Overview of (some) European e-Infrastructure Projects

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UKT0 Collaboration Meeting

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Some History

- WLCG and EGI are both descended from EU DataGrid (EDG) project 2001-4
- EDG had the LHC experiments, ESA, and a biomedical collaboration as user communities
- "LCG" then focussed on the LHC
  - As WLCG now, it operates worldwide
- EGI was started (via EGEE I, II, III) with a conscious focus on supporting all sciences
- EGI (now as part of EOSC hub) provides some key services to WLCG
- EU Commission has been developing and refining its vision – and shaping the projects it supports

Essential components

- WLCG in Europe uses the EGI services
  - GGUS (tickets)
  - GOCDB (site registration)
  - APEL (accounting)
- The LHC experiments are the main users of EGI (92% of CPU work done)
- And sites focussed on the LHC are the main suppliers of EGI resources
- But WLCG tends to have its own support structures, technical working groups, etc

European Landscape

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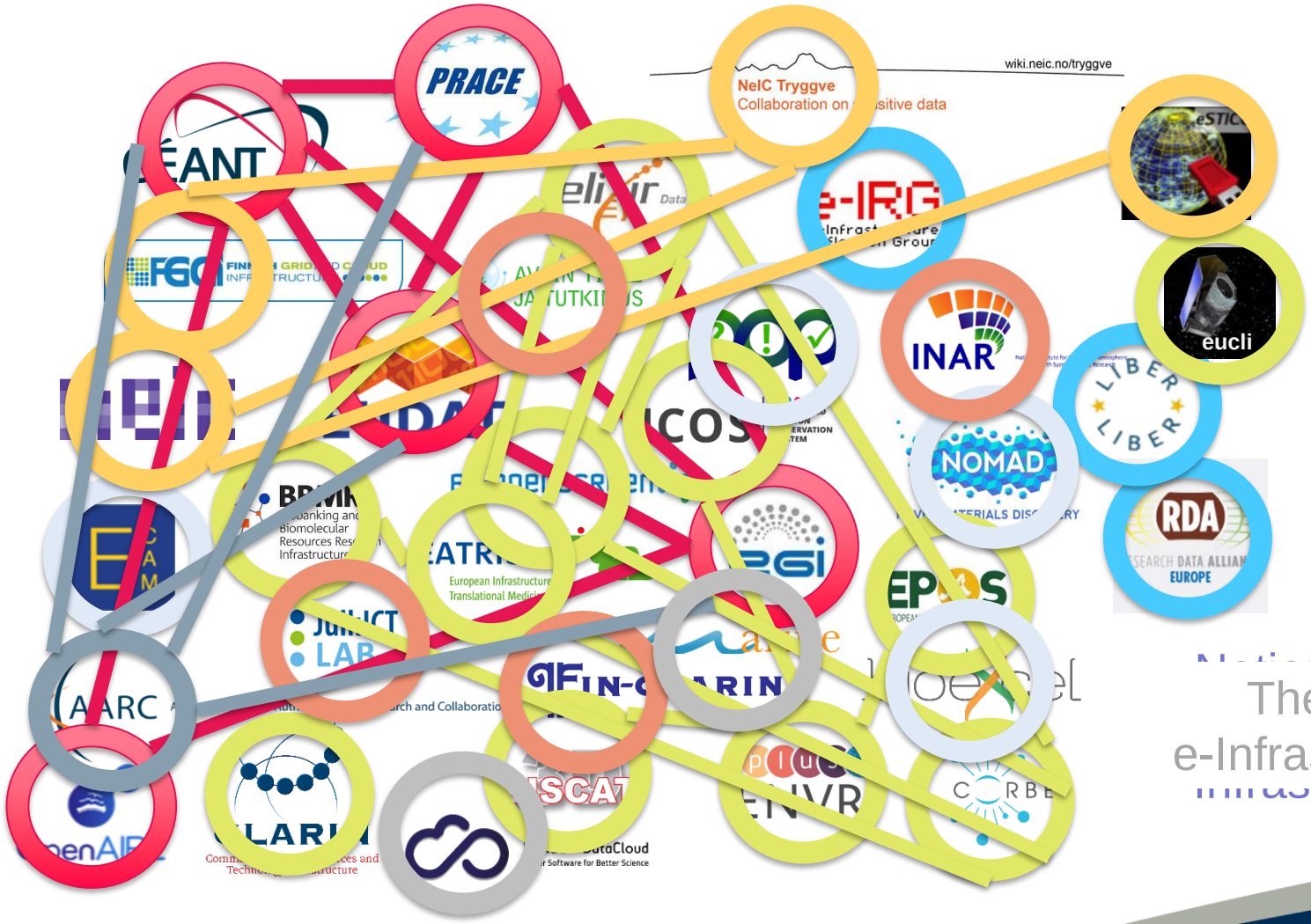
Science & Technology Facilities Council
Rutherford Appleton Laboratory



