# Additional advice on open access: possible implementation approaches

## 1. Summary

Australia's Chief Scientist, Dr Cathy Foley released *Advice on open access models: unlocking knowledge for national benefit* and an addendum to the advice in August 2024. At the request of the Hon Minister Ed Husic, Minister for Industry and Science, Dr Foley has undertaken further consultation to inform consideration of policy options for open access through the Strategic Examination of R&D.

The Chief Scientist's advice considered four models for open access, including a public access model. The advice identified that the public access model would bring the greatest benefit by significantly increasing the diffusion of high-quality evidence-based information throughout the Australian economy and society. Subsequent consultation has reinforced this advice. Speakers at a public webinar outlined some of the broader use cases for open access for business and professional practice beyond academia, including benefits for medical professionals, not-for-profit organisations and the tech industry. An overview of the model, benefits and stakeholder feedback is provided in the placemat at Attachment A. Letters of support are provided at Attachment B.

Consultation has also provided insight into the feasibility of the public access model, including what national agreements with publishers might look like, how access could be provided to the Australian community and how the model could be funded.

The Council of Australian University Librarians (CAUL) and Open Access Australasia (OAA) have flagged concerns with the public access model because in their view it would entrench the current academic publishing business models, where some commercial publishers charge high prices and make significant profits by benefitting from the in-kind labour of researchers. CAUL and OAA are calling for a multifaceted approach to open access that would include a scaled back pilot of the public access model in addition to investment in institutional repositories, a rights retention strategy and scholar-led publishing initiatives (Attachment C). CAUL and OAA's views are not representative of the broader feedback on the public access model, nor does it reflect the views of the university broader sector. Several senior university leaders (Vice Chancellors, Deputy Vice Chancellors, Deans and Heads of Schools) have expressed support for the public access model.

This advice focusses on the public access model and includes the alternative approach suggested by CAUL and OAA. It does not repeat all the details provided in the original advice and addendum so should be read in conjunction with those documents.

**Conclusion:**
That the public access model is the best and most affordable option to achieve open access to research literature with broad impacts for Australia. Next steps are to develop a plan to implement the Public Model in Australia.

## 2. Rationale/Business case

Benefits for Australia

The Australian Government wants to increase business investment in R&D to boost innovation and productivity. Better access to published research would enable Australian businesses to increase their engagement with science and research and help make Australia an attractive destination for R&D investment among firms internationally. Open access would complement and amplify other initiatives to encourage business innovation and investment in R&D. EY modelling has estimated the potential impacts over an initial 8-year period to be additional business investment in R&D of up to $1.4 billion and a potential economic uplift of $2.3 billion in GDP and 1000 new jobs.

Increased mobility of researchers across sectors of the economy is needed to help break down silos and enable an interconnected R&D system that is equipped to build high tech industries, address societal challenges and implement government priorities such as the transition to net zero and Future Made in Australia Plan. The public access model would help encourage researcher mobility as researchers could work in industry and still maintain access to the research in their fields. Speaking at the Chief Scientist's webinar, Susan Travis from The Tech Council of Australia noted that up to 75% of tech startups are not spin outs from universities and therefore are likely to have limited access to research literature.

The Productivity Commission recommended that the Australian Government implements measures to support lifelong learning for an agile workforce. The public access model would support this goal through allowing professionals to remain abreast of developments in knowledge relevant to their professional practice and help equip them to move into new roles as opportunities within industries develop and change. At the Chief Scientist's webinar, GP Professor Meredith Makeham spoke about the importance of access to research literature for health professionals, patients and carers (page 4). Dr Sarah Oxenbridge from The Smith Family outlined the difficulties that she faces in accessing the research literature that she needs to develop evidence-informed programs for the community (page 5). We heard from public servants in the Australian, state and territory governments that access to research literature is needed to support evidence-based policy making in priority areas for Australia and its jurisdictions. High school teachers have also told us that better access to research literature would support teaching and support students in their senior years.

The Strengthening Australian Democracy report identifies online mis- and disinformation as threats to democratic resilience. The public access model would help to address this by providing Australians with greater access to trustworthy evidence-based information.

The public access model would also provide equity of access to journal articles and open access publishing within the Australian research sector.

'Your work advising government on the benefits of an open access model to academic journals is a step in the right direction towards health consumers having evidence-based information to build their knowledge and help counter misinformation.'

*Katherine Deveny, CEO, Consumers Health Forum, excerpt from letter to Dr Foley*

The point of difference in the public access model

Most existing approaches to open access – such as institutional repositories, rights retention strategies and funder mandates – can only increase the proportion of new Australian research that is made open access. While this would contribute to a shift in global publishing practices, the societal and economic benefits for Australia would be limited because Australian-authored journal articles comprise less than 4% of the global total.

64% of journal articles published globally in the past 15 years are still locked behind paywalls and are accessible only to those with access to their institutions' journal subscriptions or the means to pay to read individual articles.

The key point of difference between the public access model and other approaches to open access is that the public access model would provide all Australians with access to this global research output, including the back catalogues, which will deliver substantially greater benefits for the Australian economy and society.

Retaining what is good from the current academic publishing system

'We thank you for your continued leadership in advancing a framework that balances the accessibility of high-quality research with the sustainability of the publishing ecosystem'

*Excerpt from letter to Dr Foley from Mark Robertson, APAC Consultant, International Association of STM Publishers and Dr Stuart Glover, Head of Policy, Australian Publishers Association*

The public access model is a sensible approach because it would retain what is valuable in the current publishing system.

The imbalances in the current academic publishing sector are highlighted in the Chief Scientist's advice and continue to be highlighted by stakeholders. However, publishers do provide important services in academic publishing: they play an important role in coordinating submissions, peer review, editing and integrity checks, and providing and maintaining access to the published articles and any corrections or retractions for perpetuity. Operating and maintaining these processes and catalogues incurs significant costs. Publishers invest in and maintain expensive IT systems to handle both the front and back end of the process, and tools to support the research sector and identify and manage misconduct.

Rather than dismantling the academic publishing system, only to set up an alternative publishing ecosystem – which is the solution proposed by some open access advocates – the public access model would retain what is best from the current system. It would seek to use a partnership approach to engaging with publishers to derive better value for money for Australia.

## Case study: why health professionals, patients and carers need open access

I'm going to share some thoughts on this subject as a GP. But I'm also speaking today as an academic and as an advocate of equity and transparency around the way we use data in our society.

I've got a real passion for something that we do in general practise called person-centred care, which is about empowering people to be partners with their health care professionals and able to make well-informed decisions about their own health and wellbeing. And one of the key ingredients for this is access to information. And that's access to our own health information, but also to high-quality advice and guidance for people and their carers and the health care providers looking after them. And this guidance comes from the peer-reviewed scientific literature that we're talking about today.

And like other people in the community, most of Australia's close to 40,000 GP don't have a university affiliation and they can't easily get immediate access to scientific literature if it's sitting behind expensive paywalls. That's the same situation for many other primary health care professionals and some hospital professionals too, pharmacists, physios and nurses in the community. And in the past few years following the COVID-19 pandemic, we've faced an unprecedented surge in health misinformation. As GP's, we've been part of the frontline managing the pandemic. And I'll say well supported in fact with a rapid and well-coordinated response by our federal and state departments of health who worked hand in glove with our colleges and leading clinicians and academic experts to translate that evidence into best practise guidelines that we all relied upon. An important part of our role as GPs is to debunk myths and offer real-time evidence-based advice.

And if we face blocks, whether it's paywalls or waiting for papers to come through library access days or even weeks after a consultation, we actually miss a crucial window to inform and support people at the time they need it most. And it disempowers health consumers and the broader community who would also benefit from access to that same evidence.

So I think another critical aspect that I'd like to raise here when we consider the values of equity and transparency is the fact that the research findings published in scientific journals frequently rely upon the health information of the very people who don't have access to it.

If it's your information that informs the science, you should have the right to read it, understand it, and benefit from the publications that arise from it, and at the same time, we really should acknowledge that there's a challenge of ensuring that this access is funded sustainably and that university researchers' budgets are stretched very thinly.

It's a highly competitive environment and we have facing a prospect of declining income with fewer international students coming in, in our larger research-intensive universities. But all of that means that it's really crucial that we explore funding models that protect people's rights to both access this information and the viability of Australia's research institutions.

