Open Science Commons for the ERA

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e-infrastructure

A few milestones

- 1980s free software moment followed by open source, open education and open access
- 1993 establishment of DANTE
- 2000 Eureopan Research Area endorsement by the European Council
  - Researchers, Technology, Knowledge circulation for a federated approach to research
- 2004 start of production activities, based on the principle of sharing of e-Infrastructure resources and transnational access
- 2006 first European Roadmap for Research Infrastructures
- 2009 ERIC community legal framework
- 2010 EGI.eu, PRACE association

Principles of the ERA

- European/international dimension of research
  - Avoid the digital divide
  - Harmonization of policies in provisioning and access
- Collaboration for the increase of
  - Capabilities
  - Capacities

ERA in 2014 – national dimension

- Incomplete national roadmaps for Research and e-Infrastructures with a few exceptions
  - Lack of e-Infrastructure capabilities for multidisciplinary research in some countries
  - Non organized landscape of multiple service providers and research communities → no coordinated service provisioning
  - Different access policies for user groups in each access
    - E.g. Long-tail of Science, SME/industry, education
- Fragmented national landscapes hinder the sustainability of infrastructures of European dimensions

ERA in 2014 – European dimension

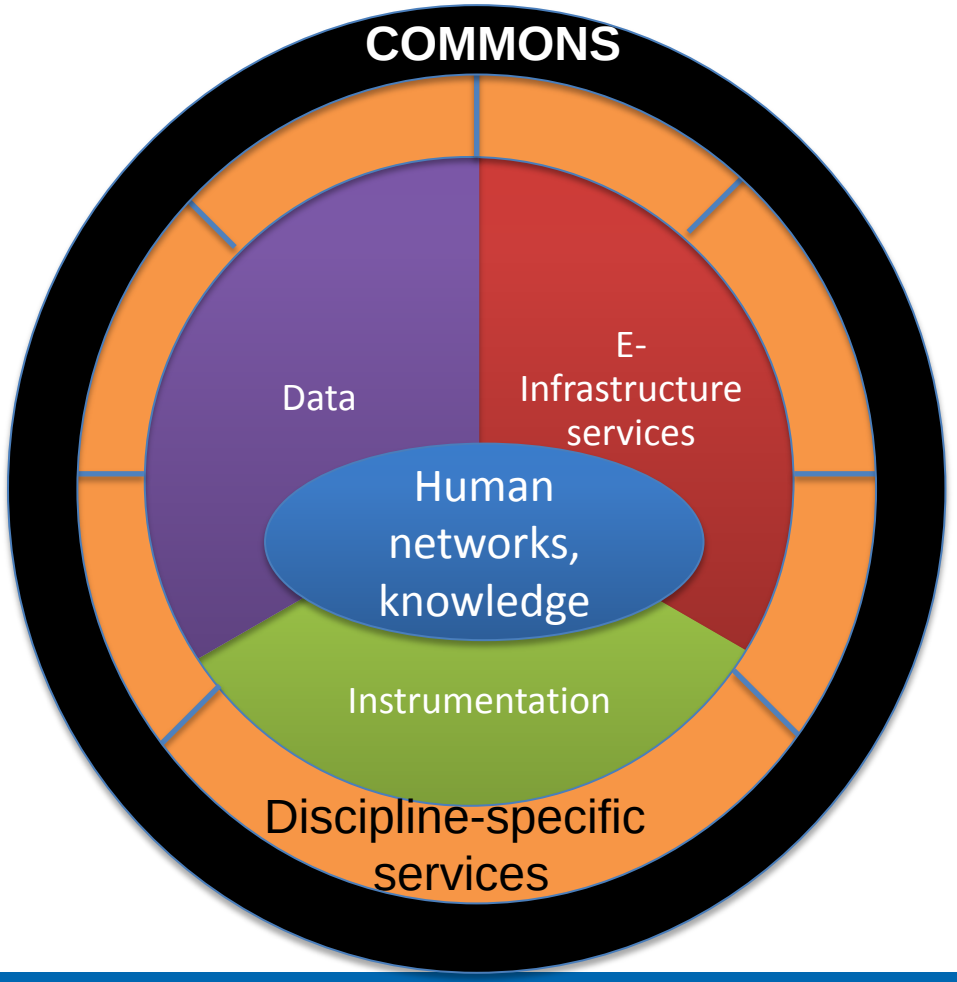
- e-Infrastructure Commons not fully achieved yet
  - Incomplete technical interoperability, different access policies
  - the “Commons” economic principle of e-Infrastructures today is only applicable with GEANT, thanks to the funding scheme that allows coordinated resource management across Europe
  - Different funding schemes for European e-Infrastructures can compromise persistency, going commercial is not a solution
- Lack of one ‘backbone’ of European ICT capabilities
- E-Infrastructures and RIs should be components of the same research system
  - Risk of unnecessary competition and duplication
  - No schemes for cross-border procurement of services
  - Co-development, user-driven development existing where bilateral agreements are in place

