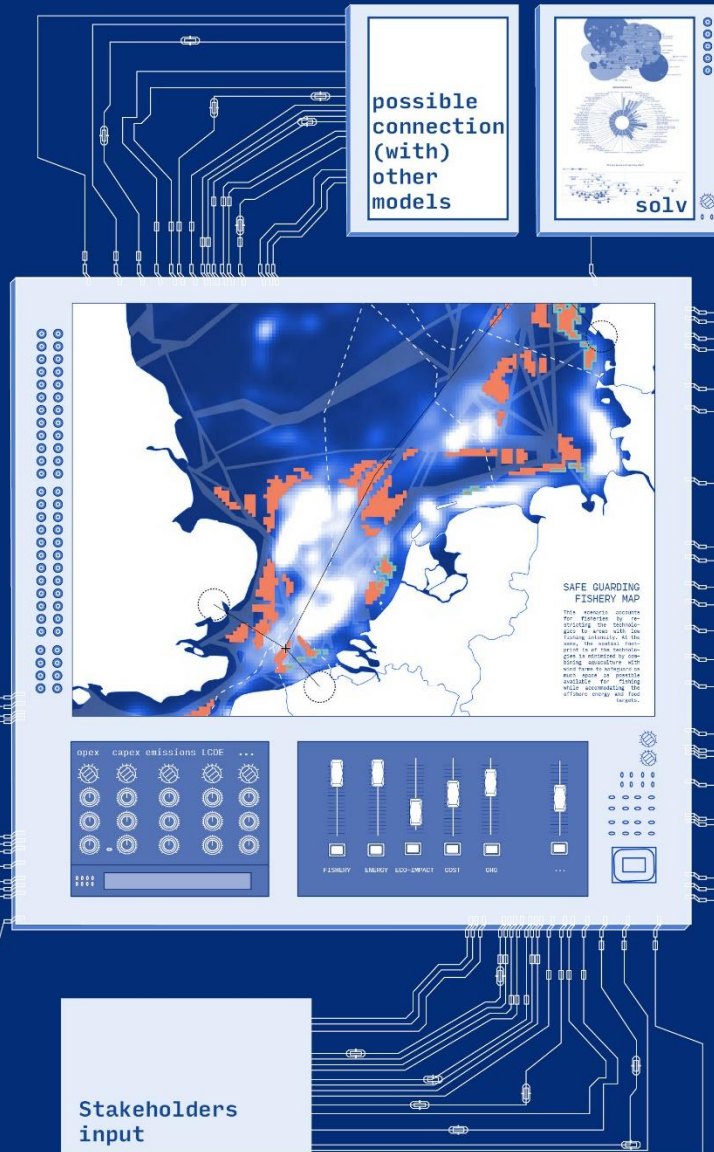
## Georeferenced Optimization Model

### Geospatial constraints inputs



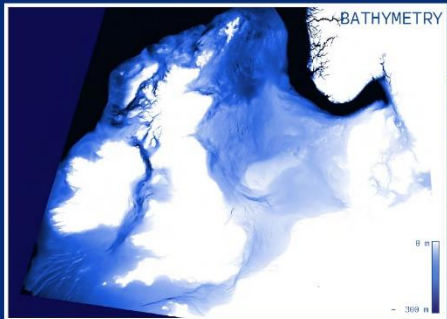
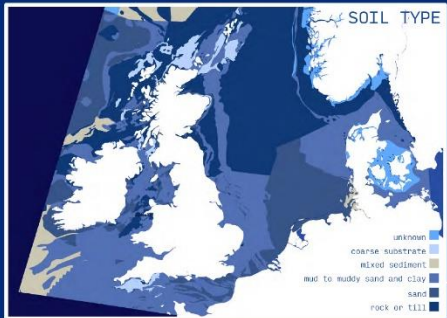
During all phases of the process, missing layers can be added

Fishing Intensity, Ecosensitivity, ...





Geospatial constraints inputs

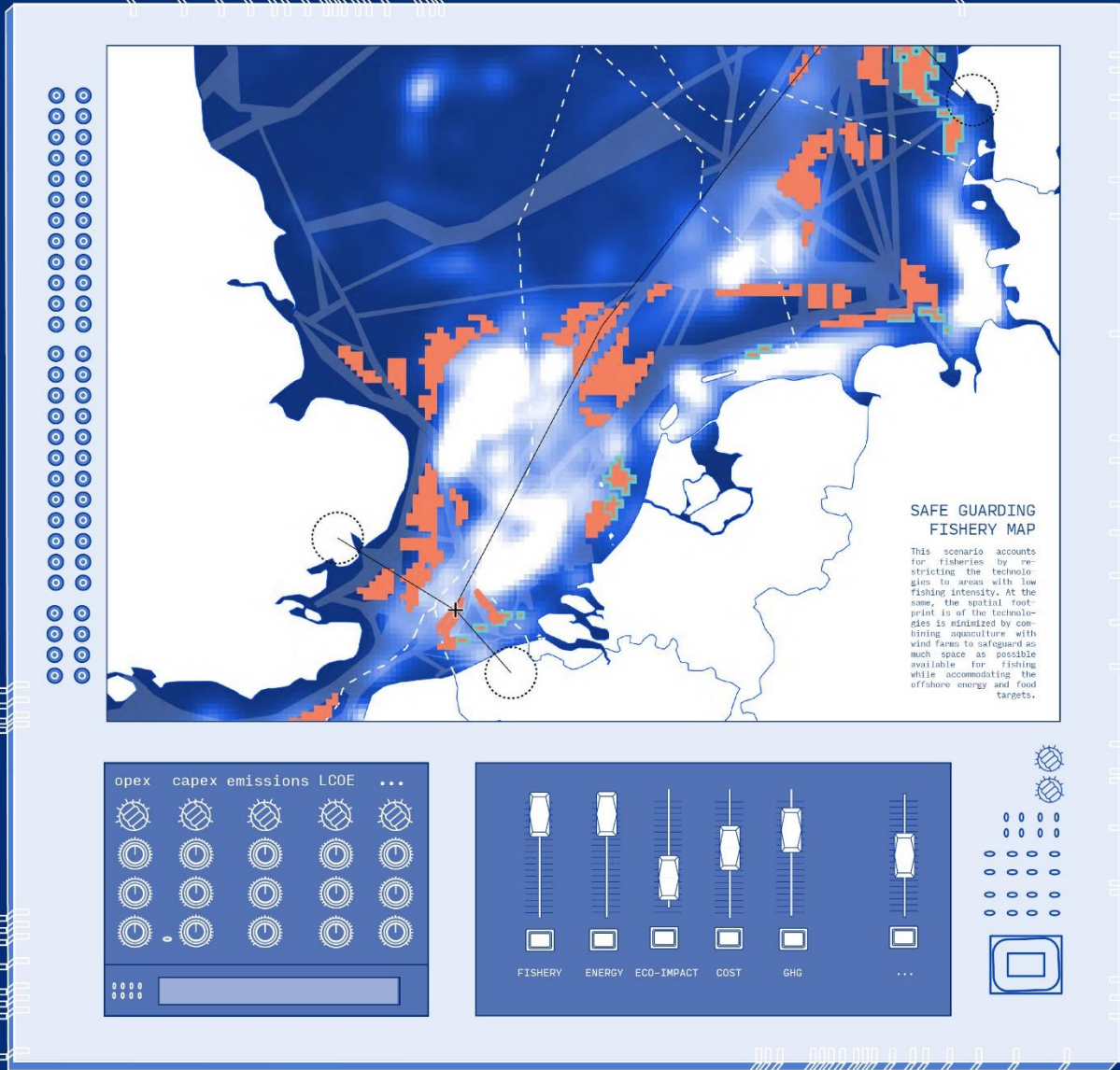
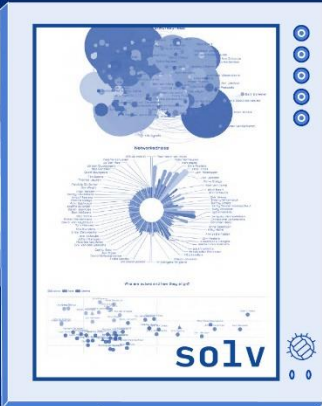


During all phases of the process, missing layers can be added

Fishing Intensity,  
Ecosensitivity,  
...

Stakeholders input

possible connection (with) other models



North C Neutralizer

Geospatial constraints

Other models

Stakeholder preferences

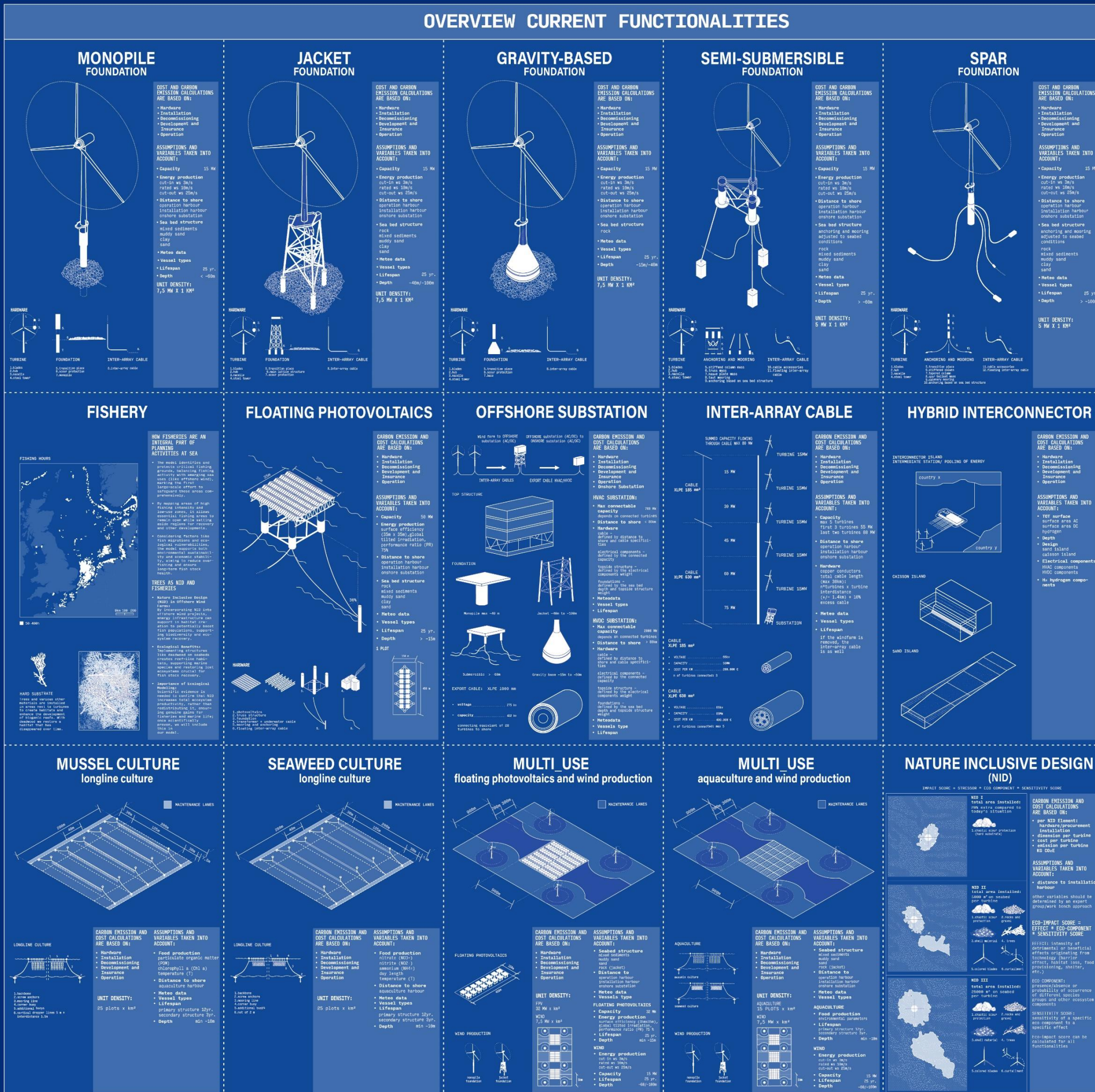
New layers of information can be added throughout the process



