



Supporting European e-Infrastructure service providers to join the European Open Science Cloud

European Open Science Cloud Governance & Funding Workshop

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DG CNECT - European Commission

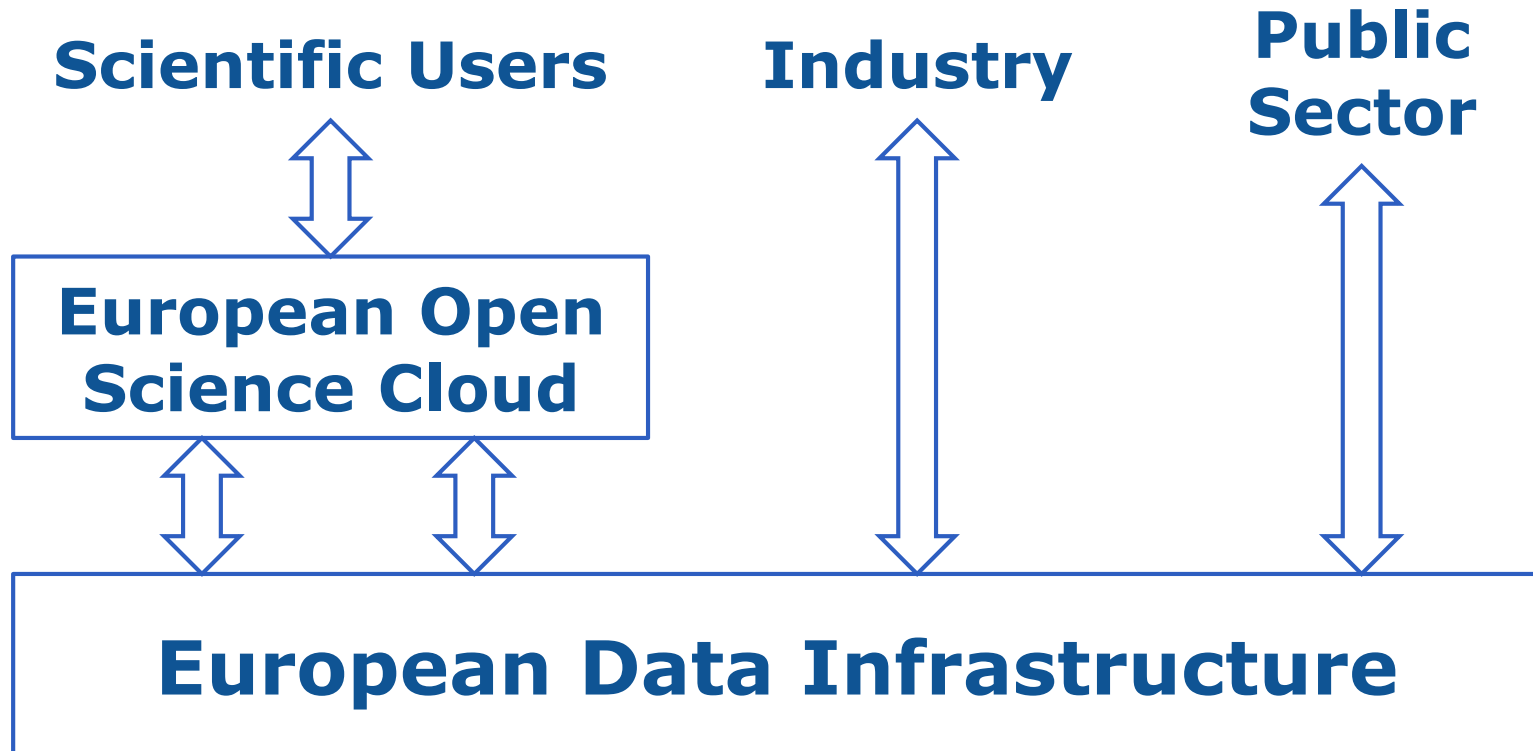
Why Europe is not yet fully tapping into the potential of data?

