



# Open Science: the new normal for practicing Science?

BE OPEN project Final Event  
*June 9, 2021*

**Kostas Glinos**  
Head of unit for Open Science  
Directorate-General for Research and Innovation  
European Commission

# Open Science

- **Open Science** means **sharing knowledge and tools as early as possible**, not only **between researchers** and **between disciplines**, but also with **society at large**.
- Open Science improves the **quality**, **efficiency** and **creativity** of research and the **trust by society in science**. In particular, OS is beneficial for science, scientists and funders, e.g.:
  - tackles the reproducibility crisis;
  - faster response to societal challenges e.g. Coronavirus, Ebola;
  - access to and sharing results yields higher impact through collaborations;
  - generates new research findings and decreases inequalities;
  - large opportunity costs of non-FAIR data—**€10.2bn/year** (source: Cost-benefit analysis of FAIR research data, 2017).
- The Commission acts as **policy maker** (propose legislation and encourage MS), a **funder** (we set requirements to our projects) and a **capacity builder** (we fund ‘enabling’ projects).

# Main challenges and priorities for Open Science

## Improve **the practice** of research and innovation

- Openly accessible scholarly publications
- Early sharing of all research outputs
- All data FAIR, RDM
- Reproducible results
- Societal engagement and responsibility

## Develop proper **enablers**

- Rewards and incentives to adopt Open Science practices, with appropriate metrics
- Appropriate skills and education, including for research integrity
- Open Research Infrastructures including the European Open Science Cloud (**EOSC**)

*Involving all the actors*

*Engaging internationally*

***Changing research culture***

# Open Science in the ERA Communication

## Deepening the ERA

The Commission will: (Action 9)

- Launch, via the Horizon Europe Programme, a **platform of peer-reviewed open access publishing**;
- **analyse authors' rights** to enable sharing of publicly funded peer-reviewed articles without restriction;
- ensure a **European Open Science Cloud** that is offering findable, accessible, interoperable and reusable research data and services (Web of FAIR); and
- incentivise open science practices by improving the **research assessment system**.

## Citizen Engagement

The Commission will: (Action 13)

- Organise with Member States and stakeholders Europe-wide participatory **citizen science campaigns** to raise awareness and networking, crowdsourcing platforms and pan-European hackathons, in particular in the context of Horizon Europe Missions. The Commission will develop with Member States best practices to open up science and innovation to citizens and youth.

[Communication](#) on a new European Research Area for Research and Innovation (September 2020)

# Copyright and open science

**Copyright** is a bundle of rights that protect authors on their creations + allow copyright holders to determine who, when and how will access and reuse works

Protects and **sets the conditions for “dissemination”**

**An adequate copyright legislative framework and copyright management are key for open science**

- **The transposition of the Copyright in the Digital Single Market Directive was due on 7 June 2021** (articles 3 & 4 on Text and Data Mining)
- **Under the ERA Communication** (Action n.9) the Commission will “analyse authors’ rights to enable sharing of publicly funded peer-reviewed articles without restriction”
- **The review of the Database Directive** will be part of the upcoming «Data Act »

# Have your say!

- The [roadmap and public consultation](#) on the Data Act (including the review of the Database Directive) are open for feedback

## Roadmap

---

FEEDBACK: OPEN

### Type

Inception impact assessment

[More about roadmaps](#)

### Feedback period

28 May 2021 - 25 June 2021 (midnight Brussels time)

### The Commission would like to hear your views.

This roadmap is open for feedback for **4 weeks**. Feedback will be taken into account for further development and fine tuning of the initiative. The Commission will summarise the input received in a synopsis report explaining how the input will be taken on board and, if applicable, why certain suggestions can't be taken up. Feedback received will be published on this site and therefore must adhere to the [feedback rules](#).

[Give feedback >](#)

## Public consultation

---

FEEDBACK: OPEN

### Feedback period

03 June 2021 - 03 September 2021 (midnight Brussels time)

### The Commission would like to hear your views.

Through public consultations you can express your views on aspects of EU laws and policies before the Commission finalises its proposals.

