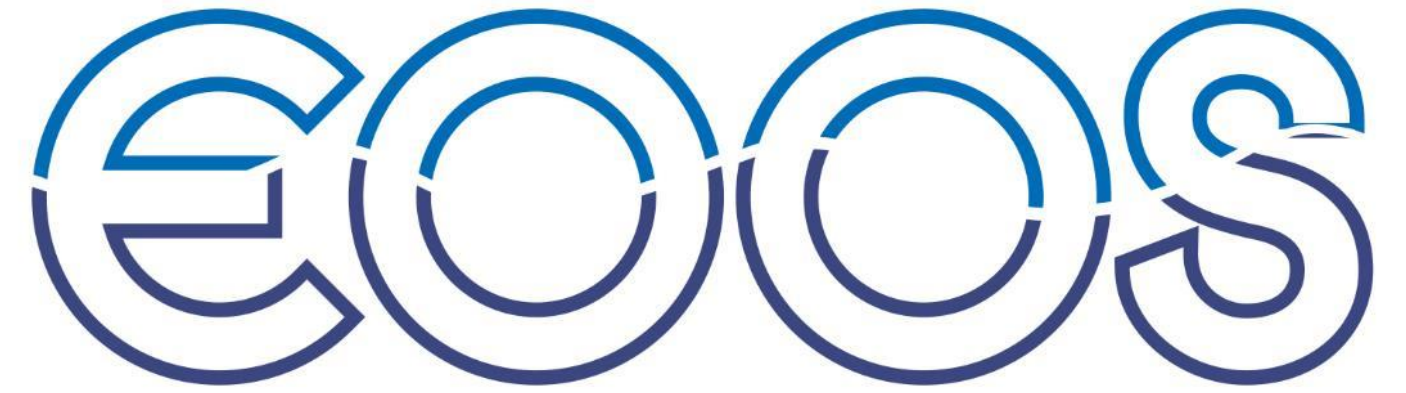


European Ocean Observing System and EuroGOOS Update to BOOS A.M.