So I'd like to finish by saying that free access to scientific literature would be welcomed by GPs and other health care professionals so that they can be better equipped to deliver safe, high-quality, and well-informed care and it would also empower people to take a more active and educated role in managing their own health and wellbeing, while it supports equity of access to information and greater transparency around the way our data is used in society. So I think Dr Foley's proposal is one that deserves serious consideration for the future of health care in Australia and for the benefit of all of our citizens. Thanks.

*Professor Meredith Makeham, General Practitioner, academic at The University of Sydney and Royal Australian College of GPs Expert Committee member*

## Case study: why not-for-profits like The Smith Family need open access

We provide financial and personal support, educational and career learning programmes and support for parents and carers. So my response today is from the perspective of the policy team here at The Smith Family and the work that we do. And it's a great opportunity for me to give some context about why we care about open access and why we applaud the Chief Scientist's efforts in this area.

The main reason for our interest in open access is that the financial and personal support we deliver and all of the programmes we run are evidence-informed. Each element of support that we provide is underpinned by a theory of change and a logic model. And we build these from in-depth meta-reviews of research, quite extensive reviews. And this practise is part of our organisational DNA and we do it to ensure the integrity and quality of our programmes.

Given that most of our sponsors are individuals, we want to be able to assure them that what we're doing is best practise and is evidence informed. We also conduct regular evidence reviews when we're writing grant applications and we do regular reviews just to ensure that our programmes continue to map to best practise over time.

And so for these reasons, we're highly reliant on academic research on a day to day basis.

But at the moment we only have partial access to research publications due to the journal pricing models.

There are articles we need, but we can't access due to cost. And because we're not for profit, we can't justify paying 130 Australian dollars for a PDF of an article that on reading might not be useful to us.

So in my team, we spend a lot of time trying to find alternative versions of the academic articles we need.

Now, fortunately, some university research centres published research outputs as free of charge, grey literature reports prior to academic publication. And these, along with The Conversation, are a God send to us.

Occasionally, we can find proof versions of published academic articles in the repositories that Dr Fox talked about and universities, but there's a real risk in using these because they may not map to the eventual finished article, which may have been subject to subsequent revisions. So there's a risk that we may be misquoting a version that's been superseded. Because our focus as a charity is on channelling our funding directly to families with minimal spending on overhead costs like journal articles, at the moment, we just have to accept that there are journal articles we can't access. but the lack of access really does put us at a disadvantage when we're applying for grant funding.

And if we had open access, we'd have access to a greater breadth of current evidence and our evidence base would be more robust. Because of these factors, we strongly support Dr Foley's efforts to enable open access on the basis that it would be of critical value to not for profits like The Smith Family. Thanks.

*Sarah Oxenbridge, The Smith Family*

*Transcript of presentation to Open Access Webinar, hosted by Dr Cathy Foley, 12 September 2024*

## 3. Scope of advice

Academic journals are the predominant outlet for sharing research results, with journal articles comprising 74% of research outputs submitted for the Excellence in Research for Australia (ERA) 2018–19 evaluation.[1] As such, the Chief Scientist focused her advice on open access to academic journal articles. In some research areas, particularly in the humanities and social sciences, books and book chapters and non-traditional research outputs such as reports and creative artifacts are also important research outputs.[2] However, these research outputs and the broader issue of open science, were out of scope for the Chief Scientist's advice.

Open access to research literature is also part of the broader objective of open science. The UNESCO Recommendation on Open Science was adopted by the 41st session of UNESCO General Conference in November 2021. It 'provides an international framework for open science policy and practice that aims to reduce the technological and knowledge divides between and within countries.'[3] In addition to open access to research literature, open science includes open data, which aims to make research methodology, results and analysis more transparent and enable replicability and further use of the data. It also includes open source and open infrastructure.

Open science advocates argue that Australia needs a national strategy for open science. The Chief Scientist understands that broader discussions are underway on how Australia could progress open science in accordance with the UNESCO recommendation, including through the recently formed National Taskforce on Open Science led by the Academy of the Social Sciences in Australia, and notes that the public access model would be a high impact step towards open science in Australia.

## 4. Preferred model: public access model

As outlined in the Chief Scientist's advice, the public access model would involve national agreements negotiated between a central body and publishers to provide:

1) access for all of Australia to the publishers' full catalogues (including internationally authored journal articles and the back catalogues), and

2) open access publishing of all Australian-led journal articles so that they are free to access globally.

### 4a. Negotiating agreements with publishers

A single Australian Government entity would be responsible for implementing the public access model. A single Australian Government entity would also be responsible for leading the negotiations with publishers—this may be the same entity as the implementing body or a different one. Existing expertise can be drawn on to support implementation, including from those entities with experience in negotiating read and publish agreements.

[1] Australian Research Council (2019), *State of Australian University Research 2018-19*, https://dataportal.arc.gov.au/era/nationalreport/2018/pages/section4/research-outputs-by-type/

[2] For example, book chapters comprised 38.4% of political science research outputs submitted to ERA 2018-19 and 41.1% of literary studies research outputs.

[3] https://www.unesco.org/en/open-science/about.

In 2022, about 1500 publishers published over 120,000 journal articles with at least one Australian author. However, most Australian-authored journal articles are published by a few large publishers. The largest 5 publishers published 60% of Australian authored journal articles in 2022, and the next 15 published 26%.[4] Reaching agreements with these 20 publishers would cover the open access publishing fees – commonly known as article processing charges (APCs) – for most Australian-led journal articles and ensure Australians can access most the world's journals articles, including back catalogues. Agreements would also be pursued with medium and smaller sized publishers and, as there are a variety of business models within the publishing industry, different approaches to national agreements may be required.

Article processing charges (APCs)

Under the public access model, the number of APCs included in the agreements would be uncapped to ensure that all Australian-led journal articles can be published open access.

Publishers have advised the Chief Scientist that the decision about whether to impose caps is a strategic one, but they also indicated that caps can be cumbersome to administer. There is precedent for uncapped agreements – 21 of the 25 CAUL agreements with publishers are uncapped. Among the capped agreements, only the agreements with Springer Nature and Taylor and Francis and Wiley have reached their caps in 2024.[5]

Payments for publishing under uncapped agreements could be calculated at the start of the year based on number of articles published in the previous year and this could be adjusted throughout the year to account for fluctuations. This approach would be appropriate for large and medium-sized publishers and open access publishers.

Bibliodiversity

The public access model would support bibliodiversity. Agreements would be pursued with publishers big and small, including fully open access publishers.

It will be important for researchers in some areas to maintain access to read and publish in smaller niche publications. Some of these journals cover Australian or discipline-specific content and are of national importance beyond the academic community.

Feedback from stakeholders highlighted that there are different business models within the academic publishing sector, and this means that the national agreements may not be a one size fits all approach. For example, learned societies often bundle subscription fees for their journals into their membership fees. There is currently a disincentive for them to move to an open access model as they could lose this membership revenue. The public access model could assist these publishers by providing a stable revenue stream for their journal titles.

Some stakeholders have raised the practicalities of pursuing negotiations with the long tail of small publishers. Some of these publishers only publish one or two Australian-authored journal articles each year and may only have a current small subscriber base within Australia. It may not be viable for some small subscription-based journals to provide access to all of Australia and uncapped APCs on a cost-neutral basis compared with Australia's current spend on subscriptions to that journal. The

[4] Web of Science
[5] CAUL website, https://caul.libguides.com/read-and-publish

method of calculating payments to these publishers may therefore need to differ from the calculations of payments to the larger publishers.

For small publishers in the long tail, there could be a process to request expressions of interest for signing up to the public access model. A standard model agreement could also be developed to increase the efficiency of negotiations.

Stakeholders have suggested that an alternative or parallel mode of engagement with the long tail could be through a national digital library. This would be an open access repository where journal articles published by small publishers could be uploaded to enhance discoverability and accessibility for perpetuity. A national digital library could be operated by a national institution such as the National Library of Australia, which currently manages a similar type of system – Trove.