[Go to consultation >](#)

# Towards a new modus operandi for Science

## *Reforming research assessment*

### The dominant current system

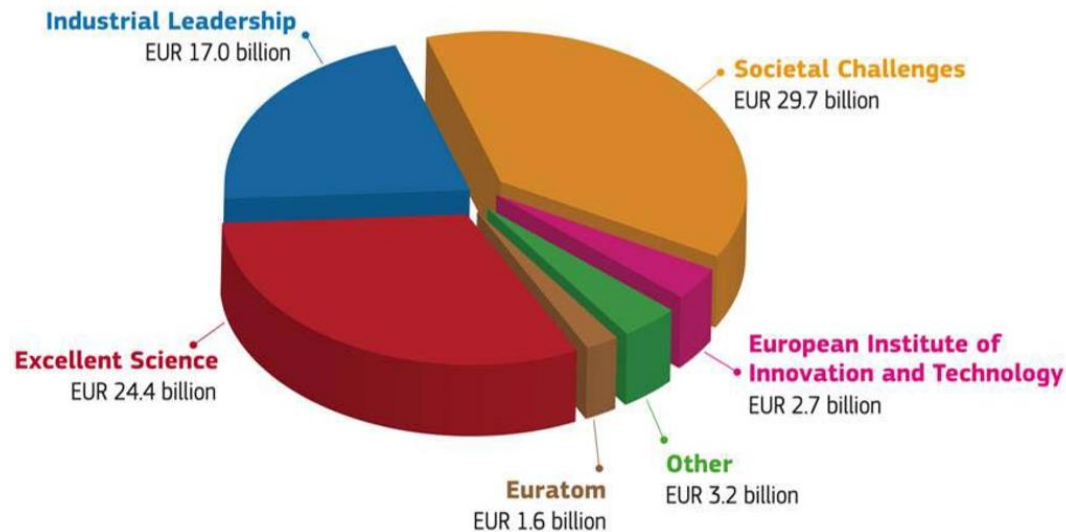
FROM → TO

### Open Science

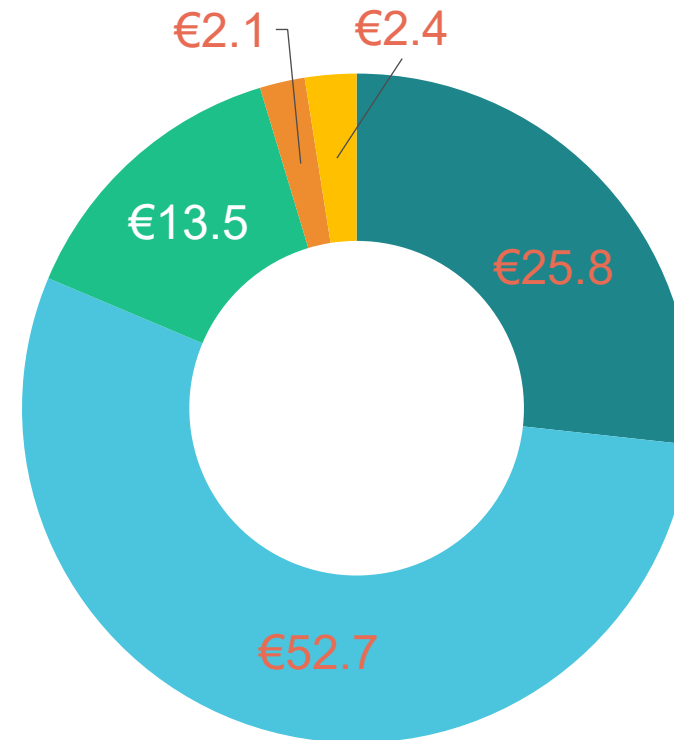
- |  |   |   |
|--|---|---|
| • Rewarding individual competing scientists  | → | • Rewarding collaboration and sharing   |
| • Publish as much and as fast as possible  | → | • Share knowledge/data as early and as openly as possible   |
| • Excellence defined largely on the basis of <i>where</i> scientists publish   | → | • Composite definition of excellence  |
| • Incentivises researchers to <i>produce specific outputs</i> (mainly publications)<br>- <i>Use of quantitative metrics</i>          | → | • Incentivises researchers to share, collaborate, increase quality and impact;<br>- <i>Use of qualitative and quantitative metrics</i>        |
| • Increasing influence of commercial players from access to publications<br>- <i>supported by proprietary services and analytics</i> | → | • Avoid lock-in over public-funded R&I output, ensuring autonomy of RPOs<br>- <i>supported by open services, analytics and science graphs</i> |

