



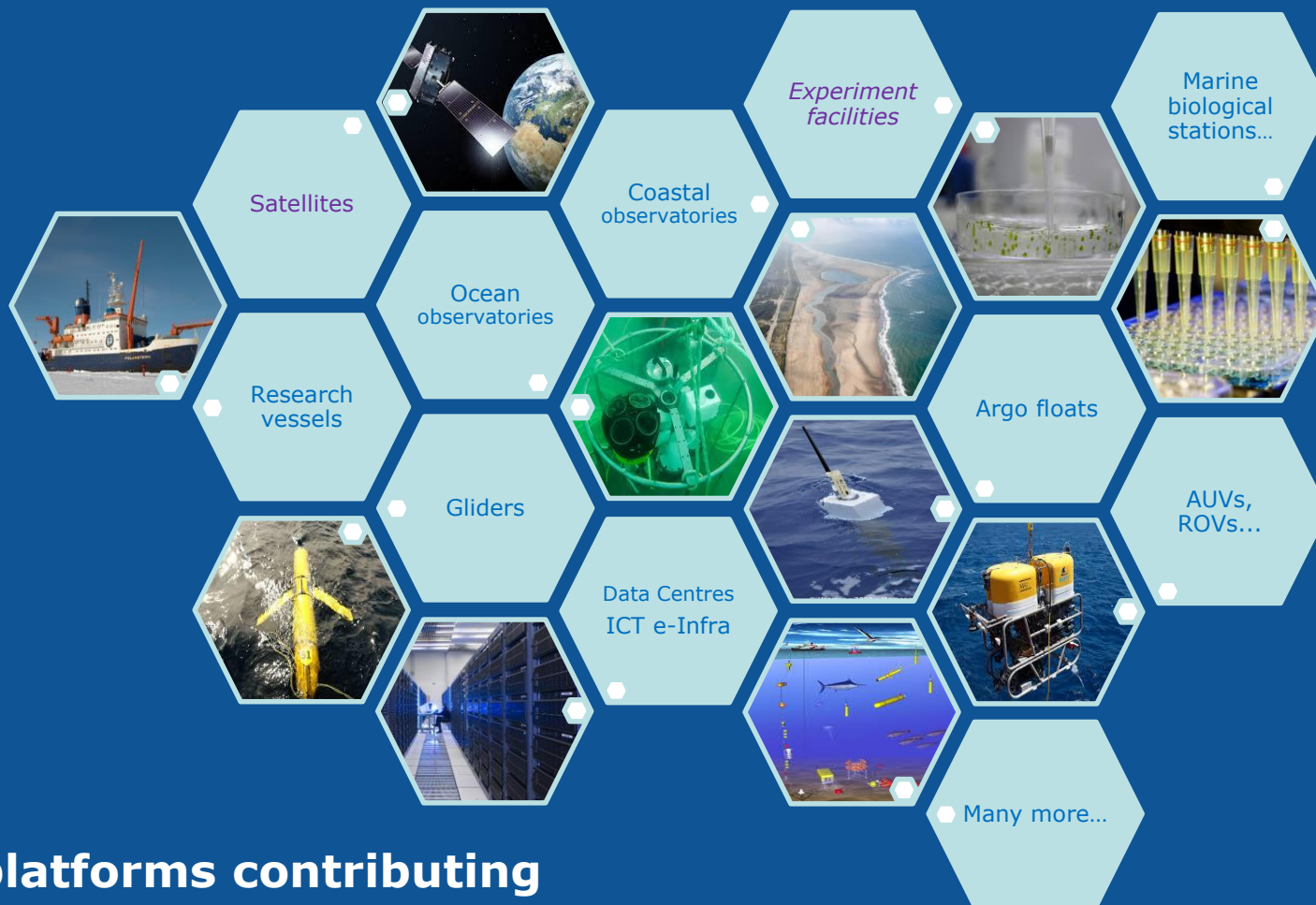
# **Ocean Observations and European Research Infrastructures**

**EurOcean  
Half-Day Conference  
Capri, 24 October 2017**

**Agnès Robin** (*remotely*)  
**Research infrastructure**  
**European Commission**



European  
Commission



**Many platforms contributing  
to Ocean Observations**



**Recent/ongoing efforts in  
integrating as network or as  
pan-European research  
infrastructures.**

## "Research infrastructures

are facilities, resources and services that are **used by the research communities to conduct research** and **foster innovation in their fields**.