- *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*

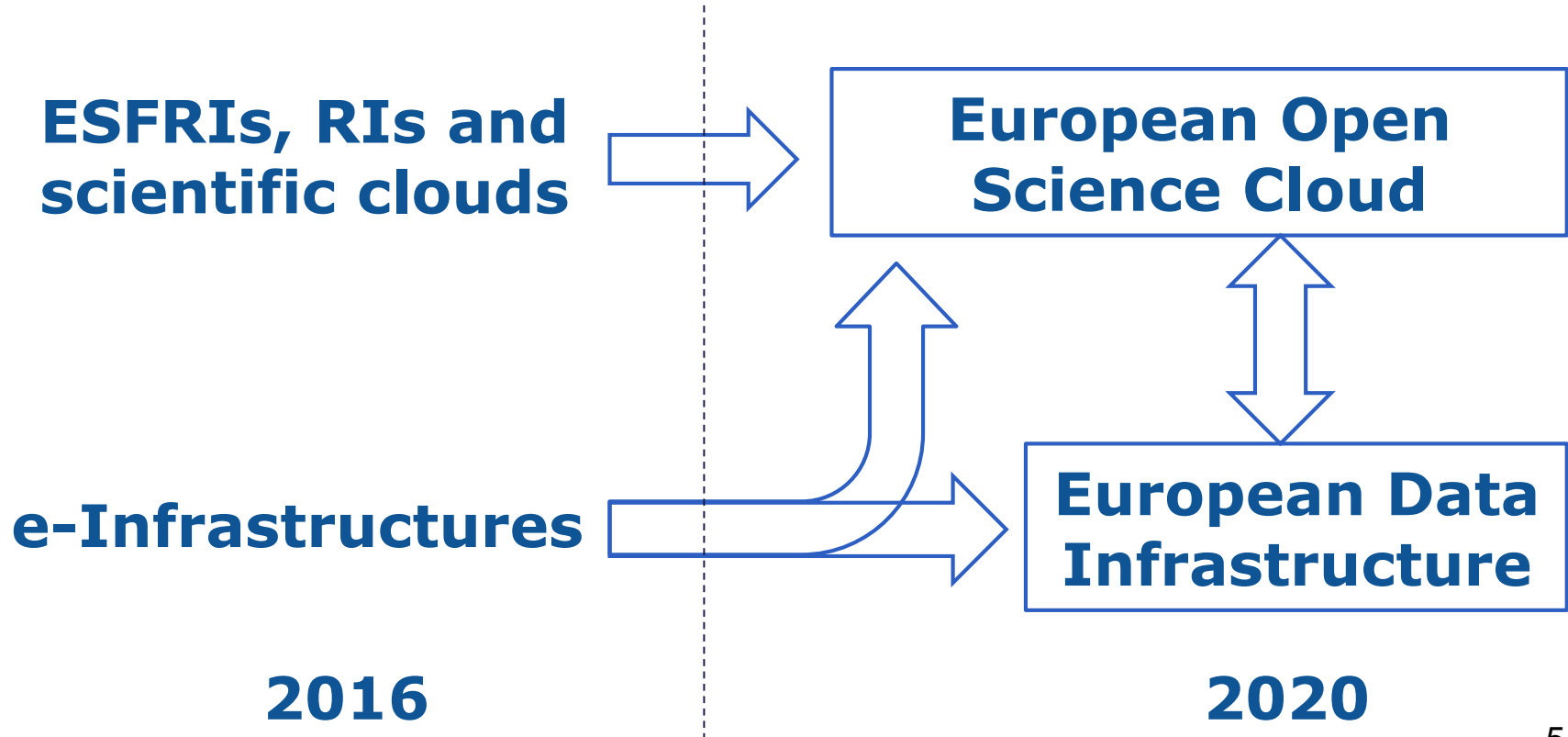
The solutions proposed in the European Cloud Initiative communication

- *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*
 - **Development and deployment of large-scale European HPC, data and network infrastructure**
- *Widening access*
 - **SMEs, Industry at large, Government**

Static View on Year 2020 (over-simplification)



Dynamic View from 2016 to 2020 (over-simplification)



In short ...

