Open Science, Excellent Science!

EC policies and initiatives in support of open science

The 13th Munin Conference on Scholarly Publishing 2018, Trømso, November 28th, 2018

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Who are we?

A policy maker

- **We propose EU legislation**
- **We legislate with other Community institutions (European Parliament, Council...)**
- **We invite Member States to act**

A funding agency

- **We set our own rules for EC-funded scientific research and innovation**

A capacity builder

- **We fund projects that support our policy**

Why Open Science?

- **Better ROI of the R&I investments:** if all the results of our public research are made reusable, more productive use follows by default
- **Faster circulation of new ideas:** we have 22 million EU SME's that will have access to top notch research without having to significantly pay for it!
- **More transparency of the science system as such**: the public taxpayer has this right and it can only enhance the quality of science
- **Fit for 21st century science purpose**: all grand societal challenges need cross disciplinary research

How do we support open science?

Funding Programmes: Horizon 2020 and Horizon Europe

- Requirements for open access and open science
- Funding for the uptake of such policies in MS
- Funding for the development interoperable infrastructures to support open access and open science at the European level

2012 Recommendation on Scientific Information

- Reports from National Points of Reference
- Reviewed in April 2018

2016 Council Conclusions

- Support for OA publications, data re-use & data management

Stakeholders and expertise

- Open Science Policy Platform, expert groups...
- Check http://ec.europa.eu/research/openscience/index.cfm?pg=home# for new reports (on FAIR data; EOSC and soon on Future of Scholarly Communication)! **NEW****

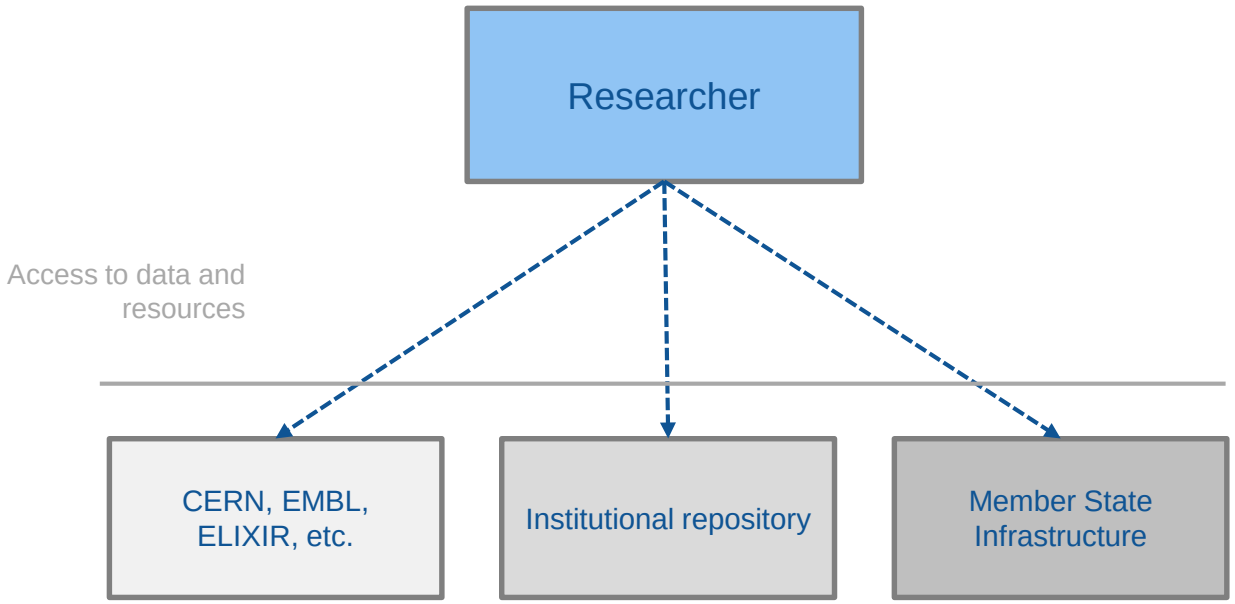
EC longstanding, systematic and growing support for open science