**Where relevant, they may be used beyond research, e.g. for education or public services.**

They include: major scientific equipment (or sets of instruments); knowledge-based resources such as collections, archives or scientific data; e-infrastructures, such as data and computing systems and communication networks; and any other infrastructure of a unique nature **essential to achieve excellence in research and innovation**.

Such infrastructures may be *single-sited, virtual or distributed*."

*(in H2020 Work Programme)*

# "Research Infrastructures" (RIs)

*are not (only/primarily)...*

- *monitoring programmes (environmental assessment e.g. EU MSFD)*
- *data providers for operational forecast models, satellite calibration*
- *training programmes*
- *goods/services providers on existing markets ("economic activities")*
- *etc.*

*but... relevant RIs are key contributors.*

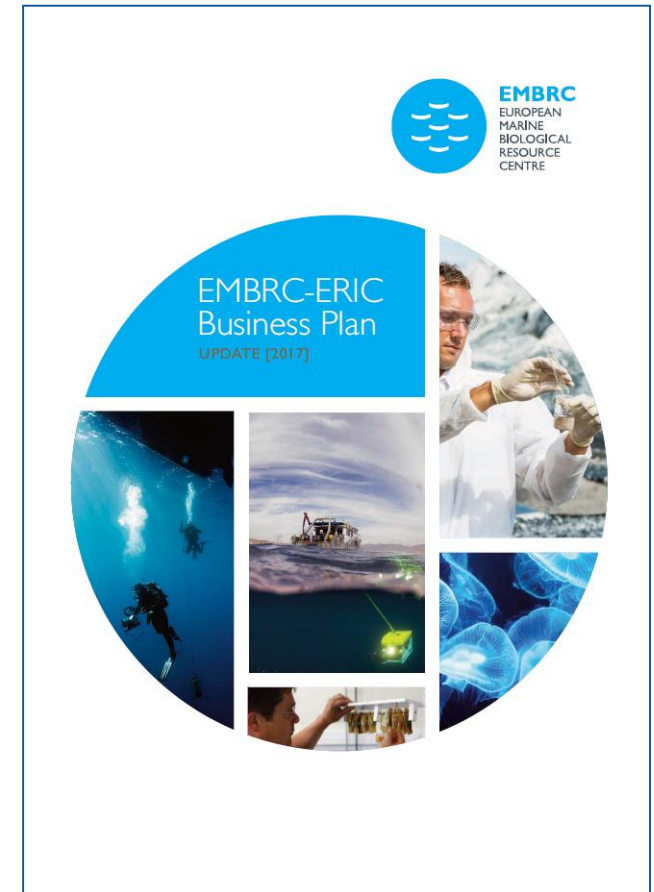
*Monitoring etc. requirements are essential parts of RIs **objectives** and **strategy**, key elements for long-term **sustainability** and duly considered as regards:*

- *User strategy*
- *Organisation, governance*
- *Data and access policy*
- *Funding framework*
- *Collaboration...*
- ***Added-value!***



## RI *Business Plan* ?

- *Example: EMBRC-ERIC (template from EIB for ERICs)*
- *for funders, policy makers, user communities, academia and industry, other stakeholders*
- *key deliverable of Preparatory Phase*
- *Updated on a regular basis*



# ESFRI 2016 Roadmap

	Energy	Environment	Health & Food	Physics & Engineering	Social & Cultural Innovation	e-RI
ESFRI Projects	ECCSEL ERIC	<b>ACTRIS</b> <sup>2016</sup>	AnaEE	CTA	<b>E-RIHS</b>	
	EU-SOLARIS (*)	<b>DANUBIUS-RI</b> <sup>2016</sup>	EMBRC (ERIC)	<b>EST</b>		
	<b>MYRRHA</b>	EISCAT_3D	<b>EMPHASIS</b> <sup>2016</sup>	<b>KM3NeT 2.0</b> <sup>2016</sup>		
	WindScanner	EPOS (ERIC)	ERINHA			
		SIOS	EU-OPENSREEN (ERIC)			
			Euro-Biolmaging (ERIC)			
			ISBE			
			MIRRI			
ESFRI Landmarks	<b>JHR</b>	EMSO ERIC	BBMRI ERIC	<b>E-ELT</b>	CESSDA ERIC	PRACE
	<i>Single site</i> <b>New</b> <sup>2016</sup> (ERIC application) *ERIC under preparation	Euro-Argo ERIC	EATRIS ERIC	ELI (ERIC)	CLARIN ERIC	
		IAGOS	ECRIN ERIC	EMFL	DARIAH ERIC	
		ICOS ERIC	ELIXIR	<b>ESRF UPGRADES</b> <sup>2016</sup>	ESS ERIC	
		LifeWatch ERIC	INFRAFRONTIER (*)	<b>Eur. Spallation Source ERIC</b>	SHARE ERIC	
			Instruct-ERIC	European XFEL		
				FAIR		
				<b>HL-LHC</b>		
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<b>SPIRAL2</b>						



