

Moving from Big Deal Negotiations to Making Agreements for Open Access to Research Publications in Sweden: The Bibsam Consortium Approach¹



How can Sweden reach full open access to all research output by 2026? What is needed to achieve an overview of the total cost of publication – including both publishing and subscription costs – in order to control the funding streams and usage rights when negotiating licensing contracts for open access to research publications? Knowledge about the cost of open access publishing is to a large extent incomplete today, but with the government directive to coordinate open access to research publications in Sweden, the National Library together with the main stakeholders, is backing international initiatives as OA2020 and LIBER for a swift transition to full open access. The library consortium Bibsam has, together with the open access team, begun work on a local OA2020 roadmap for Sweden. This roadmap comprises activities and time frames for making new license agreements which strive for FAIR and sustainable open access terms, using evidence-based analyses in high-level negotiations with publishers. The following article attempts to describe the work of coordinating open access to research publications in Sweden, the role of the Bibsam Consortium in this process, and discusses aspects of current agreements containing open access components, especially offsetting deals. Further, it discusses future implications for strategies, negotiations and agreements in order to contribute to a conversion to full open access. However, this work cannot be carried out alone, but requires cooperation on a local, national, European and global level, including all relevant bodies and initiatives. The goal is the synergy and momentum which can be achieved by aligning existing policies, infrastructures and requirements which contribute towards realising a diverse, inclusive, innovative, sustainable and open scholarly system for the 21st century, one in which publicly funded research is not repurchased after publication but made immediately open access for the benefit of research, innovation, and society as a whole.

The mid 1990's brought about two paradigm shifts in the library world. The first concerned the move of research journals from print to online, the second a shift away from purchasing individual research journal subscriptions to negotiating e-journal collections, the so called 'Big Deals' (see e. g. Guédon, 2017). In Sweden this was achieved through the creation of a library consortium called Bibsam in 1996. Today we are witnessing a third paradigm shift, as we are moving from a subscription-based model to open access, which to a large extent is driven by commercial publishers' unsustainable price increases – known as the 'serials crisis' – but also the fact that publically funded research has to be reacquired with closed access after publication. The Swedish Government's goal set out in the Swedish Research Bill (2016) states that scientific publications which are the result of publicly funded research should be made immediately open access on publication and that a transition to an open access system should be fully implemented within ten years.

The National Library of Sweden has worked with advancing open access to scholarly output since 2006. In 2017 it received an appropriation directive from the Government to act as a national coordinating body in the work towards a transition to open access. As a consequence, the National Library includes this objective in its vision for 2025 to lead the work moving from licensed-based to openly accessible research information. Following on from this the Bibsam Consortium will only negotiate new e-resources agreements including an open access component.

The current publishing system, dating back to the 17th century, is outdated and no longer viable. There are consequently many issues that need to be solved in cooperation with stakeholders within the academic community, for example:

- Library big deals are costing society enormous amounts of tax money whilst containing closed-access content preventing its wide access and reuse for the benefit of research and innovation.
- Commercial publishers' subscription revenues are overinflated and increasing far beyond the consumer price index with a 30 – 40 % profit margin.

- Institutions from developing countries with no or limited funds will not be able to publish their research immediately open access through paying APCs, which in turn will lead to an unequal representation from researchers outside Europe and North America.
- The Journal Impact Factor is a highly overrated indicator and unrelated to the quality of an individual publication which calls for research assessment systems to take new parameters into account – as open science practices and societal impact – and also assess the content of individual publications rather than basing it purely on impact factor.
- New alternative business models and infrastructures for open access-publishing must be explored, e. g. through institutional funding or library consortia models as the Open Library of Humanities, Knowledge Unlatched or Scoap³ etc. (See e. g. Buranyi, COAR, EUA, Jussieu Call, LIBER and OA2020, 2017)

A transition to an open access infrastructure can only be achieved in cooperation with existing initiatives and international organisations, OA2020 being one of the major pioneers. Such a transition demands an overview of the total cost of publication, new evidence-based data analytics, new ways of negotiating with high-level representation and cooperation across organisations and national borders.

Background: Open Access at the National Library of Sweden

The Bibsam Consortium began its operations in 1996 and today has 81 participating organisations from the following sectors: HEIs, governmental agencies and research institutes. The Consortium belongs organisationally to the National Library of Sweden, and acts on behalf of its participating organisations, having signed an agreement to this effect. The Consortium is therefore not a legal entity in itself, but negotiates e-resources on behalf of its participating organisations. The subscription cost for licensed products is paid by the Consortium, which then in turn divides the cost between the parties concerned.

