



# Science Europe's Past, Present and Future Work on Open Science

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# Open Science (OS) – a Practice or Vision ?

There is no agreed definition of what Open Science is –  
Your concept of the term will depend:

- If you are an active scientist;
- Which discipline you represent
- What your needs are, and what the level of advancements in your discipline is (data sharing, team science, co-creation, ...)
- If you already had or if you are still in the making of your scientific career
- ‘Your agenda’ (e.g. adaptation or disruption)

# Science Europe in a Nutshell

- Umbrella Organisation of major public research organisations in Europe:
- Research Funding Organisations and Research Performing Organisations
- 36 Member Organisations (MOs) from 27 countries
- Combined research budget of approximately €18 billion per annum
- Policy organisation; no funding or operational role
- Together our members reach out directly or indirectly via the support and funding of research of about 1.8 Million European scientists (based OECD, Eurostat)

# Science Europe Member Organisations 2019

Austria	FWF	Latvia	LZP	<div></div> RFO <div></div> RPO
Belgium	FWO, F.R.S.-FNRS	Lithuania	LMT	
Bulgaria	BAS	Luxembourg	FNR	
Croatia	HRZZ	Netherlands	NWO	
Czech Republic	GACR	Norway	RCN	
Denmark	DFF, DG	Poland	NCN, FNP	
Estonia	ETAG	Portugal	FCT	
Finland	AKA	Slovakia	APVV	
France	ANR	Slovenia	ARRS	
Germany	DFG, MPG, Leibniz	Spain	CSIC	
Hungary	MTA	Sweden	FORMAS, FORTE, VR	
Iceland	Rannís	Switzerland	SNSF	
Ireland	HRB, IRC, SFI	United Kingdom	UKRI	
Italy	INFN			

# A wide range of topics and activities

Collaboration among members	Active Advocacy
<p>SE Roadmap topics:</p> <ul style="list-style-type: none"> <li>▪ Cross-border Collaboration</li> <li>▪ Gender and Diversity</li> <li>▪ <b>OA to Scientific Publications</b></li> <li>▪ <b>Research Data</b></li> <li>▪ <b>Research Assessment</b></li> <li>▪ Research Careers</li> <li>▪ Research Infrastructures</li> <li>▪ Research Integrity</li> <li>▪ Science and Society</li> </ul>	<p>Collective voice for MOs' interests; Evidence-based research policies</p> <p>EU and national funding (FPs):</p> <ul style="list-style-type: none"> <li>▪ Horizon 2020 + Horizon Europe*</li> </ul> <p>EU Regulation and Legislation impacting science e.g.:</p> <ul style="list-style-type: none"> <li>▪ General Data Protection Regulation</li> <li>▪ Copyright Directive</li> <li>▪ Genome Editing</li> <li>▪ Access and Benefit-Sharing (Nagoya)</li> <li>▪ Research involving animals</li> <li>▪ Clinical Trials Directive</li> </ul>

Scientific Advise at different stages via different mechanisms

# Current work – Research Data Management Plans and Core Requirements

- RPO and RFO increasingly require researchers to develop data management plans (RDM):
- To support the researcher in considering all relevant aspects of data management from the very beginning of a research project.
- To think about optimal handling, organising, documenting, and storing of their data.
- Currently, there is a lot of variation in the way data are managed with different rules and templates.
- This can be confusing and is especially problematic when a) your funding comes from different sources with different grant requirements and institutional policies; b) mobility (institution, countries, disciplines....)

# Current work – Research Data Management Plans

29.01.2019

Launch of 'Practical Guide to the International Alignment of Research Data Management

This guide is divided into three parts:

- Core Requirements for Data Management Plans: six aspects that every DMP should cover, with detailed guiding questions.
- Criteria for the Selection of Trustworthy Repositories: four topics detailing criteria that every trusted repository should meet.
- Guidance: more detailed information and examples to support the implementation of the requirements and criteria into an organisation's policies.



A large, thick, orange-colored number '6' is centered on the page. It has a stylized, rounded appearance with a small horizontal bar at the top left of the upper loop.

