Broadly Used e-Infrastructures

Achim Streit

E-infrastructures in Germany and Europe

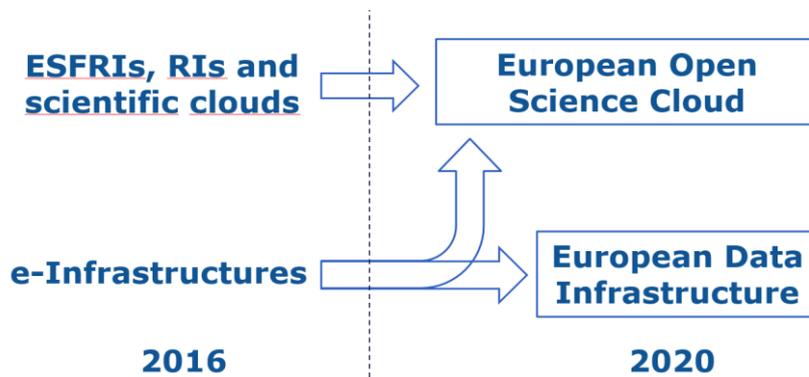|	HPC	HTC	Data	Network
Europe	PRACE	eGi, EU-TO, WLCG (Worldwide LHC Computing Grid)	EUDAT	GÉANT
Germany	Tier-structure: GCS (T1), Gauss-Alliance (T2)	– (German WLCG sites)	HELMHOLTZ Data Federation | HDF	DFN Deutsches Forschungsnetz

■ + many community specific e-infrastructures and technology providers: HBP, DARIAH, ELIXIR, INDIGO-DataCloud, AARC, RADAR, …
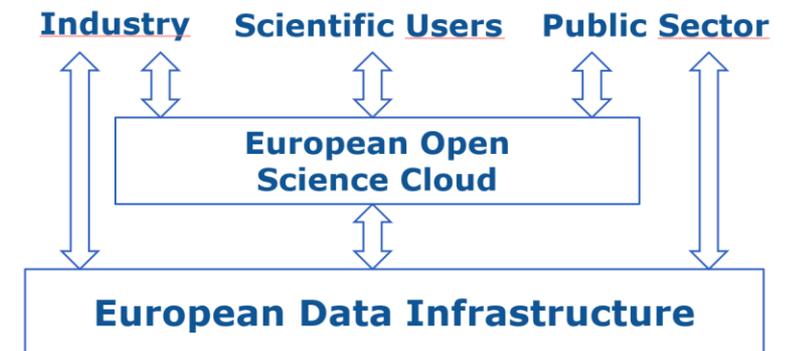
European Open Science Cloud

The European Cloud Initiative

- *European Open Science Cloud (EOSC)*
  - **Integration** and consolidation of e-infrastructures
  - **Federation of existing research** infrastructures and **scientific clouds**
  - **Development of cloud-based** services for Open Science
  - **Connection of ESFRIs** to the EOSC

- *European Data Infrastructure (EDI)*
  - **Development and deployment of large-scale** European HPC, data and network infrastructure

European Open Science Cloud (2)

- European Commission is heavily pushing towards EOSC
  - https://ec.europa.eu/research/openscience/index.cfm?pg=open-science-cloud
  - Two calls so far:
  - INFRADEV-04 → EOSCpilot project
    - Among others: KIT, DESY, MPCDF
  - EINFRA-12 → EOSChub project (starting 2018)
    - Among others: KIT, FZJ, MPCDF, GFZ, DKRZ, GWDG
    - Operation of EOSC services
- Germany
  - RfII (Rat für Informationsinfrastrukturen) proposes NFDI (Nationale Forschungsdateninfrastruktur)
    - Recommendations: http://www.rfii.de/?wpdmdl=1998
    - Discussion paper: http://www.rfii.de/?wpdmdl=2269 (community driven !)
    - BMBF call might be published soon

EOSCpilot Building Blocks

Science Demonstrators

Service Pilots

Interoperability Architecture

Defining and implementing specifications, interfaces, standards and processes to enable and underpin interoperability and sharing of EOSC data and infrastructures across disciplines and providers.

● DISCOVER MORE

Interoperability Architecture

Governance Framework

EOSCpilot Mission

☑ **Facilitating access** of researchers across all scientific disciplines to data

☑ Establishing a **governance** and **business model** that sets the rules for the use of EOSC

☑ Creating a **cross-border** and **multi-disciplinary open innovation environment** for research data, knowledge and services

☑ Establishing **global standards for interoperability** for scientific data

Steinbuch Centre for Computing