22 May 2018

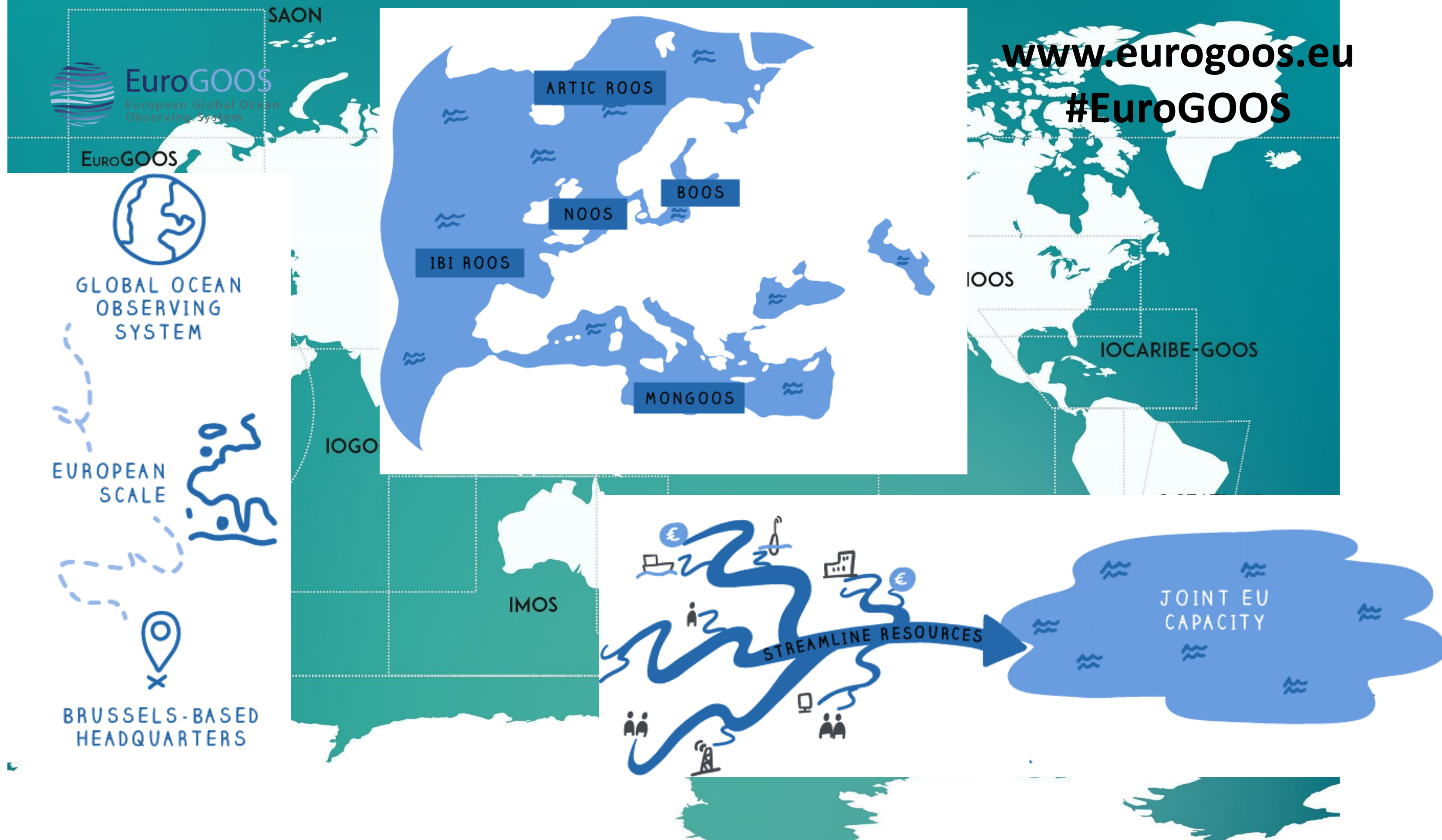
Dina Eparkhina, Glenn Nolan, EuroGOOS

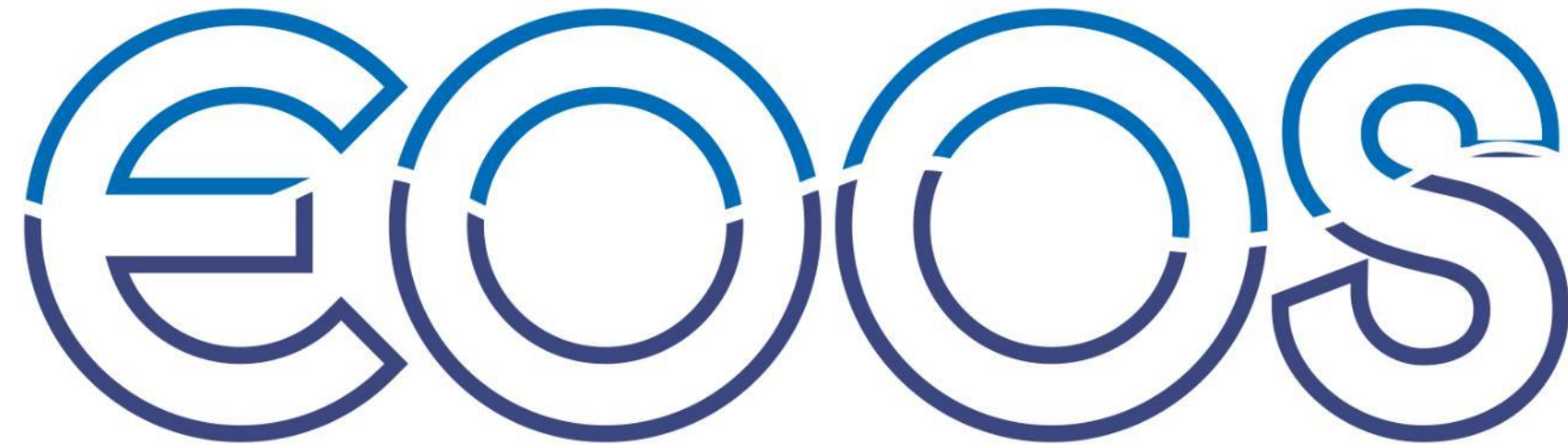
Contents



1. Who are we?
2. What is EOOS?
3. Background – Why? What has happened to date?
4. Strategy and implementation
5. How to get on board?
6. Atlantic Blueprint
7. Coastal Working Group