The European Open Science Cloud will encompass data, computing and networking **services** for the benefit of whole scientific community

... and Horizon 2020 is accelerating the implementation of the European Open Science Cloud

*By supporting European e-Infrastructure
platforms and projects to become
European Open Science Cloud **service**
providers*

Contribution of e-Infrastructure (H2020 Excellence in Science)

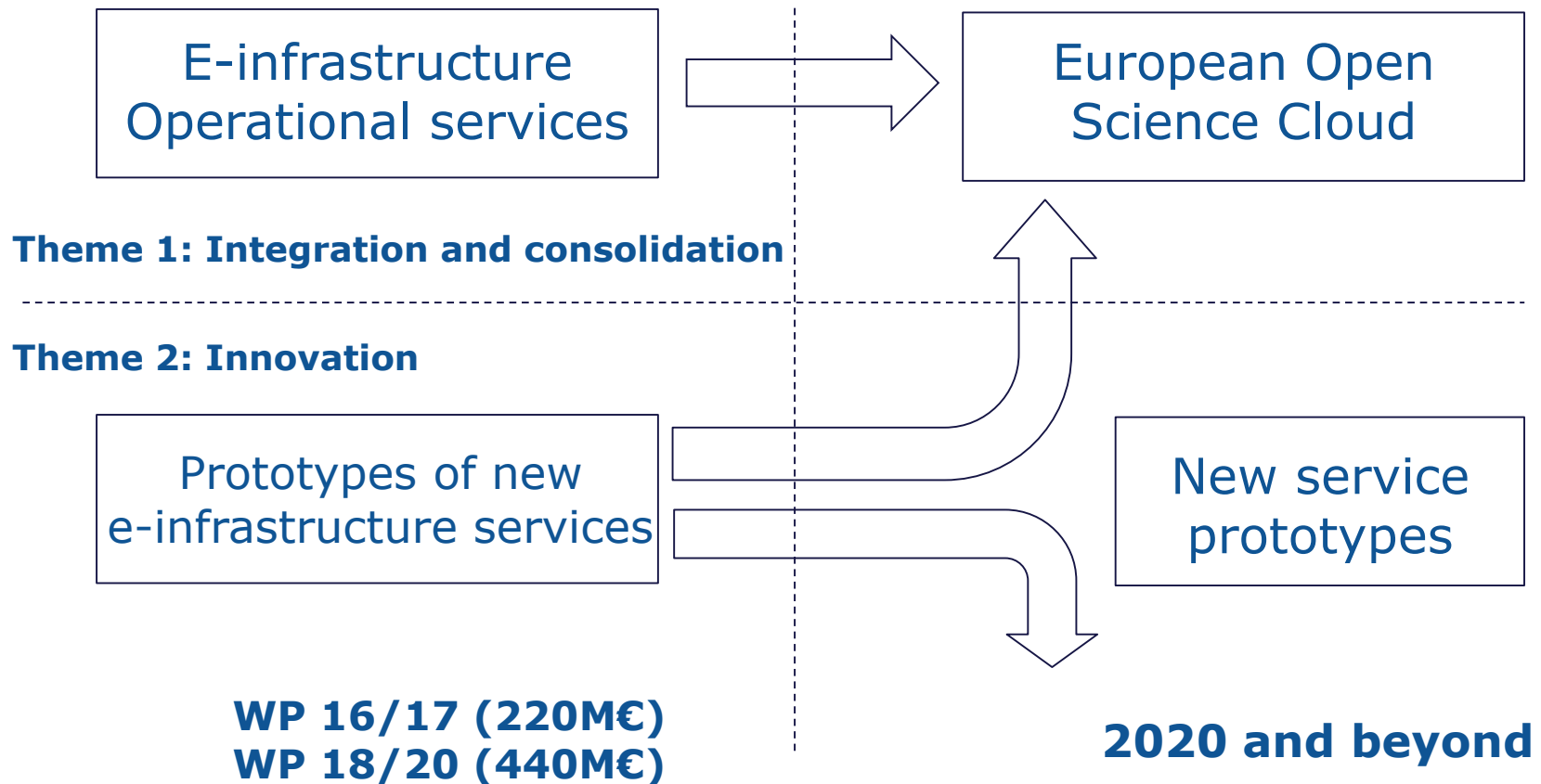
Theme 1:

**Integration and
consolidation of
e-infrastructures
services**

Theme 2:

**Prototyping of
innovative e-
infrastructure
services**

Interplay between Theme 1 and Theme 2: a dynamic view



e-infrastructures are the foundation of the European Open Science Cloud

E-INFRASTRUCTURES:
MAKING EUROPE THE BEST PLACE
FOR RESEARCH AND INNOVATION.



<https://ec.europa.eu/futurium/en/content/e-infrastructures-making-europe-best-place-research-and-innovation>



AARC: Authentication and
Authorisation for Research and
Collaboration

www.aarc-project.eu



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
fingertips

www.earthserver.eu



EDISON: Building the data science
profession

www.edison-project.eu



EGI-Engage: Engaging the Research
Community towards an Open
Science Commons

go.egi.euengage



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

www.e-irg.eu



EUDAT: European Data
Infrastructure

www.eudat.eu



EVER-EST: A Virtual Research
Environment for the Earth Sciences

www.everest-eu.eu



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



INDIGO-DataCloud: Integrating
Distributed data Infrastructures for
Global Exploitation



LEARN: LEadersActivating
Research Networks



MuG: Multi-scale complex Genomics



European
Commission



OpenAIRE: Science set free

www.openaire.eu



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

www.opendreamkit.org



OpenMinTed- Open Mining
Infrastructure for Text and Data

www.openminted.eu



PhenoMeNal: Phenome and
Metabolome Analysis

www.phenomenal-h2020.eu



PRACE: Partnership for Advanced
Computing in Europe

www.prace-ri.eu



RDA: Research Data Alliance

www.rd-alliance.org



READ: Recognition and Enrichment
of Archival Documents

read.transkribus.eu



SESAME Net: Supercomputing
Expertise for Small And Medium
Enterprises

www.sesametwork.eu



THOR: Technical and Human
infrastructure for Open Research



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



VRE4EIC: A Europe-wide
Interoperable Virtual Research
Environment
to Empower Multidisciplinary
Research Communities and
Accelerate
Innovation and Collaboration



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

Successful governance and funding mechanisms are already in place ...

