Photo Credit: Inkfish

Challenge 7: Expand the Global Ocean Observing System

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Why Ocean Observing?

Ocean observations are the foundation on which other Decade challenges depend, underpinning the UN Ocean Decade vision

- Mitigation and adaptation responses to climate change
- Early warning of hazards, weather forecasting, marine operations and safety
- Understanding status and trends in ocean conditions, biodiversity and ecosystems
- Inform decision-making, sustainable practices, resilience and adaptation for coastal communities
- Value of ocean observing to blue economy

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Ocean Observing is critical for a Sustainable Blue Economy

Background

The Global Ocean Observing System

Climate
Weather and hazard warnings
Ocean health

OceanObs Conferences
‘99, ‘09, ‘19

Global fleet of autonomous floats
Framework for Ocean Observing
Collection of community White Papers

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DCO - Ocean Observing
Programmes
Projects

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Strategic ambition

Develop	Deliver	Guide, sustain, facilitate
Operational, co-designed, comprehensive, and resourced observing system	Priority ocean observations and information	Mitigation and adaptation responses to climate change Ocean health within a blue economy Informed decision-making + knowledge for science, business and society.

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Who uses ocean observations?

Photo Credit: Rochelle Constantine

- Governments, Intergovernmental organizations, and programs (e.g. WMO, GCOS)
- Policymakers (national / international agreements)
- Marine Networks: Science and technology
- Philanthropic, societal and indigenous communities
- Blue Economy - offshore and wind industry, shipping, ocean renewable energy industries, insurance and reinsurance industry, blue carbon industry, and the marine carbon dioxide removal (CDR) industry

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WG7: Recommendations

- Improve global observation capabilities
- Improve translation of data into information
- Technology and innovation will be a pillar
- New economic thinking is critical
- Partnerships are key
- Operational approach and cultural change
- Expanded, capable, and diversified workforce underpins success

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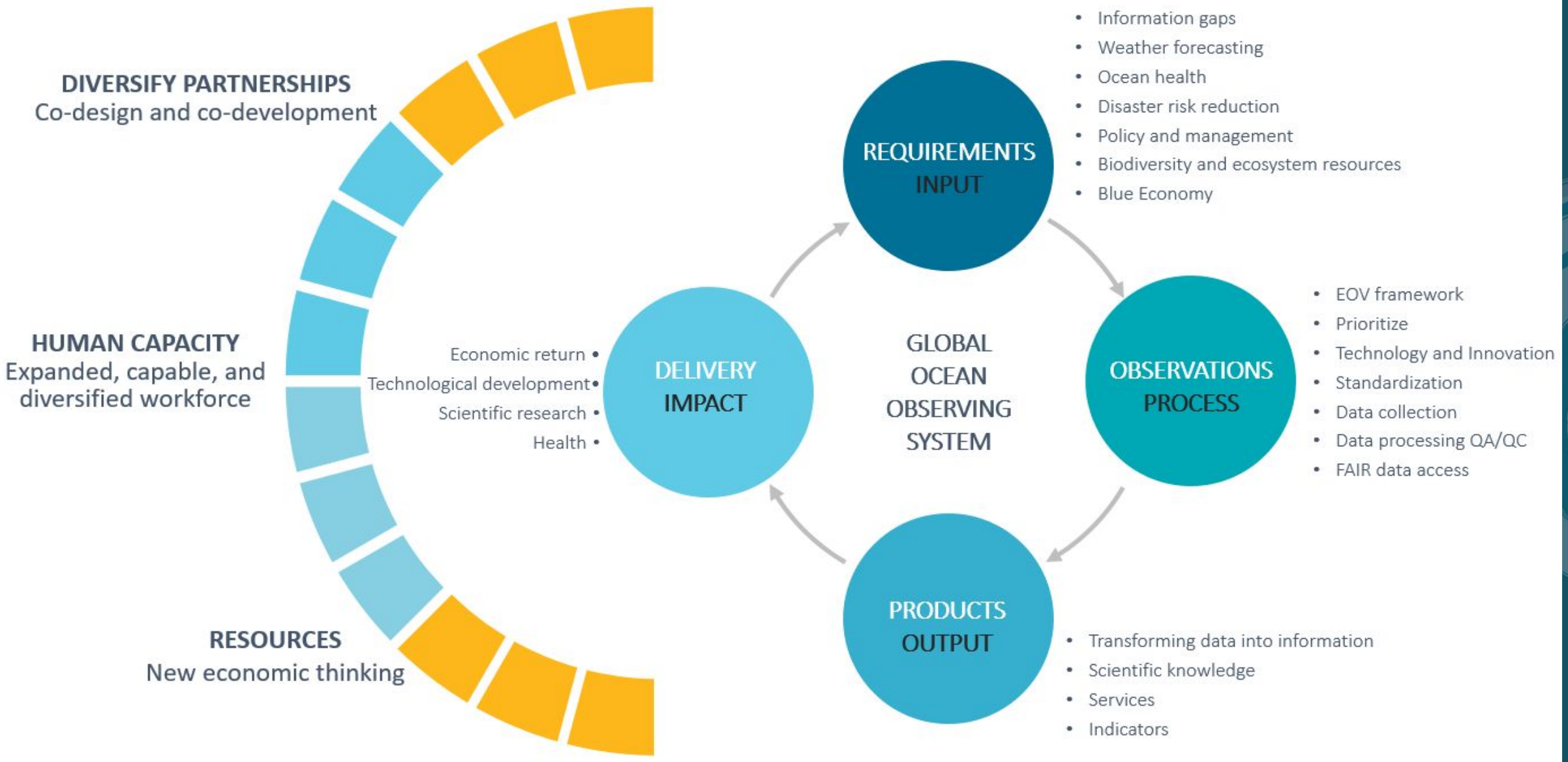
Elements of the strategic ambition

