Mission
EU policy priority

"Every problem is an opportunity for innovation. But we need a clear and ambitious objective. We need a mission, like the European Green Deal.

That is why we have launched the 'Mission to Restore our Ocean and Waters by 2030'. With **EUR 0.5 billion in funding** *from the world's largest research and development programme, Horizon Europe, and other instruments."*

EC President Ursula von der Leyen, 11 Feb 2022
https://ec.europa.eu/commission/presscorner/detail/en/SPEECH_22_962

EUROPEAN UNION

Mission objectives and targets

Restore our Ocean and Waters by 2030

PROTECT AND RESTORE MARINE AND FRESHWATERS ECOSYSTEMS AND BIODIVERSITY

- Protect at least 30% and strictly protect 10% EU's sea areas
- Restore 25.000 km free flowing rivers
- Marine nature restoration targets (incl. degraded seabeds, coastal ecosystems)

PREVENT AND ELIMINATE POLLUTION OF OUR OCEANS, SEAS AND WATERS

- Reduce by at least 50% plastic litter
- Reduce by at least 30% microplastics
- Reduce by at least 50% nutrient losses, chemical pesticides

MAKE THE BLUE ECONOMY CARBON- NEUTRAL AND CIRCULAR

- Net zero maritime emissions
- Zero carbon aquaculture,
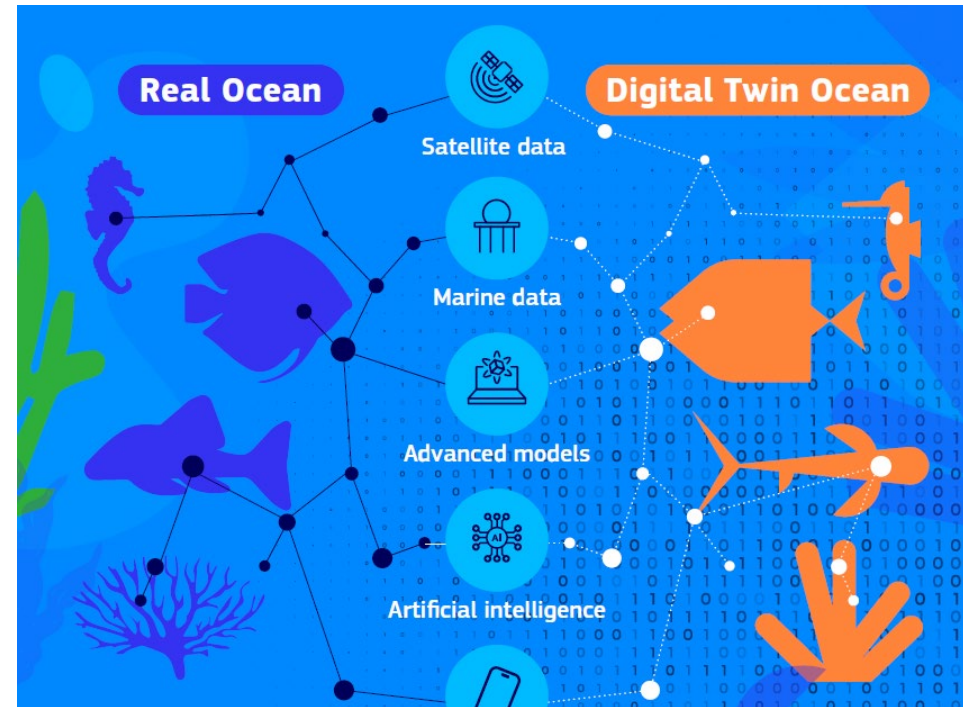- Low carbon multipurpose use of marine space

ENABLERS

Digital Ocean and Waters Knowledge system

Public mobilization and engagement

3

Enabler 1:
Digital Ocean and Waters Knowledge System

Over the entire knowledge value chain, from Ocean sensing technologies to the digital user interfaces

Be part of the Mission: adhere to the Charter

Mission Charter

Mission Charter

We are calling on Member States, regions and a wide range of stakeholders to endorse the Charter [EN ●●●] and pledge actions that will contribute to the successful implementation of the Mission and its lighthouses.

