Open Science and EOSC in the ERA policy agenda

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Pact for R&I in Europe – Values & principles

Open Science is central to the values and principles for R&I in Europe

Upholding values

- Ethics and integrity
- Freedom of scientific research
- Gender equality and equal opportunities

Working better

- **Free circulation**
- **Pursuit of excellence**
- Value creation

Working together

- Coordination, coherence and commitment
- Global outreach
- Inclusiveness
- **Societal responsibility**

https://data.consilium.europa.eu/doc/document/ST-13701-2021-INIT/en/pdf

European Commission

Pact for R&I in Europe – Priority areas

Open Science in priority areas for joint action

Deepening ERA

- **Open Science**
- **Research Infrastructures**
- Gender equality, equal opportunities for all
- Careers and mobility of researchers and **research assessment and reward systems**
- Knowledge valorisation
- Scientific leadership
- Global engagement

Broadening ERA and relevance – twin transition and society's participation

- Challenge-based ERA actions
- Synergies with education EU Skills Agenda
- Synergies with sectoral and industrial policy, to boost innovation ecosystems
- **Active citizen and society engagement**

Amplifying access to excellence

- More investments/ reforms in countries and regions with lower R&I performance
- Synergies between Union, national and regional funding programmes
- Increased links and integration of research-performing organisations

Advancing R&I investments and reforms

- Prioritise and secure long-term R&I investments and policy reforms
- Coordination of R&I investments

ERA Policy Agenda (2022-2024)

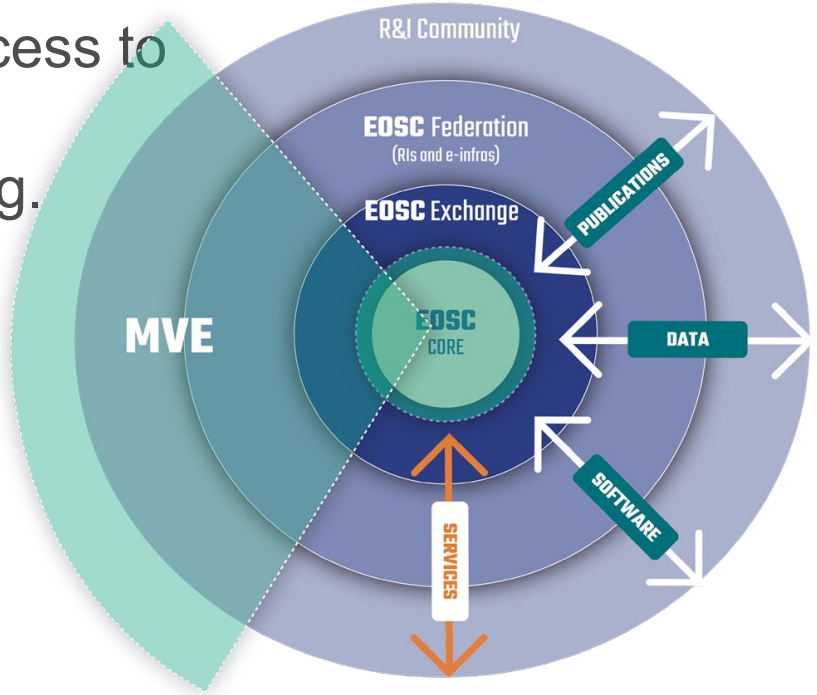
ERA Actions relevant for Open Science and EOSC

- Action 1: Enable the open sharing of knowledge and the re-use of research outputs, including through the development of the European Open Science Cloud (EOSC)
- Action 2: Propose a EU copyright and data legislative and regulatory framework fit for research
- Action 3: Advance towards the reform of the Assessment System for research, researchers and institutions to improve their quality, performance and impact
- Action 8: Strengthen sustainability, accessibility and resilience of research infrastructures in the ERA
- Action 14: Bring Science closer to Citizens
- Action 19: Establish an efficient and effective ERA monitoring mechanism

ERA Policy Agenda (2022-2024)

Outcome 1: Deploy the core components and services of EOSC and federate existing data infrastructures in Europe, working towards the interoperability of research data

Motivation: Provide all European researchers with seamless access to a rich portfolio of FAIR data and services in all relevant domains from data handling to computing, processing, analysis and storing.



