The European Open Science Cloud: the policy

Keynote
EUDAT Conference
on EOSCRome 4-2-2016

JC Burgelman, W. Lusoli, P. Brenier

The Commissioner's view

There is a revolution happening in the way science works. Every part of the scientific method is nowadays becoming an open, collaborative and participative process.

Speech at 'A new start for Europe' Conference'

22 July 2015, Brussels

A bit of history…

- The **DSM strategy** (6 May 2015) includes a commitment to launch in 2016 a European cloud initiative, including a ‘research open science cloud’.

- Commissioner Moedas announced the ‘European Open Science Cloud’ initiative at the **Competitiveness Council** (29 May), which was well received by Member States.

- On the same date, the Council supported the initiative in its ‘Big Data' Conclusions and at the Policy Debate on Open Science.

- The initiative is now one of the Commissioner **priority actions for 2016 under 'Open Science'.**

Strong stakeholder support

- Public consultation and validation workshops on Open Science (July-December 2014);
- Final report on Open Science (February 2015);
- HLEG EOSC stakeholder workshop (November 2015);
- DSM Consultation on platforms, data and cloud (closed January 2016);
- Research funders' workshop (forthcoming in March 2016).

+ PC meetings, EAG meetings, e-IRG meetings, concertation meetings, info days, conferences, events, ...

Competitiveness Council Conclusions, 29 May 2015

Strong support for the development of a European Open Science Cloud.

- CALLS for action to **remove obstacles** to wide access to publicly funded research publications and underlying data.

- WELCOMES the further **development of a European Open Science Cloud** that will enable sharing and re-use of research data across disciplines and borders, taking into account relevant legal, security and privacy aspects.

Report of the European Parliament 'Towards a Digital Single Market Act' (19 January 2016)

124. Is concerned that cloud infrastructures for researchers and universities are fragmented; calls on the Commission, in cooperation with all relevant stakeholders, to set up an **action plan to lead to the establishment of the European Open Science Cloud by the end of 2016,** which should **seamlessly integrate existing networks, data and high-performance computing systems and e-infrastructure services across scientific fields, within a framework of shared policies, standards and investments;**

European Cloud Initiative

Part of DSM strategy – Commissioners Moedas and Oettinger working jointly on the 'European Cloud Initiative'.

Strong political support: Juncker, Ansip, Merkel, LUX Presidency, NL Presidency, EP ITRE/IMCO Report on DSM Act.

3 Parts of the 'European Cloud Initiative'

- European Open Science Cloud.
- European Digital Infrastructure.
- Widening the user base (e-gov & industry) and building trust (certification and standards).

European Open Science Cloud

A trusted, open environment for storing, sharing and re-using scientific data and results and supporting Open Science practices.

- **A virtual environment** for all European researchers to store, manage, analysis and re-use data.
- **Strongly stated needs**: cost-effective, user-driven, privacy and IPR-conscious.
- **Bringing together** existing and emerging data infrastructures.
- **Added value**: scale, data-driven science, inter-disciplinarity, data to knowledge to innovation.

European Open Science Cloud

- The cloud will **federate** existing and emerging horizontal and thematic data infrastructures, effectively **bridging todays fragmentation and ad-hoc solutions**.

- It will provide 1.7m EU researchers an environment with **free, open services for data storage, management, analysis and re-use** across disciplines.

