



Operationalising Open Research Europe as a collective publishing enterprise

Independent
Expert
Report



Research and
Innovation

Operationalising Open Research Europe as a collective publishing enterprise

European Commission
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Directorate A ERA & Innovation

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Operationalising Open Research Europe as a collective publishing enterprise

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Research conducted between June 2022 and September 2022 for the European Commission, Directorate-General for Research and Innovation (DG RTD), Open Science Unit.

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EXECUTIVE SUMMARY

I. INTRODUCTION

Background

Open Research Europe (ORE) is the open access peer-reviewed publishing platform currently offered by the European Commission as an optional service to Horizon 2020 and Horizon Europe beneficiaries at no cost to them. The platform enables researchers to publish open access without paying out of their research budgets and to comply with their open access obligations.

Study objectives

The Commission is exploring the potential to gradually expand ORE from a publication platform for EC beneficiaries only, into a non-for-profit European publishing platform for all, with the involvement of funders from EU Member States and possibly beyond. The European Commission's Directorate-General for Research and Innovation (DG RTD) commissioned this independent expert analysis to provide direction with regard to the organizational and financing model(s) that may be used in this collective future endeavour as of 2026.

Methodology

Five work packages were completed as part of this review:

- Work package 1: Desk research and consultation with F1000 Research Ltd ('F1000') as the current provider of ORE's platform, as well as publishing, editorial and communication services.
- Work package 2: Review of organizational and financing models for other non-profit publishing services to identify relevant models and lessons learned that could inform the development of ORE.
- Work package 3: Development of case studies and completion of interviews with representatives of national research funders who had expressed interest in Open Research Europe, and a small number of independent experts.
- Work package 4: Identification of potential organizational and financing models for the ORE platform, together with preliminary modelling exercise to determine its likely size and cost base.
- Work package 5: Preparation of recommendations for the development of ORE as a collective publishing enterprise.

II. OPEN RESEARCH EUROPE: THE CURRENT MODEL

Governance and financing

ORE has been financed by the EC through a procurement procedure for four years, from 2021 to 2024. The total (maximum) funding of €5.8m comprises payments for platform technology, business process and sustainability and communication of €1.3m and up to €4.5m for content. The European Commission is currently the sole decision maker, and the existing governance structure includes an EC Internal Steering Group and a Scientific Advisory Board. In transitioning to a collective funding model, there will be a need to maintain a clear distinction between governance and service delivery and for those involved in the platform's governance to advocate widely for its adoption.

Operating model

In its first 18 months since launch, ORE has published some 270 papers. Publication volumes are expected to total between 1,000 and 2,000 papers over the contract period as a whole, meaning less than half the maximum budget for content will be drawn down. F1000 has committed 15-20 members of staff (full-time equivalent, FTEs) to the delivery of ORE, with a further two FTEs committed by the EC. The majority of F1000 staff are based in publishing, editorial and content acquisition functions, with the remainder focussed primarily on marketing and technology functions.

Planning for transition

Three distinct challenges can be identified for the future development of Open Research Europe:

- **Developing an open-source platform** - The Commission is considering moving to an open-source platform to enable ORE to transition away from F1000's proprietary platform technology in the future and avoid the problem of 'vendor lock-in'. This move is considered essential but its complexity should not be underestimated. Development of, or migration to, a new open-source platform should take place iteratively in order to maximise its chances of success, and time and costs overruns may nevertheless prove difficult to avoid.
- **Delivering a non-profit publishing service** – ORE is expected to transition from a wholly outsourced arrangement between the EC and a commercial service provider to a model where delivery of the service would become the responsibility of a non-profit organization, supported by multiple funding agencies. This would not preclude the non-profit organization itself outsourcing the delivery of some or all publishing activities. The actions needed to develop, finance and govern ORE as a non-profit organization are the primary focus of this report.
- **Driving cultural change** – ORE's development is closely tied to wider processes of cultural change in researcher evaluation and behaviour, and low author uptake

poses the greatest risk to its success. Securing the support of funders and other stakeholders in promoting ORE to a broader community than Horizon 2020 and Horizon Europe beneficiaries alone can both enable its growth and help to facilitate desired changes in research culture.

III. ORGANIZATIONAL AND FINANCING MODELS FOR NON-PROFIT PUBLISHING SERVICES

Drawing on seven case studies, found in Annex 1, and relevant literature a number of models and lessons learned for ORE have been identified, as follows.

Social value proposition

The articulation of a clear social value proposition that resonates with supporters and stakeholders is critical to the development of a sustainable financial model, and this must go beyond simply supporting open access to publications. The EC has indicated that ORE should take the form of an open infrastructure which maximises accessibility and re-usability and promotes high quality research. In the long-term, it should also enable multilingualism and equitable access, meaning an infrastructure which is available to funded and unfunded authors alike.

Size and scale

The case study organisations vary widely in size, but several demonstrate that achieving scale is possible with the right support and funding. At present ORE is comparable in size to Europe PubMed Central, with both having approximately 20 full-time equivalent staff members and annual operating budgets of €1-1.5m. In future, it is likely to become closer in size to SciELO Brazil (40 FTEs), eLife (45 FTEs) or OpenEdition (60 FTEs), and in time could become larger than any of these.

Operating model

ORE's operating model will need to bring together publishing and editorial, technology, and marketing and communications functions, together with support services and a secretariat to manage funder relations. Existing infrastructures rely heavily on volunteer effort and tend to underinvest in marketing and technology functions. ORE has an opportunity to leverage the influence and resources of national funders both to increase the platform's reach and to develop a stable, scalable delivery model from the outset.

Evidence from existing non-profit publishing services indicates that ORE should make judicious use of outsourced service providers in order to control costs and enable the platform to scale rapidly in response to demand. There are potential synergies with other non-profit initiatives, including the European Open Science Cloud, the Action Plan for Diamond Open Access and the Developing Institutional Open Access Publishing Models to Advance Scholarly Communication (DIAMAS) project, which should be further explored.

Legal form

Existing non-profit publishing services are frequently hosted by international organisations and academic institutions, with relatively few operating as independent legal entities. Hosting by a suitable academic or international organisation could represent a transitional solution for ORE, but the long-term ambition should be to create an independent not-for-profit entity. Selection of the final legal form for ORE will require specialist advice, taking into account relevant restrictions on the use of European Commission funding and that of other partners.

Governance

Three governance mechanisms are commonly adopted by non-profit publishing services:

- **Stakeholder fora.** A large group or forum that meets irregularly but enables stakeholders and supporters to be kept informed and engaged and provide input into the organisation's strategic direction.
- **Scientific governance.** A scientific advisory board or equivalent which provides scientific direction and credibility and connects the organisation to the research community.
- **Corporate governance.** A board or steering group, typically comprising 5-10 member and meeting on a regular basis.

ORE should model its own governance on this threefold approach, ensuring a clear distinction is maintained between governance/advisory functions and day-to-day service delivery. This could be achieved through a legal separation between governing and delivery entities or the implementation of strong governance structures within a single legal entity. In both cases there will need to be a need for a secretariat to handle funder relations and support the governing body.

Financing

Most case study organisations have mixed funding models, and only two, Europe PMC and SciELO Brazil, receive the majority of their revenues from research funders. A sustainable future for ORE would appear dependent on at least one of the following:

- Securing support from a large number of research funders.
- Accessing other sources of funding besides those from research funders, such as academic libraries.
- Identifying a host or partner institution to provide in kind support.

At this stage the first of these options appears the most desirable strategy, but the importance of support from research organisations should not be discounted. A common finding from the case studies is the relative simplicity of the arrangements in place for determining funder/partner contributions. In a collective funding model, the level of each funder's contribution is based on their willingness and ability to pay, rather than the benefit derived in

return. The viability of the overall undertaking depends on the number and size of these contributions being sufficient to meet the organisation's resourcing needs. This in turn depends on the articulation of a compelling social value proposition which is aligned with funders' and partners' strategic goals.

IV. AN ORGANIZATIONAL AND FINANCING MODEL FOR OPEN RESEARCH EUROPE

Following the call for action from the Council Conclusion on Open Science and Research Assessment of June 2022, it is understood that the European Commission has initiated consultations with a number of national funders who have expressed interest in exploring the possibility to support ORE alongside the European Commission in the future. Collectively, they account for an estimated 150,000 scientific publications per annum. Based on reasonable assumptions for the share of publications that are hosted on ORE and the cost per publication, three scenarios have been prepared for ORE as a collective publishing enterprise (Table ES1).

Table ES1 Scenarios for ORE as a collective publishing enterprise

	Lower case	Base case	Upper case
ORE Publications per year	500	2,000	4,500
Cost per publication	€2,000	€2,000	€2,000
Annual operating costs	€1,000,000	€4,000,000	€9,000,000

Endorsement and promotion of the platform by funders and other stakeholders (including leading researchers) will be the most significant determinant of uptake, but the platform is well-positioned to benefit from wider environmental trends. These include the withdrawal of cOAlition S' support for transformative agreements in 2024, growing support across Europe for diamond open access models, new requirements for immediate access to federally-funded research in the United States, ongoing efforts to reform research assessment mechanisms and the drive for greater reproducibility of scientific results.

Further modelling work will be needed to refine these provisional scenarios, validate the cost per publication, and develop a full business plan. However, the base case would involve the establishment of a new legal entity with a budget of approximately €4 million and 50 or more full-time equivalent members of staff (and/or subcontractors). This entity would be governed by a board of directors, with no more than ten members, together with a scientific advisory board and a broader stakeholder forum or advisory committee. These bodies would include representatives from funders, researchers, research organisations, libraries, learned societies, publishing specialists and related initiatives such as the Action Plan for Diamond Open Access, the DIAMAS project and EOSC.

The financing model for ORE's funders should enshrine the principle that funders are supporting an infrastructure for the public good, rather than paying for a service. An outline operating budget should be set for a minimum of a three year period (provisionally 2026-2029), with the annual costs apportioned between supporting funders based on research spend for the most recent available year, or a similar proxy. The EC should establish whether sufficient funds can be secured from the EC and national funders to support an entity of the scale envisaged in this report. Should this not prove viable, alternative sources of financing, in the form of additional funders and/or institutions and libraries, should be explored.

A number of mechanisms can be deployed to manage the possibility that publication volumes exceed estimates, and therefore that the agreed funding proves to be insufficient (see section 4.7). In practice, achieving the desired rate of growth in publication volumes presents a greater challenge than securing the funding. The risks associated with ORE succeeding beyond expectations are manageable and will be greatly outweighed by the benefits it offers. The risk that an excessively cautious approach to its financing and development means it cannot succeed at all is far greater.

V. CONCLUSIONS AND RECOMMENDATIONS

Operationalizing ORE as a collective publishing enterprise represents a significant challenge. It requires the establishment and financing of a non-profit delivery entity, the development and adoption of an open-source platform, and an acceleration of cultural changes in researchers' publication practices. It will also require coordination between the EC and a number of national funders to develop a shared vision for the platform. Yet examination of other non-profit services demonstrates that each of these challenges can be overcome.

A key lesson learned from this study is the importance of positioning ORE as an open, international infrastructure which has the potential to operate at scale. While many European countries are investing in national non-profit publishing initiatives, few if any of these hold out the long-term prospect of enabling publication by all researchers, without eligibility criteria, and at a large scale. This opportunity must also be seen in a context of rising publication output by European researchers. Without investment in high-quality non-profit publication venues, continued growth in publication volumes will primarily benefit the largest commercial publishers, at a cost to the European research system far in excess of ORE's proposed operating costs.

The purpose of this independent expert analysis has been to provide advice to the EC with regard to the organizational and financing model(s) that may be used in the operationalization of ORE as collective future endeavour as of 2026. Further work will be needed under the following five thematic areas to determine ORE's final organizational and financing model:

1. Develop the vision.
2. Define the operating model.

3. Secure finance.
4. Establish governance structures.
5. Create a legal entity.

Table 8 in Section 5.2 sets out a series of recommendations for how this work can be taken forward by the EC and its prospective funding partners, to enable ORE to be established as a collective publishing enterprise from 2026.

1. INTRODUCTION AND METHODOLOGY

In the coming years, the European Commission (EC) aims to gradually expand its open publishing platform, Open Research Europe (ORE), from a publication platform for its own beneficiaries only into a non-for-profit pan-European publishing platform . This report draws on evidence gathered via desk research, as well as interviews with publishers and funders of scientific research, to review potential financing and governance mechanisms that could support the ORE platform from 2026 and beyond. It concludes by providing advice and recommendations to support the EC's ambitions regarding ORE.

1.1. INTRODUCTION

Background

Open Research Europe (ORE) is the open access peer-reviewed publishing platform currently offered by the European Commission as an optional service to Horizon 2020 and Horizon Europe beneficiaries at no cost to them. The platform enables researchers to publish, and in open access, without paying out of their research budgets and to comply with their open access obligations.

Rationale for the study

ORE is part of the European Research Area (ERA), and its launch was an action point in the Communication 'A new ERA for Research and Innovation' (European Commission, 2020). The Communication presents four strategic objectives, one of which includes ORE as a key action to "ensure that everyone benefits from research and its results". Subsequent to the June 2022 Council Conclusions on Open Science inviting Member States and research funding organizations to consider joining ORE (or consider setting up their own open access publishing platforms if necessary) and in view of embedding the publishing platform in the ERA more deeply, the Commission is considering gradually expanding ORE from a publication platform for EC beneficiaries only, into a non-for-profit European publishing platform for all Europe, with the involvement of funders from EU Member States and even beyond. Here, several possibilities regarding the governance, funding, and partnership models emerge. First, responsibility (governance and financing) may be shared with Member States or other funders, and potentially research organisations. Second, there may be potential to consider a blended funding model that is not based on article publication charges (APCs). Third, and finally, ORE may become a service available through the European Open Science Cloud (EOSC), with its content being findable and accessible through it.

Overview of objectives

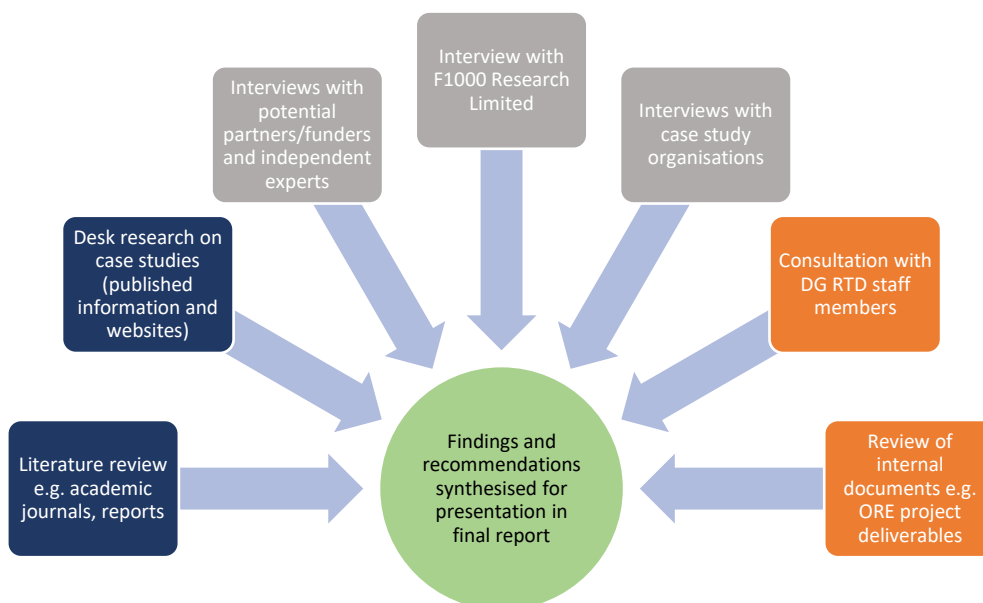
The European Commission's Directorate-General for Research and Innovation (DG RTD) commissioned this independent expert analysis to provide advice with regard to the organizational and financing model(s) that may be used in this collective future endeavour as of 2026. The three core deliverables of this work are:

- to provide an analysis of business models relevant for non-for-profit publishing;
- to propose one (or more) specific appropriate models for ORE, with pros and cons of each, providing information and examples of how financial flows would work within the preferred model; and
- to provide concrete recommendations on operationalising such a model.

1.2. METHODOLOGY

Five work packages were completed as part of this review. The present section outlines the methodology supporting this work, with an overview of the evidence base assembled provided in Figure 1.

