



# OceanPrediction DCC

Connecting the world around ocean forecasting

OceanPrediction DCC assets at the service of Foresea.



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Mercator Ocean International



# Update on OceanPrediction DCC activities: Index

- Update on OceanPrediction DCC activities
  - Update on Community building activities
  - Capacity development and Ocean literacy
  - Update on Technical component activities
- Potential action lines for collaboration: the Eightfold path
- Conclusions





# OceanPrediction DCC in the framework of the decade

## Governance and coordination framework

Decade  
coordination  
Unit

OceanPrediction  
DCC an other  
DCCs and DCOs

Direction

Collaboration, Monitoring  
and Coordination



## Programmes:

*ForeSea*  
*DITTO*  
*GEMS Ocean*  
*OARS*  
*N-SLCT*  
*Ocean of solutions*  
*OBPS*  
*Coastpredict*  
*Ocean observing co-design*  
*... many others*

Development

## 2020: THE OCEAN FORECAST WE HAVE



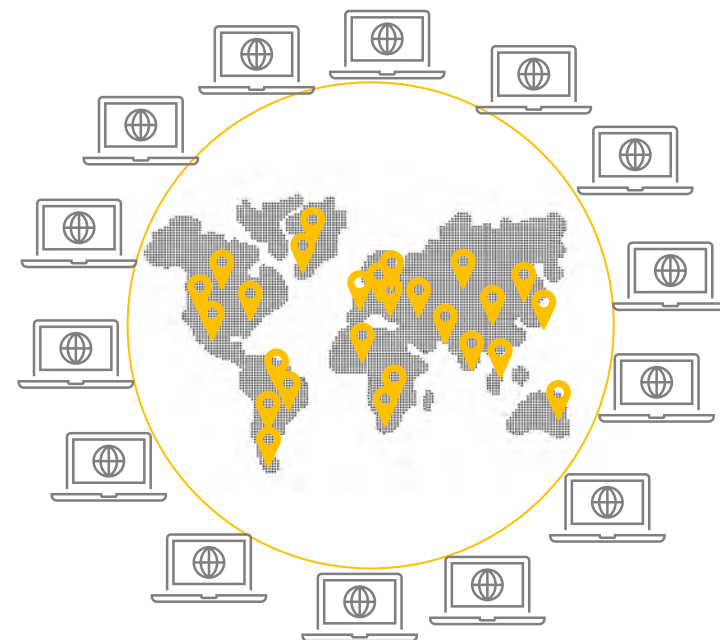
- Useful but partially disconnected services
- Poor presence in developing countries

## OceanPrediction DCC VESSEL

**Captain:** UN Ocean Decade  
**Chief engineer:** Decade actions and DTO  
**Crew:** OceanPrediction DCC community  
**Navigator:** OceanPrediction DCC



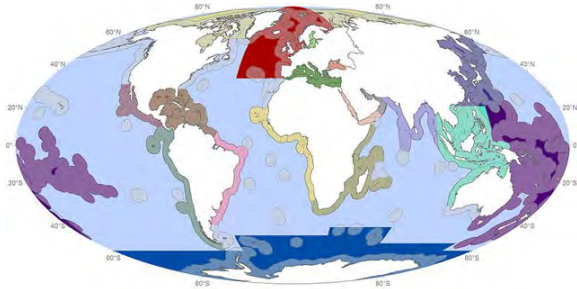
## 2030: THE OCEAN FORECAST WE WANT



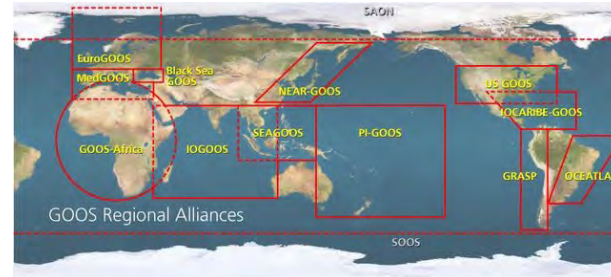
- Connected community and services
- Many robust systems worldwide

## Oceanprediction DCC regional teams: Promoting the implementation and use of ocean forecasting systems worldwide

UNEP regional seas



GOOS regional alliances



- Region 1: West Pacific and MSEA
- Region 2: Indian seas
- Region 3: African seas
- Region 4: Mediterranean and Black Sea
- Region 5: North-East Atlantic
- Region 6: South and central America
- Region 7: North America
- Region 8: Arctic
- Region 9: Antarctic

### “Boots on the ground” work:

- Identify and attract a wide community: scientist, users, private sector, NGOs, etc...
- Support decade actions related to ocean forecasting
- Identify gaps and ways forward
- Capacity building
- Advocate for implementation of Best Practices, Standards and Tools
- ...



# Organizing the Regional teams

Situation today: 1785 persons registered in Kick-off

	West Pacific	India	Africa	Med Sea	NE Atl.	S.-C. America	N. America	Arctic	Antarctic
Chair assigned									
Contrib. OFCT							*		*
ToR updated									
Kick off-meeting						*			
Steering ready			*	*	*		*		

\* In progress

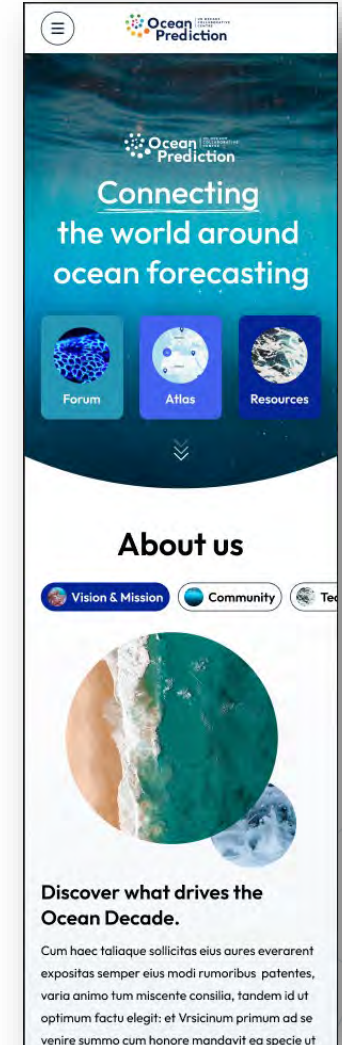
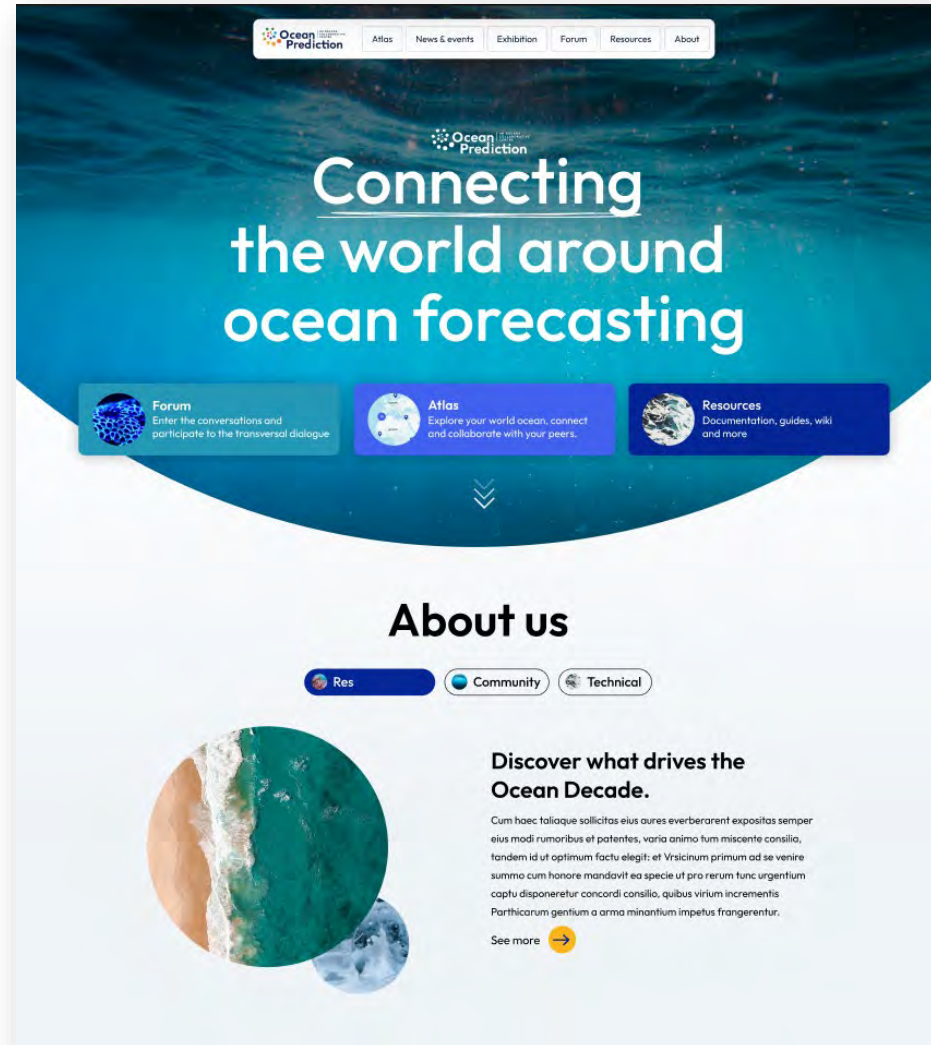




