From vision to action
Next steps on the European Open Science Cloud (EOSC)
and more

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DG RTD European Commission

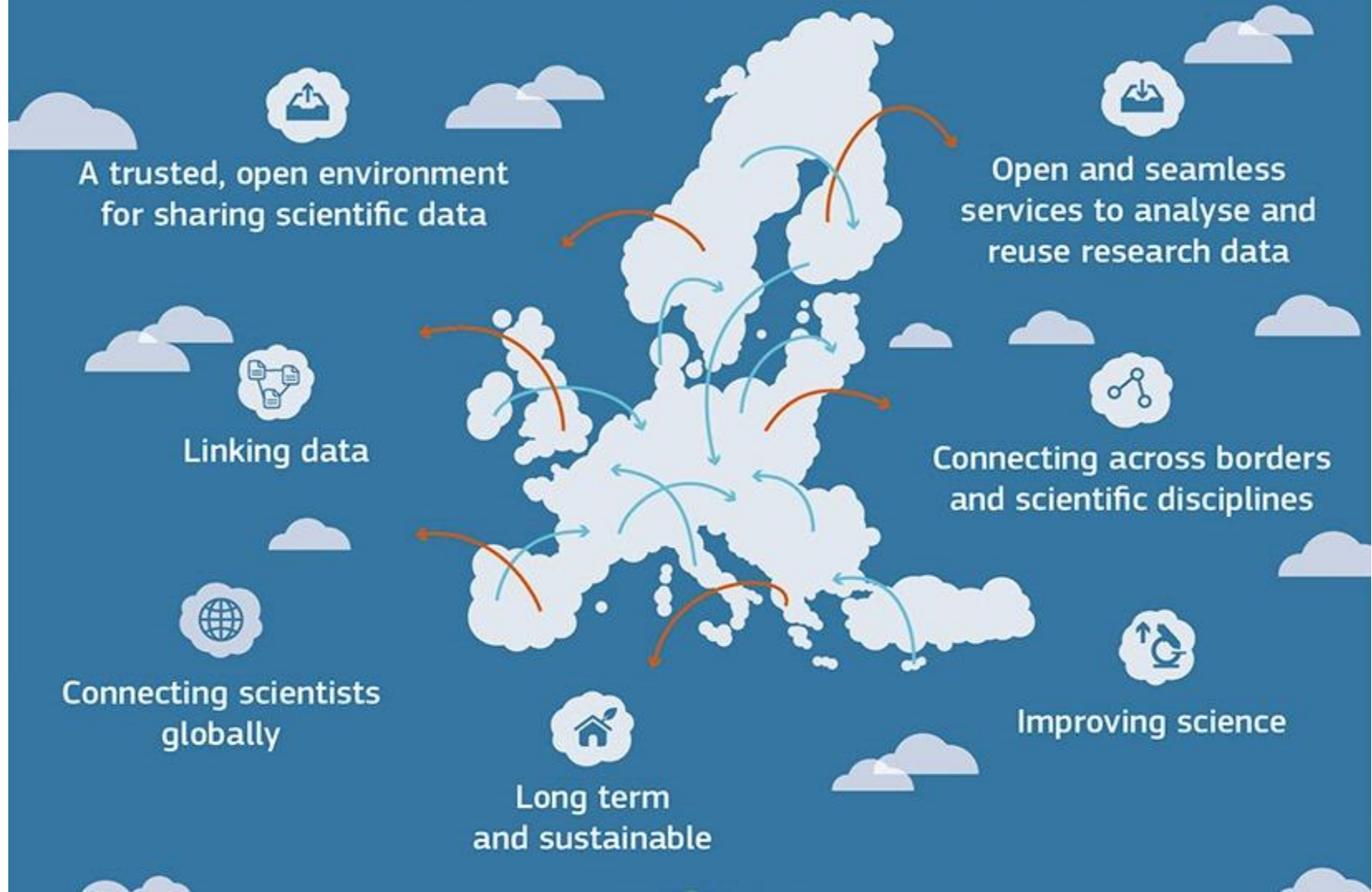Berlin 21 March 2017

The Commissioner's vision on EOSC

"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

EUROPEAN OPEN SCIENCE CLOUD

BRINGING TOGETHER CURRENT AND FUTURE DATA INFRASTRUCTURES

A trusted, open environment for sharing scientific data

Open and seamless services to analyse and reuse research data

Linking data

Connecting across borders and scientific disciplines

Connecting scientists globally

Long term and sustainable

Improving science

Communication 2016/178 : European Cloud Initiative

Part of DSM strategy (19 April 2016), strong political support.

