

Memorandum on the Open Access Transformation at the Helmholtz Association

Position Paper of the Working Groups "Open Science" and "Library and Information Management"

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Contact

Helmholtz Open Science Office
c/o Helmholtz-Zentrum Potsdam
GFZ German Research Centre for Geosciences
Telegrafenberg
14473 Potsdam
Germany
Email: open-science@helmholtz.de

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Introduction: Open Access Transformation at the Helmholtz Association

The open access movement, which was set in motion at the latest by the Berlin Declaration in 2003, went hand in hand with the goal of transforming the scholarly publishing system to open access to research results by default. However, this complete switch to open access—the “open access transformation”—which has also been formulated as a goal in many strategy papers, has not yet been achieved. The “transformative agreements” concluded for its implementation, which go beyond reading access to subscription-based journals by also providing for fee-based open access publishing options (read-and-publish or publish-and-read), have led to increases in open access, but primarily at article level. The conversion of entire journals to open access has largely failed to materialize. Whether transformative agreements can be considered a success, and whether changing the contractual model—and thus the business model—to publication costs can be regarded as a genuine paradigm shift, is therefore the subject of controversial debate. This debate is accompanied by critical discussions of the side effects of this changed publishing landscape, such as the boosting of the number of publications and launches of new hybrid journal with the aim of increasing revenue from publication charges, dubious publishing models (predatory publishing), and data tracking by publishers. At the same time, there have been numerous developments in the area of scholar-led publishing and clear calls for it to be strengthened.

The open access transformation is also the subject of discussions at the Helmholtz Association. In the spring of 2021, the two working groups “Open Science” and “Library and Information Management” drew up an “Internal Memorandum on Open Access Transformation at the Helmholtz Association,” which focused on establishing a position for the then-upcoming negotiations for the DEAL agreements. The unpublished paper served to establish the internal Helmholtz position (informing the Head Office, Helmholtz’s participation in MPDL Services gGmbH [MPDLS for short]). In addition, in round table discussions of the Alliance of Science Organisations in Germany, it contributed to the implementation of the open access strategy within the framework of the then Priority Initiative “Digital Information.”

The present memorandum moves away from this fixation on the DEAL agreements and focuses on the open access transformation as a whole. It develops perspectives and positions for Helmholtz on the future promotion of the open access transformation. In doing so, it considers experiences to date with transformative agreements with commercial providers in the context of the working group “Forum 13+,” experiences gained from the DEAL agreements concluded in 2023 and valid until 2028, the lively debate on scholar-led publishing, and the further development of the gold open access journal landscape.

In addition, the memorandum serves both as a basis for the further formation of opinions at the Helmholtz centers and for the further development of the open access strategy of the Alliance of Science Organisations in Germany in the priority area “Digitality in Science.”¹ Furthermore, it can contribute to the general assessment of transformation processes in the broader open access landscape.

¹ <https://www.allianzschwerpunkt-digitalitaet.de/>

Framework Conditions for the Open Access Transformation at the Helmholtz Association

From the Helmholtz Association's perspective, the following aspects are of crucial importance for the cultural change "from closed to open"² as part of the open access transformation. These aspects will serve as a guiding framework for the overall assessment of future transformative agreements. Although it may not be possible to take some of the aspects into account in full or at all, the majority of them must not be disregarded.

1. Evaluation of the Concept of Transformative Agreements on the Basis of the DEAL Agreements

The assessment of the extent to which the current concept of transformative agreements has sustainably promoted a transition to open access by default in scholarly publishing and what adjustments to the negotiation objectives may be necessary in the future requires a structured basis through an evaluation.

From Helmholtz's perspective, it is now necessary—and in view of the term of the DEAL agreements also timely—to launch this evaluation process within the framework of the Alliance of Science Organisations in Germany so that in 2026 common assessments can form the basis for the new negotiations, which will then be upcoming.

In view of the current broad data base, the focus on the term of the DEAL agreements will enable an in-depth analysis.

A structured evaluation by the Alliance of Science Organisations in Germany of the concept of transformative agreements on the basis of the DEAL Agreements will enable joint assessments for future negotiations by 2026.