Figure 1. Summary of the evidence base



Work Package 1: Review of ORE's current organizational and financing model

Desk research was conducted to examine the current organisational and financing model of ORE, including consideration of publicly available literature sources as well as internal

documentation shared by the European Commission. The current financing and operating model was also discussed with representatives of F1000 Research Ltd. (F1000), part of the Taylor & Francis publishing companies. F1000 currently provides DG RTD with their existing publishing platform, customized for the needs of the Commission, as well publishing, editorial and communication services, through a competitive Framework Contract (EC, DG RTD, 2019).

Work Package 2: Identification of non-profit organizational and financing models

A review of organizational and financing models for other non-profit publishing services was conducted, to identify relevant models and lessons learned that could inform the development of ORE. The following criteria were used to identify a sample of relevant services for review:

- a commitment to open access publication or service provision¹ without fees for authors or readers (commonly referred to as ‘diamond open access’);
- non-profit status;
- demonstrable longevity, meaning the organisation had been established for a minimum of five years;
- demonstrable ability to scale; and
- demonstrable success in attracting support from public funding agencies.

A total of eight services were identified in conjunction with DG RTD staff and approached to request their contribution to the study. Of these, the seven services listed in Table 1 agreed to participate. The selected case studies are predominantly based in Europe, given the need to identify models that are relevant to a European context, with one in Latin America. The focus on these two regions is consistent with their leading role in the development of diamond open access publishing models: about 45% of diamond OA journals are published in Europe and 25% in Latin America (Bosman et al., 2021, p. 32).

Table 1. Selected case studies

Case Study	Established	Location	Description
SciELO	1997	Brazil	Web-based bibliographic database, digital library, and cooperative electronic publishing model of open access journals.

¹ Only 0.2% of OA diamond journals (or platforms) publish 500 or more articles per year (Bosman et al, 2021, p.36). Accordingly, the decision was taken to consider services involved in the provision of infrastructure for scholarly communication in addition to those providing a full publishing service.

Open Edition	1999	France	National research infrastructure producing OA electronic resources in the humanities and social sciences.
Europe PMC	2007	UK	Full-text literature database for the life sciences, supported by 36 European research funders.
OAPEN	2010	Netherlands	Operates as an independent not-for-profit in the field of open access books, working to coordinate multi-funder support for OA books infrastructure.
eLife	2012	US/UK	Independent not-for-profit open access journal hosting life sciences and biomedicine research, established with financial support from three research funders.
SCOAP3	2014	Switzerland	A global partnership in the discipline of High Energy Physics (HEP) that makes over 90% of HEP journal content available via open access and free to publish for authors.
Open Library of Humanities	2015	UK	Not-for-profit platform publishing peer-reviewed scholarship across the humanities disciplines in 28 fully open access journals and its own multidisciplinary journal, with no article processing charges,

Work Package 3: Interviews and case study development

Case studies for the participating services were developed via a combination of desk research and interviews with representatives of each service. Representatives were also asked to give their recommendations for the development of operating and financing models for Open Research Europe. Additional interviews were completed with representatives of national research funders who had expressed interest in Open Research Europe, and a small number of independent experts. All interviews were undertaken in accordance with the requirements of the EU General Data Protection Regulation (GDPR) and on the basis that any quotations used would be anonymised. A full list of contributors can be found in Appendix 1.

Following the completion of these interviews, case studies were developed for each of the selected services using the business model canvas format (Osterwalder and Pigneur, 2010), together with a narrative summary of the services' legal, financial and governance arrangements and an overview of three 'lessons learned' deemed relevant to Open Research Europe. The completed case studies were shared with representatives of each service for review and approval prior to publication. The full set of case studies can be found in Annex 1 to this report.

Work Package 4: Identification of an organizational and financing model for ORE

The evidence gathered via desk research and stakeholder interviews was synthesised to identify potential business models for the organization and financing of the ORE platform. Lessons learned from each case study were reviewed for their relevance to the future ORE platform and interview transcripts were subjected to a process of qualitative thematic analysis. These findings were supplemented by a preliminary modelling exercise, designed to stimulate further work and discussion on the future size and shape of ORE.

Work Package 5: Recommendations for implementation

The recommendations presented in Section 5 of this study were developed based on a synthesis of all preceding stages of this work. Recommendations were prioritised based on their relevance to the ORE platform and validated through discussion with representatives of DG RTD and review by a selection of case study representatives. They are designed to be actionable within the timeframes proposed by the European Commission for the development of ORE as a collective publishing enterprise.

1.3. REPORT STRUCTURE

Following this introduction, this report is divided as follows:

- Section 2: Open Research Europe: the current model
- Section 3: Organisational and financing models for not-for-profit publishing services
- Section 4: An organisational and financing model for Open Research Europe
- Section 5: Conclusions and recommendations

A full list of contributors can be found in Appendix A, while the case studies developed for the purposes of this study are included as Annex 1.

1.4. LIMITATIONS

The present report is subject to the following limitations:

- The desk-based evidence review was limited to documentation supplied by the EC and the case studies, and a small number of third party sources deemed relevant to the subject matter. A full literature review was not undertaken.
- Case studies were developed for a total of seven non-profit publishing services. Services were selected based on criteria agreed with the European Commission for the specific purposes of this study, and cannot be considered as representative of all non-profit open access publishing services.

- A total of 18 participants contributed to this study through interviews (see Appendix A). Study participants were recruited via convenience sampling, that is, stakeholders were interviewed who were both available and willing to participate.
- The synthesis of stakeholder interviews and literature gathered as part of this study was underpinned by qualitative analysis, which relies on analytical judgement and interpretation. While relevant literature has been used to validate and contextualise the interview and case study findings, a full literature review did not form part of the scope of work. As a result it may not be appropriate to generalise some findings of this study and outlying results may be over-represented.

1.5. ACKNOWLEDGEMENTS

This work was commissioned by the European Commission's Directorate-General for Research and Innovation (DG RTD). I gratefully acknowledge:

- the guidance and support received from Silvia Bottaro, Christian Cucinello and Jean-François Dechamp and Victoria Tsoukala, on behalf of DG RTD;
- the support and advice provided by Lucia Loffreda, Ana Heredia, Bianca Kramer and Christine Ferguson; and
- the insights shared by the interviewees listed in Appendix A, without which the preparation of this report would not have been possible.

2. OPEN RESEARCH EUROPE: THE CURRENT MODEL

Open Research Europe (ORE) is currently supported through a four-year framework contract with F1000 Research Ltd, worth a maximum of €5.8m. Successfully transitioning ORE to a non-profit model will require the establishment of a new publishing service, the development of an open-source platform and, most significantly, an extent of cultural change in researchers' publication practices.

2.1. ABOUT OPEN RESEARCH EUROPE

Background

Open Research Europe (ORE) is the open access peer-reviewed publishing platform offered by the Commission as an optional service to Horizon 2020 and Horizon Europe beneficiaries at no cost to them. The platform enables researchers to publish their research without paying out of their research budgets and comply with their open access obligations. ORE launched in March 2021. It is supported through a four-year framework contract (FWC) (March 2020-2024) with the publisher and publishing service provider F1000 Research Ltd., which has been part of the Taylor & Francis group since 2020. The contractor provides DG RTD with their existing publishing platform and technology customized for the needs of the Commission, as well as publishing, editorial and communication services.

Business and financing model

The current business model for Open Research Europe is summarised in the business model canvas in Figure 2, below. ORE has been financed by the EC through a procurement procedure for four years. The total (maximum) funding of €5.8m comprises:

- A fixed amount for platform technology, business process and sustainability and communication of €1.3m
- A variable amount for content of up to €4.5m.

The content budget is based on 5,600 peer-reviewed publications at €780 (years 1 and 2) and €820 (years 3 and 4, with inflationary increase) and represents an upper limit, corresponding to 5% of the expected publications arising from the Horizon 2020/Horizon Europe programmes within the procurement period.

As of early October 2022, there were a total of 273 publications on Open Research Europe, with 101 published in 2021, and 172 in the first 9 months of 2022. Given the current trajectory, the maximum funding available is not expected to be drawn down, with actual publications within the contracted period likely to fall somewhere between 1,000 and 2,000 articles, equating to payments for content of €0.8 - €1.6 million.

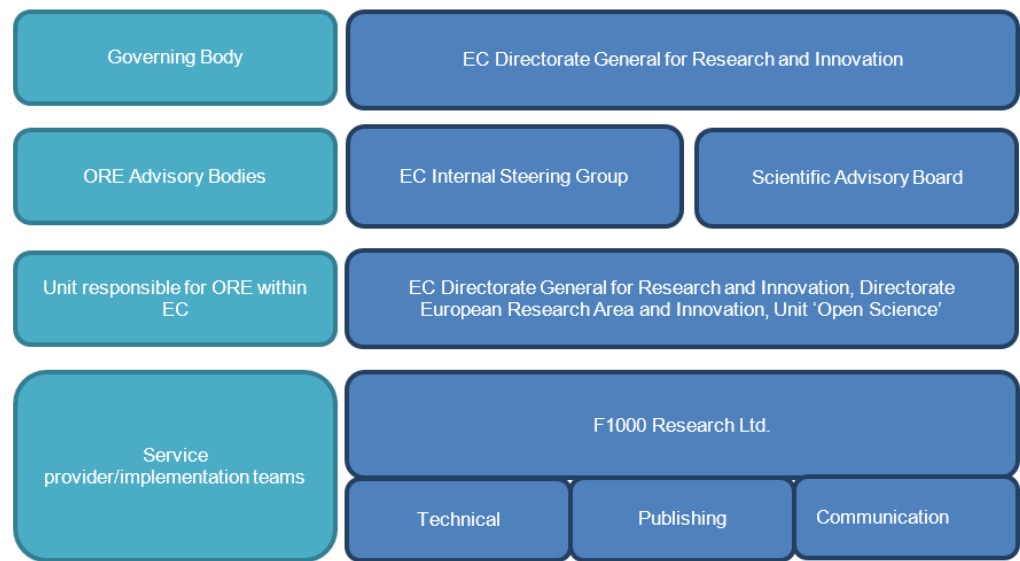
Figure 2. Business model canvas for Open Research Europe (as is).

HOW		WHAT AND WHY		WHO	
KEY PARTNERS <ul style="list-style-type: none">F1000 provides DG RTD with their existing publishing platform customized for the needs of the Commission, as well as publishing, editorial and communication services.F1000 has contracts in place with three subcontractors who assist in community engagement:<ul style="list-style-type: none">EurodocGlobal Young AcademyLIBEREC, DG RTD supervises work of F1000 as service provider on the basis of the contract, makes key operational decisions with F1000, ensures alignment to Horizon policy.	KEY ACTIVITIES <ul style="list-style-type: none">Community developmentSubmission to prepublication checks – editorial triaging and responding to editorial queriesPrepublication Checks to Publication – including data and software support, provision of articles in industry standard format.Peer review managementServices after publicationPlatform developmentMarketing and business developmentAuthor and user supportEC supervision of the contractor	SOCIAL VALUE PROPOSITION <ul style="list-style-type: none">Open Research Europe (ORE) is the open access peer-reviewed publishing platform offered by the Commission as an optional service to Horizon 2020 and Horizon Europe beneficiaries.The platform enables researchers to publish their research without paying out of their research budgets and comply with their open access obligations.ORE operates fully open, invited peer review after publication (the so-called post-publication peer-review). It aims to deliver scientific transparency, integrity, and enable reuse as all content is made available with permissive OA licenses under CC BY (Creative Commons Attribution type).ORE endorses the FAIR data principles and conforms to the Horizon Europe data guidelines.ORE represents an innovative scholarly publishing model designed to ensure that everyone benefits from research and its results	RELATIONS <ul style="list-style-type: none">ORE seeks to develop a community of authors and reviewers through the channels noted below. As authors are also beneficiaries, EC project officers are a key channel to reach the researcher communities.F1000 handles communication with authors, and directly approaches projects and research groups to promote ORE to these communities.	CO-CREATORS <ul style="list-style-type: none">Platform users (primarily researchers, in their capacity as authors, readers and/or reviewers)Database curators, library staff; information technologistsInternal Steering Committee (ISG)International Scientific Advisory Board (SAB)DG RTDPeer reviewersEC project officers	CHANNELS <ul style="list-style-type: none">WebsiteTwitterArticle campaignsThematic gatewaysMonthly newslettersWebinarsDedicated blog
COST STRUCTURE - €1-1.5m per annum <ul style="list-style-type: none">ORE's cost structure represents proprietary information but based on the available funding and current levels of staffing its operating costs can be estimated at approximately €1m.			REVENUE STREAMS - €1-1.5m per annum <ul style="list-style-type: none">ORE has been financed by the EC through a procurement procedure for four years.The total (maximum) funding of €5.8m comprises a fixed amount for platform technology, business process and sustainability and communication of €1.3m and a variable amount for content of up to €4.5m.		

Governance

ORE’s current governance structure is summarised in Figure 3 and reflects the European Commission’s role as the sole decision maker in Open Research Europe. The consensus view from those involved is that the existing governance structure works well, and that a clear separation of governance, which is handled by the EC, from service delivery, which is handled by F1000 Research Ltd, has been beneficial for all parties.

Figure 3. Governance structure



With the potential introduction of other funders and stakeholders into ORE’s governance there will be a need to revisit these structures, but some elements of the current model should be preserved. The first is the need to maintain a clear distinction between governance and service delivery, meaning that a governing body provides the strategic direction, but does not seek to interfere in operational decision-making. The second is the need for those involved in the platform’s governance to advocate for its adoption externally. EC staff within both DG RTD and the European Research Executive Agency (REA) have put significant efforts into raising awareness of the platform among EC Framework Programme beneficiaries and encouraging its uptake. Other funders seeking to support the platform in future will need to put similar efforts into promoting it to their own beneficiaries if they are to see meaningful levels of uptake. This responsibility also extends to members of the platform’s Scientific Advisory Board (SAB), who serve as ambassadors for the platform in addition to providing scientific advice and guidance.

Operating model

F1000 has committed 15-20 members of staff (full-time equivalent, FTEs) to the delivery of Open Research Europe, with a further two FTEs committed by the EC. The majority of F1000

staff are based in publishing, editorial and content acquisition functions, with the remainder focussed primarily on marketing and technology functions.

2.2. PLANNING FOR TRANSITION

SWOT Analysis

Figure 4, below, provides a summary of strengths, weakness, opportunities and threats identified for ORE. It has been derived from deliverables prepared by F1000 Research Limited for the European Commission, and validated through discussion with interviewees. Using this analysis as a reference point, three distinct challenges can be identified for the future development of ORE:

- Developing an open-source platform.
- Delivering a non-profit publishing service.
- Driving cultural change.

These are considered in turn below.

Transitioning to an open-source platform

The Commission is considering moving to an open-source platform to enable ORE to transition away from the F1000 platform in the future and avoid 'vendor lock-in' (Ross-Hellauer et al., 2018). By making the underlying code for the platform openly available it is also hoped that this will help to incentivise wider uptake of open peer review models. This approach is consistent with the vision for a 'distributed, open infrastructure' outlined in the expert group report to the EC on the 'Future of scholarly publishing and scholarly communication' (DG RTD, 2019). It was strongly endorsed by the individuals consulted in this work, who emphasised the risks of vendor lock-in associated with the use of proprietary platforms.

The key thing is that, if the ambition is that it is public, then it needs to be open source. And I think that also enables it to have wider benefit, because you are contributing to a software platform that others can then use. (Funder interviewee)

For the purposes of this report, it is assumed that the initial development of an open-source software platform, or adaptation of an existing platform, would constitute a one-off investment, with no expectation that these upfront costs would be recovered through any future financing model for ORE. Ongoing development costs to be met through any future financing model would be limited to maintenance and further development of the platform.