The transition from individual subscriptions for printed journals at each HEI to centralised negotiations for bundled online academic journal collections via a national consortium, was achieved with economic support from the National Library of Sweden and the Swedish Government during 1997 – 2002. Although one of the primary reason for this shift was to save money, it has instead led to unforeseen but increased costs for participating organisations through big deals with the large publishers.

Ten years after the inception of the Bibsam Consortium, the National Library of Sweden established an open access programme called OpenAccess.se. The aim was to fund innovative open access projects, deal with open access-related research questions and partake in the ongoing discussions in the growing international field of scholarly communication. Since 2006 the programme has arranged an open yearly conference called “Meeting Place Open Access.” Government Assignment to Coordinate Open Access Together with its international counterparts, Sweden is now facing major challenges in the transformation of the scholarly communication system. In 2017 the National Library of Sweden received an appropriation directive and funding from the Swedish Government to act as a national coordinating body in the transition to full open access to scientific publications, ensuring that publicly funded research is made immediately open access on publication. In response to the open access-related impediments identified in the “Proposal to National Guidelines for Open Access to Scientific Information” by the Swedish Research Council, the National Library of Sweden has initiated five studies with stakeholder representation from Swedish funding agencies, HEIs, researchers and the National Library of Sweden. The findings will be presented to the Swedish Government in 2019.



One of the main studies deals with the question of funding. How to go about redirecting funding streams, from licensing agreements to funds for publishing, from paying subscription fees for reading research articles to paying for publishing the output of research organisations? The paradoxical fact today is that research resulting from public money is repurchased by universities after publication through subscriptions when the goal should be that publicly funded research is made immediately available for everyone to download, read and reuse upon publication.

Paramount in this transition is achieving a national overview of the total cost of publication (TCP). The transformation process must be funded by converting already existent funds currently spent on journal subscriptions, into funds supporting open access. All stakeholders have a common responsibility for achieving the transition to open access to research information in Sweden, as is stated in the Research Bill (2016).

Local and Global Cooperation for a Sustainable Scholarly Publishing System

In order to achieve a sustainable open access publishing system, we need to cooperate both locally and globally. Active participation in international organisations, for example, OpenAIRE, SPARC Europe, EUA, LIBER and COAR, is crucial. The Bibsam Consortium cooperates and exchanges knowledge with other consortia. One example is the International Coalition of Library Consortia, ICOLC. Another example is the collaboration taking place between Nordic consortia, which meet yearly every spring. In 2017 the first Joint Nordic Meeting on Licensing and Open Access took place in Stockholm when the two organisations Nordlic and the NOAF convened for workshops and roundtable discussions on common questions. The meeting was successful and resulted in documents drawn up concerning joint principles on open access and a negotiation checklist. The checklist is intended to help when negotiating with publishers in order to reach agreements that meet consortia requirements and standards concerning open access. Hopefully, the checklist can be used for both green and gold negotiations. Next year’s Nordic meeting will be held in Copenhagen.

OA2020

The OA2020 initiative initiated and run by the Max Planck Digital Library aims to transform a majority of today's research journals from toll access to open access. The initiative is supported by around 80 research organisations around the world. In Sweden the expression of interest has been signed by the main stakeholder group: The Association of Swedish Higher Education, the Swedish Research Council and the National Library of Sweden. By signing the EoI Sweden wishes to endorse OA2020 in their mission to:

- Transform scholarly journals from toll access to open access
- Convert resources currently spent on journal subscriptions into funds supporting sustainable open access business models
- Establish transparency with regard to costs and potential savings
- Collaborate with all parties involved in scholarly publishing—publishers, universities, research institutions, funders, libraries – to facilitate a rapid and efficient transition

The year when a full transformation will be in place will differ given the specific country, discipline and national policies and funder mandates. The transition will also depend on publishers' ability to adapt to new business models and on the interest for a transformation to gold open access in Asia and the US.