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# ERICs' membership (marine related)

Established ERICs	Host country	Members	Observers
Euro-Argo ERIC	FR	DE, UK, IT, NL, EL, FI, IE, ES	NO, PL
ICOS ERIC	FI	BE, DE, FR, IT, NL, NO, SE, CZ, DK, UK	CH
EMSO ERIC	IT	IE, EL, ES, FR, PT, RO, UK	
ECCSEL	NO	FR, IT, NL, UK	
Upcoming ERIC (2017)	Host country		
EMBRC	FR		

## In "STATUTES OF Euro-Argo ERIC"

- (Article 3 - Objectives and tasks) ...and, (d) to provide quality controlled data and access to the data sets and data products to the *research* (climate and oceanography) and *operational* (e.g. Global Monitoring for Environment and Security (GMES)/Copernicus Marine Service) communities.
- (Article 4 – Activities) ...(i) maintain the links with the *research* and *operational* (including GMES/Copernicus Marine Service) user communities; ...
- (Article 27 – Dissemination Policy) 1. Dissemination of the data ...either in the 'pull mode'...; or in the 'push mode', ...(WMO) ... (GTS), ... (EMODnet), to the *Copernicus Marine Service* and to specific users upon request.

## **In preamble of "Statutes of the European Multidisciplinary Seafloor and Water Column Observatory — European Research Infrastructure Consortium (EMSO ERIC)"**

- *WHEREAS the Members desire to coordinate **long-term monitoring** of environmental processes using a **European-scale** distributed Research Infrastructure consisting of ocean observatories and platforms capable of collecting and transmitting data autonomously, to be known as the European Multidisciplinary Seafloor and Water Column Observatory (EMSO);...*
- *WHEREAS the Members request the European Commission to set up, ...(hereinafter referred to as 'EMSO ERIC'), which will form part of the **sub-sea segment of Copernicus and GEOSS** (Global Earth Observation System of Systems) and will contribute to the implementation of Directive 2008/56/EC ... establishing a framework for community action in the field of marine environmental policy (**Marine Strategy Framework Directive**);*

# EU Research Infrastructure policy

- ***Long-term sustainability*** of pan European Research Infrastructures (RIs): life cycle approach
- ***Interoperability*** - European Open Science Cloud
- EU landscape: ***integrating/opening*** RIs of European interest
- RIs for Open ***Innovation***
- ***Training*** (incl. RI managers)
- ***Global*** dimension

## More attention to...

- *Political context: **3Os** strategy, European Cloud Initiative Communication*
- ***Synergies** (e-infrastructures, other Horizon 2020/EU priorities e.g. **GEOSS, COPERNICUS**)*
- ***Long-term sustainability** (LTS)*
- ***Innovation** (larger scale initiatives)*
- *Level of **integration** ("advanced/starting" communities)*

# Sustainable European Research Infrastructures – A call for action



- *EC has launched a debate with EU Member States on establishing a European action plan*
- *EC document on key issues to be addressed*
- *Bulgarian EU Presidency: high-level conference on RIs on 22-23 March 2018*

# LTS: key issues for an action plan (1)

- ***Synchronizing** RIs national roadmaps / budgets*
- *Making RIs available more broadly (**cross-border access** schemes)*
- *Fostering links **RI – Industry** (large-scale pilots involving RIs and industry)*
- *Exploiting better **data** from European RIs*
- *Putting in place effective **governance** mechanisms at European level*



