Global Ocean Observing System

unesco Intergovernmental Oceanographic Commission

WORLD METEOROLOGICAL ORGANIZATION

UN environment programme

International Science Council

GOOS - Status

Joanna Post, IOC – GOOS Director

Vision:

A **truly global** ocean observing system that delivers the essential information needed for our sustainable development, safety, wellbeing and prosperity.

The Global Ocean Observing System (GOOS)

Leading and supporting a community of international, regional and national ocean observing programmes, governments, UN agencies, research organisations and individual scientists.

GOOS Today

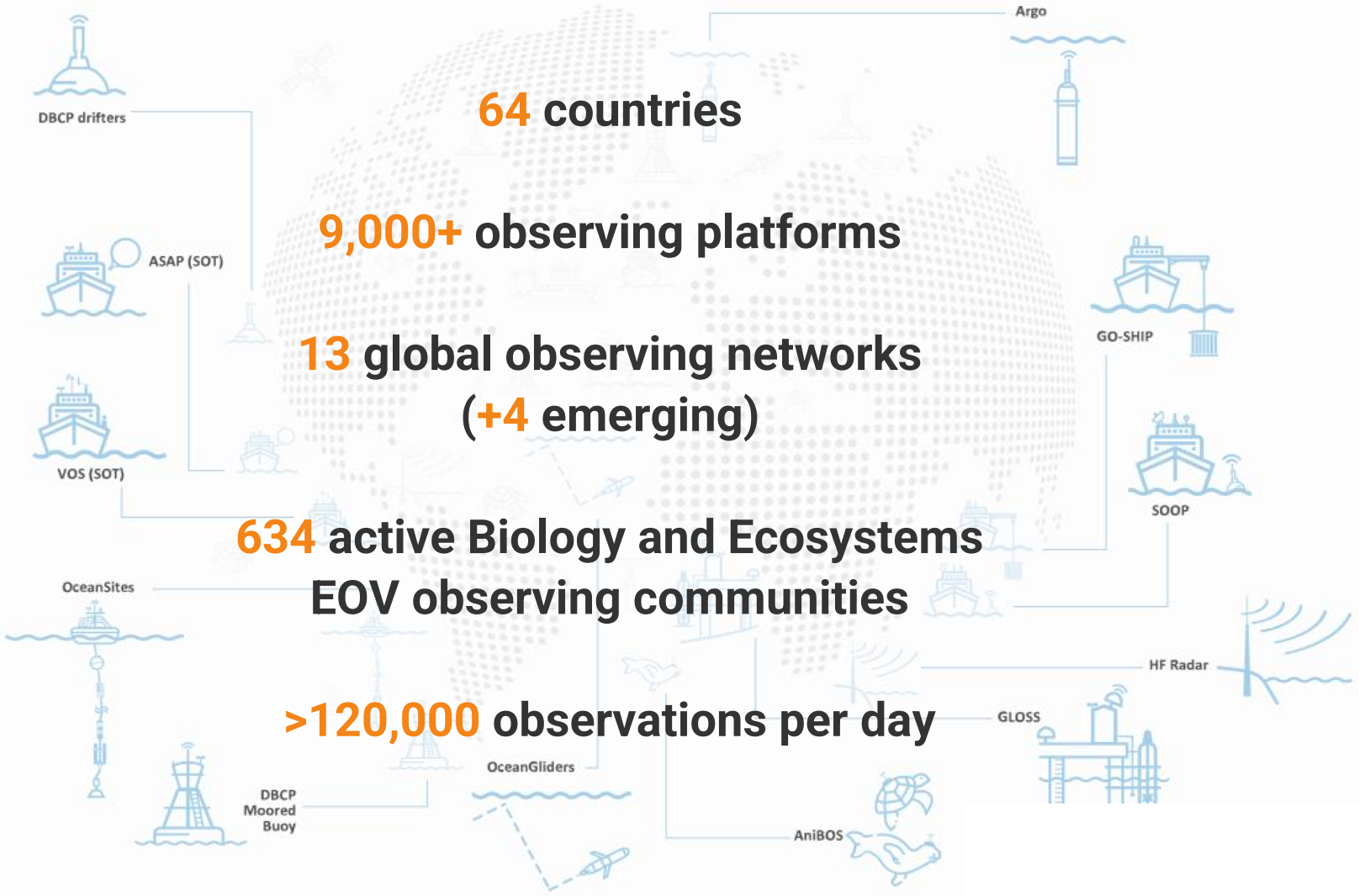
64 countries

9,000+ observing platforms

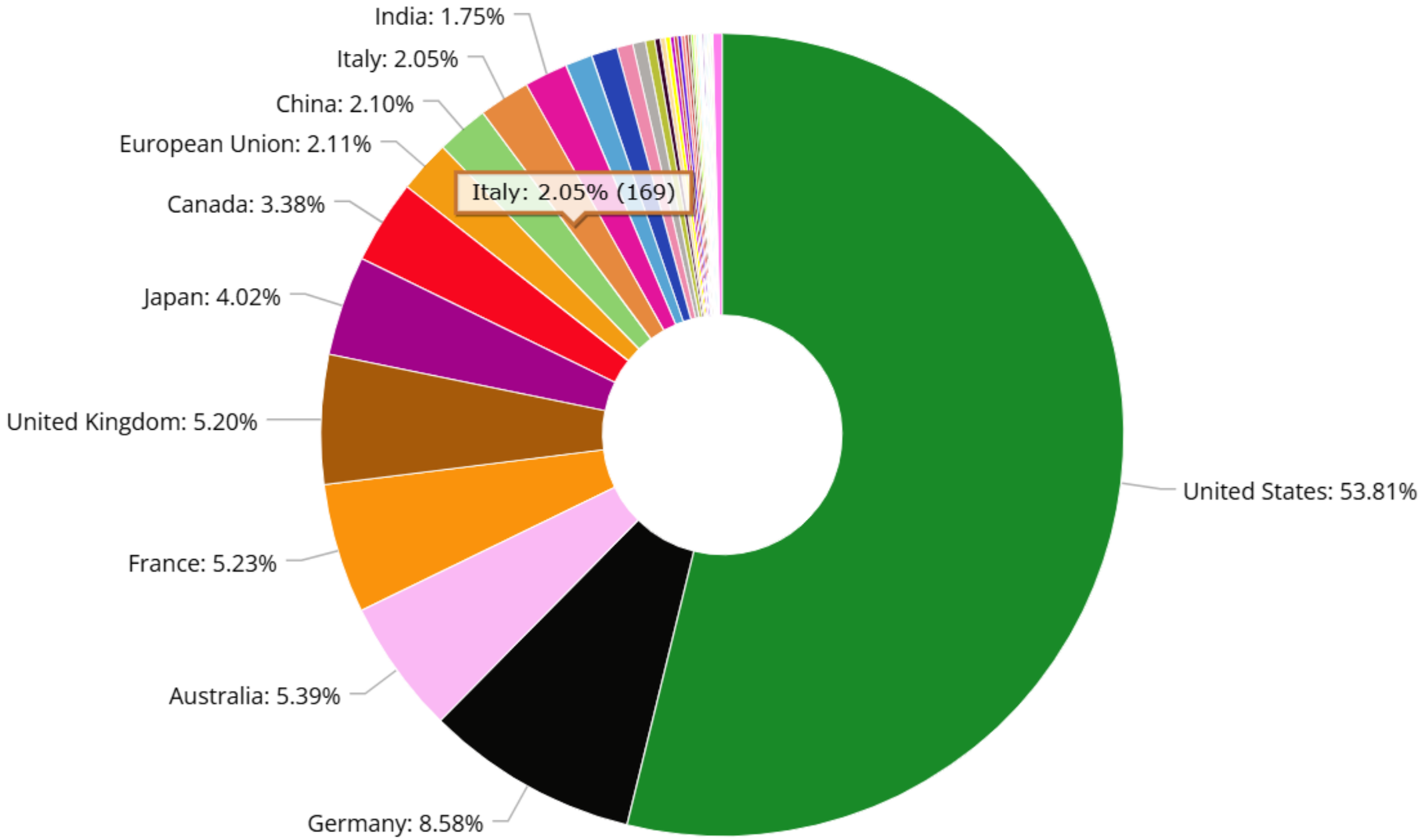
13 global observing networks
(**+4** emerging)

