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Plan S is an initiative for Open Access (OA) publishing, which requires that from 2021 scientific publications that result from research funded by public grants must be published in compliant Open Access journals or platforms.

Addressing the need for concerted actions at national, European and international levels, cOAlition S, an international consortium of research funding and performing organisations, along with the European Commission, is committed to accelerating the transition to open access. Since 2018, cOAlition S has rolled out several policies and tools to realise Plan S’s ambitious goal.

This report presents an overview of the activities we have undertaken in 2021, the levels of OA compliance amongst cOAlition S funders, and the latest news on the tools and services we are developing, such as the Journal Checker Tool and the Journal Comparison Service. Next, we outline our support for new publishing models, highlighting the progress on the Transformative Journals framework, the publishers’ reaction to the Rights Retention Strategy, and our role in encouraging small society publishers to move to Open Access. cOAlition S has also supported the publication of a report on Diamond journals and has issued a statement on Open Access for academic books.

Looking forward, cOAlition S has identified three strategic priorities for 2022, which we present in the last part of this review.
PLAN S IN 2021: FROM PRINCIPLES TO IMPLEMENTATION

The year in numbers

A growing cOAlition
Plan S has a single ambitious goal: to make full and immediate Open Access to research publications a reality. It requires that:

“**With effect from 2021, all scholarly publications on the results from research funded by public or private grants provided by national, regional and international research councils and funding bodies, must be published in Open Access Journals, on Open Access Platforms, or made immediately available through Open Access Repositories without embargo**”.

The **10 principles of Plan S** spell out the conditions of the process of transitioning to Open Access that all cOAlition S members adhere to:

<table>
<thead>
<tr>
<th>1</th>
<th>Authors or their institutions retain copyright to their publications. All publications must be published under an open licence, preferably the Creative Commons Attribution licence (CC BY), in order to fulfil the requirements defined by the Berlin Declaration;</th>
</tr>
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<tr>
<td>2</td>
<td>The Funders will develop robust criteria and requirements for the services that high-quality Open Access journals, Open Access platforms, and Open Access repositories must provide;</td>
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<td>3</td>
<td>In cases where 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;</td>
</tr>
<tr>
<td>4</td>
<td>Where applicable, Open Access publication fees are covered by the Funders or research institutions, not by individual researchers; it is acknowledged that all researchers should be able to publish their work Open Access;</td>
</tr>
<tr>
<td>5</td>
<td>The Funders support the diversity of business models for Open Access journals and platforms. When Open Access publication fees are applied, they must be commensurate with the publication services delivered and the structure of such fees must be transparent to inform the market and funders potential standardisation and capping of payments of fees;</td>
</tr>
<tr>
<td>6</td>
<td>The Funders encourage governments, universities, research organisations, libraries, academies, and learned societies to align their strategies, policies, and practices, notably to ensure transparency.</td>
</tr>
<tr>
<td>7</td>
<td>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 book chapters will be longer and requires a separate and due process;</td>
</tr>
<tr>
<td>8</td>
<td>The Funders do not support the ‘hybrid’ model of publishing. However, as a transitional pathway towards full Open Access within a clearly defined timeframe, and only as part of transformative arrangements, Funders may contribute to financially supporting such arrangements;</td>
</tr>
<tr>
<td>9</td>
<td>The Funders will monitor compliance and sanction non-compliant beneficiaries/grantees;</td>
</tr>
<tr>
<td>10</td>
<td>The Funders commit that when assessing research outputs during funding decisions they will value the intrinsic merit of the work and not consider the publication channel, its impact factor (or other journal metrics), or the publisher.</td>
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As of 1 January 2021, cOAlition S funders implemented their Plan S-aligned open access policies. For some funders, Plan S conditions apply either to all grants or to all new funding calls opened after 1 January 2021; for others, including Wellcome Trust, Science Foundation Ireland (SFI) and The Bill & Melinda Gates Foundation (BMGF), the policy applies to all research articles submitted for publication from this date onwards.

Given these different approaches, and since many of the articles that were published in 2021 would have been submitted ahead of the Plan S start date, a full evaluation of the effects of Plan S on published articles by funded authors is premature.