What?
Procure an "*EOSC Core Infrastructure and Exchange platform*" with functionalities available 24/7:

- EOSC Core: technology platform and coordination functions
- EOSC Exchange: subset of horizontal services, data sources
- Hosting infrastructure, deployment, operations and management

Investigate *sustainability options* over the long-term
Research actions to *evolve the platform* and *advance the Web of FAIR research data*

Who? EC in consultation notably with the EOSC tripartite governance and the EOSC European partnership, MS and AC, EOSC Association, its members and Task Forces, HE INFRAEOSC community

Outcome 2: Establish a monitoring mechanism to collect data and benchmark investments, policies, digital research outputs, open science skills and infrastructure capacities related to EOSC

Motivation: Assess trends over time of the uptake of Open science practices across Europe. Elaborate or adjust policies. Avoid patchy, one-off surveys. Regular update of a single, validated database. Reliability. Accountability.

What?
Four layers of data to support EOSC/Open Science monitoring in Europe:

1. EOSC-readiness by the member states and associated countries (national policies and investments to the EOSC via surveys co-defined with MS and AC);
2. Progress of the EOSC European Partnership along on its Key Performance Indicators;
3. In-kind contributions by the EOSC Association and its members to the EOSC partnership;
4. Other Open Science practices, policies, infrastructures, data and services in Europe.

Who? EC, MS, AC via the EOSC Steering Board, EOSC-Association, EOSC-Future project

Outcome 3: Deploy Open Science principles & identify best practices

Motivation: Open Science (OS) practices and skills become the 'new normal'.

What?

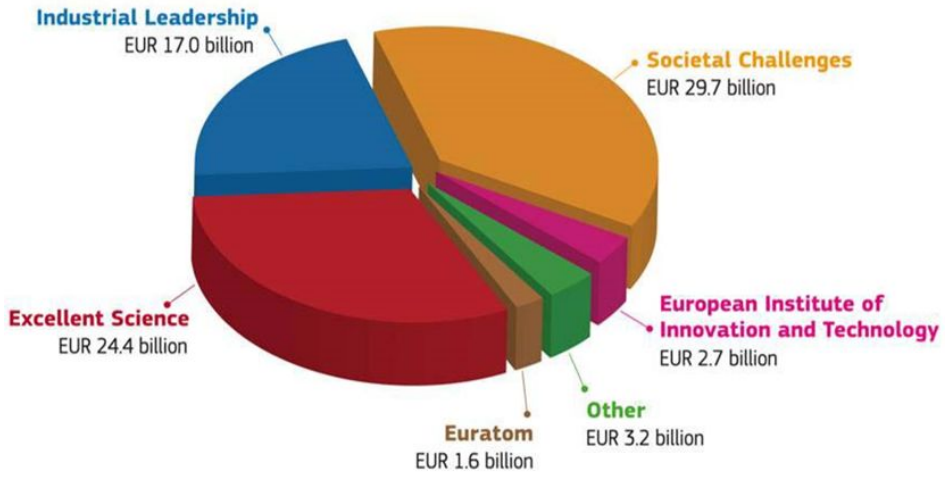
- *Mainstreaming OS across research funding programmes* (encourage OS practices as part of projects' methodologies; reward OS practice as part of proposal evaluation);
- *EOSC services and tools underpinning a research assessment system* that incentivises OS practices: use *of Scientific Knowledge Graphs (SKGs) and PIDs for* easy tracking and citation of interconnected FAIR digital objects;
- *Policy support actions:* capacity-building for institutional OA publishing, institutional changes for practising OS responsible research, capacity-building for citizen science, OS training;
- *EOSC tripartite events* including 'national EOSC events' to intensify EOSC outreach and coordination of EOSC-relevant actions in each country and *catalogue of OS best practices*.

Who? EC, MS, AC in synergy with the EOSC-Steering Board, EOSC-A, HE beneficiaries

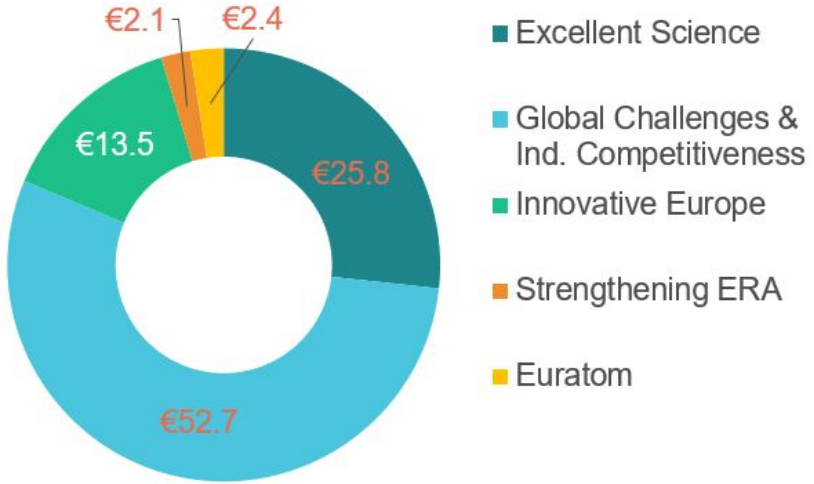
Horizon Europe:
an opportunity to mainstream Open Science