634 active Biology and Ecosystems
EOV observing communities

>120,000 observations per day



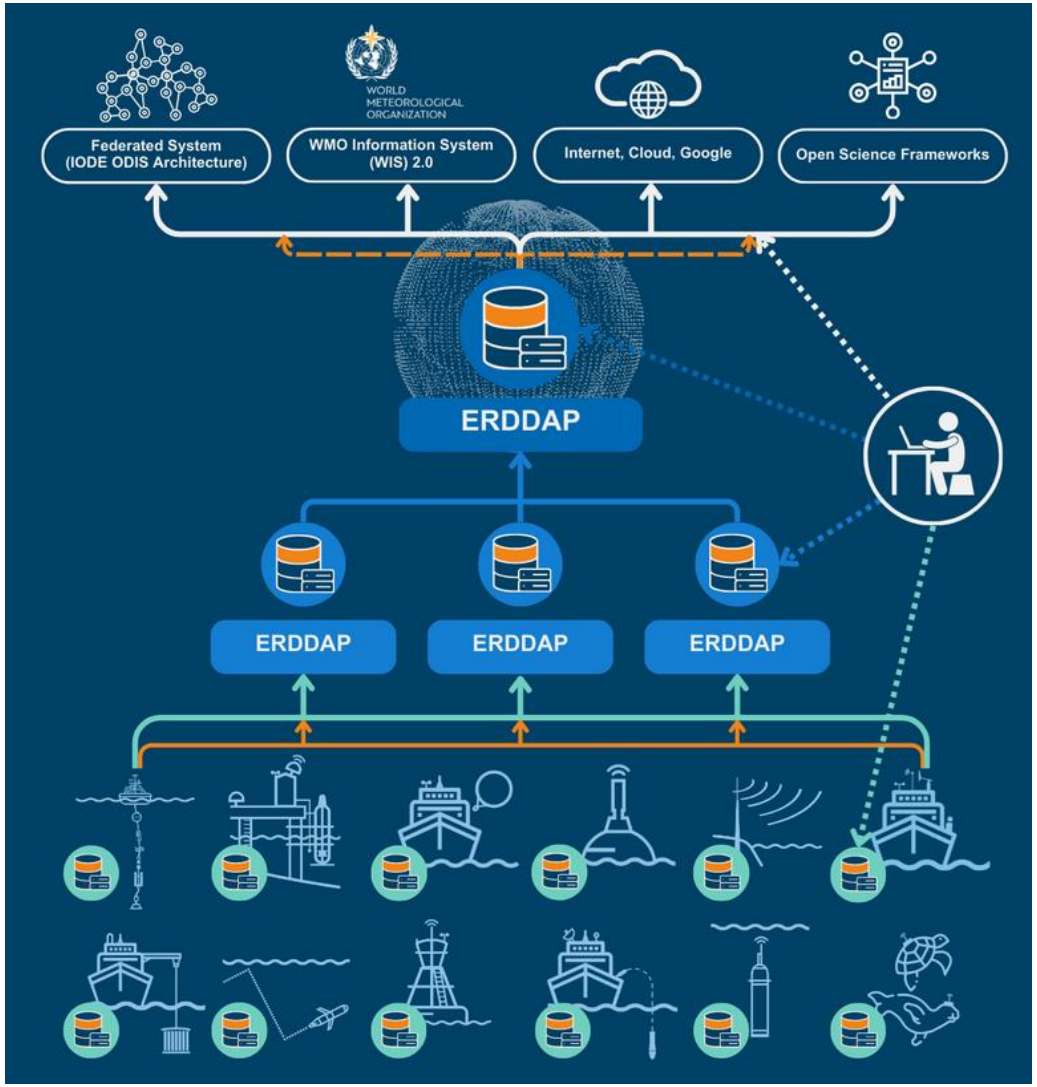
Current investment in GOOS netowrks



OCG Data Strategy - Building the system

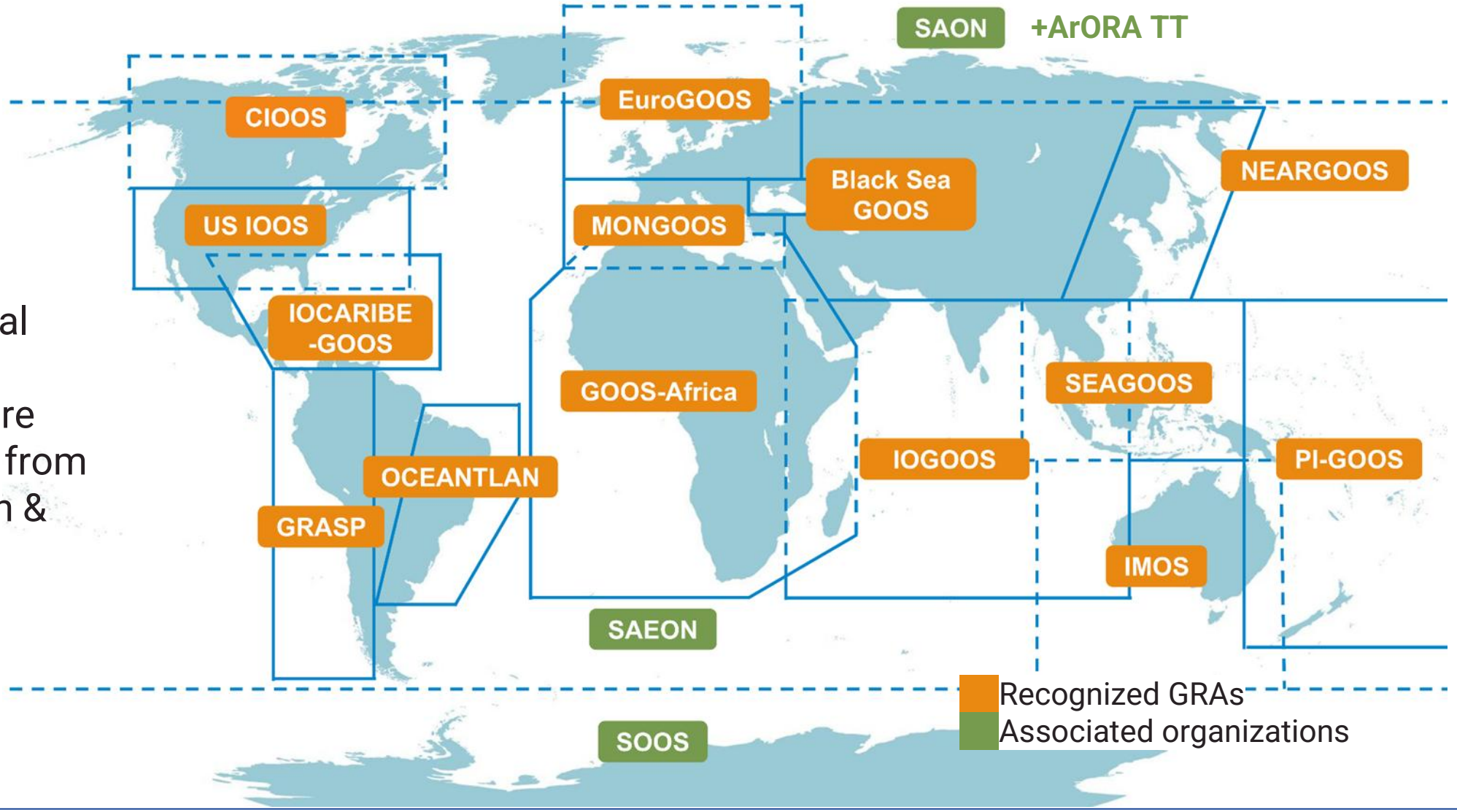
Key elements:

- Robust data endpoints for each network federated through ERDDAP layer
- Harmonised minimum metadata - the GOOS Passport
- Focus delivery and access to recognised systems:
  a. Real-Time (WMO GTS/WIS 2.0)
  b. Delayed-Mode (GOOS ERDDAP / IOC ODIS)
- OceanOPS metadata services - start to end for tracking, support, analysis, etc.