- o 'Game-changing policy', a 'vision'.

- o Commissioners Moedas & Oettinger

- o Supported by Pres. Juncker, VP Ansip, Ch. Merkel, LUX Presidency, NL Presidency, 2 sets of COMPET Council Conclusions, EP Report on DSM Act, EESC, …

COM 2016/178 - European Cloud Initiative : 3 pillars (19 April 2016)

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 (EDI)

✓ Development and deployment of large-scale European HPC, data and network infrastructure

Widening access and building trust

✓ eGovernment (EU eGovernment Action Plan 2016-2020 – accelerating the digital transformation of government) SMEs, industry, citizens.

DG RTD

Policy actions foreseen in the COM 2016

Content (open data)
Make Open research data default in H2020
Foster scientific data sharing in MS

(Open data) Infrastructure
Action Plan for scientific data Interoperability (e.g. FAIR)
Connect key EU RI (e.g. ESFRIs)
Consolidate / federate data-infrastructures

Governance
Develop roadmap for governance and financing
Create a global level playing field for research data sharing
Widen user-base to public services, Industry and EU-13

Hardware
Infrastructure (CNECT)

High-Performance
Computing

Big-data
storage

High-speed
connectivity

HLEG EOSC report (11 October 2016)

Publication of First report by the Commission High Level Expert Group on the European Open Science Cloud

Including recommendations on Policy, Governance and Implementation

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

Now: focus on core functions of the EOSC

o **Data stewardship, incentives and tools** – setting the framework conditions for scientists to be able to share and re-use open data (e.g. open data policies, conditional research funding, data publishing, data stewardship, DMPs),

o **Standard setting and certification** – for metadata, specifications for making data FAIR, certifications for data service providers.

o **Cataloguing of services** needed by scientists to find, store, share and process research data).

o **Provision of core common services**, ensuring affordable and sustainable access to data analytics and computation to EU researchers, regardless of their disciplines or where they are located.

o **Establishing rules of engagement**, terms and conditions for contributing to and benefitting from data services for all stakeholders (e.g. data/service users, data providers, operators of infrastructures, commercial service providers).

o **Agenda setting**, identifying priorities at EU level for new/upgraded research data infrastructures and services.

The next practical steps

- EOSC Summit – 12 June 2017.

- 'Declaration of intent' and 'Coalition of the willing' – end of summer 2017

- Funding decision on EOSC in WP 2018-2020 of Horizon 2020 – October 2017

- Roadmap for governance and funding – November 2017

- Interim governance board of the EOSC – Winter 2017

- EOSC Web Application – Spring 2018

- Action Plan for FAIR data Interoperability - Summer 2018

EOSC Pilot project

- To support the Commission in the first phase in the development of the European Open Science Cloud (EOSC).

