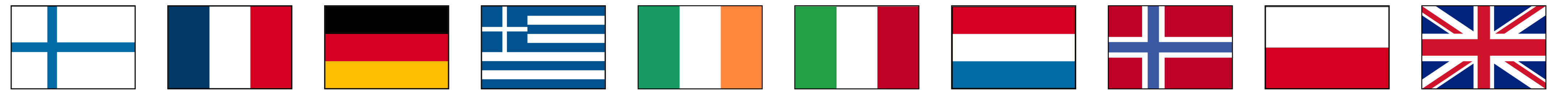




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# Euro-Argo ERIC European Research Infrastructure

## MOCCA

# Monitoring the Ocean Climate Change with Argo

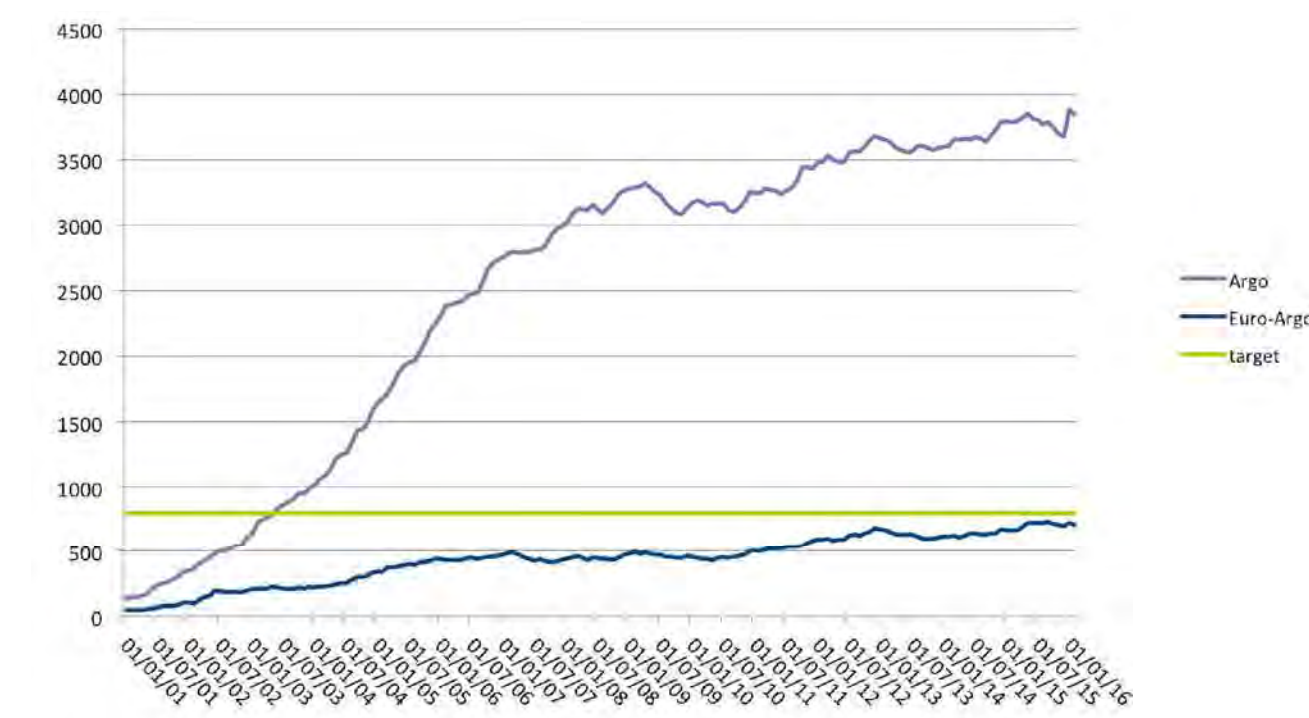
### CONTEXT

#### Objectives of Euro-Argo in monitoring the oceans:

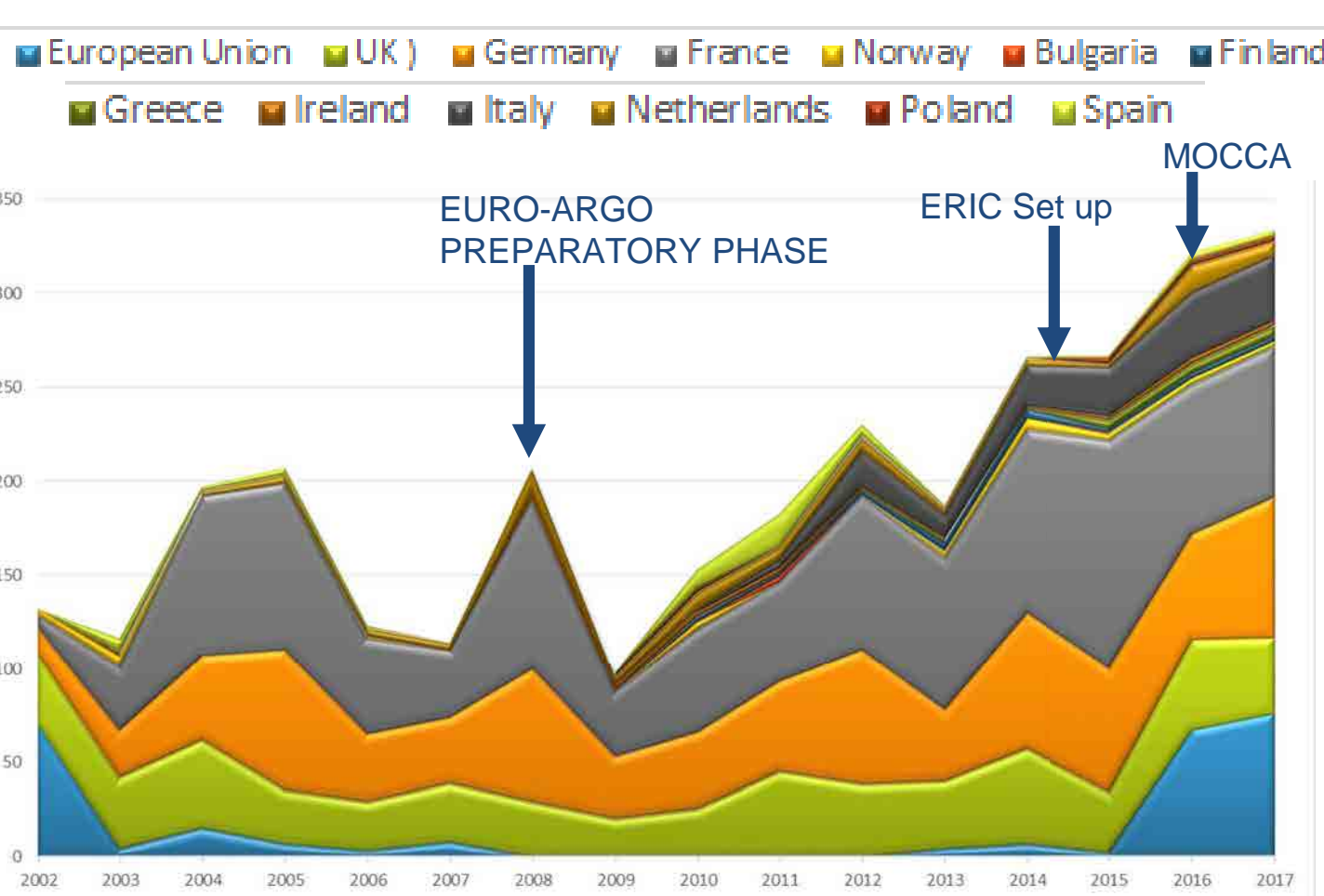
- Deploy about **250 floats per year** to contribute to the Argo **core mission** including regional enhancements (Nordic seas, Mediterranean & Black seas)
- Maintain an array of 800 floats active at any time (**1/4 of the global array**)
- Prepare and contribute to the **extension of Argo** (e.g. marginal seas, biogeochemistry, deep ocean, polar regions)

#### Users and applications:

- Ocean and climate research
- Operational oceanography (Copernicus Marine Service)