THE GLOBAL OCEAN OBSERVING SYSTEM, GOOS, REGIONAL ALLIANCES





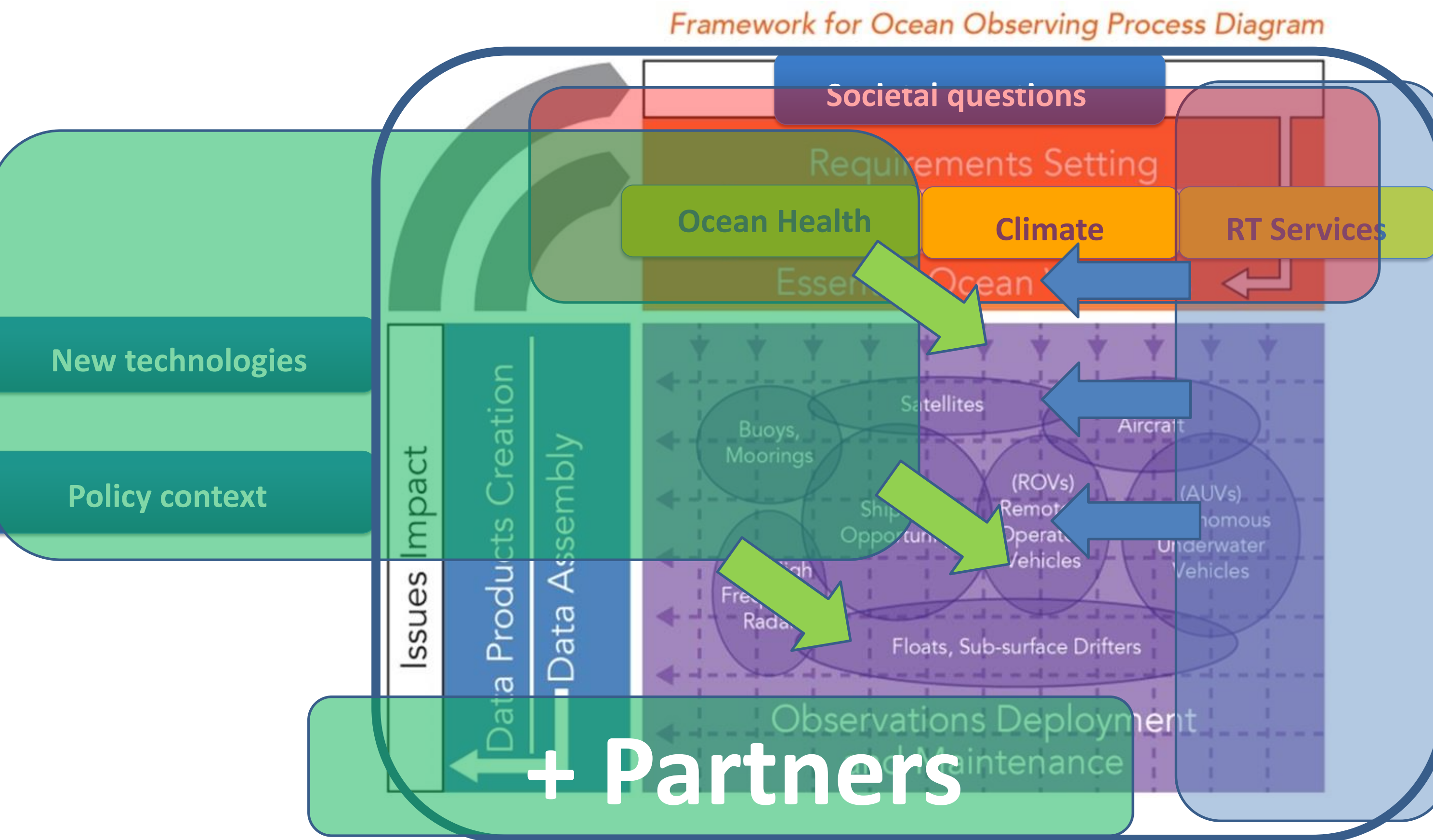
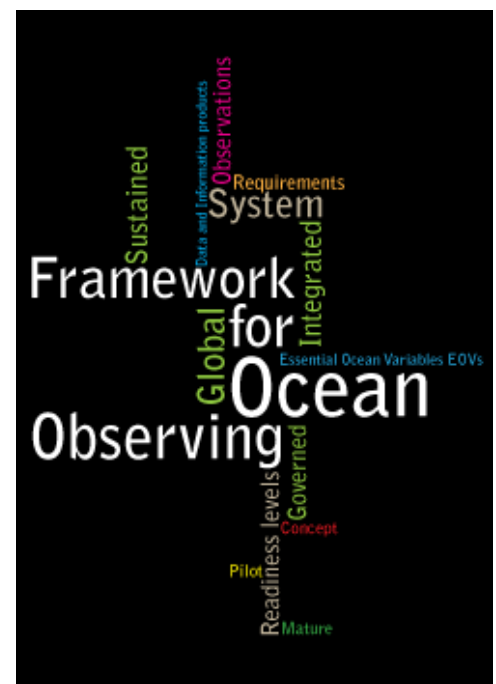
European Ocean Observing System (EOOS) is
a **coordinating framework** designed to

- **align** and **integrate** Europe's ocean observing capacity *in the long term*;
- **promote** a systematic and collaborative approach to collecting sustained information on the state and variability of our seas and global ocean; and
 - **underpin sustainable development** of the marine environment and its resources