# One main focal point

## OceanPrediction DCC page: Home page

- To be officially launched before the end of the year
- Several tools:
  - Atlas
  - Forum
  - News
  - Resources
- Participation of the community vital





# Who is who?

## An Atlas to identify our community

- An online atlas to locate:
  - OOFS
  - Individuals
  - Institutions
  - Services
- A source of information for our activities and a way to find partners
- An interface will be available to allow community to add and modify the information

The screenshot displays the 'Model information' form on the Ocean Prediction Atlas website. The form is part of a four-step process: STEP 1 (Contact information), STEP 2 (Main description), STEP 3 (Atmospheric forcing), and STEP 4 (Model information). The current step, STEP 4, includes a 'Back to map' button and a search bar. The form asks for the following information:

- Numerical model:** A dropdown menu showing 'FVCOM (Finite Volume Community Ocean Model)'.
- For which of those essential ocean variables (EOV) your model provides quantitative estimates?:** A dropdown menu showing 'West Pacific and East Asian seas'.
- Is your domain global?:** Radio buttons for 'Yes' and 'No', with 'No' selected.
- Geographical boundaries:** A diagram showing a square with vertices numbered 1, 2, 3, and 4. An information icon (i) is next to it, followed by placeholder text: 'Geographical boundaries explanations lorem ipsum dolor sit amet consectetur adipiscing elit lacus. Pellentesque ex arcu, fincidunt et urna of, facilisis consectetur turpis. Proin rhoncus ante nec neque sagittis fincidunt vitae id odio. Praesent porttitor sed mi non dapibus. Proin tempus pulvinar ligula.'

On the right side of the page, there is a sidebar with a 'Map' button, a 'List' button, and a list of search results including 'African Seas Basin', 'Specialist', 'Group plc', 'Specialist', 'ner & Brand...', 'rch of Ontario', and 'Specialist'. Each result has social media icons for Twitter and LinkedIn.

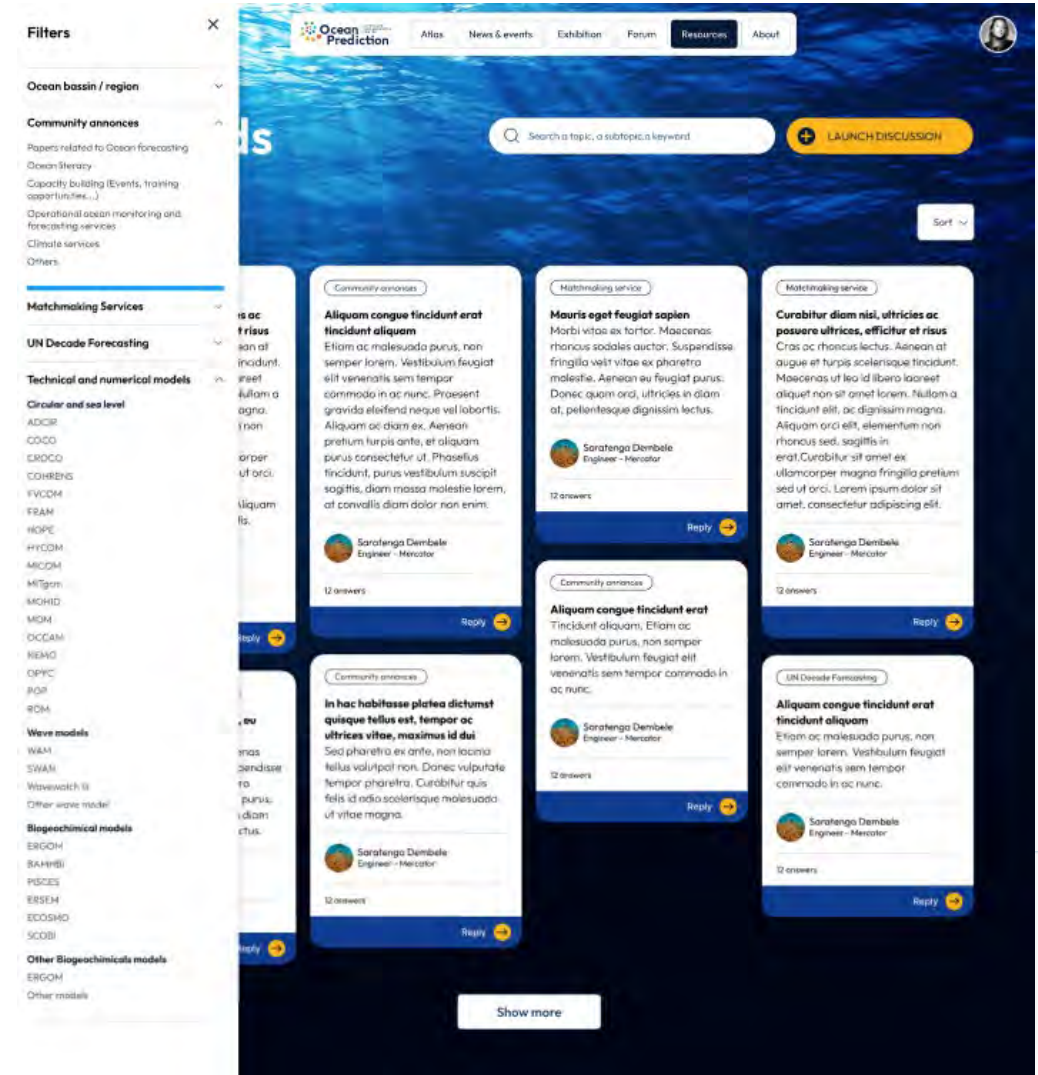




# The OceanPrediction Forum

## Community focal point

- A focal point/forum for communication and matchmaking to be operated in close cooperation with Foresea/OceanPredict:
  - Community announces
  - Contact a partner, Matchmaking service
  - Ocean forecasting Activities related to the decade programmes
  - Regional Forums
  - Technical forum for specialized announces and doubt solving
- Administration of relevant sections could be done by Regional Team.

