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Towards a decade digital
ecosystem: the UN Decade Vision
2030



Towards a Decade Digital Ecosystem

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IOC-UNESCO, DCO Ocean Observing

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Through multi-stakeholder collaboration, develop a comprehensive digital representation of the ocean, including a dynamic ocean map, which provides free and open access for exploring, discovering and visualizing past, current and future ocean conditions in a manner relevant to diverse stakeholders.



1. Understand & Beat Marine Pollution



5. Unlock ocean-based solutions to climate change



9. Skills, knowledge and technology for all



2. Protect and restore ecosystems and biodiversity



6. Increase community resilience to ocean hazards



10. Change humanity's relationship with the ocean



3. Sustainably feed the global population



7. Expand the Global Ocean Observing System



4. Develop a sustainable and equitable ocean economy



8. Create a digital representation of the ocean

Ocean Decade

Vision 2030

White Papers

Challenge 8:

Create a digital representation of the ocean





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- ✓ Increase ocean knowledge and risk mapping
- ✓ Widen use of ocean forecasting services
- ✓ Improve regional equity in availability of ocean data
- ✓ Strengthen public-private collaboration
- ✓ Develop user-friendly applications for more stakeholders
- ✓ Give free and open access to ocean data



Ocean Decade

Vision 2030

White Papers

Challenge 8:

Create a digital representation of the ocean



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Ocean data value chain



Observation, collection, acquisition or creation to integration to knowledge and action

OECD value chains in public marine data:

- Research and development
- Policy
- Risk
- Planning and decisions, Resource management
- Statutory reporting

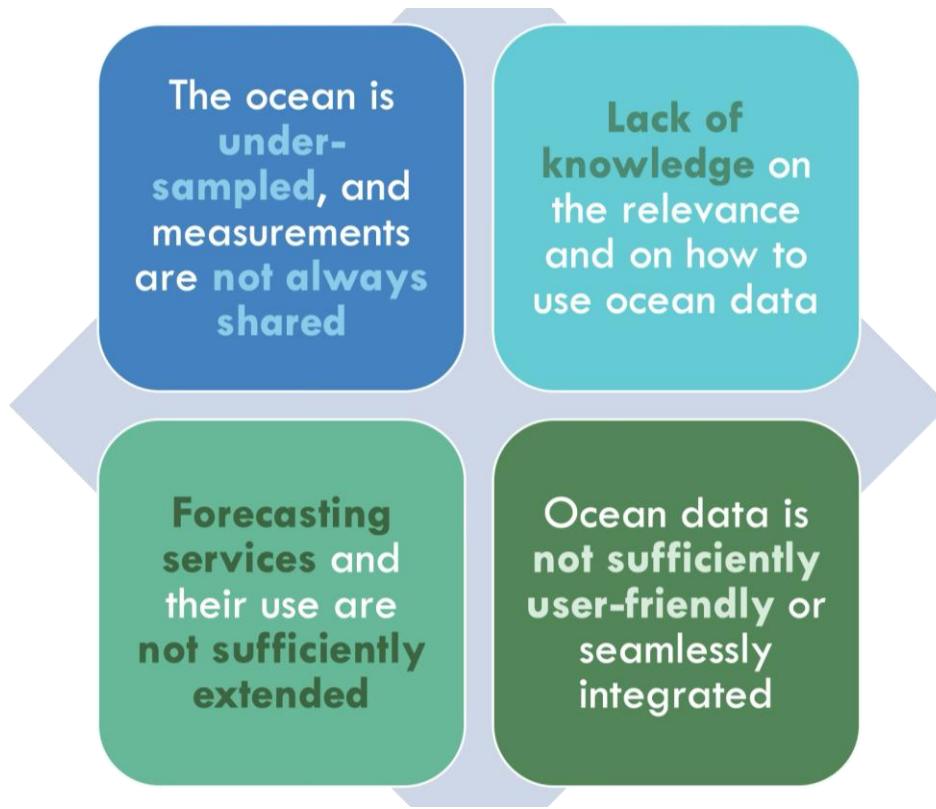
- Validation
- Raising awareness and educating



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What are the difficulties?