# North C Neutralizer

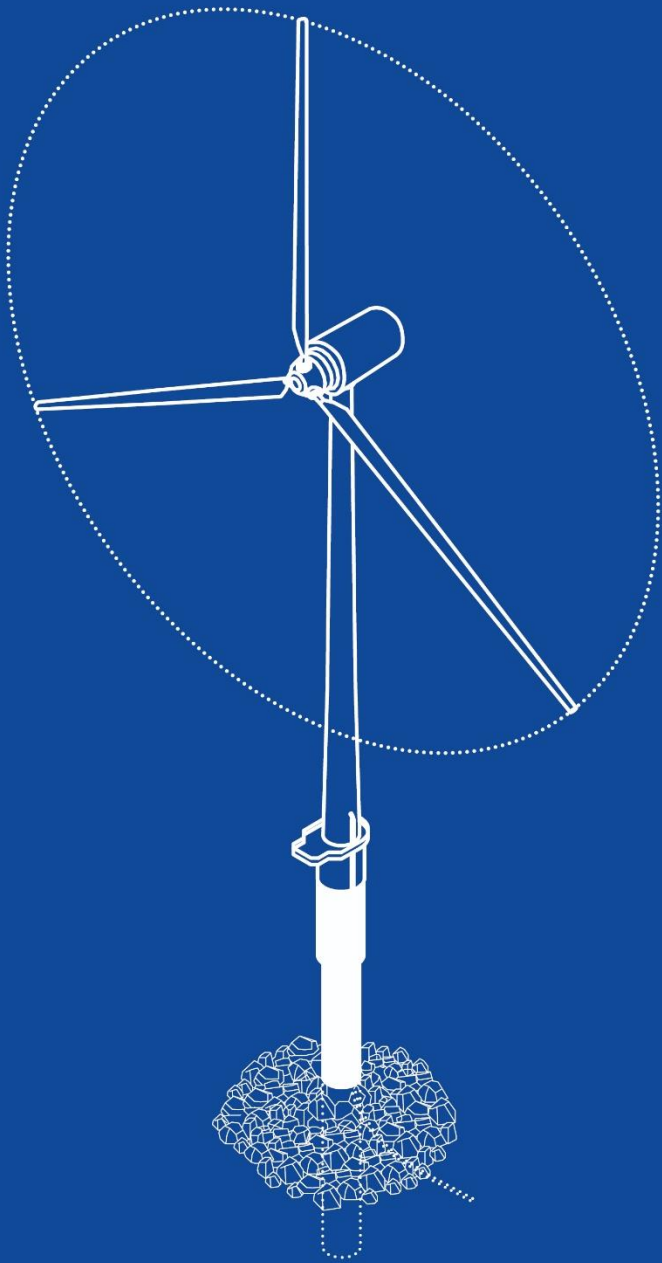
## Current functionalities

- Energy
- Fishery
- Aquaculture
- Multi-use
- Ecology





# MONOPILE FOUNDATION



## COST AND CARBON EMISSION CALCULATIONS ARE BASED ON:

- Hardware
- Installation
- Decommissioning
- Development and Insurance
- Operation

## ASSUMPTIONS AND VARIABLES TAKEN INTO ACCOUNT:

- Capacity 15 MW
- Energy production  
cut-in ws 3m/s  
rated ws 10m/s  
cut-out ws 25m/s
- Distance to shore  
operation harbour  
installation harbour  
onshore substation
- Sea bed structure  
mixed sediments  
muddy sand  
clay  
sand
- Meteo data
- Vessel types
- Lifespan 25 yr.
- Depth < -60m

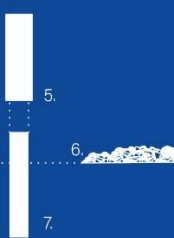
UNIT DENSITY:  
7,5 MW X 1 KM<sup>2</sup>

### HARDWARE



### TURBINE

- 1.blades
- 2.hub
- 3.nacelle
- 4.steel tower



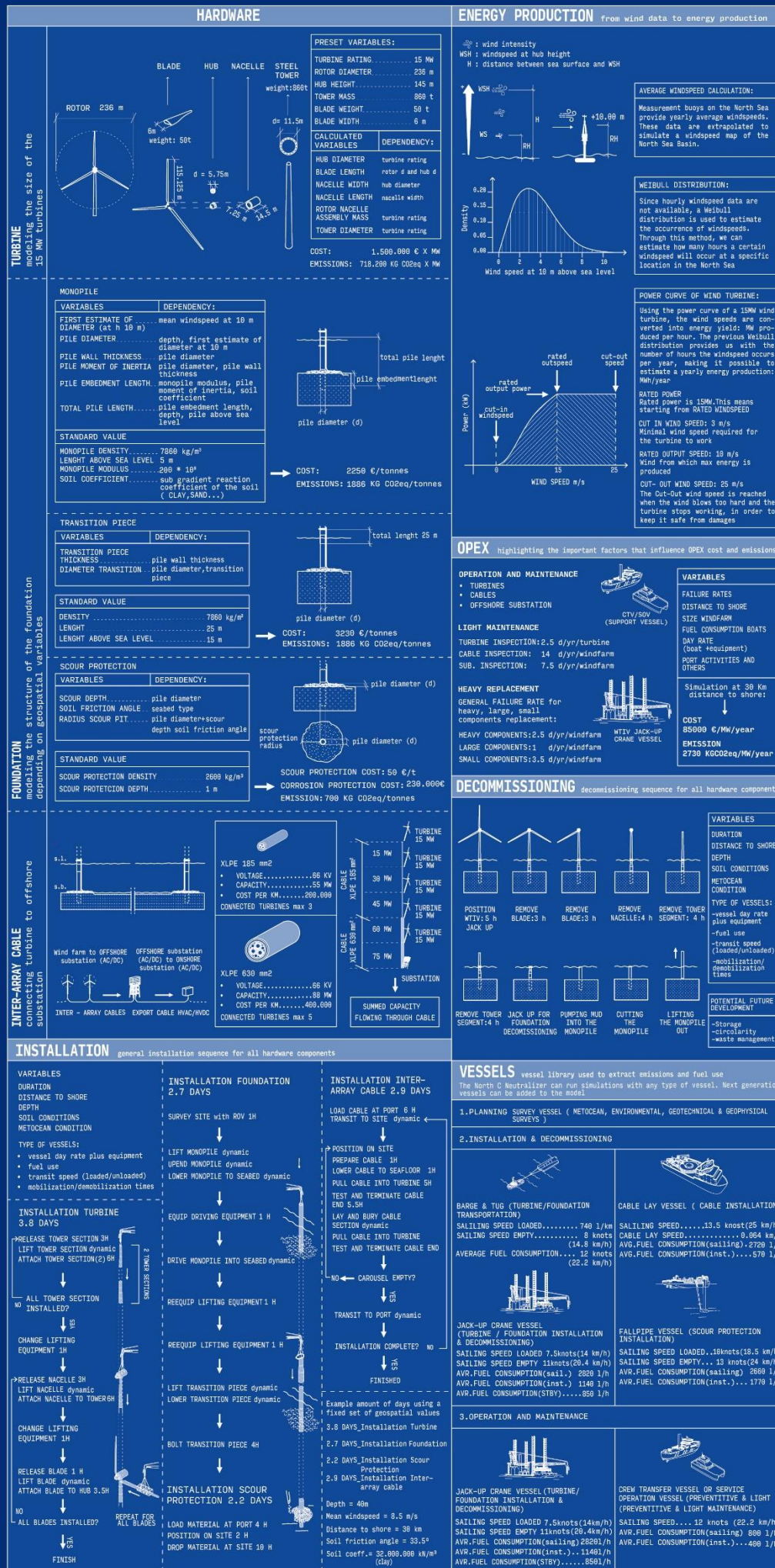
### FOUNDATION

- 5.transition piece
- 6.scour protection
- 7.monopile



### INTER-ARRAY CABLE

- 8.inter-array cable



# North C Neutralizer ex Monopile

## Hardware, Installation, Energy Production, Opex, Decommissioning, Type of Vessels

### VARIABLES

DURATION  
DISTANCE TO SHORE  
DEPTH  
SOIL CONDITIONS  
METOCAN CONDITION

### TYPE OF VESSELS:

- vessel day rate plus equipment
- fuel use
- transit speed (loaded/unloaded)
- mobilization/demobilization times

### INSTALLATION TURBINE 3.8 DAYS

RELEASE TOWER SECTION 3H  
LIFT TOWER SECTION dynamic  
ATTACH TOWER SECTION(2) 6H

ALL TOWER SECTION  
INSTALLED?

CHANGE LIFTING  
EQUIPMENT 1H

RELEASE NACELLE 3H  
LIFT NACELLE dynamic  
ATTACH NACELLE TO TOWER 6H

CHANGE LIFTING  
EQUIPMENT 1H

RELEASE BLADE 1 H  
LIFT BLADE dynamic  
ATTACH BLADE TO HUB 3.5H

ALL BLADES INSTALLED?

FINISH

### INSTALLATION FOUNDATION 2.7 DAYS

SURVEY SITE with ROV 1H

LIFT MONOPILE dynamic  
UPEND MONOPILE dynamic  
LOWER MONOPILE TO SEABED dynamic

EQUIP DRIVING EQUIPMENT 1 H

DRIVE MONOPILE INTO SEABED dynamic

REEQUIP LIFTING EQUIPMENT 1 H

REEQUIP LIFTING EQUIPMENT 1 H

LIFT TRANSITION PIECE dynamic  
LOWER TRANSITION PIECE dynamic

BOLT TRANSITION PIECE 4H

### INSTALLATION SCOUR PROTECTION 2.2 DAYS

LOAD MATERIAL AT PORT 4 H  
POSITION ON SITE 2 H  
DROP MATERIAL AT SITE 10 H

### INSTALLATION INTER- ARRAY CABLE 2.9 DAYS

LOAD CABLE AT PORT 6 H  
TRANSIT TO SITE dynamic

POSITION ON SITE

PREPARE CABLE 1H  
LOWER CABLE TO SEAFLOOR 1H  
PULL CABLE INTO TURBINE 5H  
TEST AND TERMINATE CABLE  
END 5.5H

LAY AND BURY CABLE  
SECTION dynamic  
PULL CABLE INTO TURBINE  
TEST AND TERMINATE CABLE END

NO CAROUSEL EMPTY?