Thematic
e-Infrastructures

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European e-Infrastructures

Tools and Services

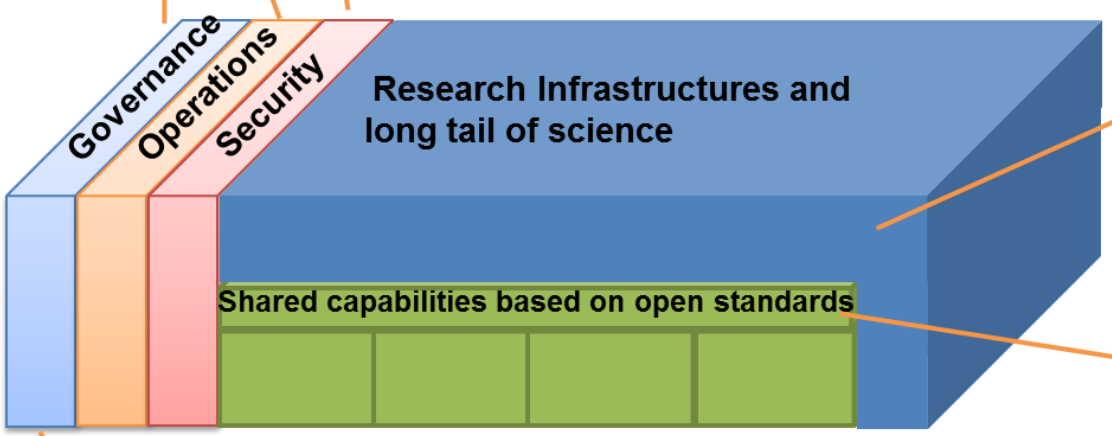
Data

Compute

Networks and Connectivity

Security and Authentication

e-Infrastructure Commons



Federated operations and support
- Service desk
- Monitoring and accounting
- Capacity management
- Service level management

- Network of CSIRT
- Federated IdPs, Auth and Authz
- Management of different levels of assurance

- Research platform built on top of shared capabilities plus community owned resources
- Data products, tools, scientific gateways, virtual labs

Core capabilities
- Open Science Cloud (e.g., VM management, Data storage/access/discovery)
- PID
- Service registry and marketplace

Multi-level governance with community participation
- Local
- National
- European

From Member States
- Capacity dedicated to large RIs
- Free pools for long tail communities

https://indico.egi.eu/indico/event/2452/session/27/contribution/48

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European Cloud Initiative, April 2016

- Building a competitive data and knowledge economy in Europe
  - to develop a trusted, open environment for the scientific community for storing, sharing and re-using scientific data and results- the **European Open Science Cloud**
  - to deploy the underpinning super-computing capacity, the fast connectivity and the high-capacity cloud solutions they need via a **European Data Infrastructure**
  - Focussing initially on the scientific community, the user base will be expanded to the public sector and to industry, creating solutions and technologies that will benefit all areas of the economy and society

Joint e-Infrastructure EOSC Vision

The Open Science Cloud offers researchers from all disciplines seamless, open access to the advanced digital capabilities, resources and expertise they need to collaborate and to carry out data- and computing-intensive science. Secure and trustworthy, the Open Science Cloud engages researchers in governing, managing and preserving resources for everyone's benefit.

http://dx.doi.org/10.5281/zenodo.32915

Implementation of EOSC

Jisc

EOSCpilot The European Open Science Cloud for Research Pilot Project	**Governance, Policy, Technical Frameworks and Architecture**	Leading on Governance and Policy Frameworks
EOSC-hub	**First Implementation**	Governance and possible funding for bringing UK services into EOSC
OpenAIRE	**OpenAIRE Advance** **Open Access e-Infrastructure**	National Open Access Desk, Metrics, extending Sherpa services into EOSC