Background to Plan S



# Open Access – Timeline; Principles & Declarations

- ▶ 2002: Budapest Open Access Initiative 2002 (major defining event)
- ▶ 2003: Berlin Declaration on Open Access to Knowledge in the Sciences and Humanities (MPG). It is one of the milestones of the Open Access movement.
- ▶ 2011: Since SE's foundation: From the beginning the SE Roadmap contains a clear objective "to move from a subscription-based ('pay to read system')' to different business models for research publications e.g. 'pay to publish' (Gold).
- ▶ 2013 and 2015 (updated): Science Europe Open Access Principles
- ▶ 2016: European Council conclusions calling to reach goal of immediate Open Access by 2020
- ▶ 2016: OA2020 - a OA global initiative

# Science Europe - Work on Open Access (OA) to Scientific Publications

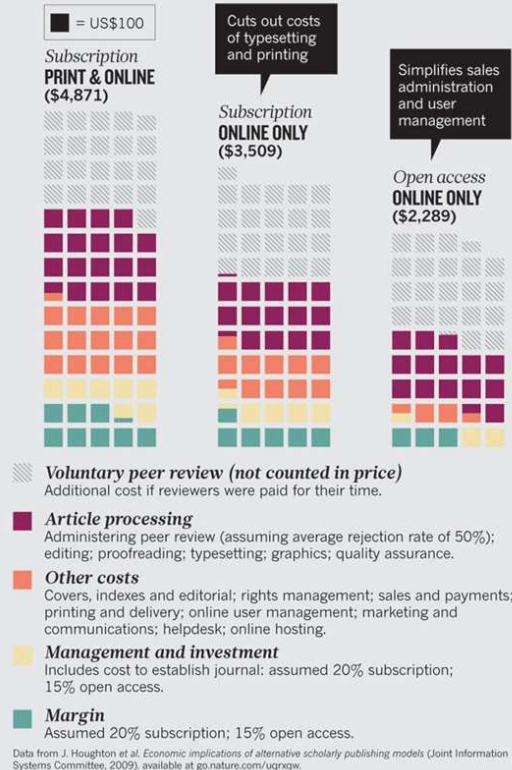
1. 2013 SE members adopted basic **Principles' on the Transition to Open Access (OA) to Research Publications;**
2. May 2015 SE members adopted **Principles for OA Publisher Services**
3. SE Briefing Paper on '**Open Access Business Models and Current Trends in the Open Access Publishing System**' (April 2016);
4. SE Survey Report on '**Open Access Publishing Policies in SE Member Organisations**' (October 2016);



# The reality

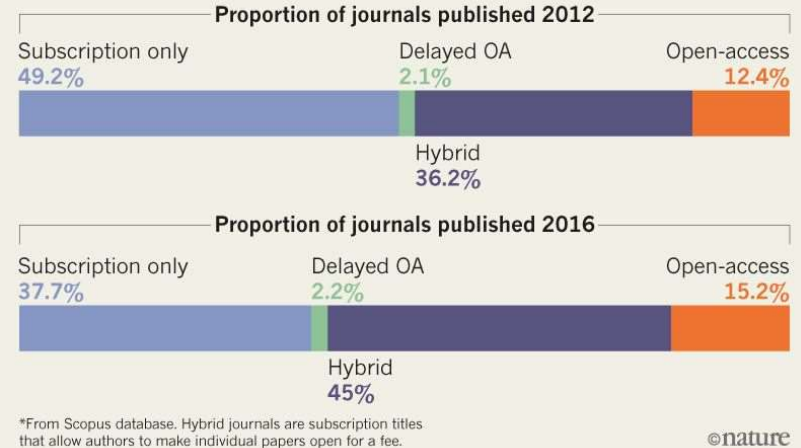
## How costs break down

An economic model shows how switching from subscription to open access changes the costs of publishing.



## PUBLISHING MODELS

Worldwide, the proportion of subscription-only journals\* shrank between 2012 and 2016, giving way to more open-access (OA) and hybrid journals.



In 2016 OA2020 a global initiative (120 signatories) to:

- ▶ Propel open access forward by fostering and inciting the transformation of today's scholarly journals from the current subscription (paywall) system to new open access publishing models that
- ▶ Enable unrestricted use and re-use of scholarly outputs
- ▶ Assure transparency and sustainability of publishing costs

Larger, expensive contracts affect the flexibility of research organisations (bind resource) instead of spending it for new innovative OA platforms.

Nature 2013: 'The true cost of science publishing' - Cheap OA journals raise questions about the value publishers add for their money.

