The European Open Science Cloud
From Vision to Action

ISC seminar: The Impact of the GDPR on Collaborative Science in Europe and the EOSC
Brussels, 18 October 2016

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HoU "Data, Open Access & Foresight"
DG RTD - European Commission
The industrial revolution of our time is digital. We need the right scale for technologies such as cloud computing, data-driven science and the internet of things to reach their full potential. The EU has this scale.

Andrus Ansip
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European Cloud Initiative will unlock the value of big data by providing world-class supercomputing capability, high-speed connectivity and leading-edge data and software services for science, industry and the public sector.

Günther H. Oettinger
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The European Open Science Cloud will make science more open, efficient and productive.

Carlos Moedas
@Moedas

Digital Single Market

DigitiseEU
#DigitiseEU
#DigitiseEU
#DigitalSingleMarket
#opensem
The Commissioner's view

"Europe's final transition must be one from fragmented data sets to an integrated European Open Science Cloud. **By 2020, we want all European researchers to be able to deposit, access and analyse European scientific data through a European Open Science Cloud.**"

Speech by Commissioner Carlos Moedas in Amsterdam, NL: “Open science: share and succeed”, 4 April 2016
19 April 2016: Communication 2016/178: European Cloud Initiative

Part of DSM Strategy, with strong political support.

- 'Game-changing policy', a 'vision'
- Commissioners Moedas and Oettinger worked jointly on the 'European Cloud Initiative'
TAKES NOTE OF the Commission Communication of 19 April 2016 on a "European Cloud Initiative - Building a competitive data and knowledge economy in Europe"

ACKNOWLEDGES that Europe may benefit from a **European Open Science Cloud** that enables, amongst others, safe and long-term storage, efficient analysis, and user-friendly (re)use of research data across borders and disciplines;

CALLS on the Commission, in cooperation with Member States and stakeholders, to **explore appropriate governance and funding frameworks**, taking sufficient consideration of existing initiatives and their sustainability and of a European-wide level playing field.
Pillars of the European Cloud Initiative

1. European Open Science Cloud (EOSC)

2. European Data Infrastructure (EDI)

3. Widening access (e-government & industry) and building trust (certification and standards).
Why a European Open Science Cloud (EOSC)?

- to **federate** existing and emerging horizontal and thematic data infrastructures, effectively **bridging today's fragmentation** and ad-hoc solutions, **reducing duplication of costs**

- to provide 1.7m EU researchers a trusted environment with **cloud based services for data storage, management, analysis and re-use** of scientific data across disciplines, borders and technologies

- to **add value** (scale, data-driven science, inter-disciplinarity, innovation) and leverage current and past infrastructure investment (*EUR 10 b. per year by MS, two decades EU investment*)
Key challenges

- Lack of awareness of the value of data
- Lack of incentives for data sharing (*shift in organisational culture & HR issues)
- Lack of common data specification & protocols to build inter-operability
- Capacity for storage, HP computing, high speed connectivity & services
- Fragmentation and coordination across different scientific communities, national borders and technologies
- Changes in privacy, data protection and copyright rules - research data domain *science exception within the Copyright Directive, TDM
Key commitments in the Communication (EOSC)

To ensure appropriate governance in the EU and beyond:

→ Develop a roadmap for governance and funding mechanisms for the EOSC (early 2017) *who decides and who pays*

→ **Widen the user-base to public services and industry** in all EU Member States (e.g. ESIF)

→ **Create a global level playing field** in scientific data sharing and data-driven science.
Building the EOSC

- The European Commission (e.g. DG RTD, DG CNECT)
- OSPP - representing all sectors, including business (19 Sept 2016)
- 8 (technical) Expert Groups – notably HLEG - EOSC
- Member States (ministries & national funding agencies) – workshop on 29 June 2016
- Council - 29 November 2016 COMPET Council: first state of play on the EOSC
- EP (ITRE, IMCO) – INI Report expected in Jan 2017
- EESC, CoR and other stakeholders with advisory roles
- Discipline specific scientific communities & participants in H2020 execution (e.g. Dec 2016 – start of INFRADEV-4 project)
- Global actors (e.g. OECD, G7) - March 2017 joint workshop
Way ahead

- Roadmap with clear rules of participation in the EOSC (2016-2017)
- H2020 Open Data = default option from 2017
- Build on synergies (FP actions, regional smart specialisations strategies, ESIF…) & Federate
- Widen the participation to all scientific communities and sectors
- Strengthen the Global level playing field (OECD, G7)
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