European Strategy Forum
on Research Infrastuctures

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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

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e-Infrastructure is everywhere…

Research infrastructures and research collaborations produce an…

- **… explosion of digital data …**

- **… which is should be made widely available …**

- **… to be analyzed using rapidly developing computer systems and e-science tools and techniques**

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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

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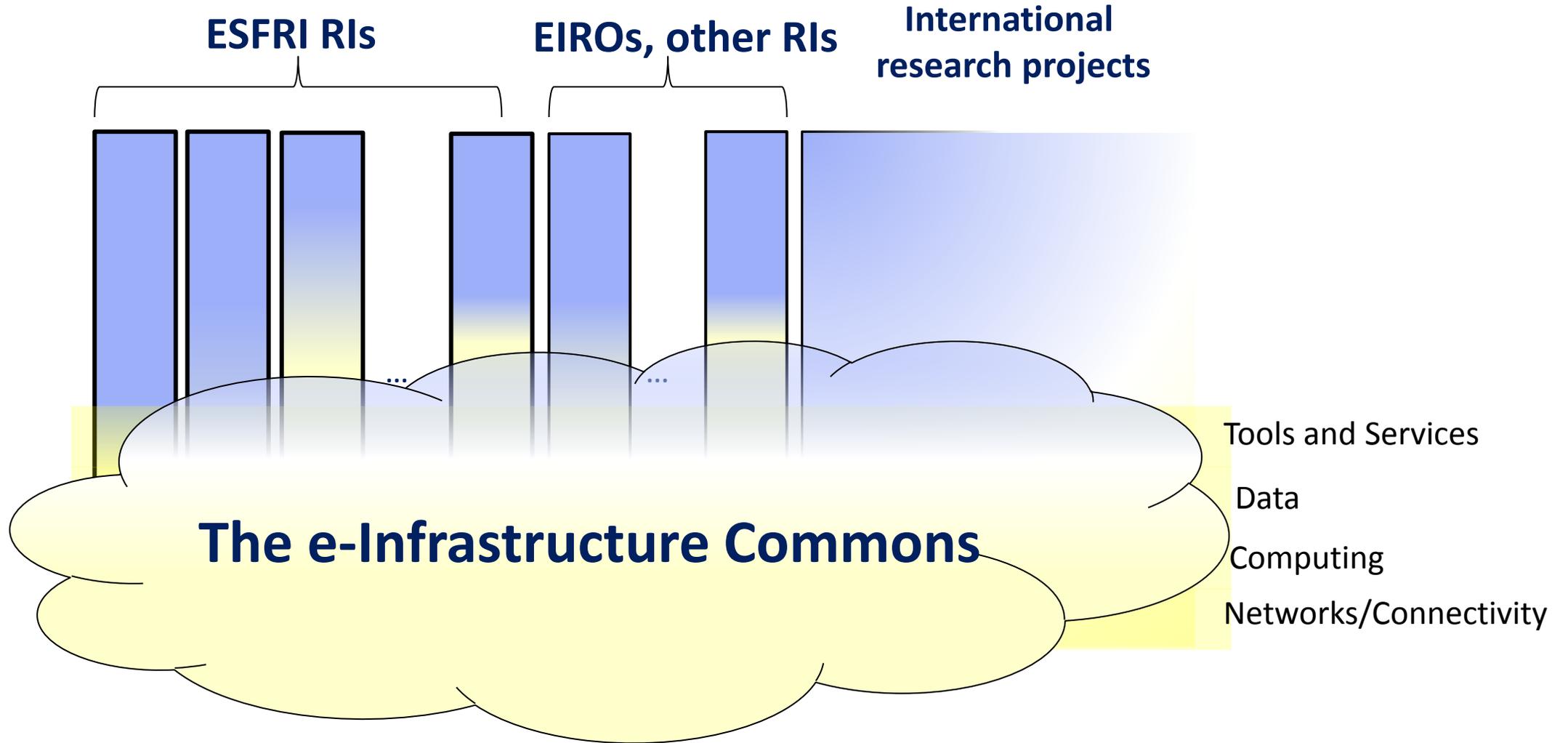# The e-Infrastructure Reflection Group (e-IRG)

- **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**

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*)

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In practice

- **Joint ESFRI/e-IRG recommendations on data management (2013)**
  - **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 from 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**