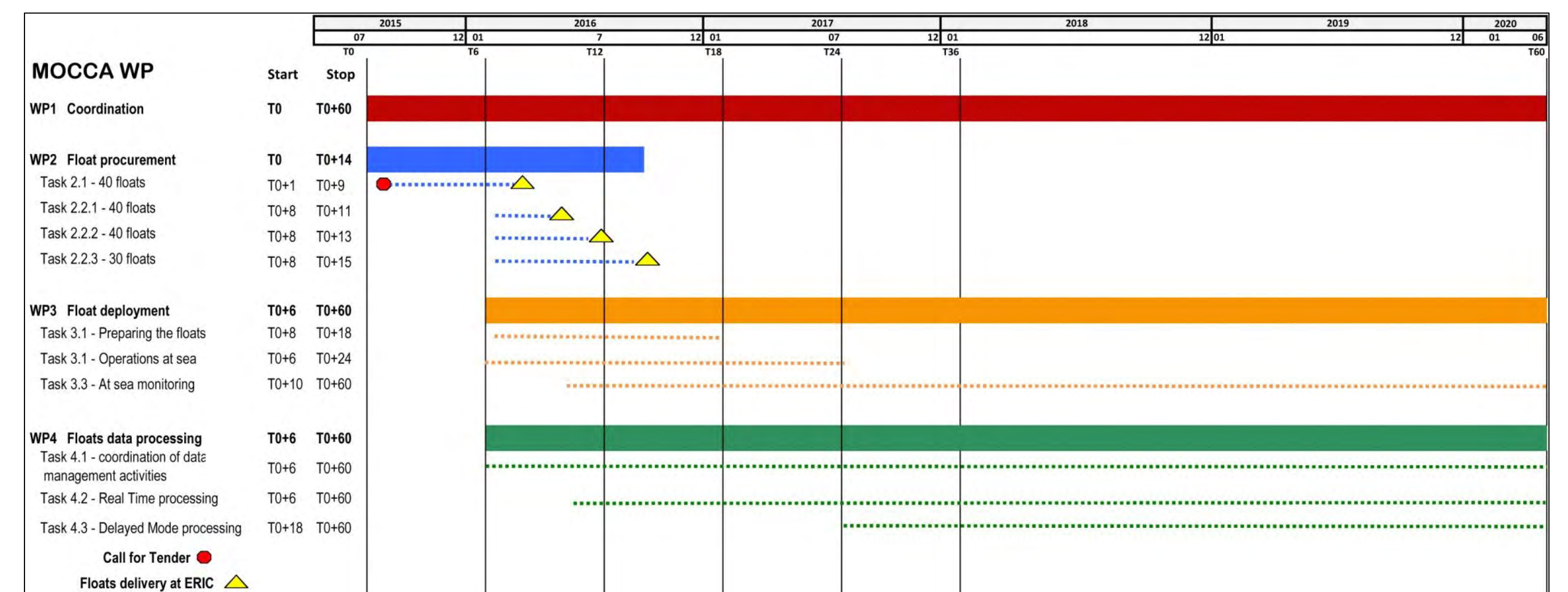
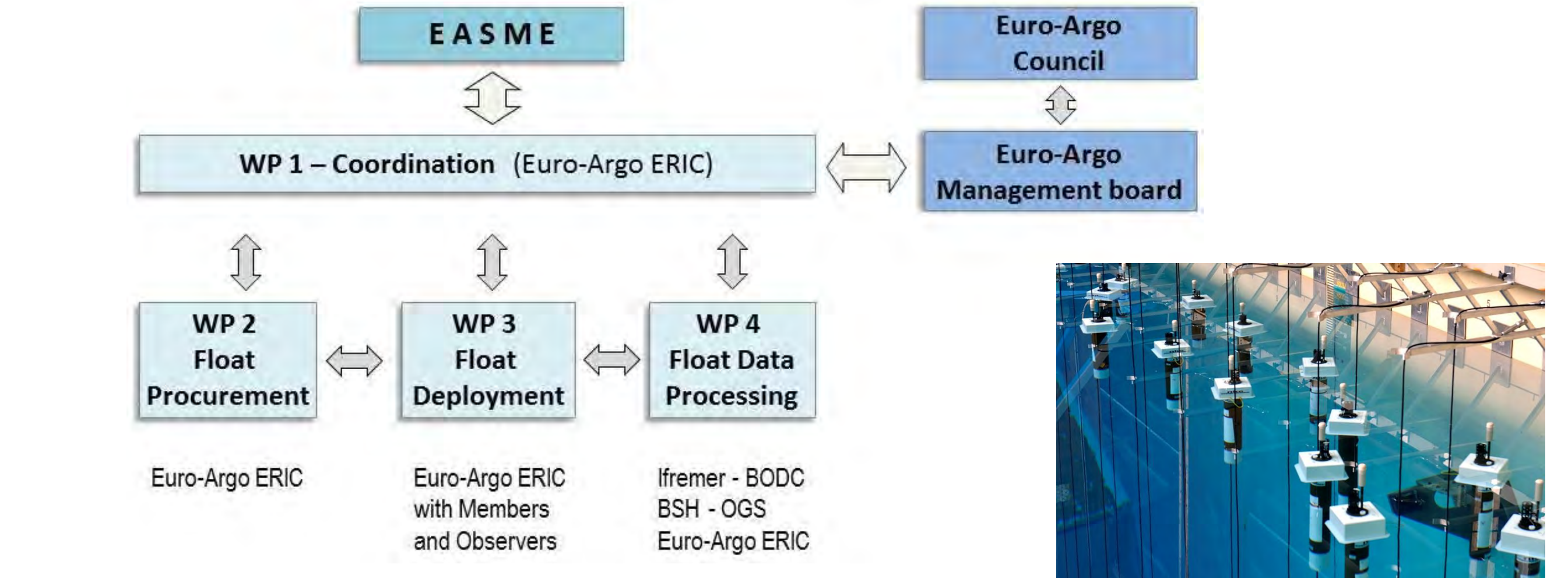
Euro-Argo distinct floats distributing data at GDACs vs Argo (monthly values)