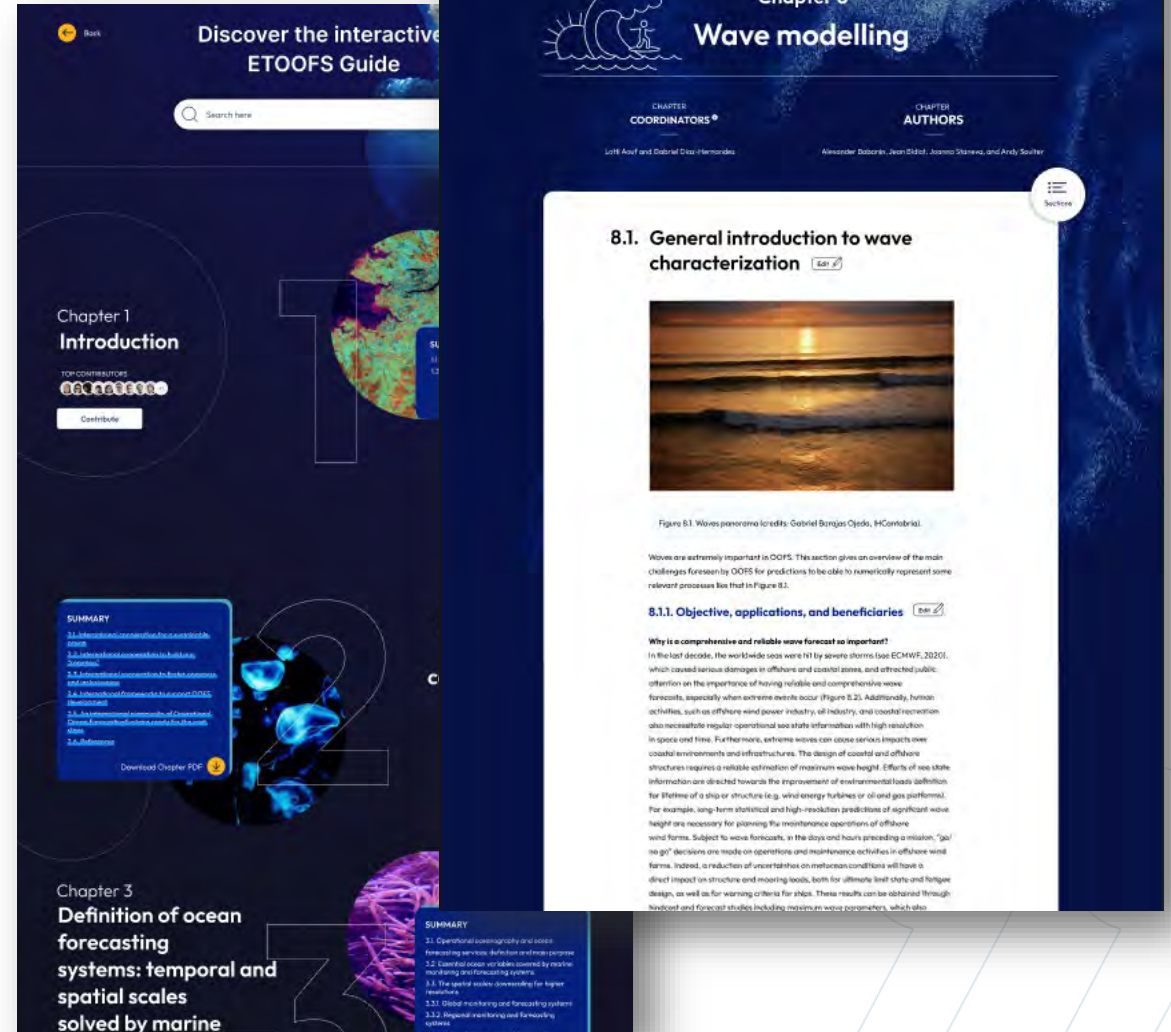




# The ETOOFS wiki

## Resources focal point

- ETOOFS guide (created with relevant contribution from COS-TT members) converted to wiki site:
  - A new consolidated version of the guide every 3-4 years
  - New section on Biological modeling (higher trophic) and Tsunami
  - Improvements needed in several sections, like rivers contribution



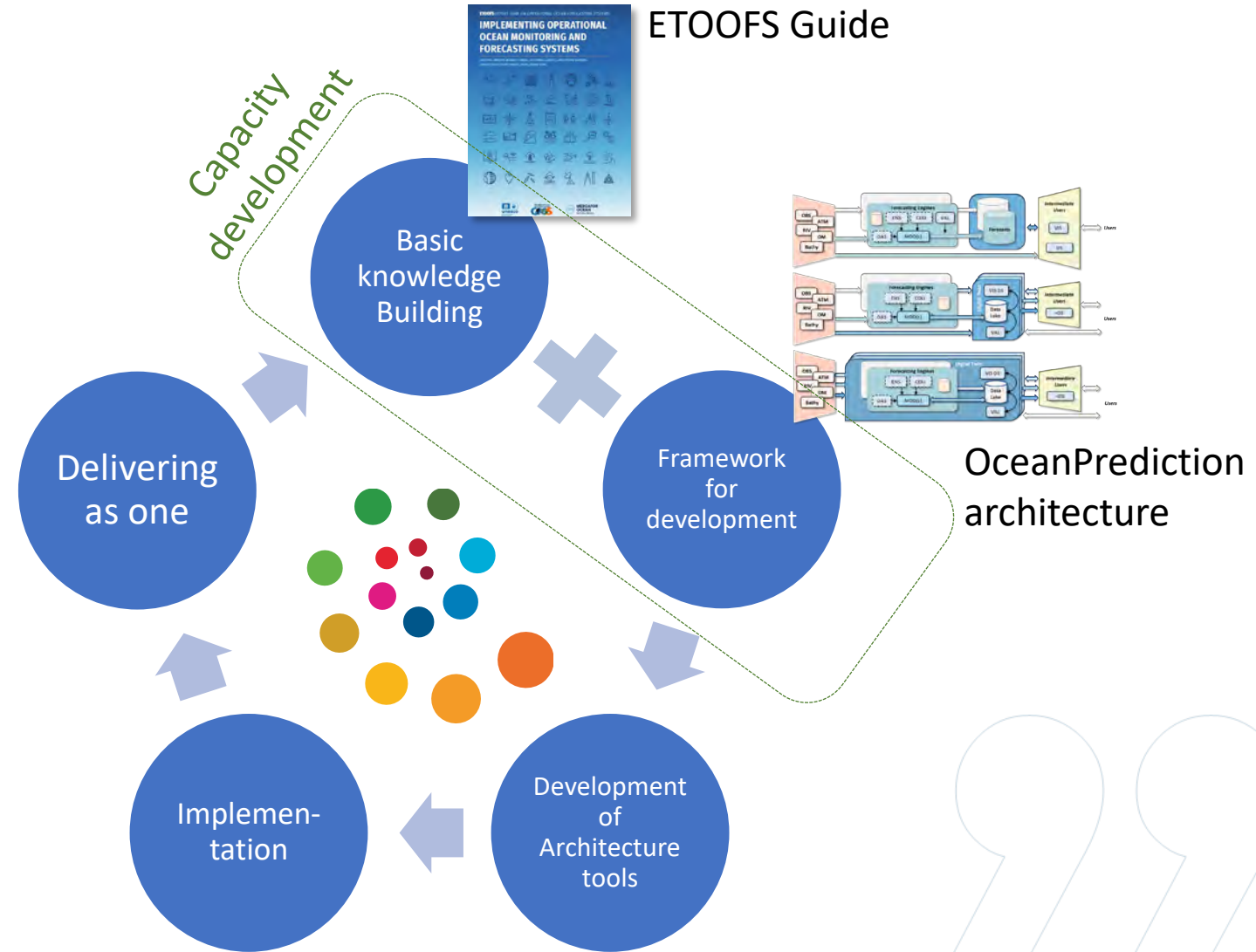


# Building our community: ongoing efforts

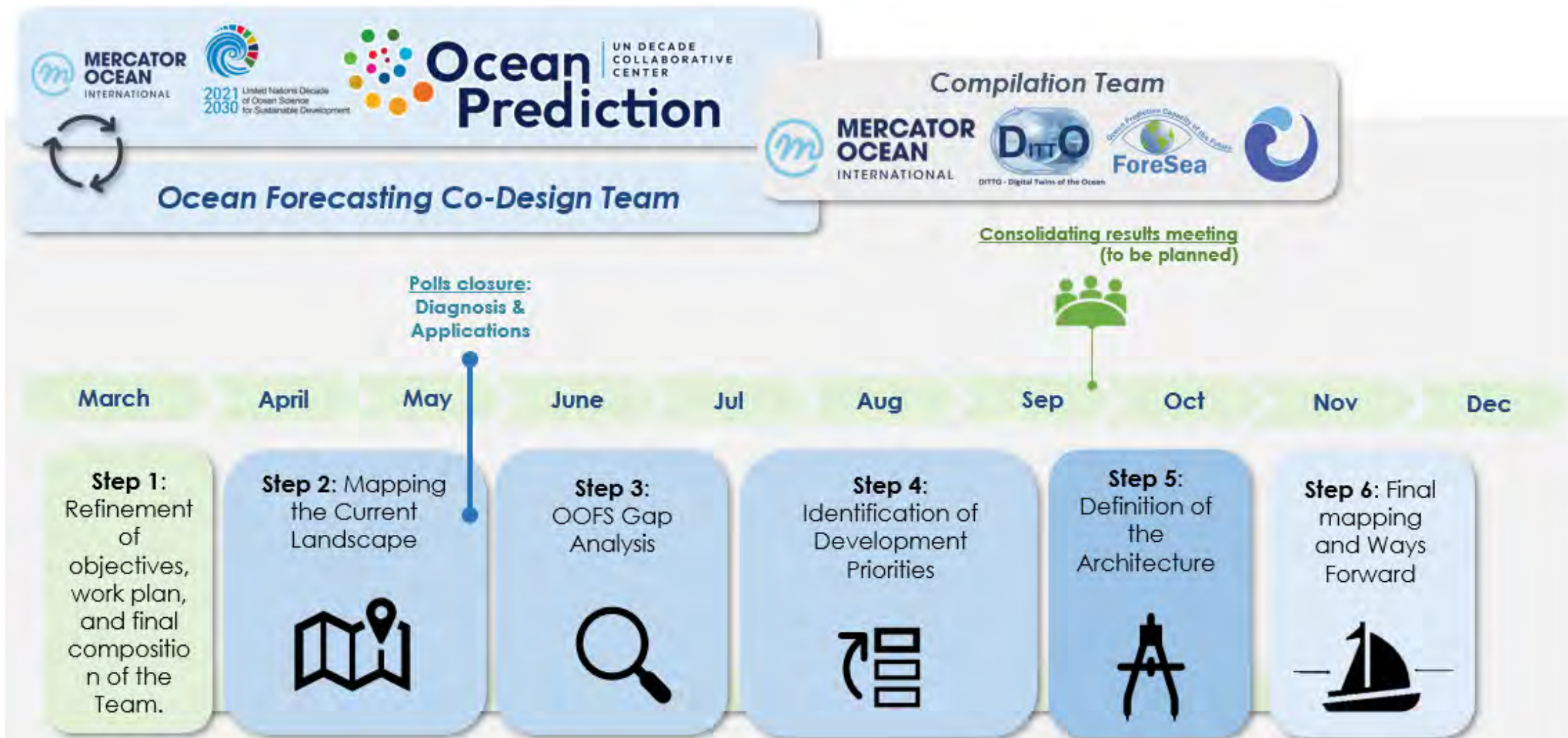
## Capacity development



- Fully integrated towards delivering as one
- ETOOFS guide and OFCT major assets