Framework for Ocean Observing

A systems approach

EOOS



EMB

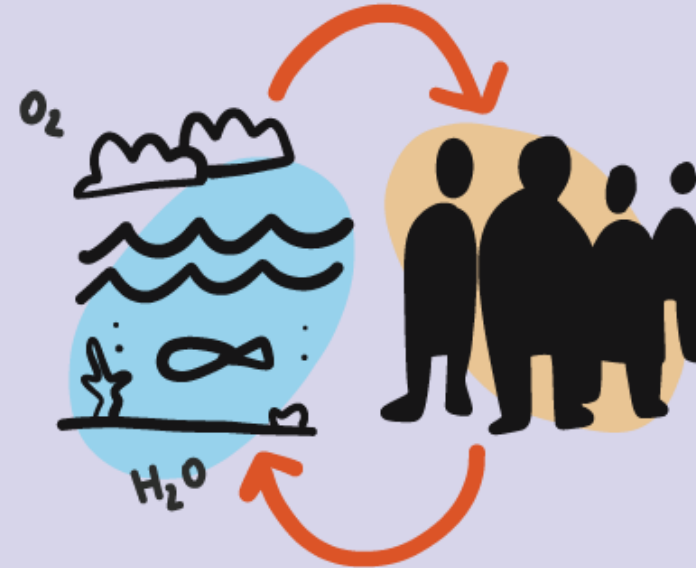
GOOS

EuroGOOS

THE IMPORTANCE OF OCEAN OBSERVING

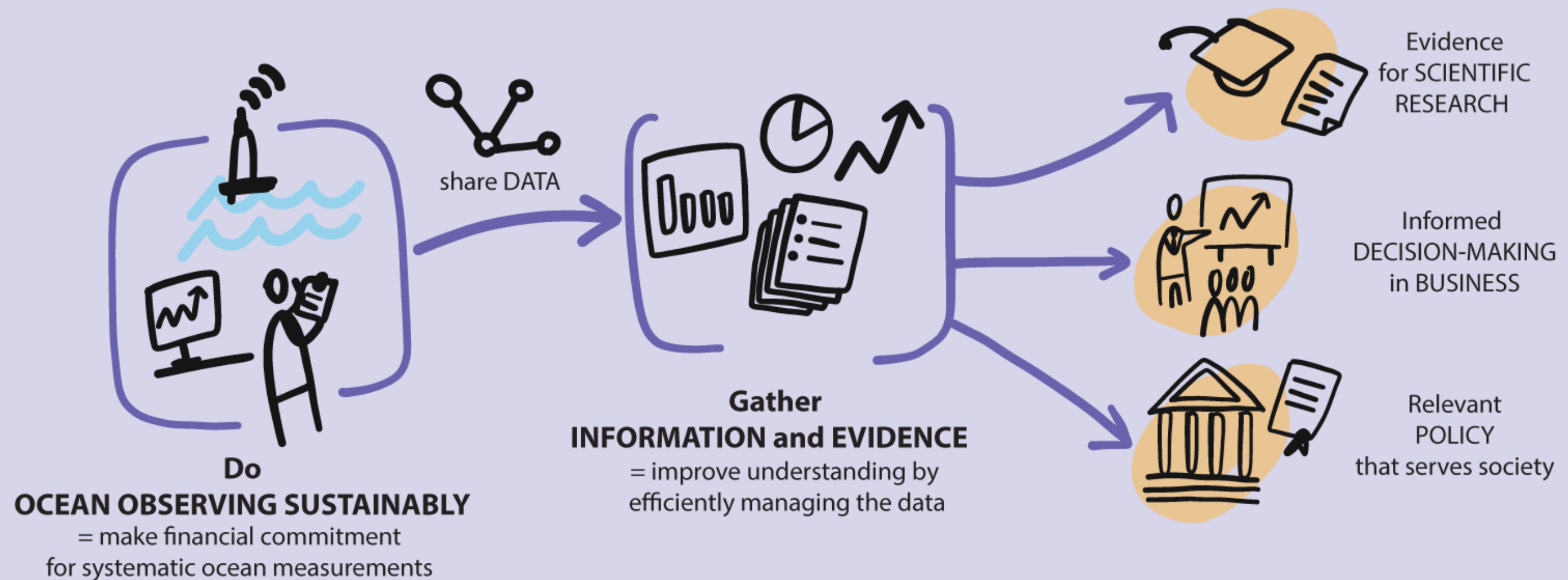
WHY?

The ocean is a basic necessity for life on Earth

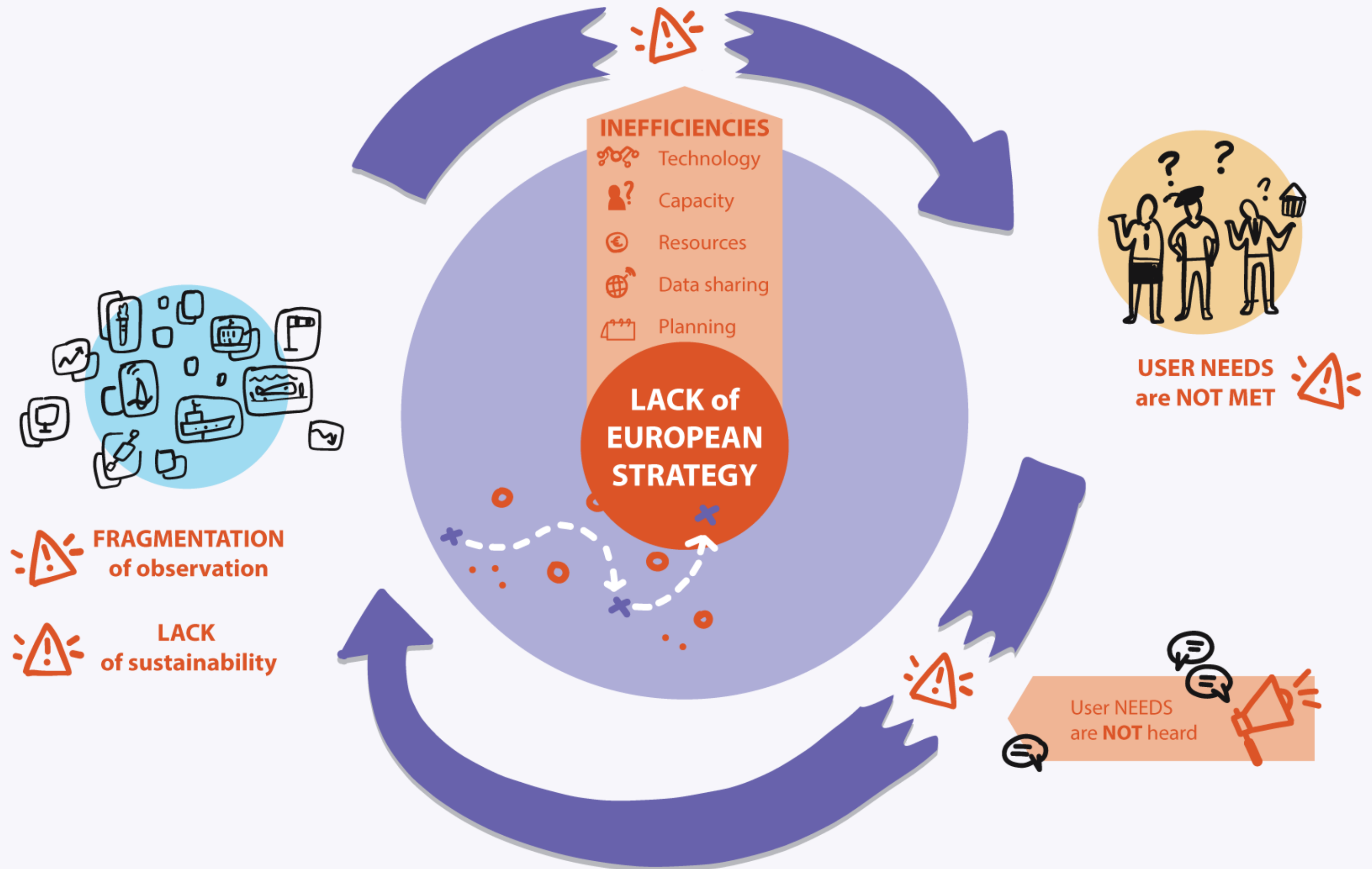


Ocean observing is a basic necessity to **UNDERSTAND OUR RELATIONSHIP** with the ocean.