Please click below to endorse the Charter and pledge actions

Endorse the Charter

Action pledges submitted so far: interactive map [EN ●●●]

More information

- mission-oriented policy for Horizon Europe [EN ●●●]
- Horizon Europe [EN ●●●]
- co-design session on oceans mission at Research and Innovation Days (video) ↗
- EU Missions info days 2022 [EN ●●●]

Contact

RTD-HORIZON-EUROPE-MISSION-OCEANS@ec.europa.eu

Restore our Ocean and Waters (europa.eu)

Adhere to the Charter by filling-in the form on EUSurvey - Survey (europa.eu)

Actions submitted by enablers

Budget and Number of Pledges by Enabler
(Accepted pledges as of August '23)
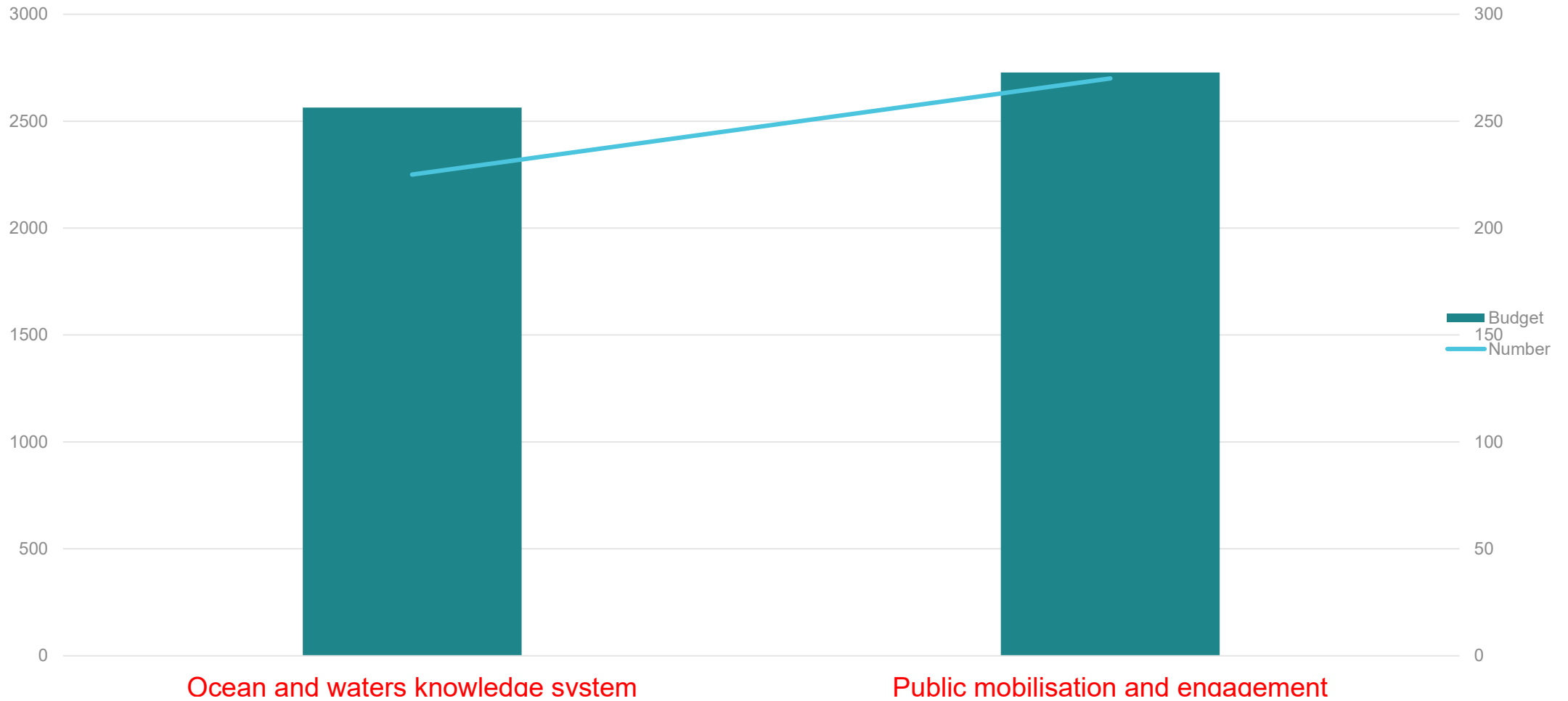
Structuring & integrating the ocean knowledge value chain **FOR** ocean actors