**Table 1: Possible approaches for negotiating with different types of publishers**

| Publisher type | Approach | % of work covered (2022) | Comments |
|---|---|---|---|
| Largest for-profit hybrid publishers (Springer Nature, Elsevier, Wiley and Taylor & Fracis)<br>Note:<br>• Hybrid journals have both subscription and open access content)<br>• These publishers each published 7000 to 27,000 Australian-authored journal articles in 2022. | National read and publish agreement.[6]<br>No caps on open access publishing fees<br>Use previous year publication numbers to determine pricing.<br>Provide mechanism for adjustments based on actuals at intervals that enables publishers' business sustainability.<br>Use IP address for security.<br>Full access to archive. | 53% | Estimates for the full cost to publishers for publishing a paper vary. A median estimate is about US$2100. |
| Other medium to large sized subscription-based and hybrid publishers such as IEEE, Institute of Physics Publishing and AIP<br>Note:<br>• Includes 43 publishers<br>• Published between 100 and 5000 Australian-authored journal articles in 2022) | National read and publish agreement.<br>No caps on open access publishing fees<br>Use previous year publication numbers to determine pricing.<br>Provide mechanism for adjustments based on actuals at intervals that enables publishers' business sustainability.<br>Use IP address for security.<br>Full access to archive. | 27% | |
| Medium to large sized publishers who are already | Use previous year publication numbers to determine pricing for prepaid. | 12% | |

[6] Agreements with publishers that provide both open access publishing and read access to the publishers' closed access journal articles for those covered under the agreements.

| Publisher type | Approach | % of work covered (2022) | Comments |
|---|---|---|---|
| fully open access such as MPDI, Frontiers and PLOS<br>Note:<br>• Includes 11 publishers<br>• Published between 100 and 8000 Australian-authored journal article in 2022) | Provide mechanism for adjustments based on actuals at intervals that enables publishers' business sustainability.<br>Use IP address for security.<br>Full access to archive. | | |
| Long tail small professional society publishers<br><br>Note:<br>• Each published between 1 and 100 Australian-authored papers in 2022 | Need to work with the Australian based societies to rethink their value proposition beyond offering their publication as the membership benefit. Suggest working with STA to understand how these journals are run and identify how to support them to be sustainable.<br><br>Also need more work to identify how access to journals published by small international society publishers could be provided through the public access model. | <6% | Many of these publishers are running at a loss and are subsidised by membership fees and organisational grants. |
| Long tail small culturally and locally important publishers<br><br>Note:<br>• Each published between 1 and 100 Australian-authored papers in 2022 | Suggest having a EOI call seeking their willingness to engage and to identify what is needed to enter into an agreement or be part of a national digital library. | <6% | Many of these publishers are running at a loss and are subsidised. |

### 4b. ICT requirements

User authentication

The simplest and preferred approach would be to use geo-locking to restrict access to subscription content to Australian-based users using IP addresses. A regular search engine could be used to locate journal articles and link authorised users directly to them on the publishers' websites. A dedicated user interface would not be necessary.

Some stakeholders have raised concerns that non-eligible users outside of Australia could gain access using VPN (Virtual Private Network) services. However, others advised that this risk is no greater that the risks of non-eligible users obtaining log-in credentials. The Digital Transformation

Agency advised that geo-locking systems have become more sophisticated and can recognise VPN use.

If geo-locking was used, an alternative means of access would need to be provided for Australian residents outside of Australia, such as researchers on work trips or sabbaticals. It was suggested that an external library proxy service can provide this access and that this is already a common practice in most universities.

An alternative approach would be to use a registration system to authenticate eligible users. Services Australia have confirmed that MyGov could be used to authenticate users and link through to a new service in the same way that users currently link through to Medicare and ATO services. An interface and help desk function would be required for the new service, and this would incur additional costs. Stakeholders are in general open to this idea; however, geo-locking is preferred by most as it would be simpler and cheaper to implement and would allow greater ease of access.

Public library registration systems were raised as another alternative. This would make use of existing infrastructure and align with the role of public libraries; however, as with the MyGov option the log in system may pose a barrier to quick and easy access.

National digital library

A national digital library for journal articles from small independent publishers would require additional ICT infrastructure, including a user interface. The specifications would be like those for institutional repositories.

Content aggregator

As already noted, regular search engines could be used to locate and link authorised users directly to the journal articles and a content aggregator with a user interface is not essential for the public access model.

However, it could be considered whether an advanced search functionality like what is currently provided by university and public libraries would provide better discoverability.

### 4c. Costs

As outlined in the advice, most of the costs of the public access model are for payments to publishers for the national agreements. Other costs include negotiations and administration, and ICT infrastructure if a national digital library is established. A national digital library may not be needed but could be considered to support the culturally important long tail of publishers who publish a limited number of journals each year.

Ongoing costs: national agreements with publishers

The aggregate amount that Australian institutions currently spend on subscriptions, read and publish agreements and article processing charges provides a starting point to estimate the costs of agreements under the public access model. In 2022-23 this was estimated to be up to $575 million (Table 2).

Payment data to calculate the 2022-23 estimate was provided to the Office of the Chief Scientist in early 2024 by CAUL, members of the Government Scientists Group and members of the Forum of Australian Chief Scientists. The data was indicative only.[7]

**Table 2: Identified payments to publishers that could be redirected to the public access model, by Australian government portfolio and state[1]**

| **Australian Government entities (by portfolio)** | **$M** | | **State and territory government entities** | **$M** |
|---|---|---|---|---|
| Defence | 1.2 | | General[5] | 35.0 |
| Attorney General's | 0.1 | | NSW | 16.0 |
| Agriculture, Fisheries & Forestry | 0.5 | | NT | 0.1 |
| Health & Ageing[2] | 40.0 | | QLD | 6.5 |
| Climate Change, Energy, Environment & Water | 0.7 | | SA | 2.4 |
| Industry, Science & Resources | 12.8 | | TAS | 0.03 |
| Education[3] | 254.6 | | VIC | 0.4 |
| Finance | 1.8 | | WA | 0.07 |
| Infrastructure | 1.6 | | ACT | 1.3 |
| **Total Australian Government entities** | **313.4** | | **Total state and territories** | **61.8** |
| **Estimated additional open access publishing fees[4]** | **Up to 200.0** | | | |

Table notes

[1] Includes subscriptions and read and publish agreements. Amounts paid by Australian Government entities also include some open access publishing fees paid by publicly funded research agencies.

[2] Includes an estimate of payments to publishers by medical research institutes.

[3] Payments by universities for subscriptions and read and publish agreements (data provided by CAUL). It does not include open access publishing fees paid by university-based researchers that were not covered under read and publish agreements. Open access publishing fees are paid from various areas of the institutions, or sometimes by individuals, and are therefore difficult to track. Additional payments to publishers for open access publishing fees could be up to $200 million.

[4] Open access publishing fees for all journal articles including an Australian author. Some of the current costs are incurred by collaborating authors in other countries. Under the public access model, eligibility could be restricted to corresponding authors with an Australian-based address.

[5] Includes state health departments (except NSW and Queensland as they are included in the state totals), State and Territory Geological Surveys and State Libraries. An estimate of $40 million for all state health departments was provided by CAUL in 2021 in 'Case Studies on the need for a coordinated Open Research agenda in Australia' (unpublished).

In Australia and internationally, cost neutrality has been the standard for negotiating read and publish agreements for individual organisations and consortia. That is, under the agreements open access publishing is generally provided at no additional cost for the researchers covered under the agreement compared with the existing cost of the organisation's or consortium's subscription. Payments just shifted from 'payments to read' to 'payments to publish'.

[7] Not all state governments provided data so an amount of $40 million was estimated for payments to publishers by state health departments based on an unpublished CAUL case study provided to the Office of the Chief Scientist in July 2021. Likewise, payments to publishers from medical research institutes have been estimated. The estimate for payments for article processing charges is an estimate for APCs and this data is incomplete as not all payments to publishers have been captured.

One-off establishment costs

EY estimated the set-up costs for the public access model to be approximately $32 million, comprised of $12 million for administration and $20 million for establishing the ICT infrastructure. These estimates were indicative only and the model has not been fully costed.

The estimate for ICT infrastructure was based on a MyGov service, which is no longer the preferred option. There would be no ICT infrastructure costs for authenticating users based on IP addresses and administration costs to set up the initiative would also be lower using this approach. A potential public digital library for small independent journals has not been costed. It is estimated that the costs would be similar to setting up an institutional repository.

Administration costs would likely include:

- APS staff to undertake additional stakeholder engagement on implementation issues, develop an implementation plan, establish the governance arrangements and negotiating team, and provide administrative support for the initial negotiations
- fees for legal advice
- remuneration and potential travel expenses for expert negotiators and
- expenses for an advisory body.

Ongoing costs: administration, governance and ICT infrastructure

The Chief Scientist's advice provided in July 2023 estimated annual administration costs of $2 million to $12 million. This would include APS staff to administer the initiative, expert negotiators and an advisory body.

