



EU MISSION

'Restore our Ocean and Waters by 2030'

European Digital Twin of the Ocean (EU DTO)



BESS inspiration Session
23/05/2024

#MissionOcean #EUDTO #HorizonEU

EU DTO: the EC Vision



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



“Today, we know the ocean is vulnerable and is threatened by our misdeeds. Pollution, chemicals and the overexploitation of marine resources. The ocean is too large for any one of us, and yet so fragile that our individual actions matter. ...

*... 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’** ...*

*... Finally, the ocean is still largely a great mystery for humankind. **That is why Europe is building a digital twin of the ocean.***

We are connecting our assets – like the Copernicus satellites, marine infrastructure like icebreakers, buoys and underwater drones, and high-performance computing. We will gather the raw data and turn it into real-time knowledge and longer-term predictions.

We are putting the power of the digital revolution at the service of our climate. ...”

EU DTO: the EC Vision



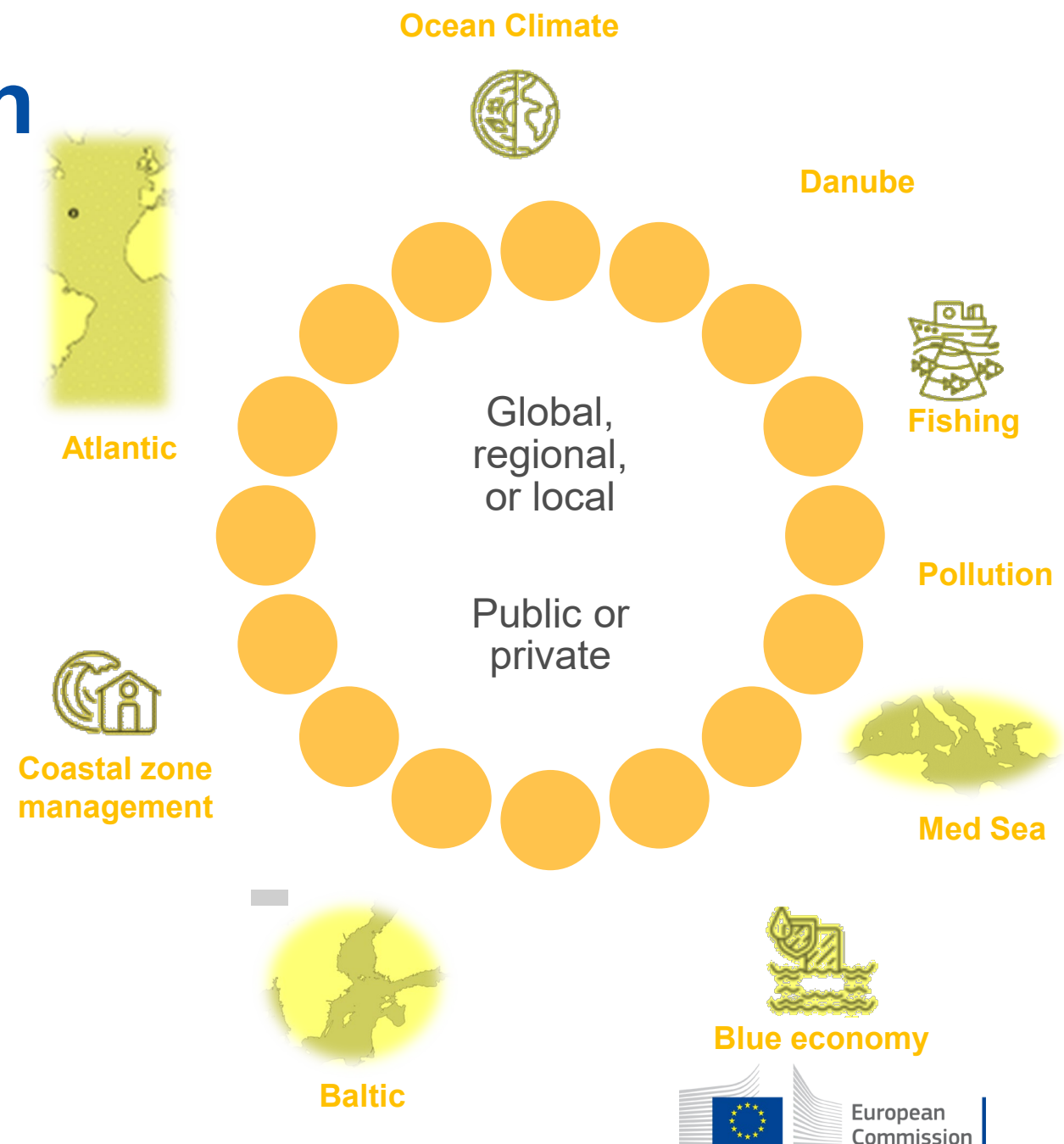
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Structuring & integrating the ocean knowledge value chain **FOR** ocean actors