Pan-European e-infrastructures with specific governance and funding models

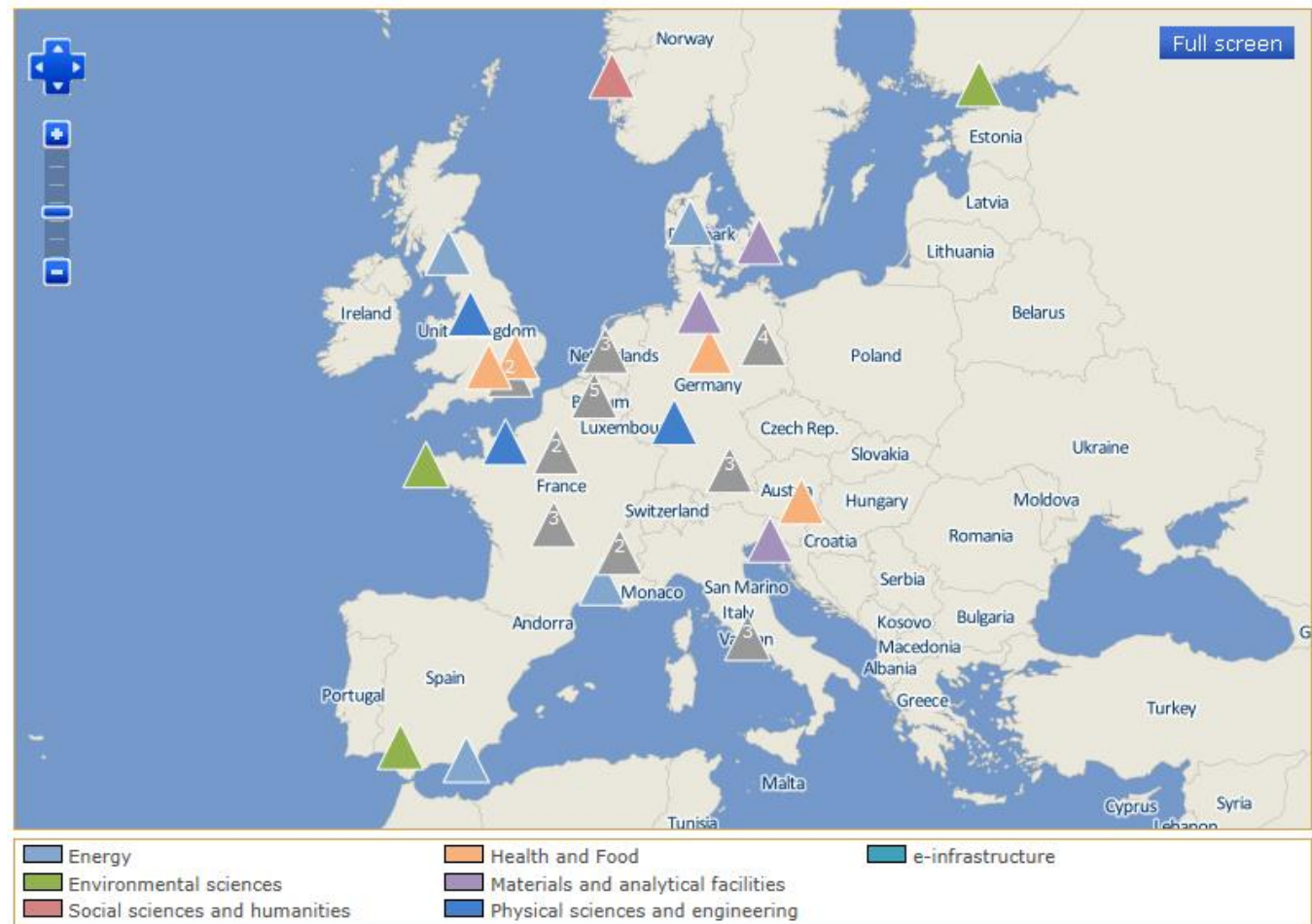


Europe's Leading Public-Private Partnership for Cloud

The Helix Nebula Initiative is a partnership between industry, space and science to establish a dynamic ecosystem, benefiting from open cloud services for the seamless integration of science into a business environment. Today, the partnership counts over 40 public and private partners.



Pan-European Research Infrastructures



And to complete the picture consider also international, national, regional, local, institutional, commercial and other research infrastructures and e-infrastructures

So, with all that in mind, how should the current governance and funding mechanisms be adapted to support the:

- 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 European Open Science Cloud

Digital Single Market Technologies and Public Service Modernisation Package

- *Digitising European Industry*
 - **SWD on Advancing the Internet of Things**
- *European Cloud Initiative*
 - **SWD on High-Performance Computing**
 - **SWD on Quantum Technologies**
- *Priorities for ICT Standardisation*
- *E-Government Action Plan*

Adopted on 19 April 2016

The European Cloud Initiative is about maximising the benefit of ...