PRIORITY DATASETS	KNOWLEDGE GENERATION AND SHARING	INFRASTRUCTURE AND PROCESS REQUIREMENT	RESOURCES AND PARTNERSHIPS	CAPACITY DEVELOPMENT AND EXCHANGE NEEDS	TECHNOLOGY AND INNOVATION SOLUTIONS
Weather forecasting Vision 2030 priorities Guide mitigation and adaptation	Fit for purpose codesign Inter-sectorial dialogues Collaboration with citizens and indigenous communities	Expand current capacity Test value Data processing and modelling capacity Use of AI Strengthen GOOS and DCOs	Strengthen /develop partnerships New economic thinking Champions	Training in broad range of skills – army of people Expand current training programs / curricula Sharing of software and analytical tools Multiple languages	More automated technologies Expansion and evolution of current observing fleet Cost-effective technologies

Expanding the Global Ocean Observing System



MILESTONES

Image Credit: Census of Marine Life

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Milestone 1. Improved and expanded observing capabilities globally, specifically in developing nations and under-observed ocean regions using standards and best practices.

Milestone 2. Developed products that translate data into usable information and knowledge for a range of users. This will include integrating data, streamlined and improved online portals and visualization tools.

Milestone 3. Deployed innovative technologies, sensors and platforms that have complemented existing observing programmes and, together, have filled priority data gaps.

Milestone 4. Accelerated and diversified investment in ocean observing, infrastructure, training and capacity development with the use of economic models for ocean investment.

Milestone 5. Sustained existing partnerships and built new international partnerships across the public and private sectors which combined have shared and strengthened responsibilities for ocean observing.

Milestone 6. Increased and diversified the global ocean observing workforce so that it truly reflects all aspects of the ocean observing value chain.

Measures of success

Identified the **key gap areas** requiring observations and identified the **key partnerships, processes, and resources** needed to carry them out.

Identified the pathway to **unlock key existing but unavailable data** and making it **FAIR.**

Established and **prioritized** a new set of ocean indicators, building on the Essential Ocean Variables, that are **co-designed** with stakeholders.

Developed the **governance structure** for the **international coordination** of the observing system, **strengthening the GOOS** Management Team (including OceanOPS), unifying coordination components and data storage nodes.

Identified and initiated the **public-private sector partnerships** needed to **seek the resources** for the development and deployment of **innovative observing technologies.**

Developed **priority skills**, suitable **training programmes** and resourcing to strengthen and **expand human capacity.**

2024 — 2030

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Feedback + Your Input

Slido/links/QR code?

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