2. Genuine Transformative Agreements

Back in 2016, the OA2020 Expression of Interest in the Large-Scale Implementation of Open Access to Scholarly Journals,³ which was supported by all science organizations in Germany, called for the switching of the entire scholarly publishing system to open access. However, the transformative agreements concluded to date both in Germany and worldwide have led only to a switch to open access at article level, and do not provide for the "flipping" of the journals. The expectation that a switch to open access at article level would almost inevitably lead to the journals being flipped has not been fulfilled either. On the contrary, there have even been "re-flips"—that is, the conversion of open access journals into subscription-based journals. The transformative-agreement path, which has been pursued for a decade now,⁴ does not appear to be expedient, and it requires at least an exit strategy. Internationally, the first

² <https://os.helmholtz.de/open-science-in-helmholtz/open-science-policy/>

³ <https://oa2020.org/mission/>

⁴ The first transformative agreements were concluded by Austria with effect from 01.01.2014. See <https://esac-initiative.org/about/transformative-agreements/agreement-registry/>

signs of a move away from transformative agreements (BIBSAM),⁵ and even article processing charges (APCs; Gates Foundation),⁶ can be observed.

From the year 2026 onwards, the Helmholtz Association will conclude or become a party to transformative agreements only if they contain robust stipulations regarding flipping. From the year 2028 onwards, the Association will conclude or become a party to transformative agreements only if they provide for a complete flip at the end of the contract period, at the latest.

3. Opt-Outs for Institutions

Participation in transformative agreements such as DEAL often ties up a substantial portion of the acquisition budgets of the Helmholtz centers' libraries and information facilities. Depending on the terms and conditions of the agreements, this expenditure may also impact open access funds and publication funds. In the case of hybrid models and gold open access, transformative agreements provide for simplified or discounted publication, which could influence publishing behavior. This could prompt authors to decide in favor of publishing in the journals covered by these agreements. This may make it necessary for the libraries and information facilities to make savings in other areas in order to be able to comply with the corresponding transformative agreements. In addition, it may contribute to a further narrowing of the focus to just a few publishers, and thus to further monopolization of the publishing market. To be able to counteract this, it must be possible to opt out of such agreements in an uncomplicated way.

From the year 2026 onwards, the Helmholtz Association will conclude or become a party to transformative agreements only if multi-annual contracts contain an unconditional opt-out option for participating institutions. This is especially important in the case of agreements with a term of more than two years.

4. Publish-And-Read (PAR) Fees and Article Processing Charges (APCs)

Open access transformative agreements mean a switch from a subscription-based monetization system to a system that is based essentially on the number of articles published.

Within the framework of previous transformative agreements, historical subscription volumes serve as the basis for the calculation of APCs (or PAR fees in the case of hybrid open access). However, these charges were based on the sometimes huge annual price increase rates that were possible only in the context of the prevailing monopoly structures. Although the current transformative agreements (taken as a whole) have been able to slow down the rates of increase, additional costs arise each year because of contractually agreed rates of increase. This contradicts the originally agreed transformation framework, which provides for a restructuring of rather than a continuous increase in the (publication) budgets.

⁵ <https://www.newswise.com/articles/need-to-move-away-from-transformative-agreements>

⁶ <https://openaccess.gatesfoundation.org/>

Regarding gold open access, the open access transformation means that although scholarly publishers no longer have any revenue from subscriptions, they can levy an APC per article. The pricing of APCs is largely unregulated and is the responsibility of the publishing houses themselves, none of which have made transparent information on the composition of these APCs available to date. It can be observed that very prestigious and highly esteemed journals in particular levy disproportionately high APCs. However, an unjustified rise in APCs can also be observed across scholarly journals as a whole,⁷ which is increasingly creating funding problems for authors and their institutions. These rising basic costs are therefore also partially cannibalizing the savings on APCs that were agreed within the framework of the long-term transformative agreements. Clearly defined cut-off limits for costs per article counteract this. In addition, they prevent the disguising of cost increases by shifting APCs to other types of charges (page charges, color charges, submission fees, etc.).

From the year 2026 onwards, the Helmholtz Association will conclude or become a party to transformative agreements only if the calculation of PAR fees is based solely on the expected number of articles by corresponding authors (extrapolated from an x-yearly tranche) and the total costs per article on which the calculation is based do not exceed 2,500 euros net.

5. Standard License CC BY

The Helmholtz Open Science Policy⁸ stipulates that open access—within the meaning of the Budapest Declaration⁹ and the Berlin Declaration¹⁰—presupposes the application of a Creative Commons CC BY license by default when publishing scientific results.

