



Open science and EOSC in the European Research Area

Open Science Day

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Science is in transition



Image by Nick Youngson CC BY-SA 3.0 Alpha Stock Images

The **Open Science (OS) paradigm** affects the whole research cycle and all its stakeholders

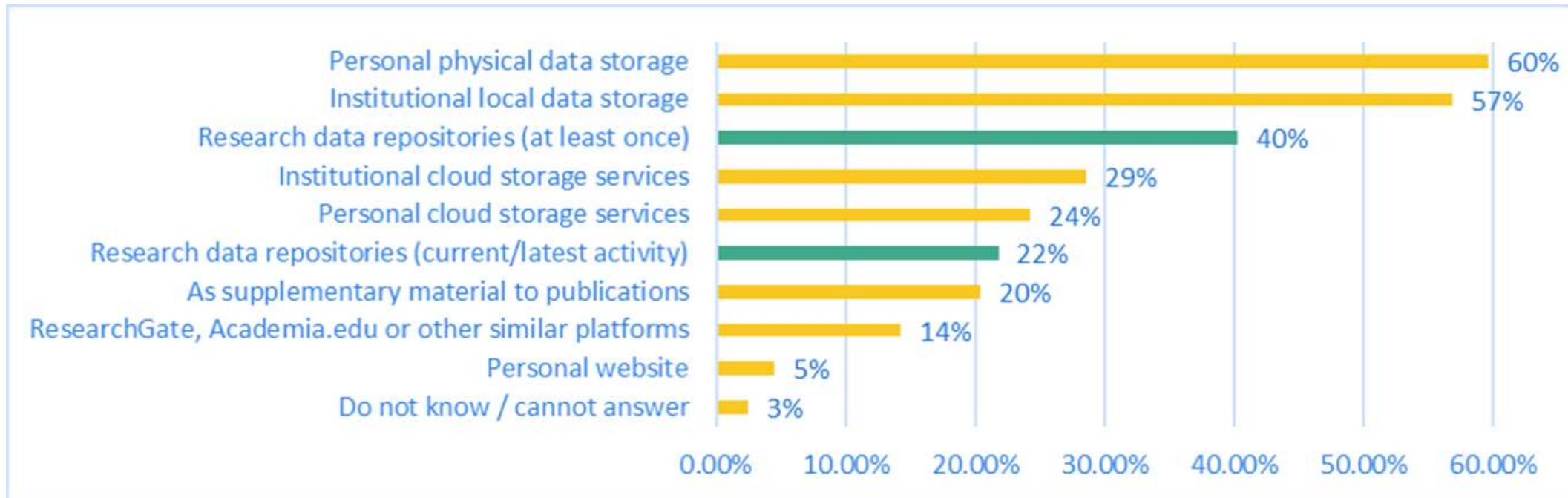
It implies sharing knowledge and tools:

- “as early as possible” in the research process;
- “as openly as possible”;
- “as FAIR as possible”;

not only within a discipline but also between disciplines and society at large.

Research data depositing

- Research data repositories are not the most common destination for storing usable research data. Researchers usually (~**60%**) stored data in **personal** physical data storage or institutional **local** data storage.
- **40%** of researchers occasionally stored data in **research data repositories**. 22% respondents did that during the current/latest research activity.



Source: European Research data landscape study 2022 commissioned by the European Commission
Elaboration by the study performers based on unweighted researchers' survey data. Total N=10,914.