However, to get a benchmark on levels of OA amongst cOAlition S funders, which we can then compare with in future years, we present the following figures, derived from the Dimensions database.
Although these data show a decrease in the overall levels of OA compliance when comparing 2021 publications with 2020, some 80% of the articles which are published OA are made available either via the “gold” route (which Dimensions defines as fully OA journals) or the “hybrid route” (which Dimensions defines as those which are made OA in a “paid access” journal). As cOAlition S funders no longer cover “hybrid OA fees” we can assume that for the majority of articles in this cohort, they are made OA as a result of a transformative arrangement, such as a Read and Publish agreement or they are published in a transformative journal.
Looking in more detail at three of the funders whose Plan S-aligned policy applied to all articles submitted from 1st January 2021, we notice that use of the “gold/hybrid” model is even greater, averaging across the three funders at just under 90% for articles published in 2021. Figure 2 below also shows that “green OA” (which Dimensions defines as a publication freely available in an OA repository) is used in only a minority of cases. These data support the assertion that the Rights Retention Strategy would typically be used as a “backstop” when an alternative route to Plan S compliance was either not available and/or was available but at a price which the author/institution deemed neither fair nor reasonable.

Figure 2: BMGF, SFI and Wellcome Open Access levels in 2020 versus 2021

<table>
<thead>
<tr>
<th></th>
<th>BMGF</th>
<th>SFI</th>
<th>Wellcome</th>
</tr>
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<tbody>
<tr>
<td>2020</td>
<td>93%</td>
<td>73%</td>
<td>95%</td>
</tr>
<tr>
<td>2021</td>
<td>92%</td>
<td>78%</td>
<td>89%</td>
</tr>
</tbody>
</table>

Open access compliance 2020 vs 2021

<table>
<thead>
<tr>
<th>Fund</th>
<th>BMGF - 2020</th>
<th>BMGF - 2021</th>
<th>SFI - 2020</th>
<th>SFI - 2021</th>
<th>Wellcome - 2020</th>
<th>Wellcome - 2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>BMGF</td>
<td>57%</td>
<td>61%</td>
<td>39%</td>
<td>44%</td>
<td>46%</td>
<td>56%</td>
</tr>
<tr>
<td>SFI</td>
<td></td>
<td></td>
<td>26%</td>
<td>41%</td>
<td>36%</td>
<td>34%</td>
</tr>
<tr>
<td>Wellcome</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11%</td>
<td>6%</td>
</tr>
</tbody>
</table>

Data sourced from Dimensions: an interlinked research information service provided by Digital Science. Search executed on 16 December 2021.
A GROWING COALITION

In 2021 we further increased our international footprint by welcoming two new members to cOAlition S: the Québec Research Funds (QRF) and the Foundation for Science and Technology of Portugal (FCT).

The Québec Research Funds are the first North American public funding agency to join Plan S. They represent almost a quarter of Canada’s scientific community and spent $253m in support of research in 2019-2020. The QRF will align their Open Access Policy with Plan S and require that from March 2023, all QRF funded research must be made open access at the time of publication. The Foundation for Science and Technology of Portugal (FCT) manages about €500m in research funds annually to ensure that knowledge generated by scientific research is used fully for economic growth and the well-being of all citizens. By gradually adopting Plan S compliant policies in 2022, the Portuguese national funder adds another strong European voice in favour of Open Access.

Furthermore, the European Commission and the UK Research and Innovation (UKRI), two major cOAlition S funders with multi-billion-euro annual investments in research, published their Plan S aligned OA policies. Key aspects of both policies include zero embargoes, open licences (CC BY with some minor exceptions), no funding of Article Processing Charges in hybrid journals, and multiple routes to support compliance, including depositing at least the Author’s Accepted Manuscript in an institutional repository at publication.
ORGANISATIONS ENDORSING PLAN S AND WORKING JOINTLY ON ITS IMPLEMENTATION

Supported by

National funders

Charitable and international funders & research organisations

European funders

The cOAlition S Office is hosted by the European Science Foundation
2

TOOLS AND SERVICES

Journal Checker Tool

Journal Comparison Service
The Journal Checker Tool (JCT) helps authors to identify how they can comply with their funder OA mandate when seeking to publish in any academic journal. To do this, the JCT uses a database of more than 50,000 journal titles and an algorithm that makes use of data held in DOAJ, Crossref, Research Organisation Registry (ROR), the ESAC Registry and OA.Works, as well as bespoke registries, such as the list of Transformative Journals.

