ICRI 2018:

The RI ecosystem and data: complementarities and synergies –
How to effectively link cyber infrastructure and data?

The e-IRG e-Infrastructures Commons in Europe - Current Developments

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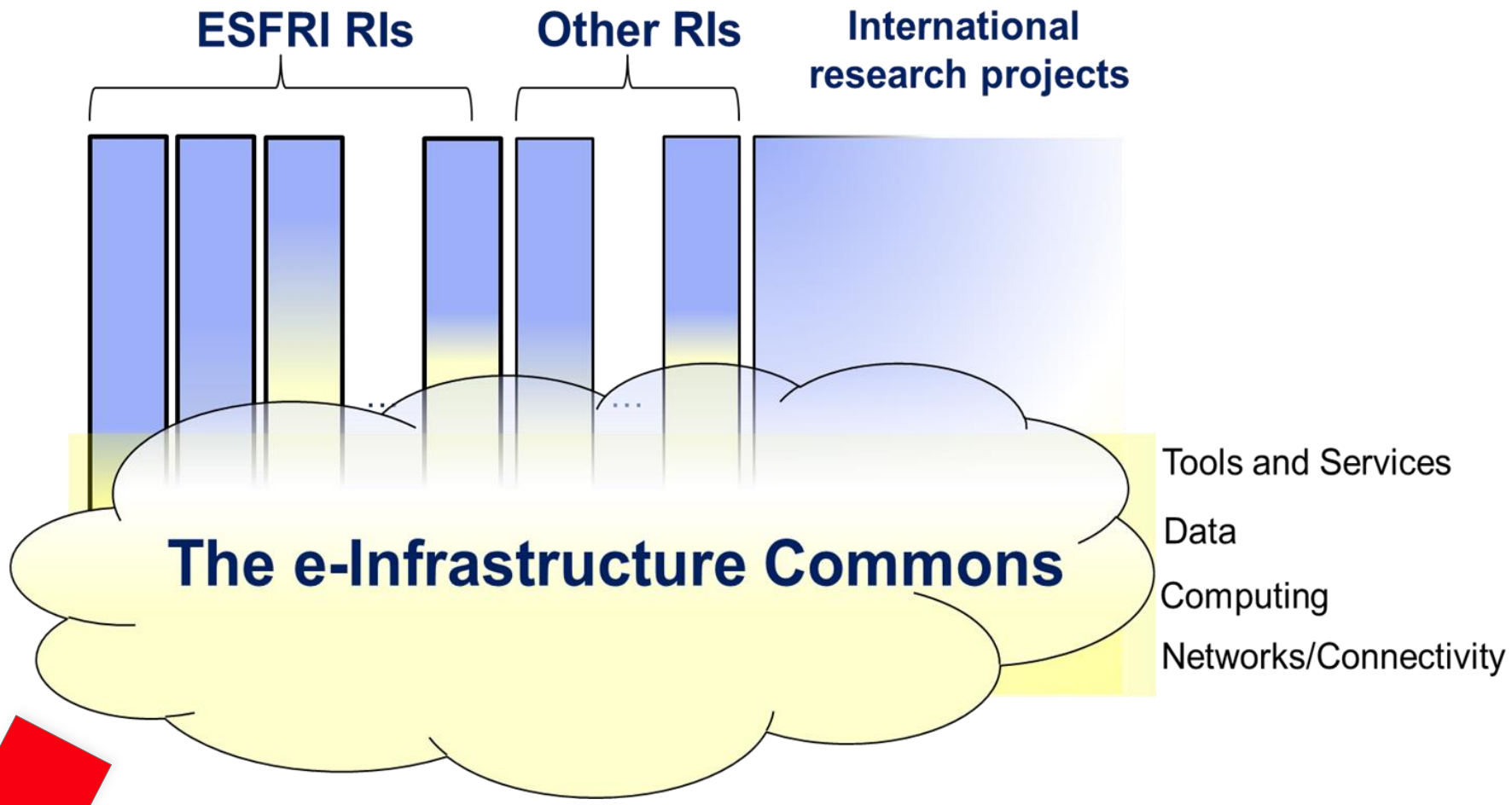
Vienna, 13th September 2018

e-IRG
e-Infrastructure Reflection Group

e-Infrastructure Commons



Innovation potential of data

- Data is the cross-section between RIs and e-Infrastructures
- RI data can be re-used to create new knowledge, new services, new products
  - with the support of e-Infras and ICT tools (analytics, machine learning, etc.)
  - Example of innovation potential: big data analytics on research data and public sector information
  - This highlights the importance of trusted data management and FAIR+R data (Findable, Accessible, Interoperable, Reusable + Reproducible)
    - FAIR (by FORCE11) and initiatives in Europe (GO FAIR, FAIR Data Expert Group,..)