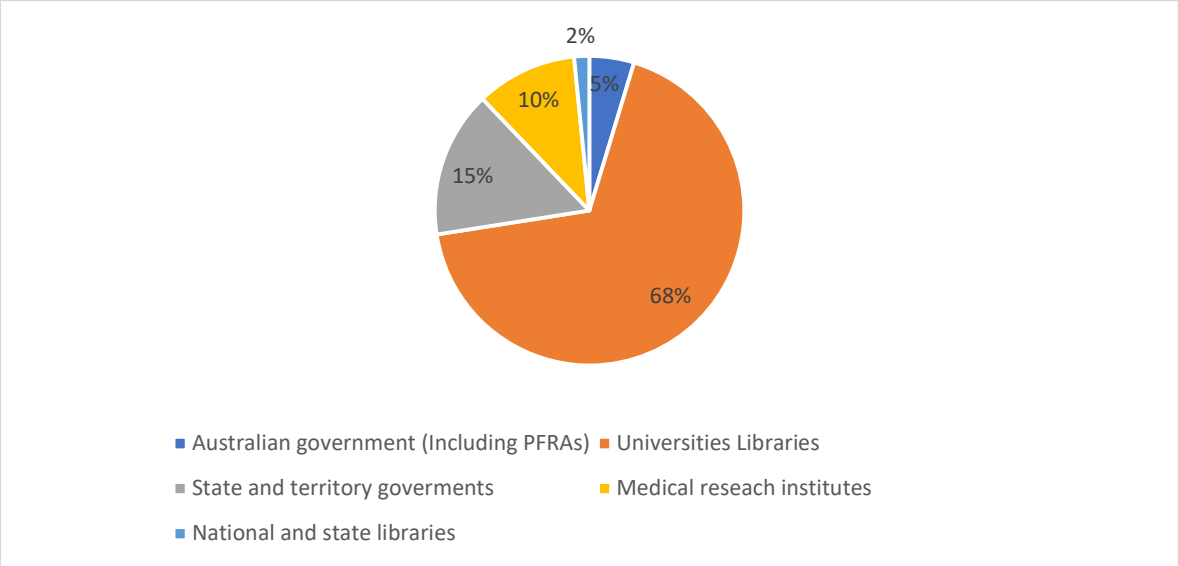
Annual ICT costs of $7 million to $20 million were also estimated based on ICT infrastructure for a MyGov service. Again, as the current preferred option is for authenticating users based on an Australian IP address with no registration system, there will be no ongoing ICT costs for authenticating users. Ongoing costs for maintenance of a public digital library for small independent Australian journals would vary depending on the volume of outputs deposited and could be in the vicinity of $500,000 per year.

**Table 3: revised cost estimates for the public access model**

| | **Costs outlined in original advice** | **Revised cost estimate** |
|---|---|---|
| **Payments to publishers (per annum)** | • $380 million + | • An estimate of up to $575 million incorporates an estimate for current APCs paid by Australian researchers. |
| **One off establishment costs – administration** | • $12 million (EY estimate) | • Costs would be lower as administration costs relating to a MyGov service would not be incurred. |
| **One-off establish costs – ICT** | • $20 million (EY estimate) based on a registration-based service such as MyGov | • Software licensing costs for IP-address based authentication are likely negligible and would be absorbed by the publishers.<br>• Costs for a public digital library if needed – software licensing and establishment costs |

| | Costs outlined in original advice | Revised cost estimate |
|---|---|---|
| **Ongoing costs – administration (per annum)** | • $2 to $12 million.<br>• The high bound was an estimate provided by EY estimates<br>• The low bound was an Office of the Chief Scientist estimate based on the higher bound estimate of the EY costing for another potential model – a national repository. | • It is likely that the ongoing costs would be towards the lower end of the range estimated in the original advice as administration costs relating to a MyGov service would not be incurred. |
| **Ongoing costs – ICT infrastructure (per annum)** | $7 to $20 million (Office of the Chief Scientists estimate) based on a registration-based service such as MyGov | • ICT costs for IP address-based authentication are likely negligible and would likely be absorbed by the publishers<br>• Less than $0.5 million for a public digital library if needed |

**Figure 1: Australian payments to publishers for subscriptions and read and publish agreements, proportion by organisation type**




## 4d. Funding options

Currently the funds used to pay publishers are widely distributed and it is not clear who pays and how much, especially for APCs[8]. There are several options to enable a single payment from Australia to publishers, including for gathering funds currently paid to publishers.

[8] .APCs in the wild: exploring funding streams for an accelerated transition to open access. https://doi.org/10.6084/m9.figshare.11988123.v4

**Option 1**: All new funds via a new policy proposal.

**Option 2**: Redirecting existing funds at a high level via budget action such as used for efficiency dividends on the grounds that under the public access model they and the institutions they fund will no longer need to make payments to publishers. This could be undertaken as a permanent redirection from the budget of each department that currently contributes to Australia's payments to publishers and from the GST payments to jurisdictions based on the amount of estimated current expenditure. This percentage varies from 0.002 to 1 % for the 2024-25 department and GST budgets. **Table 4** provides an indication of the percentage that would be redirected from each Australian Government portfolio budget and from the GST funding for each jurisdiction.

**Option 3**: Setting a "Knowledge dividend" across all government departments and jurisdictions in a similar way that "Efficiency dividends" were implemented. The dividend would be about 0.07% of budget across government departments and jurisdictions.

**Option 4**: The same approach as option 2 or 3 but the Education portfolio would not be required to contribute. This option would rectify a current imbalance in research funding as other departments do not provide the full cost of research when they fund universities to undertake research for them. This would require other departments to increase their contributions.

**Option 5**: At a more granular level, based on input from stakeholders, use some existing levers to redirect current university payments to publishers. Examples are listed below:

- The Research Support Program (RSP) provides funding to higher education providers to support the systemic costs of research such as libraries, laboratories, consumables, computing centres and the salaries of support and technical staff, as well as research costs not supported directly through Australian competitive grants and other sources. The appropriation for the RSP could be reduced to partially fund the new model.
- Acknowledging that journal articles are also used by teaching staff and coursework students, the appropriation for Commonwealth supported students under the Higher Education Support Act 2023 (HESA) could be reduced to partially fund the model.
- Alternatively, universities could be charged a levy based on the value of their current payments to publishers. A levy could be legislated through an amendment to HESA or through a new act of parliament or compacts with universities could include a requirement for universities to contribute to the public access model.
- Other parts of the R&D system also make payments to academic publishers and options for redirecting these payments to support the model need to be considered:
    - Appropriations to publicly funded research agencies (PFRAs) could be reduced by the amount of their current annual payments to publisher to help fund the model. PFRAs consulted, including CSIRO, are supportive of the model.
    - Options for contributions from the states and territories need to be explored as the states and territories currently pay about 16% of Australia's total payments to publishers for subscriptions and read and publish agreements.
    - Options for redirecting medical research institutes payments to publishers would also need to be explored with Department of Health and Ageing.

**Option 6**: CAUL and Open Access Australasia have put forward an alternative suggestion for a trial of the public access model administered by the CAUL consortium. Additional members (including the Australian and state and territory governments) would join the CAUL consortium and their existing spend would be redirected through the consortium. This is part of a proposal for a multifaceted

approach which would provide researchers with options for how their research is made open access including via repositories, gold open access and diamond open access.

**Table 4: Proportion of budgets needed to fund the public access model**

| **Australian Government entities (by portfolio)** | **Subscriptions and read & publish agreements $M*** | **Estimated APCs $M**** | **Indicative total $M** | **Annual budget 2024-2025 $B** | **% of annual budget** |
|---|---|---|---|---|---|
| Defence | 1.2 | | 1.20 | 55.7 | 0.002 |
| Attorney General's | 0.1 | | 0.1 | 5.3 | 0.002 |
| Agriculture, Fisheries & Forestry | 0.5 | | 0.5 | 6.5 | 0.0 |
| Health & Ageing | 40 | 26 | 66 | 146.1 | 0.05 |
| Climate Change, Energy, Environment & Water | 0.7 | | 0.7 | 3.8 | 0.02 |
| Industry, Science & Resources | 12.8 | 8.3 | 21.1 | 7.6 | 0.3 |
| Education[3] | 254.6 | 165.6 | 420.2 | 42.1 | 1 |
| Finance | 1.8 | | 1.8 | 2.2 | 0.08 |
| **State and territory government entities** | **Subscriptions and read & publish agreements $M*** | **Estimated APC $M**** | **Indicative total $M** | **Annual budget 2024-2025 $B** | **% of GST funding** |
| General | 35 | | 35 | | not clear who is paying this – see Table 2 |
| NSW | 16 | | 16.0 | 28.7 | 0.06 |
| NT | 0.1 | | 0.1 | 3.3 | 0.003 |
| QLD | 6.5 | | 6.5 | 18.4 | 0.04 |
| SA | 2.4 | | 2.4 | 7.3 | 0.03 |
| TAS | 0.03 | | 0.03 | 3.2 | 0.001 |
| VIC | 0.4 | | 0.4 | 16.5 | 0.002 |
| WA | 0.07 | | 0.07 | 7.9 | 0.001 |
| ACT | 1.3 | | 1.3 | 2.4 | 0.05 |

* See notes to Table 2 for further information about this data.