TO:

➢ Support science-driven approaches to policies implementations by users: ecosystem-based management of marine habitats/green infrastructure, planning and management of marine areas, safeguard productivity and biodiversity of marine ecosystems, etc.

➢ Support industry to develop new sustainable business models, green services, and opportunities in ocean data and related services

➢ Increase citizen engagement & empowering citizens in innovative co-designed services and projects, enable the infusion of 'non-scientific data streams'

HOW:

➢ By Integrating and connecting wide range of data and models (from physics to socio-ecological) with cloud infrastructures, HPC, AI

➢ by providing development kits, interfaces and visualization tools for "what-if" scenarios and decision support

A core infrastructure, conceived as a public good

European Commission

EU DTO: the EC Vision

EU MISSIONS
RESTORE OUR OCEAN AND WATERS

PROTECT AND RESTORE MARINE AND FRESHWATERS ECOSYSTEMS AND BIODIVERSITY

PREVENT AND ELIMINATE POLLUTION OF OUR OCEANS, SEAS AND WATERS

MAKE THE BLUE ECONOMY CARBON-NEUTRAL AND CIRCULAR

Cross-cutting enablers for the mission:

- **Digital Ocean and Water knowledge system**

- **Public mobilisation and engagement**

Ocean Climate

Danube

Atlantic

Fishing

EU DTO Core Infra « EDITO »

Pollution

Coastal zone management

Med Sea

Baltic

Blue economy

European Commission
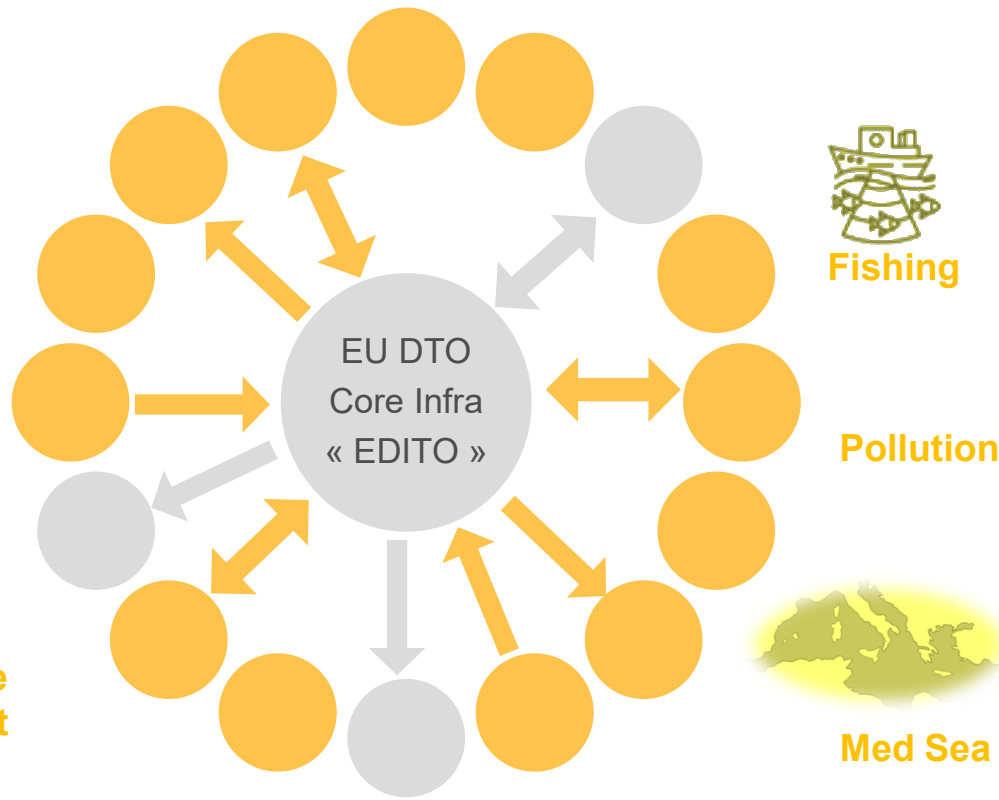
EU DTO: 3 pillars of action