2007	• EC Communication on Scientific Information
2008	• FP7 OA Pilot
2012	• Recommendation on OA to and preservation of scientific information • Communication on European Research Area (ERA)
2014 -	• Horizon 2020 OA and Open Research Data (ORD) policies
2015	• Digital Single Market (DSM) strategy
2016	• Council Conclusions on open science (EU Member States)
2016	• European Cloud Initiative Communication (ECI)- The European Open Science Cloud
2018	• Revision of the 2012 Recommendation in conjunction with recast of PSI Directive
2018	• Launch of the first phase of the EOSC
2018-	• Preparing Open Science for FP9 - Horizon Europe

HOLISTIC POLICY AGENDA SCOPE & AMBITIONS

- ✓ **Open Data:** FAIR data sharing is the default for funding scientific research
- ✓ **European Open Science Cloud:** All EU researchers are able to deposit, access and analyse European scientific data through the open science cloud, without leaving their desk. DSM strategy.
- ✓ **Altmetrics:** Alternative metrics (next generation metrics) to complement conventional indicators for research quality and impact (e.g. Journal Impact Factors and citations)
- ✓ **Future of scholarly communication:** All peer reviewed scientific publications are freely accessible and early sharing of different kinds of research outputs is encouraged
- ✓ **Rewards**: The European research career evaluation system fully acknowledges Open Science activities
- ✓ **Research Integrity:** All publicly funded research in the EU adheres to commonly agreed Open Science Standards of Research Integrity
- ✓ **Education and skills:** All young scientists in Europe have the necessary skills and support to apply Open Science research routines and practices
- ✓ **Citizen Science:** Citizens significantly contribute and are recognised as valid knowledge producers of European science

European researchers face data fragmentation and unequal access to quality information sets