GOOS Regional Alliances and National Focal Points

- 81 GOOS National Focal Points
- Invitation for more countries to join from Africa, Caribbean & Pacific islands



GOOS SC Workplan 2025-2027

I. Core Coordination and Collaboration

II. Observation system design and development
- A. Expert Panels
- B. Carbon and GHG Plan
- C. Biodiversity Plan
- D. EOV-led Ocean Indicators
- E. RRR and Evolving GBON

III. Strengthening data integration and delivery
- A. Observations Coordination / Ocean OPS
- B. IOC Data Architecture / WIS 2.0

IV. System implementation
- A. At national and regional level
  1. National Focal Points
  2. GOOS Regional Alliances
- B. And applications
  1. ETOOFS
  2. Engagement on applications, including forecasting
  3. Early Warning for All

V. Outreach and Partners
- A. Projects and partners
- B. Communications

VI. Reform

GOOS SC are tasked to **advise** on developing the capacity of all **Member States** to participate in and benefit from GOOS

Deliver an integrated, 'fit for purpose' observing system built on the systems approach outlined in the Framework for Ocean Observing (GOOS Strategy 2030, Strategic **Goal 2**).

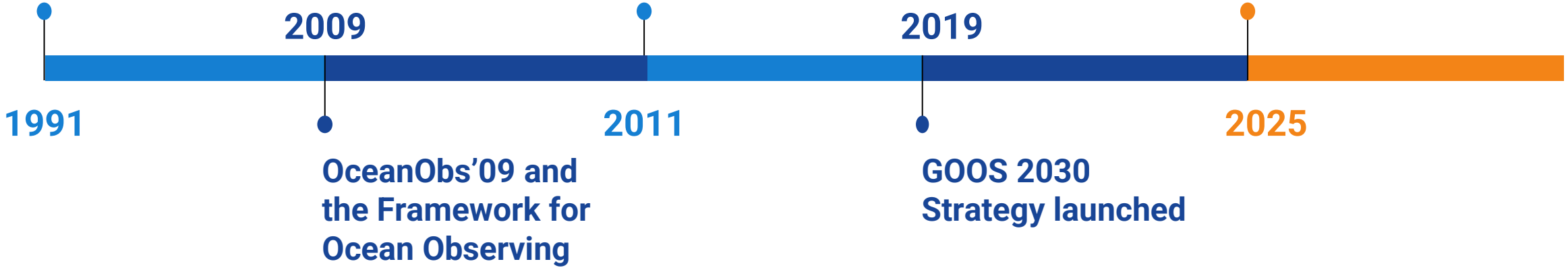
GOOS SC identified **strengthening data integration and delivery** as a needed new area of emphasis for GOOS (**all goals**)

Deepen engagement and partnership from observations to end users to advance the use and impact of the observations and demonstrate their benefits (GOOS Strategy 2030, Strategic **Goal 1**)

Building for the future through innovation, capacity development, and evolving good governance (GOOS Strategy 2030, Strategic **Goal 3**)

GOOS Evolution

GOOS 2.0



An updated and forward-focused mission statement outlines the essential role in delivering coordinated action and strategic outcomes for GOOS

Support stakeholders with implementation of effective observation systems

Support continuous improvement of ocean observing system to meet changing scientific, economic, ecological, environmental, and technological needs

Facilitate worldwide coordination and data sharing for a unified, comprehensive ocean monitoring, forecasting, and service value chain

Be receptive to the GOOS components, sponsors, Member States, suppliers, users, and the broader ocean observing enterprise

Build a robust and adaptable system that can withstand disruptions and deliver long-term, reliable data

To **lead** and **evolve** a **globally integrated**, **responsive**, and **resilient** ocean observing system for **thriving communities** and a **healthy ocean**

Ensure essential ocean data are ultimately transformed into actionable insights to support resilient societies and protect ecosystems – turning science into real-world impact while advancing the ocean economy, weather, and climate communities

Refined mission statement based on the GOOS reform project

Need for a shared Strategic Response

- Establish a shared understanding of the risks and threats to system, services, people and economies
- Coalition commitment to safeguarding infrastructure with more equitable investment and making access and use of OO equitable
- Support a basic observing network and FAIR data flows to meet societal need
- Recognition of the need for investment in the coordination and the system itself
- Embrace the technology – support levels of technological readiness that can still deliver to the system
- Multilateralism is needed for the ocean – to engage and support all countries and communities
- National Coordination is vital – eg Fr-OOS
- Global Coordination vital – support for GOOS to strengthen engagement with Member States, providers and users of data (including through reform process) is needed
- Global ocean observing system must be considered critical infrastructure – and mandated as such