- The EU invests heavily in Research and Innovation
- **€80+ Bn in Horizon 2020** leading to **over 30.000 projects**
- **€95+ Bn in Horizon Europe (HE)**
- Projects produce reports, publications, data, software, patents, etc.
- Need to **maximise reuse** of knowledge and other research output

Horizon 2020: ~ €80bn



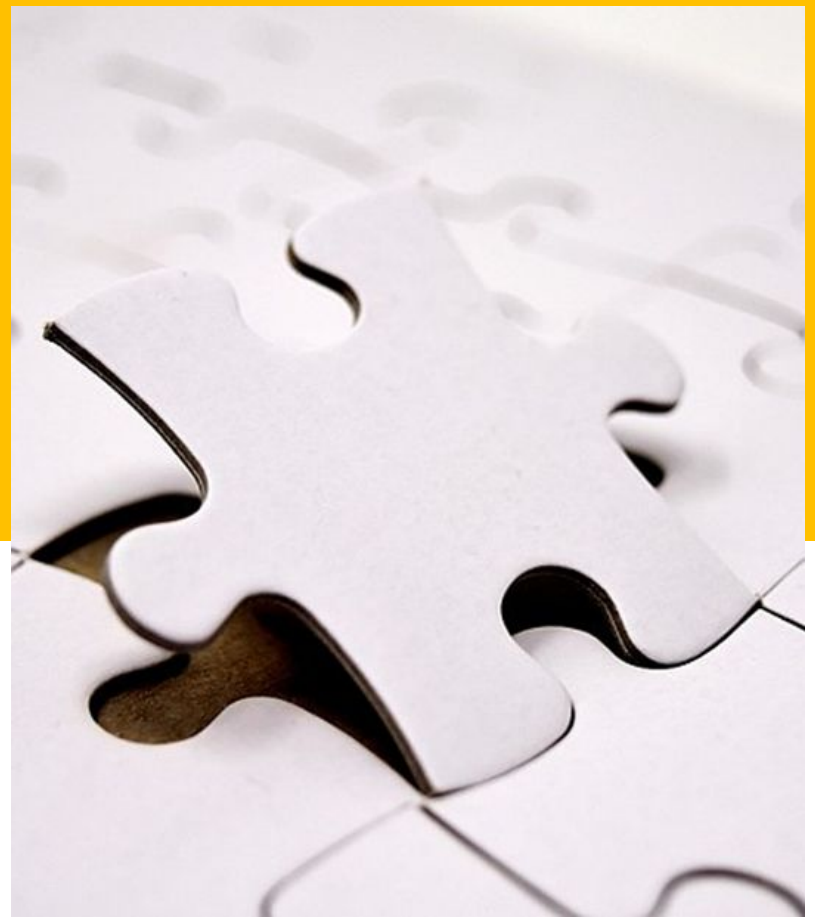
Horizon Europe: ~€95.5bn



Some novelties in Horizon Europe

- **Rationale and scope:** move from open access to open science with a broadened scope of policy; open science comprises open science practices
- **Evaluation:** open science under excellence (not impact); practices beyond mandatory incentivized through evaluation; publications evaluated on basis of qualitative assessment provided (not Journal Impact Factor)
- **Intellectual Property Rights:** requirement to maintain enough rights to meet open access requirements to publications
- **Publications:** Immediate open access (=no embargo); only publication fees in full open access venues are reimbursable (=no hybrids)
- **Research data:** research data management (including Data Management Plans) mandatory for all projects generating and/or reusing data; data managed in line with FAIR principles; open access 'as open as possible as closed as necessary'
- **Qualified open access to research outputs:** specific licenses and technical standards for digital objects to enable FAIR; trusted repositories
- **Reproducibility of research:** information for validation of publications and for validation and reuse of data required; access for validation of publications must be provided (while legitimate interests safeguarded)

The success of EOSC will also largely depend on a change of culture among the researchers towards openness. Research funders, like the Commission, are increasingly committed to foster open access, data management along the FAIR principles, as well as incentives and rewards.



Thank you

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