



HORIZON 2020

LE PROGRAMME DE RECHERCHE ET
D'INNOVATION DE L'UNION EUROPÉENNE

RESEARCH INFRASTRUCTURES

Webinar RI-LINKS2UA 12th october 2018

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What are the research infrastructures ?

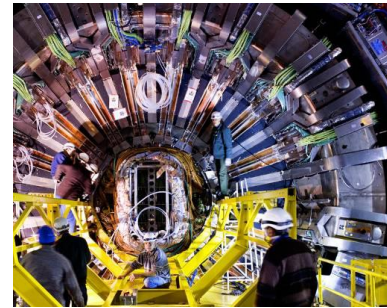
Research infrastructures are **facilities, resources and services** that are used by the research communities to conduct research and foster innovation.

RIs can be **single-sited** (a single resource at a single location), **distributed** (a network of distributed resources), or **virtual** (the service is provided electronically).

Knowledge-based resources



Major scientific equipments



e-infrastructures

Calls in the RI 2018-2020 WP

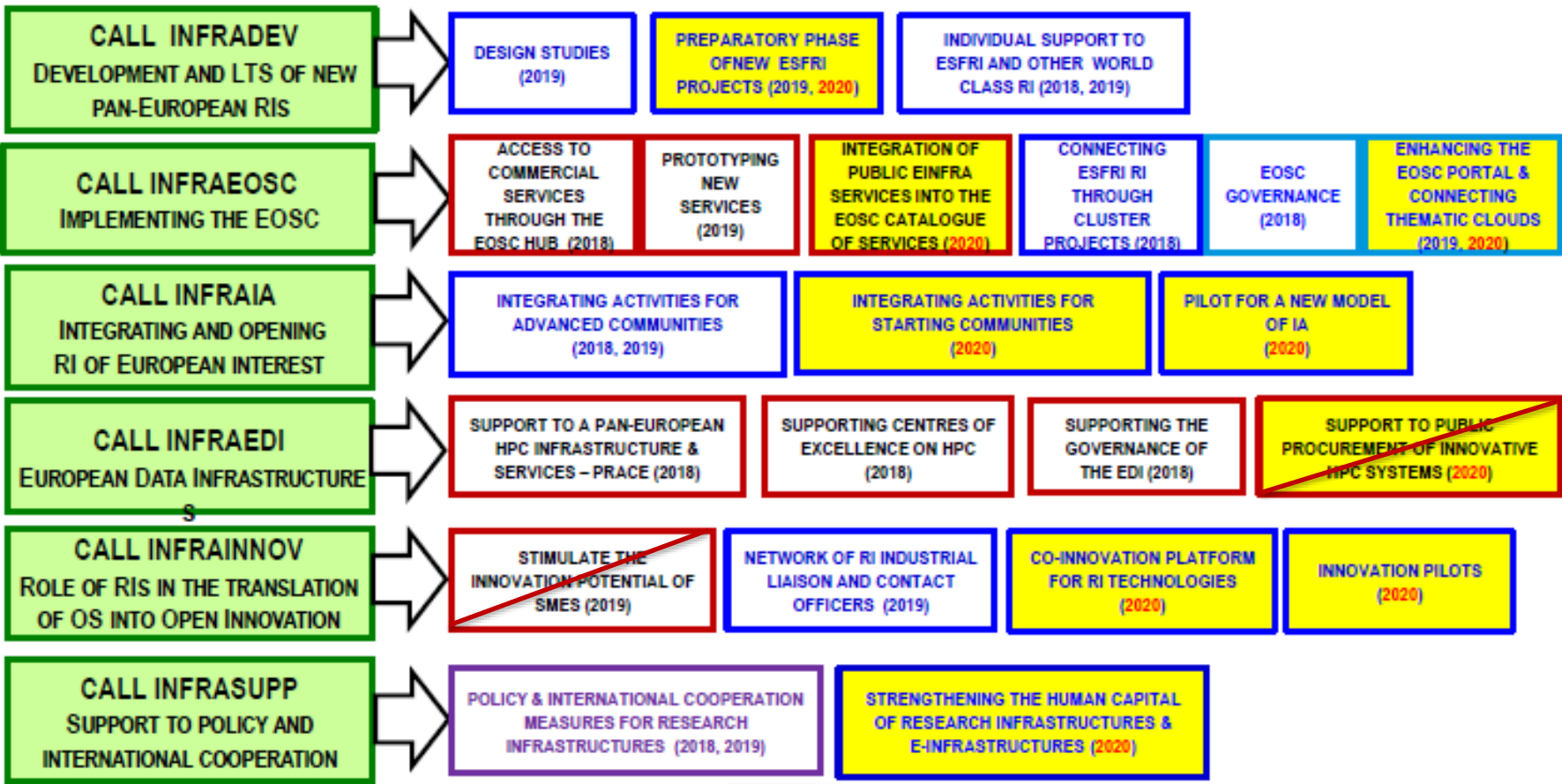
1. Development and long term sustainability of new pan-European RIs
2. Implementing the EOSC
3. Integrating and Opening RIs of European Interest
4. European Data Infrastructure
5. Demonstrating the role of RIs in the translation of Open Science into Open Innovation
6. Support to policy and International cooperation