- WPs on

  - Governance and Policy

  - Science Demonstrators and Services

  - Interoperability

  - Skills

  - Stakeholder Engagement

http://cordis.europa.eu/project/rcn/207500_en.html

http://www.eoscpilot.eu/

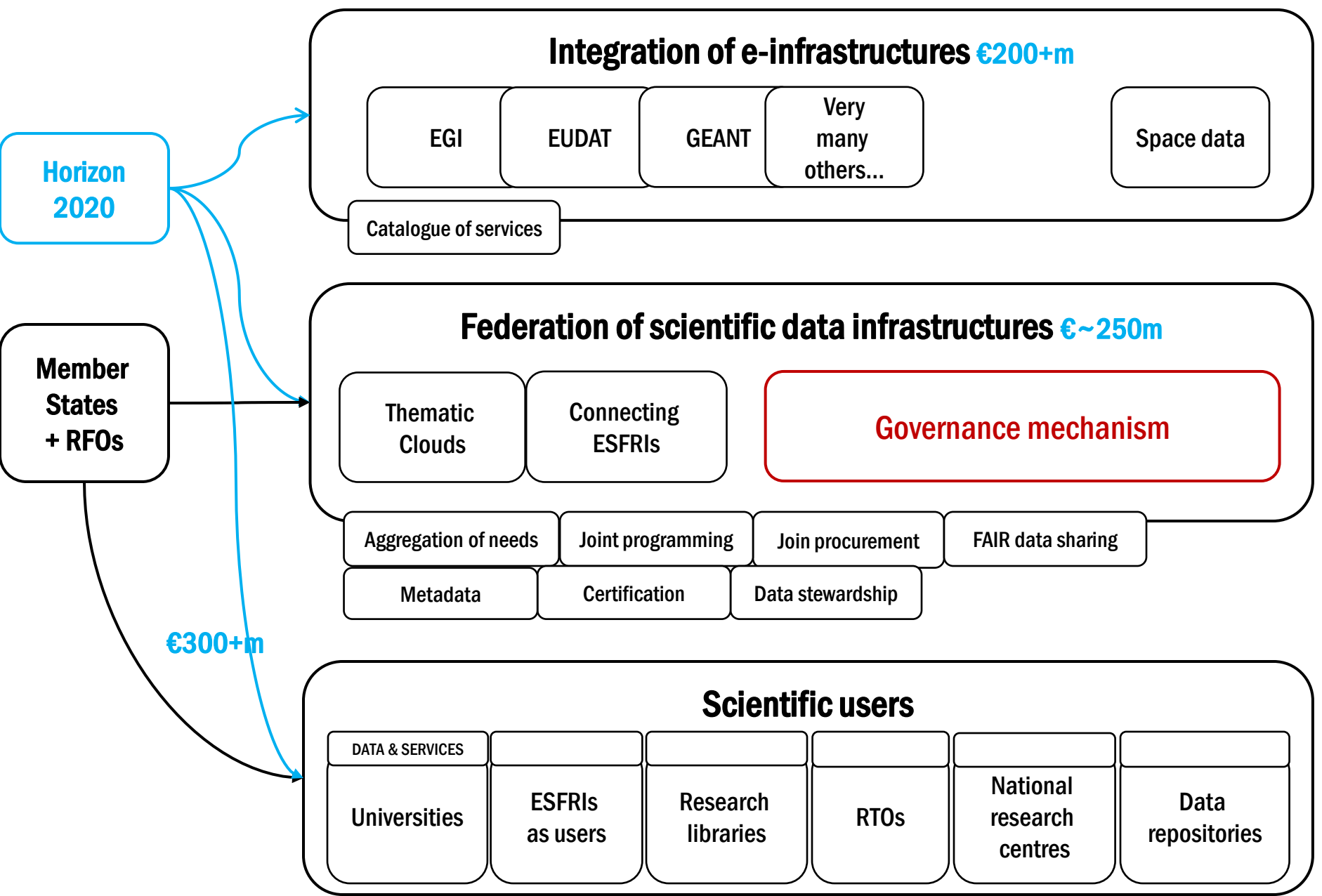# Roadmap for governance and funding

o **October 2017**

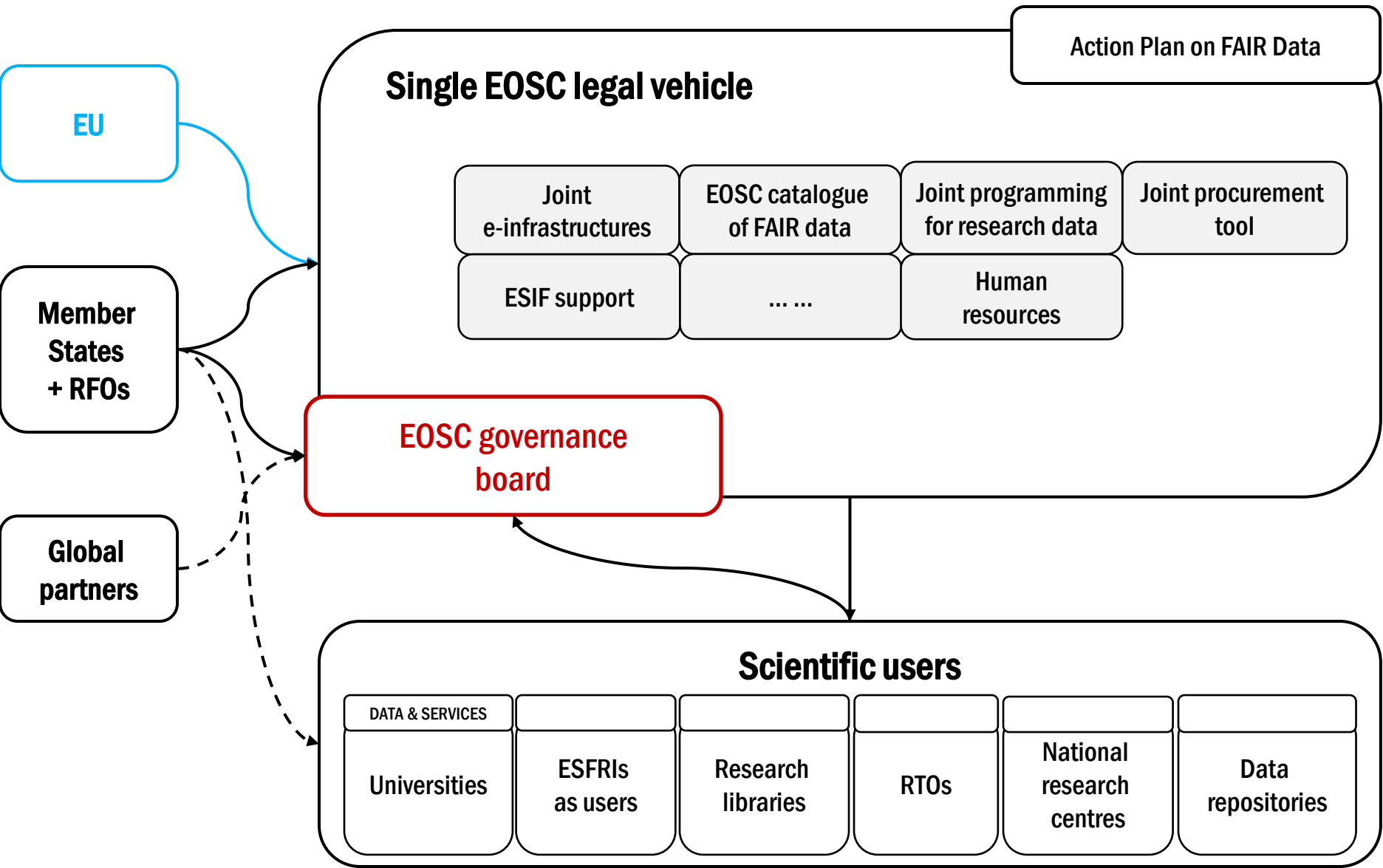o **4 Layers – architecture, governance, funding, timeline**

o **2 Phases of implementation**

o **EOSC Summit – June 2017**
   - o OSPP Opinion (TBA) – Spring 2017
   - o EOSCPilot outputs – 2017-2018
   - o HLEG EOSC and FAIR expert group inputs

EOSC funding and governance – Phase 1 – 2017/19 (simplified)

Integration of e-infrastructures €200+m

| EGI | EUDAT | GEANT | Very many others... | | Space data |

Catalogue of services

Horizon 2020

Member States + RFOs

Federation of scientific data infrastructures €~250m

| Thematic Clouds | Connecting ESFRIs | | **Governance mechanism** |

| Aggregation of needs | Joint programming | Join procurement | FAIR data sharing |

| Metadata | Certification | Data stewardship |

€300+m

Scientific users

DATA & SERVICES

| Universities | ESFRIs as users | Research libraries | RTOs | National research centres | Data repositories |

EOSC funding and governance – Phase 2 – 2020 (simplified)

EU

Member States + RFOs

Global partners

Single EOSC legal vehicle

Action Plan on FAIR Data

| Joint e-infrastructures | EOSC catalogue of FAIR data | Joint programming for research data | Joint procurement tool |
| ESIF support | … … | Human resources | |

EOSC governance board

Scientific users

| DATA & SERVICES | | | | | |
| Universities | ESFRIs as users | Research libraries | RTOs | National research centres | Data repositories |

BUT
Open science is more than the EOSC

We also

- made Open data default
- want 100% compliance on Open Access publishing
- plan a publishing platform for FWP publications
- work on Altmetrics, rewards & incentives
- Develop a global approach (G7, G20, RSA …)