Figure 4. Open Research Europe - SWOT Analysis

STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
<p>Well-functioning, multi-layered governance structure</p> <p>Website navigation/search means content is easily discoverable</p> <p>Positive author feedback</p> <p>Outreach programme that engages beneficiaries across multiple fields</p> <p>Dedicated editorial team and technical teams and ticketed helpdesk</p> <p>Combined editorial and IT reporting tool</p> <p>Platform effectively supports an open research publishing workflow</p> <p>Early uptake interest; securing Scopus Indexation within 2 years</p> <p>Aligns with the EC's Reforming Research Assessment initiative</p>	<p>Overall article numbers are expected to fall short of the contracted maximum</p> <p>Peer review times, views and downloads are below target</p> <p>Advocacy role of Scientific Advisory Board could be strengthened</p> <p>Lack of clarity around tasks best assigned to subcontractors in early days</p> <p>Early issues with platform user experience</p> <p>Initial misperception of researchers that ORE is a repository, not an original research publishing venue (offering peer review)</p> <p>Gateways for EC funding programs are confusing for site users</p> <p>Content is skewed towards certain regions and subjects</p>	<p>Articles/abstracts available in non-English language</p> <p>Supporting further article types across subject areas</p> <p>Collecting user demographics</p> <p>Enhance author satisfaction</p> <p>Supporting other funding programmes and funders</p> <p>Expand platform capabilities to support data management plans and OA books</p> <p>APIs to support text and data mining of content</p> <p>Further develop content spaces to support EC funding programme/priority areas</p> <p>Further enhance role of subcontractors in engagement</p>	<p>The existing research assessment regime incentivises publication in established journals</p> <p>Different editorial policies for Horizon Europe (and beyond)</p> <p>Need to secure indexation status in a wider range of bibliographic database</p> <p>Contractual restrictions inhibiting technology changes and developments</p> <p>Third party integrations are challenging to implement</p> <p>Reliance on English for communication</p> <p>Limited support from third party communication channels</p> <p>Competition from established publishers</p>

The consensus view among the interviewees consulted is that the transition to an open-source platform is essential, but its complexity should not be underestimated. There is widespread agreement, both within the EC and among those consulted, that any platform should be developed through investment in existing open source technologies, which would be cheaper and faster than developing a new platform from scratch. Nevertheless, there are significant risks involved:

A critical issue is the design time. And that's one part of it. The other part of it is that I haven't seen any platform out there being developed for under a million euros. (Expert interviewee)

In addition to the budgetary and time constraints, the mechanism for commissioning and implementing the platform will be critical to its success. Fecher et al (2021), in a study of the making of research infrastructures for digital research, identify two modes of technical implementation, phased (screening user needs and then building the service accordingly) and iterative (whereby user needs are constantly screened and adaptations are continuously made). They find that it was mainly non-commercial services which used the phased implementation approach, whereas for-profit services exclusively referred to iterative implementation. The preference for a phased implementation approach is considered to restrict the capacity of a service to adapt to user needs, putting non-commercial services at 'a severe competitive disadvantage' (ibid., p. 506). This conclusion was also endorsed by technical experts consulted for this study:

You can design systems very quickly but what will slow it down is outdated processes of requirements gathering. The best way that you can expedite that flow is to bring all those people together into one room and work with them over a couple of days to design the high-level architecture for the system. From there, everything else can flow in an iterative manner. (Expert interviewee)

Preliminary inter-service discussions inside the Commission have confirmed the importance of working closely with open-source communities to develop the platform. ORE is also expected to become a 'node' within the European Open Science Cloud (EOSC). Adoption of standards that enable interoperability will therefore be an essential component of its development. This will also facilitate portability of the data should there be a need to migrate to another platform in the future. It is beyond the scope of this report to consider technical development of the platform in detail. However, the experience of multiple non-profit publication infrastructures suggests that the development of a new platform should take place

iteratively in order to maximise its chances of success, and that time and costs overruns may nevertheless prove difficult to avoid.

Moving to a new ... system is just notoriously difficult. In our case, we think [new system] will support us when we're ready to move, but it has taken much longer to develop than we expected. (Case study interviewee)

Delivering a non-profit publishing service

Under the current framework contract with F1000 the delivery of the Open Research Europe publisher service is wholly outsourced:

...[T]he editorial process is completely looked after, [the EC] get regularly weekly update statistics on how quickly things are being processed and how the peer review is going. And obviously, that's our bread and butter, we have an internal team and a system that enables that to happen. (F1000 interviewee)

The current ORE model also allows for joined-up delivery of editorial, production and technical functions, as these are the responsibility of a single service provider.

If there's ever a technical issue, it goes straight into our help desk, and it gets fixed as quickly as it can be. Where there is a need for customisation to meet the EC's needs, we can do it pretty quickly for them. (F1000 interviewee)

The Commission is considering whether to transition to a model where the service would instead be the responsibility of a non-profit organization. Private service providers may be involved if the Commission chooses to outsource part or all of the operations, but it is anticipated that the management of all business-critical functions would be undertaken in-house.

The steps needed to develop, finance and govern such a service are the primary focus of this report and are considered further in sections 3 and 4. However, they must be placed in the context of wider cultural changes in the research landscape.

Driving cultural change

Transitioning ORE to a non-profit delivery entity and developing an open-source platform are significant undertakings in themselves, but its development is also closely tied to wider

processes of cultural change in researcher evaluation and behaviour. As Brembs et al (2021, p.6) have observed, ‘There already are independent, non-profit platforms where service providers can be substituted (e.g. Public Library of Science, PLoS, Open Library of the Humanities, OLH or Open Research, ORC²)... but only one, ORC, the one where ORE is located, is explicitly designed without journal containers’. ORE’s status as a platform rather than a journal allows it to serve a wide variety of scientific disciplines, and to function as an open infrastructure of the kind envisaged by the Expert Group to the EC on the ‘Future of Scholarly Publishing and Scholarly Communication’ (DG RTD, 2019).

However, as the SWOT analysis above illustrates, authors have so far proven resistant to widespread adoption of open publication platforms such as ORE in place of traditional journals. The fact remains that, ‘incentives for most scientists still focus on publication in high-prestige journals, with status measured by rankings based on the Journal Impact Factor’ (Directorate-General for Research and Innovation (European Commission), 2019, p. 36). This overarching challenge has been compounded by some initial confusion around the identity of ORE, with some researchers viewing it as a content repository, rather than an original research publishing venue providing full, quality assured peer review. There has also been further confusion around the use and function of subject/community ‘hubs’, or ‘gateways’. Changing these perceptions requires engagement with author communities over a long period of time. This remains a challenging task because of the platform’s broad scope and constituency, including:

- the need to reach communities working across all disciplines;
- its adherence to high and often unfamiliar standards and requirements for openness (e.g. through the open peer review model and open data policy mandate); and
- the need to serve a pan-European market.

We're having to do a lot of work just working out how to navigate the complexities of European Member States to ensure that people are able, or feel comfortable, to publish here. (F1000 representative)

In summary, the extent of behavioural change necessary for Open Research Europe to succeed remains significant, and low author uptake remains the single largest risk to its success, as multiple interviewees confirmed:

² ORC refers to Open Research Central, a not-for-profit organisation created to enable the international research community to establish a consensus around how best to deliver a research dissemination system. See <https://openresearchcentral.org/>.

I would say that before talking about funding.... the key issue is mass adoption.... So why not focus on that and talk about the economic model once the platform has proved itself? ... The challenge of very broad adoption seems to us to be much more crucial and central than elaborating an economic model now.
(Funder interviewee)

Securing the support of funders, research organisations and learned societies in promoting ORE to the research community will be at least as important as securing the funds needed to finance it. In this respect, ORE's success is closely tied to wider efforts to reform the process of research assessment, and specifically the commitment to: 'Abandon inappropriate uses in research assessment of journal- and publication based metrics, in particular inappropriate uses of Journal Impact Factor (JIF) and h-index' (Directorate-General for Research and Innovation, 2022, p. 6). This remains a long-term endeavour that will take many years to come to fruition, but several of the funders consulted expressed a desire for the Commission to move as rapidly as possible to expand ORE beyond Horizon Europe beneficiaries. By doing this, ORE is more likely to achieve the scale necessary to become sustainable and can play a more significant role in enabling and contributing to positive behavioural changes within the European research landscape.

I think it's great that [the EC is] considering this, but the timescale is a bit slow. Why not do it from next year, in terms of at least opening the platform to new funders? I fear that if they wait till 2026 then that ship may have sailed. (Funder interviewee)

3. ORGANIZATIONAL AND FINANCING MODELS FOR NON-PROFIT PUBLISHING SERVICES

Drawing on the case studies in Annex 1, this section considers the organisational and financing models adopted by existing non-profit publishing services. It reviews their social value propositions, size, operating models, legal forms, governance, and funding arrangements and draws out implications for the development of Open Research Europe.

3.1. SOCIAL VALUE PROPOSITION

The articulation of a clear social value proposition that resonates with supporters and stakeholders is critical to the development of a sustainable financial model. The selected case studies have a social value proposition which is focused on supporting open access publication, but in almost all cases goes beyond this (see Annex 1 for details). Other goals reflected in the case studies' mission statements or strategic plans include:

- research capacity building;
- improving the visibility of local or under-resourced research communities;
- enabling international collaboration;
- promoting multilingualism in science;
- reforming research communication and assessment mechanisms; and
- developing and promoting uptake of open source publishing software.

*If you're going to implement new models for open access that ask for participation from an international... community, you need to say something about how your values are aligned with what they want to see, and why what you're doing is a public good.
(Case study interviewee)*

Interviewees identified three areas which should be addressed within ORE's social value proposition: open infrastructure, multilingualism and equitable access.

Open infrastructure

From the perspective of researchers, ORE needs to deliver a reliable, high-quality publishing service. Yet it is also helpful to consider ORE as an ‘infrastructure in the making’, one which is not (yet) a central part of research practice, but aspires to become so (Fecher et al., 2021, p. 500). A number of interviewees recommended positioning ORE as an infrastructure, rather than a service, in the eyes of its funders and supporters.

It should be infrastructure first. Because people buy into infrastructure when they want to make a difference, whereas if they're buying a service, they want to obtain a product. (Expert interviewee)

In this context, several individuals endorsed the Principles of Open Scholarly Infrastructure (Bilder et al., 2020), and recommended that Open Research Europe seek to implement these as fully as possible. There is a growing trend for other non-profit scholarly communication infrastructures to self-assess themselves against the POSI principles and share the results online (Bartell, 2020; Giambattista, 2021; Katz et al., 2021; Kuliavets, 2022; Maria Levchenko/Europe PMC, 2022; OpenAIRE, 2022; Piwowar, 2021; The Dryad Team, 2020). For some funders, adherence to these principles was considered likely to increase their willingness to fund ORE. A smaller number of individuals also referenced the Open Research Central principles (Open Research Central, n.d.).

Multilingualism

Case studies located in non-English speaking countries typically emphasise the importance of multilingualism when serving their chosen communities. A number of interviewees recommended that this be prioritised within the further development of ORE.

To me, what ORE should embody is multilingualism in science. Which body can offer this service if not the European Commission? That, to me, is really its role. (Funder interviewee)

Equitable access

Perhaps the most significant stumbling block for potential funders and supporters of ORE is the exclusive nature of the platform, and the risk that even an expanded ORE will be open only to submissions from authors supported by a select group of funding agencies.

If the EC is only interested in article publication charges, then ORE can carry on as it is. But that won't lead to a full transition to open access across the research spectrum. That leads to a transition for the research the EC funds directly through project funding, which will leave some disciplines high and dry. (Case study interviewee)

There is widespread recognition that opening the platform to all comers may not be feasible in the near future, given the need to develop a sustainable financing model, but also that the problem of equitable access to publication is too important to be ignored. Articulating a long-term vision for ORE as an infrastructure which is open to funded and unfunded authors alike will therefore be crucial, with an initial expansion to national funders and their beneficiaries presented as a stepping stone to a more inclusive model, rather than the final destination.

Equity of access to this platform, when it's provided by funders, seems to me one of the most important things. What would be really brilliant is if people who don't have grants could submit their research to this type of publication system and not have to pay an APC. (Case study interviewee)

3.2. SIZE AND SCALE

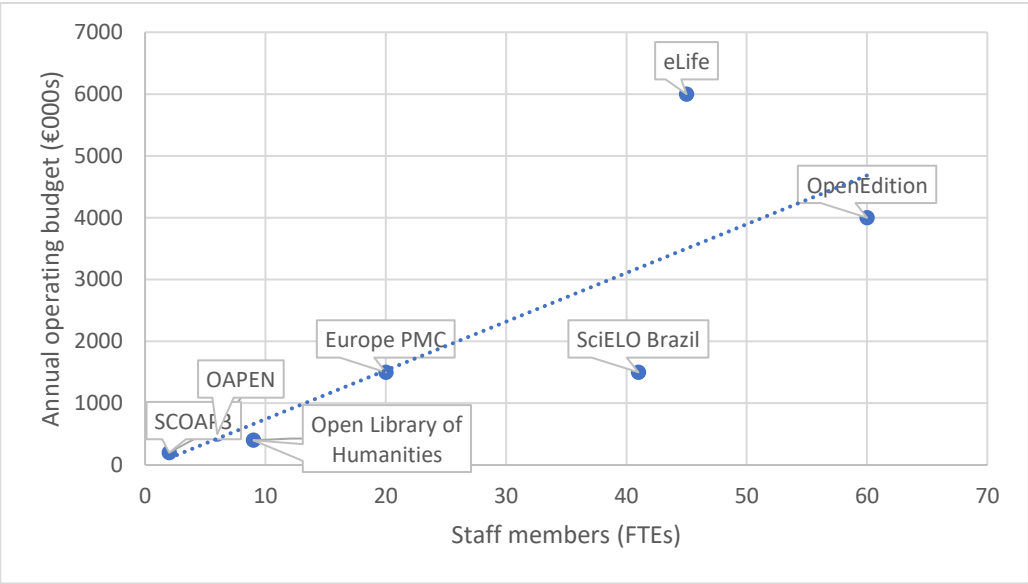
Figure 5, below, provides an overview of the case studies by reference to their operating budgets and full-time equivalent staff members (FTEs). The figures presented should be considered indicative only, as in kind support from host institutions and volunteer effort is not included in the quoted figures.

At present ORE is comparable in size to Europe PMC, with both having teams of approximately 20 full-time equivalent staff members and annual operating budgets of €1-1.5m.³ In future, it is likely to become closer in size to SciELO Brazil (40 FTEs), eLife (45 FTEs)⁴ or OpenEdition (60 FTEs), or even larger, as explained in Section 4, below.

³ Europe PMC receives funder subsidies of approximately €1.5m per annum but also benefits from significant in kind support from EMBL-EBI.

⁴ eLife operating budget of €6m appears high relative to its full-time equivalent staff members as it also makes payments to a large number of senior and reviewing editors who are not directly employed.

Figure 5: Case study entities’ operating budgets and full-time equivalent staff numbers



3.3. OPERATING MODEL

Evidence from the case studies indicates that the functional structure adopted by F1000 (Section 2.1), with teams dedicated to publishing and editorial, technology, and marketing and communications, respectively, is common to commercial and not-for-profit publishers alike. For example, Open Edition is comprised of three teams each led by a Deputy Director: Editorial, IT and Internationalisation, while the majority of eLife’s team members sit in its Publishing, Technology and Innovation, and Marketing and Communications functions.

In my ideal scenario, I would have an editorial strategy unit, a technology and operations unit and a sales and business development unit... The precise staffing makeup of those three areas varies depending on the needs of the publisher. But there has to be at least those three areas working in conjunction to really have a successful operation. (Expert interviewee)

Several interviewees emphasised the importance of these different functions being in regular communication with each other, and ideally co-located. Others emphasised the critical need to invest in marketing and technology functions, which tend to be under-resourced and over-reliant on volunteer effort in non-profit infrastructures (Fecher et al., 2021). ORE presents an opportunity to leverage the influence and resources of national funders both to increase the platform’s reach and to develop a stable, scalable delivery model from the outset.

Table 2, based on the cOAlition S price transparency framework (Information Power, 2020), shows that most of the case studies use a combination of in-house and outsourced provision. SCOAP3 represents a fully outsourced model, with publishing activities delivered by existing publishers, while entities like OAPEN and Open Library of Humanities rely on a combination of volunteer effort and outsourcing to supplement small in-house teams. Larger services such as OpenEdition are better positioned to deliver publishing activities in-house but still make use of third party service providers for manuscript production. Reviewer identification and manuscript production are the areas where non-profit providers most commonly benefit from the use of outsourced providers.



















































A clear finding from this analysis is that ORE should not seek to centralise all of its activities and deliver a publishing service wholly in-house, at least initially. Instead, it is advisable to make judicious use of publishing service providers in order to benefit from their expertise, control costs and enable the platform to scale rapidly in response to demand.

I think one thing [the EC] will need to consider if they go ahead with this is are they actually going to try and do all of it? Or are they still going to outsource the actual service delivery? Because doing all of it is expensive, and it only starts to make money when you get volume. (Expert interviewee)

This leads to a related question of whether service provision should be outsourced to commercial or non-profit providers. In the area of European non-profit provision, there are potential synergies between ORE, the European Open Science Cloud, OAPEN, OPERAS, the Action Plan for Diamond Open Access (Science Europe, 2022) and the Developing Institutional Open Access Publishing Models to Advance Scholarly Communication (DIAMAS) project. At an international level, there may also be potential for alignment between ORE and the activities of the Public Knowledge Project in North America and Redalyc and SciELO in Latin America. These present opportunities for Open Research Europe to partner with other non-profit initiatives which should be further explored in the coming years. In practice it is likely that that ORE will need to strike a pragmatic balance between investing in and developing non-profit publishing capability and leveraging the expertise and efficiency of established commercial providers.