This applies not only to the area of green open access but also—and in particular—to hybrid and gold forms. In keeping with scientific freedom, the possibility in principle for the respective authors to actively decide against publishing open access under a CC BY 4.0 license must not be removed completely.

Open access under a CC BY 4.0 license must be the default setting for corresponding authors from the Helmholtz Association in publishers' submission systems. On the other hand, the possibility for these authors to make an active decision must not be removed completely. However, an accidental or erroneous selection of a more restrictive CC license or a non-open access option must always be reversible or revisable after publication.

6. Author Verification and Payment

Author verification and the payment of publication charges should always take place via the platforms of the publisher or a third-party provider, with no additional costs for the institutions. Expenses incurred by the contracting institution should always be borne by the institution itself. With the exception of the DEAL agreements, this is a consistently observed

⁷ Haustein, S. et al. (2024). Estimating global article processing charges paid to six publishers for open access between 2019 and 2023. Preprint. arXiv. <https://doi.org/10.48550/arXiv.2407.16551>

⁸ <https://os.helmholtz.de/en/open-science-in-helmholtz/open-science-policy/>

⁹ <https://www.budapestopenaccessinitiative.org/>

¹⁰ https://www.helmholtz.de/fileadmin/user_upload/01_forschung/Open_Access/Berlin_Declaration_EN.pdf

principle. If this is currently not yet the case with MPDL Services gGmbH, greater cost transparency is needed in any case: Institutions with a large publication output that also carry out author verification themselves give rise to much lower costs per publication than institutions with few publications, especially when the verification is carried out by MPDL Services gGmbH. Therefore, greater differentiation between fixed and variable costs is needed.

Author verification and the payment of publication charges should be carried out without additional costs for the institutions, and greater cost transparency and differentiation between fixed and variable costs is needed.

7. Tracking

Research tracking has been recognized as a serious problem for some time.¹¹ In the 2022/2023 DEAL negotiations, an attempt was made for the first time to effectively prevent research tracking—albeit with only very modest success: It was the first time data protection aspects were taken into account in such agreements, but essentially only rights that already derive from the General Data Protection Regulation (GDPR) were reproduced.¹² To protect researchers and institutions, the path begun must now be consistently pursued.

From 2026 onwards, the Helmholtz Association will conclude or become a party to agreements with providers of publishing services and similar providers only if these agreements contain data protection provisions that offer a considerably higher level of protection than does the GDPR.

8. Strengthening the Legally Permitted Possibilities of Using Copyrighted Works for Text and Data Mining and Artificial Intelligence (Machine Learning)

Statutory permission to reproduce copyrighted works and substantial parts of protected databases and to use these reproductions for text and data mining and artificial intelligence—especially in the sub-area of machine learning for research purposes—is of key societal interest because these usage possibilities sustainably strengthen research and its ability to solve problems. Furthermore, without these possibilities, Europe would lose a lot of its competitiveness, and research activities that need these permissions would be relocated to other jurisdictions. Corresponding provisions in EU Directive 2019/790 on copyright and related rights¹³ and EU Regulation 2024/1689 on artificial intelligence¹⁴ are therefore emphatically welcomed.

¹¹ German Research Foundation (DFG). (2021). Data tracking in research. Aggregation and use or sale of usage data by academic publishers. <https://www.dfg.de/resource/blob/174924/d99b797724796bc1a137fe3d6858f326/datentracking-papier-en-data.pdf> [accessed August 14, 2024]

¹² Altschaffel, R. et al. (2024). Datentracking und DEAL. Zu den Verhandlungen 2022/2023 und den Folgen für die wissenschaftlichen Bibliotheken [Data tracking and DEAL. On the 2022/2023 negotiations and the consequences for academic libraries]. RuZ - Recht und Zugang, 5(1), 23-40. <https://doi.org/10.5771/2699-1284-2024-1-23>

¹³ <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:32019L0790>, see Article 3.

¹⁴ https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=OJ:L_202401689. See Recital 25: “This Regulation should support innovation, should respect freedom of science, and should not undermine research and development activity.”

Statutory permission to reproduce copyrighted works and substantial parts of protected databases for text and data mining and artificial intelligence for research purposes must be maintained.