In order to achieve a transition to open access in Sweden, we will need to adapt the OA2020 roadmap and translate it to the Swedish landscape. The Bibsam Consortium has already set milestones and work actively with specific objectives, such as requiring and negotiating open access components in all journal agreements, appointing high-level negotiation groups armed with evidenced-based analyses, to mention just a few examples. The strategy is supported by the Bibsam Steering Committee, the Bibsam Consortium, the national Open Access Advisory Group and the Open Access team at the National Library. The ultimate goal is to achieve the 'pay-as-you-publish' model in a reasonable time frame. So far the Bibsam Consortium has not been successful in closing a deal based on this model with any publisher. As mentioned earlier though, future successful open access business models cannot be achieved in isolation, but through international cooperation.

LIBER's Five Principles for Negotiating with Publishers

The European library organisation LIBER launched its five principles for publisher negotiations in September 2017. The principles should be regarded as minimum requirements when libraries or consortia negotiate new licensing deals with publishers, and the aim of the principles is to increase open access publishing in a sustainable way (See Geschun & Stone for other initiatives in this area).

According to the LIBER Open Access Working Group, there is a need to overcome barriers in European policies, budgets, organisations, consortia and discipline-specific preferences regarding publishing. The reasoning behind the principles is the perceived need for a pan-European effort to flip to full open access and a common engagement in negotiations with publishers to change their business models (LIBER, 2017).



Open Access: Five Principles for Negotiations with Publishers. Image: LIBER, CC-BY

The Bibsam Consortium and Open Access Negotiations

There are two groups working with open access and licensing on a national level at the National Library. Both groups have many objectives in common and therefore also have a common chair. First, the Open Access Advisory Group comprising of funders, HEIs and researchers, which discuss and advise the National Library on policy issues related to the Government assignment regarding the coordination of open access.

Secondly, the Steering Committee of the Bibsam Consortium consists of representatives from participating organisations. The committee works with both license and open access questions

Facts about the Bibsam Consortium at the National Library of Sweden

Participating organisations	81
Agreements	42
E-resources and packages	282
Turnover 2017	€ 36 M

and its members take an active part in negotiations with publishers, e. g. by discussing strategies before high-level negotiations with large commercial publishers. A prime objective with any new agreement is to avoid 'double dipping' or paying several times for the same content.

New Strategies Demand New Methodologies and Competences

It has been estimated that the total amount paid globally for scientific publishing in a subscription-based system is 7.6 billion € per year for around 1.5 million articles. This is only a modest estimation as not all articles are indexed in Web of Science, as is the case in this example. However, were we to take this into account and use a higher figure of 2 million articles per year instead, it would mean an average cost of 3,800 € per article. The stance of the Bibsam Consortium, which is based on ideas originating from the Max-Planck Society, is that there is already enough money in the system for flipping the system to open access. Cost figures for Sweden, based on Web of Science data, follow the same pattern as global figures. Around 60 % – or 15 364 articles of the total output of 25 805 articles published in 2014 – relate to corresponding authors affiliated to Swedish HEIs and research organisations (Schimmer, 2017). As OA2020 puts it:

No given institution or country would have to finance its entire publication output, but only the portion of publications attributed to corresponding authors from that institution or country. For research-intensive institutions this amounts to between 60 % and 70 % of the total amount of their papers, for less research-intensive institutions, the share is between 40 – 60 %.

Before initiating a new round of negotiations with any publisher, the Bibsam Consortium prepares sound data analyses using an in-house database with publication outputs from Swedish HEIs, usage statistics, trends, fees etc. This method is in line with the OA2020 roadmap. National control over publication data will mean that the Bibsam Consortium is well-prepared for publisher negotiations, as it will not solely be reliant on publishers' own APC data, especially since many publishers have systems which are out of sync with today's consortia needs (see e. g. ESAC). The question posed is what it would cost to flip the entire model and pay for publishing instead of reading? The answer varies from publisher to publisher, depending on how much they demand for reading access and how high the publication output is.

However, there is currently no national overview of the total cost of publication (TCP), where APCs make up an increasing portion of the market. In order to gain further knowledge about the TCP for Sweden, the coordinator of OpenAccess.se and Swepub initiated a pilot with Swedish HEIs in 2016, which became part of regular operations as Open APC Sweden, housed on Github. The idea was to collect information about actual article processing charges (APCs) invoiced and paid by Swedish researchers, rather than list prices provided by publishers. Through establishing an open Swedish repository of paid APCs, the Consortium strives to increase the necessary economic transparency in the growing APC market, which will be helpful in publisher negotiations and in international comparisons and analyses. Establishing an open APC repository therefore does not only benefit the Bibsam Consortium, but also HEIs and funders in monitoring compliance to funder requirements and in evaluating the transition to open access. All Swedish HEIs are now encouraged to participate and deliver data to Open APC Sweden.