ORE could have a role to play... in a network of institutional open access publishing platforms, which defend and promote the diamond model. A role for a new organisation could be to expand the current ORE, to sustain it over time, and to play a role in a network at European level. (Funder interviewee)

Table 2: Delivery of publishing activities in-house, via volunteers and via external service providers

Case Study	Relevant Activities							
	Community Development	Submission to prepublication	Prepublication to publication	Peer review management	Services after publication	Platform development	Marketing and business development	Author and user support
OAPEN		×	×	×	 	  €		 
Europe PMC	×		€	×			×	
Open Edition		×	 €	×				
Open Library of Humanities		 	  €	  €	 €	 		
SCOAP3	€	€	€	€	€	€	€	€
eLife	 	€	€			 €		 €
SciELO	  \$	  €	  €	  €		 €		  €

 Undertaken in-house  Undertaken by volunteer € Procured from external service provider(s) × Out of scope

*DOAB does not directly manage peer review, but operates a peer review information service

3.4. LEGAL FORM

A notable finding from the case studies considered in this work is the number of non-profit publishing operations which are hosted by international organisations and academic institutions, as indicated in Table 3. The two largest non-profit publishing operations by number of employees, SciELO and Open Edition, are hosted by academic institutions, while SCOAP3 and Europe PMC are hosted by international organisations. These entities benefit from significant in kind support from their host institutions, meaning they do not need to recover the full economic costs of their activities from external sources. This is consistent with the findings of the OA Diamond Journals Study, which found that more than 70% of OA diamond journals were published by universities or university presses (Bosman et al., 2021, p. 35).

Table 3: Case studies' legal form

Legal form	Case studies
Independent not-for-profits	OAPEN, eLife
Hosted and subsidised by international organisations	Europe PMC, SCOAP3
Hosted and subsidised by academic institutions	Open Library of Humanities, SciELO, Open Edition

By contrast, the independent non-profit entities reviewed are either relatively small scale, such as OAPEN, or have found it difficult to identify a sustainable business model. The Open Library of Humanities was founded as an independent charitable organisation in 2015 and has maintained a business model with no author- or reader-side fees since 2015. However, in 2021 OLH merged with Birkbeck, University of London (a UK higher education institution) in order to ensure its financial sustainability and reduce administrative overheads (Birkbeck, University of London, 2021). By contrast, eLife has remained independent but transitioned from a wholly funder-supported model to recovering its marginal costs of publication through article publication charges of \$2,500 in 2017. eLife attributed this change to the need for a revenue stream to help cover the costs of future growth (Schekman and Patterson, 2016), and increased the fee to \$3,000 in 2021 to enable its funders 'to focus their investments on developing new approaches to research communication' (Inside eLife, 2021).

Hosting by an existing entity has been the default approach for many non-profit publishing infrastructures as it de-risks service development, and allows emerging organisations to access support structures available within these entities (e.g. estates, finance, IT and human resource functions). The creation of a new entity, by contrast, involves additional legal and administrative costs, necessitates the establishment of corporate support structures alongside publishing service provision, and creates additional risks. The benefits of this

approach are independence and freedom to act. It also offers a mechanism to minimise and manage conflicts of interest, whether real or perceived, which several commentators have highlighted as a risk in relation to funder-supported publishing platforms (Anderson, 2016; Ross-Hellauer et al., 2018)

I can see value in setting up an independent entity. It is a lot of work and it will incur significant costs, but I think ultimately it that will be the only way [the EC] could do it - unless they can find somebody to host it. (Expert interviewee)

3.5. GOVERNANCE

Table 5, below, provides an overview of the governance arrangements adopted by each of the case study entities. These indicate that three mechanisms are commonly used:

- **Stakeholder fora.** Several case study organisations operate a large group or forum that enables stakeholders and supporters to be kept informed and engaged and provide input into the organisation's strategic direction. Typically these fora only meet once or twice a year at most, and place minimal obligations on their members.
- **Scientific governance.** The larger entities considered all include a scientific advisory board or equivalent. In SciELO's case this function is merged with corporate governance, but in other cases it constitutes a separate group.
- **Corporate governance.** Where the case study is an independent legal entity corporate governance is the province of a board of directors or trustees, who take on relevant statutory obligations as well as overseeing corporate strategy. For hosted entities, strategy is typically the responsibility of a steering committee, while compliance with statutory obligations is the responsibility of the governing body of the host organisation.

Day-to-day service management is typically the responsibility of a director or equivalent, though in some cases these responsibilities are shared between two or more individuals.

A common experience across many of the case studies has been the need to slim down governance structures that were originally designed to be inclusive, but proved increasingly unwieldy and inefficient as the organisation grew. This is reflected in the adoption of stakeholder fora in conjunction with a much smaller board or steering group, comprising 5-10 members.

So when we first started, we were very keen to have lots of libraries, voting on lots of things, and having an external

committee of invested people who wanted to be part of it. But we very quickly found that actually, there was a substantial vocal minority who wanted that. And then a whole set of the library community who just didn't want that at all, they just want to hand over their money. (Case study interviewee)

This approach was also endorsed by the funders consulted, who recognised the need to achieve a clear separation between governance and advisory functions and day-to-day service delivery.

We actually wouldn't want to be too much involved because we think it could actually hinder developments if the funders want too much from the executive.... So we could see ourselves in a funder advisory board, for instance, but not so much interfering in the day to day business. (Funder interviewee)

The desired level of separation could be achieved in two main ways, as shown in Table 4.

Table 4: Ensuring separation of governance from service delivery

Mechanism	Case study examples
Legal separation between governing and delivery entities	Europe PMC, SCOAP3
Implementation of strong governance structures within a single legal entity	eLife, OAPEN

It is common for the composition of the board or steering group to be defined in an organisation's articles of association (or equivalent document) to ensure different stakeholder interests continue to be appropriately represented even as individual board members come and go. For example, Europe PMC's elected committee must include representatives from its three largest funders, a governmental funder, and a smaller funder. In the case of eLife, meanwhile, the Chair is independent and the majority of decisions are taken by the board, but certain decisions, such as the appointment of the Editor-in-Chief, are reserved for its founding supporters, Wellcome and the Howard Hughes Medical Institute.

Table 5: Governance and management arrangements (number of members is given in brackets where known)

	SCOAP3	OAPEN	Open Library of Humanities	Europe PMC	SciELO Brazil	eLife	OpenEdition
Stakeholder engagement	Governing Council (3,000+ members)	Annual meeting of supporting libraries (170) Advisory Board (9)	OLH Library Board (300+)	Europe PMC Funders' Group (36)	SciELO network	eLife Innovation Initiative	Various mechanisms, including OPERAS
Scientific governance	N/A	Scientific Committee for DOAB (12), Editorial Advisory Committee for OA Books Toolkit (16)	Academic advisory board (28)	Scientific Advisory Board (6)	Advisory Committee (c.10)	Editorial Board (c.100)	Scientific Committee (50+)
Corporate governance	Executive Committee (6) and working groups	Board of Directors (6)	Co-CEOs and Birkbeck governing body	Funder committee (10)		Board of Directors (8)	Steering Committee (5)
Service management	Operations Team (2)	Executive Director	Co-CEOs (2)	PI of the Europe PMC grant	Coordinator	Executive Director	Director

3.6. FINANCING

In their analysis of thirty-three research infrastructures for digital research, Fecher et al observe that, 'Most services have mixed funding models, or at least emphasized the intention to seek other/additional sources of funding' (2021, p. 505). The case studies considered in this work bear this finding out, as shown in Table 6, below.

Only two case study entities, Europe PMC and SciELO Brazil, receive the majority of their revenues from research funders, and both benefit from in kind support from their host institutions. Indeed, support from research organisations, whether in kind or via library funds, is the most important funding source for each of the other five case study entities. A sustainable future for ORE would appear dependent on at least one of the following:

- Securing support from a large number of research funders, to allow for economies of scale and avoid excessive reliance on any individual funder. For example, Europe PMC is currently supported by 36 international science funders, which is considered to represent a sustainable number.
- Accessing other sources of funding besides those from research funders. In the case of eLife this was achieved by the adoption of an author-facing APC model, while other entities have sought to access academic library budgets.
- Identifying a host institution to provide in kind support.

At this stage the first of these options appears the most desirable, not least because identifying and accessing other sources of funding is not cost-free, but would require additional resource. Nevertheless, the importance of support from research organisations should not be discounted. Efforts should be made to engage with both research organisations and researchers through governance and outreach arrangements for Open Research Europe.

I would love this not to be just a conversation between funders. cOAlition S was [initially] a conversation just between funders. It could have been so much greater if more time had been spent with institutions. (Funder interviewee)

With regard to support from funding agencies, a finding from multiple case studies is the simplicity of the arrangements in place for determining funder/partner contributions. In the case of Europe PMC, these are based on each funder's annual research spend, while the Open Library of Humanities has determined bandings for its library partners based on geographical location and institutional size. In both cases there is no relationship between the financial contribution made and the number of articles indexed supported by the funder in question. Similarly, the contributions made by the funders of eLife and SciELO are

independent of any service or flow of benefits back to the supporting agencies. In a collective funding model, the size of each funder's contribution is based on their willingness and ability to pay, rather than the benefit derived in return. The viability of the overall undertaking depends on the number and size of these contributions being sufficient to meet the organisation's resourcing needs.

The funders finance the platform and there is a direct service that they receive in return. But they pay for the bulk of the platform's existence via a grant... There is no direct link in terms of financial contribution and the number of articles. (Case study representative)

A further factor that should not be discounted is the importance of an ambassador or 'champion' who can secure support for new and emerging services. Several of the case studies have benefited from the presence of high-profile figures who are able to build credibility and marshal support for their chosen initiatives. Examples include Martin Eve of the Open Library of Humanities, Abel Packer of SciELO Brazil, Robert Kiley on behalf of Europe PMC, and Randy Schekman and Michael Eisen as Editors-in-Chief of eLife. Robert Jan-Smits and Johan Rooryck have played similar advocacy roles in a different context for cOAlition S.

Ultimately, the success of large-scale, non-profit publishing services in securing financial support does not stand or fall on the development of sophisticated algorithms to track activities and allocate costs between their supporters. It depends instead on their ability to outline a compelling social value proposition and demonstrate its alignment with funders' and partners' own strategic goals. If ORE can do the same then it will be well-placed to secure the funding it needs to succeed.

We were asking our supporters to make voluntary contributions in 2020, right when their budgets were also being hit by the pandemic uncertainty. But we were still able to raise commitments that exceeded our initial estimates by almost 50%. If you have a strong value proposition to offer to libraries and partners, people will find ways of investing their money. (Case study interviewee)

Table 6: Diversity of funding sources

Case Study	Funding Sources						
	Grant funding – recurrent	Grant funding – competitive	Academic libraries	Publishers	In kind support (international organisations)	In kind support (academic institutions)	Other
OAPEN							Service provision to funders
Europe PMC							
Open Edition							
Open Library of Humanities							
SCOAP3							
eLife							APCs
SciELO							

Funding sources as a share of total costs:	0%	1-24%	25-49%	50-74%	75-100%
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4. AN ORGANISATIONAL AND FINANCING MODEL FOR OPEN RESEARCH EUROPE

A successful development pathway for ORE would see the number of publications grow and the cost per publication fall progressively over time. A plausible planning scenario would see ORE established as independent legal entity with an annual budget of €4m and some 50 staff members and/or subcontractors. Such an entity could be expected to publish at least 2,000 publications per annum on behalf of the EC and multiple national funders, with costs apportioned based on annual research expenditure.

4.1. POTENTIAL GROWTH PATHWAY FOR ORE

With just over 250 publications to date, the majority of ORE's existing costs relate to infrastructure and start-up activities rather than the variable cost of publication. As the platform matures and submission volumes rise, variable costs will account for an increasing share of overall costs, and the cost per publication can be expected to fall.

It is beyond the scope of this study to model the platform's development in detail, but for the purposes of establishing the size and shape of a future entity a simple projection can be prepared by considering two variables:

- The number of publications
- The cost per publication

Sections 4.2 and 4.3, below, explore the determinants of these two variables in order to determine the potential size and shape of ORE over the coming years. Sections 4.4-4.7 then outline a potential operating, legal, governance and financing model for ORE, though in each case further work and dialogue with potential funders and partners will be required to determine their final form.

4.2. GROWTH IN PUBLICATION VOLUMES

Scaling Open Research Europe to a platform that processes thousands of publications per year is achievable in principle but will require a significant shift in researchers' attitudes and publishing practices. Greater familiarity with the open research publishing model offered by ORE must be accompanied by recognition that research published by ORE is valued and counts towards researchers' careers progression.

There is precedent for rapid uptake of a new platform in the growth of open access megajournals in the 2010s. As Spezi et al (2017) report, PLOS ONE grew its published output from just over 100 articles in 2006 to over 30,000 in 2013, and Scientific Reports grew from

200 articles in 2011 to over 20,000 in 2016. However, these megajournals serve a global scientific community, with the majority of their submissions coming from US and Chinese authors, and their growth rates increased significantly once they received a journal impact factor (Spezi et al., 2017). By contrast ORE, at least initially, would be serving a much smaller group of authors in receipt of grants from its supporting European funders, and the EC has committed not to seek a journal impact factor (European Commission, n.d.). Growth in uptake will therefore depend on proactive support and promotion by funders and other stakeholders, alongside changing researcher attitudes to publication.

Subsequent to the June 2022 Council Conclusions on Open Science inviting Member States and research funding organizations to consider joining ORE (or consider setting up their own open access publishing platforms if necessary), it is understood that the European Commission has initiated consultations with a number of national funders who have expressed interest in exploring the possibility to support ORE alongside the European Commission in the future (European Commission, private communication to the author, 2022). They comprise a collection of funders of various sizes in terms of their research spend. Research in OpenAIRE and lens.org suggests that their estimated scientific publications per annum could be in the order of 150,000, including those funded by the European Commission. Were 2% of these publications to be shared on ORE, that would correspond to 3,000 publications per year, as shown in Table 7.

Table 7. Modelling annual publication volumes on ORE

Annual publication volume - ORE		Total publications supported by ORE funders per annum				
		50,000	100,000	150,000	200,000	250,000
Share of funded publications published on ORE	0.5%	250	500	750	1,000	1,250
	1.0%	500	1,000	1,500	2,000	2,500
	1.5%	750	1,500	2,250	3,000	3,750
	2.0%	1,000	2,000	3,000	4,000	5,000
	2.5%	1,250	2,500	3,750	5,000	6,250
	3.0%	1,500	3,000	4,500	6,000	7,500

2% of funded publications being shared on ORE would represent a significant increase, given less than 0.5% of EC-supported publications are currently being shared on the platform, but it is fully achievable with the appropriate level of support and communication. Wellcome Open Research, which is also based on the F1000 platform, saw 363 papers published in 2021, its

sixth year of operation, representing 24% growth over 2020 (Hope, 2022). This equates to some 3% of total Wellcome-funded research articles, reviews and preprints in 2021.⁵ Meanwhile, HRB Open Research, launched in 2018 by Ireland's Health Research Board, published 125 papers in 2021, which is estimated to equate to 10% or more of HRB-funded papers in that year.⁶

Endorsement and promotion of the platform by funders and other stakeholders (including leading researchers) will be the most significant determinant of uptake, but a number of wider developments in the international research landscape can also be expected to stimulate demand for publication on ORE, including:

- the withdrawal of cOAlition S' support for transformative agreements and transformative journals at the end of 2024 (cOAlition S, n.d.);
- growing support across Europe for diamond open access models (Science Europe, 2022);
- ongoing efforts to reform research assessment (Directorate-General for Research and Innovation, 2022; DORA, 2013);
- recently-announced requirements for immediate access to federally-funded research in the United States (White House Office of Science and Technology Policy, 2022); and
- the drive for greater reproducibility of scientific results (Directorate-General for Research and Innovation (European Commission) et al., 2020).

4.3. COST PER PUBLICATION

In its recent report on the 'Economic Landscape of Federal Public Access Policy' (OSTP 2022), the White Office of Science and Technology Policy cites evidence from SPARC (2022) and published APC prices (Elsevier, 2022; Wiley, 2022) in support of its assertion that 'the average cost to publish a research article from all funding sources falls between \$2,000 and \$3,000 dollars [or euros]' (OSTP 2022, p.12). Other evidence cited in the same report puts the actual cost of producing an article much lower, at between €200 and €1,000 (Grossmann and Brembs, 2021), while selective non-profit titles such as EMBO Press quote figures as high as €9,000 (Leptin, 2019).