- And last but not least (since we love data) we launched the first European
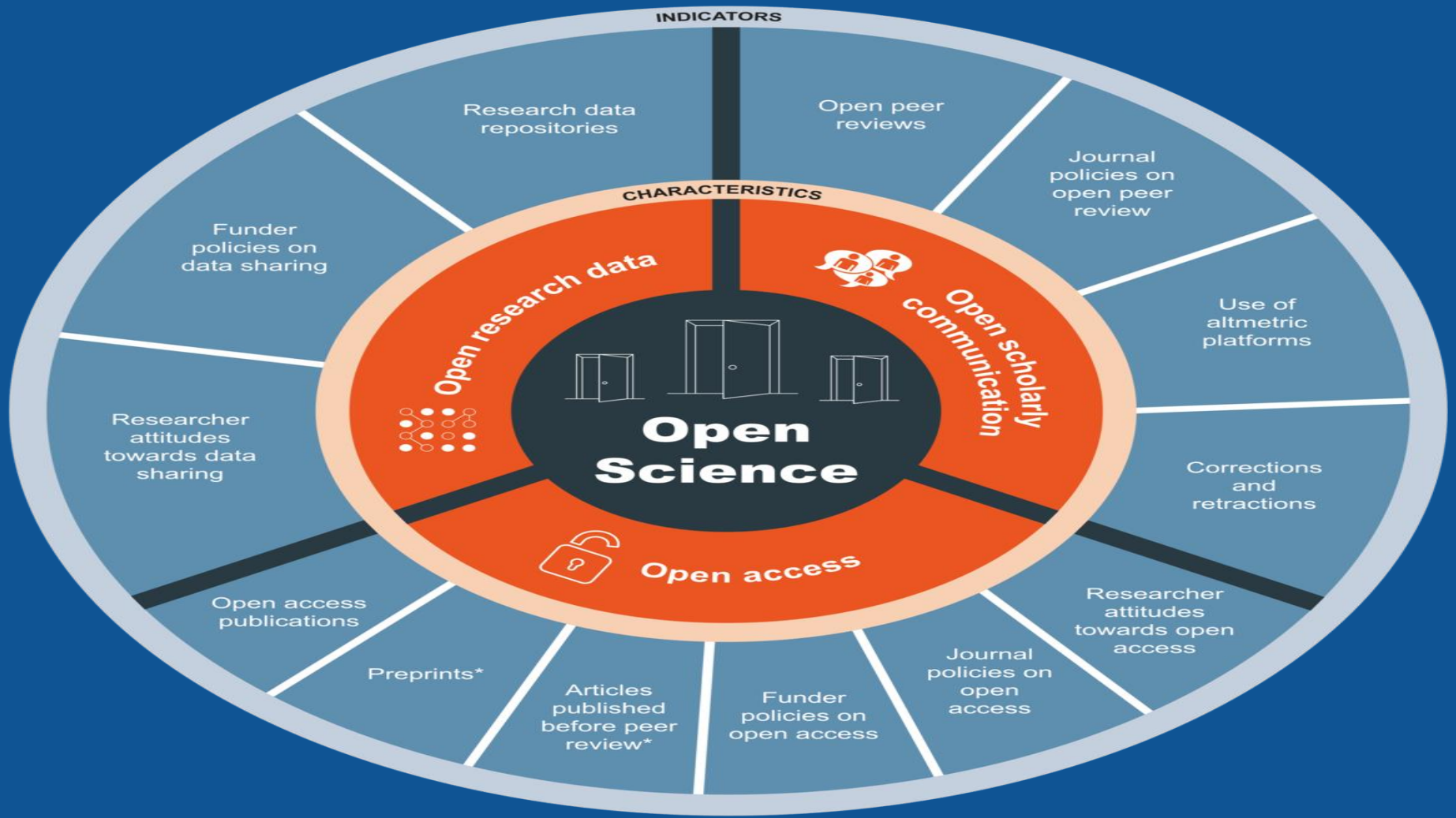
Open Science Monitor