Innovation in e-Infrastructures

e-Infras: combination of innovation and operational components

- e-Infrastructures should be at the edge of technology, and
- ahead of commodity/commercial services (innovation aspect), and
- provide stable, reliable, sustainable services (operational aspect)

Digital innovation hubs to be used in e-Infrastructures (EOSC/EGI – EUDAT – INDIGO-DataCloud)

- aim to bring all stakeholders together and promote innovation

e-IRG Roadmap 2016

Two recommendations are directed at national governments and funding agencies. They should reinforce their efforts to:

- *embrace e-Infrastructure coordination **at the national level** and build strong national e-Infrastructure building blocks, enabling coherent and efficient participation in European efforts, especially in alignment with the FAIR principles concerning data and services;*
- *together analyze and evaluate their national e-Infrastructure funding and governance mechanisms, identify best practices, and provide input to the development of the European e-Infrastructure landscape.*

The e-IRG National Nodes publication (work in progress)

Background:

- Follow-up of e-IRG Roadmap 2016 and its two recommendations
- These recommendations also appear in the Competitiveness Council conclusions (28/29 May 2018):
  - *"ENCOURAGES Member States to invite their relevant communities, such as e-infrastructures, research infrastructures, RFO's and RPO's, **to get organized** so as to prepare them for connection to the EOSC and CALLS ON the Commission to **make optimal use of** ongoing projects, existing expertise and knowledge available via existing initiatives, such as ESFRI, **eIRG**, GO FAIR and others"*

Scope:

- Analysis of the current status in the EU countries and develop recommendations/name good practices towards national e-Infra Commons, to ease integration at EU level

Process:

- Questionnaire via e-IRG members on the organisation of national e-Infras (including data infrastructures) and their coordination for national horizontal (generic) e-Infras and domain-specific national nodes

The e-IRG National Nodes publication (2)
Current replies

from
27 countries

Publication will be presented at the e-IRG Workshop in Vienna (20-21 Nov)
Attached to the EOSC Stakeholder Forum, EOSC launch event (21-23 Nov)

The e-IRG National Nodes publication (3)
Preliminary outcomes

- Today some countries have a single coordinating e-Infra service entity
  - data infrastructures are usually separate from computing and networking ones; sometimes even competing entities
- Access to resources (especially computing and storage) is mostly national
- In most cases horizontal data infrastructures are not available or not coordinated or organised at the domain (discipline)-level
- Large variety in governance and involvement of stakeholders (ministries, research funders, universities, research communities)

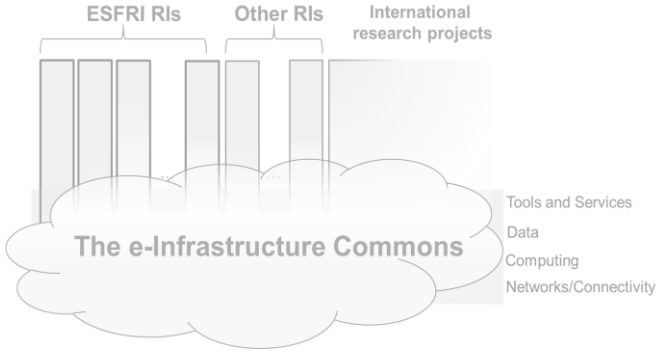
The e-IRG National Nodes publication (4)
Preliminary outcomes

- Some countries have on-going processes aiming at coordination of e-Infras initiatives and/or coordination of e-Infras and domain RIs
- Some countries describe interesting mechanisms to channel funding streams to horizontal e-infrastructures, with involvement of research communities etc.
- A few countries have good level of coordination and good data access policies
- There are examples of bottom-up multi-stakeholder coordination of both generic (network-computing-data) and domain-specific ones
  - As part of a forum with the corresponding ministry as an observer
- **Best practices for other countries!**

Conclusion

On-going national/EU/international efforts for harmonizing e-infrastructures & RIs

- major role of governance and coordination
- sustainability and funding question
- data as the common currency between e-Infras &RIs
  - quality, trust, management and handling in connection to FAIR+R data
- EOSC, EuroHPC and the connected initiatives
  - Easy access for researchers to all services loosely integrating compliant services from all providers; to become a marketplace!
  - The national building blocks are key for their success!



Thank you for your attention!

For further information see [e-irg.eu](e-irg.eu)

Special thanks to all e-IRG delegates contributing to this presentation

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