⁵ Europe PMC lists 11,300 research articles, reviews and preprints acknowledging funding from Wellcome in the 2021 calendar year.

⁶ According to lens.org, some 600 scholarly works were supported by the HRB in 2021. After adjusting for the incompleteness of these results in line with the findings of Kramer and de Jonge (2022), the total number of scholarly works supported by HRB per annum can be estimated at roughly 1,200.

As a 'sound science' platform operated on a non-profit basis, ORE's costs can be expected to be lower than those of a traditional scientific journal, which must recover the costs of rejected articles from the (potentially much smaller) number of accepted publications. The charges levied for those journals also include significant profits (or surpluses, in the case of learned society titles). These factors would not apply to a non-profit platform, although ORE should still seek to generate a modest surplus on its activities (Bilder et al., 2020).⁷ On this basis, a cost per publication of €2,000 should be a realistic goal once sufficient volumes are achieved.

However, several experts interviewed for this study cautioned against a 'race to the bottom' in which non-profit publishing service providers seek to set their cost per publication as low as possible. This would entail a narrow focus on covering the costs of article production and keeping these costs to a minimum. Such an approach is likely to come at the expense of quality and the author experience, and also risks constraining the resources available for continued investment in technology and marketing – a common mistake made by non-profit scholarly infrastructures which serves to undermine their competitiveness (Fecher et al, 2021).

4.4. OPERATING MODEL

Drawing together the preceding three sections, Table 8 presents three potential scenarios for ORE as a collective publishing enterprise. These combine a set of plausible assumptions for the number of supporting funders, the share of funder-supported publications published on ORE and the cost per publications to estimate the annual operating costs of ORE in lower, base and upper cases. The base case assumes that:

- a) Not all of the national funders who have expressed in ORE agree to support it.
- b) The share of funder-supported publications on ORE lags behind the levels seen by the Wellcome or HRB Open Research platform, reflecting the difficulties of promoting ORE to a more geographically-dispersed and multi-disciplinary community.
- c) The cost per publication is €2,000.

The lower- and upper-case scenarios illustrate the combined impact of more pessimistic or optimistic outcomes for the first two of these criteria. The lower-case scenario assumes that no other funders agree to support ORE, and it continues as a platform for Horizon beneficiaries only, with relatively low levels of uptake, while the upper-case scenario assumes

⁷ A surplus of 5-10% of revenues would be a realistic target for a charitable organisation, allowing ORE to gradually build up its reserves to a level sufficient to cover between three and six months' operating costs as a minimum. However, Bilder et al (2020) go further than this, recommending the creation of 'a contingency fund that can support a complete, orderly wind down (12 months in most cases)'.

that all of the funders who have expressed interest choose to support it, and uptake increases significantly.

Table 8. Three potential scenarios for ORE as a collective publishing enterprise

	Lower case	Base case	Upper case
a. Total publications supported by ORE funders	50,000	100,000	150,000
b. Share of funder-supported publications published on ORE	1%	2%	3%
c. Annual publications (a x b)	500	2,000	4,500
d. Cost per publication (€)	2,000	2,000	2,000
e. Annual operating costs of ORE (c x d) (€)	1,000,000	4,000,000	9,000,000

Further modelling work will need to be undertaken to refine these provisional scenarios, and develop a full business plan, including appropriate timeframes. In particular, the cost per publication of €2,000 will need to be broken down into fixed and variable cost elements, and validated or revised through a bottom-up costing exercise, translating article volumes into editorial and production staffing requirements, together with appropriate marketing, technical and support staff members plus outsourcing costs and overheads.

For planning purposes, the base case would imply an operating entity with perhaps 50 full-time equivalent members of staff being established over a three-year period beginning in 2026. In practice, staff members are likely to include individuals based within a number of non-profit and commercial delivery partners operating under the management of a central managing entity. This entity would be organised into editorial, technology and marketing/community engagement functions, together with underpinning corporate services and a small secretariat to handle funder and stakeholder relations.

It should be acknowledged in this context that some European research funders are already investing in national non-profit publishing initiatives, which raises the question of whether ORE should be competing with these for scarce resources. While the potential for conflicting demands on individual funders' budgets must be acknowledged, at the level of the research system this represents a false dichotomy, as the development of non-profit publishing venues is not a zero-sum game. For Europe as a whole, science and engineering article volumes have grown by an average of 3.5% per year over the last decade, equating to over 30,000 *additional* scientific publications each year (National Science Board, 2021). Factor in the

emergence of new article types, such as brief reports, data notes, method articles, protocols and registered reports, and there is every reason to expect demand from European researchers for publishing venues to continue to grow. Without investment in high-quality non-profit publication venues, this demand will be met, in the main, by large commercial publishers, at a cost to the European research system significantly in excess of ORE's cost per publication (see Section 4.3). Supporting a diverse range of non-profit initiatives, operating at both national and international levels, instead holds out the potential of developing a more cost-effective, transparent and open scholarly communication system, while continuing to facilitate author choice and innovation.

Furthermore, as Maxwell et al (2019) observe in their landscape analysis of Open Source Publishing Tools and Platforms, 'the *most important feature is scale*. Almost all of the projects we examined are... too small to gain critical developer mass as opensource projects... and too niche or specialized to develop a market-based clientele that might provide meaningful revenue.' As an international endeavour, ORE presents a unique opportunity to develop an open-source platform with the potential to scale that can also play a role in tackling the problems of 'coordination and integration — which is what the open ecosystem significantly lacks currently' (Maxwell et al., 2019, p. 27). The overarching intention should not be to create a single, centralized platform, but a decentralized, interoperable system, as Ross-Hellauer et al. have observed: 'The way ahead lies in linking up such efforts to coordinate them into an interoperable public infrastructure, sustainably funded by public institutions' (2018, p. 13).

4.5. LEGAL FORM

There are notable benefits from hosting by an academic institution or other existing entity, as noted in section 3.3. However, there are few organisations that would be willing and able to host an entity of the scale envisaged in the preceding section. An organisation with an operating budget in excess of €4 million would be of sufficient size to maintain its own support functions, in the form of finance, human resources, facilities management and IT support, rather than relying on those of a host institution. In light of this, the establishment of a new independent legal entity is likely to be the most appropriate model for ORE in the long run. That said, hosting by an existing entity could offer an interim solution for in the early stages of ORE's development as a collective enterprise, especially while the level of uptake and the number of partners to be involved remains unclear.

Where you have to mix several funding sources, with different programmatic constraints, and... to develop a structure which should be sustained over time, then having a dedicated legal entity seems to be a necessary step to me. (Expert interviewee)

Selection of the appropriate legal form for ORE will require specialist advice, taking into account relevant restrictions on the use of European Commission funding and that of other partners. A similar process has been followed in the recent past for OpenAIRE, with an options appraisal undertaken in 2016 (Tsiavos and Spiliopoulou, 2019) leading to the establishment of OpenAIRE AMKE in 2018 as a Greek Non-Profit Partnership with 16 partners. The OpenAIRE analysis identifies a number of legal forms which may be relevant for ORE, although some of these, such as the European Research Infrastructure Consortium (ERIC) are more appropriate for undertakings involving Member States.

Another relevant example is the European Open Science Cloud, which takes the form of a federated infrastructure, albeit one on a much larger scale than ORE. The EOSC Association is the legal entity established to govern the European Open Science Cloud (EOSC), alongside the European Commission and the EOSC Steering Board, representing EU Member States and Associated Countries. It was formed on 29th July 2020 with four founding members and has since grown to over 200 Members and Observers. The EOSC Association is an international not-for-profit association (AISBL), established under the Belgian law on non-for-profit associations.

Early discussions suggest that the creation of an independent not-for-profit entity, such as a Dutch Stichting, is likely to be the simplest approach in operational terms and would maximise ORE's freedom of action. This largely mirrors the approach adopted for eLife, which was established as a not-for-profit company registered jointly in the US and UK.

The success of Open Research Europe... requires a very quick implementation for massive adoption... which is a little bit contradictory in terms of what is required of an association. I think that we would be more in favour of a different legal form, which could be more agile and able to go forward and develop services independently. (Funder interviewee)

Further work is needed to determine whether such an entity could receive funds directly from the EC and other sources, but should this prove to be a barrier then an alternative model may be for an existing entity to take on a coordinating role, receiving and accounting for funds received from multiple partners, and commissioning services from one or more other entities. A model for such an arrangement is the role played by Wellcome as the coordinator of Europe PMC (see Annex 1).

4.6. GOVERNANCE

ORE should adopt a threefold approach to governance, with a board of directors complemented by a scientific advisory and a stakeholder forum, ensuring a clear distinction is maintained between governance/advisory functions and day-to-day service delivery.

The experience of other collaborative, funder-led initiatives such as cOAlition S and Europe PMC indicates that influence over governance and decision-making should not be determined by funders' size or ability to pay. While a small number of key matters could be reserved for 'anchor' funders such as the European Commission, in most respects the aim should be to ensure equitable representation of funders (and other stakeholders) in governance, even where there are known imbalances in terms of funding.

In the early stages of ORE's development, it may be possible, and is likely to be beneficial, for all funders to be represented on its governing body. In time, however, it is likely that a subset of funders could represent the interests of a wider group, who would continue to be engaged via a stakeholder forum or advisory group, alongside formal scientific and corporate governance mechanisms. As Ehgbal (2016) has observed, 'Supporting infrastructure requires embracing the concept of stewardship rather than control.' ORE's governance mechanisms should also make provision for appropriate input from research organisations and libraries, for example via the European University Association (EUA) and LIBER, alongside funders, learned societies and researchers. There may be value in representation on ORE's governance bodies of related initiatives such as DIAMAS, the Action Plan for Diamond Open Access, OAPEN, OPERAS and/or EOSC.

Finally, consideration should be given to identifying senior members of the academic community, in multiple disciplines and countries, who are willing to commit to publishing on the platform and act as ambassadors for it, thereby increasing its visibility and credibility amongst their peers.

4.7. FINANCING MODEL

While publication volumes and a cost per publication have been used to determine a potential operating model in section 4.4, the financing model should enshrine the principle that funders are supporting an infrastructure for the public good, rather than paying for a service.⁸ An outline operating budget should be set for a minimum of a three year period, with the annual costs apportioned between supporting funders based on research spend for the most recent available year, or a similar proxy.

An objective financial measure of this nature is preferable to the use of an overall publication count, as the latter is subject to a range of definitional and measurement challenges. A financing model based on annual research spend also has a number of other advantages over a model based on payment per publication:

- Increased certainty over budgetary commitments for funders and revenues for ORE.

⁸ An additional benefit of this model is that it minimises the risk of value added tax (VAT) being levied on payments by funders or research organisations in support of ORE's activities, as the payments made will not relate to a supply of services.

- Reduced administrative complexity for all parties.
- Incentivisation of funders to maximise uptake of ORE by their own beneficiaries.
- Positioning of ORE as open infrastructure rather than a service provider.
- Enabling investment in technology and marketing, which are liable to be deprioritised under a per publication model.

The work undertaken for this report should allow indicative budgetary estimates and contributions to be prepared for discussion with potential funders of ORE, although a more sophisticated cost model will be required in due course. The priority is to establish whether sufficient funds can be secured from the EC and national funders combined to support an entity of the scale envisaged in this report. Should this not prove viable, alternative sources of financing, in the form of additional funders and/or institutions and libraries, should be explored. The Global Sustainability Coalition for Open Science Services (SCOSS, n.d.) offers a co-ordinated cost-sharing framework that could potentially be accessed for this purpose.

The weakness of a financing model based on annual research spend is the risk that publication volumes and/or costs exceed estimates, and therefore that the agreed funding proves to be insufficient. However, the evidence from the early years of ORE, growth in uptake of other open platforms such as Wellcome Open Research, and the experience of any publisher who has launched a new journal or platform suggests that this risk should not be overstated. Growth in researchers' adoption of new journals and platforms tends to be incremental rather than exponential, and the number of new journals and platforms that fall short of expectations for publication volumes is far greater than the number that exceed them.

Furthermore, should Open Research Europe succeed in attracting a higher than expected volume of submissions, this will be an indicator of success in a number of strategically important initiatives which have been widely endorsed by the EC, Science Europe and other actors, including:

- Diversion of submissions from APC-based open access journals to non-profit platforms. Any additional costs involved for ORE in these cases are likely to be more than offset (at the aggregate level) by corresponding savings in article publication charges.
- Progress in the reform of research assessment mechanisms, meaning researchers' publication choices are no longer as strongly influenced by the journal impact factor (JIF).
- Increased transparency and reproducibility of the research process, including the use of preprints, open peer review and open data.

Should adoption of ORE exceed expectations in this way, a number of steps can also be put in place to manage the cost increases involved:

- Develop a mechanism to recover additional, unbudgeted costs from those funders whose researchers have benefited most from the platform's adoption, based on numbers of publications. This mechanism could also enable funders who face

legislative or budgetary constraints on their ability to fund international infrastructure to participate on a 'pay-as-you-go' basis.

- Establish monitoring and feedback mechanisms to regularly assess submission volumes and scale up or reduce marketing and promotional activities to keep submissions broadly in line with desired levels of demand.
- Use the platform's success as a basis for seeking funding from a wider set of supporters, which could include both funders and institutional libraries.
- As a last resort, take steps to cap publication volumes for a given period of time, or introduce a waiting period, should the volume of submissions substantially exceed available funds and capacity.

In practice, achieving the desired rate of growth in submissions presents a far greater challenge than securing the funding needed to support this, as one interviewee noted:

[Funding] is not the key issue that we have to face today. The key issue that we have to face today is to open ORE as broadly as possible, and then we'll talk about funding. First we have to prove that it works. (Funder interviewee)

The risks associated with ORE succeeding beyond expectations are manageable and will be greatly outweighed by the benefits it offers. The risk that an excessively cautious approach to its financing and marketing means it cannot succeed at all is far greater.

5. CONCLUSIONS AND RECOMMENDATIONS

Operationalising ORE as a collective publishing enterprise poses significant challenges, but an examination of existing non-profit publishing services provides credible evidence that these can be overcome. This report sets out a series of recommendations for further work to allow ORE's vision, operating model, legal form, governance and financing arrangements to be finalised.

5.1. CONCLUSION

Operationalising ORE as a collective publishing enterprise represents a significant challenge. It requires the development and adoption of an open-source platform, the establishment of a non-profit delivery entity, and an acceleration of cultural changes in researchers' publication practices. It will also require coordination between the EC and a number of national funders to develop a shared vision for the platform. Yet examination of other non-profit services demonstrates that each of these challenges can be overcome.

Europe PMC and eLife exemplify the ability of research funders to collaborate successfully in the development of new infrastructure and services for scholarly communication. The Open Library of Humanities and OAPEN have demonstrated that open-source software represents a viable alternative to proprietary platforms. SciELO and OpenEdition show that non-profit, multi-lingual publishing platforms can scale successfully without the introduction of article publication charges. SCOAP3 illustrates the ability of stakeholders across the research ecosystem to develop new solutions that challenge the status quo.

While several European countries are already investing in national non-profit publishing initiatives, few if any of these offer the same potential to scale as ORE. In this respect, ORE presents an almost unique opportunity to develop a collective, international funding model for a scalable non-profit publishing platform. This opportunity must also be seen in a context of rising publication output by European researchers. Without investment in high-quality non-profit publication venues, continued growth in publication volumes will primarily benefit the largest commercial publishers, at a cost to the European research system far in excess of ORE's operating costs.

The challenge of increasing uptake of ORE by authors cannot be easily dismissed, as this will require engagement with a wide range of disciplinary communities. Nevertheless, a number of developments in the wider research environment suggest ORE will represent an increasingly attractive proposition for authors in the coming years. These include the withdrawal of cOAlition S' support for transformative agreements in 2024, the growth in support across Europe for diamond open access models, new requirements for immediate access to federally-funded research in the United States, ongoing efforts to reform research assessment mechanisms and the drive for greater reproducibility of scientific results.

It was beyond the scope of this study to develop a fully-costed operating model for Open Research Europe, and this will be a key area for further work as the level of support becomes clearer. Nevertheless, from the findings of this initial study it is possible to sketch out a vision for Open Research Europe's future role as a high-quality open access publishing platform that:

- adheres to the Principles of Open Scholarly Infrastructure, enables multilingualism and is working towards truly equitable open access.
- attracts support from multiple European national funders, with total contributions of €4m+ each year, allocated based on research spend;
- is built on an open-source software platform;
- is delivered by an independent non-profit entity, with hosting by an existing research organization as a potential interim solution;
- enables the publication of at least 2,000 publications per year, with an intention to grow this to 5,000 and beyond;
- works in partnership with a distributed network of non-profit and commercial service providers to deliver scalability and value for money.