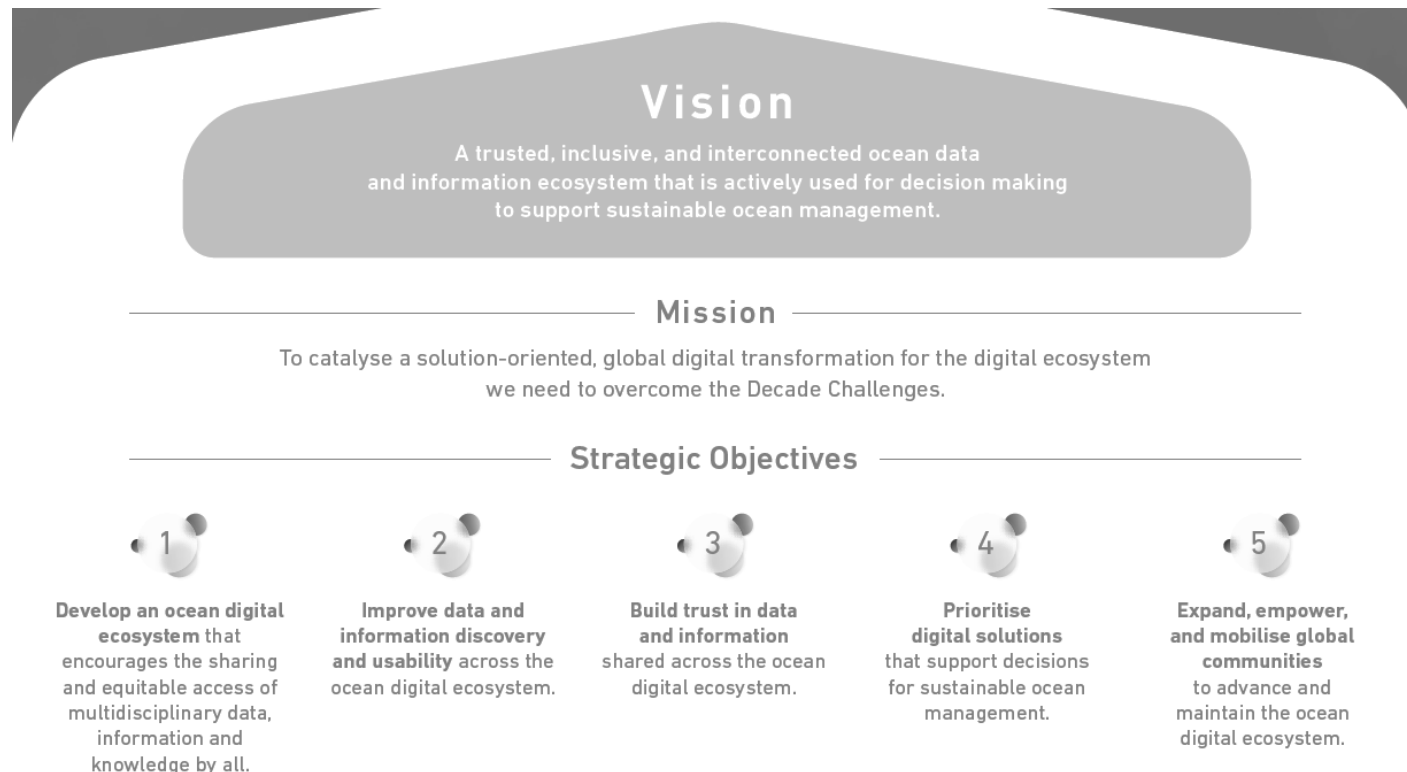
- Maximise the local value and efficiency of ocean data collection by making global ocean data more readily available enabling new data products and analytics.
- Socio-technological infrastructure to increase access to ocean data



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Vision



Enabled by

- Policy & regulatory frameworks;
- Innovation;
- Resourcing;
- Partnerships

Tools to enable delivery:

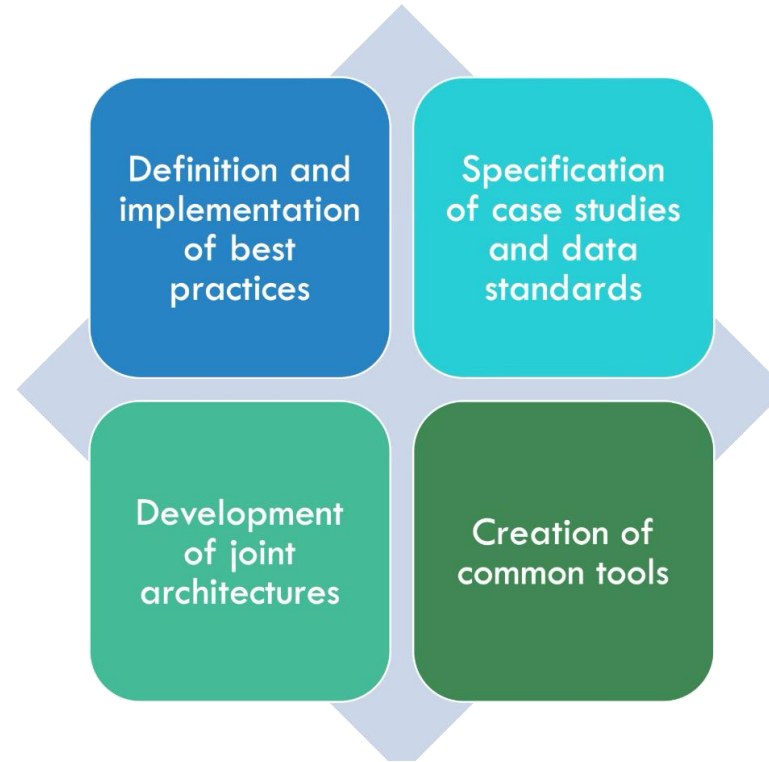
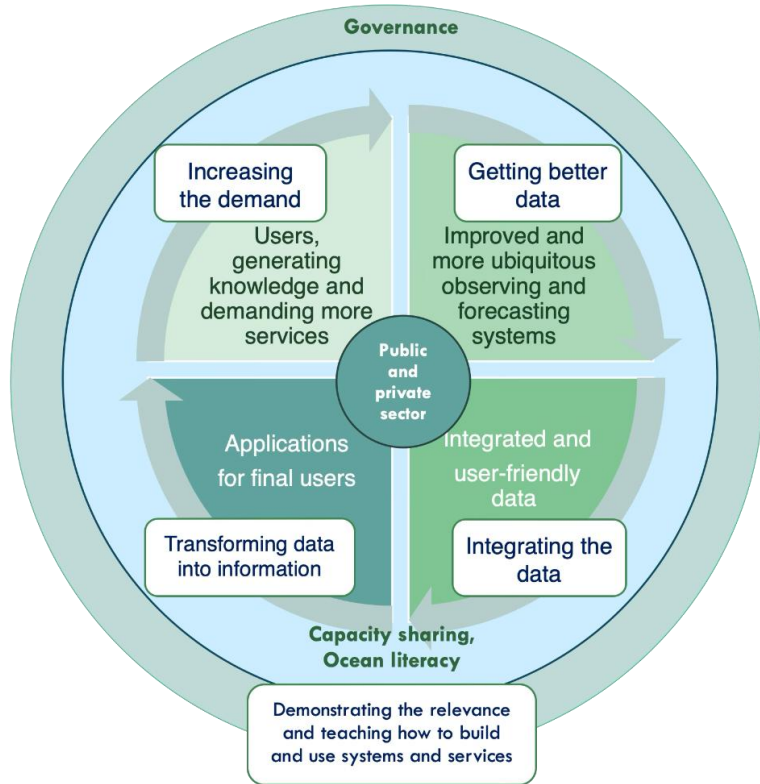
- Data Discovery & Access Service;
- Ocean Forecasting Structure;
- Digital Atlas of the Ocean;
- Marine Knowledge Exchange Mechanism;
- Capacity Development and Training



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How we will get there



- Beyond 'traditional' ocean observing systems;
- Common global approaches - backed by inspiring story telling;
- Lowering technical barrier to entry;
- Shared frameworks throughout the value chain



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Successes to date...



- Connections with BlueTech and private sector;
- Published guidelines and architecture;
- Tool development;
- Community engagement, connection and growth;
- Digital Atlas concept defined



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... and next steps



- Co-develop standards for ocean forecast, citizen science & socio-economic data;
- Promote good practices around planning for and attribution of data;
- Develop flagship data products for each Decade challenge;
- Make better use of existing global data systems;
- Implement observing, data and forecasting approaches at scale;
- Digital Atlas roadmap and implementation

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Join us in building the Digital Ecosystem



unesco
Intergovernmental
Oceanographic
Commission

2021 United Nations Decade
2030 of Ocean Science
for Sustainable Development

Building the Ocean Decade's Digital Ecosystem

A coordinated global strategy for ocean observing, data sharing, and forecasting

Understanding the ocean data challenge

The health of the ocean is integral to the well-being of the planet, influencing climate regulation, oxygen production, and the livelihoods of billions. Ocean data is the fundamental building block to drive critically important research and inform sustainable ocean governance and policies, yet:

- The ocean is under-observed, especially in developing regions.
- Data from observations and forecasts are often fragmented and hard to access.
- Many communities lack knowledge and capacity to discover and use ocean data effectively.

A well-connected digital data ecosystem can enable Sustainable Development Goal 14 on 'Life Below Water' by providing real-time, interoperable ocean information that supports evidence-based policies, sustainable marine resource management, and effective conservation efforts.



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