



# EOSC

## European Open Science Cloud

<https://ec.europa.eu/research/openscience/>

2018-06-04, Sigve Haug, Nordugrid Conference 2018, Munich

# Overview

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- Declaration
- Projects
- Roadmap

## **Take home**

Lorem

# EOSC Declaration October 2017

## Some 60-100 signatories (2018)

- 5-6 pages output from EOSC summit June 2017
- Organisations like CERN, EGI, ELIXIR, SKA, NeIC, GEANT, EUDAT, ...
- Data culture and FAIR data
- Research data services and architecture
- Governance and funding



# EOSC in short

## Key projects (3++)



Joining/including other existing projects:



# EOSC Roadmap

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- Implementation Roadmap released March 19
- Presented at EOSChub event in Malaga April 18 by Augusto Burguenjo Arjano, head of eInfrastructures and Science loud, EC DG CONNECT/C1
- Following slides mostly taken from there

# Open Science

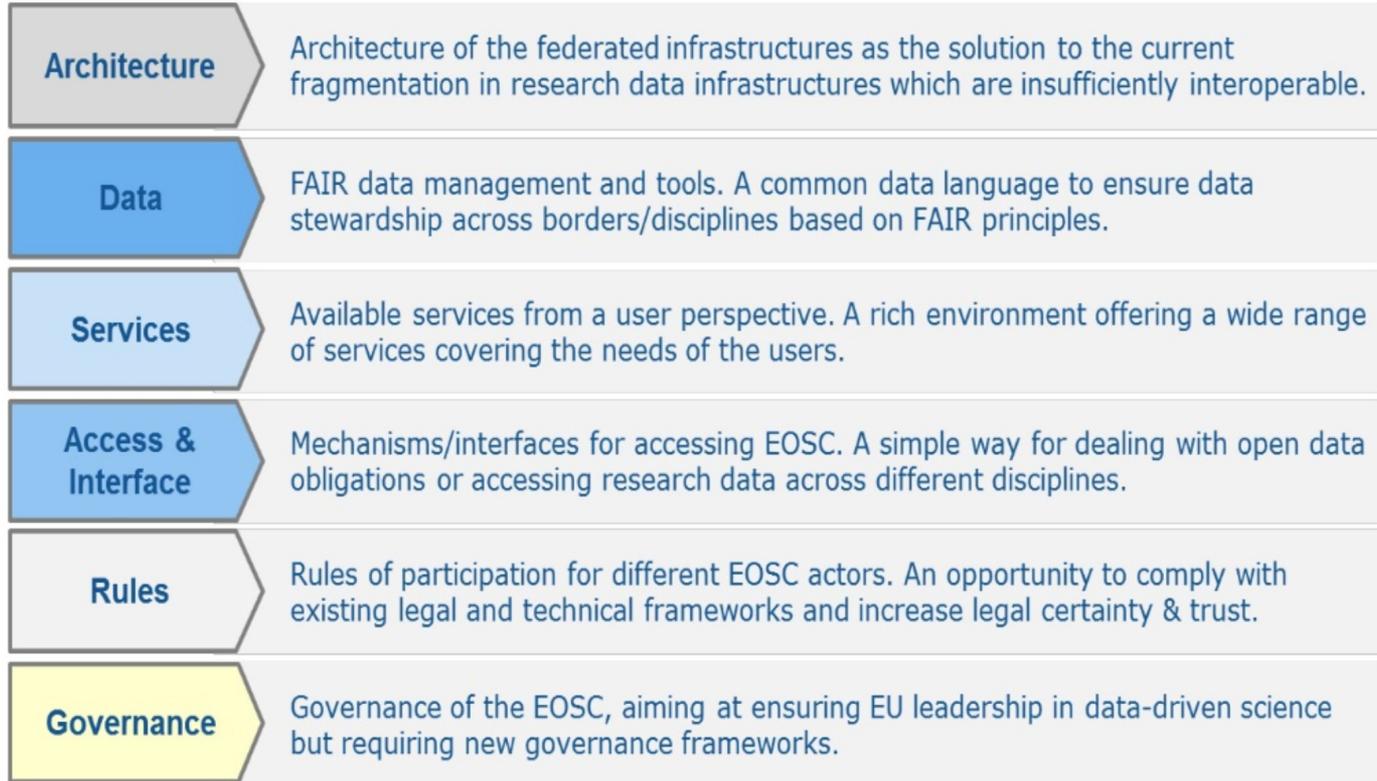
## P

- Open Access
- Open European Science Cloud
- Open Science Policy Platform
- Open Science Policy Monitor