HOW?

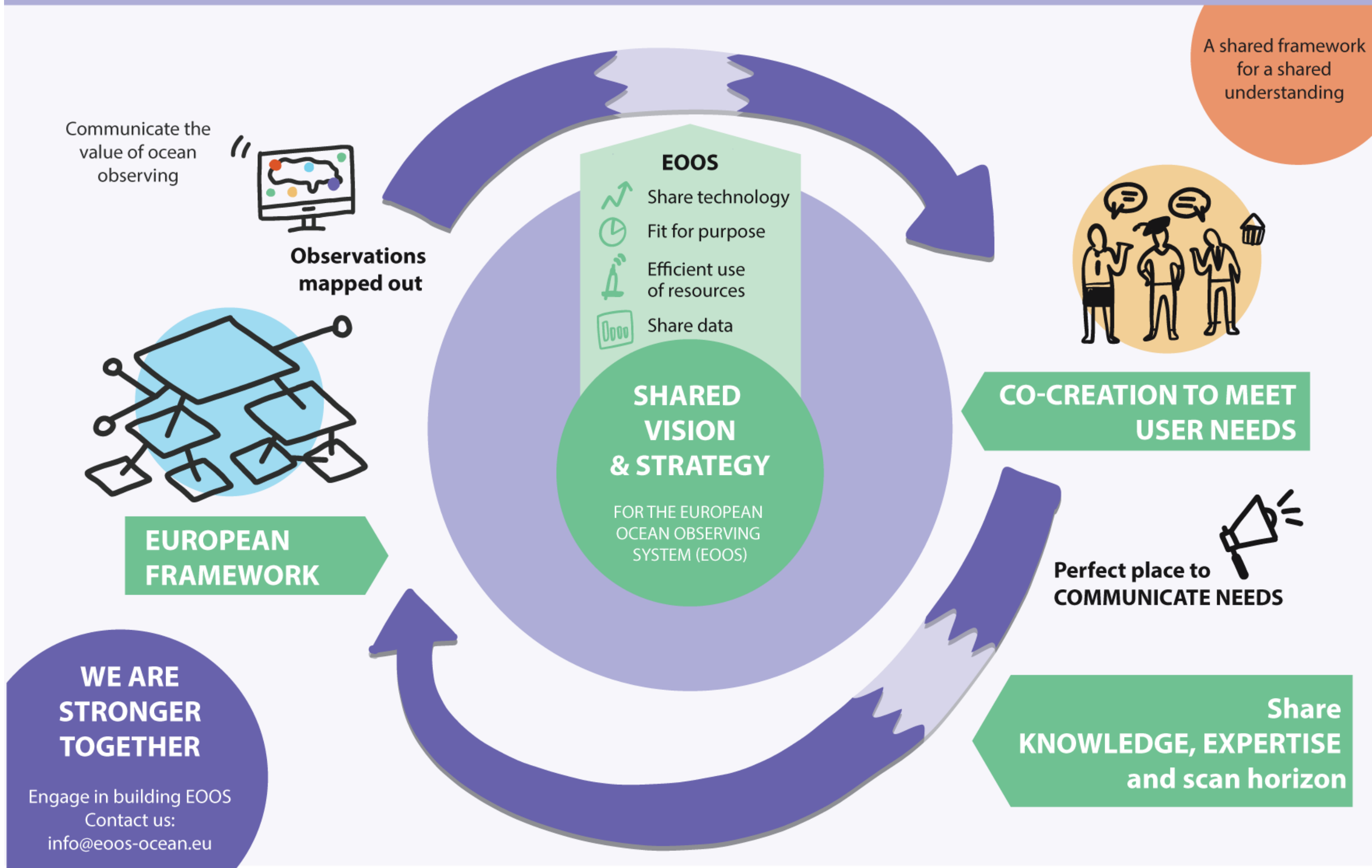


THE UNTAPPED EUROPEAN POTENTIAL IN OCEAN OBSERVING



50% of national budgets for marine science in the EU are spent on operating and replacing marine infrastructure assets (GOSR, 2017)

HOW CAN WE ACHIEVE SUSTAINABLE OCEAN OBSERVING IN EUROPE?



- **2007-2008:** Integrated Maritime Policy; EuroGOOS and EMB deliver a vision document on an end-to-end, integrated and interoperable network of ocean observing systems in Europe
- **2010-2014:** EOOS in various strategy and policy documents
- **2015:** EMB-EuroGOOS EOOS brainstorming workshop – 20 experts in personal capacity
- **2016:** Setting up of EOOS steering group; EOOS consultation document; European Parliament event; logo; website; materials
- **2015-2017:** Active EOOS promotion at events, conferences, exhibitions
- **Dec. 2016 – Jan. 2017:** Open stakeholder survey based on the EOOS consultation document
- **2018:** EOOS strategy and implementation plan; EOOS forum and EOOS conference in Brussels

2007



Integrated Maritime Policy
EMB-EuroGOOS Vision Document



Strategy-policy declaration: EOOS a priority



Strategy and policy documents feature EOOS



Strategy-policy declaration: EOOS a priority

2015



Expert brainstorming

2016



www.eoos-ocean.eu
Visual identity and website



EOOS event at European Parl.



