



EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR RESEARCH & INNOVATION

Directorate A Policy Development and Coordination
A.6 Data, Open Access and Foresight

SESSION 2: ADOPTION AND IMPLEMENTATION OF FAIR DATA PRINCIPLES

INPUT PAPER

European Open Science Cloud (EOSC) Summit

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RECOGNISING the challenges of data driven research in pursuing excellent science;

GRANTING that the vision of European Open Science Cloud is of a research data commons, widely inclusive of all disciplines and Member States, sustainable in the long-term, the EC;

PROPOSES that the stakeholders present at this summit commit to share the following intents and will actively support their implementation in the respective capacities:

- **[User needs]:** All researchers in Europe will enjoy access to an open by default, efficient and cross-disciplinary research data environment supporting the FAIR data principles. The EOSC will be underpinned by minimal and rigorous global standards and terms of engagements, combined with long-term preservation in FAIR status and maximum freedom of local implementation;
- **[FAIR coverage]:** FAIR principles will apply not only to research data in the conventional sense but also to data-related algorithms, tools, workflows, protocols, services and other kinds of digital research objects;
- **[FAIR Governance]:** The design and implementation of FAIR will benefit from inclusive and widening stakeholder participation. It will be based on interinstitutional arrangements, well-established frameworks and decision making flows, and clear roles and responsibilities;
- **[Cross-disciplinary vs domain specific common standards]:** The setting of standards and guidelines will distinguish cross-disciplinary from domain specific needs. Cross-disciplinary needs will require cross-disciplinary agreements, while domain specific needs should be tackled within each discipline, however without losing cross-disciplinary needs out of sight;
- **[Legal layer]:** Legal barriers to access and reusability of data will be identified and overcome; the underpinning legal framework will be made simpler and more coherent. This will allow least cumbersome integration of research data under different legal frameworks, policy implementation plans and strategies;
- **[Organisations' role]:** Research organisations, information infrastructures, publishers and other actors will align their data-related business processes, responsibilities and expectations to achieve commonly agreed goals;
- **[Common catalogues]:** There will be catalogues (e.g. for datasets, services, standards) which will make research data discoverable/searchable via an EOSC Portal via machine readable metadata and identifiable by means of a common and persistent identification mechanism;

- **[Semantic layer]**: Research data will be both syntactically and semantically understandable, allowing meaningful data exchange and reuse among scientific disciplines and countries;
- **[FAIR capacity building]**: FAIRness of data and building FAIR-ability will be actively promoted from the bottom up through awareness-raising, education and training activities. Such activities will ensure that the research community includes FAIR-related skills in their capacity building and long-term sustainability strategies;
- **[FAIR incentives]**: FAIR data does not mean free data (for the producer), but increases costs; incentives should be given to research organisations and brokers to fully commit for the implementation of FAIR principles;
- **[FAIR implementation]**: Implementation of FAIR principles requires careful orchestration (e.g. the FAIR Data Action Plan 2018-2020). This is an important collaborative instrument for the embedding of FAIR principles in the first phase of the EOSC. The plan will not necessarily suggest any specific technology, standard or implementation solution and it will complement existing initiatives to turn data into FAIR data;
- **[Transition to FAIR]**: For an even transition to FAIR data from different levels of maturity, existing activities to make data FAIR will be complemented by new initiatives that embed FAIR principles in all the phases of data life cycle;
- **[Roles of stakeholders]**: The Research Data Alliance and other organisations active in the development of data-related standards will be used as forums to reach consensus on practical implementation of FAIR data principles at European and global level;
- **[Certification]**: Scientists will be assured that the data repository where they deposit/ access data conforms to clear rules and criteria (e.g. certified) and that their data is FAIR compliant. A certification mechanism will be set in place based on agreed procedures alongside an up-to-date and accessible catalogue of certified repositories.
- **[Common tools]**: Easy access to a set of tools and services to guide the curation of FAIR data for re-use and to assess FAIR compliance will be available.
- **[EU-added value]**: National and European measures need to be coordinated and interlinked to maximise the added value of making data FAIR and to prevent diverging developments and duplication of efforts and investments.