## N

- M

# Actions line in the implementation roadmap



## Pan-European federation of data infrastructures

- The EOSC architecture comprises:
  1. A federating core: H2020 projects (notably the EOSC-hub) will provide an **access channel** with a number of **horizontal services** (including a portal, authentication and authorization and security access) allowing users to access the computing, data and services of pan-European and disciplinary research data infrastructures.
  2. A **large number of research data infrastructure** funded at EU, national and regional level and connecting resources and services to the core.

### **This process of federation of resources would be implemented gradually, based on simple guidelines consistent with existing good practices:**

- data infrastructures would enter the federation on a voluntary basis based on the commitment of resources and on the capacity to comply with its rules; minimum commitments would be set in the Rules of Participation;
- data infrastructures would define the extent of their own involvement in the federation, in terms of the data sets and services they would contribute to the EOSC; their commitment would be limited to these;
- data infrastructures would continue to follow their own rules outside of their specific commitments to the EOSC;
- data infrastructures would operate in the EOSC according to FAIR data principles and seek to become FAIR-accredited/certified entities;
- the structuring of the EOSC federation would occur flexibly, in response to actual needs and requests; i.e. data infrastructures that already have the capacity, commitment and added value to facilitate/coordinate EOSC operations at a geographical or thematic level could seek to become EOSC federated centres;
- the federation would entail as few constraints as needed to deliver the expected EOSC services.
- the federation process would aim to achieve economies of scale and scope

## Architecture

Starting from	Committed resources (non-exhaustive)	Action	Milestones
2018, Q1	<ul style="list-style-type: none"> <li>EOSC -hub project</li> <li>OpenAIRE-Advance project</li> <li>FREYA project</li> </ul>	Develop initial EOSC federating core including the EOSC shared resources	Q4 2019: Initial EOSC federating core in place
2019, Q1	<ul style="list-style-type: none"> <li>EOSCpilot project</li> </ul> INFRASUPP-01-2018-2019 (b3)	Develop catalogue of interested and eligible (per Rules of Participation) data infrastructures to be federated into the EOSC and identify EOSC federate centres	Q4 2019: Registry of data infrastructures of the EOSC (initial)
2018, Q4	<ul style="list-style-type: none"> <li>INFRAEOSC-04-2018</li> </ul>	Connection the research infrastructures identified in the ESFRI Roadmap to the EOSC. Support to this activity will be provided through cluster projects.	Q2 2020: Preliminary connection of most infrastructures and services to the EOSC

Identified required actions to foster the development of professional practices of research data management and stewardship in Europe:

- Developing a better **culture of RDM** and practical **skills** (including actions on incentives, rewards, skills and curricula)
- Developing **FAIR data tools**, specifications, catalogues and standards, and supply-side services
- Stimulating the **demand for FAIR data** through consistent FAIR data mandates and incentives to open data



**EOSC shared resources for data management  
covering all aspects of FAIR**

Starting from	Committed resources (non-exhaustive)	Action	Milestones
2018, Q1	FAIR data Expert Group (E03464), in consultation with stakeholders	Prepare a FAIR data Action Plan	Q3 2018: FAIR data Action Plan published
2018, Q3	<ul style="list-style-type: none"> <li>• DG RTD</li> <li>• RDA Europe 4.0</li> <li>• INFRAEOSC-05-2018-2019 (b)</li> </ul>	Define a European framework for FAIR research data	Q2 2019: European framework for FAIR research data agreed
2019, Q1	<ul style="list-style-type: none"> <li>• FREYA project</li> <li>• RDA Europe 4.0</li> </ul>	Define a Persistent Unique Identifier policy for FAIR data	Q4 2019: FAIR persistent unique identifier policy defined
2019, Q1	INFRAEOSC-05-2018-2019 (c)	Develop a FAIR data accreditation /certification scheme for repositories	Q4 2019: FAIR certification scheme available.