About 3000 new users visit the JCT every month, performing 4700 unique searches, with 20% return users. Primary access is from the United Kingdom and the United States, with growing demand from Europe.

New developments implemented in 2021 include a more user-friendly look, simpler language in the description of results and a new feature to share the results.
The Journal Comparison Service seeks to collect and compare transparent pricing and service-based information for specific publishing services. We anticipate that transparent price and service information will help researchers, libraries and funders better understand the services they are procuring from publishers, and thus introduce more competition in the scholarly publishing market.

To support this ambition, and following a public procurement, we have tasked Cottage Labs & Antleaf to build the Journal Comparison Service. We anticipate this will go live next summer, in line with our policy which states that from July 2022 only publishers who adhere to one of the approved Plan S price transparency frameworks will be eligible to access funds from cOAlition S members.

To help ensure that this service becomes a useful and used resource, it is imperative that the key stakeholders – publishers, library consortia (and their members) – engage with it. To this end, a separate contract has been awarded to Information Power to provide engagement services.
3

SUPPORTING NEW PUBLISHING MODELS

Transformative Journals framework
Rights Retention Strategy
Supporting small, society publishers
Diamond publishing
Open Access Books
To qualify for reimbursement of publication fees by cOAlition S funders, a Transformative Journal must commit to transitioning to full OA and comply with ambitious year-on-year increases in OA content. To date, 14 publishers – large and small, for-profit, not-for-profit, society publishers and university presses – and some 2240 journals, have enrolled in the Transformative Journals framework, including the Association for Computing Machinery, Cambridge University Press, Elsevier, Karger, Oxford University Press, Royal Society, and Springer Nature.

The blog post Transformative Journals: an initial assessment provides a detailed analysis of the ambitions, along with the OA targets for 2021, of these journals.

The Transformative Journals framework has been developed to accelerate the transition of hybrid journals to full Open Access.

**TRANSFORMATIVE JOURNALS FRAMEWORK**

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3.2

RIGHTS RETENTION STRATEGY

THE RIGHT TO MAKING ONE’S WORK OPEN ACCESS

The Rights Retention Strategy (RRS) enables authors to exercise the rights they have on their manuscripts to deposit a copy of the Author Accepted Manuscript (AAM) in a repository on publication and provide open access to it. Some cOAlition S organisations have modified their grant conditions to make sure that a CC BY licence is applied to all future Author Accepted Manuscripts. On submission, authors funded by such organisations notify the publisher that they are funded by a cOAlition S organisation and that they will apply a CC BY licence to any AAM arising from their submission. The RRS only lays a CC BY claim to the AAM, leaving the rights in the Version of Record (VoR) to the publisher.

PUBLISHERS’ RESPONSE

The Rights Retention Strategy has been met with resistance from some publishers and trade bodies. They – most notably the STM Association and Springer Nature – have argued that the RRS undermines the industry’s transition to Gold Open Access. We have found no evidence to support this claim, which appears to stem simply from the commercial publisher’s fear of losing lucrative Gold OA resources and is not supported by data. Only one publisher, the American Society for Hematology, has indicated that cOAlition S funded submissions that include the RRS will be desk-rejected. Publisher opposition has instead focused on making things difficult for the author, such as being asked to sign a contract specifying that they will not disseminate the AAM; a contract that the publishers know to be in direct violation of the author’s grant agreement.

> 1000 papers have been published using the Rights Retention Strategy route across hundreds of different outlets (as of November 2021)

PLAN S: ANNUAL REVIEW

STRONG SUPPORT BY RESEARCH ASSOCIATIONS

In support of the RRS, CESAER, the European University Association (EUA) and Science Europe published an open letter calling on all publishers to fully respect researchers’ rights and to end the use of restrictions and embargoes. The statement was signed by the presidents of the three organisations that represent more than 880 universities, research-performing and research-funding organisations. It represents a strong support for Open Science and Open Access.
Following up on the outcomes of the Society Publishers Accelerating Open access and Plan S (SPA-OPS) project, cOAlition S and the Association of Learned & Professional Society Publishers (ALPSP) commissioned Information Power to deliver a study to review progress on transformative and other Open Access agreements between library consortia and smaller independent publishers.

Information Power’s report (June 9, 2021) indicates that Open Access agreements between libraries and smaller independent publishers are increasing. However, a full transition to OA is a serious challenge for smaller independent publishers: society publishers without a larger publishing partner, university presses, library presses, and small independent commercial presses.