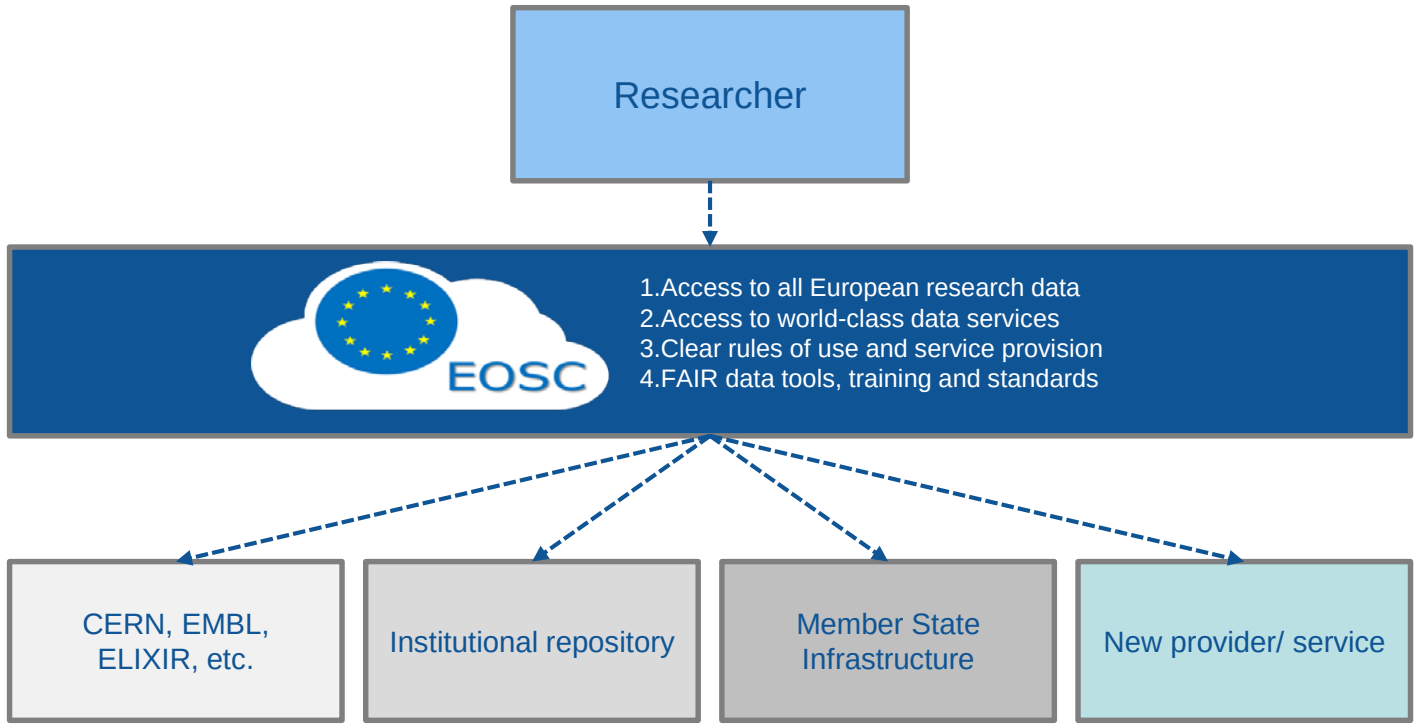


- Fragmented access (across scientific domains, countries and governance models; varying access policies)
- Limited cross-disciplinary access to data sets (i.e. interdisciplinary research)
- Non-interoperable services and data
- Closed data

Limited and limiting access for an ordinary European researcher

Source: RTD

The EOSC will allow for universal access to data and a new level playing field for EU researchers



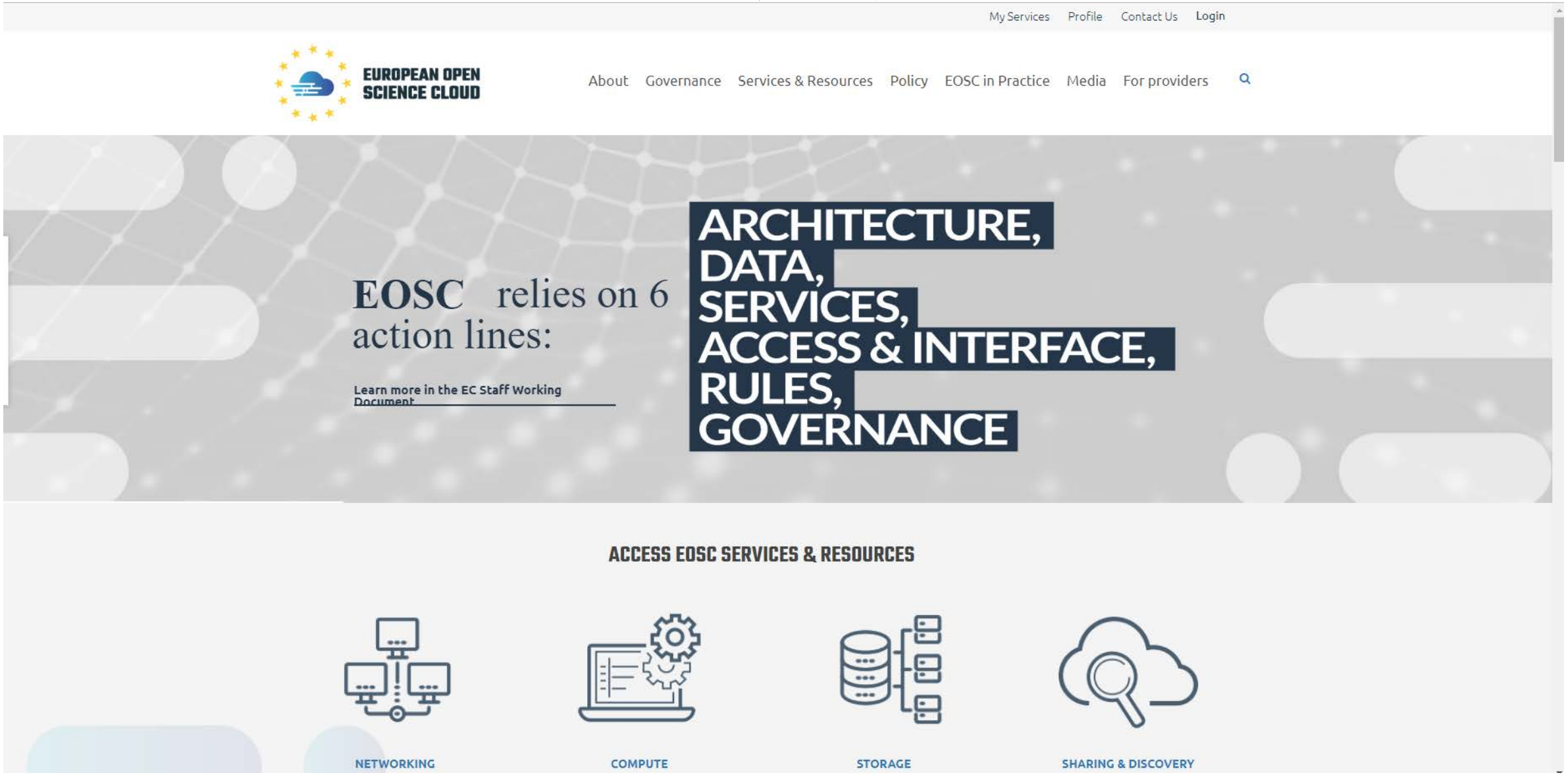
- Easy access through a universal access point for ALL European researchers
- Cross-disciplinary access to data and services unleashes potential of interdisciplinary research
- Services and data are interoperable (FAIR data)
- Data funded with public money is in principle open (as open as possible, as closed as necessary)
- EOSC will help increase recognition data intensive research and data