http://ec.europa.eu/research/openscience/monitor/

RESEARCH & INNOVATION
Open Science

European

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Rate of green open access publications compared to journal publications
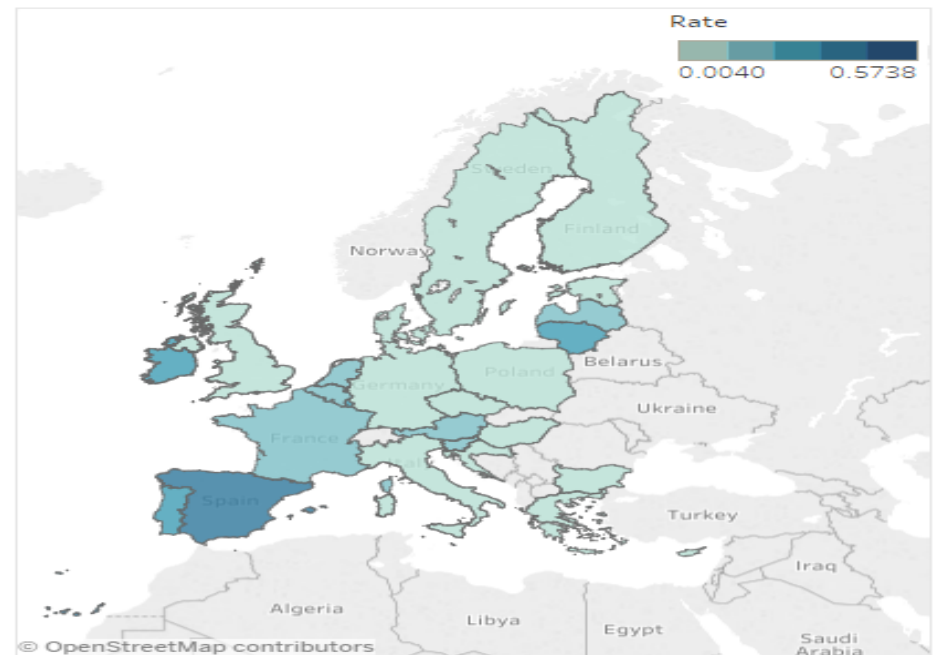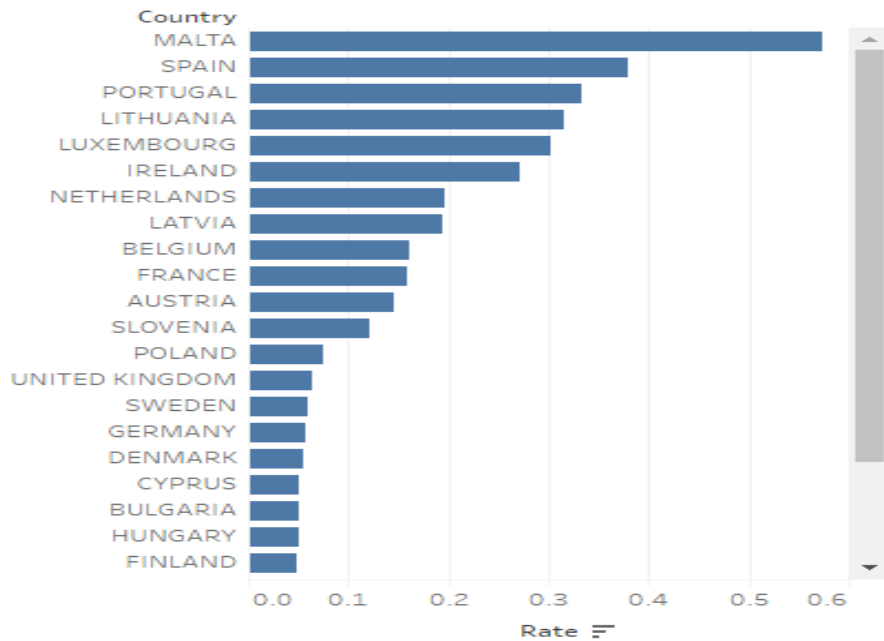
This visualisation shows the rate of green open access publications in institutional repositories (from OpenAIRE) compared to the total number of publications (from Web of Science).

Focus on one or more countries by selecting them on the barchart below. The CTRL key can be used to select multiple countries.

To reset, use the reset button in the bar below.

Eu28
- ☑ EU28
- ☐ Other

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So – a lot is going on, but that is only because

YOU make it possible

(we facilitate)

Lets make sure, in the coming 2 to 3 years, Europe doesn't miss this paradigm shift