European Open Science Cloud

Open science, innovation and data - Building EOSC together

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European Commission

Horizon Europe

THE NEXT EU RESEARCH & INNOVATION PROGRAMME (2021 – 2027)

Open Science, Open Innovation, Open to the World

Horizon Europe 2021-2027

Horizon Europe 2021-2027: Key facts and drivers for Open Science

- *With only 7% of the world's population, Europe accounts for **20% of global R&D investment, produces one third of all high-quality scientific publications***
- *Support R&I stakeholders in fully endorsing the principle of the open access and **working with them to make the European Open Science Cloud a reality**;*
- *Strengthen the **European data space** that allows for unrestricted and constant knowledge and data circulation and creating the necessary incentives for programme beneficiaries and innovators to share their results and data for reuse.*

Open science in Horizon Europe

- ***The principle of open science*** *will become the modus operandi of the new Programme.*
- *It will go beyond the open access policy of Horizon 2020 and require* ***open access to publications and data*** *(with robust opt-outs for the latter), and to research data management plans.*
- *The Programme will* ***foster the widespread use of FAIR (findable, accessible, interoperable, and re-usable) data****; and activities that enhance researchers' skills in open science and support reward systems that promote open science*
- ***Fostering open science*** *will ensure better exploitation of R&I results within the Union.*