Evolution of the number of floats deployed per European Countries in past 15 years

- Based on national funds only the European contribution has reached a plateau
- Discussions started a few years ago with DG-Mare, DG-Research and DG-ENV to develop a sustained EU contribution to Argo
- **European funds are needed to complement national funds.**
- **2 projects are on-going:**
  - **DG-Research H2020 AtlantOS**
  - **DG-MARE MOCCA**

### THE MOCCA PROJECT



#### Schedule:

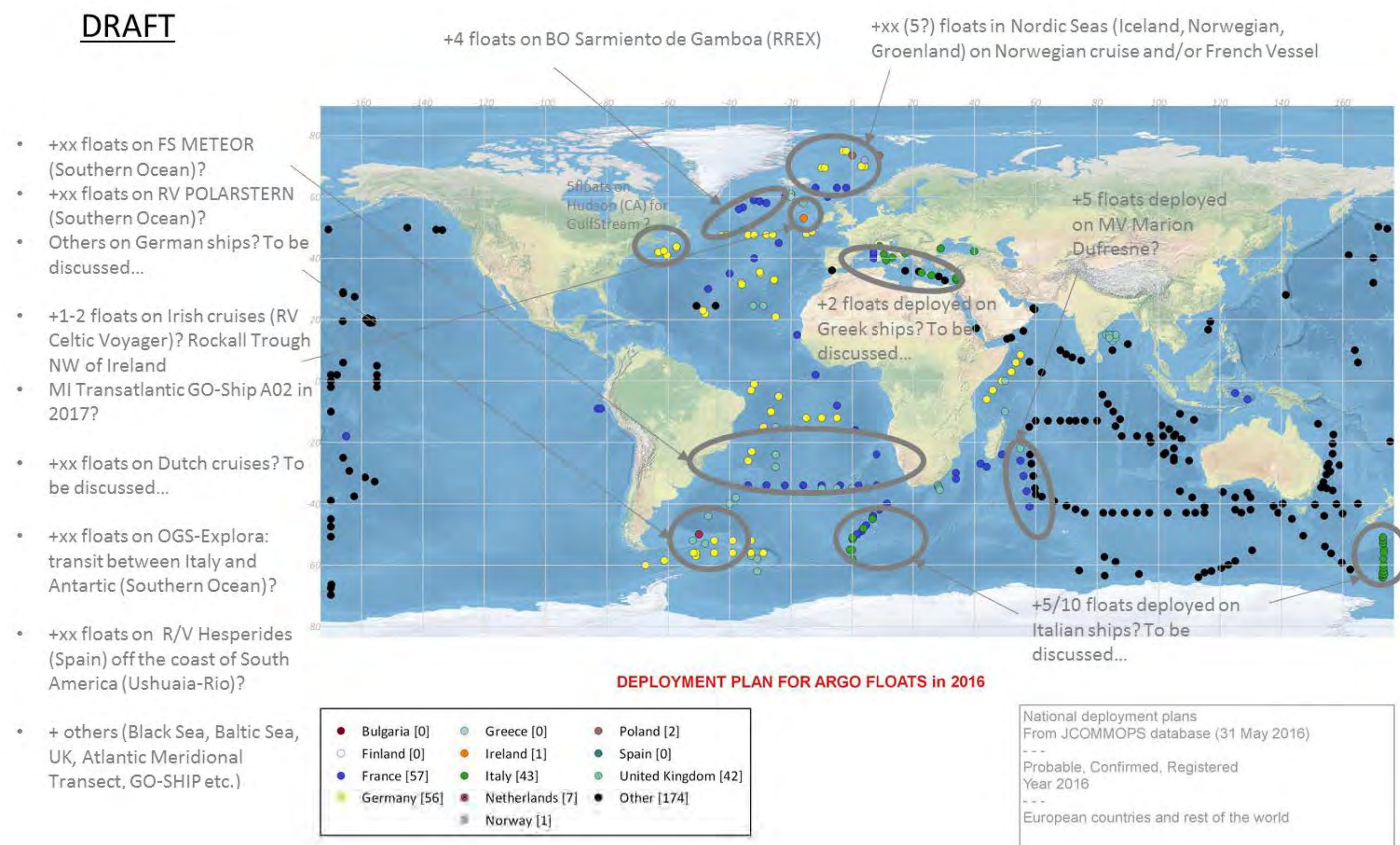
- Started end June 2015
- Will end in June 2020
- Float purchase call for tender issued end of July 2015
- NKE won the tender

#### MOCCA floats description:

- 150 T/S Core (130 Iridium and 20 Argos)
- 20 floats co-financed by partners (Germany, Italy, Netherlands, Poland)
- 60 floats expected to be deployed in 2016 and 70 in 2017

### COORDINATION OF DEPLOYMENT PLAN

#### DRAFT



#### Elaboration of deployment plan based on:

- Recommendations from the 'Strategy for the evolution of European contribution to Argo for the next decade' document
- National plans
- Argo density/age maps (JCOMMOPS)
- Cruises opportunities from partners and others