And in addition:

- Work on FAIR Data management and data-related skills by past and current EU funded projects
  - Including coordinated strategy by EOSC-hub and OpenAIRE-Advance: competence centres, specialised training, Open Science skills, etc.
- Standards and recommendations to ensure interoperability (e.g. RDA Europe 4.0)

## EOSC catalogue of services & datasets

1. Unique **identification and authentication** service + **access point** and routing system towards the resources of the EOSC
2. Protected and personalised **work environment/space**
3. Access to relevant **service information and guidelines**
4. Services to **find, access, re-use and analyse research data** generated by others, accessible through appropriate **catalogues of datasets and data services** (e.g. analytics, fusion, mining, processing).
5. Services to **make their own data FAIR**, to **store it** and ensure **long-term preservation**

- Initial catalogue based on the ongoing integration and consolidation of services offered by existing service providers

Starting from	Committed resources (non-exhaustive)	Action	Milestones
2018, Q2	<ul style="list-style-type: none"> <li>EOSC-hub project</li> <li>eInfraCentral project</li> <li>OpenAIRE-Advance project</li> <li>INFRAEOSC-01-2018</li> <li>INFRAEOSC-04-2018</li> <li>INFRAEOSC-05-2018-2019 (b)</li> <li>INFRAEOSC-02-2019</li> <li>INFRAEOSC-03-2020</li> <li>INFRAEOSC-06-2019-2020 (a)</li> <li>INFRAEOSC-06-2019-2020 (b)</li> </ul>	Develop <b>initial catalogue of services</b> to be provided via the EOSC (to be enriched periodically) and define delivery model(s)	<p>Q4 2018: Initial EOSC Catalogue of services accessible &amp; prototype EOSC Portal accessible</p> <p>Q4 2019: Updated EOSC Catalogue of services &amp; EOSC Portal</p>
2018, Q2	<ul style="list-style-type: none"> <li>EOSCpilot project</li> <li>EOSC-hub project</li> <li>INFRAEOSC-04-2018</li> <li>INFRAEOSC-05-2018-2019 (b)</li> </ul>	Develop <b>initial catalogue of datasets</b> accessible via the EOSC (to be enriched periodically)	Q2 2019: Initial EOSC Catalogue of datasets accessible.

## Setting out the rights, obligations and accountability of the different stakeholders

- Rules should address:
  - The use of tools, specifications, catalogues and standards (EOSC shared resources) and applicable methodologies (framework for FAIR research data)
  - Principles for regulating transactions in the EOSC (e.g. financial mechanisms and procedures, agreements/bylaws)
  - Applicable legal frameworks (e.g. GDPR, copyright, Data Security and Cybercrime, etc.)
  
- Based on the groundwork by EOSCpilot & EOSC High Level Expert Group & taking into account the established practices and current needs.

2018, Q2	Develop Rules of Participation in consultation with stakeholders	Q1 2019: Initial EOSC Rules of Participation Q4 2019: Final EOSC Rules of Participation	<ul style="list-style-type: none"> <li>• DG RTD</li> <li>• EOSCpilot project</li> <li>• EOSC-hub project</li> <li>• High Level Expert Group EOSC</li> <li>• INFRAEOSC-05-2018-2019 (a)</li> </ul>
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## Scope & basis of EOSC Governance

- The EOSC governance should support **well-defined functions**...
  - **Strategy** e.g. setting long-term orientation and priorities, deciding on compliance
  - **Implementation** e.g. setting budgetary orientations
  - **Monitoring** e.g. setting out KPI
  - **Reporting** on progress
- ... exercised within a clear and bounded **remit**, including notably:
  - European **framework for FAIR research data**
  - **EOSC shared resources**
  - **Rules of Participation**
  - **EOSC Portal**
- Based on the groundwork of the EOSCpilot project

## EOSC portal – Roadmap

- Services under the EOSC will be made accessible via an EOSC portal, based on the work developed by current projects and further support planned in Horizon2020 for the EOSC portal.
- Service providers will of course maintain their user interfaces for their own user communities

## EOSC portal – Ongoing work

- Collaborative effort building on current initiatives



- Building an engagement channel towards the EOSC stakeholders and gateway to resources and services that support activities of the EOSC actors
- Initial release: November 2018
- The EOSC portal should be progressively enriched with more services and resources and new features.



# The role of ARC ?

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