A challenge in the current system concerns the ability to retrieve metadata about corresponding authors of articles, as the corresponding author is the one paying an APC, either personally using a credit card or via an invoice to the affiliated organisation. As institutional repositories do not contain this information today, consequently, data about corresponding authors cannot be retrieved from the aggregated national publications database Swepub, making it difficult to achieve a complete overview of publication charges. The fact that Swepub needs a new field for this role, making it possible for local institutional repositories to enter, import and export this information was pointed out in the Openapc-se pilot (Eellend & Smith, 2016). The National Library is currently developing Swepub and its format specification in order to meet government, funder and HEI demands to monitor the TCP and compliance with funder requirements.

Knowledge of the total cost of publication is of utmost importance in order to be able to analyse the economic consequences which the transition will bring to the whole research system in Sweden, as well as supporting various types of analyses and negotiations. It will also mean that license managers and the Consortium need updated knowledge of data analysis. Instead of 'only' negotiating the annual price increase for reading subscribed journal content, evidence-based data compilations and analyses produced in-house will also be a needed competence and something we are working at attaining.

Open Access and License Agreements

The Bibsam Consortium introduced open access components in negotiations with publishers already in 2010, by including requirements for author rights and self-archiving rights in license agreements; the aim being to raise the amount of open access articles. When possible, green open access rights shall be included in license agreements in order to comply with funders' mandates and policies.

However, we do not only need to raise the total amount of open material, we also need to control the total cost of publication, avoiding any type of 'double dipping.' In a significant step, the Bibsam Consortium – the first Nordic consortium to do so – signed an offsetting agreement combining both reading and publishing fees in its contract with Springer in order to control the total cost of publication. Read and publish deals, as described below, are closed with the goal of avoiding double dipping and as a step towards a transition to open access.

All offsetting deals and related publishers will be under evaluation by a committee on behalf of the Bibsam Consortium. The focus areas for evaluation are: economy, administration, researcher attitudes and research dissemination, in part similar to the areas studied in an earlier report by Jisc, which looked at cost, administration efficiency, transparency and whether offsetting models such as Springer Compact contributes to a transition to open access (Earney, 2017). The result from the Swedish evaluation committee will be used for future negotiations, to measure funder compliance, survey current funding

streams and, not least, to support strategic discussions with stakeholders on future offsetting models. As an ideal model has not yet been developed, and considering that offsetting takes on different guises – some offer a refund, some unlimited publishing for a capped amount and some reduce publishing charges – the Bibsam Consortium is interested in trying out and piloting different open access models (Geschuhn & Stone, 2017, Olsson, 2017, Kronman, 2017).

If for some reason the Bibsam Consortium would chose not to renew a contract with a publisher of a large journal package because it lacked, for instance, a required open access clause, its agreements often include permanent access terms (PTA) that would then be activated. There are also a number of alternative, legal access routes to openly available parallel published scholarly articles in, for example, institutional or subject repositories.

Principle and Objectives

In order to increase the number of open access agreements and in anticipation of a national policy regarding open access in Sweden, the Bibsam Steering Committee took a decision in 2016 that if a publisher is unwilling or unable to offer open access terms in a journal deal, the agreement should be limited to a single calendar year. To be able to close multi-year agreements the publisher would therefore have to adhere to this principle and include a paragraph in the contract stating that both parties can renegotiate the contract at any time. In negotiations the Bibsam Consortium strives towards the following objectives:

1. Closing multi-year agreements for scholarly journals *only* when they contain an open access component
2. Combining both licenses and article publication charges in order to acquire an overview of the total cost of publication through:
 - a) Redirecting financial streams from subscriptions to open access
 - b) Creating sustainable financial models which suit participating organisation
 - c) Keeping researchers informed about open access via participating organisations
 - d) Requiring open licenses to make content as open as possible, preferably CC-BY

Current Business Models

Many of the first models on offer were **voucher systems** or different types of **memberships**. The uptake is often low as it is very hard to disseminate information to researchers about these. Such models put a heavy administrative burden on individual libraries and as such are not desirable for a transition to open access. An early example of a successful **consortial model** is **SCOAP³** with over 3000 partner libraries worldwide. More than 16 500 articles have been published open access within the field of particle physics since the start in 2014. Currently the following publishers have joined the initiative: Elsevier, Hindawi, Institute of Physics, Jagellonian University, Oxford University Press and Springer. From 2018 the American Physical Society will join **SCOAP³** and another three important journals will be included in the agreement.