## LTS: key issues for an action plan (2)

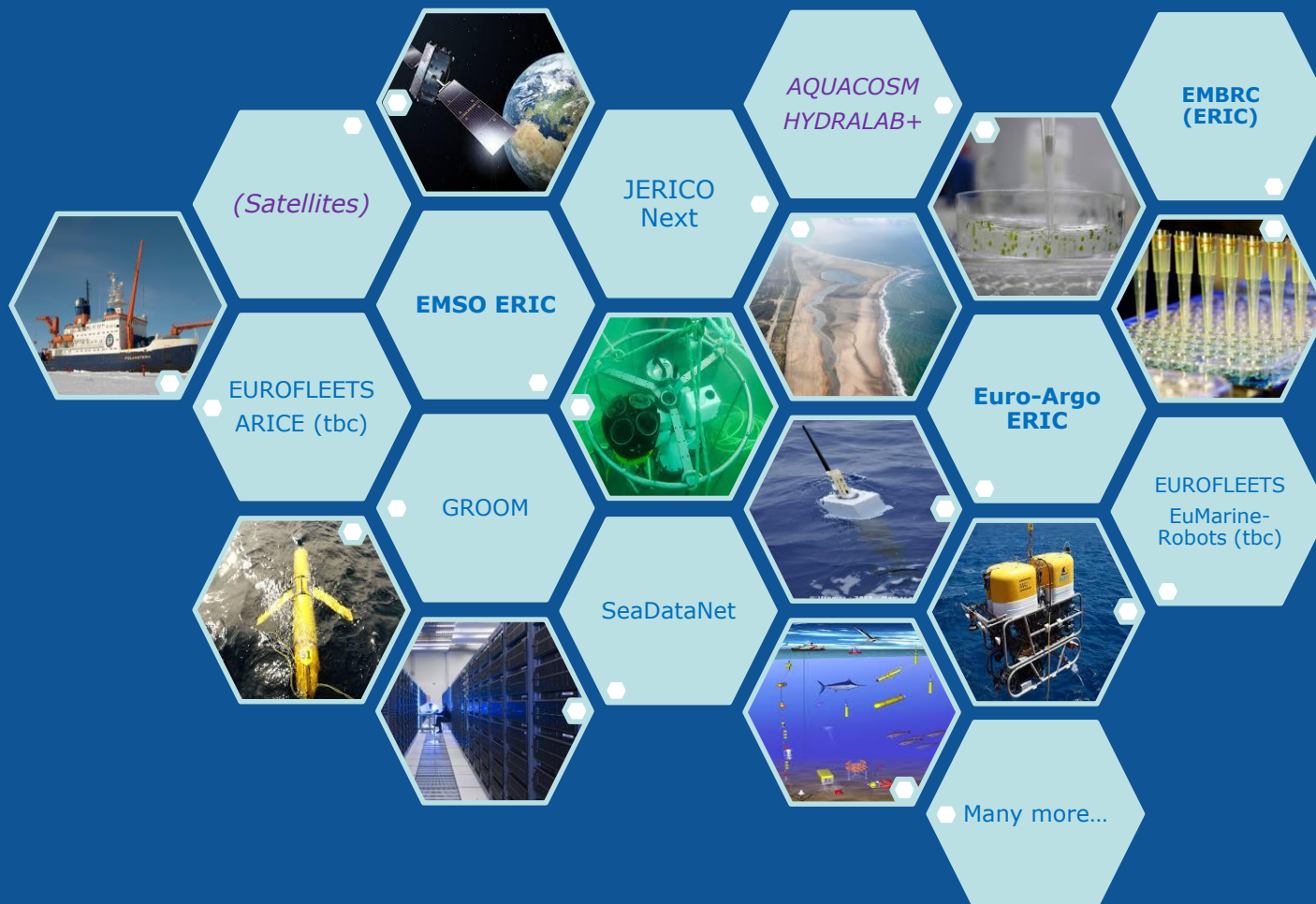
- *Making better use of the European Structural Investment Funds (**ESIF**), the European Fund for Strategic Investments (**EFSI**), and the **InnovFin** – EU Finance for Innovators programme for developing RIs*
- *Promoting the **international outreach** of RIs, using them as flagships for European science policy*
- ...

# Horizon 2020 – work programme 2018-2020

1. *Development and **long-term sustainability** of new pan-European RIs*
2. *Implementing the **EOSC***
3. ***Integrating** and opening RIs of European interest*
4. ***European Data Infrastructure** (HPC)*
5. *Demonstrating the role of RIs in the translation of Open Science into Open **Innovation***
6. *Support to **policy** and **international** cooperation*



European  
Commission





# HORIZON 2020

**Find out more:**

<http://ec.europa.eu/horizon2020>

<http://ec.europa.eu/research/infrastructures>