EOOS profiled in various exhibitions and events among others GEO, IOC, EMD

EOOS a key priority in EuroGOOS policy brief



EOOS steering group launches open consultation



EOOS steering group to collect feedback on strategy and implementation plan at two events

2017

2018



International policy landscape: How can ocean observing make a difference?



provide high-quality information supporting operations and applications developed by the Group on Earth Observations (GEO) for building a Global Earth Observing System (GEOSS). Furthermore, the GEOSS Societal Benefit Areas process aligns with the Sustainable Development Goals – the internationally adopted

Sustainable Development Goals (SDGs) and all of the GEOSS Societal Benefit Areas require data to reach their objectives. SDG 14⁵ is particularly designed to help protect, restore and sustainably use the world's oceans, seas and marine resources.

has the unprecedented potential to help meet those societal challenges. Urgent

and supporting actions for sustained ocean

energy and collaboration to strengthen the (global) benefit.

What is true for the ocean, its resources and ecosystem services, is also true for ocean science capacities: you cannot manage what you do not measure.



Group on Earth Observations (GEO) Societal Benefit Areas are the environmental fields around which the Global Earth Observing System is being developed, for the benefit of the global economy.



Therefore, G7 technical experts recommend:

- The G7 work collectively to establish sustained funding mechanisms that are essential to maintain and extend the existing global ocean monitoring and observing systems in accordance with national research priorities and budgets.
- The G7 members establish a Global Ocean Observing System (GOOS) Implementation group to liaise with and support GOOS whilst coordinating enhancements to G7 observing.
- The G7 develop a strategy for extending observations focussed on high-priority areas and develop associated road maps for the next 5 years.



HIGH REPRESENTATIVE
OF THE UNION FOR
FOREIGN AFFAIRS AND
SECURITY POLICY

Brussels, 10.11.2016
JOIN(2016) 49 final

JOINT COMMUNICATION TO THE EUROPEAN PARLIAMENT, THE COUNCIL,
THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE
COMMITTEE OF THE REGIONS

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specific objectives and deliverables to be achieved by 2030. In the General Assembly and other international fora, the IOC has proposed some preliminary

- **Enhancing sustainable use of ocean and marine resources** including a focus on: making an inventory of ocean resources and ecosystem services; understanding and quantifying biogeographical zones and the potential role of marine protected areas;
- **Expanding use of knowledge about the ocean conditions** including data management, data gathering, modeling, forecasting ocean food productivity and evaluating its capacity to meet growing demands;
- **Supporting the development of the ocean economy** including analyses of economic and social benefits from the sustainable use of marine resources and science-based management;
- **Sustainable management of coastal ecosystems** including ecosystem resilience and marine spatial planning to minimize impacts of sea-level rise, extreme weather events, flooding and erosion, improvements of baselines on environmental conditions and public perceptions;
- **Increasing scientific knowledge** about the impacts of cumulative interacting stressors such as warming, acidification and habitat destruction;
- **Achieving integrated observations and data sharing** including the use of satellites, fixed and moving observing platforms, all feeding into common data management and the Global Ocean Observing System (GOOS).

#EOOS

United Nations International Decade of Ocean
Science for Sustainable Development 2021-2030

USERS OF MARINE
INFORMATION



Local & Regional
Authorities



Marine and Maritime
Industries & Services
(Blue Economy)