Awareness of the FAIR principles

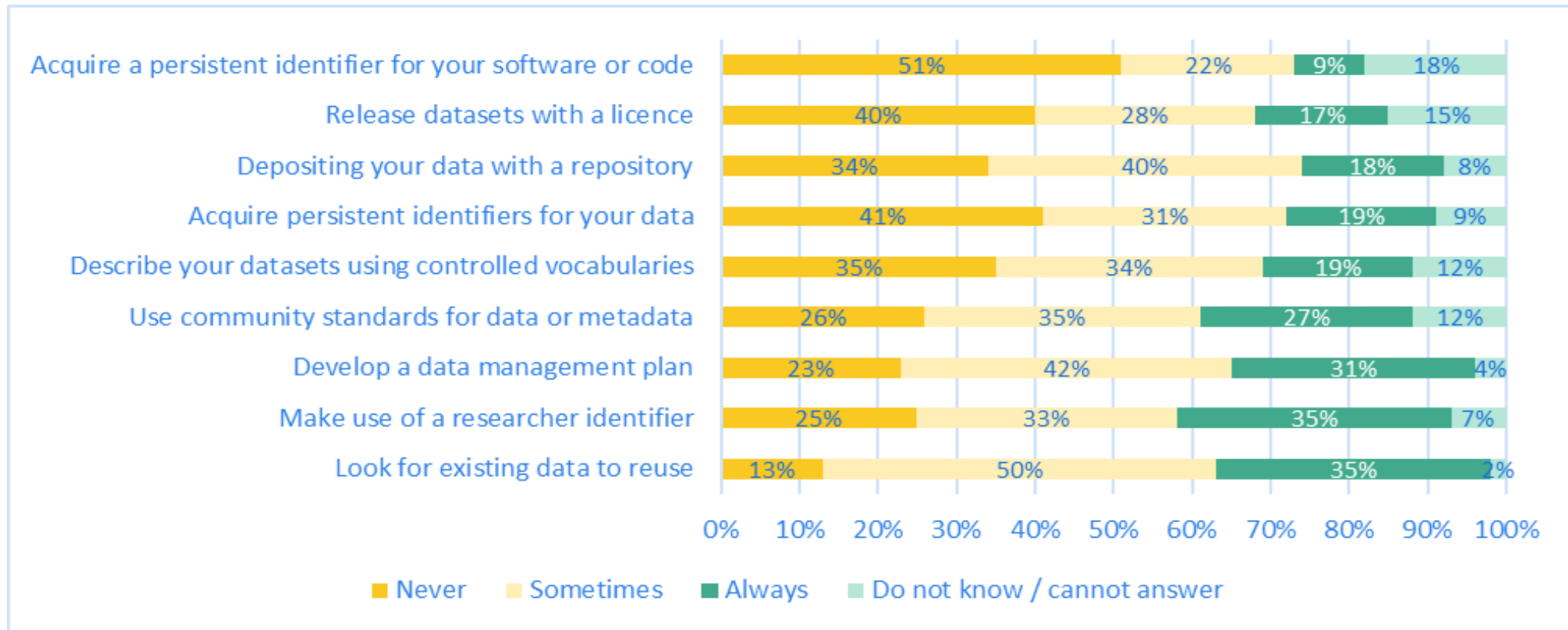
- About **2/3s** have **some level of familiarity** with the FAIR principles.
- More than **1/3** have **never heard** of them.
- Only **18%** of the respondees put the FAIR principles **into practice**



Source: European Research data landscape study 2022 commissioned by the European Commission
Elaboration by the study performers based on unweighted researchers' survey data. Total N=11,849