** APCs are generally paid by universities, medical research institutes and some PFRAs. The APCs were added proportionally to the Education, Health and DISR portfolios.

## 5. Alternative approaches

Institutional repositories

Some stakeholders support the use of institutional repositories as an alternative to paying publishers fees to publish journal articles open access.

However, establishing and maintaining institutional repositories is duplicative both in terms of their content and the resources required to host and manage them. They also raise quality and integrity concerns as corrections and retractions do not always get picked up and noted in the repository versions. And this approach can only increase access to Australian authored research, which is less than 4% of the world's research output.

The Chief Scientist acknowledges that institutional repositories will still be needed for theses and non-traditional research outputs, such as reports and recordings, and that the maintenance of these repositories will require funding. However, the use of repositories as a vehicle for providing access to copies of journal articles that are published behind paywalls is not supported by the Chief Scientist for the reasons outlined above.

Rights retention strategy

Several stakeholders are advocating for a rights retention approach in Australia.

Rights retention strategies aim to help authors (or their institutions) to retain intellectual property rights – specifically copyright ownership – over their journal articles. These strategies typically provide a statement that the author must include when submitting their manuscript to the publisher. The intention is to lessen the burden on individual authors to understand and negotiate licensing terms. When accepted by the publisher, a rights retention approach allows a version of the article to be deposited to an open access institutional or subject matter repository immediately upon publication.

A rights retention strategy is in place in the United Kingdom – alongside support for other open access approaches – and some stakeholders in Australia are advocating for a national rights retention strategy, including CAUL and Open Access Australasia.

As rights retention supports the green (repository) open access route, offering an alternative to paying open access publishing fees, the limitations of the approach are the same as those noted for the repository model.

Diamond open access

Some stakeholders are also advocating for new scholar-led publishing initiatives – including diamond open access – as an alternative to the commercial publishing system. Diamond open access is often cited as being both 'free' to read and 'free' to publish, but it is not actually free because the costs of publishing are typically funded by universities and professional societies.

Feedback from other stakeholders, including publishers, has reinforced that there are disadvantages in the diamond open access approach. New ventures need to establish and maintain the systems and resources to manage a complex process, including all the checks and processes that maintain

quality and integrity. These systems are expensive to establish and maintain – in 2024, Elsevier's parent company Relx expected to invest £477 million in capital alone.[9] Unsurprisingly, many small publishers, including diamond open access publishers, struggle to sustain their journal titles.[10]

One of the arguments posed for supporting repositories and new diamond journals is that authors should retain the choice about where and how they publish their research. However, it would be difficult to obtain the social licence for an approach that prioritises author choice above value for money, a sustainable publishing system and broader public benefits.

A multifaceted approach

Several stakeholders have commented that repository and mandate models are not an either/or solution – to be effective they would need to be implemented together.

Under this combined approach all research funders in Australia would mandate that the research they fund is made open access immediately upon publication.[11] In conjunction, there would be investment in institutional repositories to allow an alternative to paying to publish in gold or hybrid open access journals. Some stakeholders have also suggested that a rights retention strategy would be an important part of such an approach, as would support for diamond open access initiatives.

CAUL and OAA have proposed a multifaceted approach that combines these approaches and a pilot of the public access model. However, unlike the model proposed by the Chief Scientist, the pilot would be administered by CAUL and the Australian Government would provide a fee to join the consortium.

Multiple pathways are currently and have been pursued in Australia and internationally for decades, but the transition to open access has been slow and uneven. 64% of journal articles published globally in the past 15 years are still locked behind paywalls.

The multifaceted approach would be duplicative, add costs to the system and increase risks for research integrity and quality. It would be difficult to obtain social license for such an approach as it would add costs to the publication process, while the public access model aims to increase the benefits to Australia from existing payments to publishers.

International developments

As mentioned in the addendum to the original advice to government, Egypt established the Egyptian Knowledge Bank (EKB)[12] in 2017. EKB provides access to academic journal articles and educational resources for free for all Egyptians who register using their national ID. This was one of several economic reforms introduced to assist the transition of the Egyptian economy away from reliance on fossil fuels. By promoting access to high quality research, studies and data, the EKB is being assumed to play a prominent role in fostering Egypt's knowledge economy and innovation.[13] It would be

[9] https://www.relx.com/investors/annual-reports/2023
[10] https://onlinelibrary.wiley.com/doi/10.1002/leap.1448
[11] Two of the major funders of competitive research grants in Australia, the Australian Research Council (ARC) and the NHMRC, already have open access policies that require work they fund to be open access. However, while the NHMRC requires immediate open access, the ARC policy allows a 12-month embargo period.
[12] www.ekb.eg
[13] https://unesdoc.unesco.org/ark:/48223/pf0000391125/PDF/391125eng.pdf.multi.page=%2049, p.52

worthwhile for the department to keep a watching brief on EKB to identify any analyses of the impact of EKB on the Egyptian economy.

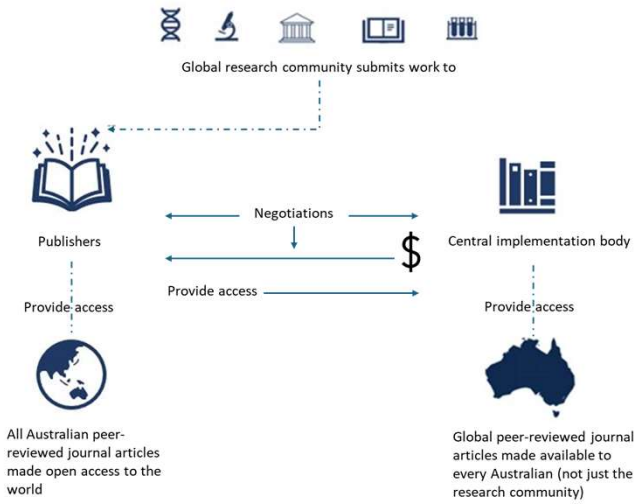
India has also recently announced a "One Nation One Subscription" deal with 30 publishers. This provides 6,400 research and educational institutions with access to over 13,000 journals.

**Attachments**

- Attachment A: Placemat – Unlocking knowledge for national benefit
- Attachment B: Letters of support
- Attachment C: CAUL/Open Access Australasia proposal for a multifaceted approach

# Unlocking knowledge for national benefit

## Public access model




The public access model aims to maximise the number of people who can read science and research literature

National agreements would be negotiated with academic publishers to provide:

- Open access publishing of all academic journal articles with an Australian lead author so that they are free to access worldwide
- Access for all Australians to all paywalled academic journal articles from all participating publishers.

## Benefits include diffusion of new knowledge and best practice across the community

- For the **business community** open access would help encourage business investment in R&D and an uptick in innovation and productivity. EY modelling has identified a potential cumulative economic uplift of $2.3 billion in GDP and 1000 new jobs across the first 8 years.
- For the **public service and the not-for-profit sector**, open access would help ensure that policy making and service delivery is informed by the latest evidence.
- For professional groups, including **health professionals, teachers and journalists**, open access would enable their practice to be informed by the latest evidence.
- For the **wider population**, open access would help foster a culture of lifelong learning and public engagement with science and research. This would support an agile workforce and democratic resilience.

The public access model would also provide equity of access to journal articles and open access publishing within the Australian research sector.