Our first example of a **read and publish deal** was with Springer. The Bibsam Consortium and Springer signed a pilot agreement for **Springer Compact** in July 2016. It is a pilot running between July 2016 and December 2018. The deal was made possible with additional funds from the Swedish Research Council and the National library of Sweden. The objective with Springer Compact is to leave the traditional historical print spend model, thus reducing costs and also increasing the number of open access articles. The agreement includes reading access to researchers of participating organisations to approximately 2,000 Springer journals and the possibility to publish research output open access in around 1,650 of these hybrid journals. The Swedish agreement allows for a fixed amount of research articles (4162) to be published open access with CC-BY license as default during the period. All researchers affiliated to participating organisations of the Bibsam Consortium are eligible as corresponding authors. The Springer Compact deal has been analysed by an evaluation committee on behalf of the Bibsam Consortium Steering Group and the first reports show that the agreement has met the objective of increasing open access articles (Olsson, 2017, Kronman, 2017). Recent figures from the publisher show that 90 % of Swedish corresponding authors that publish with Springer do so open access (Springer, 2017).

The agreement with Springer should be seen as a **transitional pilot** combining reading and publishing, subscriptions and open access. However, despite the fact that the agreement can be seen as being pro open access there are also a number of cons. There is a risk of this type of deal replacing or even cementing the big deal since consortia have to continue to pre-pay large amounts of money for a fixed number of articles in a limited number of hybrid journals. Furthermore, this deal excludes gold open access journals, has a fixed list price for APCs regardless of the journal in question, requires commitment over several years (usually on a three-year basis) with yearly price increases, researchers think it is free to publish and also find it easy to publish with the provider in question, not understanding the cost associated with the agreement, and lastly, the price estimate is based on both research output published the year preceding the contract and the forecasted output for the following years. What if the forecasts would be proven wrong?

Another **offsetting model** is used by **Institute of Physics (IOP)**. In their offsetting model there is a balance between local and global offsetting. The participating organisations' total amount spent for APCs year one is offset against the same organisations' subscription or licence fees the following year. The model is based on a sliding scale, meaning that when the proportion of hybrid articles grows, the cost for licenses is reduced. The sliding scale also guarantees that when the proportion of hybrid open access articles grows in a journal or collection of journals, customers which do not themselves support hybrid open access will still get price reductions in subscription or licence fees in proportion to the amount of open access content.

As the Consortium only entered into an agreement with IOP in 2017, it is still too early to analyse the outcome. One problem we have detected, though, is that while a researcher is required to pay the full APC at the moment of submission, the refund

is not paid out to the library until the following year. Thus there is not enough incentive for researchers to publish open access, but it could instead be experienced as a financial burden, should the issue of payments and refunds not be resolved. An interesting recent development regarding author payments is the Library of the Imperial College of London's use of virtual credit cards for their researchers (Harris, 2017).

Future Business Models

All business models for increased open access described above should be seen as transitional, tried out in order to find a flexible and optimal model. Our experience is that while negotiating discounts on APCs has been relatively easy, researchers have found it tasking or even problematic to find information and make use of available discounts, if they know about them at all. The European University Association writes in a recent report on open access that there is a need for increased awareness of open access among researchers in general as it is "estimated that only 30 % of researchers are aware of what publishing OA means" (EUA, 2017).

Paying ahead of publishing is not optimal, as is the case with offsetting models, usually in the form of a multi-year contract with a fixed prepaid amount for a set number of articles, with a yearly price increase on top. The 'pay-as-you-publish model' on the other hand is often described as a realistic model based on paying as and when you publish. To date, the Bibsam Consortium has not closed an agreement of this kind with any publisher, but something it strives towards. The National Library of Sweden, the Swedish Association for Higher Education and the Swedish Research Council have all endorsed OA2020. In future negotiations for journal packages 'pay-as-you-publish' and transparent price models need to be addressed. All publicly-funded research should be made immediately open access.