Three-pillar structure

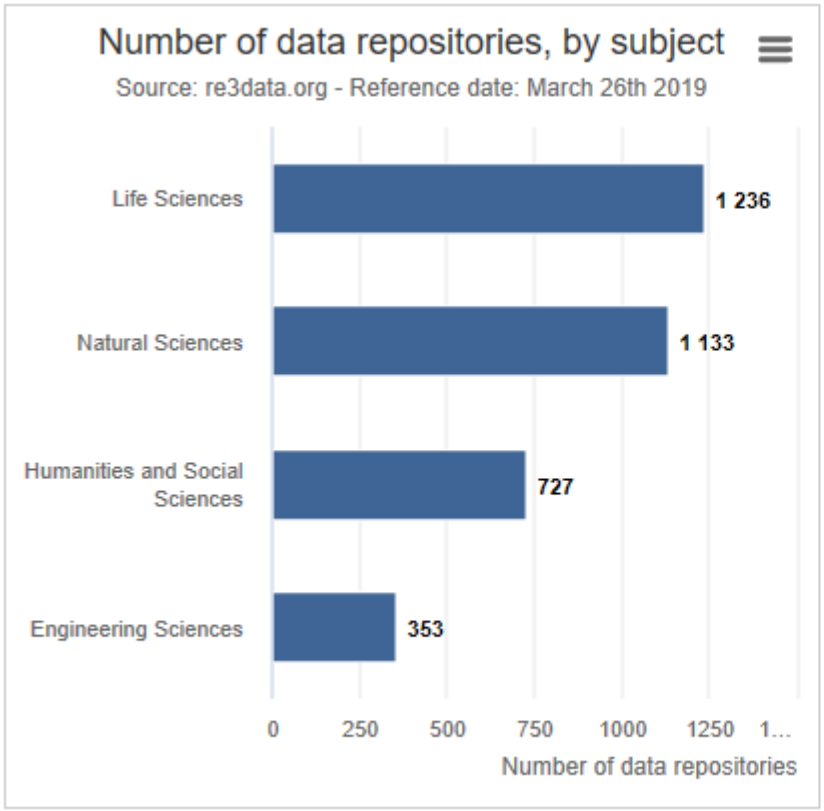
25.8 bn €

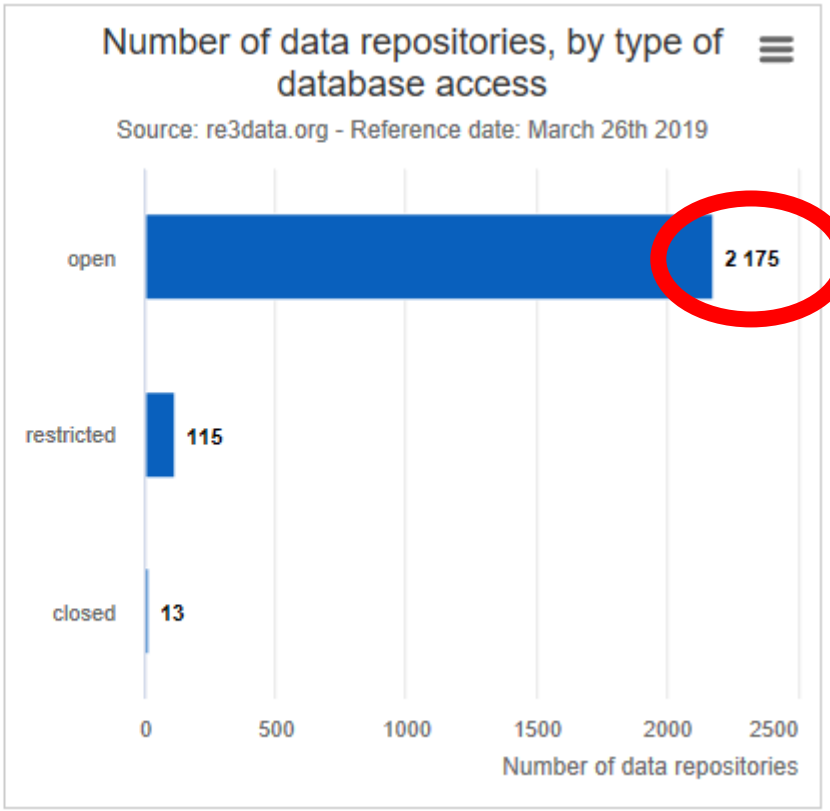
2.4 bn €

Why open science?

Barriers to open science: From big business to Watson and Crick" by opensourceway is licensed under CC BY-SA 2.0