# Horizon 2020 & Horizon Europe

Horizon 2020: ~ €80bn



Horizon Europe: ~€95.5bn



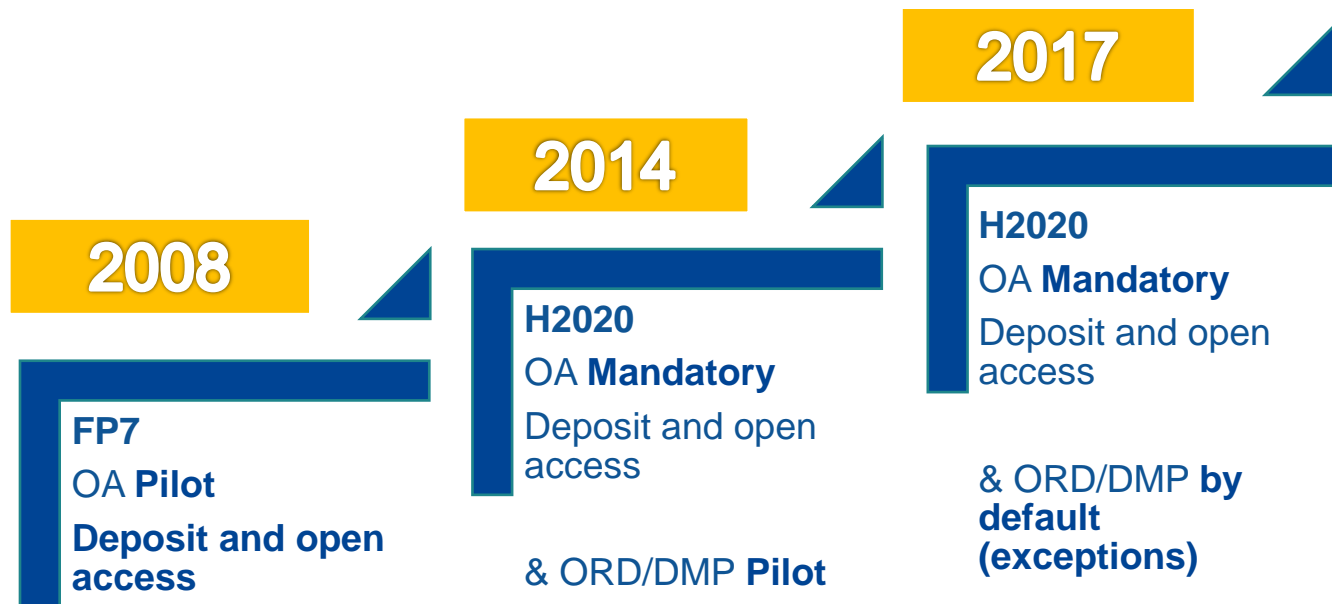
- Excellent Science
- Global Challenges & Ind. Competitiveness
- Innovative Europe
- Strengthening ERA
- Euratom

- The Commission invests heavily in Research and Innovation.
- Over **30000 H2020 projects**—Projects produce **research outputs, data, deliverables, etc.**
- It becomes increasingly important to make the **best possible use** of previous work.