Seamless environment enabling interdisciplinary research

Source: RTD

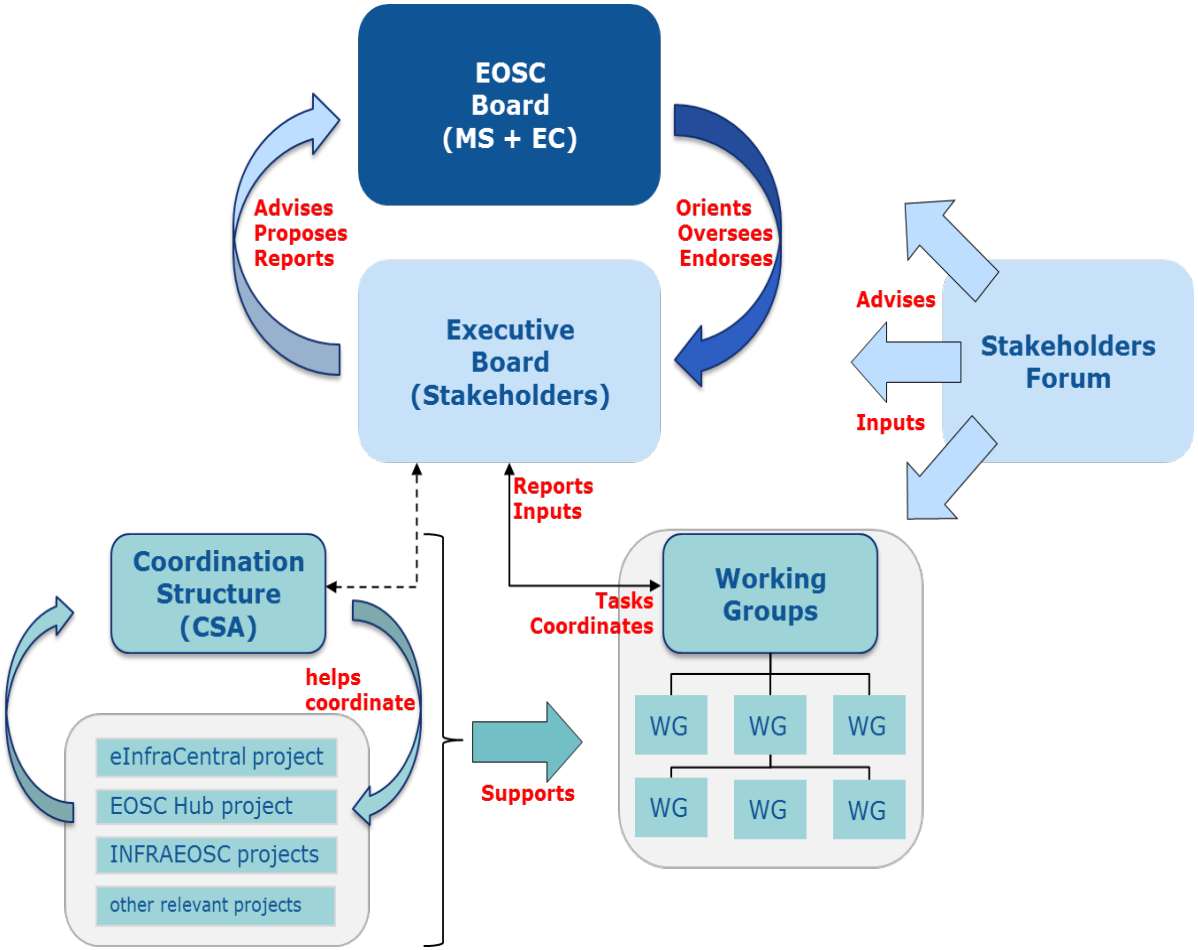
EOSC Launched, November 2018!!

