



THE LANDSCAPE OF  
e-INFRASTRUCTURES AND  
HOW THE ESFRI PROJECTS  
IMPACT ON IT

Strategy Report on Research Infrastructures  
**ROADMAP 2018**

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# The Landscape of e-Infrastructures and how the ESFRI projects impact on it

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# e-Infrastructure

e-Infrastructures includes

- Networks/Connectivity
- Computing (high performance computing (HPC), throughput computing, distributed computing, ...)
- Data (storage, FAIR data, archiving, ...)
- Tools and services

Note the wide (“horizontal”) scope: e-Infrastructure is needed to support all types of research and other research infrastructures



# e-Infrastructure is everywhere...

Research infrastructures and research collaborations produce an...

- ... explosion of digital data ...
- ... which should be made widely available ...
- ... to be analyzed using rapidly developing computer systems and e-science tools and techniques



# The European e-Infrastructure landscape

- **Pan-European e-Infrastructure for research (e-RIs) (all types), other research infrastructures (all types), innovation, education,...**
  - **Networks** GEANT
  - **Computing and Data** PRACE, EGI, EUDAT, GEANT, Helix Nebula, OpenAIRE (all in different ways)
  - **Tools and Services** All above (different T&S)
  - **Data Sharing** OpenAIRE, RDA (not an infrastructure...)
- **Disciplinary e-RIs, e.g. in ESFRI projects**
  - Often coordinated with the general e-RIs above at international and/or national level
- **National e-RIs**
  - This is where the bulk of resources and funding is!



## A potential risk...

**If e-Infrastructure co-ordination is not improved further, we might...**

- **build silos and miss opportunities for coherent basic e-Infrastructure services**
- **miss opportunities for cost-efficient implementation and operations**
- **miss opportunities for creating sustainable e-Infrastructures**