Vital to better connect with modelling community
to optimise system and user needs

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Thank you

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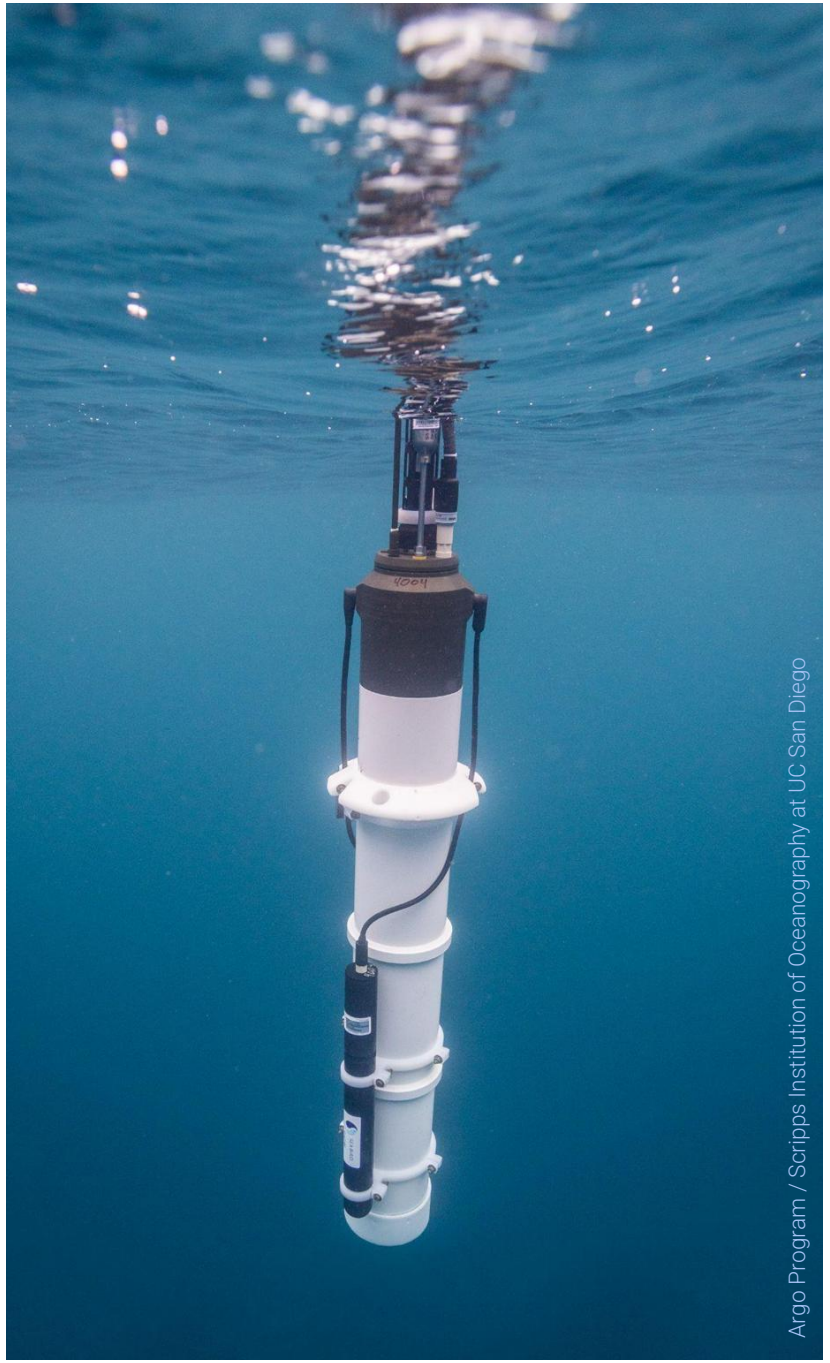

Argo Program / Scripps Institution of Oceanography at UC San Diego