https://eosc-portal.eu/



Not a cloud made in Brussels!

EOSC Governance framework



Three layer structure

- *EOSC Board* of MS/AC and EC representatives to ensure effective supervision of EOSC implementation
  - ***Working Group of the strategic configuration of the Programme Committee***
- *Executive Board* of stakeholder representatives to help ensure proper EOSC implementation and accountability
  - ***Commission expert group***
- *Stakeholder Forum* to provide input from a wide range of actors
  - ***Self-organised with EC support***

Adopted

25/4/2018

Public sector and publicly funded data

Private sector data

Research data

Proposal for a revision of the Directive on the reuse of public sector information

Draft Guidance on private sector data sharing in B2B and B2G contexts

Update 2012 Recommendation on access to and preservation of scientific information

2018 DATA PACKAGE

Different policy instruments for different types of data

#dataeconomy #opendata

Proposal for revision of the PSI Directive and research data

In the DSM Mid-term review, the Commission promised to adopt measures to **enhance the availability of public and publicly funded data** by spring 2018.

The proposal adopted on 25 April as part of the 'Data Package' **extends the scope of the PSI Directive to publicly-funded research data** already accessible via repositories (art. 10).

In addition, it requires the Member States to **adopt national Open Access policies** to further encourage the availability and re-use of research data.

Re-use of research data will be free. The provisions of the PSI Directive will apply (e.g. licensing, formats, non-discrimination) with some exceptions (i.e. request procedure – Article 4).

2018: Revised Recommendation on access to and preservation of scientific information

A stronger instrument

The main changes

- **Research data management (incl. FAIR data)**
- **Incentives schemes and reward systems for researchers to share data and commit to other Open Science practices**
- **Skills and competences regarding scientific information**
- **Text and Data Mining (TDM) and technical standards that enable re-use**
- **Infrastructures for OS (incl. European Open Science Cloud)**

The expected impact

- **An even more powerful policy instrument that is fit for purpose**

The next steps

- **A new compass for Member States**

ORE

The Open Research Europe Publishing Platform

Newsflash!!!! Which is not so much news any more for many of you.....