END USERS



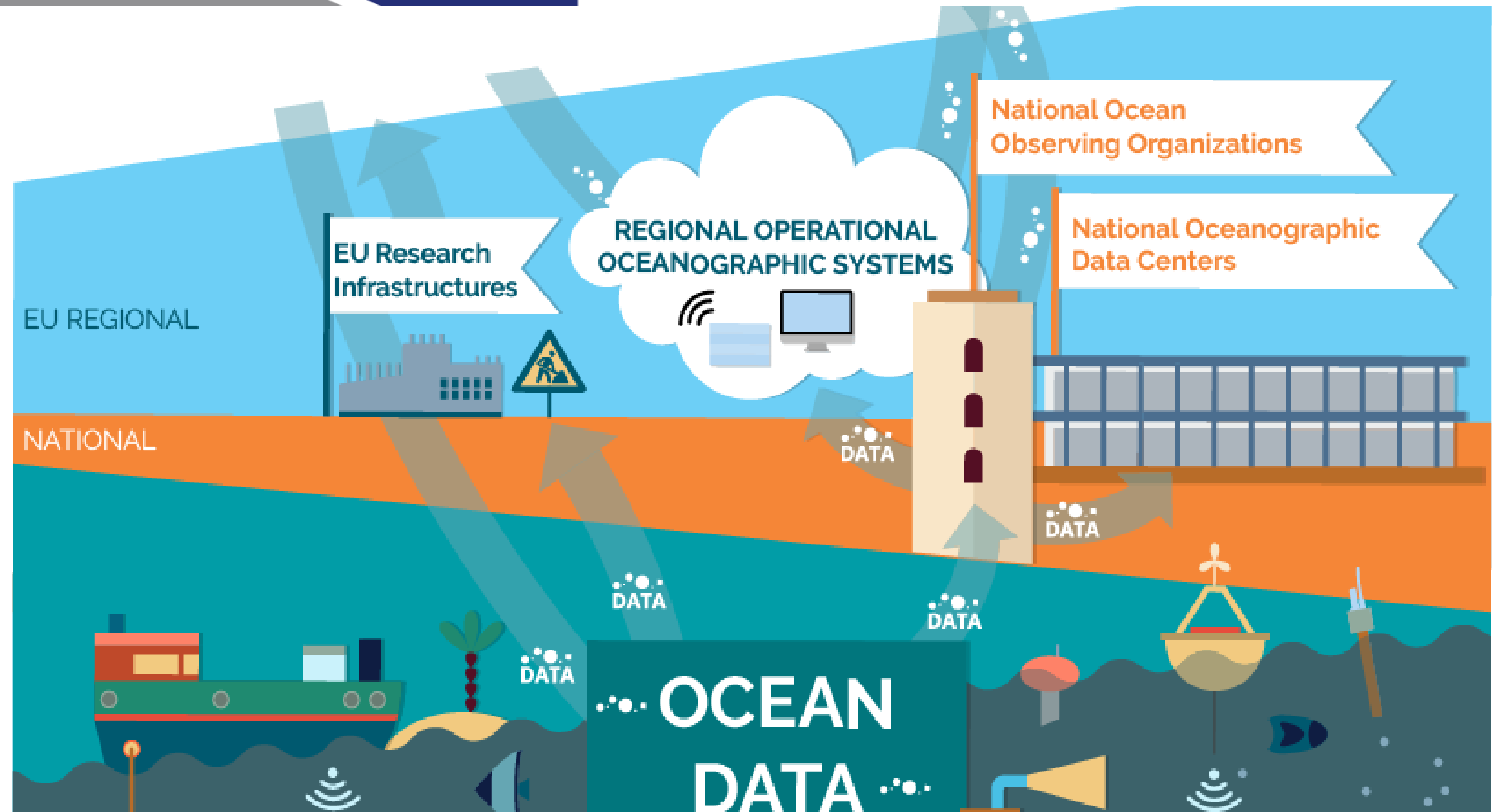
Research
Community



Policymakers

European needs

OPERATORS OF
INSTRUMENTS



EOOS Forum, 8 March 2018, Brussels

What are the challenges we need to address?

1. Making the European observing system fit for purpose – What are the **priorities**?
2. **Funding** EOOS – What are the benefits? What will help you **make the case**?
3. What would a **fully integrated and sustained** EOOS look like?
4. What are the **relationships and skills** needed to support an integrated system?
5. What are the **key messages** and who needs to hear them?
6. How should we **govern and coordinate** EOOS?
7. As **new technologies** come on stream, how do we ensure they're incorporated?



EOOS Strategy (draft in consultation with EOOS steering group; public release 25 April)

EOOS Vision

By 2030, EOOS will build an end-to-end coordinated and connected European ocean observation community that puts user needs at its centre, promoting European leadership, driven by stakeholders, and serving the needs of science, society, and innovation.

EOOS Guiding Principles

Efficient and fit-for-purpose; Connecting communities; Innovative and adaptable; Stakeholder-driven; Sustainable

Main focal areas

- Better Coordinated and Sustained In Situ Ocean Observing
- Close association with the ocean modelling and satellite observation communities to ensure full integration and responding to user needs
- EOVs
- Non-EOVs (other relevant variables, e.g. bathymetry)
- Integrated Ecosystem Approach: from platform-specific observing to multi-platform, integrated and thematic observing

EOOS Implementation Plan (draft in consultation with EOOS steering group; public release 25 April)

Stakeholder co-design of strategy and implementation plan 2018-2022

- **EOOS mapping and stakeholder engagement**
- **Policy context and foresight**
- **Requirements gathering** (forum and conference 2018, EMODnet checkpoints, OSSE, regional conventions, ICES, ECMWF, GCOS...)
- **Sustainability studies** = gather national plans and RI feedback
- **EOOS elements** (national plans, RI plans, tech plans, best practices)
- **Cost-benefit for European states**
- **EC support, Nations' joint programming funding**
- **Communication and outreach** (bring together communities, persuade funders and users)

How to get on board?

- EOOS for and by stakeholders. Inclusive and bottom-up. While seeking and hoping to secure political and funding support
- Strategy and Implementation plan consultation open on 25 April
 - Inputs to June 15th 2018.
- Subscribe to EOOS mailing list at **www.eoos-ocean.eu/contact/**
www.eoos-ocean.eu
- Website for all info
Conference 21-23 Nov. registration ongoing:
www.eoos-ocean.eu/conference-2018/



EOOS events 2018

- EOOS Forum (March 8th) - complete
- OceanObs Whitepaper submission (March-September 2018) pending abstract acceptance
- EuroGOOS Sustainability Workshop (May 8th and 9th) – complete: BOOS approach??
- Blue Planet Symposium (July 4th to 6th, Toulouse)
- EOOS Conference (November 21st to 23rd)
- EMB Working Group activities
- EuroGOOS Coastal working Group (formed and working)