# Open Science in Horizon Europe

## Evolution of OS policies across FPs



## Under **Horizon Europe (2021)**

- Open Science (OA, RDM, Citizen Engagement, etc.) embedded across the FP
  - **Evaluation** of proposals (excellence –methodology-, quality & efficiency of implementation )
  - **Grant Agreement, guidelines**
  - **Reporting**—during the project’s lifetime
  - **Work programmes**
- Strengthening of the obligations with respect to open access and focus on responsible RDM in line with FAIR

**Horizon  
Europe**



# Open Science in Horizon Europe (cont'd)



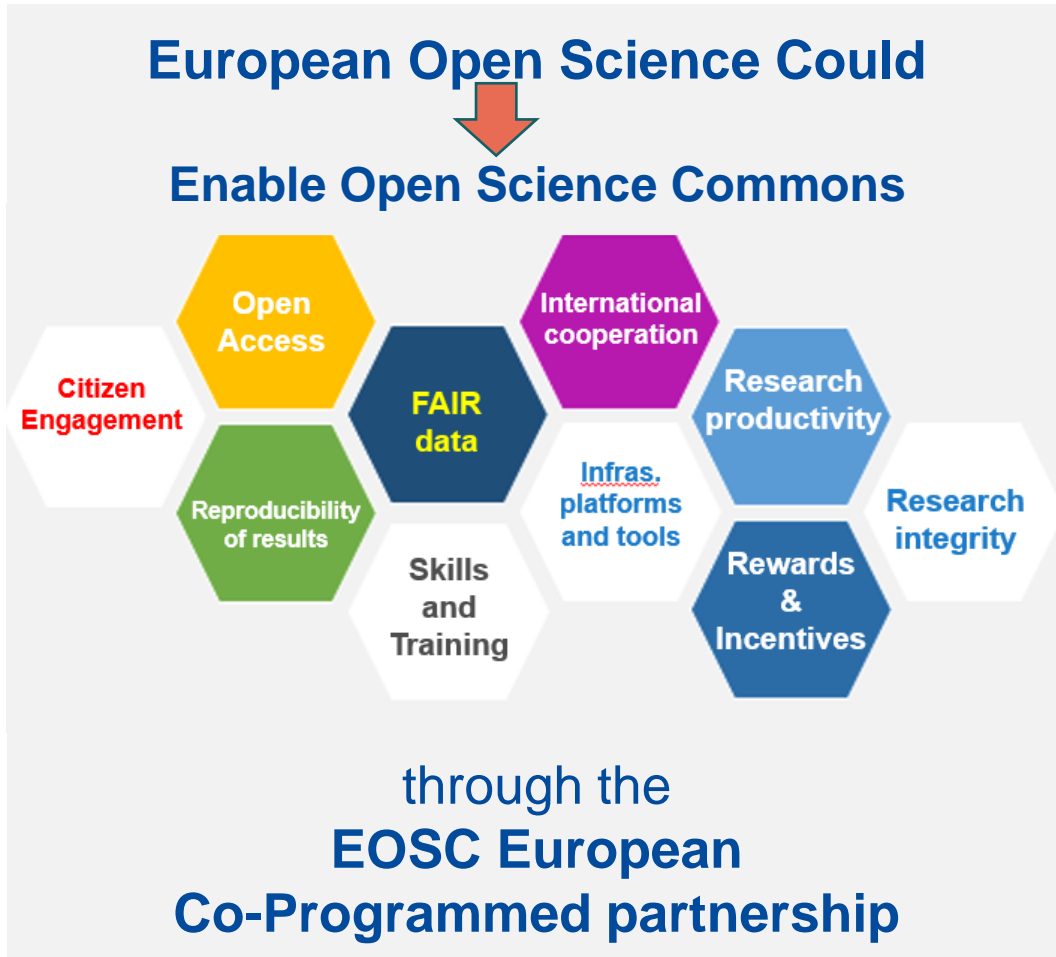
- OA to peer-reviewed publications under Horizon Europe
  - **deposition** in a **trusted repository** and **immediate open access**
  - **retain IPR** and **open licences** [CC BY (or equivalent)]
  - **publication fees (APCs/BPCs) refundable** only in **full open access** publishing venues
  - **Metadata** of deposited publications **open under CC0 or equivalent**
- **Research data management**, in line with the **FAIR principles**
  - **Data Management Plan (DMP)** as a living document constantly updated
  - deposit data in a **trusted repository** (federated in EOSC if required) and link to publications
  - ensure **open access** ASAP under **CC BY** or **CC0 (or equivalent)**, unless exceptions apply  
→ “as open as possible, as closed as necessary”
- Other research outputs (software, algorithms, protocols, workflows, models)
  - Recommended to treat as data (access, deposition, inclusion in DMP,...)