TRANSIT TO PORT dynamic

INSTALLATION COMPLETE? NO

FINISHED

Example amount of days using a  
fixed set of geospatial values  
3.8 DAYS\_Installation Turbine

2.7 DAYS\_Installation Foundation

2.2 DAYS\_Installation Scour  
Protection

2.9 DAYS\_Installation Inter-  
array cable

Depth = 40m

Mean windspeed = 8.5 m/s

Distance to shore = 30 km

Soil friction angle = 33.5°

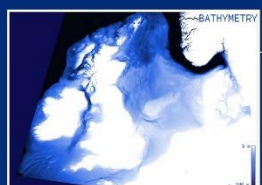
Soil coeff.= 32.000.000 kN/m<sup>3</sup>  
(clay)



# North C Neutralizer

## Generate outputs given stakeholder goals & constraints

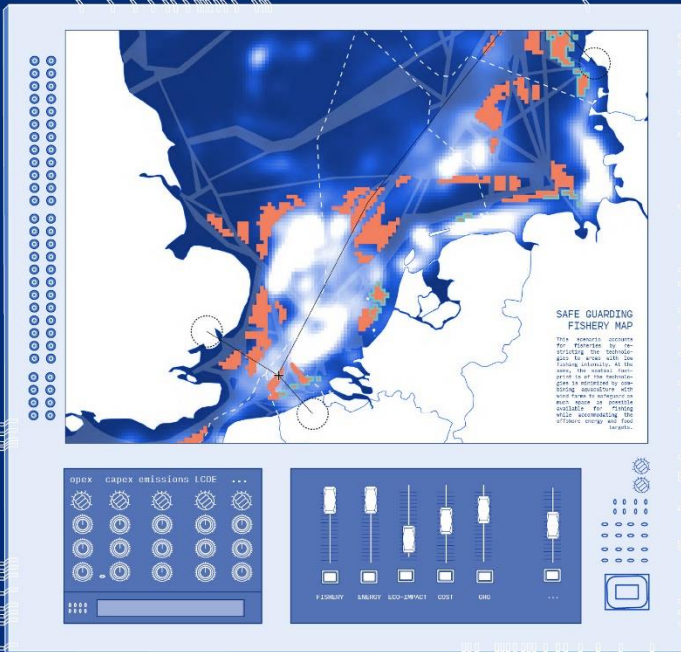
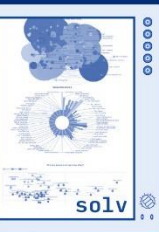
### Geospatial constraints inputs



During all phases of the process, missing layers can be added

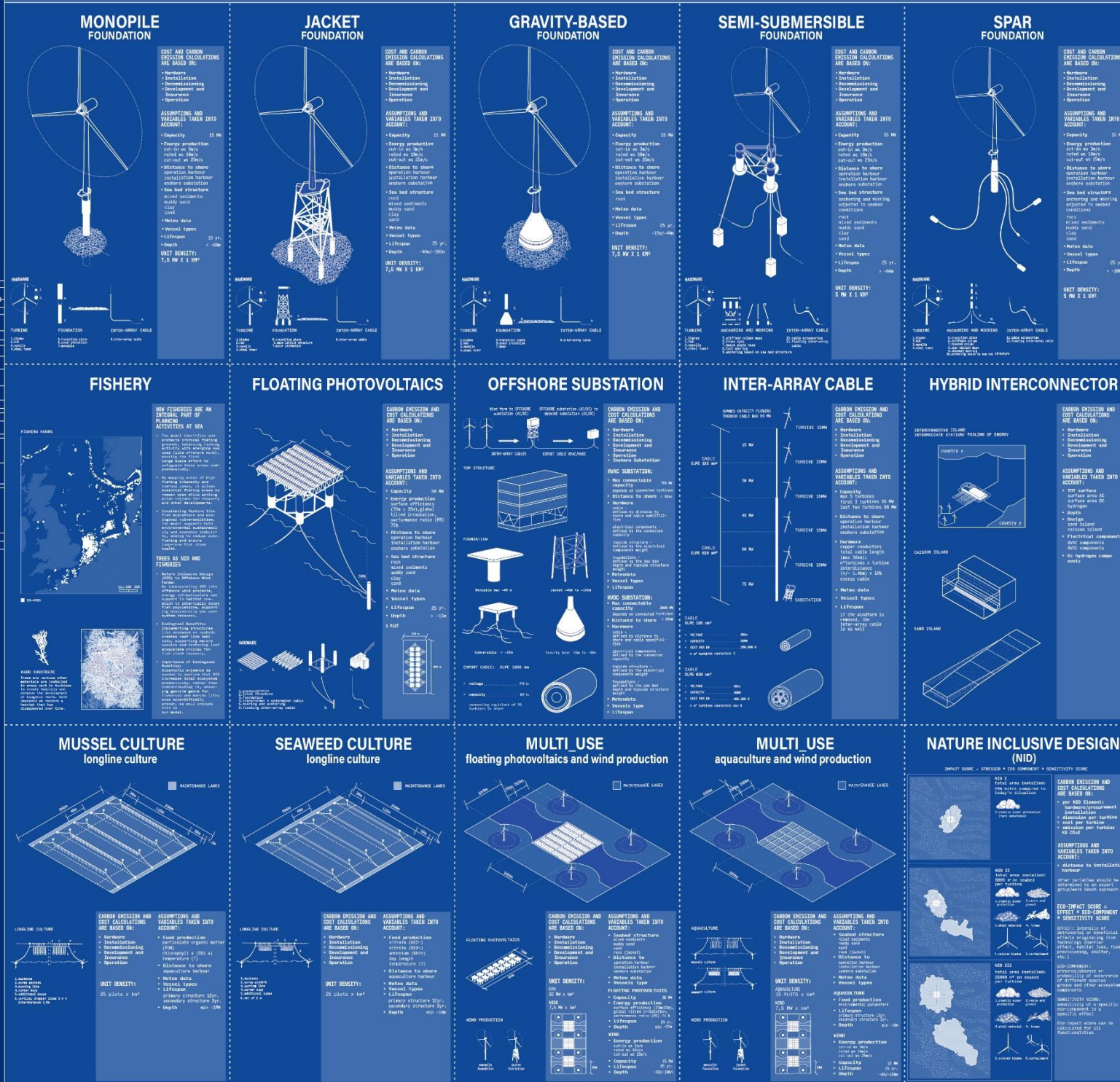
Fishing Intensity, Ecosensitivity, ...