The purpose of this independent expert analysis has been to provide advice to the European Commission with regard to the organizational and financing model(s) that may be used in the operationalization of ORE as collective future endeavour as of 2026. Further work will be needed under each of the areas discussed within this report to determine ORE's final organizational and financing model. Table 9 sets out a series of recommendations for the EC and its prospective funding partners to take this work forward over the coming months and years.

5.2. RECOMMENDATIONS

Table 9 – Recommendations for further work

Theme	Recommendations for further work
1. Develop the vision	<p>The Commission has committed to develop a scoping paper in conjunction with representatives of national funders that will articulate the guiding principles of ORE's vision. The EC has already emphasized that ORE should take the form of an open infrastructure which maximises accessibility and re-usability and promotes high quality research. The findings of this study indicate that ORE's guiding principles should also include:</p> <ul style="list-style-type: none"> • adoption of the POSI and/or Open Research Central principles, including a commitment to self-assessment against these; • a commitment to multilingualism; and • a long-term commitment to expanding access beyond funded authors. <p>The Commission and its supporting funders should consider the value of identifying high-profile ambassadors who can be the public face of ORE, working to build its credibility within disciplinary communities as well as helping to secure commitments of support from funders and other stakeholders.</p>
2. Determine the operating model	<p>The preliminary scenarios developing for the purposes of this report (see Section 4) should be developed and refined in conjunction with ORE's potential funding partners. Key variables to be determined include:</p> <ul style="list-style-type: none"> • The number of funding partners, together with their annual research spend and publication volumes. • The share of funded publications that are likely to be made available on ORE. • Operational requirements, including the publishing workflow to be adopted. These should be co-created in conjunction with existing and prospective users of the platform. • The estimated cost per publication, which should be broken down into fixed and variable costs and validated with independent experts in publishing.

	<p>Based on the outcomes of this exercise, the likely size and growth trajectory of ORE can be forecast, and a full business plan prepared. This can also be used to inform discussions on financing (see theme 3, below).</p> <p>An operating model should be developed based on three core teams (editorial, technology, marketing), together with support structures for an independent entity (finance, human resources etc) and a secretariat/coordination function to handle funder relations. This should involve the use of some outsourced service providers to de-risk the transition from F1000 and make it easy to scale provision in response to demand.</p> <p>Potential synergies with other non-profit initiatives such as the European Open Science Cloud, the Action Plan for Diamond Open Access, OAPEN, OPERAS and the Developing Institutional Open Access Publishing Models to Advance Scholarly Communication (DIAMAS) project should be explored.</p>
3. Secure finance	<p>Plans for ORE's financing should be progressed as follows:</p> <ul style="list-style-type: none"> • An outline operating budget should be set for a minimum three-year period (provisionally 2026-2029), based on estimated publication volumes and costs (see Theme 2, above). • Appropriate allowance should be made for set-up and infrastructure costs in years 1 and 2, and for ongoing expenditure on marketing and technology (being mindful that under-resourcing of these activities tends to critically undermine non-profit services' competitiveness). • The budgeted costs should be apportioned between potential funders based on their research spend for the most recent available year, or a similar proxy, to establish whether sufficient funds can be secured from the EC and interested national funders to support an entity of the required scale. • Should this not prove viable, alternative sources of financing, in the form of additional funders and/or institutions and libraries, should be explored. • Funders should be made aware of the expectation that they will need to make internal resources available to promote ORE to their beneficiaries (both researchers and research organisations) in addition to providing funds to the delivery entity. • Mechanisms should be established to manage the risk that publication volumes exceed estimates, and therefore that the agreed funding proves to be insufficient (see section 4.7). These mechanisms should also enable funders who face legislative or budgetary constraints on their ability to fund international infrastructure to participate on a 'pay-as-you-go' basis.

4. Establish governance structures	<p>The following recommendations should be pursued with regard to ORE's governance:</p> <ul style="list-style-type: none"> • Develop a threefold approach to ORE's governance, with a board of directors, scientific advisory board and a stakeholder forum or advisory group. A governance workshop with specialists in the field (e.g. from the COPIM project⁹) could be of value in this regard. • Ensure a clear distinction is maintained between governance/advisory functions and day-to-day service delivery, either through a legal separation between governing and delivery entities, or the implementation of strong governance structures within a single legal entity. • Make provision in ORE's operating model for one or two full-time equivalent members of staff to handle funder relations and provide secretariat services to the governing body. • Ensure ORE's governance mechanisms provide for representation of funders, researchers, research organisations, libraries, publishing specialists and related initiatives.
5. Create a legal entity	<p>Secure or commission legal advice on the most appropriate legal form for ORE, taking into account relevant restrictions on the use of European Commission funding and that of other partners. Explore the potential for an existing organisation to host ORE as an interim solution while a fully-fledged independent entity is established.</p>

⁹ See <https://www.copim.ac.uk/workpackage/wp4/>

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APPENDIX A. LIST OF CONTRIBUTORS

A list of contributors to this work is included below. Where contributors have been directly quoted in the report an indication of the capacity in which they were speaking (as an ‘independent expert’, ‘case study representative’ or ‘funder’) has been included in the text.

Table A1. List of project contributors.

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ANNEX 1: CASE STUDIES

List of case studies

Name	Year established	Location	Summary description
SciELO Brazil	1997	Brazil	Web-based bibliographic database, digital library, and cooperative electronic publishing model of open access journals.
Open Edition	1999	France	National research infrastructure producing OA electronic resources in the humanities and social sciences.
Europe PMC	2007	UK	Multi-funder repository with both coordinating (Wellcome) and delivery (EMBL-EBI) entities.
OAPEN	2010	Netherlands	Operates as an independent not-for-profit in the field of open access books, working to coordinate multi-funder support for OA books infrastructure.
eLife	2012	US/UK	Independent not-for-profit open access journal hosting life sciences and biomedicine research, established with financial support from three research funders.
SCOAP3	2014	Switzerland	A global partnership in the discipline of High Energy Physics (HEP) that makes over 90% of HEP journal content available via open access and free to publish for authors.
Open Library of Humanities	2015	UK	Not-for-profit platform publishing peer-reviewed scholarship across the humanities disciplines in 28 fully open access journals and its own multidisciplinary journal, with no article processing charges.

SciELO Brazil

About SciELO Brazil

SciELO (Scientific Electronic Library Online) is a web-based bibliographic database, digital library, and cooperative electronic publishing model of open access journals. SciELO was created in 1997 to meet the scientific communication needs of developing countries and provides an efficient way to increase visibility and access to scientific literature. Originally established in Brazil, today there are 17 countries in the SciELO network, including Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Ecuador, Mexico, Paraguay, Peru, Portugal, South Africa, Spain, Uruguay, and Venezuela.

SciELO Brazil provides the technological platform that integrates and provides access to all of the SciELO network sites.

Legal status

SciELO Brazil is a FAPESP research infrastructure program implemented via triennial grants by FAPESP and annual grants by CNPq and CAPES. It is hosted by the Federal University of São Paulo (UNIFESP) and is not an independent legal entity.

Governance

SciELO Brazil is a FAPESP Special Program, linked to FAPESP Open Science policies and supported by CNPq and CAPES, and is also subject to UNIFESP's administrative & legal infrastructure. SciELO Brazil is governed by an Advisory Committee which aims to assist the development of the SciELO Brazil Collection and is made up of scientific editors and by representatives of SciELO sponsoring institutions, which currently are FAPESP, CAPES and CNPq, and the Brazilian Association of Scientific Editors. Additional governance mechanisms are in place for the SciELO network, including a quinquennial meeting when the priority lines of action are updated.

Financial model

SciELO Brazil was initially supported by the São Paulo Research Foundation (FAPESP) and the Brazilian National Council for Scientific and Technological Development (CNPq), along with the Latin American and Caribbean Center on Health Sciences Information (BIREME). Today, 80% - 90% of its funding comes from FAPESP as a research grant awarded every 3 years to a researcher linked to UNIFESP and 10% - 20% from CNPq (National Council for Scientific and Technological development) and CAPES (Coordination for the Improvement of Higher Education Personnel). Several options for diversification of SciELO Brazil's income are under discussion at the time of writing, but the current funding model is expected to remain in place until at least 2024.

HOW

WHAT & WHY

WHO

KEY PARTNERS

- SciELO Network
- 1996 Brazil – FAPESP
- 1999 Chile – CONICYT
- 2000 Costa Rica – CONARE/CONICIT
- 2001 Cuba – Minister of Public Health/WHO
- 2003 Colombia – UNAL
- 2003 Peru - CONCYTEC
- 2004 Mexico - UNAM
- 2005 Argentina – CONICET
- 2005 Uruguay – UDELAR
- 2007 Paraguay – Minister of Health/WHO
- 2008 Bolivia – SIBICYT
- Ecuador – SciELO Brazil
- WIP Venezuela

KEY ACTIVITIES

- SciELO Platform: Research & Training, Meeting Attendance, Conference Attendance
- Submission system: SciELO provides OJS for all its journals
- Repositories: pre-print and Research data
- Impact Indicators: Development and operation of the SciELO Brazil Index
- Events: Annual meetings and larger events every 5 years
- Projects & Initiatives: Open Science editorial practices, professionalization and internationalization processes
- Advocacy: Open Science and importance of local and regional scholarly communication systems

KEY RESOURCES

SciELO Brazil:

- Human: 41x staff: 1x Director, 4x Council members, 8x coordinators, 2x admin staff, 4x librarians, 21x technical staff, 1x intern
- Physical, Systems and data: provided by UNIFESP (public university)

OPERATIONS

ENGAGEMENT

SOCIAL VALUE PROPOSITION

- Visibility & dissemination of local journals via the consolidation of SciELO in the flow of scientific communication
- Open Science by providing support and editorial best practices
- Interoperability with SciELO Network and international reference systems, especially WoS, Scopus, Google Scholar, CROSSREF and PUBMED;
- Professionalization providing guidance and training for journal editors and editorial staff

RELATIONS

- 1458 Journals: Brazil=394, Colombia=218, Mexico=155, Chile=148, Argentina=90
- SciELO Network – 17 countries
- International reference systems, especially WoS, Scopus, Google Scholar, CROSSREF and PUBMED
- FAPESP
- UNIFESP
- REDALYC OLIVA project

CHANNELS

- Website
- Conference and events
- Blog/newsletter
- Facebook
- Twitter
- YouTube
- External events

CUSTOMER [MEMBER] SEGMENTS

- Journal editors & staff
- Authors
- Readers (researchers)
- Peer reviewers
- Committee members

COST STRUCTURE (€1.5-1.7m per annum)

SciELO Brazil: *

Annual cost of operating SciELO Brazil in 2021 is estimated at between USD1.5M and USD1.7M.

Individual journals: Responsibility of the publishing institution, with different sources of funding: public universities, societies, national programs of agencies which support research, S&T and scholarly communication specific projects, sponsorships, advertising and author fees.

** Under the auspices of UNIFESP, SciELO Brazil has a home base for project operations, including IT, HR, finance, compliance and legal, making it difficult to fully identify their embedded costs.*

National Collections: Responsibility of the institution or institutions that head the SciELO operations at the national level, such as: funding agencies, Ministries of Education, S,T&I, Health, public universities.

REVENUE STREAMS (€1.5-1.7m per annum)

SciELO Brazil:

- 80% - 90% from FAPESP (Research funding agency of the State of São Paulo) as a research grant awarded every 3 years to a researcher linked to UNIFESP, a federal university São Paulo.
- 10% - 20% from CNPQ (National council for scientific and technological development) and CAPES (Coordination for the Improvement of Higher Education Personnel).

National Collections: Responsibility of the institution or institutions that head the SciELO operations at the national level, such as: funding agencies, Ministries of Education, S,T&I, Health, public universities.



SciELO Brazil - Lessons learned

1. Editorial independence is critical

SciELO was founded on principles of editorial independence and quality control, and these underpin all of its activities. Decisions on which journals to index and what to publish rest with the scientific committee, not FAPESP as the funder, and each SciELO network site makes independent decisions on how to fund and run their SciELO collection.

2. A decentralized approach supports national priorities

SciELO's decentralized approach enables it to accommodate asymmetries between participating countries, and to support the development of local publishing capacity. The success of this approach depends on a well-organised and widely-recognised network to enable the sharing of experience and promote uptake of new technologies.

3. SciELO works with existing journals to change the system

SciELO represents a comprehensive infrastructure to support the publication of journals, but it is not considered to be in competition with the journals themselves. It aims to work in partnership with existing journals to change their publishing practices in favour of greater openness.

OpenEdition

About OpenEdition

OpenEdition is a national research infrastructure producing OA electronic resources in the humanities and social sciences. The infrastructure includes four platforms: OpenEdition books, OpenEdition journals, Hypotheses research blogs and Calenda event announcements; it is run by the OpenEdition Center – a joint research unit between CNRS, École des Hautes Études en Sciences Sociales (EHESS), Aix-Marseille University and Avignon University. Based in France, it offers content largely in French (69.1% in 2021) but also English, German, Spanish, & Italian content etc. Running since 1999, it launched the OpenEdition portal in 2011 and added its book platform in 2013. It is a large organisation with an annual budget of > €4M.

Legal status

OpenEdition is constituted as a 'mixed-unit', in common with other research laboratories and infrastructures in France. It is not a legal entity in its own right but operates under the umbrella of the four institutions. All contracts are signed by one of the 'tutelle' (host) institutions.



Digital resources in the
humanities and social
sciences

Governance

Governance is the responsibility of a steering committee (comprising representatives of the four institutions and the French Ministry of Higher Education, Research and Innovation) and a scientific committee. The Ministry maintains oversight of the collaboration between the four institutions in order to ensure successful provision of a national infrastructure. The Scientific Committee is well-balanced between disciplines, and has an international membership.

Day-to-day, OpenEdition is run by a Directors Board (Director and 3 x Deputy Directors for Internationalisation, Editorial and IT) and an extended board which comprises 12-14 persons, who each head up individual departments. Open Edition also has a 'Conseil D'Unité', an advisory body that includes elected representatives of the staff members. This group are consulted on strategic direction and anything relevant to human resources.

Financial model

The majority of costs are met by the four institutions in the form of payroll costs, but OpenEdition also receives cash allocations from the four partners and the Ministry, other income from its freemium model, and project funding.

HOW

WHAT & WHY

WHO

◀ OPERATIONS

ENGAGEMENT ▶

FUNDING PARTNERS

- 4 institutional partners: CNRS, EHESS, AMU and Avignon University, plus Ministry of Higher Education, Research and Innovation

OTHER PARTNERS:

- European and international consortia involved in publishing, printing, referencing and distribution services
- Publishing, printing, referencing and distribution services
- Consortia of academics, universities and university presses
- Infrastructures
- Research centres

KEY ACTIVITIES

- Publish content in OpenEdition platforms (freemium programme)
- Editorial services, assistance and training (books and journals)
- Research blogs
- Academic events
- IT maintenance and development
- Data management
- Communications
- International development
- Projects (e.g. Equipex+COMMONS)
- OpenEdition Lab (R&D)

KEY RESOURCES

- Human: c.55 FTE salaried staff for admin, technology platform, user platform, international growth
- Physical, Systems and data: 4 platforms + software: Lodel electronic publishing software, OTX for XML conversions. Core Open Edition information system. Data centre provided by CC-IN2P3 (National Institute for High-Energy Physics).
- Content: 586 journals, 12851 books, 4299 blogs, 49877 publicised events

SOCIAL VALUE PROPOSITION

- Dedicated to producing OA electronic resources in the humanities and social sciences; not-for-profit: all income is reinvested in development of OA academic publishing
- Largely non-English content; 81% OA (2021)
- OpenEdition Lab runs an R&D programme focussed on opening data for the research community
- Actively involved in international development and collaborative projects e.g. included in France's National roadmap 2022; runs OPERAS as part of ESFRI's infrastructure roadmap; collaborates with OAPEN to run DOAB

RELATIONS

- OPERAS: The Open Scholarly Communication in the European Area for Social Sciences and Humanities research infrastructure
- Freemium Market = countries across Europe, Canada, Africa
- Other national infrastructures (Huma-Num, Métopes, CCSD, Persée)
- Editors, publishers, libraries
- Authors (for blogs)

CHANNELS

- 4 platform websites
- All have FB, Twitter, YouTube social media outlets
- Publications: reports, papers and white papers published by OpenEdition
- Collaborative projects and associated external conferences

CUSTOMER [MEMBER] SEGMENTS

- Staff of libraries and institutions who partner or participate in the freemium programme;
- Journal application vetting reviewers; editorial teams of member journals, authors, peer reviewers, readers academic authors who publish content in OpenEdition
- Book application reviewers, member publishers, authors, peer reviewers, readers
- Readers (researchers)
- Bloggers; blog readers
- Event organisers; delegates
- Committee members

COST STRUCTURE – TOTAL c. €4m

- Payroll (for staffing admin, communications, international development, editorial, technology platform, user platform, international growth, contribution to stable employment) - €2,900k
- Missions (policy development & R&D project work) - €25k
- Purchasing IT systems - €300k
- Delivery of services to users of the platform - €370k
- Equipment - €62k
- Running costs (Including maintenance and upgrades to IT platforms) - €185k

REVENUE STREAMS – TOTAL c.€4M

- Institutions (four in France) that pay salaries to permanent employees: €1,562K (in kind)
- Subventions (allocations to cover operating costs): €798K
- Other income: €809K (incl journal production, freemium income €382K; Cairn income, etc)
- 8 Collaborative cross-European Projects: €894K (eg CO-OPERAS IN, TRIPLE, I-FAIR, COESCO, etc)



Open Edition - Lessons learned

1. Prioritise community engagement

Funder-led initiatives tend to be remote from the community of users they serve. The relationship with users must be put at the top of the agenda, with infrastructure development driven first and foremost by users' needs. The publishing initiative must become part of the community, and not operate outside of it.