Alternative models have also been called for, for example the Jussieu Call for Open Science and Biodiversity, a French researcher and scientific publishing professionals' initiative. One of their key points is that business models that charge neither authors nor readers should be prioritised. Further, they point out that there are existing 'fair funding models' that can be backed by institutional support: library subsidies and open archives are some of several alternatives mentioned. Their call has already been endorsed by LIBER:

We call on research organizations and their libraries to secure and earmark as of now a share of their acquisition budgets to support the development of scientific publishing activities, which are genuinely open and innovative, and address the needs of the scientific community (Jussieu Call, 2017).

Conclusions

Today's subscription-based system is no longer viable; a system in which scientific articles are locked behind publisher paywalls and one in which the large scientific publishers are demanding increasingly higher subscription revenues, with the effect of a diminishing access to scientific information for the academic community, and for innovation and the public at large. Library budgets cannot meet the current demand and supply-prices, furthermore there is no direct relationship as one journal cannot simply be substituted for another, relying on current metrics and journal impact factors. The current subscription system is outmoded but there is already enough money to allow a flip of the publishing system to open access, a task that needs to be carried out in cooperation with publishers.

In order to achieve a transition, there is a clear need for national and supra-national commitment. According to OA2020, no country would have to finance its entire publication output, only the share of publications that can be attributed to that particular country's corresponding authors. Many international organisations have already endorsed OA2020, and many other organisations, such as EUA and LIBER, support the idea of a sustainable transition, as well as demanding full open access by 2020, if carried out in cooperation with all main stakeholders in the scientific communication system: publishers, the European Commission, governments, funders, HEIs, research organisations, researchers, libraries, consortia etc. Added to this, there are strong voices demanding alternative publishing models that charge neither author nor reader, as there is already a sufficient amount of money in the system, considering that research, research publications and peer review work are provided by the academic community for free to publisher, outputs which are funded by tax money and then repurchased by libraries for access to their individual circles of patrons.

For a transition to take place though, we need an overview of the total cost of publication (TCP), since subscriptions for reading are traditionally paid by libraries, based on historical print spend with predictable yearly price increases. APCs, on the other hand, are paid by HEIs or researchers directly, thus creating two revenue streams for publishers, the so called 'double dipping.' EUA states that cost transparency is a 'non-negotiable requirement' in the scholarly publishing market in their latest recommendations for university leaders and national rectors' conferences (2017). The information concerning publication charges is still limited, since traditional subscription publishers demand non-disclosure clauses in their agreements.

The publishing system, consequently, is neither transparent nor comparable between organisations, consortia or nations. In an effort to change this in Sweden, the National Library set up an open APC repository on Github in 2016 for HEIs to contribute information about their collected APC spending, having retrieved data from local accounts and economy systems. Although this work is voluntary and does not cover all Swedish HEIs, a common code for registering APCs was introduced by the Swedish Association of Higher Education in May 2017, recommending HEIs to use them when registering invoices in their local systems. The repository of paid APCs in Sweden, Open APC Sweden, is inspired by the German initiative Open Intact and is an important activity in our local version of the OA2020 roadmap in order to monitor and contribute to the needed overview of the TCP.

Funding to support library budgets can be redirected and new schemes for cost reallocation can be devised. However, libraries and consortia need to be backed by national stakeholders. As EUA succinctly puts it in their recommendation: "Governments

and research funders should further their support in the transition towards open access by contributing to costs incurred by institutions and researchers with open access, such as those related to infrastructures and APCs" (EUA, 2017).

The need to control funding streams and the redirection of funds from subscriptions to open access is one route of many in which to achieve full open access, and as such the subject of one of the five studies coordinated by the National Library (OpenAccess.se). Evidence-based decision making also empowers the Bibsam Consortium and HEIs when negotiating for cost-controlled agreements and a cost-neutral publishing market. Galloping price increases for publishing and accessing research publications must be restrained by the introduction of price caps and by avoiding 'double dipping.' The Bibsam Consortium foresees a need for institutional reallocation of funds among national stakeholders. Therefore, alongside the study on the control of and the necessary redirection of funding streams, new cost allocation models also need to be developed, as they to a large extent today are based on extant business models, which use the number of FTEs or historical print subscriptions as a stepping stone for new agreements. Historical prints spend mostly affects older and larger universities, the first ones jumping the band wagon and closed the original big deals. One of the questions we contend with is whether the old model ought to be replaced altogether or complemented with publication output? Another hurdle is how the cost for publishing should be reallocated within the Bibsam Consortium, as some organisations publish nothing at all, and some are very research intensive.