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 business models, sustainable 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-economics) 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 »

EU DTO: the EC Vision



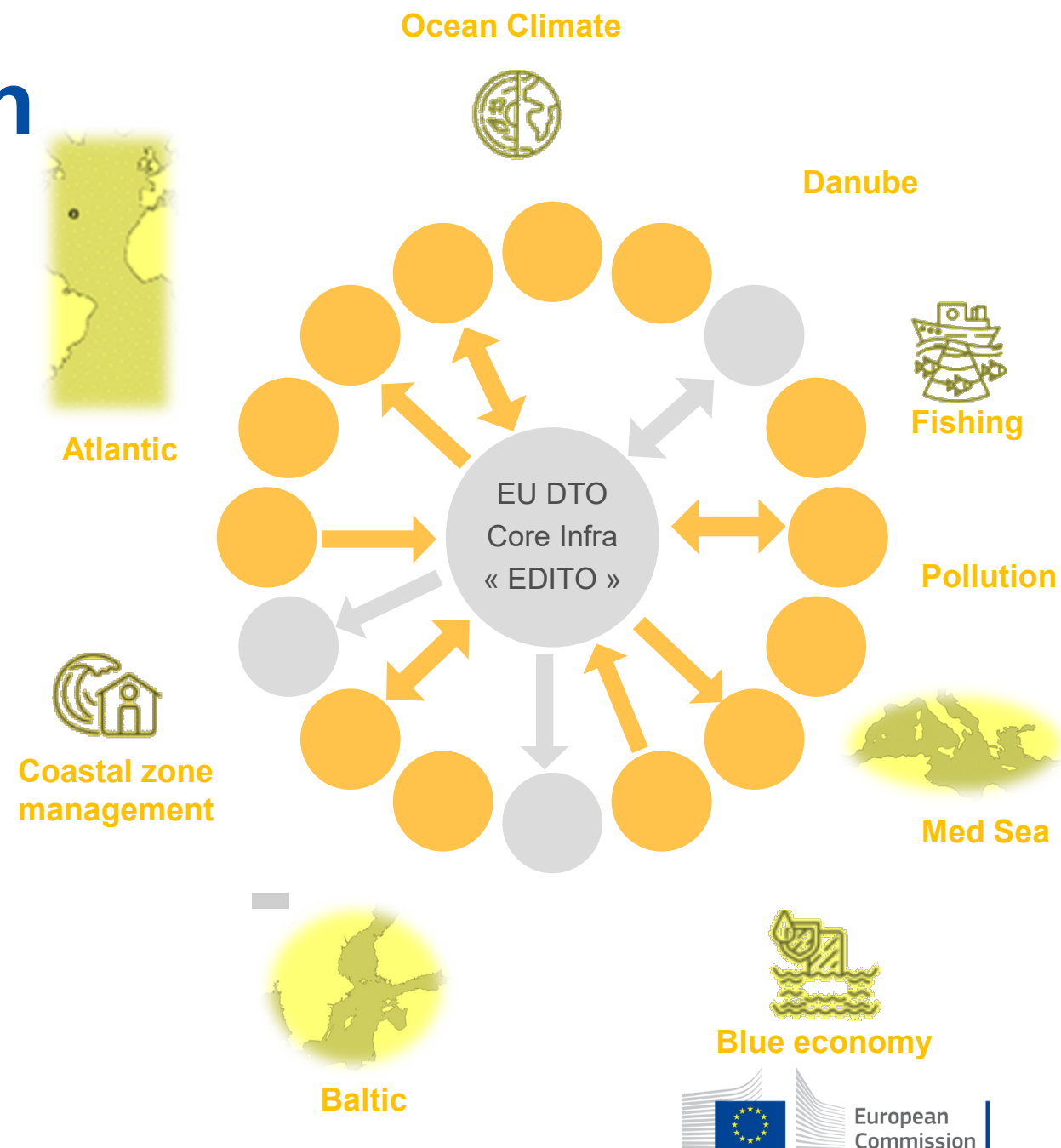
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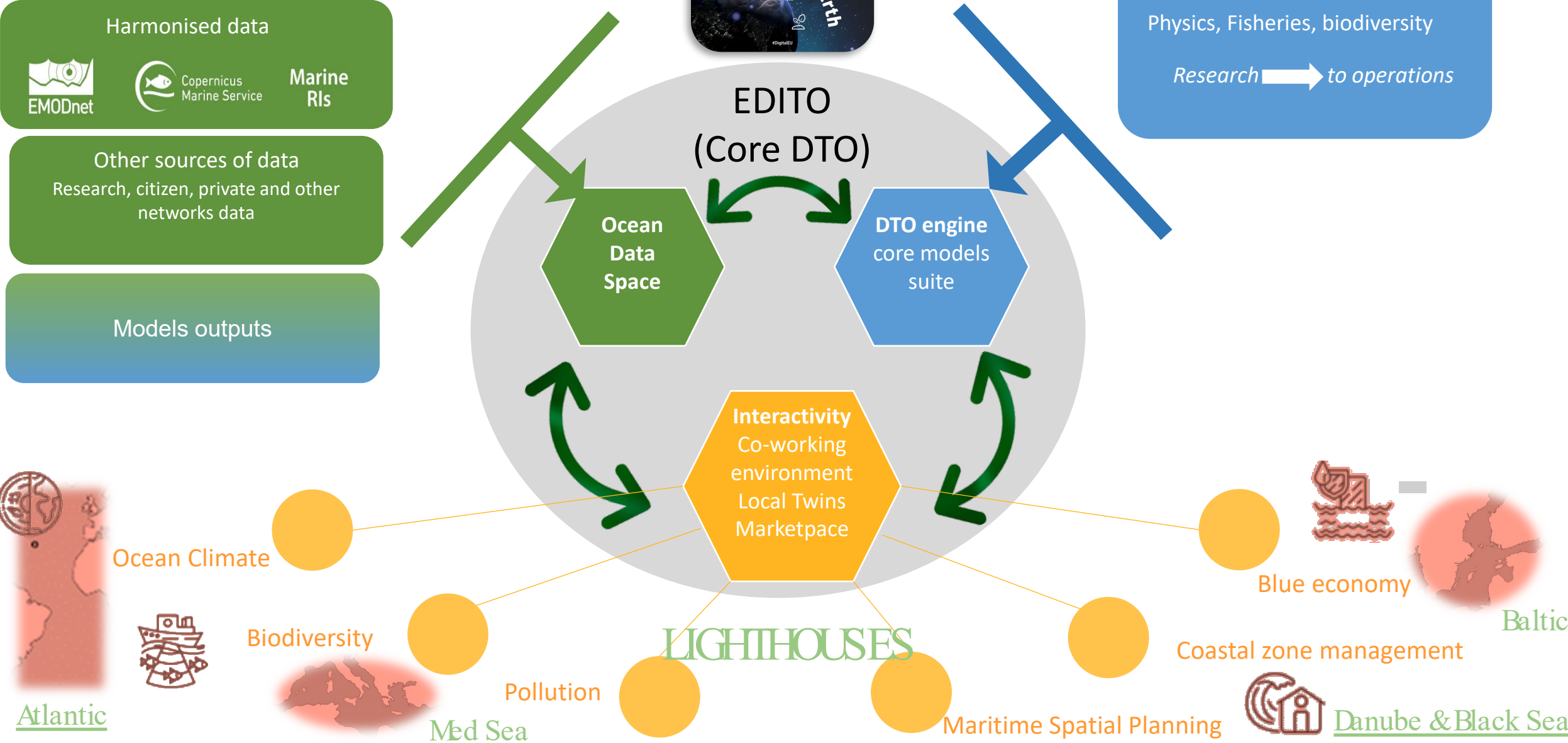
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EU DTO: the EC Vision