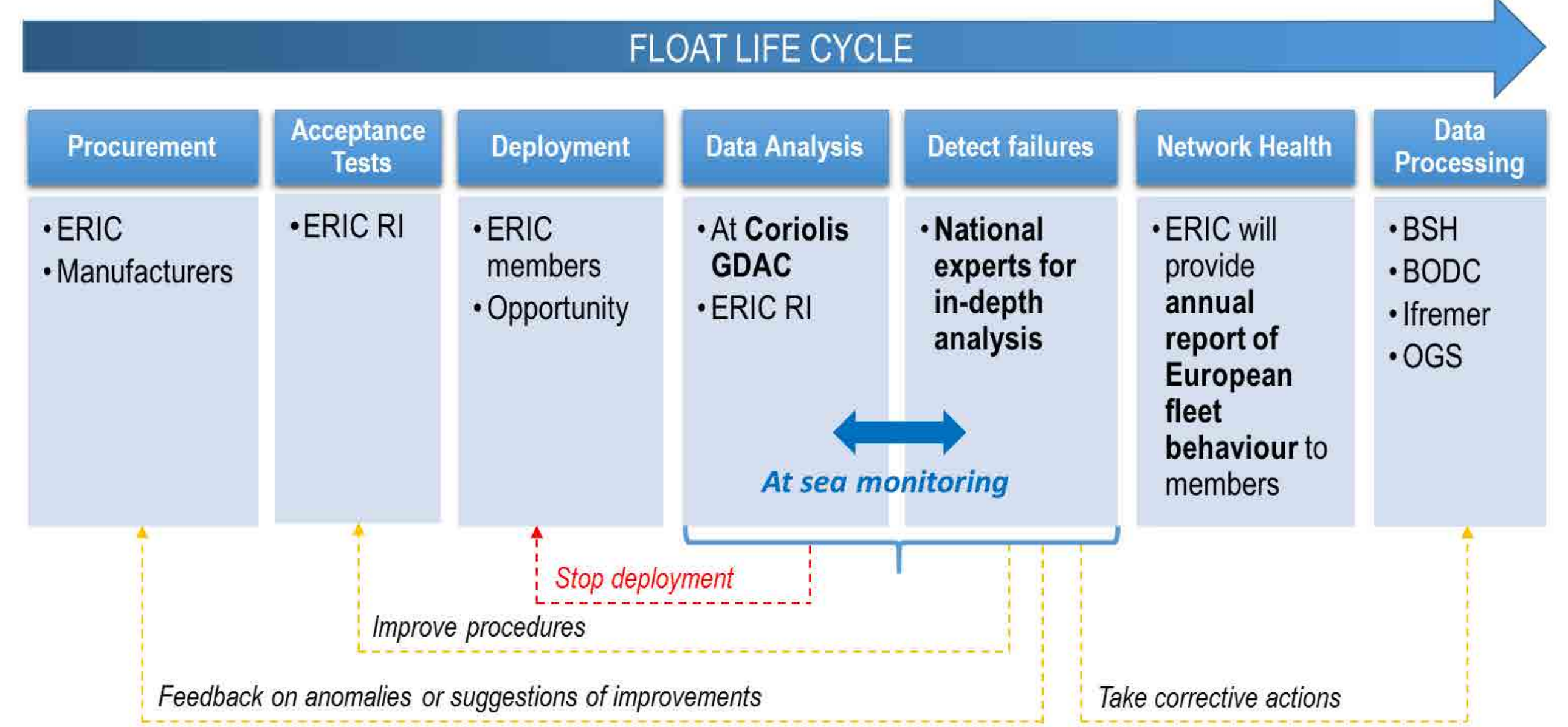
#### MOCCA target deployment areas:

- Southern Ocean (ice-free): poor density in Argo network
- Nordic Seas (ice free): based on actual national plans, gap in the area from target identified in Strategy Document
- Marginal Sea enhancement in 2017: Black Sea (2 floats), Mediterranean Sea (Aegean, Levantine), Baltic Sea

### MONITORING THE EUROPEAN FLEET

At sea monitoring based on technical files, national experts knowledge and ERIC RI data analysis at Coriolis GDAC.

Starts in 2016, will be enhanced in 2017 based on first experience and partners feedback.



#### Coordination of float processing:

- **Real Time processing:** UK and France will share the processing of the MOCCA floats
- **DMQC:** will be distributed among the 4 institutes involved in DMQC based on the area of deployment
  - OGS: Med and Black Seas
  - BSH: Nordic Seas and part of the Atlantic Ocean floats
  - BODC: Southern Ocean and part of the Atlantic Ocean floats
  - Ifremer: part of the Atlantic Ocean floats



Acceptance tests in Ifremer pool, May 2016

### CURRENT STATUS

- 40 floats received in April and 40 in May 2016
- **Acceptance tests performed for 80 floats: ready to be deployed**
- Co-financed floats deployed or shipped to partners
- 40 floats to be received in July and 30 in September 2016
- **Elaboration of deployment plan** in progress, to be validated at next Management Board

### CONCLUSIONS



Euro-Argo Central RI team

- **Euro-Argo is ready to manage European contribution to Argo**
- Within MOCCA the Euro-Argo ERIC will demonstrate its operational capabilities
- It is important to continue working with EC to sustain such funding to Euro-Argo and better define its contribution to Argo and its extensions