LIBER Statement on a European Open Science Cloud

LIBER, the Association of European Research Libraries, wholeheartedly supports the development of an Open Science Agenda for Europe.

We share the vision of Open Science serving innovation and growth, and view a more integrated research infrastructure in the form of an Open Science Cloud to facilitate access to data as a key element in achieving this vision.

It is important that the development of this infrastructure involves both a top-down and bottom-up approach to gain the trust of funders and researchers. Ultimately it is the researcher, supported by an ecosystem of social and technical enablers, who has the power to realise Open Science.

For the Open Science Cloud to be successful, LIBER believes it must be founded as a research commons: no barriers to entry, supporting diverse activities and communities, and with light and distributed governance.

1 Connecting Institutional, Consortial, National and European Infrastructures

Open Science is currently on the agenda at many research institutions, and at consortia, national and European level. This is why it is important to build a functional and, for the researcher, understandable solution to serve the needs of research communities. A new integrated network of infrastructures and existing data in repositories should form the basis of a clear service for the researcher, and provide cost-effective solutions for storing, sharing, reusing, preserving and mining datasets. In the future, the ability to analyse data across disciplines will be essential. This underlines the importance of working towards technical and semantic interoperability.

2 Open Ownership and Governance

It is critical that the Open Science Cloud is open in all aspects, not just its outputs. Governance, funding models, and the structure of the Cloud should be transparent. In order to strike the right balance between centralised infrastructure and localised applicability, we recommend beginning developments with a design phase in which both technical issues and governance rules are sufficiently elaborated. The primary user communities — institutions, libraries and disciplinary communities — should be involved in this process.

Whilst commercial procurement may have a role to play in building the Cloud infrastructure, it is imperative that the Cloud is not driven by commercial interests but is publicly owned and controlled, and that there are no fees charged at points of access.

3 Added Value

It is unrealistic to expect that the Cloud will be wholly centrally funded. Funding should come from a range of sources and should be a combination of centralised, national and institutional

funding. The Cloud should also provide added value to public and private infrastructures and stakeholders, in order to attract investment and to incentivise the sharing of infrastructure. An evaluation of current research infrastructures to identify possible areas to streamline would be a first step towards achieving this.

4 Diversity

Libraries and repositories are fundamental enablers of Open Science[1]. This is because they provide local solutions and support diversity. There is huge value to be gained from the complex and diverse data produced by various disciplines.

A challenge for a European Open Science Cloud is how to deal with diverse and heterogeneous datasets as well as big data. Existing EU infrastructures have primarily been developed to handle large volumes of scientific data. The long tail of data, which comes from a cross section of disciplines, has largely been handled locally at institutional level. This may be because of the complex and specialised nature of the datasets, the need for specialist curation and metadata, or because this is the choice of the researcher. National and shared infrastructures have also been important for engaging local communities. Researchers should have the freedom to choose if, when (in the research lifecycle), and how they connect with the Cloud.

The ability to integrate the Cloud into local workflows will be essential, as will guidance, support and training for researchers on the ground.

5 Flexibility and Engagement

The overarching message of the Science 2.0 consultation was that the success of Open Science will be characterised by bottom-up or grass roots initiatives led by the research community. There is a danger, therefore, that an overly-centralised approach could have the effect of alienating such community-led initiatives if the Cloud is developed without comprehensive and continuous stakeholder engagement or if it hinders the flexibility and responsiveness required for Open Science to thrive. Experimentation and the piloting of small-scale projects before starting large-scale developments should be supported and incentivised to guarantee success.

The overall goal of the Open Science Cloud is to enable the practice of Open Science. Therefore, continuous awareness-raising about the benefits of Open Science will be key to encouraging researchers to engage with and contribute to the Cloud. We believe that libraries have a key role to play in advocacy and raising awareness and in engaging new actors such as citizen scientists by providing guidance and training and support and local level.

A social layer between the Cloud and the researcher is important to equip researchers with the skills to fully and responsibly exploit the Cloud. Investment in education and advocacy must not be neglected in favour of investment in technical solutions.

6 Collaboration and Communication

LIBER is a partner with several large European research infrastructure projects — including EUDAT, OpenAire, Europeana and GÉANT — because we believe that it is important for libraries to engage in the development of such infrastructure and to provide support and guidance on the ground to help researchers avail themselves of these infrastructures. It is also important for these infrastructures to communicate and collaborate with one another to build a coherent infrastructure. The usability of cloud services will be key to their uptake and this will be dependent on extensive consultation between and across communities.

1. OECD report on Making Open Science a Reality https://www.innovationpolicyplatform.org/content/open-science