1. **Science-base**

   (Horizon Europe, national programmes …)

2. **EU Core Infrastructure**

   (Mission Ocean WP)

3. **EU DTO in the world**

EU DTO: inclusive and open

EDITO follows a co-design and co-development approach

The core EU DTO must:
- ➢ be co-developed in collaboration with willing projects and stakeholders
- ➢ foster the co-development of local or regional, application-specific, DTOs
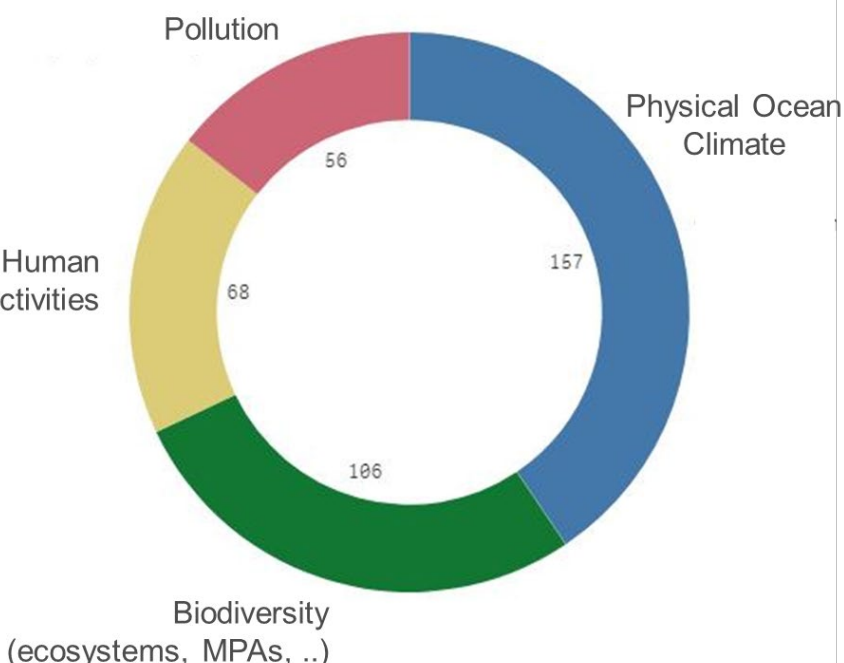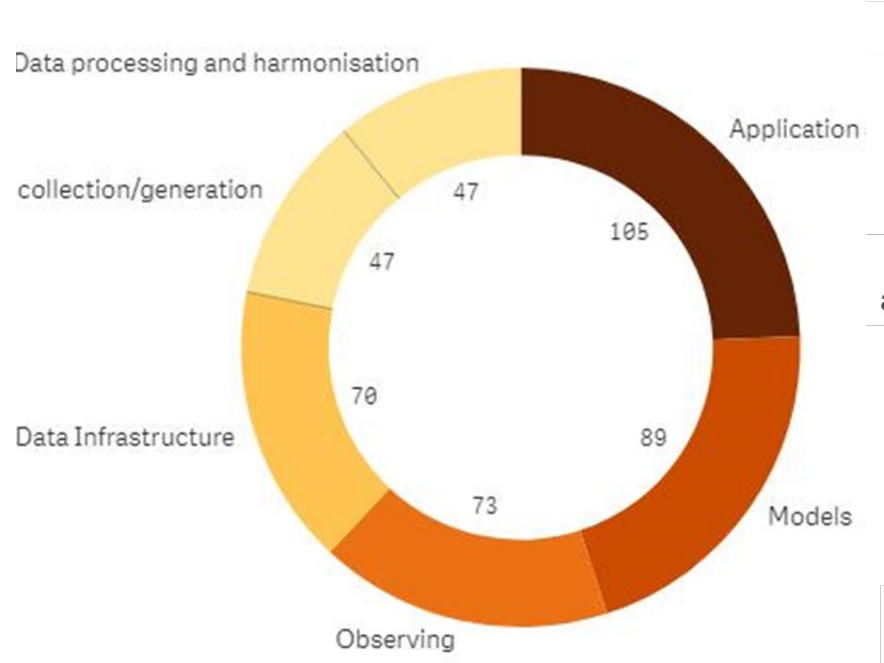- ➢ open to interoperability with other similar initiatives