Practical collaboration in a number of areas is needed to align on shared principles, license language, data exchange, and workflows, followed by engagement to embed these in practice. The report recommends that funders take steps to enable universities to aggregate all their expenditure with publishers via the library. They also encourage publishers, who closely link the price of OA agreements to article volume, to think carefully about more equitable models.

We anticipate a final tranche of outputs - including shared principles and a much simpler model agreement - to be published early in 2022.
In March 2021, a consortium coordinated by OPERAS published an in-depth study of community-driven Open Access journals across the world that are free for readers and authors, usually referred to as “OA diamond journals”.

Specifically, the study examined critical areas for OA diamond journals, from legal structures and governance to technical capabilities, editorial processes, and funding models. The report found that diamond journals represent a vast archipelago of relatively small journals serving a wide variety of scientific communities. They largely depend on volunteer work, universities, and government funding. Diamond journals are making headway towards Plan S compliance but face several operational challenges despite multiple scientific strengths. They need to be more efficiently organised, coordinated and funded to better support researchers in disseminating their work.

The study’s recommendations included preparing an International Workshop, setting up a funding strategy, and establishing a Diamond Publishing Capacity Centre.

*The study was commissioned by cOAlition S and funded by Science Europe in order to gain a better understanding of the OA diamond landscape.*
In a statement about Plan S principles for academic books issued in September 2021, cOAlition S members commit to making progress towards full open access for academic books as soon as possible.

Recognising that academic book publishing is different from journal publishing and that some cOAlition S members already have OA policies for monographs and book chapters, the statement encourages funders to adopt a set of five recommendations. Specifically, cOAlition S-funded academic books should be made available Open Access on publication with a CC licence, with sufficient intellectual property rights being retained for re-use. Embargo periods should never exceed 12 months. cOAlition S funders will financially support Open Access of academic books via their funding schemes and open access publishing business models via dedicated arrangements.

cOAlition S will collaborate with the OA books community to develop implementation guidelines that respect this bibliodiversity: the Directory of Open Access Books, OAPEN, and the OA Books Network.
LOOKING FORWARD TO 2022

Supporting the implementation of Plan S
Outreach and engagement
Developing partnerships
cOAlition S will continue to support its funders to successfully implement Plan S by providing advice, services and tools.

We will make sure that the Journal Checker Tool (JCT) becomes a trusted resource for our funded researchers, identifying publication routes that are aligned with Plan S.

We will develop the Journal Comparison Service to help determine if prices for publishing services are fair and reasonable.

We will step up communication efforts around the Rights Retention Strategy (RRS) and we will work to ensure that authors and/or research institutions apply a CC BY license to all submissions and deposit their AAM in a repository when they publish behind a paywall.

We will monitor the Transformative Journals framework, making sure that publishers honour their KPIs and annual OA targets.

As more researchers start publishing peer-reviewed articles under Plan S policies, we will step up the monitoring of the effects of Plan S for Early Career Researchers.

We will undertake work to support the Diamond (fee-free) publishing model.
OUTREACH AND ENGAGEMENT

cOAlition S will continue to seek new members and foster alignment around Plan S principles to ensure that it has a more international and diverse footprint including in regions hitherto underrepresented within cOAlition S.

Our external communications will continue to seek to convey the benefits of Plan S to all key stakeholders.

DEVELOPING PARTNERSHIPS

cOAlition S will seek out partnerships with stakeholders in scholarly publishing to help create a level playing field for equitable Open Access.

We will reinforce our strategic partnerships with OA2020, UNESCO, OASPA, and DORA to develop fair and equitable publishing models and continue to support society publishers developing transformative agreements.

We will work with DORA, EC, GRC, and Science Europe to develop responsible research assessment practices.

We will align policies for Open Access to academic books in collaboration with OAPEN, DOAB, and the OA books community.
GET INVOLVED

Become an active part of the growing community of Open Access supporters.

Visit coalition-s.org to keep informed about Plan S.

Follow @cOAlitionS_OA on Twitter and help share our news or connect with us for further insights and support.

Get in touch with us at info@coalition-s.org if you have any questions about Plan S, are interested in finding out more, or want to send us your feedback.

We would love to hear your stories.
Plan S
Making full & immediate Open Access a reality

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