

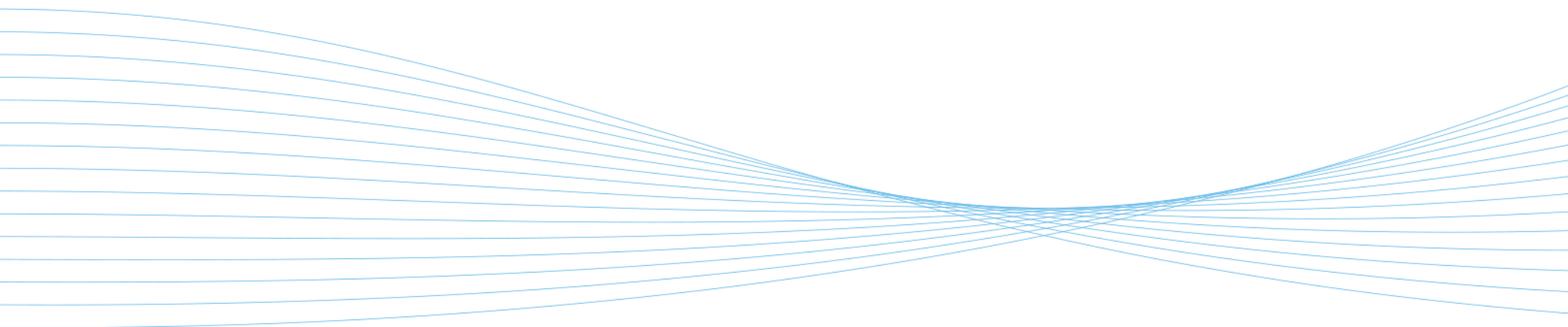


FINNISH METEOROLOGICAL INSTITUTE

Research Infrastructures

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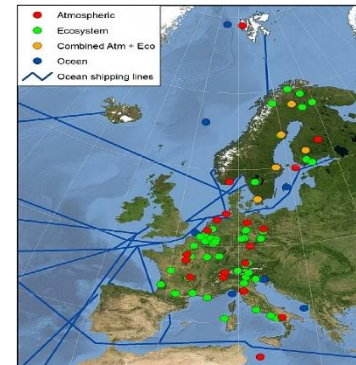
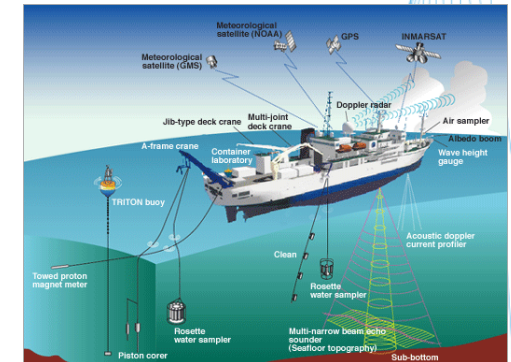
H2020 EAG member for RIs and e-RIs





Characteristics of pan-European Research Infrastructures

- Research infrastructures provide unique, high-quality research services for various user communities
- Single sited, distributed, virtual
- Green field, upgrades of existing facilities
- National and European level operations



The ESFRI roadmap

48 new - or major upgrade of - Research Infrastructures of pan-European interest

(+ 3 additional projects from the CERN Council strategic roadmap for particle physics*)

Social Sc. & Hum. (5)	Life Sciences (13)		Environmental Sciences (9)		Energy (7)	Material and Analytical Facilities (6)	Physics and Astronomy (10)		e-Infra-structures (1)
SHARE	BBMRI	ELIXIR	ICOS	EURO-ARGO	ECCSEL	EUROFEL	ELI	TIARA*	PRACE
European Social Survey	ECRIN	INFRA FRONTIER	LIFEWATCH	IAGOS	Windscanner	EMFL	SPIRAL2	CTA	
CESSDA	INSTRUCT	EATRIS	EMSO	EPOS	EU-SOLARIS	European XFEL	E-ELT	SKA	
CLARIN	EU-OPENSREEN	EMBRC	SIOS	EISCAT_3D	JHR	ESRF Upgrade	KM3NeT	FAIR	
DARIAH	Euro BioImaging	ERINHA BSL4 Lab		COPAL	IFMIF	NEUTRON ESS	SLHC-PP*	ILC-HIGRADE*	
	ISBE	MIRRI			HiPER	ILL20/20 Upgrade			
	ANAEE				MYRRHA				

Distributed research infrastructures

Single sited research infrastructures

+ many RI networks



Characteristics of pan-European Research Infrastructures (2)

- Variety of services – data, physical access, virtual research environments, innovation platforms
- Different phases: planning, construction, operations, decommissioning
- ESFRI RI implementation: mobilization of ca. 20 B€ on constructions and ca. 2 B€/yr for operations
- Diversity of funding models and business plans
- Main funding instruments:
 - **EC H2020 funding** for EU-level coordination in planning and construction phase (funding instruments in H2020 RI WP very well suitable for RI implementation)
 - **Public MS funding** for constructions and operations (ESFRI and national roadmap processes)
 - **Structural and cohesion funds** are used when ever possible, need still promotion
 - **EIB** but rarely used
 - **EFSI** potential and may be used in RI construction phase



EIB and EFSI as a RI funding instrument

- ESFRI RIs are Member State led and funded actions > public funding, either direct government budget or via research councils' budgets
- Changing of funding model is challenging (or is it even necessary?)
- Loans and risk funding could be possible when big initial investment is needed or major upgrade is planned (to balance the annual country contributions)
- Eligibility criteria? Finnish RI contributions come from universities, research institutions, Academy of Finland and Ministries (what are the statutes saying on loans?)