# Open Science in Horizon Europe (cont'd)

HE WP Research Infras. – Destination InfraEOSC

leading by example



## Open Research Europe EC publishing platform

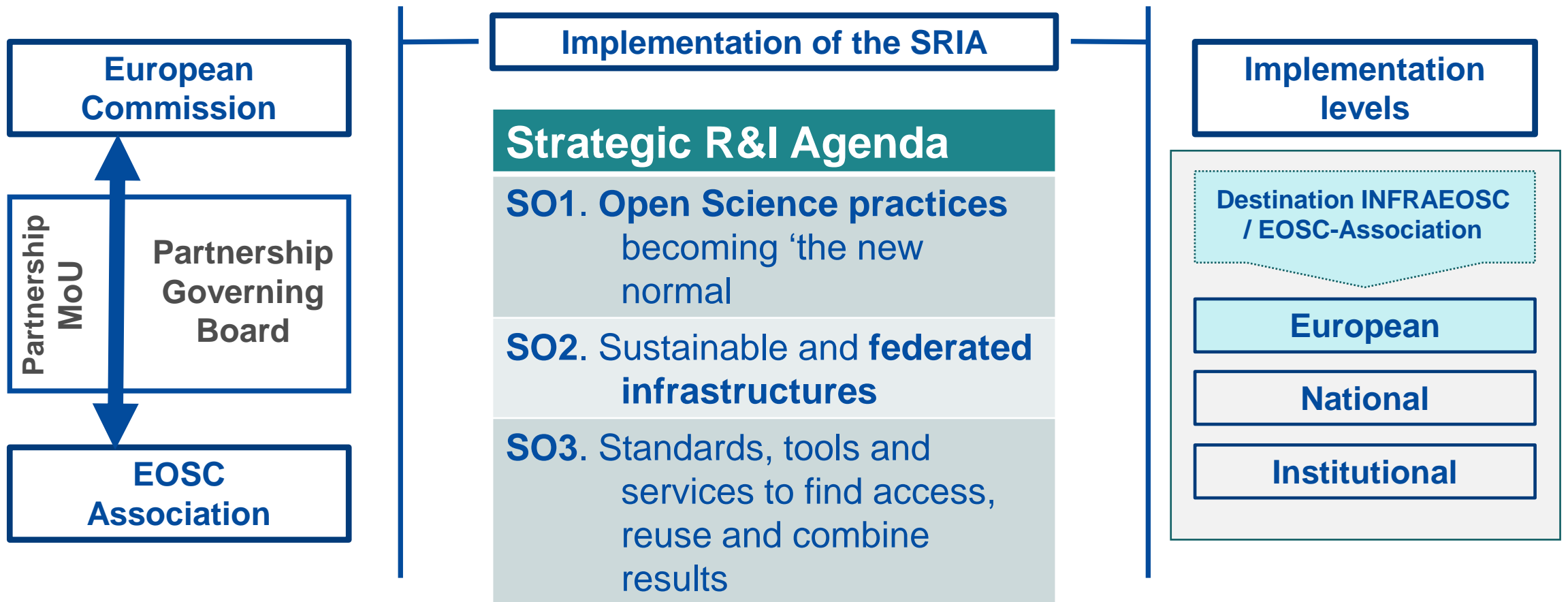
- Support EC open access policy
- enable publishing post-grant
- operationalise open science principles
- transparency and cost-effectiveness

## EC repository for data and other outputs

- Tentative plan
  - launch in 2022
  - Operational in 2023
- Foster FAIR principles implementation
- expert curation
- **cost-effectiveness**

# EOSC implementation in Horizon Europe

European Co-Programme partnership and Horizon Europe programming



# Thank you



© European Union 2020

Unless otherwise noted the reuse of this presentation is authorised under the [CC BY 4.0](https://creativecommons.org/licenses/by/4.0/) license. For any use or reproduction of elements that are not owned by the EU, permission may need to be sought directly from the respective right holders.