EU DTO: 3 pillars of action

1. Science-base

(Horizon Europe, national programmes ...)

2. EU Core Infrastructure

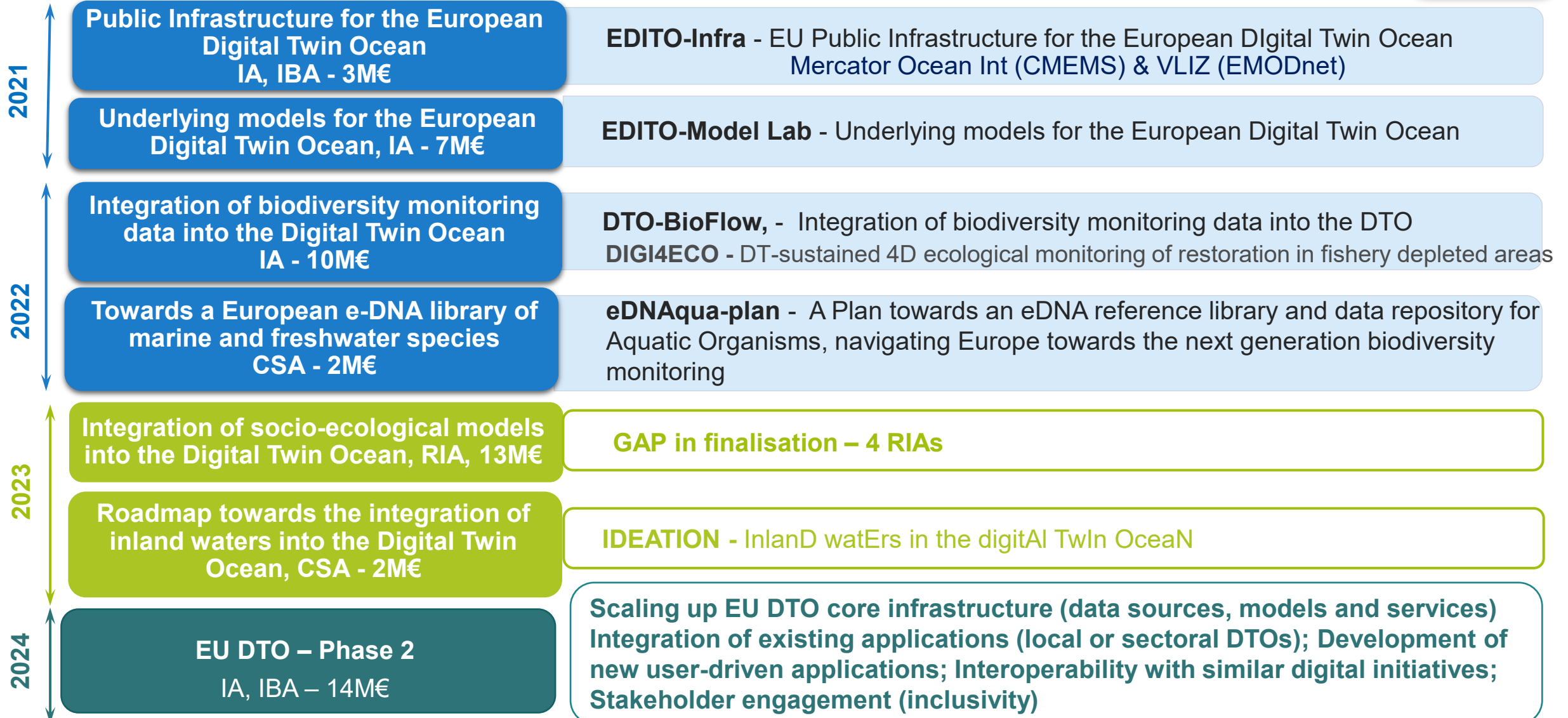
(Mission Ocean WP)

3. EU DTO in the world





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



EU DTO: inclusive and open

EDITO follows a co-design and co-development approach

The core EU DTO must:

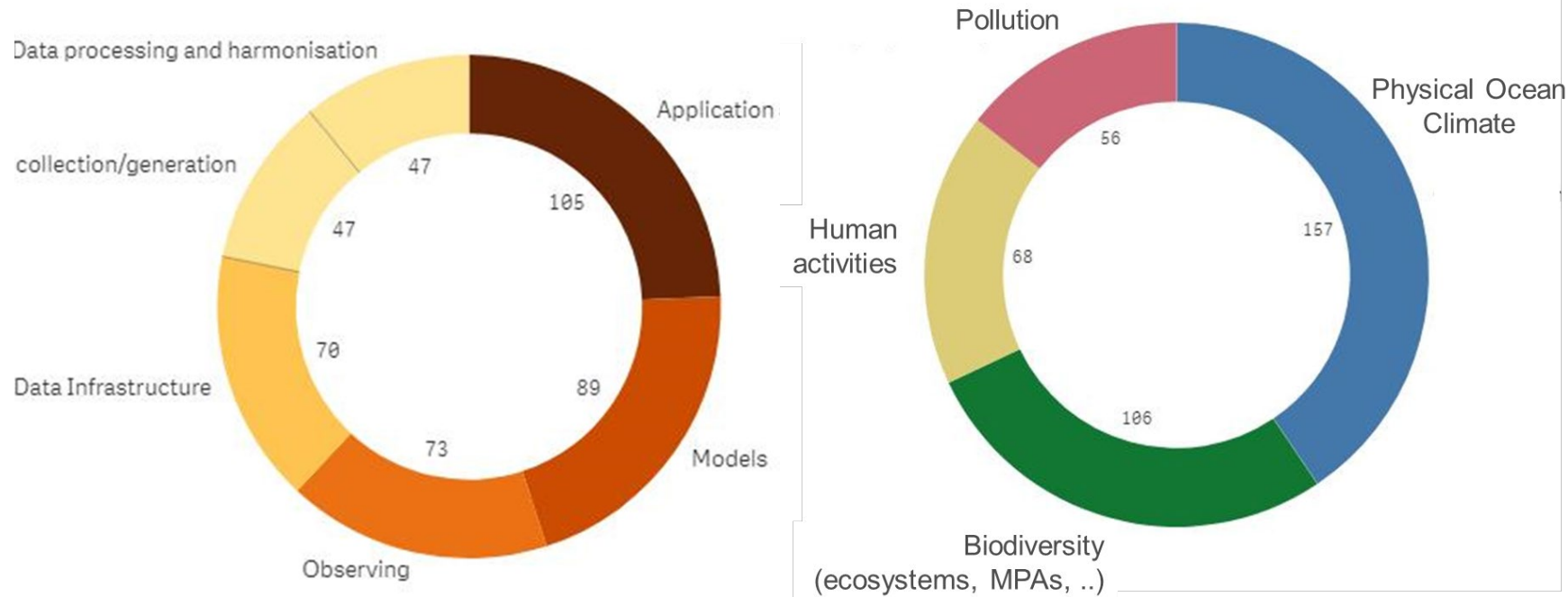
- be co-developed in collaboration with willing projects and stakeholders
- foster the co-development of local or regional, application-specific, DTOs
- open to interoperability with other similar initiatives

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

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



Digital Ocean Forum
 14-15 June 2023, Brussels

3. EU DTO in the world

- EU 27 – linking with national initiatives
- UN Decade of Ocean Science for Sustainable Development



...



- All-Atlantic Ocean Research & Innovation Alliance



INVITATION



EU MISSIONS

RESTORE OUR OCEAN & WATERS

Digital Ocean Forum #3



Wednesday 12 June, 12:30-18:00

Scientific and Technical Workshop

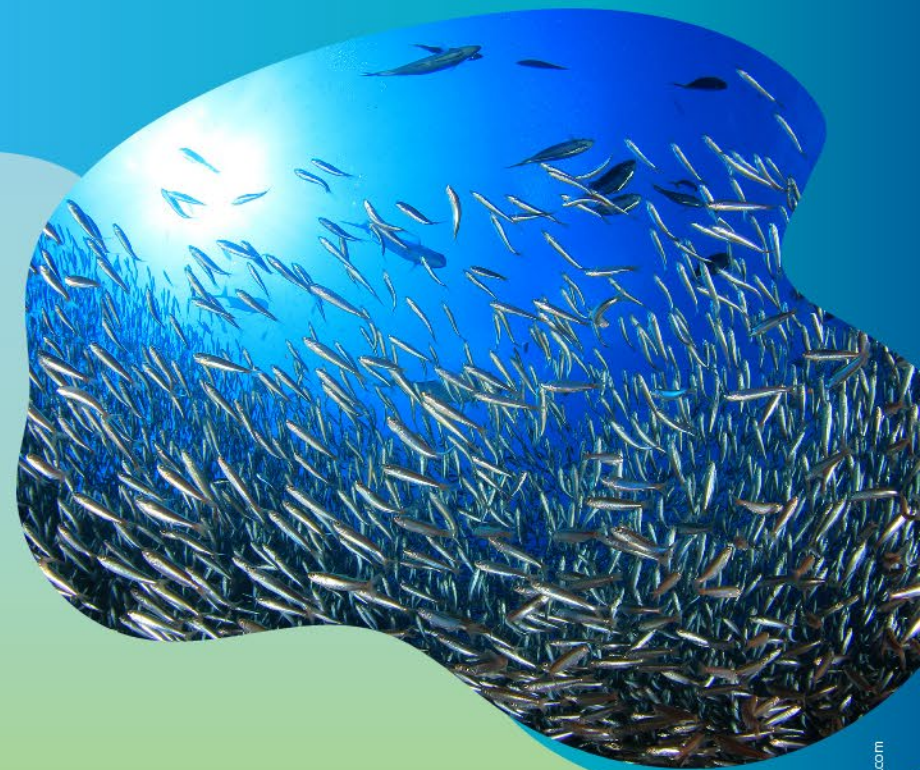
Brussels, Palais des Académies



Thursday 13 June, 10:00-16:30

High-Level event

Brussels, Palais des Académies



in cooperation with