possible connection (with) other models

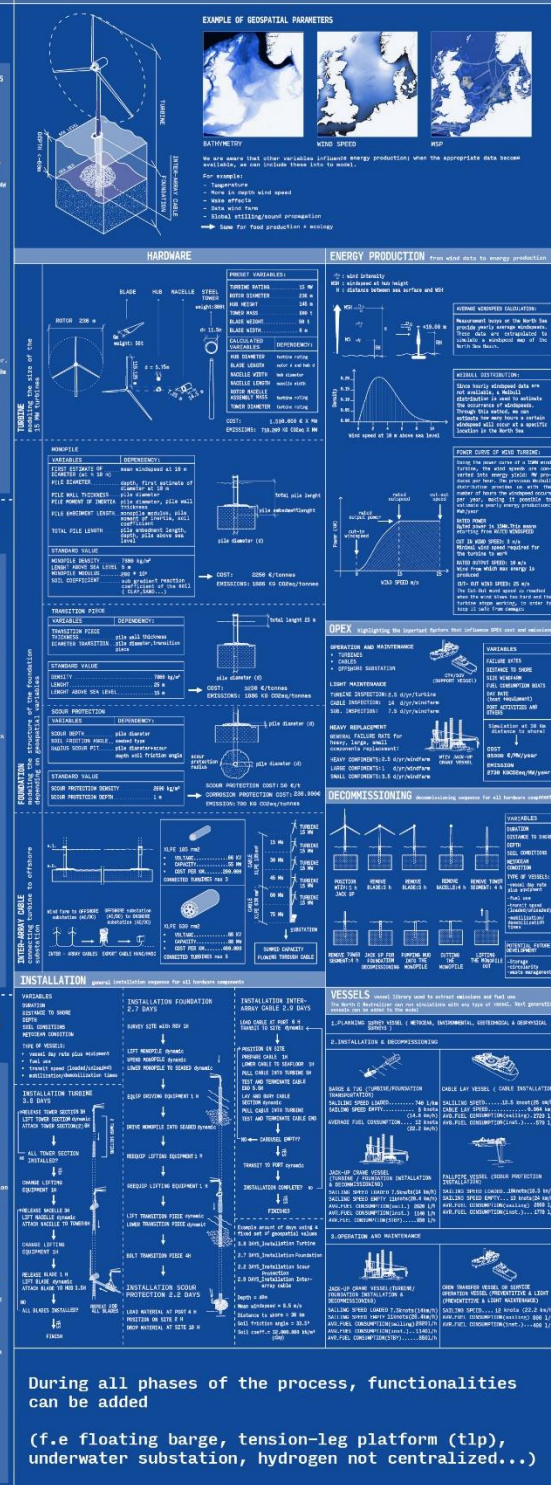


Stakeholders input

### OVERVIEW CURRENT FUNCTIONALITIES

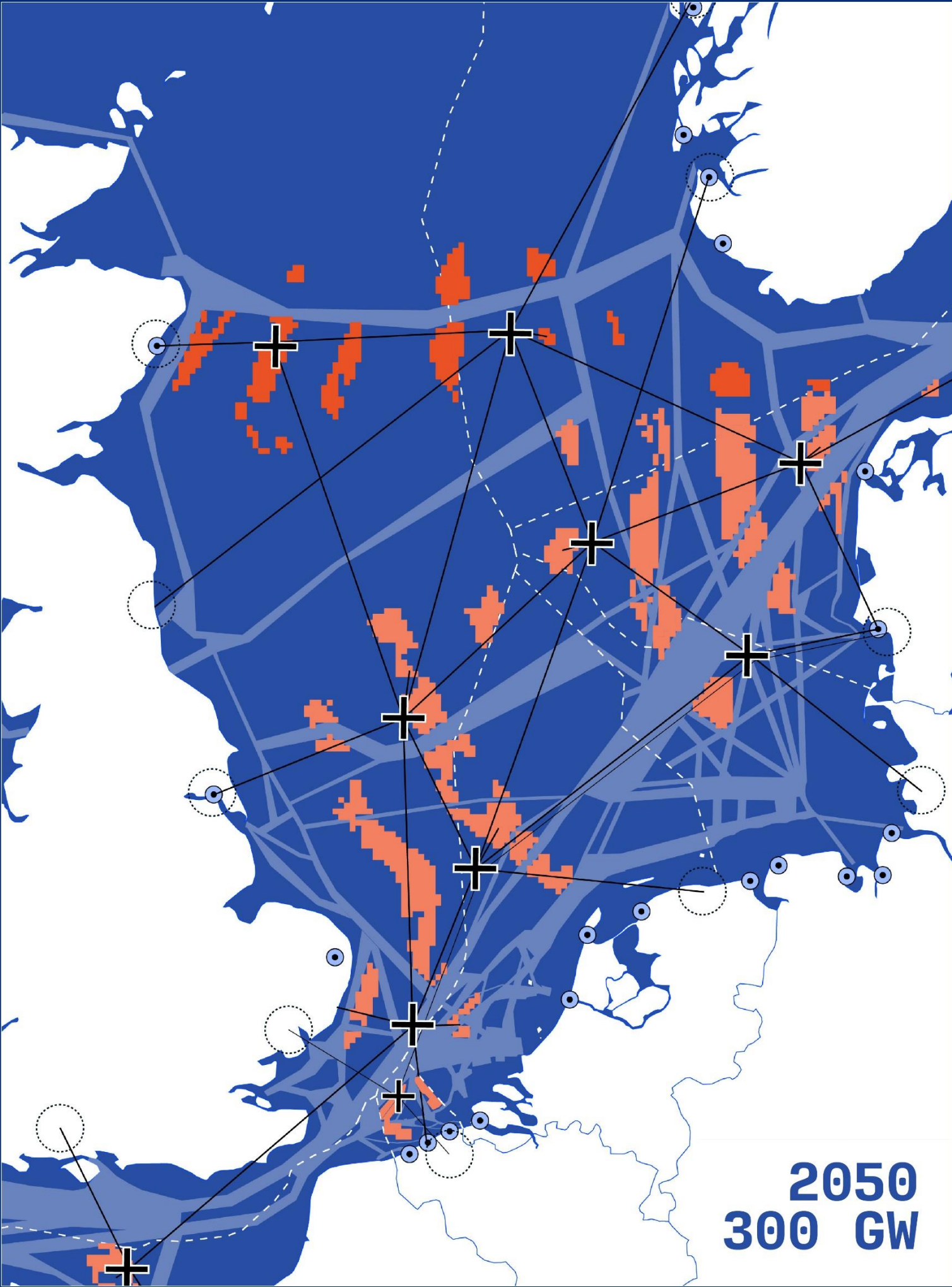


### LEVEL OF DETAIL: MONOPILE FOUNDATION



During all phases of the process, functionalities can be added  
(f.e floating barge, tension-leg platform (tlp), underwater substation, hydrogen not centralized...)





## INTERNATIONAL OFFSHORE GRID

In this 'international offshore grid' scenario, we optimized the placement of wind turbines in the North Sea, considering that energy islands would serve as their sole connection points. These islands function as the electrical landfall for energy produced by the wind farms while also serving as the OPEX bases for the connected wind farms. Most islands are interconnected and linked to the countries within the GNSBI.

This setup provides TSOs with greater control over managing the international supply and demand for energy. The islands were strategically placed with a specific purpose: to leverage insights into wind correlations, minimizing the effects of Dunkelflaute while arranging the individual wind farms to reduce wake effects between them. This approach ensures optimal energy generation and a stable energy supply.

### ENERGY COST

ENERGY PRODUCTION	1,4 M GWh/y
OPEX	29,1 B €/y
Total CAPEX	1,8 T €/y
System-LCOE	131,7 €/MWh
LCOE	70,5 €/MWh

### CLIMATE CHANGE IMPACT

GHG EMISSION	21,7 M t/y
GHG MITIGATION	244,0 M t/y
NET MITIGATION	227,5 M t/y
(GHG = Green house gas)	

ECO IMPACT	1636
------------	------

### MAIN PARAMETERS

	COST
	ENERGY PRODUCTION
	WAKE EFFECT RESTRICTION
	WIND CORRELATION

### COOPERATION:



### LEGEND:

#### TECHNOLOGIES

	monopile
	jacket

#### HUBS

	potential hub location
	potential grid connection zone
	energy fluxes

	PORTS
--	-------

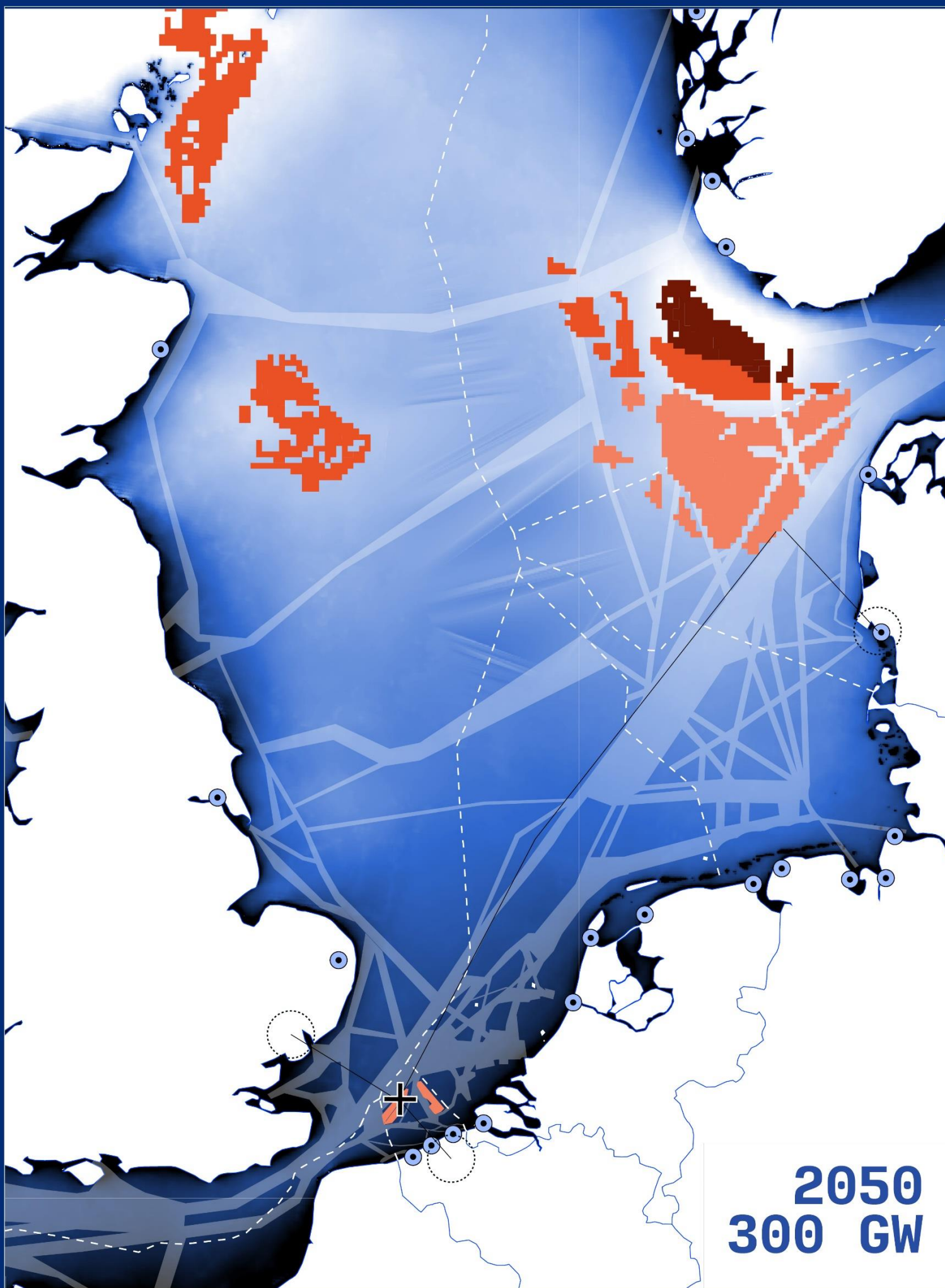
# International offshore grid

All wind farms connected to hubs  
Hubs guide energy fluxes  
Wake effects  
Dunkelflautes



# Climate Change Mitigation

Carbon mitigation as driving factor



## CLIMATE CHANGE MITIGATION

This scenario showcases the theoretical mitigation potential of greenhouse gasses by off-shore wind if it maximally replaces carbon-heavy energy production technologies (coal, oil and gas). In reality, practical challenges including costs, wake effects and the Dunkelflaute, limit this theoretic potential.

To showcase the versatility of the model, we let the North C Neutralizer generate this 300 GW scenario, without considering existing and planned wind farms.

### ENERGY COST

ENERGY PRODUCTION	1,6 M GWh/y
OPEX	30,9 B €/y
Total CAPEX	2,4 T €
System-LCOE	152,8 €/MWh
LCOE	102,7 €/MWh

### CLIMATE CHANGE IMPACT

GHG EMISSION	20,2 M T/y
GHG MITIGATION	273,8 M T/y
NET MITIGATION	253,6 M T/y

The net mitigation calculated in this scenario corresponds to the mitigation of 17.5% of the current emissions from fossil fuels and industry of the GNSBi countries.

ECO IMPACT	1960
------------	------

### MAIN PARAMETERS

 GREENHOUSE GAS

### COOPERATION:




NO  YES

### LEGEND:

#### TECHNOLOGIES

-  monopile
-  jacket
-  spar

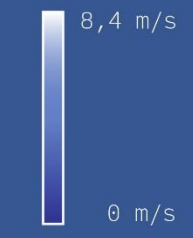
#### HUBS

-  "Princess Elisabeth Island"
-  potential grid connection zone
-  energy fluxes