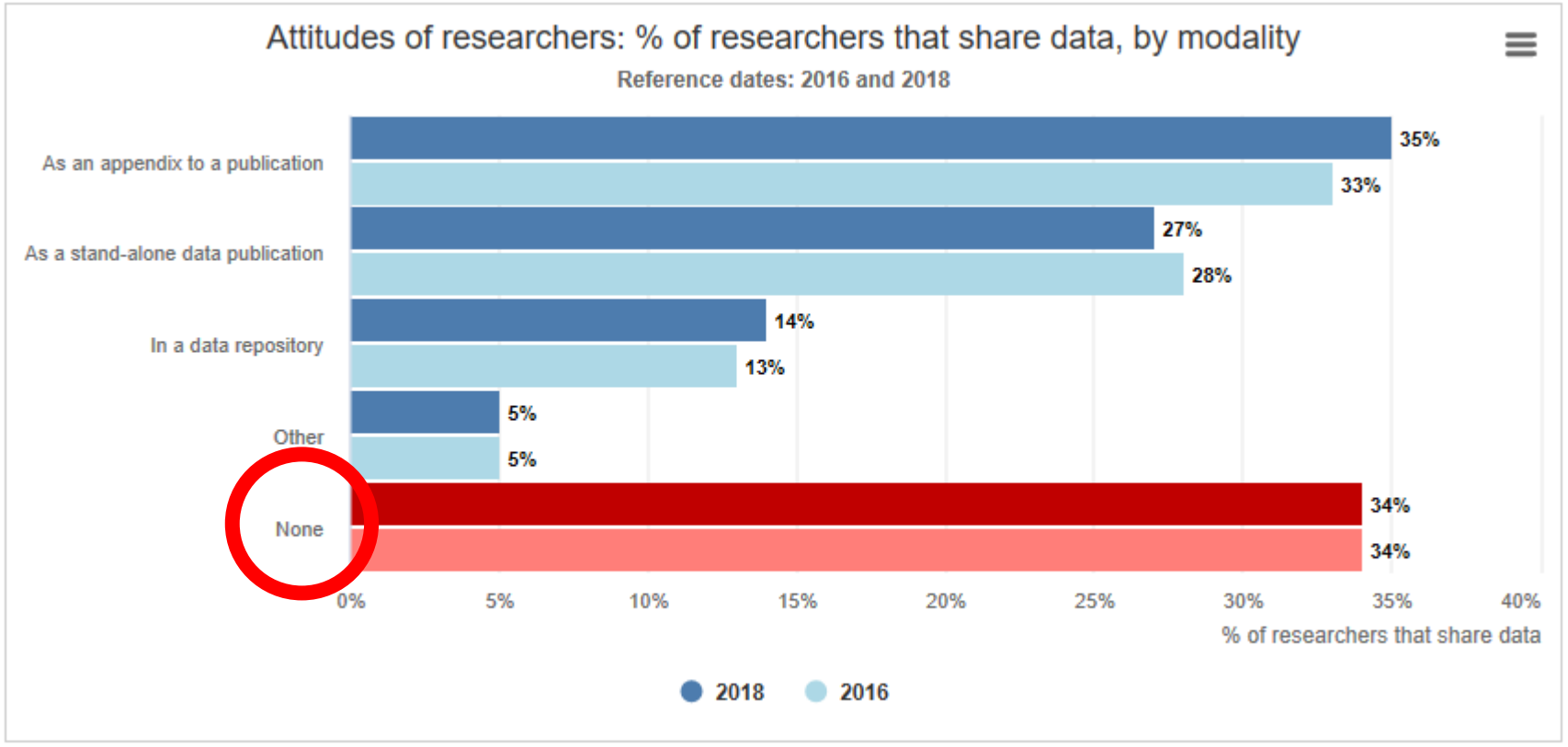
Data repositories:
Numbers vs openness





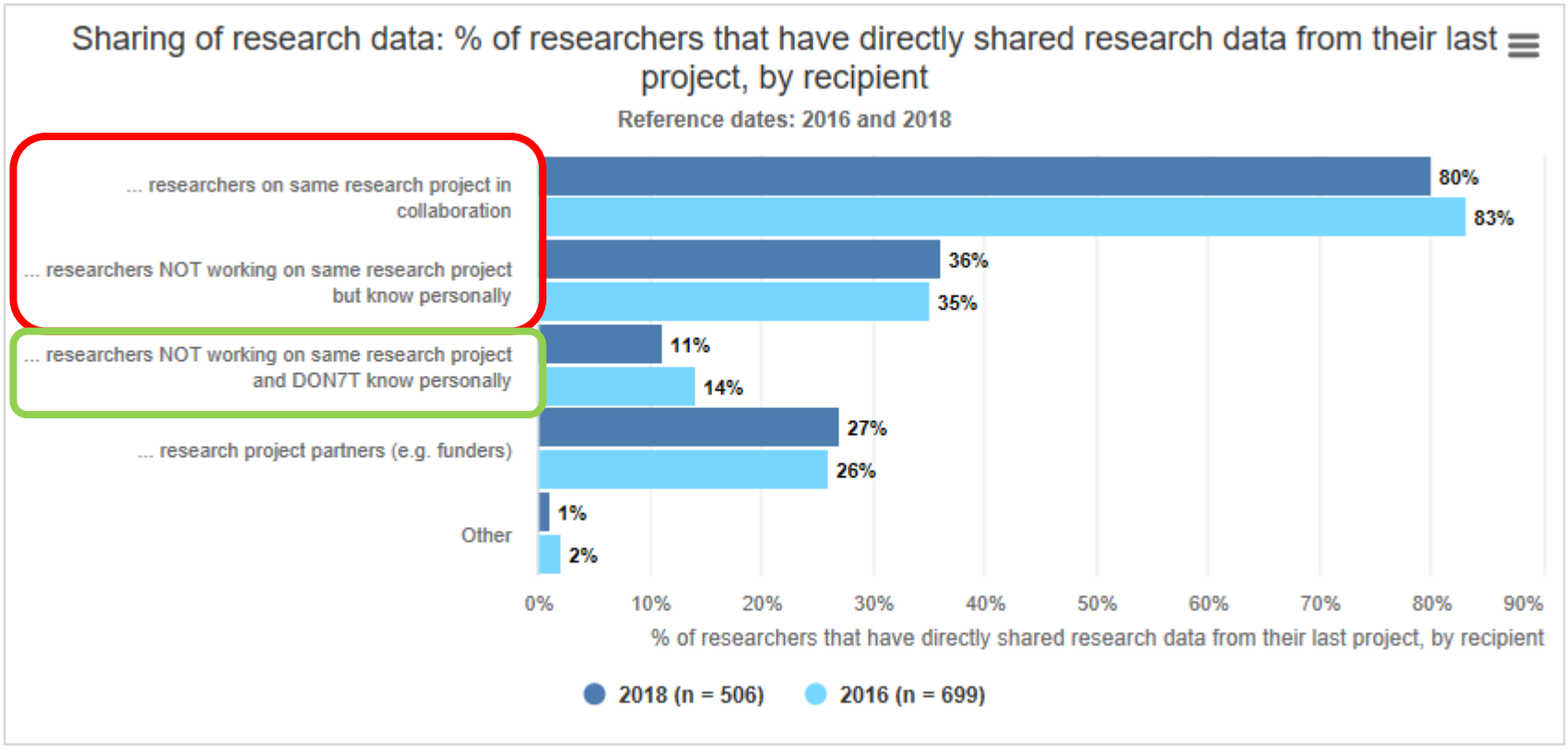
Source: Open science monitor

Attitudes of researchers:
To share or not not to share?