Cumulative uplift of **$2.3 billion in GDP** over 8 years

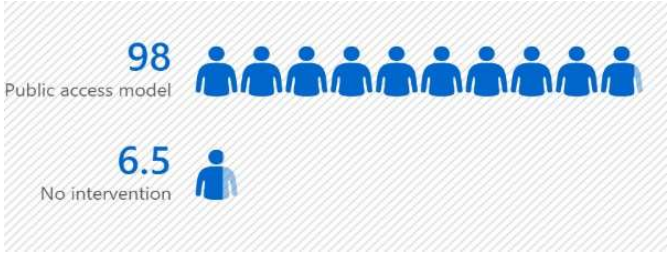
Up to **1000 new jobs** over 8 years

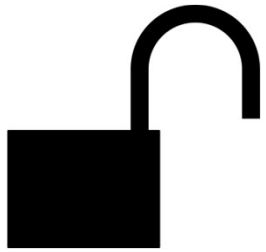
| Year | 2030 | 2040 | 2050 |
|---|---|---|---|
| GDP ($m) | 400 – 790 | 1,400 – 2,800 | 2,900 – 5,800 |
| Employment (FTEs) | 520 – 1,030 | 1,450 – 2,900 | 2,650 – 5,300 |
| Investment ($m) | 210 – 430 | 490 – 975 | 880 – 1,770 |

Source: EY Modelling on GDP impacts

## Australia is paying about $570 million per year to access and publish journal artciles

**% of Australian population with access to paywalled peer reviewed journal articles**



Productivity Commission
5-year Productivity Inquiry
Recommendation 5.3

Governments could strengthen collaborative networks for diffusion and facilitate knowledge transfer through…

… **requiring open access for government funded research in journals, papers and publications that is currently locked behind paywalls**.

In implementing this change, the government should compare the benefits and costs of the Chief Scientist's proposed open access model with the benefits and costs of other potential approaches.

# Open access has strong in-principle support

The public access model has generated significant interest across government:

- The Treasury portfolio is interested in the capacity for open access to deliver benefits for economic productivity.
- The Education portfolio has expressed interest in the Chief Scientist's advice, noting the importance of all universities having access to the research literature they need to improve their service offering to students. It has also been noted that the initiative could be a potential enabler for Australia's future education needs.
- The Environment, Agriculture and Prime Minister and Cabinet portfolios are interested in the idea to support evidence-informed policy making and increase the effectiveness of the Australian Public Service.
- The Home Affairs portfolio has indicated that open access would be of significant benefit for portfolio interests if its implementation enabled large language models to access and synthesise academic literature to make it more accessible for the public and policy makers.

Support has also been expressed by:

- Individuals within several publicly funded research agencies,
- The academic publishing industry, including the Australian Publishers Association and the International Association of STM Publishers
- The National and State Libraries Association
- Several Vice Chancellors and Deputy Vice-Chancellors of Research
- Not-for-profits and peak bodies, including The Smith Family, the Consumers Health Forum and the Tech Council

Other feedback:

- Stakeholders in the technology industry have noted that the public access model would align with search-engine functionality.
- The Council of Australian University Librarians (CAUL) and Open Access Australasia believe that the model would reinforce problematic academic publishing business models. They are calling for a multifaceted approach that would include investment in institutional repositories and new scholar-led publishing initiatives.

## Comment from the Chief Scientist

Other models for open access are based on the premise that the academic publishing system needs to be dismantled. Options for replacing the current system are largely variations on a theme: replicating or duplicating the current system but without the benefits – the checks and balances that protect research quality and integrity and data storage.

In a world where misinformation and disinformation is rapidly increasing and predatory scientific journals are flourishing, we cannot risk losing the well-established and effective peer review process that is delivered through the current publishers.

However, we can get achieve value for money from publishers for a similar level of investment by negotiating national agreements with publishers.

> Kate Pounder, former CEO, Technology Council of Australia
>
> Democratising access to knowledge is **particularly important for firms without the capacity to pay high costs to access databases or subscription journals**, such as young firms, and firms in areas without easy access to research institutions, such as regional Australia.

> Professor Meredith Makeham, GP Academic at the University of Sydney Royal Australian College of GPs Expert Committee member
>
> Free access to scientific literature would be **welcomed by GPs and other healthcare professionals** so that they can be better equipped to deliver safe, high quality and well-informed care. And it would also empower people to take a more active and educated role in managing their own health and wellbeing.

> Dr Sarah Oxenbridge, Senior Policy Analyst The Smith Family
>
> We're highly reliant on academic research on a day-to-day basis – but at the moment, we only have partial access to research publications due to the journal pricing models.
>
> There are articles we need, but we can't access due to cost – and because we're not for profit, **we can't justify paying $130 for a pdf of an article that, on reading, might not be useful to us.**

> Katherine Deveny, CEO, Consumers Health Forum
>
> Your work advising government on the benefits of an open access model to academic journals is **a step in the right direction towards health consumers having evidence-based information** to build their knowledge and help counter misinformation.

MONASH University

13 July 2023

Dr Catherine P. Foley
Australia's Chief Scientist
Office of the Chief Scientist
Level 6, 10 Binara Street
Canberra ACT 2601

Dear Dr Foley,

**Open access and national agreements with scholarly publishers**

I write to express support for your proposal for national agreements with scholarly publishers, enabling open access publishing for all Australian researchers and extending read access to currently paywalled content to all Australians.

Monash University is committed to the principle of open access. To date, our efforts have been led through the Council of University Librarians (CAUL). CAUL now has 22 open access agreements in place, including agreements with Elsevier, Wiley, Springer Nature, and Taylor and Francis. These agreements will enable more than 20,000 papers authored by Australian researchers to be published open access this year.

In developing a national approach to open access, it will be important to build on arrangements such as those negotiated by CAUL, and ensure that it does not impose additional costs on the university sector. The Monash University Library, Mr Bob Gerrity, currently leads CAUL's Content Procurement Committee and is happy to speak with you and your office about models for taking a national approach to open access.

Yours sincerely,

**Professor Margaret Gardner AC**
President and Vice-Chancellor

CC: Bob Gerrity, University Librarian, Monash University

**Professor Margaret Gardner AC**
President and Vice-Chancellor
Chancellery, 27 Chancellors Walk, Clayton Campus
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monash.edu

CRICOS Provider 00008C
ABN 12 377 614 012

Monday 2 December 2024

Dr Cathy Foley
The Chief Scientist
Office of the Chief Scientist
GPO Box 2013,
Canberra ACT 2601

By email cathy.foley@chiefscientist.gov.au
Cc amy.phillips@chiefscientist.gov.au

Dear Dr Foley

**Publisher Support for a Public Access Scheme for Journals and Research**

On behalf of the APA (Australian Publishers Association) and STM (International Association of Scientific, Technical, and Medical Publishers), we express our ongoing support for the aims and general direction of your proposed Public Access Scheme for journal outputs and other research.

Ensuring equitable access to research outputs is a goal shared by most publishers and researchers. We particularly welcome your understanding that this is best achieved through a model that sustains the vitality of the diverse publishing and research ecosystem.

We thank you for your continued leadership in advancing a framework that balances the accessibility of high-quality research with the sustainability of the publishing ecosystem.

We have closely followed stakeholder responses to your ideas and note the importance of ensuring that this scheme receives the continued attention of the Office of the Chief Scientist after your tenure concludes. We understand that your proposal will be submitted to the Strategic Examination of Research and Development whose panel and terms of reference were released today. We hope for continued dialogue with the publishing community through our representative organizations, APA and STM.

OCS staff should not hesitate to contact us if we can provide specific insights or assistance. We look forward to continuing our constructive and collaborative engagement to advance our shared goal of supporting an open research ecosystem in Australia and beyond.

Thank you for your dedication to enhancing Australia's leadership in research and innovation.

Warm regards,

**Mark Robertson**
**APAC Consultant**
STM (International Association of Scientific, Technical, and Medical Publishers)
Email: robertson@stm-assoc.org

**Dr Stuart Glover**
**Head of Policy**
Australian Publishers Association (APA)
Email: stuart.glover@publishers.asn.au
60/89 Jones Street
Ultimo NSW 2007

Consumers Health Forum of Australia

Dr Cathy Foley AO PSM
Australia's Chief Scientist
10 Binara Street
Canberra City ACT 2601
Australia
Email: secretariat@iisa.gov.au

6 November 2024

Dear Dr Foley,

A Letter of Thanks

With your appointment as Chief Scientist coming to a close, on behalf of the Consumers Health Forum of Australia (CHF) I wanted to thank for the work and leadership you have shown in your time as Australia's Chief Scientist.

Your work advising government on the benefits of an open access model to academic journals is a step in the right direction towards health consumers having evidence-based information to build their knowledge and help counter misinformation.

The creation of the *Quantum Meets* series is a great example of where Australia's science community can work with other sectors to create solutions to some of our country's most pressing problems. The series has become an important way for organisations such as CHF to engage with Australia's science sector and is a clear example of your influence and legacy. I wanted to thank you for the opportunity to present and attend the *Quantum Meets Healthcare* workshop. The day brought to light the impact that emerging technologies will have on consumers, which I am grateful for.

