



## IMPLEMENTATION RECOMMENDATIONS

he issue here is to support practical implementation of the EOSC, with a set of "priority specifications" and other "technical stimuli"

The EOSC should implement "whatever works" and do "whatever it takes" to increase the availability and volume of quality & user-friendly scientific information on-line

Define **EOSC interoperability standards** so that services can be interconnected and federated to be as effective as possible and be based on existing open standards

Define an **EOSC Quality of Service (QoS) standards**, separate for all elements of the ecosystem (data, data access services, software, etc.), to develop a trustable ecosystem

Introduce, as part of EOSC's mission, that a state of the art analysis is carried out on a national level within the Member States for assessing statistics and key assets around the composition and relevant clustering of the community of users, with the respective elnfrastructures & research infrastructures & scientific communities

The universal entry point to the EOSC should provide access to a **marketplace** of efficient and effective **services**, with lightweight integration (authentication and authorization infrastructure, order management, etc...) where service providers can find service users and vice versa. Nothing is wrong with a number of multiple entry points which should be seen as a plus rather than a negative fragmentation

Adopt EOSC standards – from international standards – for information encoding and for protocols for data sharing and publication to **implement FAIR principles over data and services** in a complete & efficient way. And vice versa, offer open EOSC standards to international standardisation bodies

Promote the development of services as **independent**, **interoperable and exchangeable building blocks** to foster the future accreditation of innovative and/or efficient alternatives

Promote open software development, where possible, for all elements of the EOSC

Introduce a **regular assessment of EOSC against other alternatives, including commercial providers**.

This could be made to either enhance an EOSC Service, or to support new Services

Simplify early (beta) participation in the EOSC by potential data providers, service providers, and underlying infrastructure providers, by relaxing initial constraints but without relaxing quality standards for data and services

**Resource allocation**, particularly for early stage pilots, needs to be dynamic and amenable to change even at short notice

Build a workforce able to execute the vision of the EOSC by **ensuring data stewards, data and infrastructure technologists and scientific data experts who are trained and supported adequately.** 

## **ENGAGEMENT RECOMMENDATIONS**

ne central element for the success of the EOSC, part of the "participation" issue, will be engagement of all the Actors, starting with the researchers. The "Engagement Recommendations" highlight some practical ways of supporting an "EOSC Engagement Strategy"

Create **career-enhancing incentives** for researchers who open the science that they produce as also indicated by the OSPP, e.g., who lodge high quality, curated data in trusted repositories, share data services to their peers, or develop open software and services, and make the EOSC a portal to those incentives

Develop, both at Member State and also EU level, appropriate engagement schemes whereby publiclyfunded research infrastructure providers and research communities take part in the EOSC

EOSC should take **national and international developments into account** and should be connectable to national and international frameworks (e.g. the National Research Data Infrastructure in Germany or the AOSP ICT Infrastructure Framework<sup>1</sup>)

To **stimulate the "supply side"** of the EOSC, ensure creation of economic incentives for research infrastructure providers to use and co-develop shared facilities and data repositories through the EOSC. This would be supported by the Commission through the European Data Infrastructure (EDI)

To **stimulate the "demand side"** of the EOSC, ensure establishment of dedicated funding for demonstrations of the EOSC at EU level that would include researchers and their infrastructure providers (e.g., EOSC in practice stories, cross-disciplinary success of EOSC).

## STEERING RECOMMENDATIONS

- OSC will need to select and yet receive strategic advice and steering input from a number of sources and the following recommendations highlight a few valuable paths
- Ensure that the WGs and the other advisory structures well cover for the Executive Board the latest scientific and organisational trends and novel ideas for the necessary decisions in those areas
- Harness **inputs** and **pledges** of the coalition of doers and support their activities in the context of EOSC implementation
- Ensure, both at pan-European and international level, that research communities pursue **advanced partnerships**, also supporting with grants and other incentives, so that EOSC's progress is not dependent on the slowest but on the fastest movers

Guidelines and rules should be clearly separated into (i) domains for which stability and trustability are important and (ii) domains for which progress must take place rapidly. The former should have rules and instructions that remain stable in time, whereas the latter should be run by living documents, facilitating innovation and change. All guidelines and rules should be accounted for in the establishment and progress of the WGs.

<sup>1</sup> http://africanopenscience.org.za/?p=230



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