

# ICDI, EOSC-Pillar and the Italian contribution to EOSC

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# Open issues towards Open Science: why we need national initiatives

- In order to make Open Science a reality, higher levels of **coordination between RIs and e-Infrastructures** are needed to:
  - Efficiently use **resources** (computing, storage, data, SW...)
  - Support **high-quality research**
  - **Avoid duplications** of efforts (i.e. reinvent the [same] wheel)
  - Make more efficient use **of Regional, National and EU funds**
  - Harmonise the (currently fragmented) policies **to foster and incentivize Open Science** at the organisation/national/international level
- The participation in **EOSC, EDI, EuroHPC (+AI)** require a clear and comprehensive position of the Italian Research Community
- The Italian Research Community should play a key role in providing **input to the Ministry of University, Research and Education** for the preparation of the next FP of the European Commission

# National Initiatives & the EOSC: a vision

National initiatives involving RIs and e-Infrastructures can play a key role to involve live user communities and research infrastructures in the very design of EOSC and its sustainable evolution.

Action is required:

- **At the national level**, to bring together all relevant stakeholders
- **At the international level**, to harmonise the National Initiatives and streamline the trans-national roll out of services that can be of interest of different communities distributed across multiple countries.

Having their intrinsic sustainability, the NIs can be a key element to support the development of the EOSC ecosystem, and develop into a cornerstone on which to build its long-term sustainability.

# The Italian ICDI initiative: objectives & activities

- **Sign a MoU among the Research Organisations in Italy to create a core group**
- **Develop an inclusive coordination between RI & eI**
- **Supporting the Italian Scientific Research System** by fostering synergies between RIs and e-Is at national level
- **Harmonizing Italian participation to pan-EU initiatives** to optimize available resources and facilitating prioritization and sustainability
- **Establish a national coordination** to increase the Italian capability to address and foster decision-making at EU level
- Facilitating the **harmonization and synchronization of the Italian priorities and strategies with the European context**
- **Mapping national contributions to pan-European initiatives involving RIs and e-Is**



Italian Computing and  
Data Infrastructure

# ICDI: Italian Computing & Data Infrastructure

Born as a Bottom-up initiative, it currently includes major national research organisations and several universities



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# ICDI: Italian Computing & Data Infrastructure (cont.)

ICDI brings together key RIs in Italy:

- National chapters of ERICs
- ESFRI Projects
- JRUs



# Available Resources and services

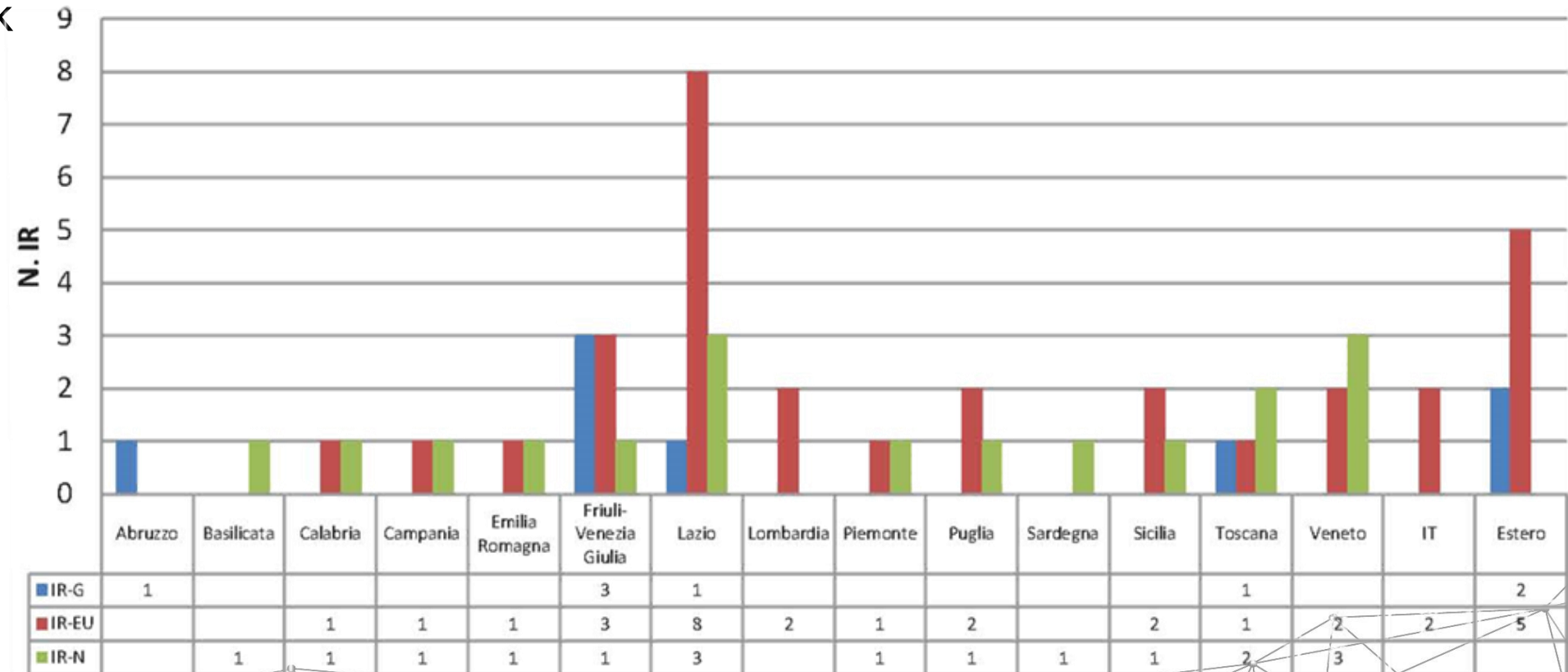
- High Speed Research and Education Network (GARR)
- Computing and Data centres in the major Research Institutes and laboratories (INFN, INAF, ENEA, CNR)
- HPC in CINECA
- Libraries and Data archives in many scientific domains: Health, BioMedicine, Agriculture, Physics, Earth Observation, Cultural Heritage, Archaeology, Geophysics, etc.
- Data infrastructure services (OpenAIRE, D4Science)
- International initiatives, e.g. Research Data Alliance
- Data Scientist Master and PhD courses (Universities)



# Available Resources and services (cont.)

The National Program of Research Infrastructures (PNIR 2014-2017) selected 56 Priority RIs out of a total of 97.