FAIR aligned practices

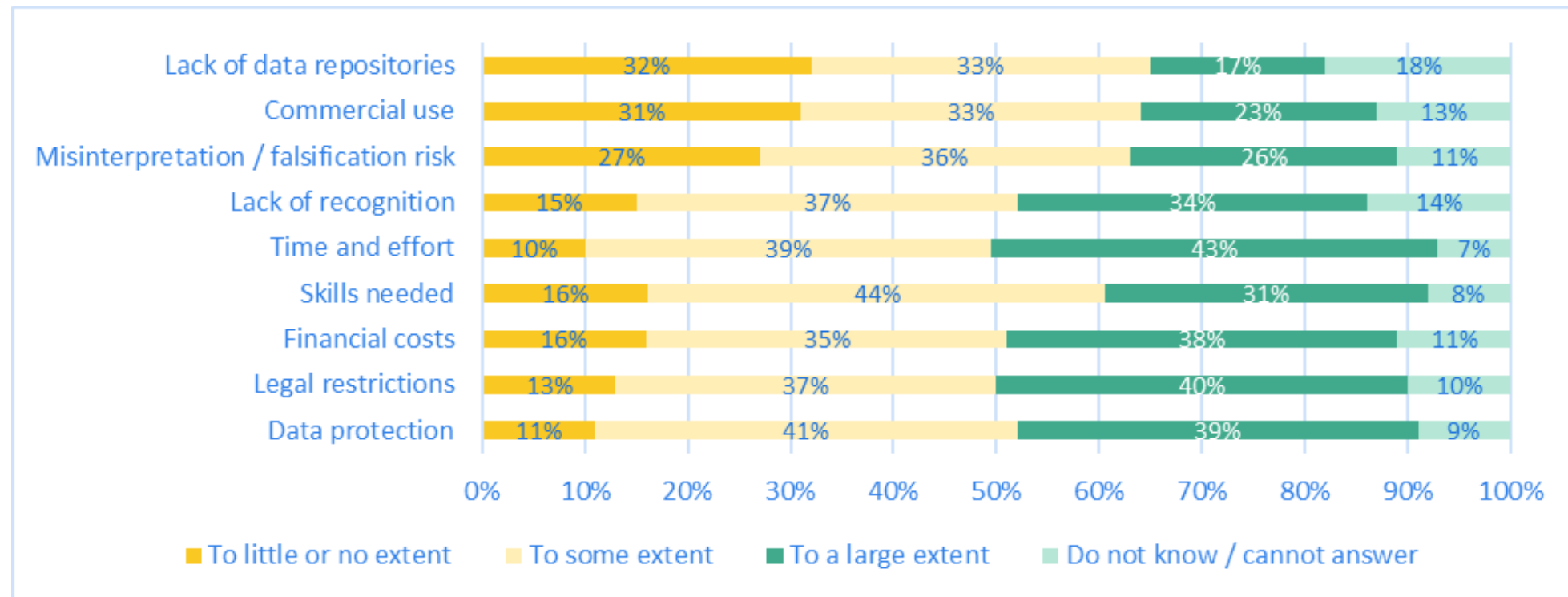
- More than 2/3s develop DMPs but other FAIR-aligned practices are less common.
- Allocating PIDs to data is the least common practice.



Source: European Research data landscape study 2022 commissioned by the European Commission
Elaboration by the study performers based on unweighted researchers' survey data. N=10,868-10,889, depending on option

Barriers

- **Time, effort and financial costs** required for RDM and data sharing are seen as a challenge
- **Data protection and legal restrictions** are also seen as big obstacles
- **Lack of recognition** also seen as a major barrier



Source: European Research data landscape study 2022 commissioned by the European Commission
Elaboration by the study performers based on unweighted researchers' survey data. N=9,898 (selected at least one option).

Open Science: a Political Priority of the Union



2016: Council Conclusions on the ‘**Transition Towards an Open Science System**’

2018: EC Recommendation on ‘**Access to and Preservation of Scientific Information**’

2020: EC Communication on the ‘**New ERA**’

2021: Council Recommendation on a ‘**Pact for R&I in Europe**’

2021: Council Conclusions on the ‘**Future Governance of the ERA**’ including the ‘**ERA Policy Agenda**’

2022: Council Conclusions on ‘**Research Assessment and Implementation of Open Science**’

Implementing EOSC

- **EOSC as part of the European Research Area** to enable sharing of knowledge, data and tools
- **EOSC European Partnership** to pool resources: Horizon Europe grants & procurements plus in-kind additional activities by the EOSC Association members
- **EOSC tripartite collaboration:** Implementation steered by the European Commission, the Member States and Associated Countries, and the EOSC Association representing the voice of the community



Courtesy of the EOSC Association.

- **A community-driven process**
- Gradual implementation based on **mutual alignment at European, national and institutional levels**

OS and EOSC in the ERA Policy Agenda 2022-2024

ERA Priority Area:

“Deepening a truly functioning internal market for knowledge”



Action 1 (out of 20):

“Enable the open sharing of knowledge and the re-use of research outputs, including through the development of the European Open Science Cloud”

- Commitments by 24/27 MS
- Three outcomes by end of 2024 (see next slides)
- Synergies with other ERA actions:

Data legislative framework for research
Research Infrastructures
Green/digital transition

Reform of the Research Assessment
International cooperation
ERA monitoring mechanism