#### PORTS

- 

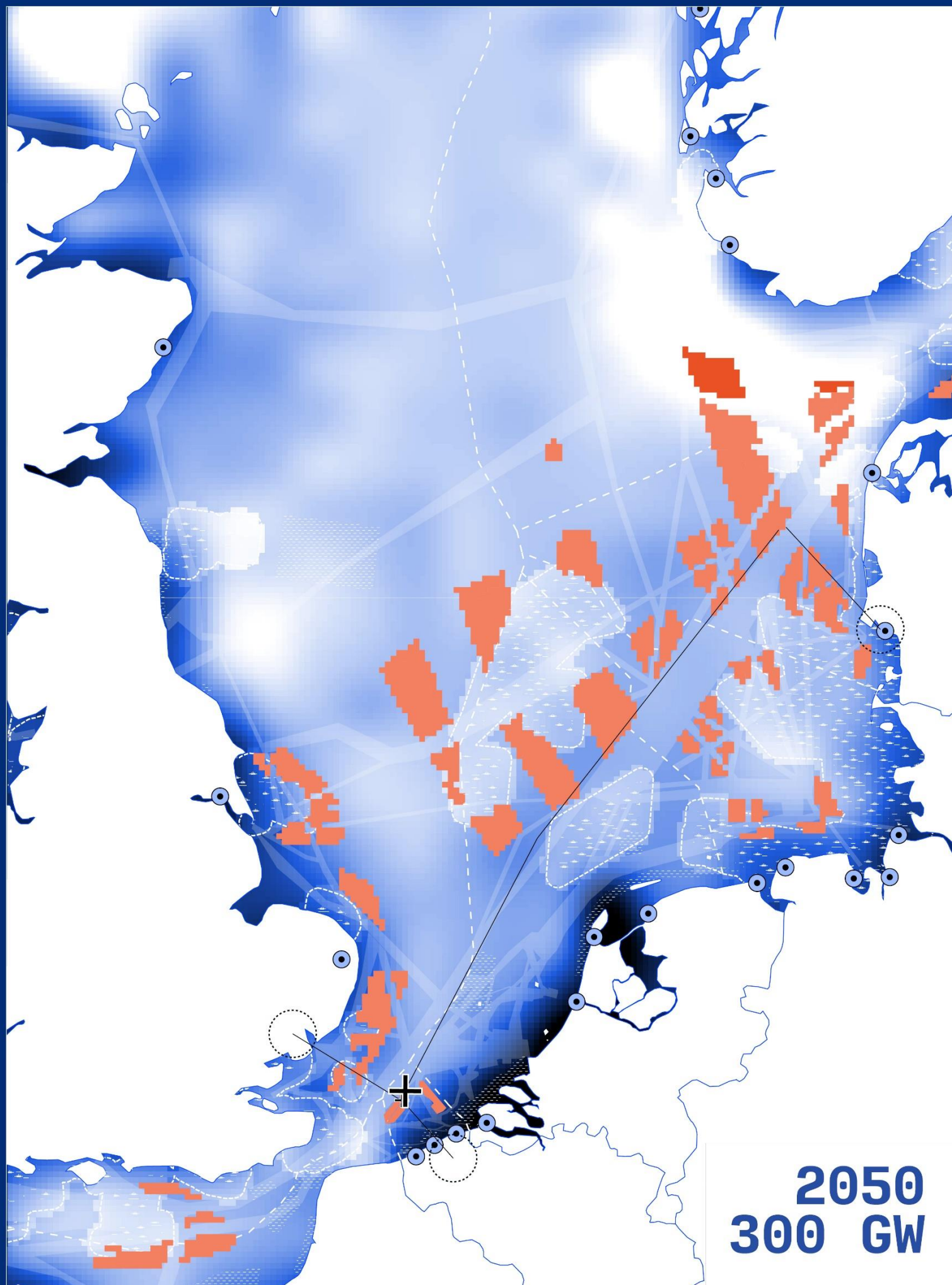
#### WIND LOAD





# Wind enhancing Ecology

Ecological impact as driving factor  
Wind farms as leverage for nature  
Wake effects



## WIND ENHANCING ECOLOGY

In this scenario, we use wind farms as an asset to enhance marine ecology. Wind farms are placed near nature reserves, excluding bird habitats, and fitted with various NID elements primarily focussed on the seabed to enhance marine biodiversity and ecology within the reserves. Optimal positioning is determined by the ecology impact model.

To showcase the versatility of the model, we let the North C Neutralizer generate this 300 GW scenario, without considering existing and planned wind farms.

### ENERGY COST

ENERGY PRODUCTION	1,5 M GWh/y
OPEX	40,5 B €/y
T_CAPEX	1,8 T €
System-LCOE	138 €/MWh
LCOE	87,6 €/MWh

### CLIMATE CHANGE IMPACT

GHG EMISSION	20,2 M T/y
GHG MITIGATION	20,2 M T/y
NET MITIGATION	20,2 M T/y

(GHG = Green house gas)

ECO IMPACT 1844

### MAIN PARAMETERS

ECO-IMPACT

WAKE EFFECT RESTRICTION

### COOPERATION:

NO

YES

### LEGEND:

#### TECHNOLOGIES

- monopile
- jacket

#### HUBS

- "Princess Elisabeth Island"
- potential grid connection zone
- energy fluxes

PORTS

#### NATURE RESERVE

- Special Protection Areas (Birds Directive)
- Areas of Conservation (Habitats Directive)