Public procurement process, a rather complex and long process: Resulted into a non-award decision announced yesterday, along with the launch of a new procedure very soon

The EC is committed to providing a publishing platform as a service to researchers and has been learning from this process

ORE

The Open Research Europe Publishing Platform

- **Help H2020 beneficiaries and their researchers comply with the open access mandate**
  - During and after the grant
  - No cost to researchers (EC pays for platform and APCs)
- **Improve uptake of open access in H2020**
- **Promote open access as the mode for publishing from now on**
- **Support open science and lead by example**
  - Early sharing of research (pre-prints + peer-reviewed articles)
  - Open peer-review+ post publication commenting
  - New generation metrics
- **Explore the economic side of open access publishing**
  - Transparency, cost-effectiveness and sustainability

ORE

We are committed to offering an attractive publishing service for researchers

- Original peer-reviewed articles and pre-prints stemming from H2020-funded research eligible
- Immediate open access, licensed content for re-use
- Open peer-review and post-publication comments
- New generation metrics
- Explicit, accessible and transparent business processes and publication policies aligned with H2020 ones
- Scientific Advisory Board
- Super-networked and TDMable! (PIDs, connection to repositories, interoperable technologies, preservation of content)

Horizon Europe to operate under open science premise

- FP9 clarifies and strengthens the OA obligations
- FP9 empowers authors of scientific publications to provide open access
- FP9 is home of FAIR and open data ('as open as possible, as closed as necessary')
- FP9 supports responsible research data management (DMPs required for projects producing data)
- FP9 promotes the European Open Science Cloud
- FP9 broadens OA (with opting out options) to other research output
- FP9 promotes compliance with 'Open Science principles' through a combination of obligations and incentives
- FP9 further implements sanctions for those beneficiaries significantly failing to provide open access, requiring institutions to assume responsibility for their intellectual output
- FP9 introduces the use of 'next generation' metrics for better assessing the systemic impact of research output and the engagement in Open Science by researchers and their institutions

- ***Status quo: trilogue on regulation of HE; articles 2, 10 and 35***

European Commission

Launched September 4th, 2018

- **WHO?** 13 National research funders, including your very own Norwegian Research Council and 3 charitable funders!
- **WHY?** Aim to 'accelerate transition to a scholarly publishing system characterized by immediate, free online access to and largely unrestricted use and reuse of scholarly publications'.
- **HOW?** built around Plan S, comprising one target and 10 principles and has been developed under the auspices of Science Europe and with the support of the Commission's open access envoy, Robert-Jan Smits, and contributions from the ERC Scientific Council.
- Commissioner Moedas has supported Plan S and so has the European Research Council (ERC) with statements

It is political commitment by funders, and has the potential to be a strong coordination mechanism

European Commission

The target

“By 2020 scientific publications that result from research funded by public grants provided by participating national and European research councils and funding bodies, must be published in compliant Open Access Journals or on compliant Open Access Platforms.”

The principles

1) **Authors retain copyright of their publication** with no restrictions. All publications must be published under an open license, preferably the Creative Commons Attribution License CC BY. In all cases, the license applied should fulfil the requirements defined by the Berlin Declaration*;

2) The Funders will ensure jointly the establishment of robust criteria and requirements for the services that compliant **high quality Open Access journals and Open Access platforms must provide;**

3) In case such high quality Open Access journals or platforms do not yet exist, the Funders will, in a coordinated way, provide **incentives to establish and support them when appropriate**; support will also be provided for Open Access infrastructures where necessary;

4) Where applicable, **Open Access publication fees** are covered by the Funders or universities, not by individual researchers; it is acknowledged that all scientists should be able to publish their work Open Access even if their institutions have limited means;

5) When **Open Access publication fees** are applied, their funding is **standardised and capped** (across Europe);

6) The Funders will ask universities, research organisations, and libraries to **align their policies and strategies**, notably to ensure **transparency**;

7) The above principles shall apply to all types of scholarly publications, but it is understood that the timeline to achieve **Open Access for monographs and books** may be longer than 1 January 2020;

8) The importance of **open archives and repositories** for hosting research outputs is acknowledged because of their long-term archiving function and their potential for editorial innovation;

9) The **'hybrid' model** of publishing is not compliant with the above principles;

10) The Funders will **monitor compliance and sanction** non-compliance.