17

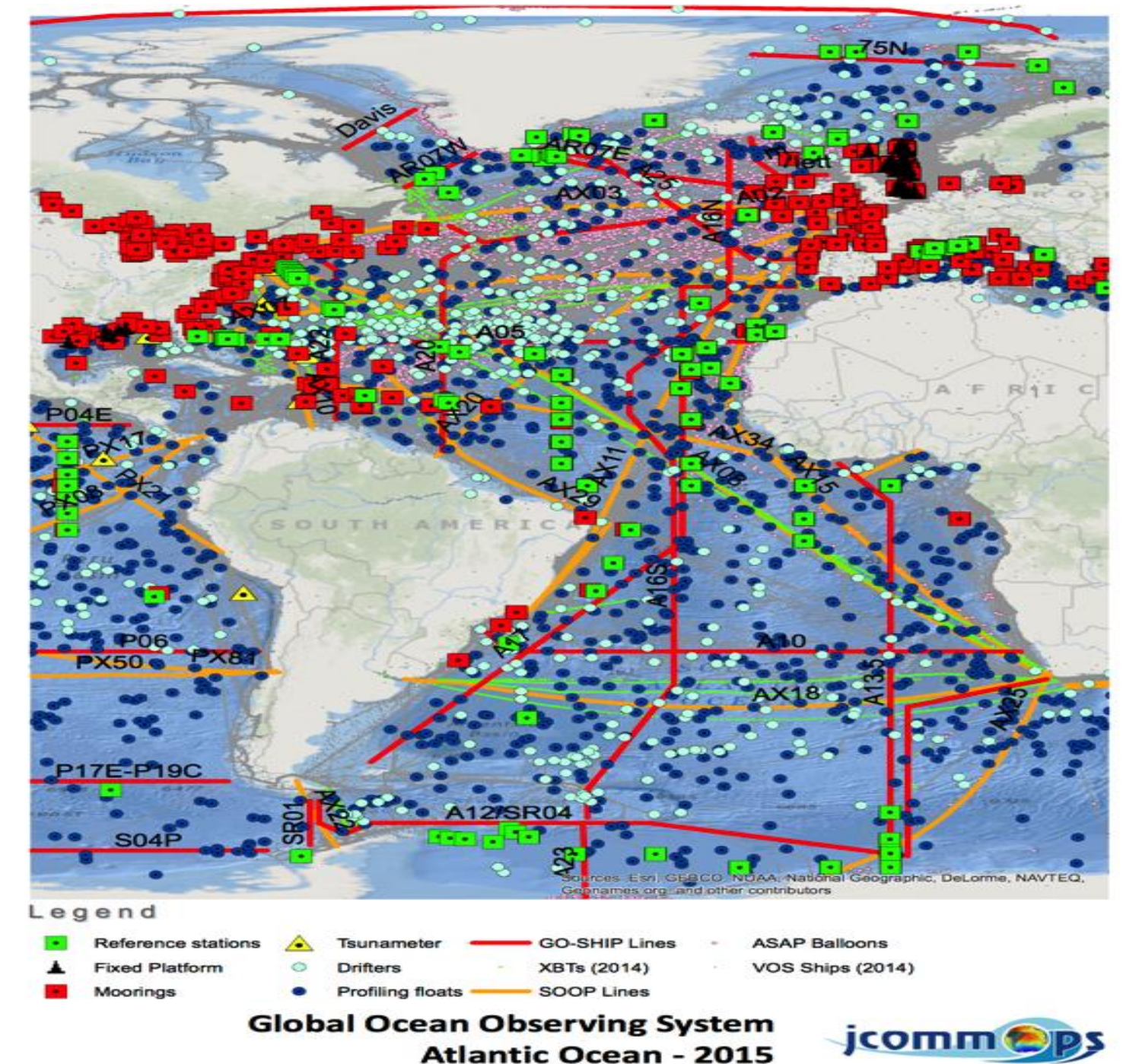


EOOS Pilot Projects

Activity	Pilot title	Indicative timeline and task leader(s)
Activity 1. EOOS mapping and stakeholder engagement	Pilot project 1.1 Mapping existing infrastructures and capabilities	May 2018-January 2019, EuroGOOS and EurOcean
	Pilot project 1.2 Requirements gathering for EOOS	May 2018-July 2019, EuroGOOS
	Pilot project 1.3 EOOS conference 2018	Sept.2017-Nov.2018, EMODnet, EMB and EuroGOOS
	Pilot project 1.4 Stakeholder co-design of strategy and implementation plan 2018-2022	Nov.2017-Nov.2018, EMB and EuroGOOS
Activity 2. Policy context and foresight	Pilot project 2.1 Future science brief on biological observations	2017-Sept.2018, EMB
	Pilot project 2.2 EOOS policy landscape	March -Sept. 2018, EMB
Activity 3. Implementation of EOOS observing system elements	Pilot project 3.1 EOOS Technologies Forum	2018-July 2019, EuroGOOS
Activity 4. EOOS Funding	Pilot project 4.1 EOOS cost-benefit analysis	From 2018, EuroGOOS with additional stakeholder help
Activity 5. Communications and outreach	Pilot project 5.1 EOOS communication strategy	By Nov.2018, EuroGOOS
	Pilot project 5.2 Maintain and evolve EOOS web presence	From 2016, EuroGOOS
Activity 6. Governance	Pilot project 6.1 Evolution of EOOS governance	March-Sept. 2018, EuroGOOS and EMB EOOS steering group co-chairs

Developing a Blueprint for an Atlantic Ocean Observing System

- Strong need to develop a strategy for integrated ocean observing in the Atlantic
- Seek to facilitated a more sustainable, well coordinated, comprehensive system
- Need to better serve societal needs
- System should be sustainable, efficient and fit-for-purpose
- Ambitious, multi-national, multi sectoral, fit-for-purpose
- Should include capacity development and enhance partnerships between science, service, private sector and civil society
- Early 2018 public release of first draft
- The Blueprint will serve as inspiration for the other regional projects who most likely will formulate similar documents



EuroGOOS Coastal Working Group

Sustained observations:

Funding
Gaps

Data:

Unlock access
Convey requirements

INSPIRE:

Recommendations
Inventory

Modelling:

Future priorities
Assimilation
Hydrology

Products:

Requirements;
sci and other
Inventory
Fitness for purpose