EOSC European Partnership

Directionality

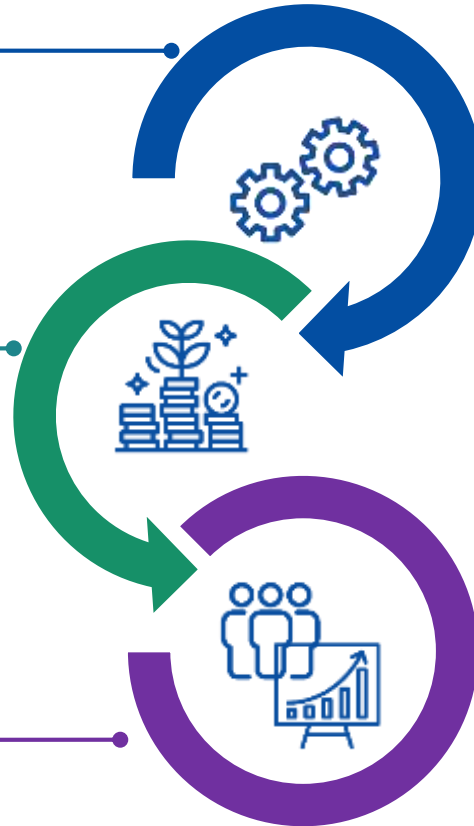
- Industry R&I strategy
- **Member States/Pan-European**

Additionality

- Industry investments
- **Member States**

Impact

- Economic
- **Social**



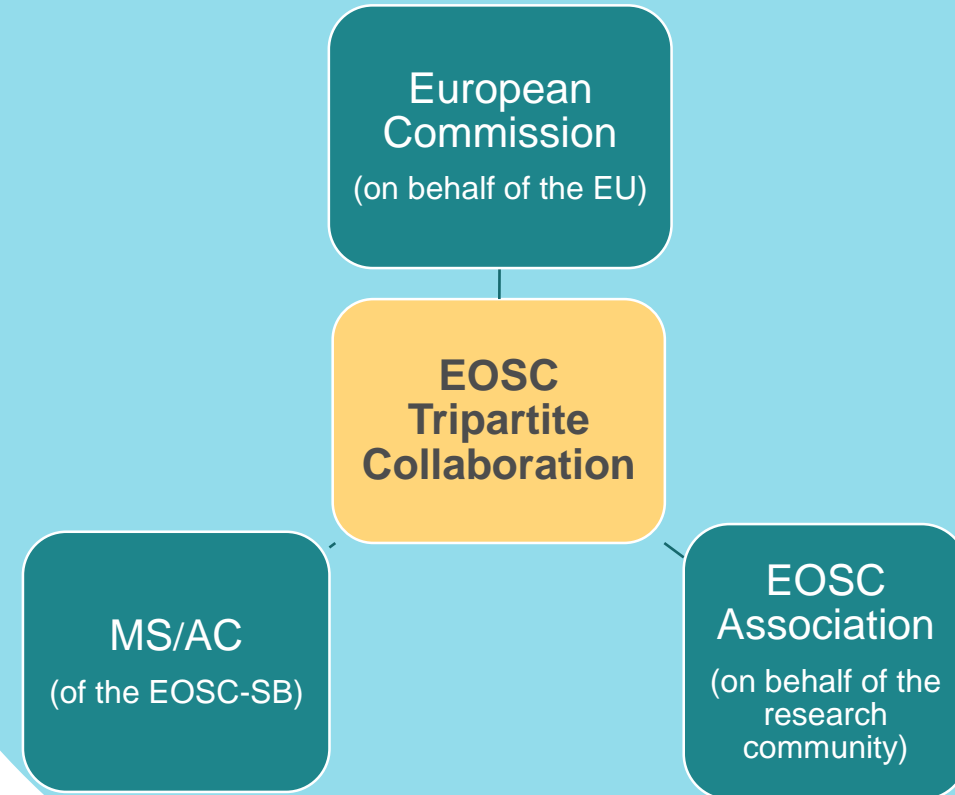
- Towards a **Web of FAIR data and services** for science (across borders and scientific disciplines)
- Common strategic vision to develop a **European data space for science, research and innovation** articulated with other public/private data spaces.
- **Multiple levels:** Pan-European / national / institutional.
Multiple stakeholders: EU, MS/AC, Funding agencies, RPOs, universities, libraries, research infrastructures, e-Infrastructures.
- **Multiple commitments:** EU / national investments, Open Science policy alignment & commitments, FAIR uptake, trusted repositories, EOSC-registered services
- **Research efficiency, trust in science, data sovereignty, societal relevance of science, innovation in the digital age**

