

Economics and equity in the development of Open Research Europe

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Abstract¹

Open Research Europe (ORE) is the open access peer-reviewed publishing platform 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 while complying with their open access obligations. This paper identifies potential financing and governance model(s) that would operationalize ORE as a collective publishing enterprise, supported by research funders and possibly research organizations, as of 2026. The aim of this study is to develop a sustainable, scalable funding model that is not based on article publication charges (APCs). To this end, the main business and financing models for not-for-profit publishing services were reviewed, based on a series of case studies and interviews with seven leading not-for-profit service providers. The paper outlines possible business model(s) for the financing of the operations of the Open Research Europe platform in the future and sets out actionable recommendations for implementing such a business model, appropriate to the scope and scale of the endeavour. It assesses how to incorporate equity into the design of Open Research Europe; and how to make Open Research Europe sustainable in the long run.

Keywords

Open access, not-for-profit publishing, Open Research Europe

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. The European Commission is exploring the potential to gradually expand ORE from a publication platform for EC beneficiaries only, into a not-for-profit European publishing platform for all, with the involvement of funders from EU Member

¹ This paper provides an abbreviated summary of the full, public report Johnson, R. (2020). Operationalising Open Research Europe as a collective publishing enterprise. European Commission Directorate-General for Research and Innovation, LU <https://doi.org/10.2777/061886>

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. This paper provides an abbreviated summary of the full, public report delivered to the European Commission (Johnson, 2022).

Methodology

Five work packages were completed as part of this review. Firstly, desk research was conducted to examine the current organisational and financing model of ORE and an interview was conducted with F1000 Research Ltd as the current provider of ORE's platform, as well as other publishing, editorial and communication services. Secondly, a review of organizational and financing models used by other non-profit publishing services was undertaken to identify relevant models and any lessons learned. Thirdly, a set of case studies were prepared for the entities listed in Table 1. Fourthly, funders interested in ORE's new platform and independent experts were consulted to identify potential organizational and financing models for ORE, with modelling used to determine the size and cost of each option. Finally, recommendations were prepared for the development of ORE as a collective publishing enterprise.

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.
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.

Case Study	Established	Location	Description
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.

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 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 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 focused 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 Open Research Europe to transition away from F1000's 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.

- *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.

Organizational and Financing Models for non-profit Publishing Services

Drawing on a mixture of case studies and relevant literature, several models and lessons learned for ORE have been identified.

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, Open Research Europe 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), or even larger.

Operating model

ORE's operating model will need to bring together publishing and editorial, technology, and marketing and communications functions, with support services and a secretariat to manager funder relations. Existing infrastructures rely heavily on volunteer effort and tend to underinvest in marketing and technology functions. Open Research Europe 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 explored further.

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, considering 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 Open Research Europe would appear dependent on at least one of the following:

- Securing support from a large number of research funders.
- Accessing other sources of funding, 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.

An Organizational and Financing Model for ORE

Following the call for action from the Council Conclusion on Open Science and Research Assessment of June 2022, it is understood that some 15 funders have expressed interest in discussing how they could support ORE alongside the European Commission. Collectively, they account for over €20 billion in annual research funding, which leads to 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, as can be seen from the table.

Table 2 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 together with a refreshed 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.

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. If this becomes not the case, alternative sources of financing would have to 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. 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.

Economics and equity in the development of Open Research Europe

The operationalization of 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.

From an economic perspective, there are challenges in securing and coordinating the financing of ORE, and scaling funding in response to demand. However, ORE presents a unique opportunity to develop an open, international infrastructure which has the potential to operate at scale. In the absence of scalable non-profit publication venues such as ORE, 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 biggest economic challenge still to be resolved is how to stimulate demand for a platform that does not have an impact factor and is not aligned with a specific disciplinary community.

From the perspective of equity, the most significant stumbling block 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. 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.

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