9. Strengthening the Diversity of the Publishing Landscape and in Particular Scholar-Led Publishing Infrastructures

The market dominance of major scholarly publishers and the growing presence of their tools in the research process are increasingly jeopardizing the sovereignty of research.¹⁵ The failure to flip journals to full open access and the pooling of financial resources to enable participation in transformative agreements like DEAL lead to a loss of biodiversity and are ultimately not conducive to open access transformation, as they further manifest the status quo. National and international developments and activities are therefore increasingly focusing on strengthening scholar-led publishing infrastructures and diamond open access.¹⁶

Helmholtz centers can reduce their dependence on major publishers and contribute to a sustainable open access publishing landscape. This can be achieved through collaborations in the area of not-for-profit publishing opportunities or by establishing scholar-led publishing infrastructures. Opening the centers' own infrastructures (e.g. Jülich Publishing House or KIT Publishing) to other Helmholtz centers or using existing external offerings (e.g. TIB Open Publishing) are conceivable approaches. In addition, new publishing platforms with scholar-led review structures should be considered (inter alia such as Open Research Europe¹⁷ or community-based evaluation structures,¹⁸ among others) and, where possible, supported through long-term institutional memberships or sponsoring. Financial leeway could be achieved here, for example, by re-allocating financial resources in the area of licensing.

The Helmholtz Centers should reduce their dependence on major publishers and promote a sustainable open access publishing landscape by supporting not-for-profit publishing opportunities, establishing scholar-led publishing infrastructures, and using existing offerings.

¹⁵ See also: Bertelmann, R. et al. (2024). Scholarly publishing at Helmholtz: Status quo, scenarios for scholar-led publishing – A discussion paper. Version 2.1. Helmholtz Open Science Office.
<https://doi.org/10.48440/os.helmholtz.077>

¹⁶ See, for example, the [German Science and Humanities Council \(2022\) Recommendations on the Transformation of Academic Publishing: Towards Open Access](#) (Footnote 21); the German Research Foundation's (DFG) [call for proposals](#) for a service center to strengthen the diamond open access landscape in Germany; the European [Action Plan for Diamond Open Access](#); the [activities of cOAlition S on diamond open access](#); the ["Council Conclusions on High-Quality, Transparent, Open, Trustworthy and Equitable Scholarly Publishing"](#) approved by the Council of the European Union in May 2023; and the European consortium project [DIAMAS](#).

¹⁷ <https://open-research-europe.ec.europa.eu>

¹⁸ See, for example, [PCI – Peer Community in](#).

Further Fields of Action

1. Transparent Information Budgets
2. Rethinking Reputation Mechanisms
3. Drawing Up a Helmholtz-Wide Whitelist of High-Quality Diamond Open Access Journals
4. Examining Possibilities for Rights Retention for Helmholtz

1. Transparent Information Budgets

The concept of an information budget refers to the clear and transparent allocation and management of resources within an organization or a project.¹⁹ This means that all expenditure and investments in the area of information technology and information infrastructure are documented in an open and comprehensible way. It enables an efficient use of resources and facilitates reporting on and the management of the use of funds.²⁰

A commitment by Helmholtz to transparent information budgets could support the achievement of the objectives in the area of open science formulated inter alia in the Helmholtz Open Science Policy. Regular reporting on measures and outcomes in connection with the promotion of transparent information budgets and other related initiatives would be helpful in this regard.

In addition, in its paper “Recommendations on the Transfer of Academic Publishing: Towards Open Access,” the German Science and Humanities Council (WR) recommended that an overview (i.e., basically of the elements of the information budget) be produced in a timely manner—by 2025 at the latest—so that further steps toward the open access transformation can be prepared.²¹

2. Rethinking Reputation Mechanisms

To achieve the open access goals, and in line with initiatives such as the San Francisco Declaration on Research Assessment (DORA)²² and the Coalition for Advancing Research Assessment (CoARA),²³ existing reputation-assignment mechanisms must be adapted. Publication formats and publication channels such as preprints²⁴ and proceedings should be considered and recognized as part of the open access transformation. One lever for the necessary incentivization of their use could be the integration of alternative and innovative

¹⁹ Pampel, H. (2019). Auf dem Weg zum Informationsbudget. Zur Notwendigkeit von Monitoringverfahren für wissenschaftliche Publikationen und deren Kosten [On the way to an information budget. The need for and costs of monitoring procedures for scholarly publications] (Working paper). Helmholtz Open Science Office. <https://doi.org/10.2312/os.helmholtz.006>

²⁰ At Helmholtz, the projects [Transform2Open](#), [open-access.network](#), and [openCost](#) are currently addressing these topics; further standardization processes and projects are to be welcomed.

