



European Digital
Twin Ocean



Alain ARNAUD
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EU Digital Twin of the Ocean - perspective



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2021
2030 United Nations Decade
of Ocean Science
for Sustainable Development

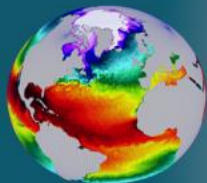
Connecting the world around Ocean Prediction: *A vision for the Decade and Beyond* – 8 April 2024

2024 OCEAN DECADE CONFERENCE

Connecting the world around Ocean Prediction:

A vision for the Decade and Beyond

As part of the Ocean Decade Week (8-12 April 2024)



European assets, in situ data, satellites...



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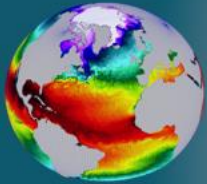


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European projects

EU MISSIONS
RESTORE OUR OCEAN & WATERS
#EUmissions #HorizonEU #MissionOcean



Objective or Enabler Tot	Basin coverage Tot	Country Tot	Start Date 01/03/2019 16/09/2024
Type of action Research and innovation	Type of Organisation Tot	Community of Actors Tot	

Number of Mission Charter Actions
151

Budget Allocated for the Actions
1.014.392.929 €

Mission Actions - EU Mission Restore our Ocean and Waters
Year: 2024

- Research and innovation
- Evidence-based knowledge and data
- Upscaling, deployment and replication of solutions
- Citizen engagement, outreach, awareness raising
- Education and training

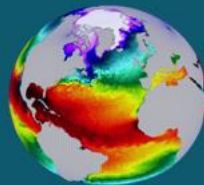
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Ocean Data & New Sensors



Application and Ocean intelligence



Ocean Modelling and AI



International Collaborations



NEW DIGITAL FRAMEWORK



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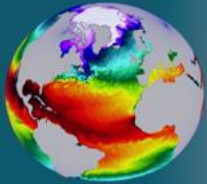


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EU Public Infrastructure for the European Digital Twin Ocean

Grant to identified beneficiaries, MOi & VLIZ representing
CMEMS and EMODnet

Budget: 2,999,850.00 € for the 2 first years



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**MERCATOR
OCEAN**
INTERNATIONAL



EDITO provides an architectural basis for the
interconnection of assets



EDITO sets up a federated data lake



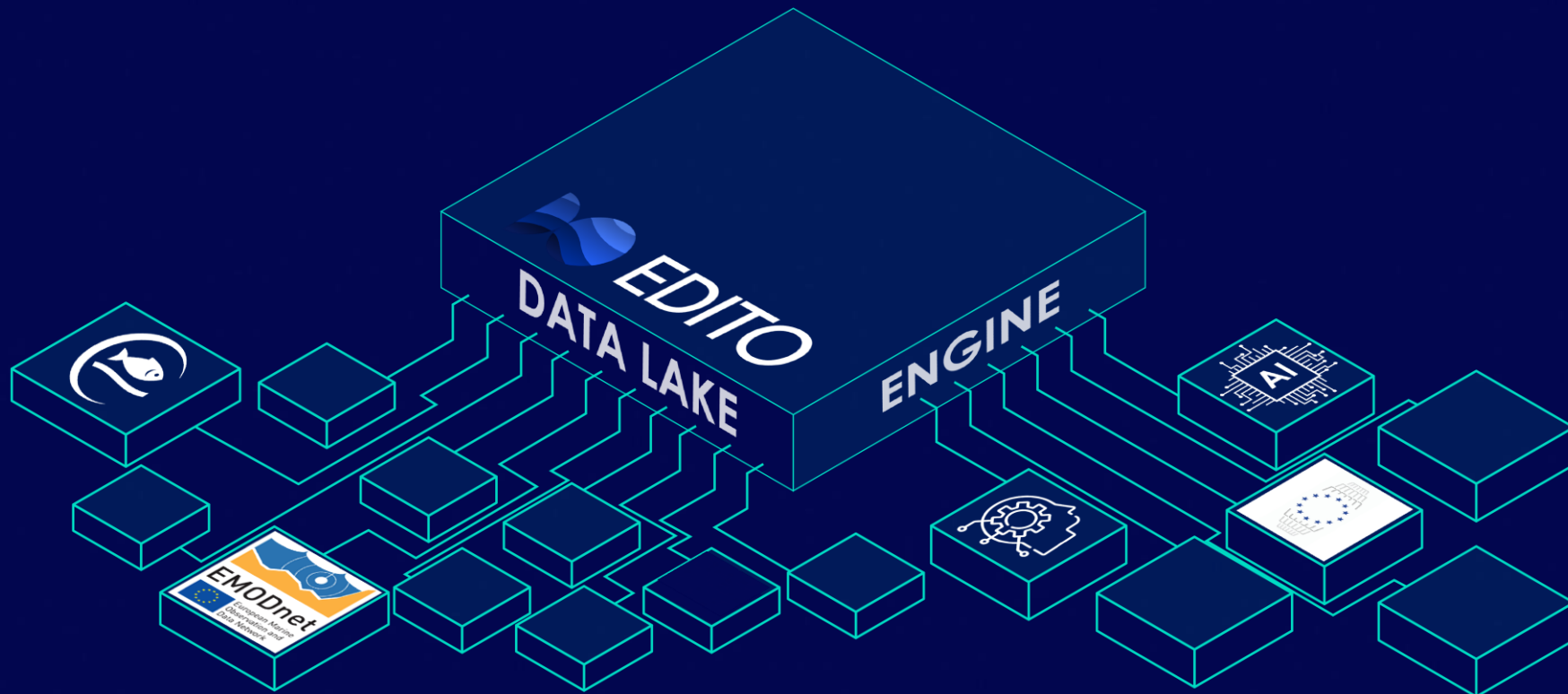
... to enable first a seamless access to the whole
EMODnet and CMEMS data



In addition EDITO offers a processing engine



.... allowing to launch models, Machine Learning,
and any applications







CO-CONSTRUCTION by DEFINITION

Each Project brings its:
Data
Tools
Front-Office









Ocean Health



Polar Environment Monitoring



Trade & Marine Navigation



Climate & Adaptation



Policies & Ocean Governance & Mitigation



Science & Innovation



Education, Public Health & Recreation



Natural Resources & Energy



Coastal Services



Marine Conservation & Biodiversity



Marine Food



Extremes, Hazards & Safety



Socioecology
Marine Species ecosystems
Biogeochemistry
Physics

EDITO
DATA LAKE
ENGINE

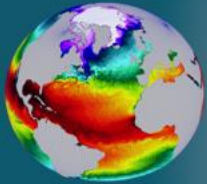


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CONCLUSION

- The European project follows a co-design principle on the development of the Core DTO.
- The core DTO is formed by all the existing and collaborating projects and fosters the co-development of local or regional DTOs
- It is also open to interoperability with other similar initiatives, with UN DCC OP and DITTO program or to the support the development of local DTOs, using the Core infrastructure and enriching the global knowledge thanks to additional Data, Models Applications or Services.



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