On a more personal note, I have appreciated your strategic thinking within the role and your focus on ensuring that the government is paying attention to research, more so within healthcare. I wish you all the best in your next endeavour and hope that your successor will share your goal and passion of advancing science in the names of all Australians.

Yours sincerely,

Elizabeth Deveny MEd PhD
Chief Executive Officer
Consumers Health Forum
E: ceo@chf.org.au

National and State Libraries Australasia

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Dr Cathy Foley, Chief Scientist of the Commonwealth of Australia
C/- Office of the Chief Scientist
GPO Box 2013, Canberra
ACT 2601 AUSTRALIA

Monday, 16 December 2024

Dear Dr Foley,

On behalf of the Directors of National and State Libraries Australasia (NSLA) Inc., I write to congratulate you on the release of your *Advice on open access models: Unlocking knowledge for national benefit*, and to convey NSLA's in-principle support for the public access model that you have proposed to address the challenge of ensuring access by Australians to the world's research literature.

Australia's national, state and territory librarians are entrusted with the custodianship of Australia's documentary heritage, which NSLA's member libraries collect under mandates of legal deposit. With these shared mandates, NSLA members have been collaborating for more than fifty years to advance our libraries and to drive positive, respectful change for the benefit of Australians and New Zealanders. NSLA's patron is Her Excellency Ms Sam Mostyn AC, Governor-General of the Commonwealth of Australia.

At a recent meeting of the Board, NSLA's Directors discussed your advice to Government, and more broadly the relationship between information access and a strong, functioning democracy. As executives in the information sector, the Board acknowledged that one consequence of citizens being unable to access reliable information in existing conditions will be an increase in rates of subscription to the less reliable, or unreliable, information that is readily available to them; this has been identified in the recent *International Federation of Library Associations (IFLA) Trend Report 2024*.[1]

NSLA endorses the recommendations that you have made to Government, namely that (i) the Australian Government should develop and implement a strategy to maximise access to academic journals for the Australian community, and (ii) The Government should undertake further analysis to develop the preferred model that will deliver the greatest benefit for Australia, from both an economic and social perspective. To this second endorsement, NSLA adds its in-principle support for the public access model that you have proposed, as well as the professional conviction that maximising access by Australians to the world's knowledge is a foundation of our institutions, which have always had a responsibility and concern for enabling informed and inclusive communities.

NSLA welcomes the opportunity to work further with the Office of the Chief Scientist and with the Government to maximise access to the world's research literature for the Australian community.

Yours faithfully,

**Dr Simon Polson**
Executive Director, National and State Libraries Australasia (NSLA) Inc.

CC: Paula Perrett, Amy Phillips, Riana Yeates (Office of the Chief Scientist).

[1] Dezuanni, M., Osman, K. Burton, A. & Heck, E. (2024) *IFLA Trend Report 2024: Facing the future of information with confidence: Phase 2*. Brisbane: Digital Media Research Centre. https://repository.ifla.org/handle/20.500.14598/3496. See especially Trends 1 and 2.

अजय के. सूद
भारत सरकार के प्रमुख वैज्ञानिक सलाहकार
**Ajay K. Sood**
Principal Scientific Adviser to the Govt. of India

सत्यमेव जयते

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office-psa@nic.in
Website : www.psa.gov.in

F.No.Prn.SA/PSA/O-65/2024
Dated : 16th December, 2024

Dear Cathy,

It has been an absolute pleasure engaging with you during your tenure as Chief Scientist of Australia. I extend my heartfelt gratitude for your unwavering support and dedicated efforts in strengthening the India-Australia scientific partnership. My Office and I have greatly valued the opportunity to collaborate with you, particularly during India's G20 Presidency. Your significant contributions to the Chief Science Advisers' Roundtable (CSAR) initiative are deeply appreciated.

You have been a steadfast advocate for sustainable open access in Australia, making substantial contributions to global open access efforts. I am delighted to share that the Union Cabinet of India has recently approved the One Nation One Subscription (ONOS) scheme, which is set to enhance access to scholarly scientific knowledge by 170% across the country—a milestone that reflects shared aspirations in democratizing knowledge.

I also cherish our productive engagements through QUAD initiatives, especially the Quad Centre of Excellence on Quantum Information Sciences (Quad CoE-QIS). I firmly believe that these pioneering collaborations in Quantum Technologies will significantly bolster both national and global competitiveness in this critical field.

Thank you once again for your thoughtful attention to India-Australia partnerships throughout your impactful tenure. I look forward to continuing our association and fostering deeper collaborations.

Wishing you every success in your future endeavors.

**With warmest regards,**

**Yours sincerely,**

Ajay Sood
**(Ajay K. Sood)**

Dr. Cathy Foley
Chief Scientist of Australia

**9 October 2024**

# A multi-faceted open access model for Australia

Open Access Australasia (OAA) and the Council of Australian University Librarians (CAUL) and are fully committed to the Chief Scientist's goal of providing access to research output for Australians. However, both organisations propose that this goal will be most effectively achieved through a comprehensive, multi-faceted open access strategy rather than the public access model in isolation. If combined with other strategies designed to maximise author choice and protect author rights, as well as strengthen our national negotiating position, the public access model could become the cornerstone of an ambitious and effective national open access framework. Both CAUL and OAA believe a more comprehensive strategy will enable Australia to take a global leadership position – providing all Australians with the rights to read and publish openly, while also aligning with global efforts to create a more equitable and sustainable publishing eco-system for the future.

## A multi-faceted open access model

The following model articulates what a multi-faceted open access model might look like. It outlines three broad approaches, with specific strategies for each, and articulates what would be required of the government to pursue each approach. Elements of the model are unpacked below the table, where further detail is required.

| **Strategy and tactics** | **1. Pursue national agreements with major publishers to maximise read and publish access for all Australians** | | **2. Protect Australian authors' rights to their research outputs to maximise choice of publication venue and re-use** | | **3. Advance Australian scholar-led publishing initiatives to nurture bibliodiversity** | |
|---|---|---|---|---|---|---|
| | **1A Pilot the 'public access' model with transformative agreements with a subset of publishers, negotiated by CAUL** | **1B Pilot new agreements with fully open publishers** | **2A Protect authors' rights through strengthened and aligned publisher mandates** | **2B Capitalise on existing repository infrastructure through national infrastructure for discovery of repository-based content** | **3A Support small for-profit publishers and society publishers to flip to open access through infrastructure and support services** | **3B Nurture diamond open access through national infrastructure for discovery of open journal content** |
| **Rationale** | Rather than attempting to negotiate new national agreements with publishers of all sizes, a more strategic | There is a need to negotiate agreements for full open access venues. Transformative agreements | Rights retention is critical to ensuring works published behind a paywall can be made available via | Institutional repositories are required to ensure:<br>• Open access to Author Accepted Manuscripts | Negotiating agreements with the long tail of small for-profit and society publishers, many of whom are not | Diamond open access is an important element in ensuring a diverse publishing ecosystem that is scholar- |