You can ALL contribute

- ➢ What will you need from the EU DTO ?
- ➢ What can you bring to the EU DTO, and how?

European Digital Ocean Forum
DOF 2023, 14-15 June, Brussels

1. DTO Science Base

EU Programmes : 187 relevant projects (50+ running and linked)

Data processing and harmonisation — Application 105

collection/generation 47 — 47

Data Infrastructure 70 — 89 Models

73 — Observing

Pollution 56 — Physical Ocean Climate 157

Human activities 68 — 106 Biodiversity (ecosystems, MPAs, ..)

Sustainable Blue Economy Partnership

Digital Ocean Forum
14-15 June 2023, Brussels

2. DTO Core Infrastructure (EDITO)
(in the Mission Ocean WP)

2021

**Public Infrastructure for the European Digital Twin Ocean
IA, IBA - 3M€**

EDITO-Infra - EU Public Infrastructure for the European DIgital Twin Ocean

Underlying models for the European Digital Twin Ocean, IA - 7M€

EDITO-Model Lab - Underlying models for the European Digital Twin Ocean

2022

**Integration of biodiversity monitoring data into the Digital Twin Ocean
IA - 10M€**

DTO-BioFlow - Integration of biodiversity monitoring data into the Digital Twin Ocean

**Towards a European e-DNA library of marine and freshwater species
CSA - 2M€**

eDNAqua-plan - A Plan towards an eDNA reference library and data repository for Aquatic Organisms, navigating Europe towards the next generation biodiversity monitoring

2023

Integration of socio-ecological models into the Digital Twin Ocean, RIA, 10M€

Roadmap towards the integration of inland waters into the Digital Twin Ocean, CSA - 2M€

Call deadline for WP2023 topics: 20/09/2023

2024 - 25

**EU DTO – Phase 2
(under discussion)**

Scaling up EU DTO core infrastructure (data sources, models and services) Integration of existing applications (local or sectoral DTOs); Development of new user-driven applications; Interoperability with similar digital initiatives; Stakeholder engagement (inclusivity)

3. EU DTO in the world

o EU 27 – linking with national initiatives

o UN Decade of Ocean Science for Sustainable Development

o

o

o All-Atlantic Ocean Research & Innovation Alliance

Intervention areas

The five co-designed Intervention areas below have been the basis for the first joint call

| Development and validation of **Digital Twins** of the Ocean at sub-sea-basin scale | Blue generation **marine structures** | **Planning and managing** sea uses | Healthy **'Blue Food'** under a 'One Health' approach | Enabling the green transition of **'Blue Food' production** |

Thank you!

#MissionOcean

#EUmissions

#HorizonEU