#### ECOIMPACT WIND +NATURE INCLUSIVE DESIGN

- positive impact
- negative impact

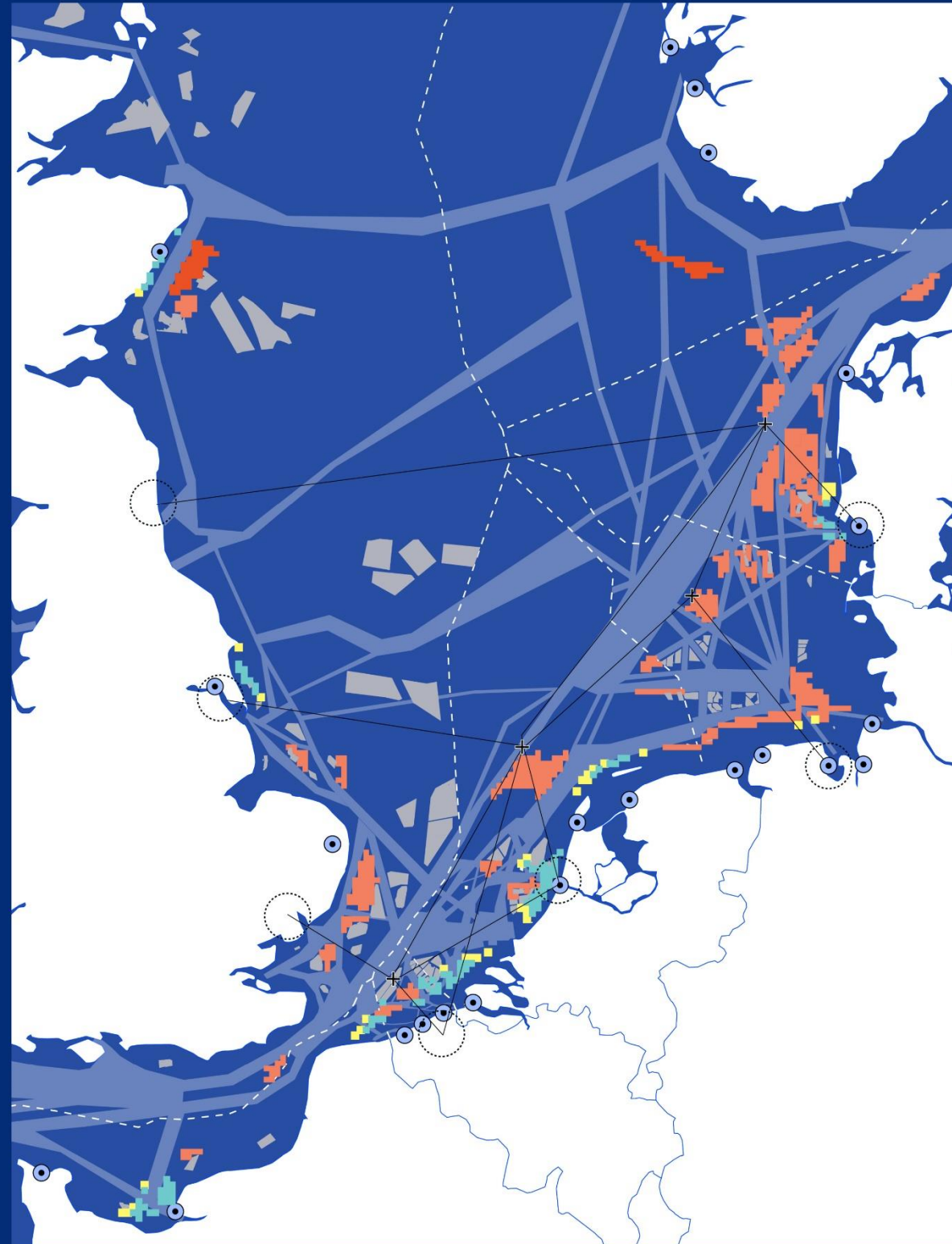


# Roadmaps

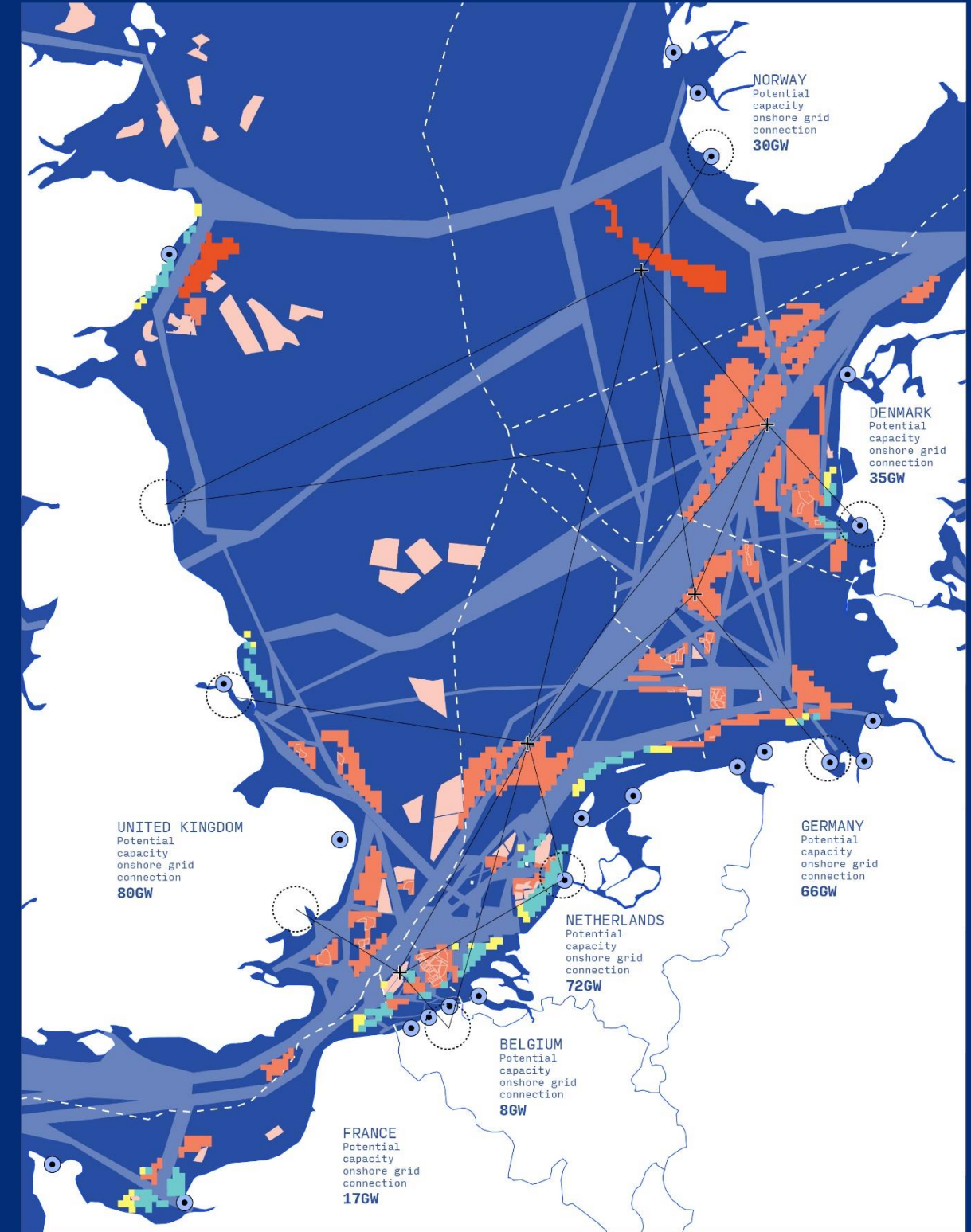
Over time



2030



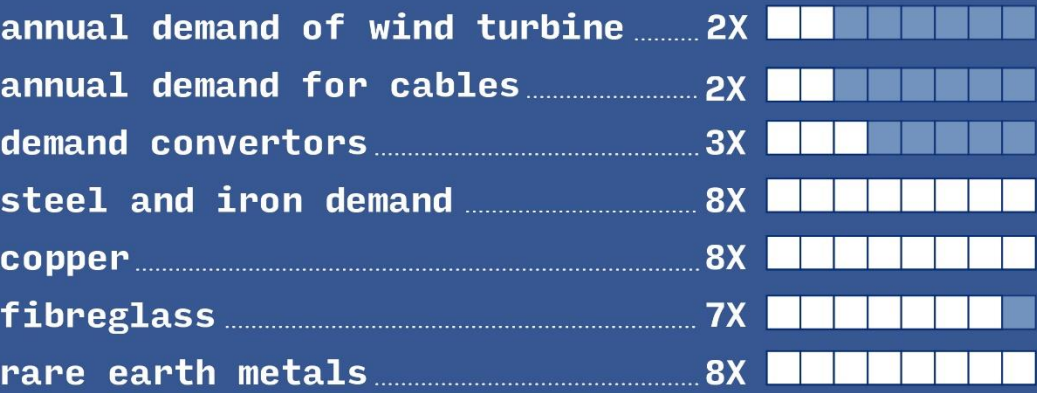
2040



2050

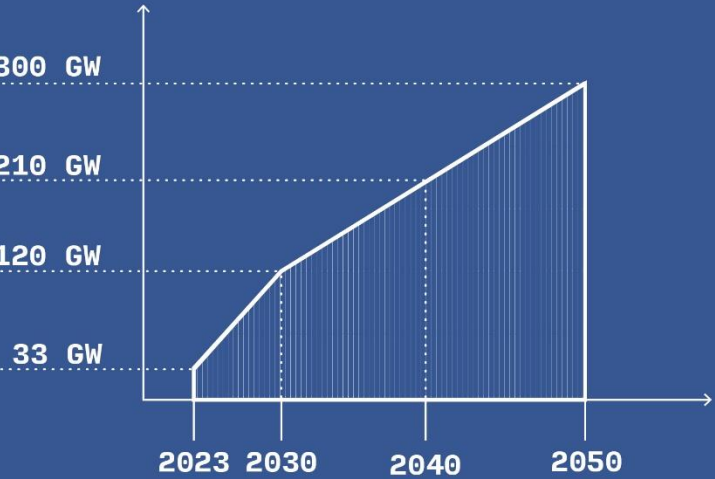


ANNUAL DEMAND COMPARISON  
2024 / 2050

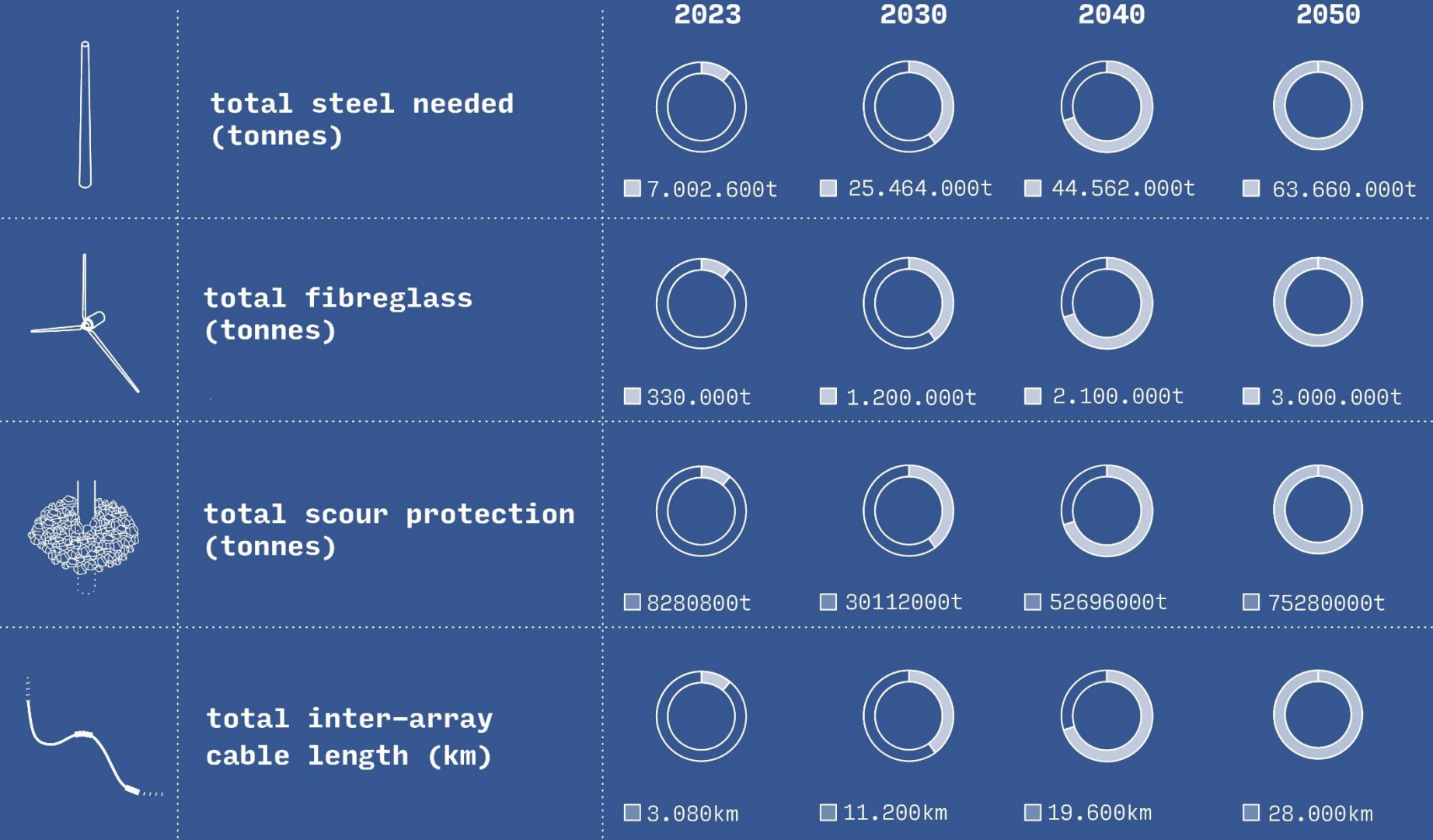


CAPACITY GROWTH

This is according to the Ostend  
declaration ( April 2023)



CUMULATIVE DEMAND 2023 —> 2050



Roadmaps  
f.e. what about the hardware (monopile)?



## PORT AREA

current yearly  
available area for  
offshore development

supply with planned  
expansions (yearly) tot 800 ha

peak demand in the future  
(yearly)

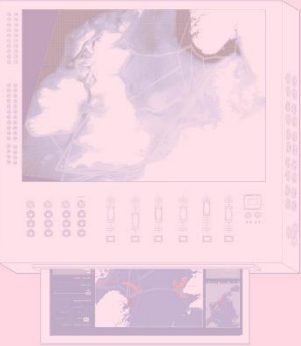
600 ha

200 ha

850 -1300 ha



# North C Neutral Optimisation and Decision Support Toolkit Greater North Sea Basin

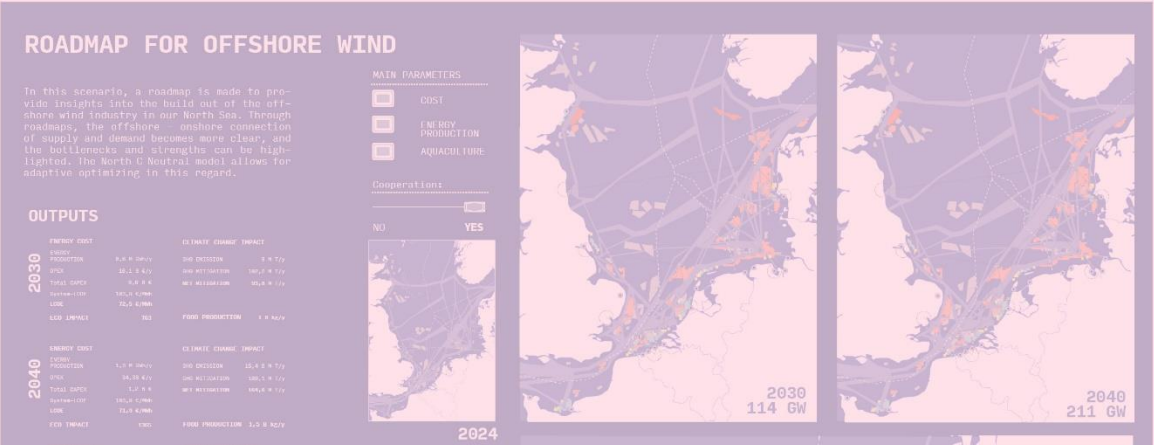
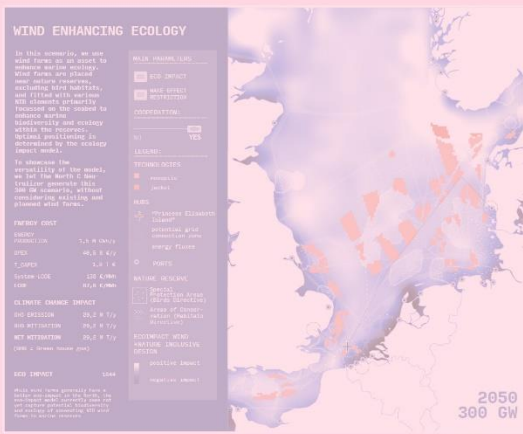
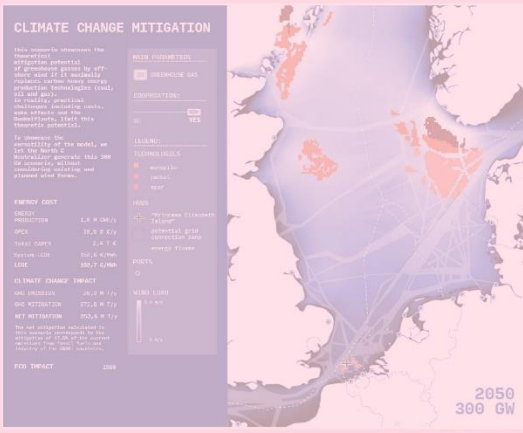


## North C Neutralizer

### Greater North Sea Basin optimization model

The North C Neutralizer is an innovative and unique optimization model developed for GNSBI. Operating at the sea basin level, it integrates stakeholder interests, leverages the best available data, and builds on existing marine spatial plans. For each desired stakeholder scenario, it seeks an optimal balance across various marine sectors.