- *the use of **big data** in science, industry and public services,*
- ***access** for researchers, SMEs, industries, and public administrations in the EU **to world-class supercomputing,***
- ***secure data storage and analysis,***
- ***and reliable and high speed connectivity***

Concrete steps

- *EINFRA-22-2016 – User-driven e-infrastructure innovation (21 M€, closed on 30/3/2016)*
 - **Service development for**
 - Societal challenges
 - Innovative actors (SMEs)
 - Pan-European ID Federation
 - Support services for Open Science
- *EINFRASUPP-03-2016 – Support to policies and international cooperation for e-infrastructures (7,5 M€, closed on 30/3/2016)*
 - **SKA**
 - **Catalogue of services**
 - **Foresight roadmaps**

Concrete steps (continued)

- *INFRADEV-04-2016 – European Open Science Cloud (10 M€, closed 22 June 2016)*
 - **Research data generated by RI, such as ESFRI projects**
 - **Head and long-tail of science**
 - **Governance**
- *EINFRA-12-2017 – Data and distributed computing e-infrastructures for Open Science (€40 M€, closes 29/3/2017)*
 - **Integration and consolidation of e-infrastructure services**
- *EINFRA-21-2017 – Platform-driven e-infrastructure innovation (€20 M€, closes 29/3/2017)*
 - **Service development**

Concrete steps (continued)

- *INFRASUPP-02-2017 – Policy and international cooperation measures for research infrastructures*
- **Support to the Research Data Alliance (RDA) until at least 2020**

ICT Proposers' Days – Bratislava 26-27 September 2016

- *2 hours session on e-Infra calls*
 - **Brief presentation of call topics**
 - **Presentation by potential participants**
- *Opportunity for e-Infras, ESFRIs and RIs to meet and discuss potential co-design opportunities in the context of EINFRA-21-2017 as well as integration and consolidation opportunities in the context of EINFRA-12-2017*
- *Questions? ec-eosc@ec.europa.eu*



The Digital4Science platform

www.ec.europa.eu/d4science




#D4Science

@ICTscienceEU

@FET_EU

@FETflagships

@eInfraEU



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Excellent Science in a Digital Age

We would be happy to hear about what you expect from the European research in the field of Excellent Science; what your experiences are; what your ideas are on FET, FET Flagships, Open Science and e-Infrastructures.






[Read more about the platform](#)


Take part

Share your experiences, present your ideas, engage with other researchers and with us, and help us design our future policies and work programmes.

[Join here to take part](#)

What's New


-  discussions
Trans-national and Virtual Access
-  discussions
How to set KPIs that work
-  discussions
'devops' in the context of e-infrastructures
-  discussions
e-Infrastructures WP2016-2017: are you ready for the TRLs?
-  library item
Expectations for the HPC Centres of Excellence - EXDCI and HPC CoE meeting



Blog

Welcome to the Digital4Science platform!


I am delighted to announce the launch of the Digital4Science platform, set up to stimulate conversations on Excellence in Science and its activities around the Open Science Cloud, e-infrastructures, High Performance Computing, Future & Emerging Technologies and the FET flagships. Discussions have been launched on all these topics and are just waiting for you to enrich the debate.



Thierry Van der Pyl

The #D4science hashtag is born!


Please use the #D4science hashtag for all your conversations linked to the Digital4Science platform. It will enable all of us to follow the streams. Thank you!



stephanie matt

Let's talk e-infrastructures!

Welcome to Digital4Science, a virtual space for dialogue open to all in the fields of Open Science, Future and Emergent Technologies, and e-Infrastructure. For those particularly interested in e-Infrastructure, let me briefly tell you how we intend to trigger the first conversations. We would like to focus on two main areas: 1) co-operation between projects and 2) being ready for workprogramme...



Augusto Burgueño Arjona

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