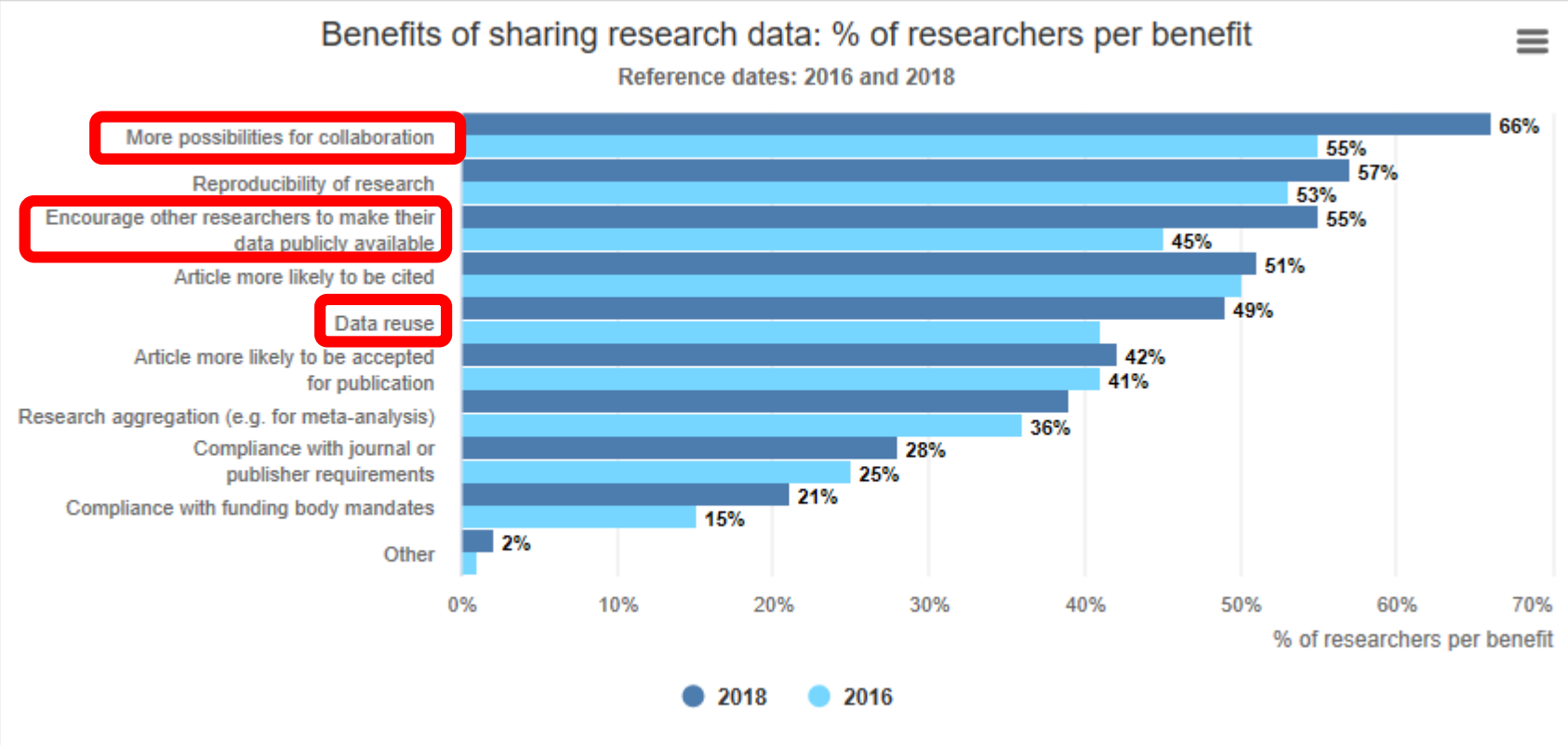


Source: Open science monitor

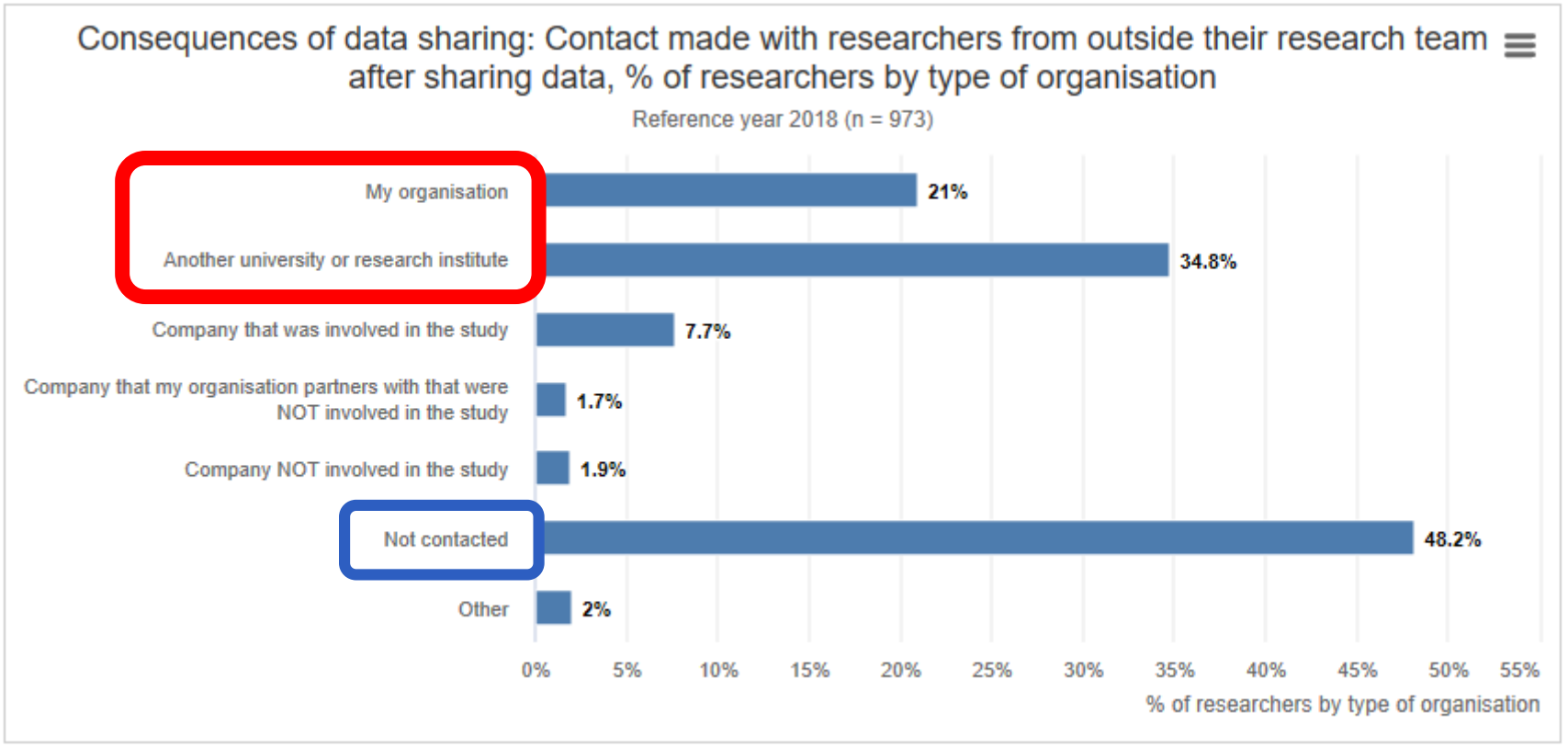
Sharing of research data:
Friends vs strangers?



Sharing of research data:
If I share, what do I get?