2. Connect community managers with technical developers

It can be attractive to decentralise in order to engage more closely with users. However, if community managers are not closely connected to technical developers they quickly lose credibility in the eyes of users. Retaining a strong link between the two groups is essential.

3. Empower and incentivise sales staff

It is difficult for public institutions to develop and market commercial services. They are constrained by salary structures which lack performance incentives and by a lack of flexibility in commercial negotiations. If services are to be provided commercially then the responsible individuals must be incentivised and empowered.

Europe PMC

About Europe PMC

Head quartered at EMBL-EBI (European Bioinformatics Institute) in Hinxton, UK, Europe PMC is a database of biomedical and life science research articles, including peer reviewed full text articles and abstracts, and preprints, micropublications, books, reviews, and protocols. Europe PMC contains 41.2 million abstracts and 8.2 million full text articles, When the full text is not available because of restrictive licensing, Europe PMC can provide extended access to full text, with links to legal free copies via Unpaywall. Formerly known as UKPMC, the service was rebranded in November 2012 as Europe PMC to reflect the scope of the funding agencies that support it.

Legal status

Europe PMC is a service operated by EMBL EBI, in partnership with the USA's National Library of Medicine, and funded by a milestone grant from Wellcome, on behalf of 36 international science funders who are all parties to a Europe PMC collaboration agreement. EMBL is an intergovernmental organisation created in 1974 and is funded by public research money from its member states.

Governance

From a legal perspective, governance rests with an elected committee, comprising 10 representatives selected from within the 36 funders. These must include the three largest funders, a governmental funder, and a smaller funder. Europe PMC also has a Scientific Advisory Board which approves further developments.

Financial model

Europe PMC is supported financially by a group of 36 international science funders as their repository of choice. It was initially funded via a combination of 'base' and 'additional' costs (XML conversion and helpdesk calls), but since 2016 it has been wholly grant-funded on a five-year cycle. In 2016 the grant was awarded via a competitive application process but at the last renewal only EMBL-EBI were invited to apply, as they were considered the only organisation that could realistically deliver the service.

The funders commit to financing Europe PMC as open science infrastructure. An incidental benefit of contributing is that research papers authored by each funder's grantees are indexed. Annual contributions by 'members' of Europe PMC's Funders' Group are based on the most recent Annual Research spend of the member, and there is no direct link between the financial contribution and the number of articles indexed.

HOW

WHAT & WHY

WHO

KEY PARTNERS

- EMBL-EBI
- PubMed Central (NIH)
- Wellcome – coordinates funding and governance, providing 0.2 FTE for this purpose
- 36 members of EUROPE PMC's Funders Group
- Contributors to EuropePMC's data platforms (data, manuscripts, identifiers, etc)

KEY ACTIVITIES

- Platform/database maintenance and development
- Data ingestion, content enhancement and indexing (Liaison with Crossref, ORCID.org, etc)
- Europe PMC plus: for managing author manuscript uploads, XML conversion, and compliance with Europe PMC funder; XML vendor liaison
- Communications (social media; user webinars/training, website information; publications; recruitment of data providers; liaison with search engine users and technical database users)
- Managing EuropePMC funders group
- Contributing to open science projects eg EU's FREYA project, Open Targets, ELIXIR

KEY RESOURCES

- Human: 1x Team leader, 1 x Co-ordinator, 2 x project leader, 16 x other FTEs (including platform developers, data scientists, User support architect, Author support team, Outreach & communications team); Funders' group co-ordinator
- Physical, Systems and data: Europe PMC's manuscript database, grants database, search engine platform and suite of services

COST STRUCTURE - €1.5m per annum, plus in kind support

- Europe PMC data platform
- Database search engine and access platform
- Programmatic user services
- Staff salaries (EMBL-EBI)
- Governance (with EMBL-EBI; with Pubmed Central (NIH); with Scientific advisory board, Europe PMC Funders Group)

OPERATIONS

ENGAGEMENT

SOCIAL VALUE PROPOSITION

- Literature database dedicated to Open Science (data and tools are freely open & publicly accessible)
- Community contributes underlying data and therefore there is community ownership, so it cannot be 'bought out' by commercial enterprise
- Offers powerful online search engine and data services to linked data and annotations biological terms
- Offers a submission service for authors to submit the author accepted versions of their manuscripts – enabling compliance compliance for funders who are members of the Plan S consortium eg Wellcome, NWO, ERC
- Focus is life science research publications
- Approach to scaling: continuous enlistment of new members to the funders group, external grants to grow the database infrastructure; contribution to Open Science projects

RELATIONS

- Engagement with funders is handled by Wellcome
- EMBL-EBI handles relations with users, data providers and publishers

CHANNELS

- Website europepmc.org
- [API](#)
- Website's News Channel (<http://blog.europepmc.org/>; <https://europepmc.github.io/techblog/>)
- Twitter @EuropePMC_news)
- [YouTube](#)
- Recorded training webinars (via EMBL-EBI Training Programme)
- Research publications

CUSTOMER [MEMBER] SEGMENTS

- Platform users (Academic authors; readers (researchers); database curators, library staff; information technologists
- Scientific Advisory Board
- The funder committee
- Funders
- Publishers
- PubMed Central staff
- EMBL-EBI directors, comms team, training team
- Open Science community (EU, big data providers/life science databases at EMBL-EBI, Wellcome Sanger Centre and beyond, eg British Library, protocols.io; preprint server staff)

REVENUE STREAMS - €1.5m per annum, plus in kind support

- Europe PMC Funders' Group subsidies are channelled to EMBL-EBI through a Wellcome discretionary award of €7.6m over a five year period
- In kind support from EMBL-EBI
- Independent awards to support Platform development eg [indexing COVID preprints](#)
- Grants to support participation in Open Science projects eg [FREYA](#)



Europe PMC - Lessons learned

1. Funding services vs. infrastructure

Europe PMC has moved away from a contractual service provision model to being grant funded. Its primary function is the provision of discovery infrastructure for >20 million users, not the indexing of content on behalf of individual research funders. Funders instigated this change.

2. Ease and stability of financing

The majority of Europe PMC's costs are fixed, and are not driven primarily by the number of manuscripts indexed. Supporting funders contribute agreed amounts for a 5 year period via the payment of an invoice (with one exception). This significantly reduces the compliance and reporting burden associated with running Europe PMC.

3. Separation of governance and delivery

Europe PMC benefits from a clear separation between governance and coordination functions, which are undertaken by Wellcome, and service delivery functions, which are undertaken by EMBL-EBI. This is seen as a positive, and ensures service delivery expectations are clearly defined and codified.

OAPEN

About OAPEN

OAPEN (Open Access Publishing in European Networks) has been in operation since 2010 as an online library and global distribution platform for peer-reviewed academic open access (OA) books. Its mission is to increase the discoverability of OA books and to build trust in OA book publishing.

As of June 2022, it hosts >23K OA books from >390 publishers. The OAPEN Library saw ~1M COUNTER conformant downloads monthly in 2021. The publishing language is predominantly English (66%), then German (25%), then Dutch, French, Italian and other European languages. 92% of the books in OAPEN are available with Creative Commons licences, while 8% of the books hold an 'all rights reserved' licence (primarily due to legacy).

Legal status

The OAPEN foundation is a not-for-profit organisation (Dutch 'Stichting') based in the Netherlands with its registered office in the National Library in The Hague. Its legal status means that it cannot be sold or acquired.

Governance

OAPEN is currently governed by a six-member board of directors, headed by an Executive Director and advised by a board of nine members from different stakeholder groups and geographical regions. In 2023 the Board of Directors is due to be replaced by a Supervisory Board and headed by a Managing Director.

Financial model

OAPEN has four revenue streams: library support, publisher fees, research funder service fees, and project income.

It serves as the Dutch node for OPERAS (a research infrastructure on the ESFRI roadmap as of 2021 promoting open scholarly communication in the social sciences and humanities) and has benefited from being selected by The Global Sustainability Coalition for Open Science Services (SCOSS).

The wide diversification of funding streams for OAPEN is notable and appears linked to its status as an independent not-for-profit, with no host entity providing financial backing and support.

HOW

WHAT & WHY

WHO

◀ OPERATIONS

ENGAGEMENT ▶

KEY PARTNERS

- Key suppliers (upstream) include c. 400 publishers, research funders (and grantees), Bibliovault, CoreSource, Longleaf, and ScholarLed, Atmire
- Key (partners) downstream are academic libraries, Google Scholar, OpenAIRE, BASE, CORE, Unpaywall, EBSCO, ExLibris (Clarivate), OCLC, Portico
- Other general partners are OPERAS, OA Books Network, DOAJ, Jisc, OASPA, LYRASIS, SCOSS, CLOCKSS, Crossref, OpenEdition, MUSE, JSTOR, FWF, SNSF, NWO, Wellcome, ERC/EC

KEY ACTIVITIES

- Provides an online library (repository) to host, disseminate, and preserve freely accessible academic books
- Provides deposit, QC, metadata enhancement, dissemination, digital preservation and COUNTER-conformant usage reporting services to publishers, libraries and research funders
- Runs DOAB together with OpenEdition
- Constitutes the national node for OPERAS in the Netherlands ; member of OPERAS Executive Assembly
- Operates and coordinates the OA books toolkit and co-coordinates the OA books network

KEY RESOURCES

- Human: [Team of 6 FTEs](#) (director, deputy director, publisher relations manager, collection manager, community managers, project manager)
- Physical, Systems and data: 3 platforms ([OAPEN library](#); [OA books toolkit](#); [DOAB](#))

SOCIAL VALUE PROPOSITION

- Provides the largest library for freely accessible academic peer-reviewed books
- Provides publishing platform for OA books to publishers, libraries and science funders
- Multilingual publisher
- Involved in a variety of projects/initiatives for OA books eg but not limited to [COPIM](#), [OABN](#), [BAD project](#), OPERAS PLUS, [ERC-OAPEN-2019](#), PALOMERA, [TRIPLE](#)

RELATIONS

- Publishers (upstream providers of book content and metadata; requires enormous flexibility)
- Funders/ supporters (collection management and usage monitoring via a dashboard)
- Libraries and readers/researchers (downstream users of OAPEN content)

CHANNELS

- Website [oapen.org](#); Website [news](#)
- Search engines and REST API
- Annual meeting for Supporting libraries
- Funder dashboard
- Other conferences and webinars
- Publications [eg](#) with the UKRI
- Newsletter
- Twitter [@OAPENbooks](#)
- Blog <https://oapen.org/blog>

CUSTOMER [MEMBER] SEGMENTS

- Publishers
- Libraries (also via DOAB-OAPEN library working group)
- Institutions
- Funders
- Researchers (authors; readers)
- OA book stakeholders (organisations)

COST STRUCTURE - €420k (2021)

[From Stakeholder report 2021](#)

- Wages and salaries (72%)
- Platform development (18%)
- Boards (1%)
- General costs (6%)
- Office costs (3%)

REVENUE STREAMS - €562k (2021)

- Library support (of OAPEN library and DOAB; premium membership or special contributions) - 165 libraries globally in 2021
- Publishing fees from publishers who are not affiliated with library supporters
- Fees from ERC, Wellcome, SNSF, FWF, KU, NWO, SCOAP3 for providing depositing and collection management services for monograph or book chapter outputs from grantees, publisher collectives and OA initiatives.
- Private donations
- [Contributions to the toolkit](#) (one off; basic and tailored)
- Income from project contributions



OAPEN - Lessons learned

1. Independence carries both risks and benefits

As an independent entity OAPEN has no institutional backing and limited financial resources. However, it benefits from being a neutral party which can attract support from multiple entities, and is wholly transparent in its expenditure and activities. Independence allows it to be agile in its operations and to make rapid decisions without recourse to a host organisation.

2. Scaling through networks, partners and volunteers

As a small, not-for-profit entity, OAPEN has limited in-house resources. It overcomes some of these challenges to growth by being part of a broad community such as OPERAS, by using volunteers, and by partnering with other actors (e.g. OpenEdition). Nevertheless, this limits what it can achieve and it is seeking longer-term support from funders.

3. Open source software with private sector support

OAPEN uses open source software (D-Space) with support from a privately held enterprise (Atmire). This combination avoids lock in to any specific supplier while allowing OAPEN to access a level of technical expertise and support that could not realistically be maintained in-house. They strongly advocate for the use of open standards in software development.



About eLife

In 2012, eLife was launched as a top-tier, open access journal hosting life sciences and biomedicine research. The journal was established with financial support from three research funders (the Howard Hughes Medical Institute, the Max Planck Society and Wellcome) and continues to be led by an editorial board of active scientists. The Knut and Alice Wallenberg Foundation joined as a partner in 2017.

In 2020, [eLife published 1,870 research articles](#), and accepts the submission of a variety of article types including; Research Articles, Short Reports, Tools and Resources articles, Research Advances, Scientific Correspondence and Review Articles. As of July 2021, eLife stated that it will only review manuscripts that have been already published as preprints and will focus its editorial efforts on producing public reviews for posting alongside preprints.

Legal status

eLife Sciences Publications, Ltd was incorporated on 6 October 2011 as a limited liability non-profit non-stock corporation in the State of Delaware, USA. It is also registered as a branch in the United Kingdom, where the majority of its operations take place. According to eLife's [2020 Financial Statements](#), two of the Sponsors, the Howard Hughes Medical Institute and the Wellcome Trust, are also members of the eLife company.

Governance

Governance rests with eLife's [Board of Directors](#) Sciences Publications, Ltd which includes representatives of its funders as well as independent non-executive directors.

Financial model

eLife receives financial support and strategic guidance from the Howard Hughes Medical Institute, the Knut and Alice Wallenberg Foundation, the Max Planck Society and Wellcome. eLife sponsors share funding promises with eLife, and eLife must ensure that the associated conditions of funding are met, and that expected income is consistent with the forecasts approved by grant sponsors.

To support the long-term sustainability of the service, eLife [introduced](#) an article publication charge of US\$2,500 in 2017, intended to cover its marginal costs of publication. The fee was increased to \$3,000 in 2021, a figure intended to cover '[what is costs us to publish](#)'. Authors with insufficient funding remain eligible for a fee waiver.

The adoption of APCs reflects the fact the funders were not supporting publication costs for their own grantees only, but for all submissions to eLife. In this respect it differs from the current ORE model where the EC covers publication for its own beneficiaries only.

