

The European Open Science Cloud (EOSC) versus the single Research Institution. Drawing the scenario at local level

Executive summary

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- a) the seminar on "*The European Open Science Cloud (EOSC) versus the single Research Institution. Drawing the scenario at local level*" held in Padova 28 August-1 September 2017, organized by the University of Padova, the Ca' Foscari University of Venice and the University of Vienna.
- b) the "*Workshop on Open Science*", Venice 4 September 2017, organized by the University of Padova, the Ca' Foscari University of Venice, the University of Vienna and the collaboration of the Italian Open Science Support Group (IOSSG)

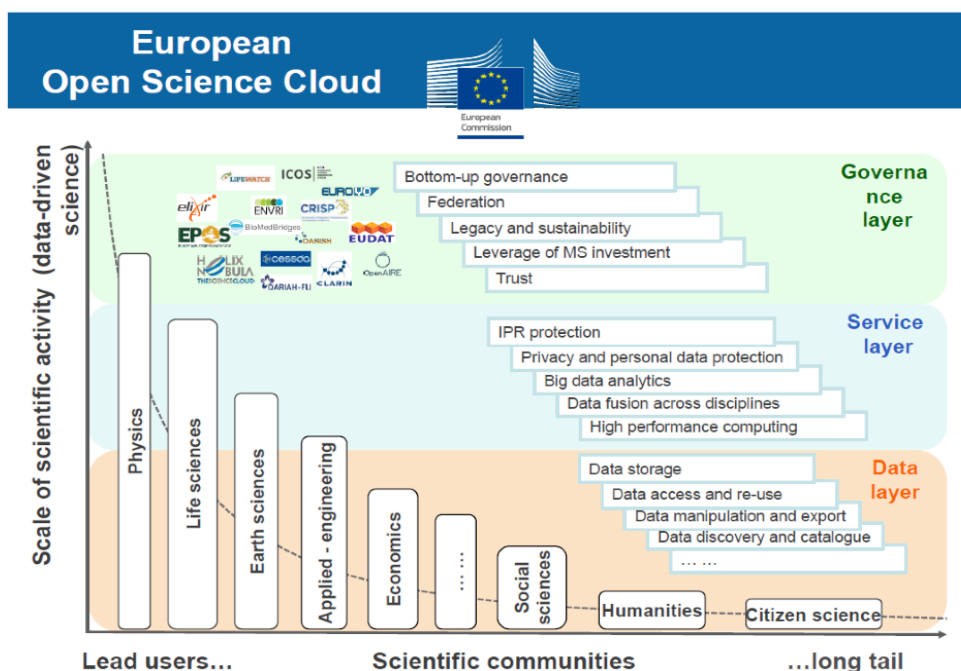
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The European Commission is promoting the European Open Science Cloud. The EOSC is not an actual cloud service, but it is a kind of **reengineering of existing e-infrastructures based on scientific data**. The EOSC is a **bottom-up process** and will be a federated environment for the **sharing and re-use** of scientific data, based on existing and emerging elements in the Member States, **with lightweight international guidance and governance** and a large degree of freedom regarding practical implementation ¹. The realization of the EOSC foresees the development of three layers: a governance layer, a service layer, a data layer. They are described in the following figure ²



As research is not an individual task, but the result of a joint effort between research and research support, the Research Institution needs to shift from vertical to horizontal thinking.

New Roles for Researchers and Research Support

The implementation of the EOSC requires the definition of new transversal processes concerning the digital workflow of research ("Digital Workflow"). These processes are distributed across the whole Research Institution. Excellent Research is accompanied by optimal Research Support.

To pave the way to the realization of EOSC at local level the Research Institution must provide a Digital Workflow to manage the research process and assure the convergence of knowledge into shared transversal services to support research.

¹ See: <http://ec.europa.eu/research/openscience/index.cfm?pg=open-science-cloud>

² Source: "Open Science policy: Results of the consultation on 'Science 2.0: Science in transition and possible follow up.'" Presented by J.C. Burgelman, Riga, June 3 2015 at a E-Infrastructure Reflection Group Reflection Group workshop

A goal of this process is the offering of advice and the concrete monitoring on cost generation and development along the entire chain concerning data production, storage and reuse, e-infrastructures, human resources development, funding, services, timing.

The key elements are:

- The Digital Workflow of research processes, to assure the compliance with the FAIR principles³ required by the EOSC
- Research Data Management Policies, regarding roles and responsibilities of Researchers, Research Support Entities and the Institution as well as Good Governance models⁴
- Data Management Plans defining data and all processes concerning their production, use and final reuse⁵
- A single reference point gathering transversal knowledge for research support involving a set of competences and skills (internal or/and outsourced).

This Reference Point is intended to be a service (internal or external). In any case the Reference Point will be able to solve questions referring to shared services, central services, cross-disciplines services.

The implementation of the EOSC at a local level will improve the visibility and the attraction of the Research Institution, contributing to improve also its ranking. Research Support entities will be called to play a major and strategic role in this process. The improved quality of training will attract further resources and more qualified personnel and students.

EOSC will be a tangible reality in 2018: start to reorganize now

1. Enhance the shift of mentality from vertical based thinking to horizontal based thinking. Create and offer new horizontal cross disciplines services. Make convergence of knowledge possible and gather efforts into Reference Points for Research Support.
2. Start Policy development and alignment at all levels, and introduce especially RDM Policies. As a further step generate and adopt Data Management Plans, supporting Data Stewardship⁶.
3. Acknowledge the increasing relevance of the roles of research support units versus the researcher community.
4. Get involved into the bottom-up processes of EOSC and participate to the networks and initiatives concerning the EOSC. Activate all stakeholders in your Research Institution for the realization of the EOSC.

All documents are available at: <http://phaidra.cab.unipd.it/o:334202>
Handle: 11168/11.334202

³ Findable, Accessible, Interoperable, Reusable/Reproducible <https://www.dtls.nl/fair-data/go-fair/>

⁴ H2020 Project LEARN www.learn-rdm.eu and the results of the working group GDL-Dati della ricerca (policies sulla gestione dei dati della ricerca – http://wikimedia.sp.unipi.it/index.php/OA_Italia/Risorse_sugli_open_research_data)

⁵ The Data Management Plan (DMP) is a structured guideline (document or online tool) which depicts the entire lifeline of data and can be updated if needed. Data management plans must assure that research data are traceable, available, authentic, citable, properly stored and that they adhere to clearly defined legal parameters and appropriate safety measures governing subsequent use. Ideally, DMPs should be delivered in a machine actionable format. See: Model Policy for Research Data Management (RDM) at Research Institutions/Institutes, <http://learn-rdm.eu/wp-content/uploads/RDMToolkit.pdf>

⁶ See: Realising the European Open Science Cloud, https://ec.europa.eu/research/openscience/pdf/realising_the_european_open_science_cloud_2016.pdf