Vision

- *Researchers from all disciplines have easy, integrated and open access to the advanced digital services, scientific instruments, data, knowledge and expertise they need to collaborate to achieve excellence in science, research and innovation.*

How does the ERA benefit from this vision?

- The “Commons” economic principle for Open Science is applied to all the pillars of research
  - Knowledge and its human networks
  - Scientific instruments
  - ICT
  - Data



Principles 1/2

Principles of the Commons	What it means to the Open Science Commons
Shared community resources	Sharing is extended to research data, scientific instruments, digital services, software, scientific publications, educational and training, expertise
Collective rights, access with no central authority	Access modes are well defined and non-discriminatory for all members of the ERA
Community-based rules and procedures in place with built-in incentives for responsible use	Harmonised access policies, based on one market, clear points of access and support

Principles 2/2

Principles of the Commons	What it means to the Open Science Commons
Community management of communal services and resources	Formally managed services using transparent methods to maintain service access and quality. Management spans organisations to support collaboratively-provided services
Governance: The community of individuals building the commons can intervene in the governing of their interaction processes	Governance model with multiple stakeholders, including research communities, scientific infrastructures, resource providers, national and European infrastructures, etc.
Long-term, persistent care for a given resource for the benefit of oneself and others	Long-term support of funding agencies to allow for infrastructures to take a long-term view and build for a common European future

EGI strategic actions for the OSC

- Open knowledge
  - Implementation of a network of distributed competence centres for RIs and international research collaborations with the National Grid Initiatives
  - Integrated training programme with EUDAT and PRACE
- Future
  - Coordinated landscape extended to include PLAN-E, CoEs, RI and VRE support activities

EGI strategic actions for the OSC

- Open data platform on a community federated European cloud
  - Open data platform on cloud for publication of open data, data discovery, caching for use and re-use
  - Open data accessibility to SMEs and industry, business model including sustainability for data curation → big data value chain
  - Hosting of data products on cloud (IaaS, PaaS, SaaS)
- Open E-Infrastructure
  - User-driven technical integration including Ris and EUDAT partners

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  - Engagement with private sector (demand and supply)

Recommendations for e-IRG

- e-Infrastructure – RI interaction goes beyond service provisioning as these are part of the same research system to include
  - Collaboration for service co-design
  - Knowledge transfer and integrated training programme
  - Service procurement (national and cross-border)
  - Federated operations
    - In-house, IaaS, PaaS, SaaS

Recommendations for the EC

- Simulate the consolidation of national e-Infrastructures
- Capacity and capability building of a European “backbone” of
  - Data, ICT, instrumentation and knowledge
  - Governance, technonology
- Integrated actions allowing European e-Infrastructures to work with RIs

Conclusions

Open Science Commons

http://go.egi.eu/osc

- *A new approach to digital research, tackling policy challenges and coupling the "open science" and the "commons" economy as a new paradigm for knowledge creation and collaboration in research*
- *EGI invites organisations from the research landscape to join and develop these concepts, and through them to advance the implementation of the European Research Area*
- Expressions of interest to: policy@egi.eu