<https://www.nature.com/news/open-access-the-true-cost-of-science-publishing-1.12676>

## cOAlition S aims for:

- ⦿ Full and immediate Open Access (OA) to publications from publicly funded research
- ⦿ Shift towards new models of academic publishing
- ⦿ A system for scholarly publications that is more transparent, efficient and fair
- ⦿ A culture that ensures that young scholars have opportunities to excel and advance their careers
- ⦿ cOAlition S invites research funders, institutions, researchers, learned societies, and publishers to work together to make this happen



## Who is cOAlition S?

- Austria: FWF
- France: ANR
- Finland: Academy
- Ireland: SFI
- Italy: INFN
- Luxembourg: FNR
- Netherlands: NWO
- Norway: RCN
- Poland: NCN
- Slovenia: ARRS
- Sweden: FORMAS, FORTE
- UK: UKRI

- Wellcome Trust
- Bill and Melinda Gates Foundation
- Riksbankens Jubileumsfond (Sweden)

### **Supported by:**

- European Research Council
- European Commission

<http://scieur.org/coalition-s> #cOAlitionS

**Coordinated by:**

**SCIENCE  
EUROPE**  
Shaping the future of research







**Nature News & Comment** @NatureNews · Sep 4

#PlanS: from 2020, scientists funded by 11 major European agencies must make resulting papers free to read immediately on publication.



**Kurt Deketelaere** @KurtDeketelaere · Sep 4

.@LERUnews welcomes Plan S which has the potential to be a game changer in the move to full and immediate OA - all stakeholders must now sit together to make it a reality : [leru.org/news/accelerat...](http://leru.org/news/accelerat...) @moedas @JEPaquetEU @ucylpay



**LERU** @LERUnews · Sep 4

Accelerating the transition to full and immediate #openaccess to scientific publications: LERU's reaction to #PlanS [leru.org/news/accelerat...](http://leru.org/news/accelerat...)



**LIBEREurope** @LIBEREurope · Sep 4

LIBER Supports New Plan to Make #OpenAccess A Reality By 2020 [libereurope.eu/blog/2018/09/0...](http://libereurope.eu/blog/2018/09/0...) #PlanS #openscience #libraries



## Strong political support; Reactions from the research community vary



**Jon Tennant** @Protohedgehog · Sep 4

11 EU countries conclude: from 2020 all scientific literature must be available free of charge.

That means no 'hybrid', no Nature, Science or Cell. Unless they all go 100% Open Access.

Nice to see the EU following Latin America, finally.

[volkskrant.nl/nieuws-achterg...](http://volkskrant.nl/nieuws-achterg...) #PlanS



**11 EU-landen besluiten: vanaf 2020 moet alle wetenschappelijke li...**

Het is niets minder dan een revolutie. Vanaf 2020 mogen wetenschappers met belastinggeld betaald onderzoek niet meer publiceren in wetenschap...

[volkskrant.nl](http://volkskrant.nl)

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# The 10 Principles of Plan S

- ◉ Authors retain copyright of their publication with no restrictions. All publications must be published under an open license, preferably the Creative Commons Attribution Licence CC BY. In all cases, the license applied should fulfil the requirements defined by the Berlin Declaration;
- ◉ 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;
- ◉ 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;
- ◉ 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;
- ◉ When Open Access publication fees are applied, their funding is standardised and capped (across Europe);
- ◉ The Funders will ask universities, research organisations, and libraries to align their policies and strategies, notably to ensure transparency;
- ◉ 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;
- ◉ 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;
- ◉ The 'hybrid' model of publishing is not compliant with the above principles;
- ◉ The Funders will monitor compliance and sanction non-compliance.



## One Main Shared Objective

**“After 1 January 2020 scientific publications on the results from research funded by public grants provided by national and European research councils and funding bodies, must be published in compliant Open Access Journals or on compliant Open Access Platforms.”**





## Plan S : Consultation on the Implementation Guidance

- The guidance is now open for public feedback until 8 February 2019
- So far 650 responses; about 1000 to be expected
- Quality of feedback varies

<http://www.coalition-s.org/feedback>

- Based on the feedback guidance will be refined
- Published in summer



## Cultural changes are needed to increase open research uptake

### Lack of incentives

- ▶ If I do it, I will loose out - still judged by journal impact factor

### More work?

### A lot of misconceptions:

- ▶ Open Research is not (yet) equal to quality
- ▶ Open Access does not mean that everything can be open

### How and what to do it? Who to ask?

- ▶ Conservatism and lack of knowledge
- ▶ Trainings will be crucial

# SE's Future work on Research Assessment: Peer Review and Rewards and Incentives

- Start with a systematic review of the research assessment practices by MOs (processes and mechanisms) and test the robustness of the traditional research assessment processes and new forms (e.g. open peer review)
- How to incentivise and reward scientific quality
- DORA
  - Eliminate the use of journal-based metrics in research assessment
  - Assess research on its own merits
  - Capitalize on technology to enhance scholarly communication and evaluation of the impact of research
- LEIDEN Manifesto for research metrics
- The Task Force conclusions will serve to formulate recommendations for Science Europe

# More information

[www.scienceeurope.org](http://www.scienceeurope.org)

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