Other Actions: GÉANT Partnership projects, Support to NCP

Around €1,1 billion to be awarded over 3 years

In a snapshot:

RESEARCH INFRASTRUCTURE Work Programme 2018-2020: 6 calls, 22 topics - EUR 1,1 billion





Call 1

Development & LTS of new pan-European RIs

To facilitate and support preparation & implementation of the ESFRI and other world-class RIs, which will help Europe to respond to grand challenges in science, industry and society.

Emphasis on long-term sustainability, on fostering the innovation potential, on data management and the connection to the EOSC


1. Design studies
2. Preparatory Phase of new ESFRI projects
3. Individual support to ESFRI & OWC RIs
4. Fast track to the implementation of an ESFRI research infrastructure : ELI

INFRADEV-01-2019-2020 - *Design studies*

Support the **conceptual and technical design** of new research infrastructures, which are leading-edge user facilities of a clear European dimension and interest:

- *Conceptual and technical feasibility of new or upgraded **research user facilities**, leading to a 'conceptual or technical design report'*
- *Need to demonstrate relevance and **advancement** wrt the state-of-art as well as the addressing of **research challenges and RI landscape gaps***
- ***Bottom-up process, only one deadline 12/11/2019** but budget over 2 years*
- *50% budget increase for the 2019 topic with respect to the 2017 corresponding topic.*
- *Budget **30 M€** - EU contribution per proposal between 1-3 M€*
- *Very competitive topic as aimed at identifying the RIs that really have the potential to become the next generation of European world-class RI*

Call INFRADEV Summary

Research Infrastructures	2018	2019	2020	Total	Single grant	Deadlines
CALL H2020-INFRADEV-2018-2020	15	100	10	125		
INFRADEV-01: Design studies		20	10	30	from 1 to 3 M€	12 Nov 2019
INFRADEV-02: Preparatory Phase		20	?	20	up to 4 M€	29 Jan 2019 end of 2020
INFRADEV-03: Individual Support	15	40		55	from 2 to 5 M€	22 Mar 2018 20 Mar 2019
INFRADEV-04: FTI ELI 		20		20		29 Jan 2019

Call 2 – Implementing the EOSC

Topic 1: Access to commercial services through the EOSC hub

2018

Topic 2: Prototyping new services

Topic 3: Integration of public pan-European infrastructure services into the EOSC basic catalogue of services

Topic 4: Connecting ESFRI RI through Cluster projects

2018

Topic 5: EOSC governance

Topic 6: Enhancing the EOSC portal & connecting thematic clouds

INFRAEOSC-02-2019

Prototyping new innovative services

To develop an agile, fit-for-purpose and sustainable service offering accessible through the EOSC hub that can satisfy scientific community evolving needs by stimulating the design and prototyping of novel innovative digital services

- **Targeting gaps** in the service offering of the EOSC catalogue of services
- The new services should address relevant aspects of the **research data cycle** (from inception to publication, curation, preservation and reuse)
- Responding initially to specific needs of particular scientific communities but in the long run they should be leveraged to become **as generic as possible**, serving a wider remit of research needs, as well as new users like industry and the public sector.
- Targeting services at **TRL 6** with the aim to reach **TRL 8** at the end of the project. Take consideration of projects funded under EINFRA-12-2017
- Indicative budget **28.5M€**, EU contribution per proposal (RIA) 5 - 6 M€

Call INFRAEOSC Summary

Research Infrastructures	2018	2019	2020	Total	Single grant	Deadlines
CALL H2020-INFRAEOSC-2018-2020	142	45.5	84	271.5		
INFRAEOSC-01: Access to commercial services	12			12	from 11 to 12 M€	22 Mar 2018
INFRAEOSC-02: Prototyping new services		28.5		28.5	from 5 to 6 M€	29 Jan 2019
INFRAEOSC-03: Integration & consolidation			79	79		mid 2020
INFRAEOSC-04: Connecting ESFRI RI through clusters	95			95	from 6 to 24 M€	22 Mar 2018
INFRAEOSC-05: EOSC governance	(a)	10		10	up to 10 M€	19 Juin 2018
	(b)	15	15	30	from 5 to 6 M€	21 Nov 2018
	(c)	10		10	up to 10 M€	19 Apr 2018
INFRAEOSC-06: portal & thematic clouds	(a)		2	2	up to 2 M€	20 Mar 2019
	(b)			5	5	mid 2020