*The Declaration on Open Access to Knowledge in the Sciences and Humanities was adopted in 2003 in Berlin (under the initiative of the Max Planck Society). This declaration is considered a milestone of the OA movement and provided one of the most authoritative definitions of "open access"

Public consultation of implementation guidance
Until 1st February 2019

Plan S
Making full and immediate Open Access a reality

Why Plan S | 10 Principles | Funders & supporters | About | Contact us

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cOAlition S Adopts Implementation Guidance on Plan S

22/11/2018

(Brussels, 22 November 2018) Members of cOAlition S, the research funders behind Plan S, have read with interest the many comments made on Plan S which aims to accelerate the transition to full and immediate Open Access. After discussion and consideration, the coalition has approved the draft implementation guidance to make full and immediate Open Access a reality. The guidance will now be open for public feedback.

The Plan S principles aim to address a simple fact: in the 21st century no science should be locked behind paywalls that withhold a substantial amount of research results from a large fraction of the scientific community, and from society as a whole.

Specific implementation guidance for the Plan S principles has been developed by a dedicated task force headed by John-Arne Røttingen, Research Council of Norway, and David Sweeney, UK Research and Innovation, together with leading experts and researchers from participating funders. It also drew on significant input from interested parties from various relevant sectors such as research institutions, researchers, universities, funders, charities, publishers, and civil society.

The guidance serves to clarify the Plan S provisions and describes implementation modalities. It also provides responses to questions and comments arising from online discussions and debates on Plan S. cOAlition S declares its willingness and enthusiasm to work with publishers and other stakeholders. The coalition has also listened to feedback coming from other countries and ensured that the implementation framework aligns with different International approaches to Open Access.

The implementation guidance, finalised in Brussels today, will be presented at a briefing on Monday 26 November and released on Tuesday 27 November. It will be open for feedback until 1 February 2019 in order to collect further suggestions from a wide range of Plan S stakeholders.

Download this Press Release

Science Europe AISBL
Rue de la Science, 14

Main paths to open access per Plan S

1. Publication in open access journals or platforms
2. Deposit in open access repositories (VoR or AAM)
3. Publish in ‘hybrid’ journals under transformative agreements

- Requirements of compliance of articles in short:
  - **Immediate open access**
  - **Compliant platforms/journals and repositories (DOAJ/DOAR/transformative)**
  - **Open licensing, CC-BY or equivalent required**
- Technical standards for compliance of journals/platforms/repositories

Proposed policy for Horizon Europe re: Plan S

Legal text in regulation, articles 2, 10 and 35. Debated with EP and Council

- **Good news! The regulation as is supports an implementation along the lines of Plan S. The regulation is the broad legal basis for the FP**

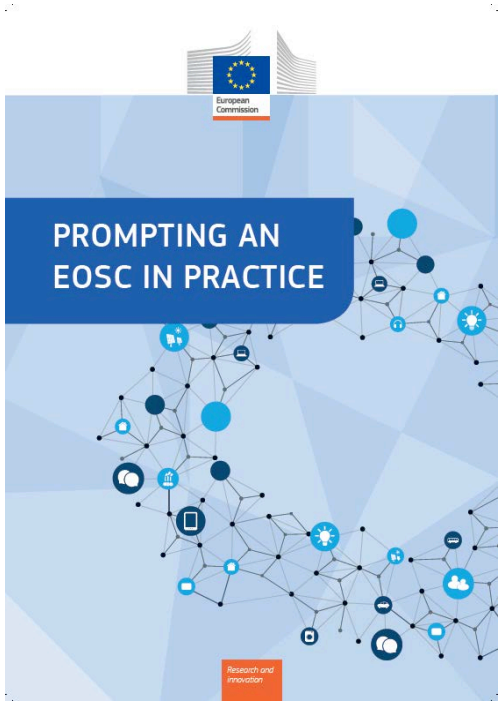
The implementation through the MGA is under discussion now

- **Good news again!! Some aspects are already aligned as provisions for HE are stronger in open access requirements both to publications and data**
- **Naturally details remain to be decided**