**This would in turn result in missed opportunities for both disciplinary and cross-disciplinary research**



# The e-Infrastructure Reflection Group (e-IRG)

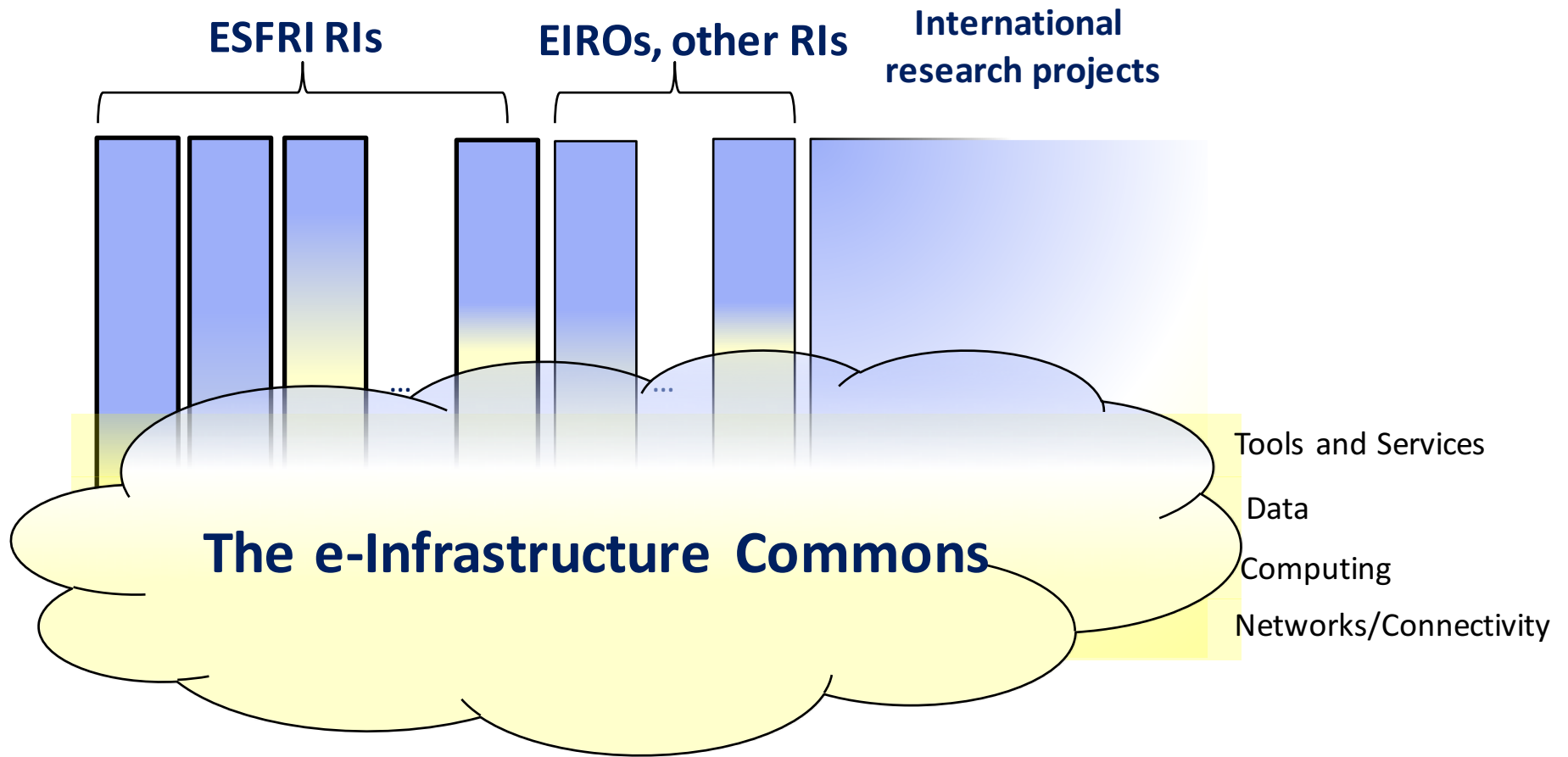
- Self-regulated independent body of national delegates founded in 2003
- facilitate integration in the area of European e-Infrastructures and connected services, within and between member states, at the European level and globally.
- support both coherent, innovative and strategic European e-Infrastructure policymaking and the development of convergent and sustainable e-Infrastructure services.
- [www.e-irg.eu](http://www.e-irg.eu)



e-Infrastructure  
Reflection Group



# The e-IRG vision for the European RI/e-IR landscape







# The e-Infrastructure Commons

**e-IRG recommendations in 2013: A single *e-Infrastructure Commons* for knowledge, science and innovation should be established ...**

- through a joint effort between users, strategic actors and e-infrastructure providers, to attain an ecosystem in which ...
- users enjoy the freedom to easily choose and use the services they need, so that ...
- they can focus on doing of science, in (international) research collaborations.

**e-IRG recommendations in 2016: Research infrastructures and research communities should reinforce their efforts to:**

- elaborate on and drive their e-Infrastructure needs;
- participate in the innovation of e-Infrastructure services;
- contribute to standards and take care of their data.

**(e-IRG Roadmap 2016: [e-irg.eu/documents/10920/12353/Roadmap+2016.pdf](http://e-irg.eu/documents/10920/12353/Roadmap+2016.pdf))**



## In practice

- **Joint ESFRI/e-IRG recommendations on data management (2013)**
  - [e-irg.eu/documents/10920/238805/BP-summary-policy-130227.pdf](http://e-irg.eu/documents/10920/238805/BP-summary-policy-130227.pdf)
- **e-IRG Delegates in the ESFRI SWGs and Implementation Group**
  - input to the ESFRI proposal format (“eNEEDS questions”)
  - review of proposals for ESFRI projects
- **These e-IRG Delegates for the e-IRG “Overarching Working Group”**
  - Will soon publish the document *Best Practices for the use of e-Infrastructures by large-scale research infrastructures* – to provide practical guidelines for ESFRI proposals