EOSC tripartite collaboration

A level playing field for EOSC implementation and coordination

Consensus in 2021 to accelerate implementation of

- the deployment of a viable EOSC platform for use by the research communities;
👉 *EOSC procurement (upcoming)*
- the deployment of a single joint capacity to monitor the uptake of open science and respective contributions to the EOSC;
👉 *EOSC Observatory (ongoing)*
- alignment of policies, investments, and practices at European, national/regional, and institutional levels to foster synergies and leverage effects of the conducted actions.
👉 *EOSC tripartite catalogue (under development)*



EOSC catalogue (under development)

A working group appointed by Universities Norway (UHR) was mandated to recommend **guiding principles for the assessment and evaluation of research(ers) in the light of the transition to Open Science.**

The ambition has been to develop a guide that adopts three core principles for assessment: more transparency, greater breadth, and comprehensive assessments as opposed to one-sided use of indicators.



- Assessment
- Data
- Engagement
- Infrastructure
- Publications
- Services
- Skills/training
- Software

EOSC catalogue (under development)



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The diagram illustrates the Data Management Expert Guide (DMEG) process. It features a central 3D graphic of a person climbing a stack of wooden blocks that form the letters 'D', 'A', and 'A'. Surrounding this central graphic are seven blue circular icons, each representing a step in the data management process: PLAN (with a downward arrow), ORGANISE & DOCUMENT (with a grid icon), PROCESS (with a circular refresh icon), STORE (with an upward arrow), PROTECT (with a shield icon), PUBLISH (with a document icon), and DISCOVER (with a magnifying glass icon).

Data Management Expert Guide (DMEG)
The DMEG is designed by European experts to help social science researchers make their research data Findable, Accessible, Interoperable and Reusable (FAIR).
You will be guided by different European experts who are - on a daily basis - busy ensuring long-term access to valuable social science datasets, available for discovery and reuse at one of the CESSDA social science data archives.

EOSC catalogue (under development)

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The Research Council of Norway (RCN) is establishing a **national network for citizen science** together with relevant institutions from research and the public sector to enhance mutual learning and sharing of experiences across institutions and societal sectors.

Participation in the PRO-Ethics project which tests new, **ethical ways to involve citizens in decision making processes** and will deliver an ethics framework and a set of practical guidelines and actionable criteria for assessing the quality and ethics of participation processes.

EOSC catalogue (under development)

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OPEN ACCESS TO CONTENT

- Digital Library of the University of Maribor
- Repository of the University of Ljubljana
- Repository of the University of Primorska
- Repository of the University of Nova Gorica
- Digital repository of research organisations of Slovenia
- Repository of independent higher education and higher education organisations
- Social data archive
- VideoLectures.NET
- Digital Library of Slovenia
- NUK Web Archive
- Ministry of Defence Digital Library
- Sci Vie Repository
- CLARIN.SI
- ZRC SAZU

A central portal for open science in Slovenia

To provide access to the intellectual production of Slovenian research organisations. Researchers have the infrastructure at their disposal that allows them to comply with the mandatory open availability of publications from publicly funded research.