²¹ German Science and Humanities Council (WR). (2022) Recommendations on the Transformation of Academic Publishing: Towards Open Access. <https://doi.org/10.57674/0gtq-b603>. See p. 70: “The WR considers it desirable for the institutions to obtain an overview of the financial flows in a timely manner so that they may discuss the design of the financial flows in a purely open access world after the transformative treaties [sic] by 2025 at the latest.”

²² <https://sfdora.org/>

²³ <https://coara.eu/>

²⁴ Meistring, M. et al. (2023): Helmholtz Open Science Briefing: Handreichung: Preprints in Helmholtz. Version 1.0. Helmholtz Open Science Office. <https://doi.org/10.48440/os.helmholtz.069>

publication formats as permissible forms of output into the system of indicators of the Helmholtz Association's program-oriented funding.

3. Drawing Up a Helmholtz-Wide Whitelist of High-Quality Diamond Open Access Journals

One way would be to draw up a whitelist of suitable publication formats (e.g., diamond open access journals) for Helmholtz authors that—for performance assessment purposes—are considered to be on a par with the formats normally used to date (i.e., journals indexed in the Web of Science and/or Scopus). This would strengthen scholar-led formats and could contribute to a move away from the selection of publication venues based on traditional metrics. To support the acceptance of such a list, it is essential that the communities represented in the research areas of the Association be involved in drawing it up. In addition, the creation and maintenance of such a list will require continuous commitment on the part of expert reviewers from the research areas. This additional effort could be positively recognized—and thus strengthened—by taking it into account in the key performance indicators compiled internally by the centers or the Association.

4. Examining Possibilities for Rights Retention for Helmholtz

Essentially, one obstacle to the implementation of immediate open access is the transfer of copyright or exclusive rights of use in publications to publishers or publishing service providers, which is standard practice in scholarly publishing and restricts or prevents authors from immediately making their works available to the public or reusing them themselves. One important concern in the transformation to open access is therefore the promotion of possibilities for researchers to secure sufficient rights in their scientific works to ensure that they can be immediately made available to the public and reused. Ways of implementing such reservations of rights are subsumed under the term *rights retention*. They include contract addenda with which researchers can individually modify publishing agreements (author rights addenda)—albeit mostly with unclear prospects of success and the risk of having a manuscript rejected. By contrast, the CoalitionS “Rights Retention Strategy”²⁵ aims to adapt research funders' grant conditions in such a way that authors are required to apply a CC BY license to the final version of the manuscript accepted for publication after peer review (author's accepted manuscript, AAM) or the final published version (version of record, VoR). In this way, the possibility of making works immediately available to the public and reusable is always ensured, and researchers would not have to rely on the existence of often limited self-archiving permissions. Another way to implement this is through institutional rights retention policies whereby researchers transfer all or some rights of use in their publications to their respective scientific institutions. This takes place before submission of the manuscript for publication and thus prevents the transfer of copyright or exclusive rights of use to the publishing service provider or publisher. The application of an open license such as CC BY would therefore always be possible. Such rights retention policies were pioneered by Harvard University; in Europe, they have so far been implemented mainly in the United Kingdom.²⁶ That

²⁵ <https://www.coalition-s.org/rights-retention-strategy/>

²⁶ On the current status of institutional rights retention policies, see, in particular, Labastida i Juan, I. et al. (2023). Opening knowledge. Retaining rights and open licensing in Europe. SPARC Europe. <https://doi.org/10.5281/zenodo.8084051>

these policies have been implemented to date in countries in which Anglo-American copyright applies is no coincidence. However, it explains only partly why an adapted application in continental Europe has hardly taken place up to now. What all these approaches have in common is that they ensure that authors reserve rights in their own publications.

For the Helmholtz Association and its centers, an examination of the possibilities for a better and at the same time legally watertight exercise of authors' rights in the sense of rights retention is being initiated. In particular, the aim is to determine the extent to which institutional rights retention policies for the Helmholtz centers are possible and implementable within the German legal framework and how researchers can be better supported and collectively empowered to individually implement the principle of rights retention.