Through visualizations and quantitative analyses, the North C Neutralizer clarifies impacts at all levels – from the Greater North Sea Basin to national and even onshore scales, including harbors and energy cable landing points. The detailed roadmaps it generates provide a robust foundation for supply chain planning and financing strategies.



## Spatial design Activate Joint Fact Finding

To “materialize” the outputs of the North C Neutralizer and initiate the joint fact-finding process, we further develop these outputs through spatial design.

In designing at various scales, we reveal hidden aspects, seek solutions, and identify synergies. Opportunities and challenges for each stakeholder group are highlighted, ensuring a transparent process that is easily and continuously accessible to all stakeholders.

Feedback loops between spatial design and the North C Neutralizer make the entire process increasingly adaptive, resulting in more robust solutions.



## Co-creation Harvesting Collective Intelligence

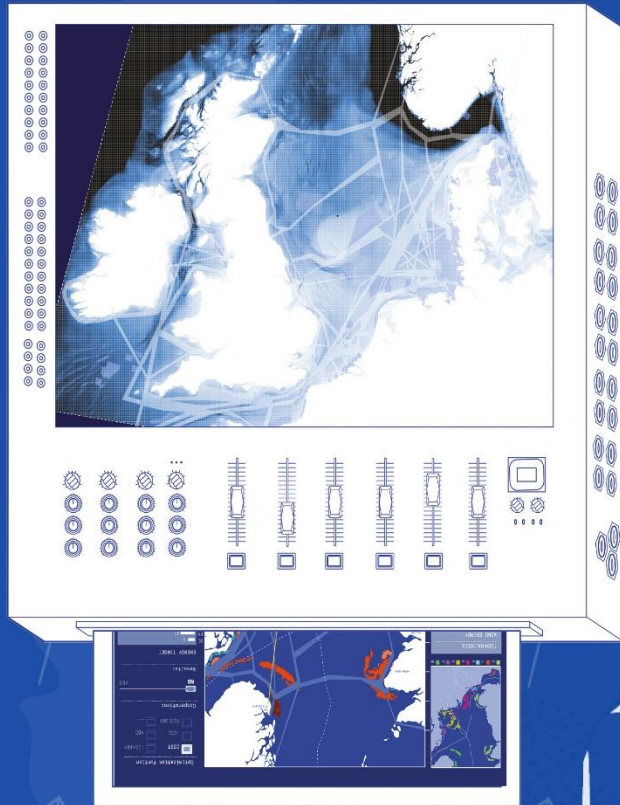
To leverage the best available knowledge and assist GNSBI stakeholders toward a unified Greater North Sea Basin strategy, we have designed a dynamic, 1.5-year co-creative process.

In collaboration with GNSBI stakeholders and supported by leading independent experts, we co-create, evaluate, and refine alternatives until we reach a feasible and widely supported set of options for policymakers. The co-creation methodology is designed to include experts from various GNSBI member states, enabling GNSBI to evolve into a truly pan-European project at all levels.

At the end of the process, we envision a traveling exhibition to share the results with citizens across participating countries.







# Spatial Design

## Activate Joint Fact Finding

### Feedback loop to model

ALPHA

Copyright: ORG



# Spatial Design

Activate Joint Fact Finding  
Feedback loop to North C Neutralizer





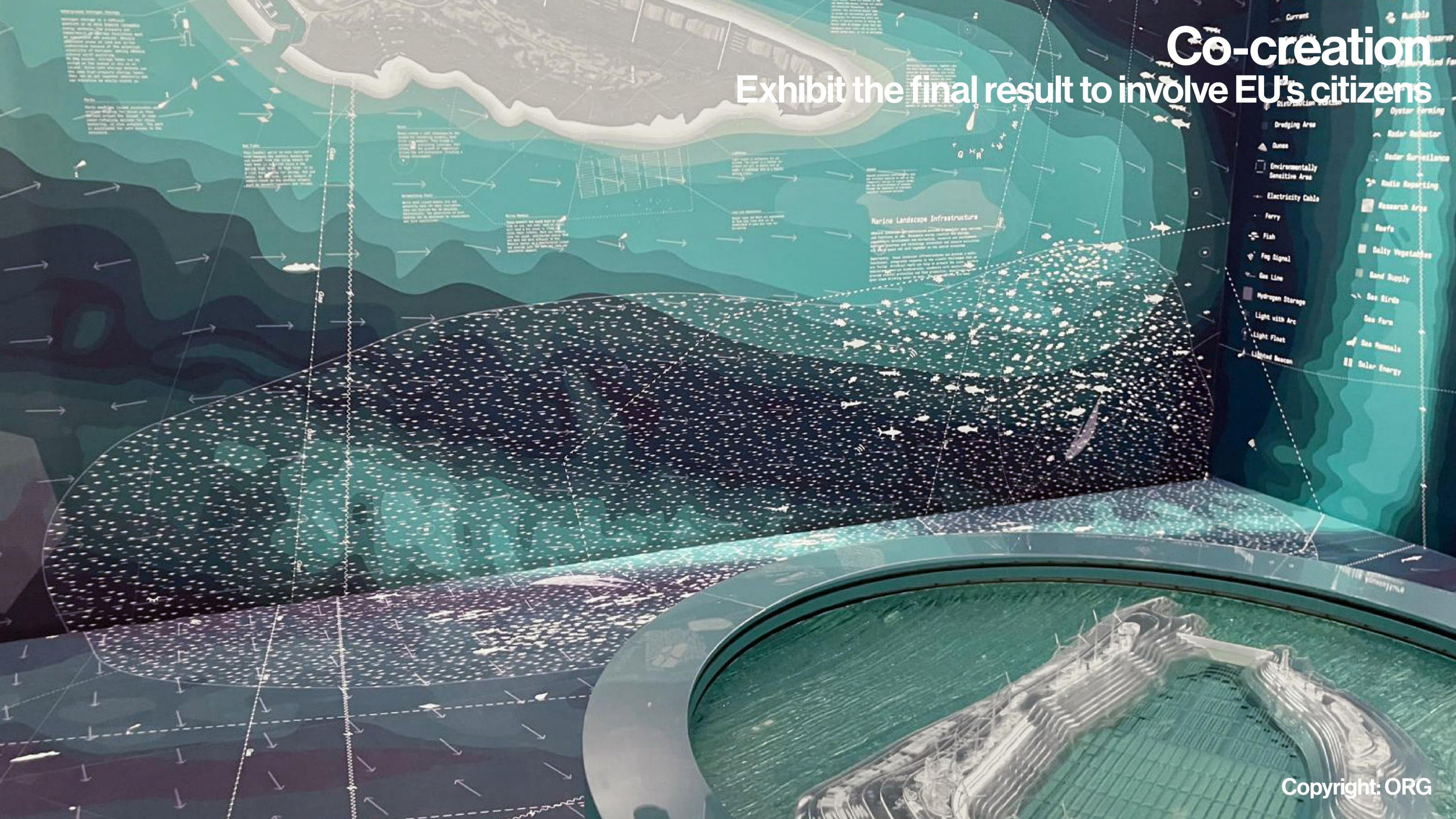
# Co-creation Harvest Collective Intelligence via Work Benches Feedback loop to North C Neutralizer