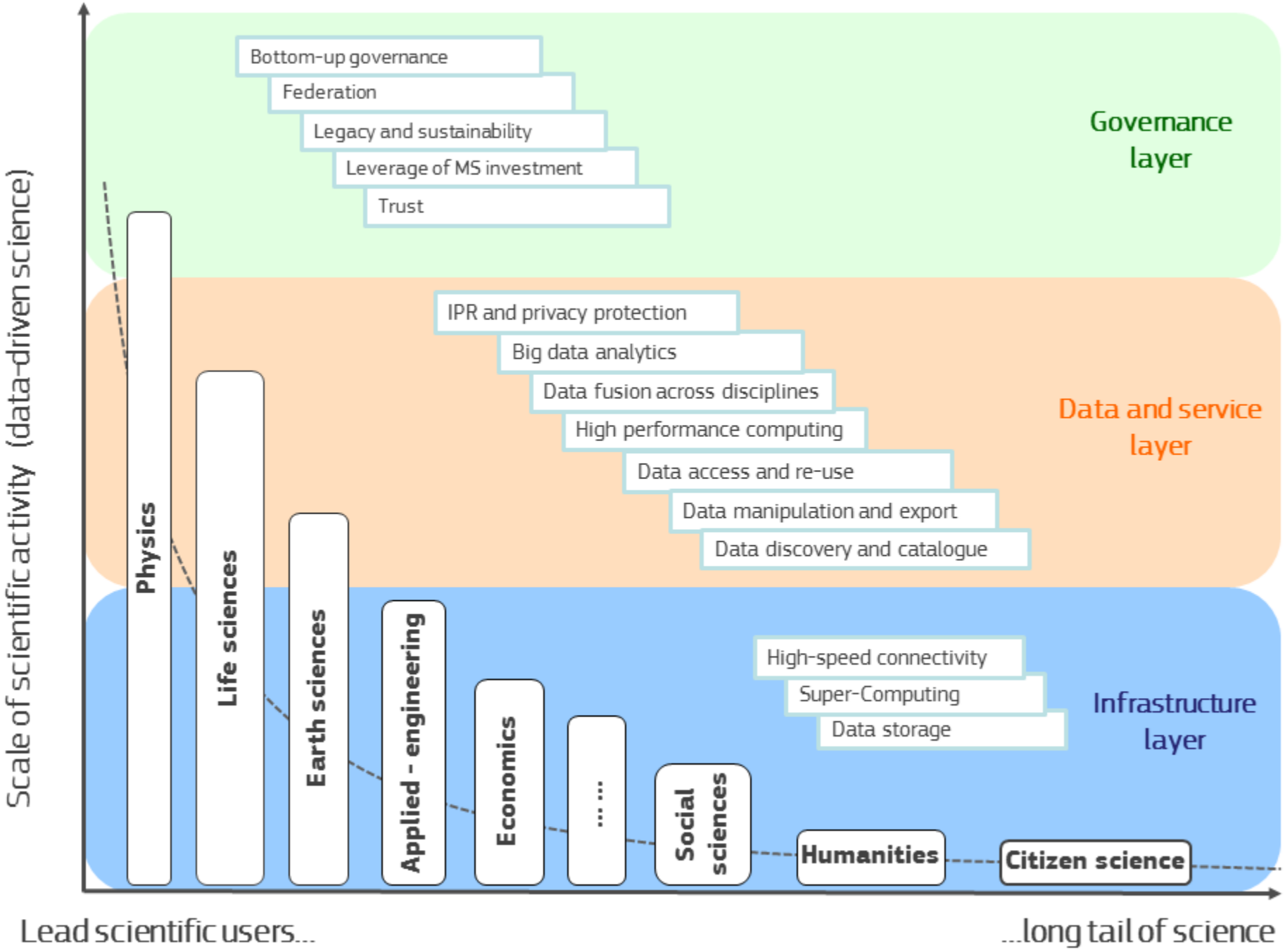
- It will **add value** (scale, data-driven science, inter-disciplinarity, data to knowledge to innovation) and leverage current and past infrastructure investment (10b per year by MS, two decades EU investment).

→ **Governance** is a key issue.

Key requirements

- **Cloud-based services for Open Science,** enabling researchers to openly share and analyse research data across technologies, disciplines and countries.

- **Governance platform for policy development** on infrastructure and services, mechanisms for global data stewardship, decision making on funding and long-term sustainability.


Scale of scientific activity (data-driven science)
Bottom-up governance
Federation
Legacy and sustainability
Leverage of MS investment
Trust
Governance layer
IPR and privacy protection
Big data analytics
Data fusion across disciplines
High performance computing
Data access and re-use
Data manipulation and export
Data discovery and catalogue
Data and service layer
High-speed connectivity
Super-Computing
Data storage
Infrastructure layer
Physics
Life sciences
Earth sciences
Applied - engineering
Economics
... ...
Social sciences
Humanities
Citizen science
Lead scientific users...
...long tail of science

Key challenges

- Still a lack of widespread **awareness** of the value of data and of **incentives** for data sharing.
- Lack of common standards to ensure **inter-operability** of data.
- **Not enough hardware capacity** for scientific computing, storage, connectivity.
- **Fragmentation and lack of coordination** over different scientific communities and countries.
- Need to translate recent **changes in privacy, data protection and copyright rules** to the research data domain.

Next steps

2016 will be busy…

- **Action on specifications for research data;**
- **Setting the EOSC governance;**
- **Harnessing H2020 and 'FP9' rules;**
- **Engage with Council, Dutch presidency, RWP, European Parliament;**
- **Continuous, extensive stakeholder engagement.**

March 2016	High Level Expert Group final report on governance, funding and services of the European Open Science Cloud.
March	Stakeholder workshop with Research Funding Organisations.
4-5 April	Conference under Dutch Presidency on Open Science.
~ April	Launch of the European Cloud Initiative, including the European Open Science Cloud.
May	COMP Council.
June	Deadline INFRADEV-04-2016 call on data federation, governance and services of the EOSC (€10 M).
Summer	Start engagement with the European Parliament and with the Council concerning implementation of the initiative.
March 2017	EINFRA-12-2017 implementation of data preservation, access and interoperability of scientific data (€40 M).

Txs!