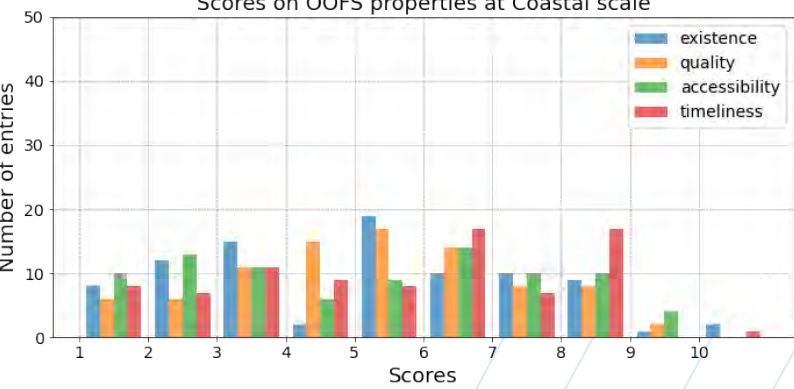
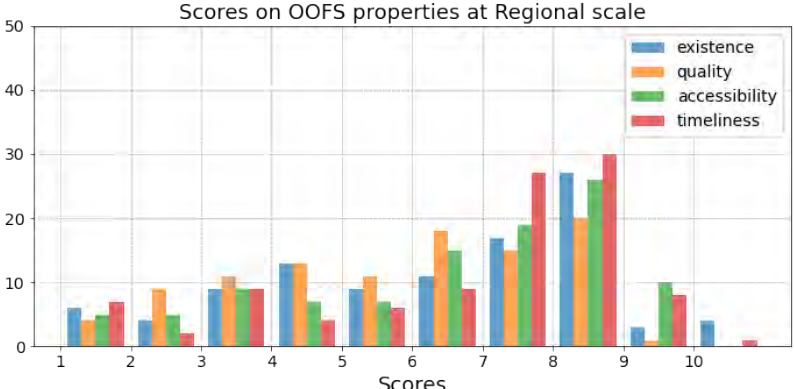
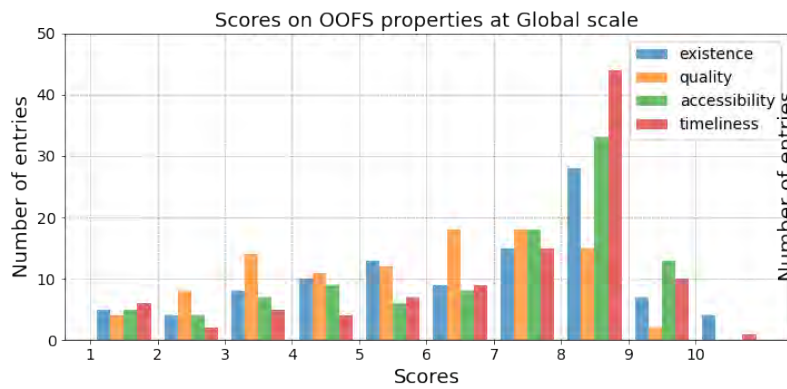
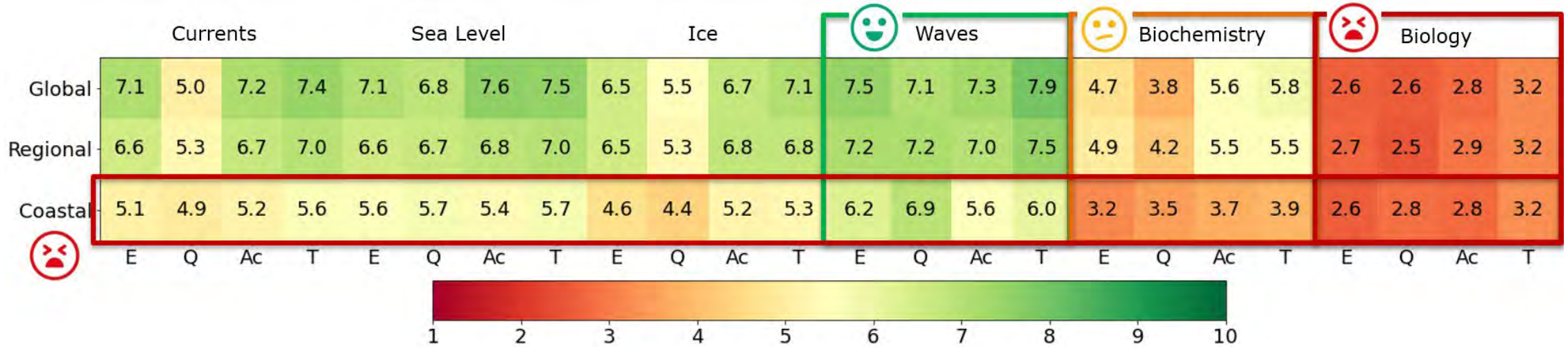




# Experts Poll “Diagnosis

Rate our ability to provide a solution:

E	Existence
Q	Quality
AC	Accessibility
T	Timeliness

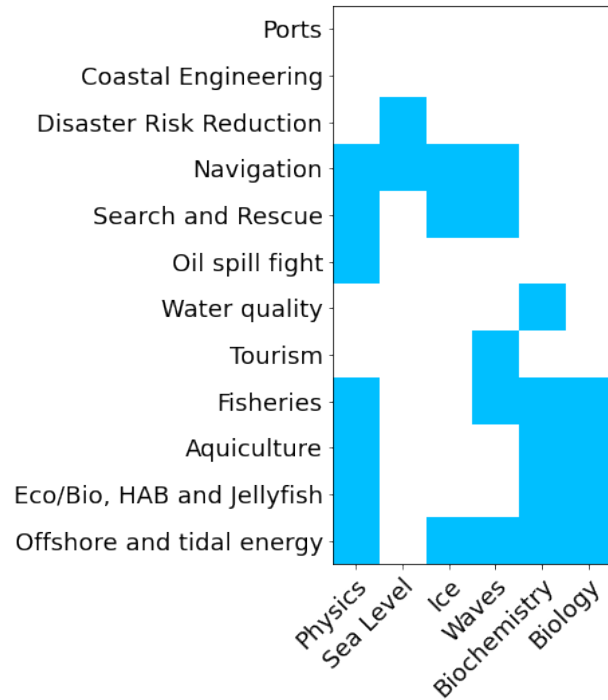




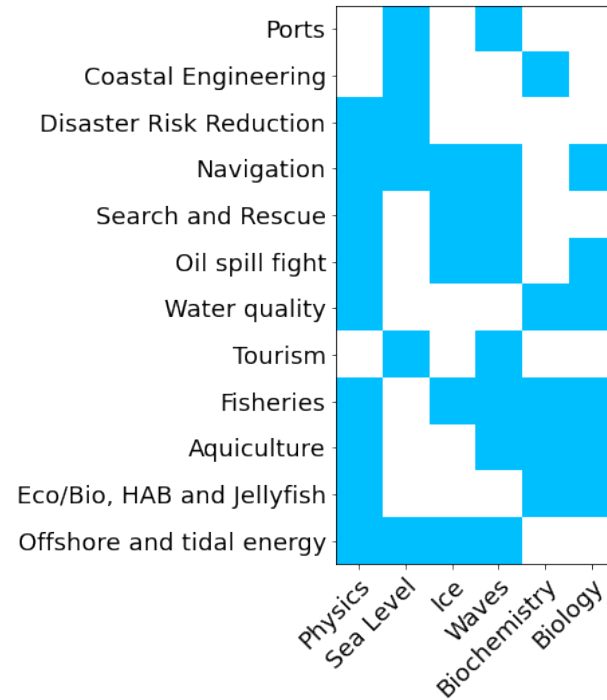
# Where are our systems being used?