HOW

WHAT & WHY

WHO

◀ OPERATIONS

ENGAGEMENT ▶

KEY PARTNERS

- Howard Hughes Medical Institute, the Knut and Alice Wallenberg Foundation, the Max Planck Society and Wellcome – eLife funders.
- [Stencila](#) – supports Executable Research Articles
- Coko – collaboration to develop Libero Reviewer submission system
- Dryad – partnership allowing authors to submit datasets
- CLOCKSS, EPMC, GoOA, Jisc Publications Router, LOCKSS, Mendeley, papeerity, PMC, PubMed, SHARE – support content availability and archiving
- Pre-Review – funded by eLife

KEY ACTIVITIES

- Peer reviewing preprints in the life sciences and medicine
- Building technology to support this model that is open-source, readily adaptable and addresses community needs, including sciety.org, an aggregator of preprint reviews, enhanced preprints, software that presents preprints much like a journal, and Kotahi, a manuscript tracking system
- Advocates for a reformed research culture. eLife was a founder – and continues to be a supporter – of DORA
- Building a platform similar to F1000 that Wellcome could potentially move Wellcome open research onto

KEY RESOURCES

- Human: 45 FTEs Executive Staff (headcount c.50)
- Coko Team – 6 to 7 developers, product manager and designer.
- Publishing staff x18, technology approx. x18, finance and admin x 4, marketing and community x10
- Physical, Systems and data: [eLife Lens](#): supports exploration of research articles, figures, descriptions, references and more; Libero Reviewer submission system

SOCIAL VALUE PROPOSITION

- Committed to sharing research from a diverse, global community in a way that is open to all
- Developed a reputation for quality, integrity and flexibility.
- Committed to a "publish, review, curate" model for publishing through peer review of preprints, building open-source technology to address community needs, and working with scientists to improve research culture
- Has an ambition to reform research communication and assessment and to promote a research culture that centres on openness, integrity, and equity, diversity and inclusion. eLife was a founder of DORA and continues to be a member
- All software developed at eLife is open source under the most permissible of licences and can be found in eLife's GitHub organisations for eLife GitHub and Sciety GitHub

RELATIONS

- Early-Career Advisory Group
- 128 eLife Community Ambassadors programme
- 243 eLife ambassadors

CHANNELS

- Newsletter/weekly email alerts
- Magazine
- Facebook
- Twitter @eLife, @eLifeCommunity, @eLifeInnovation
- YouTube
- Webinars

STAKEHOLDERS

- 1 editor in chief
- 5 deputy editors
- 78 Senior journal editors
- 746 reviewing editors
- Authors
- Readers (researchers)
- Peer reviewers (incl. 595 early career reviewers)
- Committee members

COST STRUCTURE – [total expenditure £5,977,000 \(2020\)](#)

- 60% publishing (up 33% from 2019), including costs of editors, staff and outsourcing, systems, collections costs, journal development, features and marketing
- 36% technology and innovation
- 4% research culture

REVENUE STREAMS – [total revenue £5,570,000 \(2020\)](#)

According to eLife's [Financial Statements report](#) (December 31, 2020 and 2019), eLife's core revenue streams are publication fees and grant contributions from sponsors.

In 2020:

- revenue from publication fees totalled £3,536,000
- revenue from grant contributions totalled £2,034,000Z



eLife - Lessons learned

1. eLife validates the concept of a funder-supported platform

eLife demonstrates that funders can collaborate successfully to create a new publishing venue, but also that achieving long-term sustainability is challenging. In eLife's case this is being achieved through adoption of APCs, but it is recognised that this is a suboptimal solution that creates barriers to publication for some authors.

2. External vendors can facilitate scale

eLife has used a small number of commercial publishing service providers since its inception. These have been critical to its ability to scale and meet fluctuations in demand, and are considered to deliver a high quality service.

3. eLife aims to fit into the existing ecosystem

eLife's approach to technological development is based on 'fitting into the existing ecosystem rather than building a new one'. This is reflected in its ongoing development of [sciety.org](https://www.sciety.org), which draws content from existing preprint servers such as [bioRxiv](https://www.biorxiv.org) for review and curation.

SCOAP3

About SCOAP3

SCOAP3 (Sponsoring Consortium for OA publishing in particle physics) is a global partnership in the discipline of High Energy Physics (HEP), that supports 'the world's largest disciplinary open access initiative' making upwards of 90% of HEP journal content available via open access as well as free to publish for authors.

SCOAP3 has been running since 2014 and is hosted by CERN who provides the infrastructure to benefit the HEP community in a similar manner to the collaborative LHC program. SCOAP3 publishers have published 50K articles from 11 participating HEP journals.

Legal status

SCOAP3 is hosted by CERN and is not a legal entity in its own right. Participating partners (global) sign a "Memorandum of Understanding" which is the legal basis of the SCOAP3 partnership. The MoU is kept deliberately lightweight, reflecting the collaborative nature of the partnership. CERN employs a small team of SCOAP3 staff members and enters into contracts with publishers on the partnership's behalf.

Governance

Each contributing country/region/territory participates in the SCOAP3 Governing Council, with seats allocated in accordance with each one's share of the high energy physics literature. The Governing Council meets annually, with additional meetings where there are strategic decisions to be made, and operates by consensus. An Executive Committee comprising six representatives of the wider collaboration meets every two weeks to oversee operational activities, and there are five working groups, (Audit committee; Communications and outreach; Open Books; Repository strategy and support; SCOAP3 Tender (for the business model)).

Financial model

Contributors send funds to CERN that were previously paid towards journal subscriptions. The total amount contributed by each country, region or territory is commensurate with its share in the worldwide scientific output in High-Energy Physics. Additional money is contributed by funders in countries that do a lot of HEP research. The funds, collected in a central pool, are paid to participating publishers by CERN in lieu of APCs, making content OA and free to publish for authors.

Articles funded by SCOAP³:

29

yesterday

651

last 30 days

3 314

in 2022

50 733

since 2014

Accessed June 10th, 2022

HOW

WHAT & WHY

WHO

◀ OPERATIONS

ENGAGEMENT ▶

KEY PARTNERS

Governing council: voluntary and comprises representatives from participating organisations (annual), Executive committee (6 members, bi-weekly meetings) and several working groups

SCOAP3 comprises a partnership of organisations including:

- over 3,000 libraries, funding agencies, and research organizations from 44 countries
- 3 intergovernmental organizations (CERN, IAEA – International Atomic Energy Agency; JINR- the joint institute for nuclear research)

KEY ACTIVITIES

- CERN (as host organisation) collects contributions from participating organisations and puts in place contracts at an agreed level (capped in total) to participating publishers. CERN does not take payment for IT maintenance and development; nor for admin. Separate fund to cover growth (€2.5m)
- SCOAP3 digital repository of OA articles as a means of ensuring compliance
- OA books pilot programme (new and currently limited to 102 books)

KEY RESOURCES

- Human: 2 FTEs - SCOAP3 operations manager and technical assistant plus wider support; Governing council, executive committee and 5 working groups - all roles 'non-remunerated' and 'voluntary'
- Physical, Systems and data: SCOAP3 repository and its interfaces

SOCIAL VALUE PROPOSITION

- Sponsoring Consortium for Open Access Publishing in Particle Physics: sustaining open access to leading high energy physics journals, freely available for everyone to read and reuse, shifting away the burden of the publishing cost from readers and authors
- Serves the international High-Energy Physics (HEP) community via a FAIR share process : countries contribute funds commensurate with their output. Only HEP content in a participating journal is covered by SCOAP3
- In 2019 started an OA books programme (26 books currently published OA)
- SCOAP3 repository hosts the content it makes OA

RELATIONS

- Contributing organisations
- SCOAP3 repository
- >50 000 OA journal articles
- Publishers of 11 participating journals (4 underwritten completely, 7 where only the HEP content is covered by SCOAP3 – no editorial input from SCOAP3)
- 26 Books made OA out of an agreed 102
- Repositories hosted by OAPEN and INIS (International Nuclear Information system)

CHANNELS

- Working groups and councils
- Website <https://scoap3.org/>
- Newsletter
- Publications and working papers
- SCOAP3 forum (Webinar material) 2014-2017

CUSTOMER [MEMBER] SEGMENTS

- Staff of organisations that participate in the SCOAP3 programme; They contribute to governance and working groups
- Researchers of the HEP community who access the OA content in the SCOAP3 repository
- Authors
- Publishers
- Repositories Hosted by OAPEN, INIS and by part organizations

COST STRUCTURE – c.€10m

- SCOAP3 journals: the 'APC fee' paid to participating publishers from central fund collected from participating organisation by CERN. Fixed at a maximum yearly payment, plus a share of the growth fund - €10m
- All other running costs beyond payments for publishers (eg admin and infrastructure) are borne by CERN (all governance roles are nonremunerated and on a voluntary basis) - €200k p.a.

REVENUE STREAMS – c.€10m

- Partner organisations contribute membership fees that are used to pay for relevant content in each journal - €10m p.a.



SCOAP3 - Lessons learned

1. Use a lightweight legal framework for partners

SCOAP3 has adopted a lightweight legal framework for its partners, with an emphasis on mutual understanding rather than extensive contractual obligations.

This is considered to have worked well. The vast majority of SCOAP3 participants renew their commitments, and requests for voluntary contributions to support OA books exceeded estimates.

2. Combine stability with mechanisms to support growth

SCOAP3 operates on a 3 year cycle (extended to 5 due to COVID-19) to give partners and publishers certainty of revenues and costs. In order to support growth and reflect changes in the publishing marketplace SCOAP3 also maintains a separate €2.5 million fund that compensates publishers who have grown their share of the publishing market.

3. A service-based model needs the right host entity

SCOAP3 is relatively low cost to run, with direct operational costs of approximately €200k (only 2% of the funds distributed to publishers). However, it relies heavily of the support of CERN as host organisation. This support is provided on the basis that SCOAP3 fits with CERN's mission of advancing science in the discipline of high energy physics.

The Open Library of Humanities

About The Open Library of Humanities

The OLH publishes world-leading, rigorous and peer-reviewed scholarship across the humanities disciplines in 28 fully open access journals and its own multidisciplinary journal, with no article processing charges. It is funded by an international consortium of libraries, with 300 libraries worldwide pooling their resources to convert ('flip') journals wholesale to open access, which are then hosted on the OLH platform. More research is consequently openly available worldwide with commensurate benefits to the public and developing economies.

Legal status

OLH launched in 2015 as an independent charitable organisation dedicated to publishing open access scholarship in the humanities. In 2021, OLH merged with Birkbeck, University of London, a higher education institution incorporated by Royal Charter (England/Wales). The OLH is a strictly not-for-profit entity and it has no shareholders.

Governance

From a legal perspective, governance rests with the governing body of Birkbeck, but in practice The Open Library of Humanities is governed by a steering committee which includes a mix of academics at Birkbeck, OLH's editorial officers and the co-CEOs. Over the coming year the intention is to expand the steering committee to include librarians and academics from other institutions. OLH also has an Academic Advisory Board with 28 members, while all institutions and individuals who are members of the OLH Library Partnership Subsidy (LPS) scheme are entitled to membership of the OLH Library Board.

Financial model

The OLH aims to implement a collaborative, or collective, funding model for gold open access in the humanities. It is funded through a model of Library Partnership Subsidies to collectively fund the venue and its array of journals. Contributions are banded according to an institution's FTE (staff and students), geographical region & currency. Contributions are currently received from Europe, Middle East, Far East, North America and Australasia. The OLH has also benefited from grant funding from the Andrew W. Mellon Foundation and Arcadia.

HOW

WHAT & WHY

WHO

◀ OPERATIONS

ENGAGEMENT ▶

KEY PARTNERS

- Part of Birkbeck, University of London
- Consortium of 324 libraries, who are members of the OLH Library Board
- 28 members of the Academic Advisory Board
- External publishing partners, eg Crossref, CLOCKSS, Portico

KEY ACTIVITIES

- Supports 28 open access journals
- Publishes own multidisciplinary mega-journal
- Runs a scheme for recruiting more subscription-based HSS journals looking to flip to OA (journal flipping programme)
- Runs a Library Partnership Subsidy scheme
- Maintains Janeway publishing software
- Manages Janeway publishing clients

KEY RESOURCES

- Human: 9 FTEs: 2 x Co-Founders/Directors, 1 x marketing and finance, 3 x editorial & marketing staff, 3 x technical & development staff (operating Janeway platform); 1 x intern
- Physical, Systems and data: OLH platform; Janeway platform and suite of services

SOCIAL VALUE PROPOSITION

- Not-for-profit entity dedicated to publishing open access scholarship (28 journals in the humanities) with no author-facing article processing charges
- Approach to scaling: all contributors given a place on the OLH library board - allow library consortium to vote on inclusion of new journals (this means high quality and high rejection rate)
- Work published in the OLH is Plan S compliant and its journals fulfils all of the submission criteria for the UK Research Excellence Framework
- Development of the open-source publishing software Janeway

RELATIONS

- 324 library members in the subsidizing consortium from Europe, Middle east, Far east, North America, Australasia
- 28 HSS journals
- 8 Publishing clients using Janeway

CHANNELS

- Website openlibhums.org
- Website's News Channel (flagging publications, annual reports, etc)
- Twitter @openlibhums
- Facebook
- YouTube
- External awards
- Research publications
- Conference papers

CUSTOMER [MEMBER] SEGMENTS

- Journal editors & staff
- Academics (authors, editors, peer reviewers)
- Readers (researchers)
- Committee members
- Scholarly presses
- Libraries
- Research funders

COST STRUCTURE – TOTAL EXPENDITURE OF C.€400K IN 2021

- OLH publishing platform
- Library access platform
- Staff salaries – main element
- Journal flipping programme
- Governance (academic steering committees, library committee, founders, CEO)

REVENUE STREAMS – TOTAL INCOME OF C.€500K IN 2021

- Initial philanthropy to establish & grow platform from Mellon Foundation, Austrian National Science fund (FWF), Arcadia Fund
- Library partnership subsidies- contributions banded according to Institution's FTE (staff and students), geographical region & currency
- Higher tier supporters through Jisc (gold, silver and bronze membership options)
- Birkbeck runs financial/accounting elements and salaries



Open Library of Humanities - Lessons learned

1. The backing of an academic institution is valuable

As an independent not-for-profit OLH benefited from Birkbeck's support, but this also created a potential conflict of interest. Operating entirely independently was not financially viable, and so OLH merged with Birkbeck in 2021. This affords OLH administrative support and reduces financial/legal risk, but creates additional bureaucracy as part of a larger organisation.

2. Focus on sustaining the organisation, not paying for outputs

The OLH model is based on asking libraries to support and sustain its activities as an organisation, rather than prioritising ownership of their own outputs. This approach can be challenging for funders who expect direct accountability for their funding, but represents a more inclusive and sustainable model in the long run.

3. Moving from commercial to OS software is difficult

OLH moved from using a commercial publishing platform (Ubiquity Press) to building its own open source platform (Janeway). This transition was challenging, and illustrates the significant complexity involved in creating a new platform from scratch. This also creates an obligation to maintain and update the platform in perpetuity, which should not be underestimated.

GETTING IN TOUCH WITH THE EU

In person

All over the European Union there are hundreds of Europe Direct centres. You can find the address of the centre nearest you online (european-union.europa.eu/contact-eu/meet-us_en).

On the phone or in writing

Europe Direct is a service that answers your questions about the European Union.

You can contact this service:

- by freephone: 00 800 6 7 8 9 10 11 (certain operators may charge for these calls),
- at the following standard number: +32 22999696,
- via the following form: european-union.europa.eu/contact-eu/write-us_en.

FINDING INFORMATION ABOUT THE EU

Online

Information about the European Union in all the official languages of the EU is available on the Europa website (european-union.europa.eu).

EU publications

You can view or order EU publications at op.europa.eu/en/publications. Multiple copies of free publications can be obtained by contacting Europe Direct or your local documentation centre (european-union.europa.eu/contact-eu/meet-us_en).

EU law and related documents

For access to legal information from the EU, including all EU law since 1951 in all the official language versions, go to EUR-Lex (eur-lex.europa.eu).

EU open data

The portal data.europa.eu provides access to open datasets from the EU institutions, bodies and agencies. These can be downloaded and reused for free, for both commercial and non-commercial purposes. The portal also provides access to a wealth of datasets from European countries.

Open Research Europe (ORE) is the open access peer-reviewed publishing platform currently offered by the European Commission as an optional service to Horizon 2020 and Horizon Europe beneficiaries at no cost to them. The European Commission is exploring the potential to gradually expand ORE from a publication platform for EC beneficiaries only, into a non-for-profit European publishing platform for all, with the involvement of funders from EU Member States and possibly beyond.

The European Commission's Directorate-General for Research and Innovation (DG RTD) commissioned this independent expert analysis to provide advice with regard to the organizational and financing model(s) that may be used in this collective future endeavour as of 2026. Drawing on case studies of non-profit services involved in the provision of infrastructure for scholarly communication, it sets out a series of recommendations for how this work can be taken forward by the EC and its prospective funding partners, to enable ORE to be established as a collective publishing enterprise from 2026.

Studies and reports



Publications Office
of the European Union