Call 3 – Integrating and opening RIs of European interest

To open up **key** national and regional research infrastructures to all European researchers and to ensure their optimal use and joint development:

Emphasis on sustainability, widening, skills, innovation and data management in compliance with the EOSC

1. Integrating activities for **Advanced communities**
2. *Integrating activities for **Starting communities** (2020)*
3. ***Pilot for a new model** of IA : new ways for opening and integrating at EU level RIs of European interest (2020)*

INFRAIA-01-2018-2019

Integrating Activities for Advanced communities

- RI communities with an advanced degree of coordination achieved through previous IA
- Targeted approach, **one stage** calls
- Deadline: 20/03/2019.
- Budget 110 M€, up to 10 M€ of EU contrib. per GA (RIA)
- Emphasis on **novelties** with respect to previous GAs; on **widening TA / VA provision** in term of services, users, and served disciplines; on **innovation aspects**; on the contribution to a **catalogue of RI services**; on addressing the **sustainability of the integrated RI services** provided at EU level, on the adoption of the **European Charter for Access to RI**, on **data stewardship & connection** of data services and tools to the **EOSC**

Biological and Medical Sciences

- Virus collections including for high-risk animal/human/plant pathogens
- Structural biology research infrastructures for health and food research
- Nanomedicine characterisation infrastructure.
- Research infrastructures in aquaculture

Energy

- European smart grids research infrastructure

Environmental and Earth Sciences

- Research infrastructures for long-term ecosystem and socio-ecological research
- Coastal and shelf seas observing research infrastructures
- Multidisciplinary Marine Data Centres for ocean and marine data management
- Mesocosms facilities for research on marine and freshwater ecosystems.
- Research infrastructures for terrestrial research in the Arctic
- Research Infrastructures for earthquake hazard
- Research infrastructures for environmental hydraulic research.

Mathematics and ICT

- Distributed, multidisciplinary European infrastructure on Big Data and social data mining.

Material Sciences, Analytical facilities and Engineering

- Research infrastructures for advanced research in nanoelectronics.
- Advanced laser sources for leading-edge research.

Physical Sciences

- Research Infrastructures for Nuclear Physics
- Research infrastructures for high-energy astrophysics
- Research Infrastructures for planetary science.

Social Sciences and Humanities

- European research infrastructures for cultural heritage restoration and conservation.
- Contemporary European history: European Holocaust research infrastructure

Call 3 – Integrating and opening RIs of European interest (continued in 2020)

DRAFT

INFRAIA-02-2020: Integrating Activities for Starting communities

- RI Communities never supported for their integration under EU FPs
- **Two-stage call:** 1st stage 2019, 2nd 2020. **Bottom-up** approach
- Emphasis on **networking**, standardisation and **common access procedure**, **complementarity** and coherence with the existing European RI landscape

INFRAIA-03-2020: Pilot for a new model of Integr. Activities

- To explore new ways to support the opening of national/regional/ European RIs and the provision of integrated RI services at EU level
- **One stage call.** Targeted approach – 2020
- Targeting larger sets of RIs, gathering close communities, even with different degree of coordination, to develop and implement a programme focussing on **access provision and integration**

Call INFRAIA Summary

Research Infrastructures	2018	2019	2020	Total	Single grant	Deadlines
CALL H2020-INFRAIA-2018-2020	101.5	125	155	381.5		
INFRAIA-01: IA - advanced communities	101.5	125		226.5	Up to 10 M€	22 Mar 2018 20 Mar 2019
INFRAIA-02: IA – starting communities			155	155	up to 5 M€	end 2019 + mid 2020
INFRAIA-03: Pilot for a new model of IA						mid 2020

Call 4 – European Data Infrastructure

To integrates world-class HPC capability, high-speed connectivity and leading-edge data and software services

Topic 1: Support to a Pan-European High Performance Computing infrastructure and services (PRACE) 

Topic 2: Supporting Centres of Excellence on HPC that promote the use of upcoming exascale computing capabilities 

Topic 3: Supporting the governance of the EDI 

~~Topic 4: Support to Public Procurement of innovative HPC systems (2020)~~

Call 5: Demonstrating the role of RIs in the translation of Open Science into Open Innovation

Large initiatives and support measures to foster the innovation potential of research infrastructures:

- ~~1. Stimulate the innovation potential of SMEs~~
2. Network of research infrastructure **Industrial Liaison and Contact Officers**
3. *Co-Innovation platform for research infrastructure technologies (2020)*
4. *Innovation pilots (2020)*

INFRAINNOV-02-2019: *Network of RI Industrial Liaison & Contact Officers*

Support the establishment of a **network of Industrial Liaison and Contact Officers** engaged with pan-European RI, including ESFRI and other relevant world class RI of European interest

- Addressing **training session & exchange of best practises** across various research domains, enhanced cross-border and cross-thematic **brokerage events**, joint **awareness campaigns** towards industry (including SMEs), ...
- covering a wide range of scientific domains
- **portals of calls, tenders**, future needs and technology transfer opportunities per technological domain could also be developed
- Indicative budget **1.5 M€** - Coordination & Support action (CSA)

Call INFRAINNOV Summary

Research Infrastructures	2018	2019	2020	Total	Single grant	Deadlines
CALL H2020-INFRAINNOV-2019-2020		9.5	60	69.5		
INFRAINNOV-01: stimulate the innovation potential of SME		8		8	from 7 to 8 M€	25 Apr. 2019
INFRAINNOV-02: network of RI ILO/ICO		1.5		1.5	up to 1.5 M€	20 Mar 2019
INFRAINNOV-03: co-innovation platform for RI technologies			60	60		mid 2020
INFRAINNOV-04: innovation pilots						mid 2020

Call 6: Policy and International cooperation

Actions to reinforce European research infrastructures policy and international cooperation, the latter with flagship initiatives (*support to Sesame in Jordan, cooperation with Russia, EU-CELAC cooperation on RIs*).

- 1. Policy and international cooperation measures for research infrastructures**
- 2. *Strengthening the human capital of research infrastructures and e-infrastructures (2020)***

INFRASUPP-01-2018-2019

Policy and international cooperation for RI

- **(c) Research & Innovation actions (RIA) for the 2019 deadline**
 - **Cooperation with Russia:** joint research activities for the development of instrumentation between advanced Mega-science initiatives and EU facilities; joint design effort for new facilities; exchange programmes; access provision for European researchers to RU facilities
 - Budget /proposal : up to 25 M€
- **(d) Coordination & Support actions (CSA) for the 2019 deadline**
 - **EU-CELAC cooperation on RIs:** identification of priorities for regional and bi-regional cooperation, exchange of best practises, ...
 - Budget /proposal : up to 1.5 M€
- **Global budget : 27 M€**

Call INFRASUPP Summary

Research Infrastructures	2018	2019	2020	Total	Single grant	Deadlines
CALL H2020-INFRASUPP-2018-2020	12.6	27	1.5	41.1		
INFRASUPP-01: policy & INCO measures for RIs	(a)	6		6	up to 6 M€	22 Mar 2018
	(b)	6.6		6.6	up to 1.5 or 0.6 M€	22 Mar 2018
	(c)		27	27	up to 25 M€	20 Mar 2019
	(d)				up to 1.5 M€	20 Mar 2019
<i>INFRAINNOV-03: strengthening the human capital of RIs</i>			1.5	1.5		<i>mid 2020</i>

Call INFRASUPP Summary

Research Infrastructures	2018	2019	2020	Total	Single grant	Deadlines
CALL H2020-INFRASUPP-2018-2020	12.6	27	1.5	41.1		
INFRASUPP-01: policy & INCO measures for RIs	(a)	6		6	up to 6 M€	22 Mar 2018
	(b)	6.6		6.6	up to 1.5 or 0.6 M€	22 Mar 2018
	(c)		27	27	up to 25 M€	20 Mar 2019
	(d)				up to 1.5 M€	20 Mar 2019
<i>INFRAINNOV-03: strengthening the human capital of RIs</i>			1.5	1.5		<i>mid 2020</i>

How to identify European RI projects, potential partners ?

The Member States and Associated Countries develop national roadmaps for research infrastructures (RIs). These roadmaps are a tool to identify the RIs that are supported at regional and national level, and can be potential partner at European level.

Link : [ESFRI/National roadmaps](#)

The MERIL (Mapping of the European Research Infrastructure Landscape) portal provides access to a database that stores information about openly accessible research infrastructures (RIs) in Europe, across all scientific domains, including the social sciences and humanities.

Link : [MERIL](#)

RICH2020, the European Network of National Contact Points (NCPs) for RIs presents a list of all on-going projects to open their research infrastructure to transnational/virtual researchers/users.

Link: [RICH2020 – TNA &VA](#)

Thank you for your attention !

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