The view of the experts:

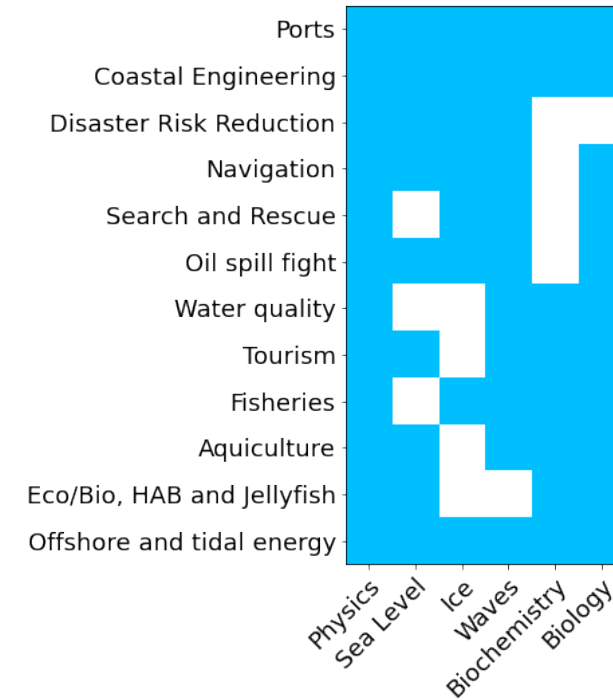
Answers from Experts: Global scale



Answers from Experts: Regional scale



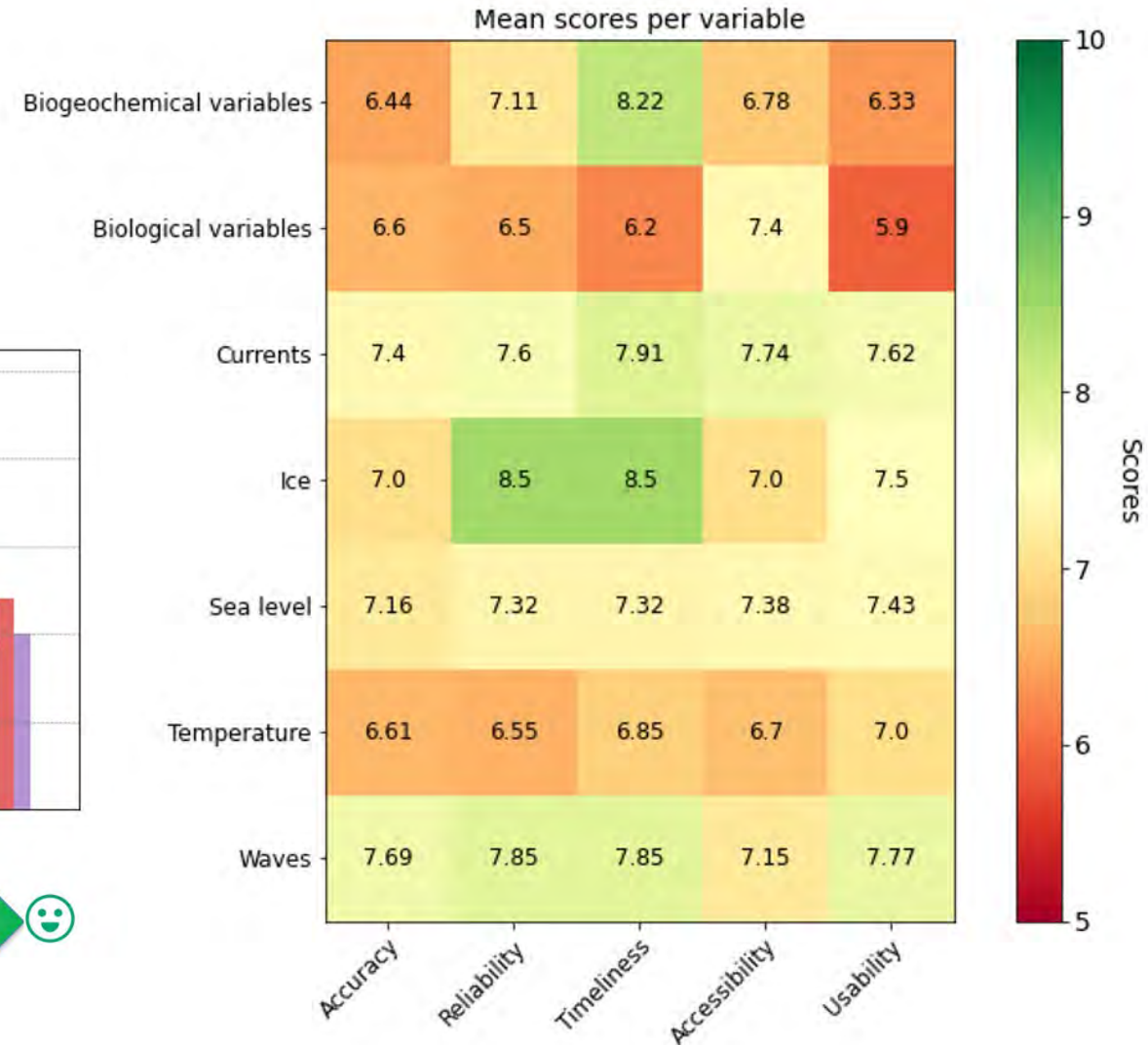
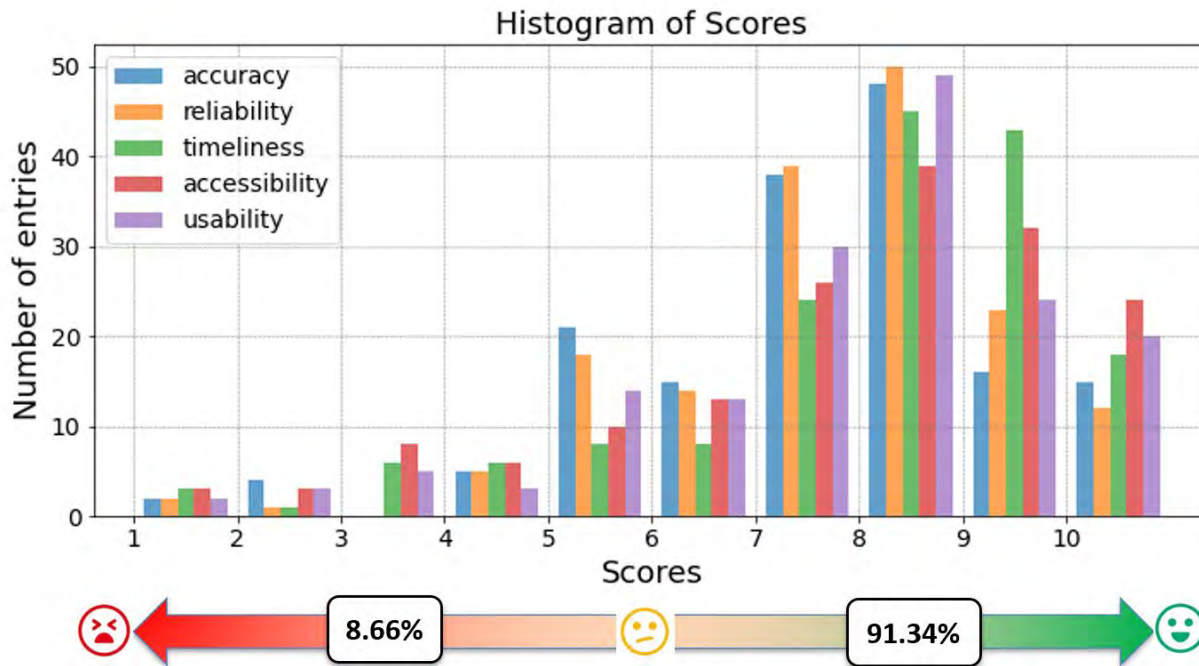
Answers from Experts: Coastal scale