| | | | | | | |
|---|---|---|---|---|---|---|
| | approach would be to pilot the 'public access' model with a subset of publishers - ideally three or four of the major publishers with whom CAUL has existing agreements, and/or those with which CAUL currently has uncapped agreements - by expanding current CAUL agreements to cover the rest of the country. It may also be useful to pilot an agreement with a publisher with which CAUL does not currently have a read and publish agreement (e.g. IEEE) as a test case for negotiating a new agreement. This model would be the most efficient means of expanding read access and allow the government to leverage CAUL's relationships and existing agreements for national benefit. The CAUL consortium already includes non-university participants and this could be expanded.<br><br>* Please see expanded rationale below table. | are only one agreement model that facilitate open access publishing. There are a myriad of current publishing and subscription models in the open space that fall outside of the current commercial hybrid arrangements. Examples include: SCOAP3, PLOS suite, Subscribe to Open, Frontiers. | institutional repositories.<br><br>See outcomes from the ARC funded research project: Managing Ownership of Copyright in Research Publications to Increase the Public Benefits from Research | (AAMs) of publications that are not published direct to OA. This is critical for visibility of Australian research globally and to ensure that any content published behind a paywall where there isn't a public access agreement in place is still accessible to the Australian public.<br>● Capability to provide open access before an open access publishing agreement is reached or where there is failure to reach a negotiated agreement.<br>● Open access to non-traditional research outputs (NTROs).<br>● A complete local record of research output.<br>● Academic freedom about choice of publication venue by providing an alternative means to make publications open. | making substantial profits from their journals, will be an enormous task. Rather than investing considerable resources in negotiating with these small publishers, many of whom may not be in a position to have informed conversations about open access agreements. Many of these publishers will require support to change their business models, available through initiatives for society journals and be supported to flip their business models to open access. | led. National infrastructure to support discovery of diamond journals, and development and support for open journals, would ensure the longevity of diamond publishing. |
| **What's required from the government** | ● Government and stakeholder representation and participation in expanded CAUL negotiation team.<br>● Government (and potentially other stakeholders) to join the CAUL Consortium. | | Strengthened funder mandates on rights retention from government funders at all levels. The NHMRC Open Access Policy is an excellent starting point. International experience in the open access environment has demonstrated that effective mandates include a | ● Investment in connecting existing institutional repositories through federated search to improve discoverability.<br>● A sector-wide system for managing retractions and other integrity updates, which is needed regardless of whether repositories are | Investment in infrastructure and development of support services (which could include a grant program alongside an education program) to support these publishers to flip their business models. | ● Investment in connecting existing diamond journals through federated search to improve discoverability. Examples of similar activities include DIAMAS, which aims to 'deliver an aligned, high-quality, and sustainable institutional |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | | compliance component and ramifications for lack of compliance. Aligning mandates across different funding organisations reduces confusion and increases compliance due to clearly defined expectations. | part of an open access strategy. There are possibilities within existing systems that could be built on to facilitate this. For example, Retraction Watch.<br><br>Examples of existing mechanisms for consolidating academic material held in repositories:<br>● COAR Notify<br>● UK's CORE<br>● Dutch BASE | | OA scholarly publication ecosystem for the ERA [European Research Area]'. See also the Directory of Open Access Journals subset of Australian journals.<br>● Investment in national open journal infrastructure and support services to nurture new diamond journals. CAUL's Open Educational Resources Collective does something similar for open textbooks. |
| **What's required from other stakeholders** | NSLA and health libraries' participation in expanded negotiation team | | Strengthened open access policies mandating rights retention | | Commitment from publishers to engage in the program | Buy-in from institutions with open journal infrastructure |
| **Funding** | ● Organisations with existing agreements join the CAUL Consortium and redirect current spend through the Consortium<br>● Additional funding may be required, pending formal commercial negotiation discussions with publishers | ● Organisations with existing agreements join the CAUL Consortium and redirect current spend through the Consortium<br>● Additional funding may be required, pending formal commercial negotiation discussions with publishers | | Funding for a project to establish a federated search layer for existing repositories. | Funding for infrastructure, grants and support services (shared with strategy 3b). | ● Funding for a project to establish a federated search layer for diamond journals.<br>● Funding for national open journal infrastructure (shared with strategy 3a). |
| **Other options for government action** | | | There are also examples internationally where copyright law reform has resulted in a mandate for secondary publishing rights for publicly funded research, including the Netherlands. See: Secondary publishing rights in Europe. | In the longer term, there is a need for renewed and ongoing investment in repository infrastructure. | | |

## * Expanded rationale and explanation for: 1a: Pursue national agreements with major publishers to maximise read and publish access

The CAUL consortium already includes non-university members, including CSIRO, Australian Nuclear Science and Technology Organisation, AgResearch and Defence Science and Technology Group, among others, and is in active discussions with potential new Consortium participants from different sectors who are interested in joining CAUL's read and publish agreements. CAUL is progressing plans to expand its negotiation team to include senior sector stakeholders. This could quickly be expanded further to take a fully national approach.

The pilot could be used to test:

- Whether it is possible to negotiate uncapped agreements with no additional cost beyond the current national spend
- Publisher willingness to work with various authentication options
- Public appetite for access via analysis of usage data (used to inform future negotiations).

A pilot approach with CAUL leading negotiations has numerous benefits, including:

- It will allow the model to be explored without the overhead of setting up a separate agency to administer agreements.
- Transformative agreements are an interim measure, not an end goal, and piloting in this way would mean the public access model could be pursued without investing in establishing an agency that will ideally no longer be required within the next decade.
- It will allow the government to leverage CAUL's experience with negotiating and administering open access agreements. The administrative load associated with administering these agreements must not be underestimated. Even if agreements are uncapped, there will need to be a process for checking credentials and eligibility to publish, and CAUL's experience is that this generates a significant volume of work.
- It minimises the risk to institutions that already have agreements in place, in terms of continuity of access.
- It situates the work with the academy, which is the largest stakeholder group and the group that contributes the most free labour to current scholarly publishing models, and is therefore the best positioned to negotiate.
- It will provide Australians with access to a significant portion of Australian and international publishing output.

For this to be a viable option that supports a transition to open publishing and realises maximum benefit for Australians:

- The agreements must be truly transformative (e.g. actively progress towards a flip to a fully open access model, while maintaining public transparency in costing). CAUL and OAA would welcome a conversation about the future we are hoping to see. Internationally, there are emerging conversations about whether a transformative agreement approach is the best option.
- The agreements must allow authors to retain rights.
- Public access should be mediated via libraries, not MyGov.

# A pragmatic way forward

While CAUL and OAA believe a multi-faceted open access model, combining all of the strategies listed in this paper, would be the most effective way to increase public access to research outputs while simultaneously advancing the broader open access agenda, both organisations understand that this approach may not be supported at the current juncture due to the financial climate and the investment that the multi-faceted model requires from the government.

CAUL and OAA suggest that a pragmatic approach would be to move forward with a multi-faceted open access model that is reduced in scope, encompassing:

- Part 1: Pursue national agreements with major publishers to maximise read and publish access for all Australians
    - 1A Pilot the 'public access' model with transformative agreements with a subset of publishers, negotiated by CAUL
    - 1B Pilot new agreements with fully open publishers (potentially as a phase 2)
- Part 2: Protect Australian authors' rights to their research outputs to maximise choice of publication venue and re-use
    - 2A Protect authors' rights through strengthened and aligned p funder mandates.

CAUL and OAA make the following recommendations for implementation of 1A, 1B and 2A:

1. The public access model should be pursued as a pilot, beginning with a small number of agreements.
2. The public access model pilot should use the existing CAUL Consortium, with expanded participation, to negotiate agreements. We see this as critical to success because it will allow the initiative to leverage off existing agreements and reduce the overheads associated with establishing an agency to run a pilot. It is also critical because it will ensure continuity in read and publish access for higher education, which is the largest stakeholder and has the most to lose if access is interrupted.
3. The public access model should be mediated via libraries, not through MyGov. Libraries are best placed to manage authentication and support the public in finding, analysing and applying research outputs.
4. If access is mediated through IP geofencing, this must be as part of a dual access model that allows libraries (including university, TAFE, school, state, public, government departments, law courts, etc. libraries) to mediate access for their users. This is critical to ensuring continuity of access, including for Australians who are offshore or who use a VPN to access the internet.
5. The public access model must negotiate truly transformative agreements and these agreements must protect author rights.
6. There must be a component to the model that advances rights retention, we suggest through strengthened and aligned funder mandates (strategy 2A).

**About Open Access Australasia**

Open Access Australasia is a membership organisation of 20 Australian university libraries, all 8 New Zealand university libraries through the Council of New Zealand University Librarians, Creative Commons Australia, Tohatoha Aotearoa Commons, the Australian Library and Information Association (ALIA), National and State Libraries Australasia (NSLA), Australian Citizen Science Association, Australian Digital Alliance (ADA) and Wikimedia Australia. Its mission is to attain open access to research in Australia and New Zealand through advocacy, collaboration, awareness, and capacity building across the Australian and New Zealand research sectors. oaaustralasia.org

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**About the Council of Australian University Librarians**

The Council of Australian University Librarians is the peak leadership organisation for university libraries in Australia and Aotearoa New Zealand. CAUL members are the University Librarians or equivalent of the 39 institutions that have representation on Universities Australia and the eight members of the Council of New Zealand University Librarians (CONZUL). CAUL makes a significant contribution to higher education strategy, policy and outcomes through a commitment to a shared purpose: To transform how people experience knowledge – how it can be discovered, used and shared. CAUL's vision is that society is transformed through the power of research, teaching and learning. University libraries are essential knowledge and information infrastructures that enable student achievement and research excellence. CAUL has strategic programs of work that include aims to advance open scholarship and open educational resources. CAUL is also committed to progressing the open access agenda through strategic procurement activities as part of the CAUL Consortium. www.caul.edu.au

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