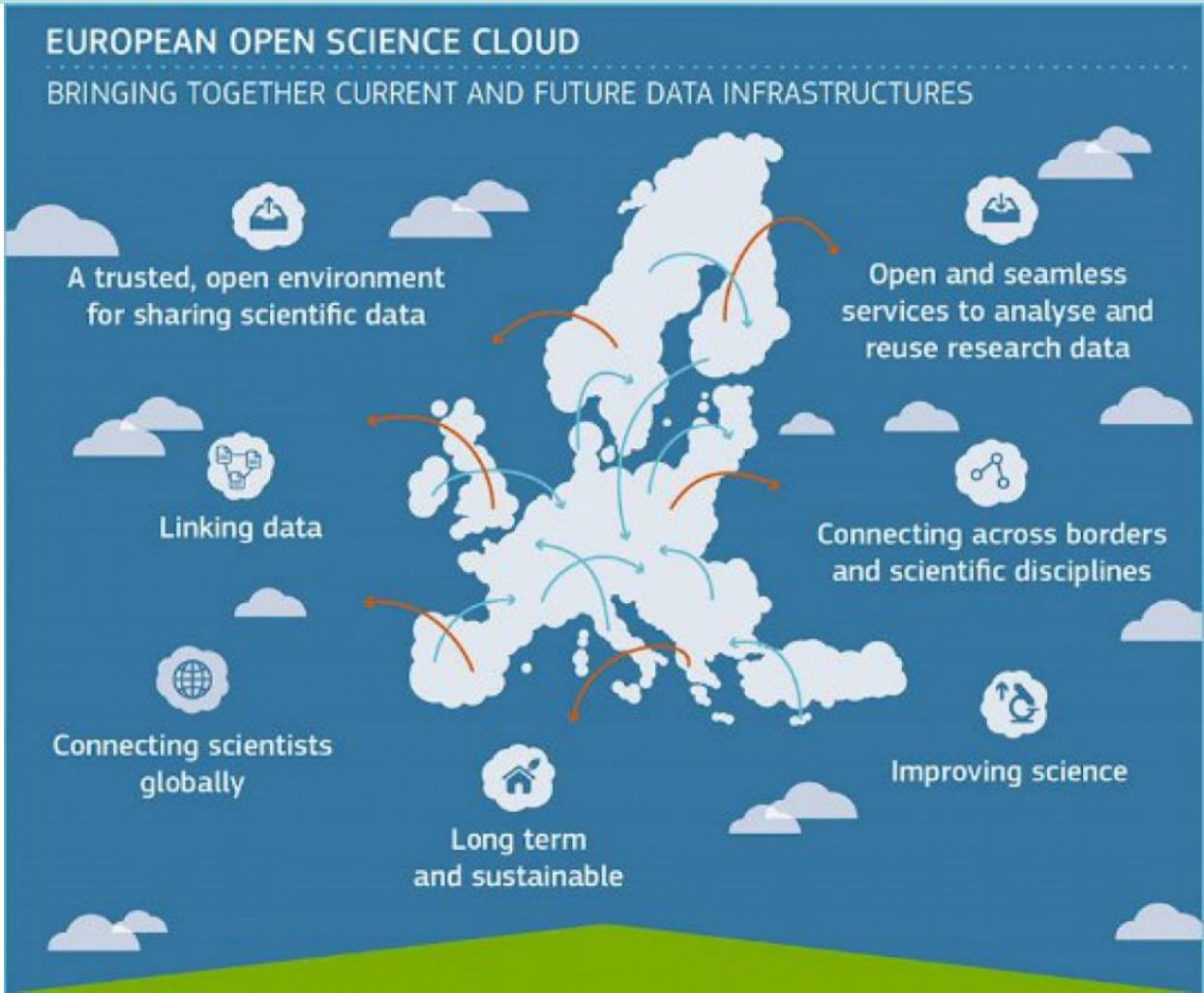
Consequences of data sharing:
Limitless or limited collaboration…?



Why the EOSC? What is EOSC?

Enabling the digital transformation of research: towards more of data-intensive, collaborative and cross-disciplinary science

EOSC will provide 2 million EU researchers and innovators with a service environment for research data management, analysis and re-use across disciplines, increasing the creativity, productivity and reproducibility of research



EOSC as a joint mission of several Commission services

DIRECTORATE-GENERAL | CONNECT

Communications Networks, Content and Technology

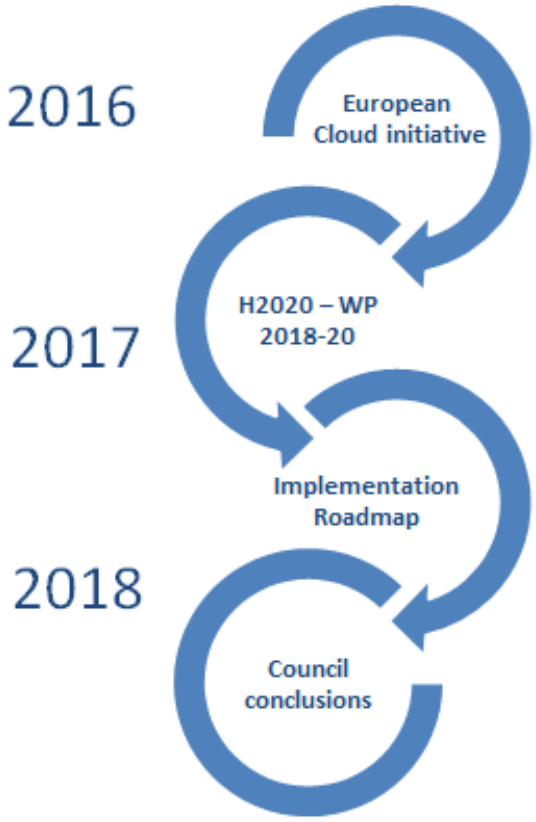
The Directorate-General for Communications Networks, Content and Technology is the Commission department responsible to develop a digital single market to generate smart, sustainable and inclusive growth in Europe.

DIRECTORATE-GENERAL | RTD

Research and Innovation

This Commission department is responsible for EU policy on research, science and innovation, with a view to help create growth and jobs and tackle our biggest societal challenges.