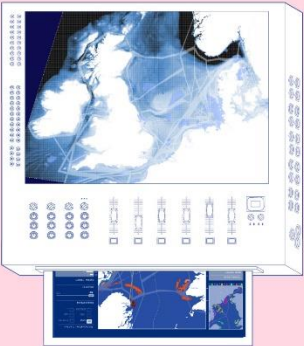
# Co-creation

## Exhibit the final result to involve EU's citizens





# North C Neutral Optimisation and Decision Support Toolkit Greater North Sea Basin

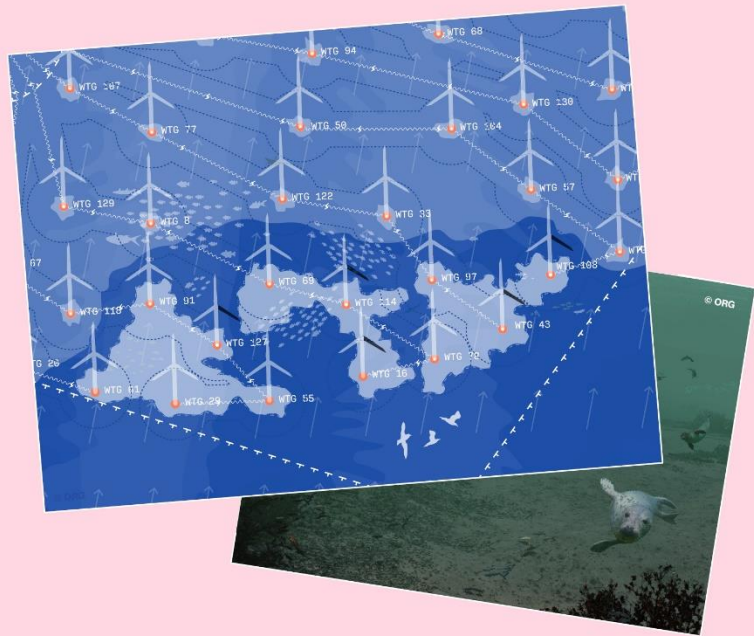
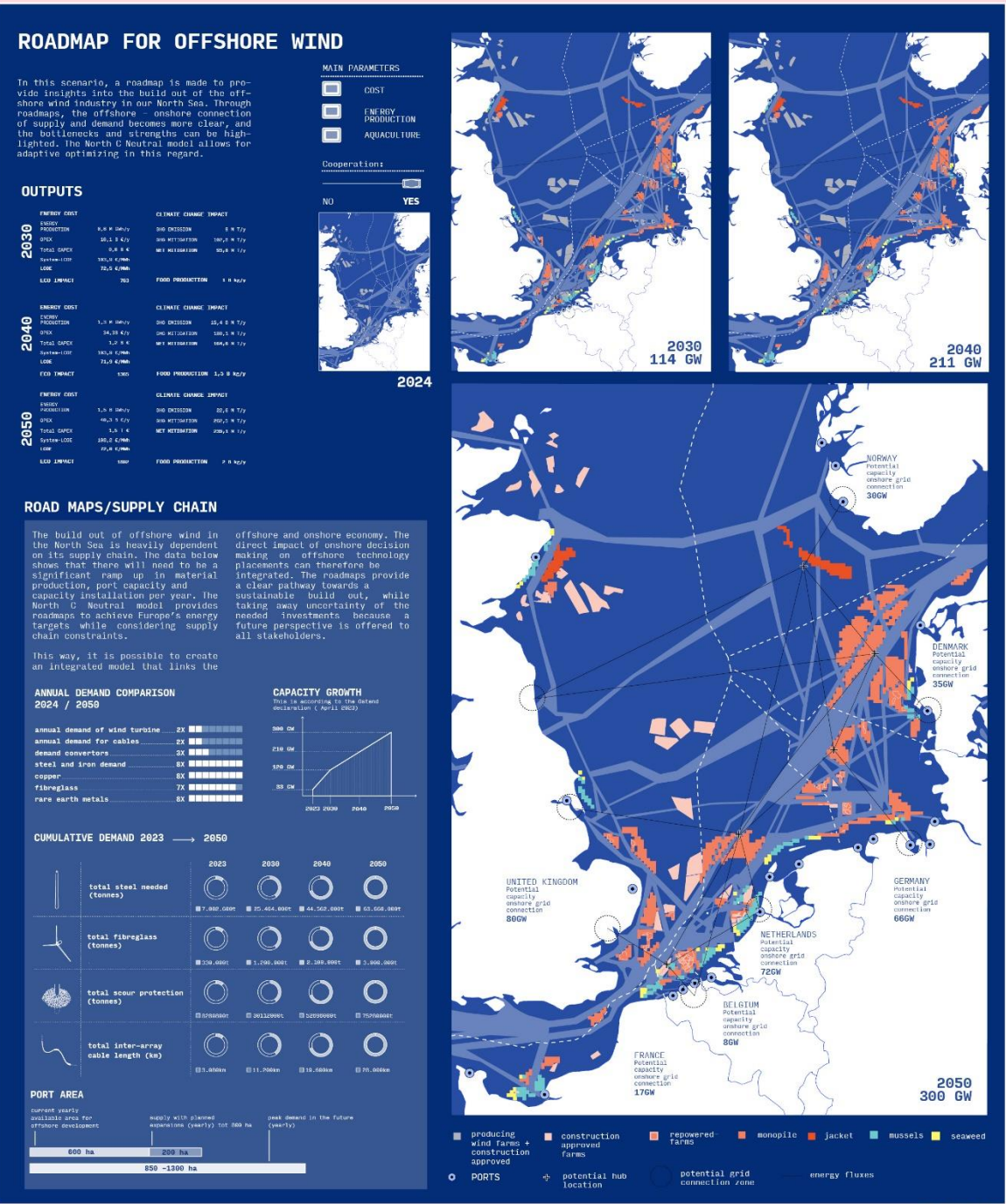
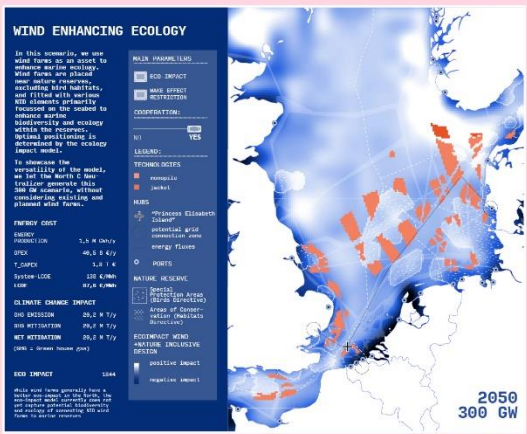
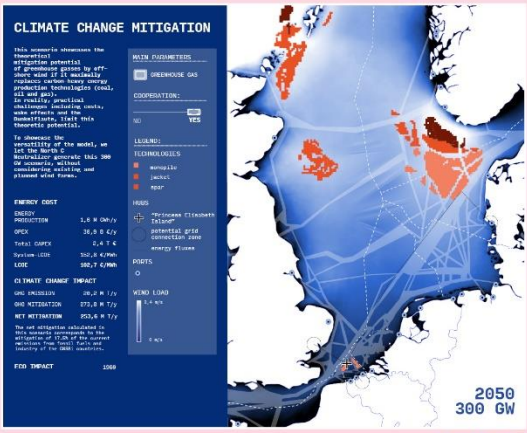


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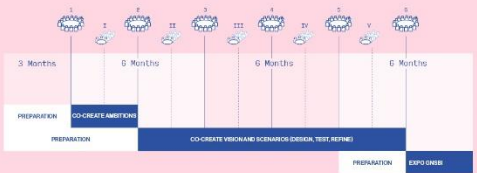


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# Contact

**Timothy Vanagt\_t.vanagt@orgpermod.com**

**Marijn Rabaut \_marijn@i-marine.expert**



# ROLE PLAY

## Joint consensus

**! Fiction !**



### Reuse abandoned infrastructure

Joint aim: Collaboration between stakeholders on reusing offshore infrastructure and integrating NID/ ecosystem-based approach from the start.

*Marjoleine, Nancy*

### NID as basis for large infrastructure, an energy island

Joint aim: How to use large financing for NID – in big projects involving decent data management?

*Timothy, Kinnie*

### Integrated Floating solar and Aquaculture System

Joint aim: Exploring logistics, shared infrastructure, and the economic benefits of combining. A co-use platform is installed needing agreements on collection, storage and data use, share infrastructure and management and maintenance.

*Peter, Nico*

### Smart Blue Economy Hub for SBE and Data Management

Joint aim: How to build a sustainable blue (bio-)economy by leveraging digitalisation, shared data and innovation. How to support scale-up, which challenges are faced?

*Kristien, Jurgen*



# Way Forward





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**What new insights brought the role play - in one word?**

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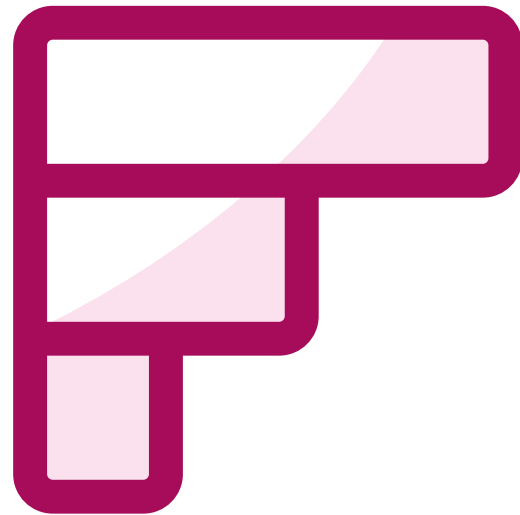
**Only by strong stakeholders/experts/governmental .. collaboration, multi-use can work. Give an effective example of such initiative. (Intersectoral <-> interbasin approaches (ie. CoP's)).**

① Start presenting to display the poll results on this slide.



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**Successful MU requires a stimulative governmental approach. Rank the measures.**

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**Efficient single use remains preferable.**

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**When dealing with MU, is a Maripark the best way to do so?**

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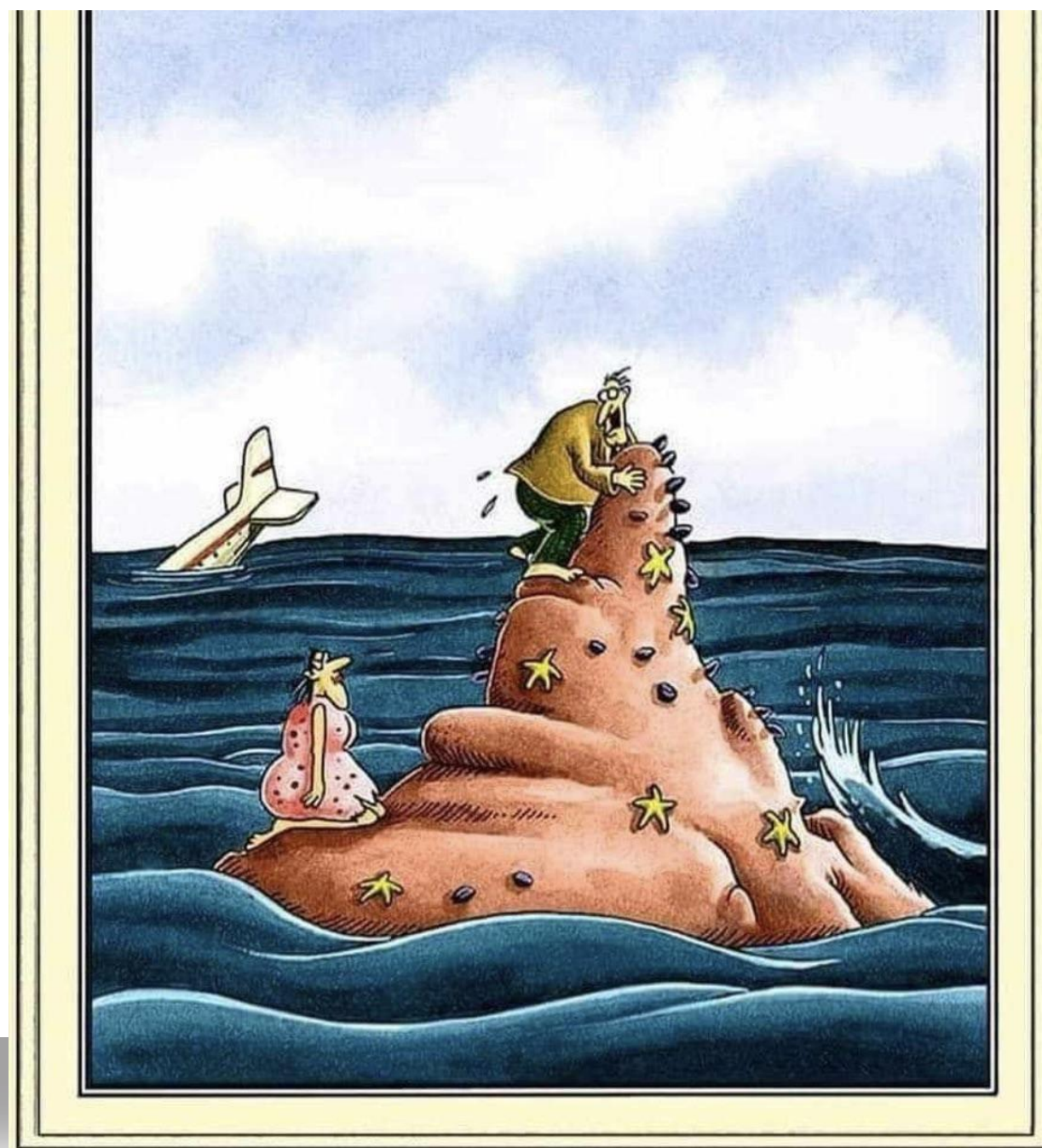
## Who should finance the infrastructure of a Maripark?

① Start presenting to display the poll results on this slide.



# BLUE MISSION BANOS

## THANK YOU



Well, we'll never want for food, Doris. ...  
This rock is absolutely encrusted with oysters  
and mussels-all the way to the top!