- ERICs, ESFRI and Integrated Activities Projects (e.g. EPOS, EMSO, E-RIHS, KM3NET, SoBigData, BBMRI, etc.)
- IT branches of ERICs (e.g. DARIAH, ELIXIR, etc.)
- GARR-X R&E Network





# Short List of RI in the National Program of RI

National Operative Program (PON)  
€286.094.904,00 for selected RI:

- ACTRIS-RI
- CERIC-ERIC
- DARIAH – ERIC
- DHTCS
- ECCSEL
- ELIXIR
- EMBRC
- EMSO
- EPOS
- EURO-BIOIMAGING

- ICOS
- E-RIHS6
- KM3-NET
- LIFEWATCH
- LNGS
- LNS
- SRT
- STAR

Regional Operative Programs (POR) e.g.

- Abruzzo - LNGS
- Sardinia – Sardinia Radio Telescope
- Puglia - Lifewatch

- Acronym: EOSC-Pillar
- Title of Proposal: Coordination and Harmonisation of National and Thematic Initiatives to support EOSC
- Submitted to the Call: INFRAEOSC-05 (b) Coordination of EOSC-relevant national initiatives across Europe and support to prospective EOSC service providers - Research and Innovation Actions
- 18 Partners
- Austria: University of Vienna
- Italy ICDI: GARR (Coordinator), CINECA, CMCC, CNR, INFN
- Italy: TRUST-IT
- France: CINES (Technical Coordinator), CNRS, INRA, INRIA, IFREMER, INSERM
- Germany: KIT, DKRZ, Fraunhofer, GFZ
- Belgium: University of Gent
- Total EC Contribution: € 6.880.965,00
- Start date: 1 July 2019

**Support the EOSC implementation leveraging national initiatives of the Member States (MS) and Thematic Initiatives (TI) developed by research communities** working in national and European collaborations to build a future based on Open Science and FAIR data practices

- **01 - Analyse the state of the art** of existing national initiatives and services for computing and data services in the countries involved, and **support their consolidation**
- **02 - Harmonise procedures** for the delivery of horizontal enabling services for research data across countries;
- **03 - Co-ordinate with other initiatives** to achieve harmonisation across different regions, countries, and trans-national research communities to build a truly inclusive EOSC;
- **04 - Promote the uptake of FAIR data practices and services** at national levels and across scientific communities and national borders
- **05 - Enable non-commercial trans-national services** to be accessed through the EOSC portal;
- **06 - Support the growth of an active community of stakeholders** in each involved country, who will actively contribute to the success of EOSC;
- **07 - Propose viable business models** for the sustainable provision of trans-national services.

# Work-packages

Work package No	Work Package Title	Lead Part. No	Lead Part. Short Name	Person-Months	Start Month	End month
1	Management	1	GARR	58	1	36
2	The human factor of the EOSC: Dissemination, Outreach and Community building	18	TRUST-IT	69	1	36
3	National Initiatives Survey	6	UNIVIE	80	1	36
4	From National Initiatives to trans-national services	1	GARR	89	1	36
5	The Data layer: establishing FAIR data services at the national and transnational level	15	Fraunhofer	126	1	36
6	EOSC in action: Use cases and community-driven pilots	8	CNRS	288	1	36
7	The Infrastructure layer: delivering horizontal data storage and computing services, from national to transnational	8	CNRS	119	1	36
				829		

# Conclusions

- ICDI (Italian Computing and Data Infrastructure) is a forum created by representatives of major Italian Research Infrastructures and e-Infrastructures, with the aim of promoting synergies at the national level, and optimising the Italian participation to European and global challenges in this field, including the European Open Science Cloud (EOSC), the European Data Infrastructure (EDI) and HPC
- ICDI provides the national research community with opportunities to discuss and negotiate common strategies for the participation in the EOSC and EDI, in order to optimise and coordinate the Italian contribution to these initiatives. As first actions, we mapped the Italian participation in pan-European Research Infrastructure and e- Infrastructure programmes and identified the initial contributors to the ICDI initiative
- This work aims at bringing different benefits, a) coordinate the participation to European and National initiatives; b) ensure a coherent growth of national infrastructures, c) improve sustainability by leveraging on existing human capitals, knowledges, experiences, etc., d) foster the cross-fertilization of solutions across multiple scientific domains
- ICDI is currently finalising a MoU among the major Research Organisations in Italy that are responsible for existing Research and Electronic Infrastructures
- Italian participation to EOSC-Pillar (and EOSC-Secretariat) projects has been discussed and agreed in the ICDI meetings
- The Italian Ministry of Education, Universities and Research, while joining the ICDI as Observer, is very interested in this initiative especially if it will be recognised as representative of the national stakeholders community and able of supporting the Ministry in elaborating the national positions with respect to the European initiatives under development

Thank you