The EC is now working on the implementation of Horizon Europe on basis of group work with cOAlition S

Report: Prompting an EOSC in practice

EOSC 2nd High Level Expert Group



- **Aim**: *To mark a transition towards the practical implementation of the EOSC and to set the scene for the practical launch of the EOSC*
- **Focus**: *Governance Structure, Rules of Participation and Business model options*
- **32 recommendations** *are provided, clustered in Implementation, Engagement and Steering*

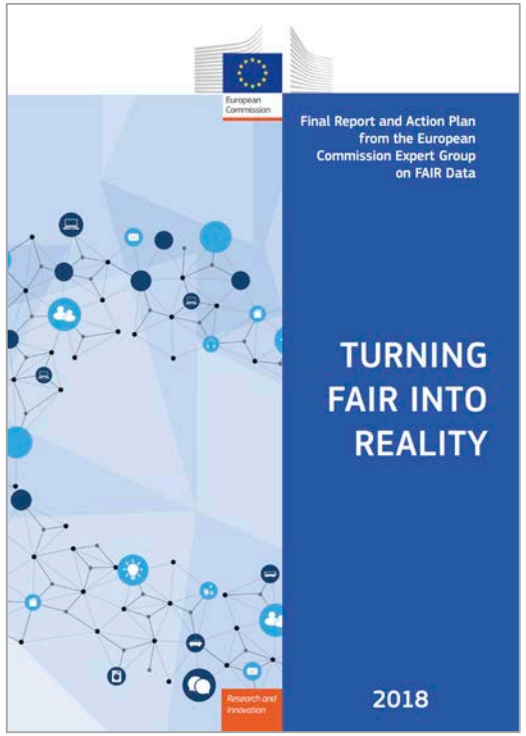
Prompting an EOSC in practice

Key elements in the report

- ✓ **Vision – The EOSC as interlinking people, data, services & trainings, publications, projects, and organisations across borders and scientific disciplines**
- ✓ **MVE – Discussion on how to make EOSC a Minimum Viable Ecosystem**
- ✓ **Business models – 3 valid alternatives for funding the EOSC have been outlined**
- ✓ **The stimulating set of practical recommendations – including on EOSC portal**
- ✓ **Preliminary list of possible WGs**

Turning FAIR into Reality

FAIR Data Expert Group



- **Report and Action Plan**: Take a holistic approach to lay out what needs to be done to make FAIR a reality, **in general and for EOSC**
- Addresses the following key areas: **Concepts for FAIR, the FAIR data culture, the FAIR data ecosystem, skills, incentives and metrics, investment and sustainability.**
- **Recommendations and Actions**: 27 clear recommendations, structured by these topics, are supported by precise actions for stakeholders.

European Commission Expert Group on FAIR Data, March 2017-Dec 2018

Simon Hodson, CODATA Chair of FAIR Data EG

Rūta Petrauskaitė, Vytautas Magnus University

Peter Wittenburg, Max Planck Computing & Data Facility

Sarah Jones, Digital Curation Centre (DCC), Rapporteur

Daniel Mietchen, Data Science Institute, University of Virginia

Françoise Genova, Observatoire Astronomique de Strasbourg

Leif Laaksonen, CSC-IT Centre for Science

Natalie Harrower, Digital Repository of Ireland – year 2 only

Sandra Collins, National Library of Ireland – year 1 only

Forthcoming report: vision on future of scholarly communication

European Commission Expert Group on FSC, October 2017-December 2018

Chair Prof. Jean-Claude Guédon. 6 independent experts and 6 experts representing organizations (funders, publishers)

Principles for scholarly communication in the next ten or so years and recommendation to main actors

To be released end of 2018

Open Science is:

- ***Just science done right!***
- ***Excellent science!***

Isn’t open science a necessary condition for Excellent Science in the 21st century?

Aren’t openness, transparency in the scholarly process at the center of the scholarly endeavor?

Stickers: Melanie Himming, ImmingImpact

Thank you!

More information at

http://ec.europa.eu/research/openscience