EOSC developments in 2016-2018



- Vision
- EOSC roadmap
- Political support
- Targeted resourcing
- Communities at work
- Prototype Portal
- Governance 2019-2020

The Vienna Declaration on the European Open Science Cloud
Vienna, 23 November 2018

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H2020 funding portfolio

H2020 INFRAEOSC Calls

2018-2020

> 250 Mio €

Portal development

New services new users

Governance and policy

INFRAEOSC-06-2019
Enhancing the user experience

INFRAEOSC-03-2020
Portal integration & consolidation

INFRAEOSC-01-2018
Access to commercial services

INFRAEOSC-04-2018
Connecting ESFRI infrastructures

INFRAEOSC-05-b-2018-2019
Coordination of national initiatives

INFRAEOSC-02-2019
Prototyping new services for new users

INFRAEOSC-07-2020
Increasing the service offer

INFRAEOSC-05-a-c-2018
- EOSC coordination structure
- **FAIR Data uptake** and compliance

EOSC governance in 2019-2020

Advise on / inform the implementation

Steer the implementation

Contribute to the implementation

Stakeholder Forum

Users, Service Providers, Public sector, Industry, SMEs, etc.

Governance Board

MS/AC delegates and the European Commission

Proposes
Monitors
Reports

Reviews
Endorses
Orients

Working Groups

WG | WG | WG | WG

Executive Board

European stakeholder organisations and individual experts)

Interact

- EU-funded projects
- Nationally-funded projects and initiatives
- Other projects and initiatives
- Extended Coalition of Doers

Supports

Supports

Supports/ coordinates w.

EOSCSecretariat.eu
Coordination and Support Action

How does EOSC look like?

EUROPEAN OPEN SCIENCE CLOUD

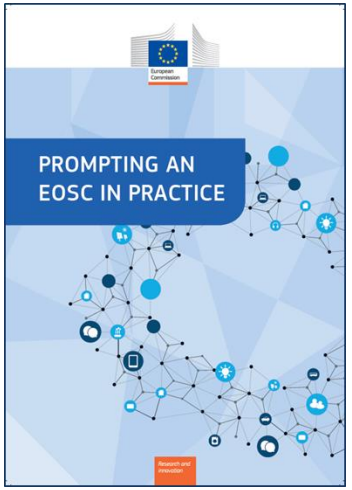
eosc-portal.eu

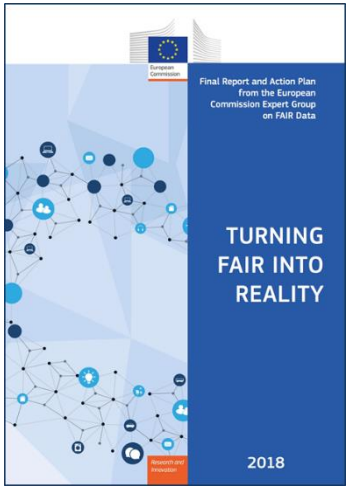
Summary: EOSC state of play in 2019

- ***EOSC policy*** *documentation*
  - *Cloud initiative, DSM mid-term review, Implementation Plan(SWD), Council Conclusions, Commission Recommendation on access to and preservation of scientific information*
  - *Common European data space, Open Data and Public Sector Information Directive*
- ***EOSC governance*** *structure composed of Member State representatives and domain experts*
- ***EOSC funding*** *through H2020 (DG CONNECT and DG RTD)*
- ***EOSC initiatives*** *at (trans)national, regional and thematic levels to complement and support pan-European level developments*