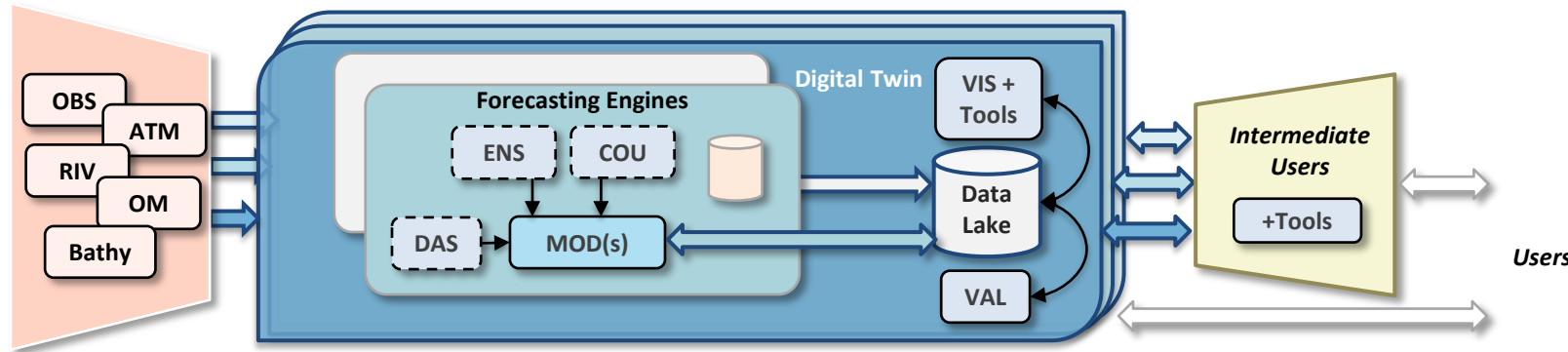
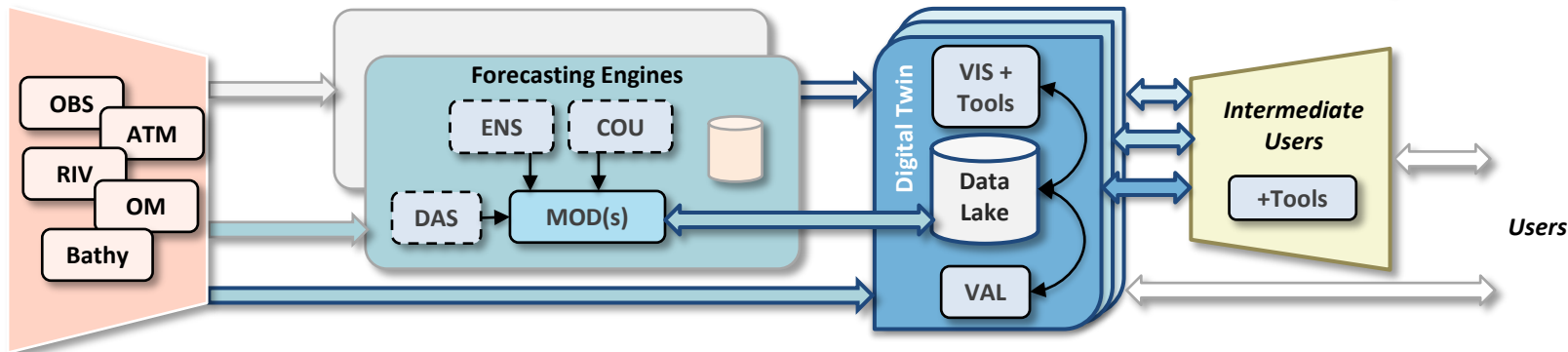
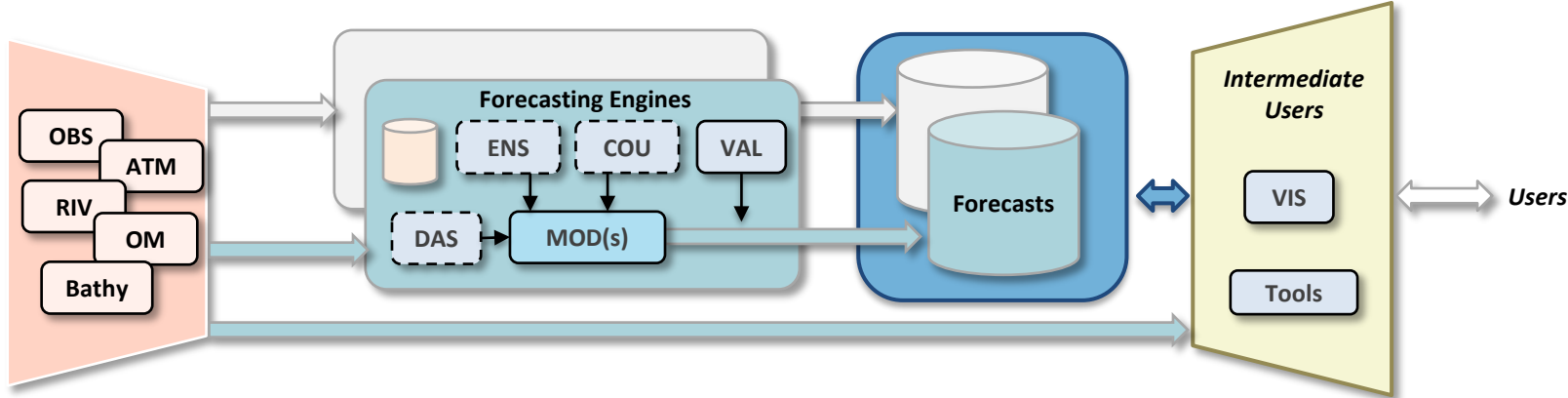


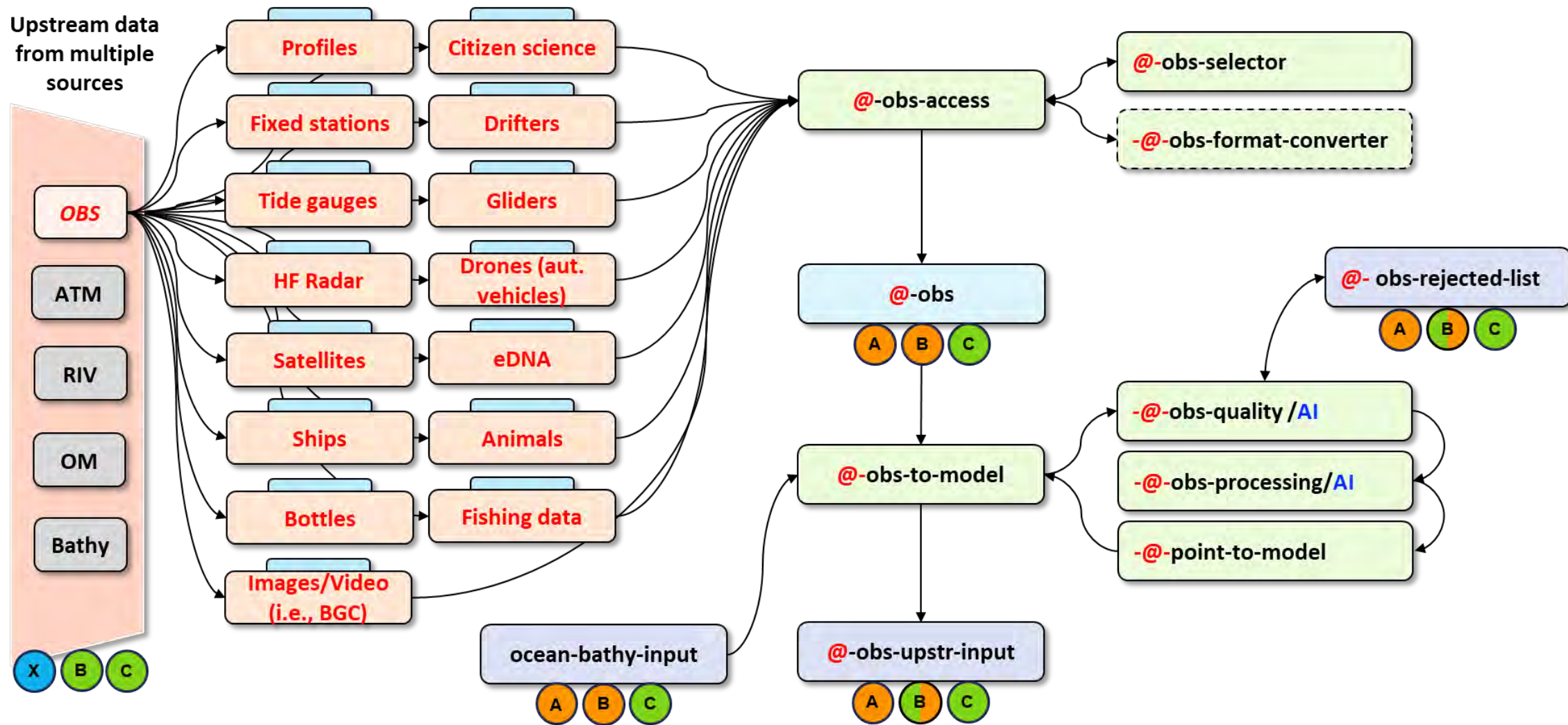
# Users Poll “Diagnosis”: average scores

Rate our ability to provide a solution:







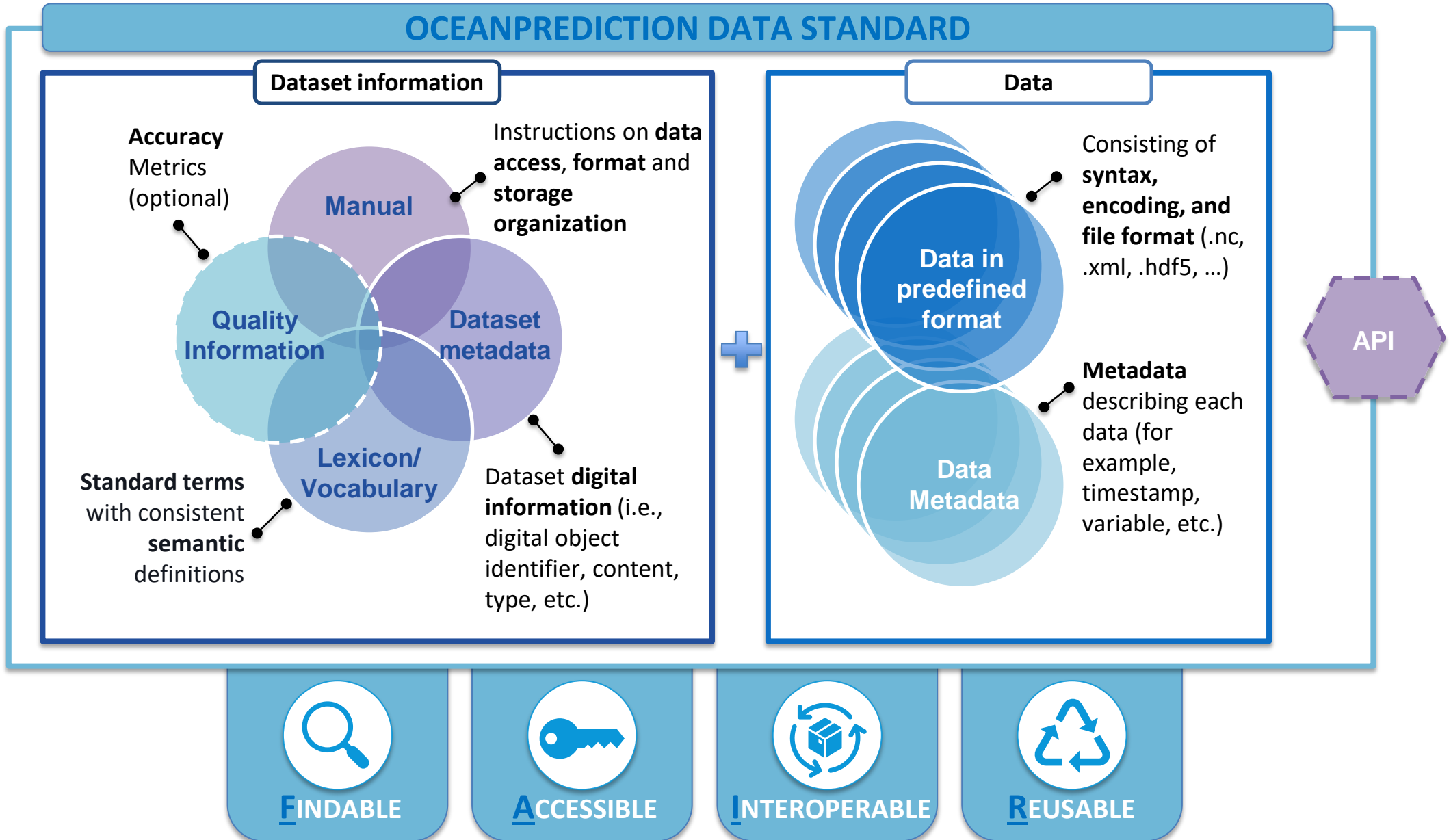


@ stands for all the different types of observations (depending on platform and variable)

DATA STANDARDS

WF DATA STANDARDS

TOOLS



## Four independent digits to describe a system:

- First number for degree of operability
- Second, to technical solution
- Third for degree of validation
- Fourth to output dissemination

## Benefits of ORL:

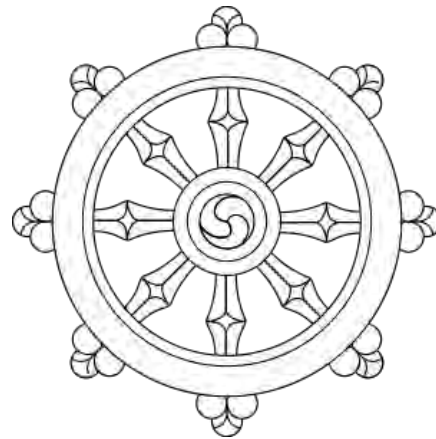
- Promote the adoption of tools, standards and Best Practices
- A mechanism to endorse services to join common frameworks
- A way to guide and stimulate services development



1. Development of the **foundations** for a global ocean information delivery system
2. **Integration of ocean forecasting**/prediction efforts with other affiliated efforts and other components of the operational oceanography value chain.
3. Development of **improved assessments and prediction** of the ocean system
4. Implementation of coordinated **capacity building**
5. Improvement of **ocean modeling capacity** (numerical algorithms, parameterizations, resolution, etc.)

**How can OceanPrediction DCC contribute to these priorities?**

Eightfold  
Path



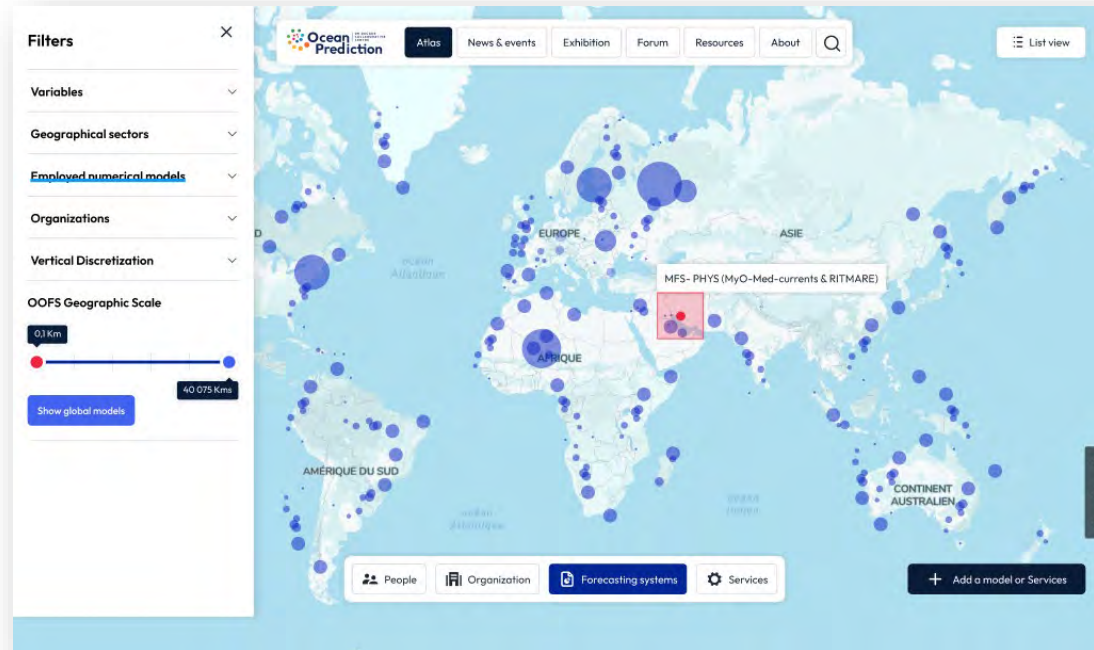
8 action lines to leverage  
OceanPrediction DCC/Foresea

Foresea action: Development of the **foundations** for a global ocean information delivery system

1.

OceanPrediction DCC contribution: By providing a set of tools for coordination and community building at the OceanPrediction DCC web page:

- Atlas
- Forum
- News
- Resources

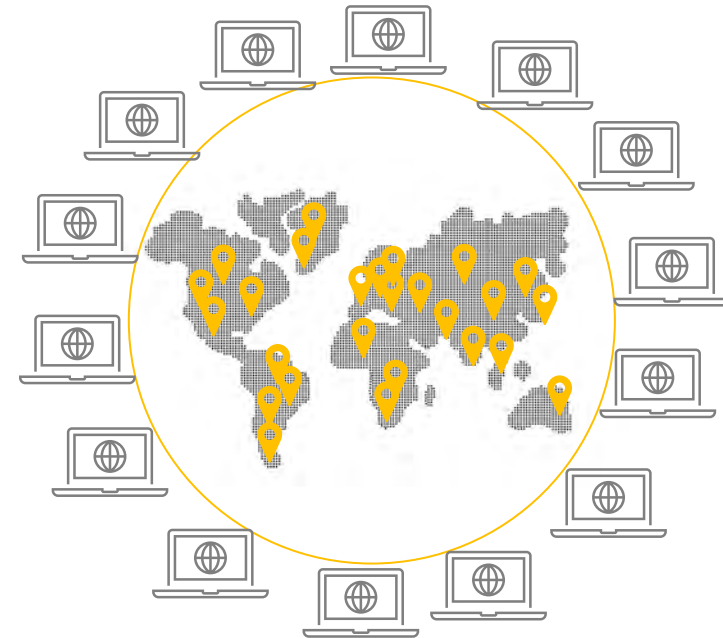


Foresea action: Development of the **foundations** for a global ocean information delivery system

## 2.

OceanPrediction DCC contribution: By providing a global collaborative structure based on Regional teams at the service of the Decade objectives:

- Based on regional Teams
- Steering teams
- Ready to leverage with Foresea

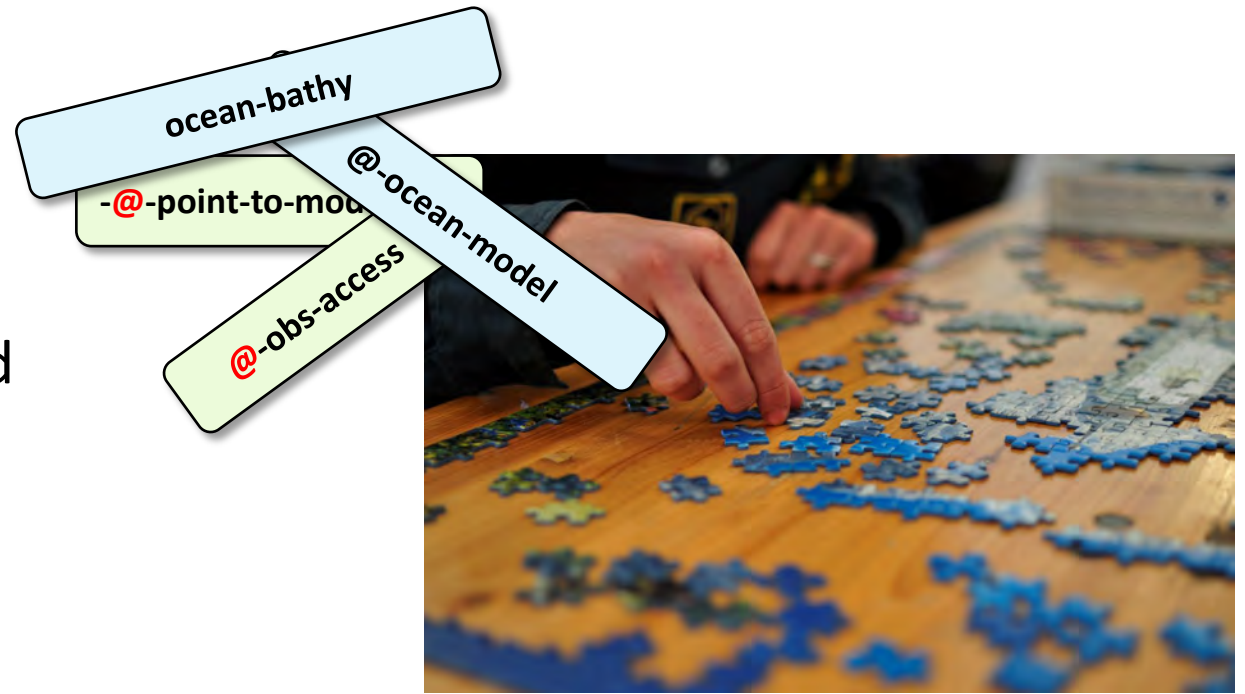


Foresea action: **Integration of ocean forecasting**/prediction efforts.

3.

OceanPrediction DCC contribution: By providing a shared architecture that will serve as a framework for integration:

- Definition and development of standards
- Identification and development of shared tools
- Integration in DTO





Foresea action: **Integration of ocean forecasting**/prediction efforts.

## 4.

OceanPrediction DCC contribution: By providing a framework to collaborate with other relevant Decade Programmes primary endorsed to OceanPrediction DCC:

- Aligning programmes to achieve relevant Decade objectives
- Promoting collaboration

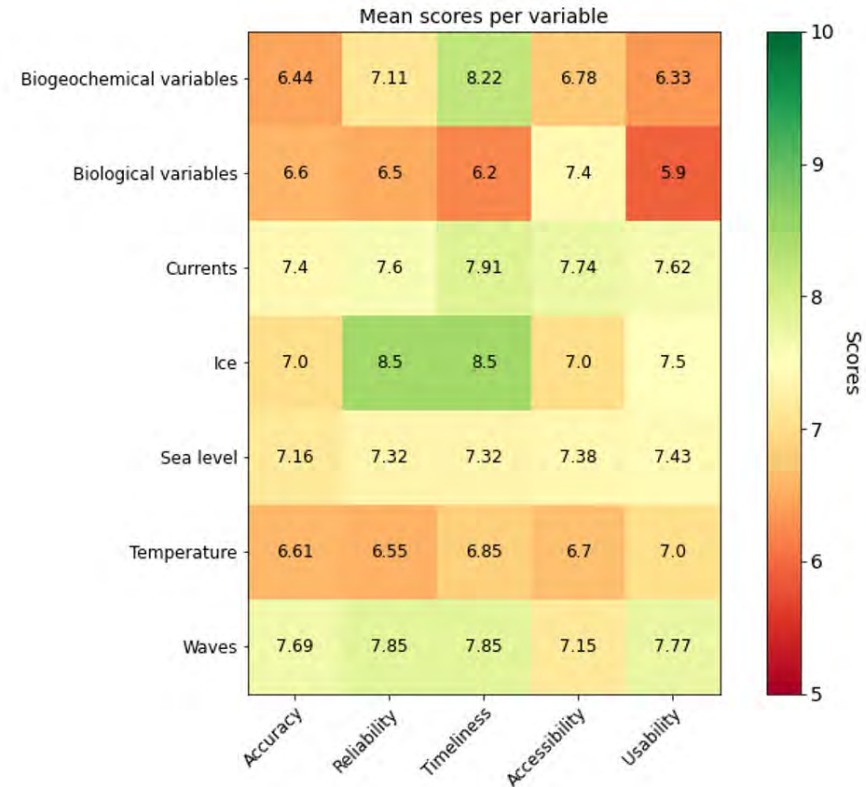


Foresea action: Development of **improved assessments and prediction** of the ocean system

OceanPrediction DCC contribution: By initiating, via the OFCT, a technical work to:

5.

- Map the status of advance ocean forecasting worldwide
- Identify Gaps
- Identify ways forward



## Foresea action: Implementation of coordinated **capacity building**

6.

OceanPrediction DCC contribution: By updating ETOOFS guide via a wikis site on the web page

- An entry point to share new advances in ocean forecasting (AI, data assimilation...)

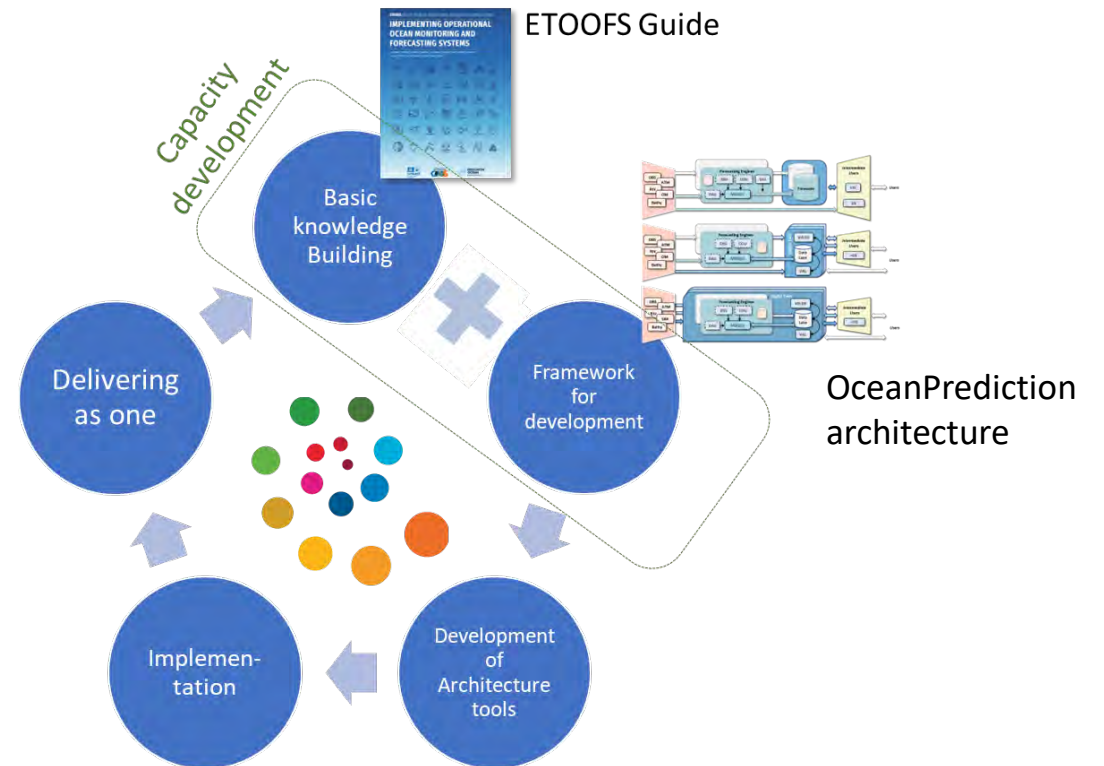


Foresea action: Implementation of coordinated **capacity building**

7.

OceanPrediction DCC contribution: By providing a framework for capacity development

- Capacity development oriented to tangible results
- Based on ETOOFS guide and on the Architecture



## Foresea action: Improvement of **ocean modeling capacity**

OceanPrediction DCC contribution: By providing a shared ORL index

8.

- Promote adoption of tools, standards and best practices
- Stimulate improvement
- Promote integration of services





# CONCLUSIONS

- First tangible results from OceanPrediction DCC are starting to be available: Regional Teams structure, web page, architecture, ORL, ...
- These results are a relevant assets for Foresea development. Also, are an important element for integration with other decade actions.
- Next step must be to convert this Eightfold path in specific short-term and long-term actions to be developed in accordance with funding possibilities.
- This planning will start with the present meeting...



*Connecting the world  
around  
Ocean Prediction*