

European Universities & the European Open Science Cloud

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So far ...



EU-funded eInfrastructures landscape (The foundation of the European Open Science Cloud)





OpenDreamKit: Open Digital Research Environment Toolkit for the Advancement of Mathematics

www.opendreamkit.org



OpenMinTed-Open Mining Infrastructure for Text and Data



PhenoMeNal: Phenome and Metabolome aNalysis

www.phenomenal-h2020.eu



AARC: Authentication and Authorisation for Research and Collaboration



BlueBRIDGE: Building Research environments fostering Innovation, Decision making, Governance and Education to support blue growth

www.bluebridge-vres.eu



EarthServer2: Big Earth Data at your EDISON: B fingertips

EDISON: Building the data science profession

www.edison-project.eu

everest

www.openaire.eu



STHOR

THOR: Technical and Human infrastructure for Open Research



VI-SEEM:Virtual Research Environment (VRE) for regional Interdisciplinary communities in Southeast Europe and the Eastern Modiforranean



www.openminted.eu

READ: Recognition and Enrichment of Archival Documents

read.transkribus.eu

V R E

VRE4EIC: A Europe-wide

Interoperable Virtual Research

Environment

to Empower Multidisciplinary

Research Communities and Accelerate Innovation and Collaboration



SESAME Net: Supercomputing Expertise for Small And Medium Enterprises

www.sesamenetwork.eu



West-Life:World-wide E-infrastructure for structural biology



LEngage: Engaging the Researd Community towards an Open Science Commons

e-IRG: Paving the way towards a general purpose European e-Infrastructure

www.e-irg.eu



GÉANT Project (GN4-1):
Accelerating research, driving
Inovation and enriching education



INDIGO-DataCloud: INtegrating Distributed data Infrastructures for Global ExplOitation



www.earthserver.eu

EUDAT: European Data Infrastructure

www.eudat.eu

www.everest-eu.eu

EVER-EST: A Virtual Research

Environment for the Earth Sciences



LEARN: LEaders Activating Research Networks



MuG: Multi-scale complex Genomics

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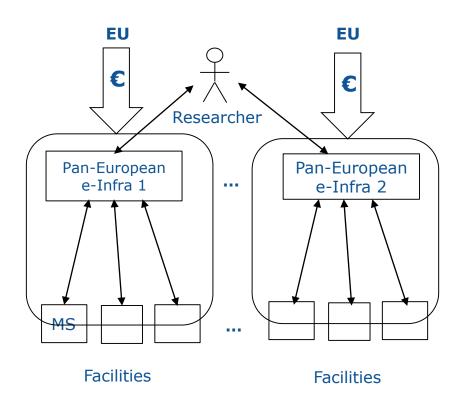


EU-funded eInfrastructures are just one part of the whole picture

- Other EU-funded research infrastructures thematically oriented
 - ESFRI projects
 - Integrating activities
 - Starting and advanced communities
- National, regional, local and institutional research infrastructures and eInfrastructures



Unique value of EU-funded eInfrastructures: pan-European access provision to national, regional, local and institutional facilities





But ...

Research in an increasing number of disciplines is becoming data-driven and computing-intensive



Why Europe is not yet fully tapping into the potential of data?

- Data coming from publicly funded research is not always open due to lack of clear incentives
- Lack of general framework for the reuse of data
- Lack of data interoperability
- **Fragmentation** of data infrastructures (geographic, thematic, technological, governance)
- Offer does not match demand in world-class High Performance Computing (HPC) infrastructures

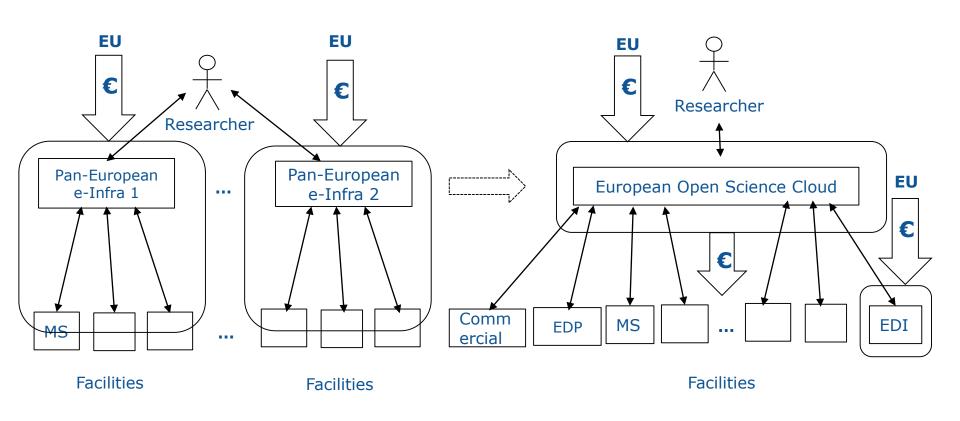


The European Cloud Initiative

- 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
- Widening access
 - SMEs, Industry at large, Government



Users, suppliers and access channels



TODAY FUTURE