Key issues by end of 2020

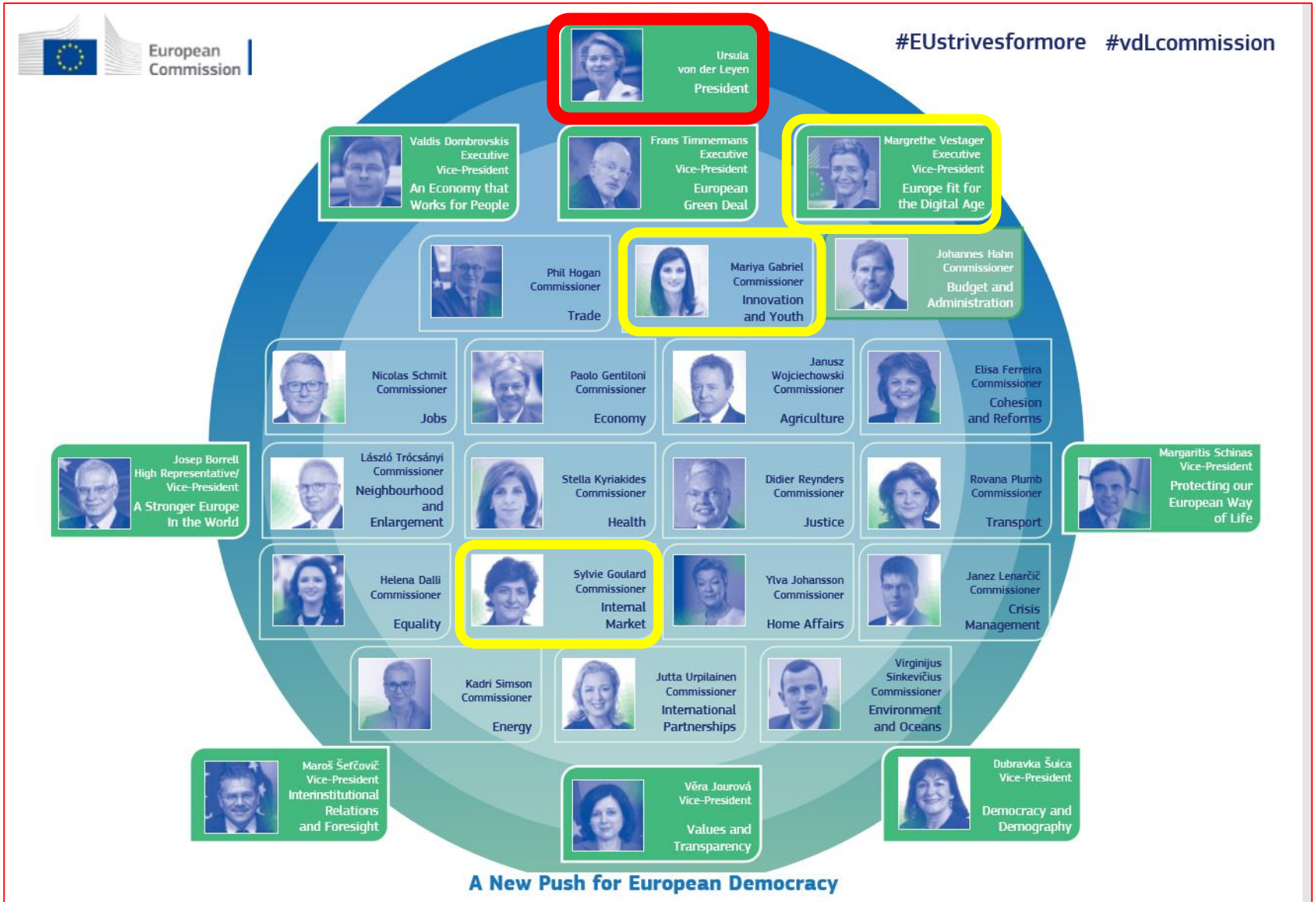
- ✓ Possible Horizon Europe **Partnership?**
- ✓ **Legal vehicle** for operations after 2020
- ✓ **Financing model(s)** to sustain EOSC infrastructure and services
- ✓ **Involving the research communities** and widening the EOSC user base; turning **FAIR** principles into practice
- ✓ Aggregating **procurement**?
- ✓ Need for **certification**?
- ✓ Role of the **private sector**
- ✓ EOSC in the **international context**





Turning FAIR into Reality: Report and Action Plan: https://doi.org/10.2777/1524
Prompting an EOSC in practice: https://ec.europa.eu/info/events/2nd-eosc-summit-2018-jun-11_en

European Commission



Future calls: INFRAEOSC-03-2020

Consolidate and scale up the EOSC Portal and its underlying service platform to:

- ***Strengthen the EOSC Portal***
- *Reinforce the **role of the marketplace** as the access channel to integrated, composable and reliable services*
- *Attract **more users** within the research community and beyond*
- *Ensure its **long-term sustainability** taking into account all the relevant governance and business frameworks.*

Budget: 40,9n Mio €

One single proposal to be funded

Future calls: INFRAEOSC-07-2020

Coordinate, through the EOSC Portal, ***the provision of state-of-the-art research enabling services*** *from national, regional and institutional public infrastructures in Europe, covering diverse thematic domains, and further non-research resources to:*

- ***Scale up*** *the EOSC Portal*
- *Set-up a* ***model for interaction*** *between service providers and the EOSC Portal operators through pan-European e-infrastructure entities, based on transparency and effectiveness of cost compensation.*

Budget: 24 Mio €

Six areas, one proposal per area to be funded

Thank you!