The aim of the national portal is to support open science, which, in addition to open access to researchers' publications and research data, also involves open collaboration of scientists at different stages of research

<https://www.openscience.si/Default.aspx>

EOSC catalogue (under development)



Ente
Finanziatore



Ricercatore



Istituzione



Cittadino

E voglio informazioni su:



Open Science



Gestione dei dati della ricerca



Regolamenti Open Science



Repository



Enti finanziatori e Open Access



OS Progetti e Iniziative

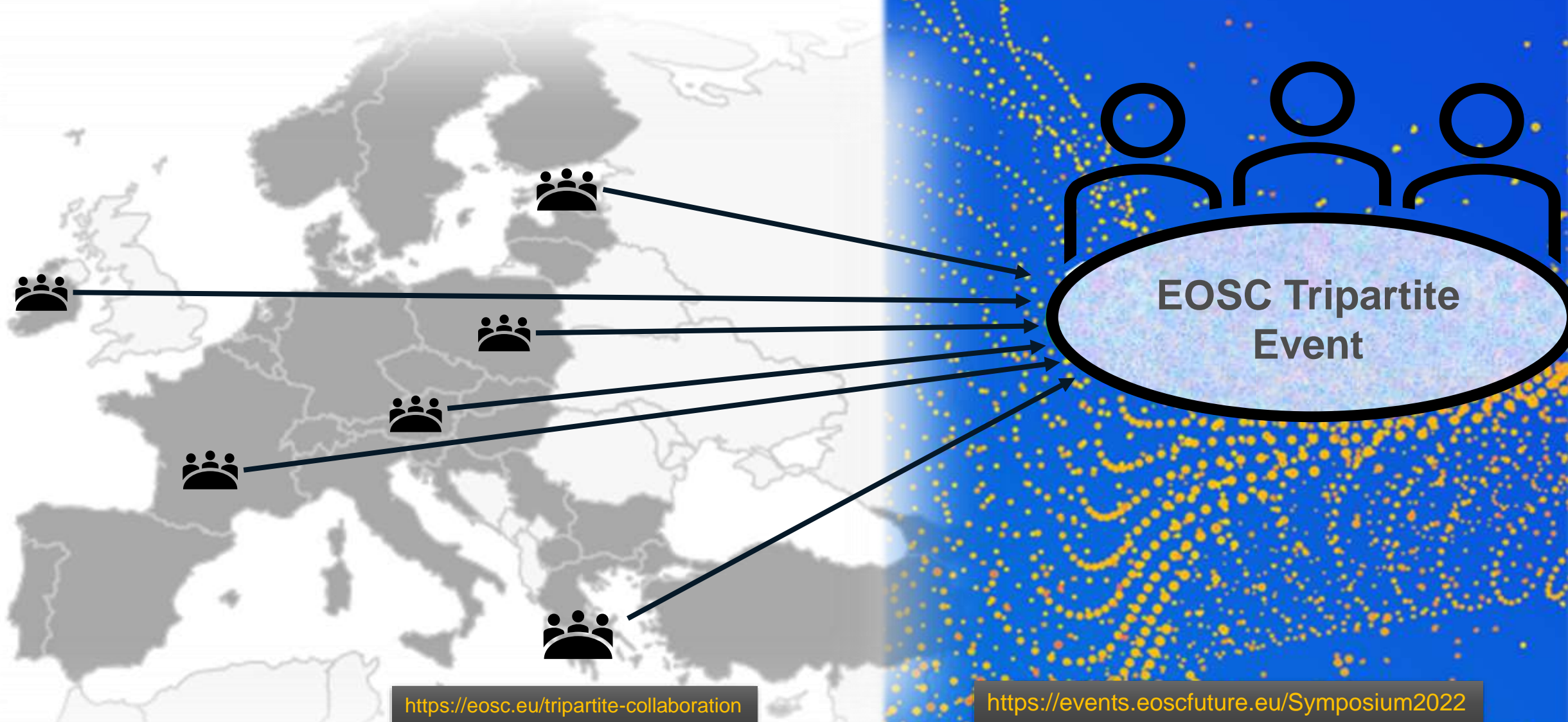
Open-science.it is the Italian portal dedicated to Open Science, Open Access to research outputs and many related topics. The portal hosts general information, **training material**, events, news and updates of national and international relevance, introductory material and resources related to specific problems, as well as analysis and advanced information. It is addressed to the Italian speaking community, contents are only available in Italian for now.

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- **Skills/training**
- Software

<https://open-science.it/fr/english>

Coordination of outcome of National EOSC Tripartite Events

EOSC SYMPOSIUM 2022
14 to 17 November, Prague



The success of EOSC will 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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