Despite the aim of achieving a swift transition, there is currently no satisfying open access business model on the market. 'Read and publish models' with large publishers are only to be regarded as trials or transitional, as there is a real risk of them transforming into open access big deals, replicating the lock-in we have today with bundled journal collections with major publishers tying up a substantial amount of library budgets. There are, though, a number of ongoing pilot schemes in several countries, even though most publishers are reluctant to set up new pilots with other consortia before having evaluated existing ones. The Netherlands has been a pioneer in making open access agreements for both hybrid and gold open access journals, for example their agreement with Cambridge University Press. Furthermore, publishers' editorial systems are often not set up for new business models nor standardized, they lack vital metadata, for example funder information, and the processes for article submission and handling of invoices for APCs are deficient (ESAC, 2017). Something we have experienced within the Bibsam Consortium is that many researchers are still unaware of available open access schemes and pilots, business models, costs and CC-licenses. All stakeholders need to address these issues and support the research community during a transitional period (see e.g. Geschuhn & Stone, 2017, EUA, 2017, LIBER, 2017).

It can be concluded, that a flipped system is no longer only a mirage on the horizon, but is in fact currently underway in Sweden: through national guidelines and studies, new evidence-based ways of working at the Bibsam Consortium combining both open access and subscriptions in high-level negotiations, monitoring funding streams and compliance with mandates, and through national and international cooperation. The National Library of Sweden together with the main stakeholders must not lose momentum in this process but make a concerted push forward to achieve a sustainable scholarly publishing system in unison with its international counterparts, to arrive at full and immediate open access to all research publications by 2026.

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Web sites

- Association of Swedish Higher Education
<http://www.suhf.se>
- Bibsam Consortium [in Swedish]
<http://www.kb.se/bibliotek/centrala-avtal>
- COAR – Confederation of Open Access Repositories
<https://www.coar-repositories.org>

- Creative Commons Attribution 4.0 International Public License
<https://creativecommons.org/licenses/by/4.0/legalcode>
- EOSC – The European Open Science Cloud for Research Pilot Projects
<https://eoscipilot.eu/>
- ESAC – Efficiencies and Standards for Article Charges
<http://esac-initiative.org>
- EUA – European University Association
<http://www.eua.be>
- FORCE11– The Future of Research Communications and e-Scholarship
<https://www.force11.org/group/fairgroup/fairprinciples>
- ICOLC – International Coalition of Library Consortia
<http://icolc.net/>
- JISC – UK higher, further education and skills sectors' not-for-profit organisation for digital services and solutions, negotiating deals with commercial publishers. <https://www.jisc.ac.uk/>
- Jussie Call for Open Science and bibliodiversity
<http://jussieucall.org/>
- Knowledge Unlatched
<http://www.knowledgeunlatched.org/>
- LERU – League of European Research Universities
<http://www.leru.org/index.php/public/home>
- LIBER – Association of European Research Libraries
<http://libereurope.eu>
- National Library of Sweden
<http://www.kb.se>
- OA2020 – Global alliance committed to accelerating the transition to open access
<https://oa2020.org/>
- OLH – Open Library of Humanities
<https://www.openlibhums.org/>
- OpenAccess.se – The National Library of Sweden's Website for Communication about Open Access to Research Publications <http://openaccess.blogg.kb.se>
- OpenAire – EU-funded project promoting open scholarship, improving FAIR access to research publications a data
<https://www.openaire.eu>
- Open APC Sweden
<https://github.com/Kungbib/openapc-se/blob/master/README.md>
- Open Intact
<https://www.intact-project.org>
- Science Europe – Association of European Research Funding Organisations and Research Performing Organisations
<http://www.scienceeurope.org>
- Scoap³ – Sponsoring Consortium for Open Access Publishing in Particle Physics
<https://scoap3.org>
- SCOSS – The Global Sustainability Coalition for Open Science Services
<http://scoss.org>
- Sparc Europe
<https://sparceurope.org>
- Swedish Research Council
<https://publikationer.vr.se/produkt/proposal-for-national-guidelines-for-open-access-to-scientific-information-2/>
- SwePub – Publications database for Swedish research publications' and publication statistics
<http://swepub.kb.se> [references database] <http://bibliometri.swepub.kb.se> [bibliometrics]
- Zenodo – Open EU-funded repository developed by CERN
<http://www.zenodo.org>

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