



Monitoring and evaluating the effectiveness of UKRI's open access policy

Principles, opportunities and challenges

Prepared on behalf of UK Research and Innovation

September 2023

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Open access glossary

The glossary below is not intended to cover all facets of open access. It provides definitions for a small set of key terms that are used throughout this report, building on previous documents released or referenced by UKRI.

| Term | Definition |
|---------------------------------|--|
| Article Processing Charge (APC) | A fee paid to publishers, to publish a research article immediately open access. |
| Book Processing Charge (BPC) | A fee paid to publishers to publish a long-form output immediately open access. |
| Gold open access | Published, peer-reviewed outputs arising from research are freely accessible at the point of publication, often accompanied by Article Processing Charges (APCs) levied on article authors. Publications with no APCs are known as diamond OA. Gold open access is referred to as Route 1 in UKRI's OA policy. |
| Green open access | Accepted manuscripts arising from research are posted to a public institutional or subject repository after peer-review. Green open access is referred to as Route 2 in UKRI's OA policy. |
| Hybrid open access | In hybrid journals, research authors have the option of paying APCs to make individual articles open access, while the journal also receives subscription revenues from libraries and other institutions. |
| Transitional agreements (TAs) | Transitional agreements are contracts which gradually shift the basis of payments from an institution to a publisher from subscription-based reading to open access publishing services in a controlled manner. |

Sources

Economic implications and benefits of updated UKRI open access policy - <https://www.ukri.org/publications/economic-implications-and-benefits-of-updated-ukri-open-access-policy/>

UKRI Open Access Policy - https://www.ukri.org/wp-content/uploads/2022/07/UKRI-28072022-Final_UKRI-Open-Access-Policy_Version-1.5_July-2022.pdf

Working with transitional agreements - <https://www.jisc.ac.uk/full-guide/working-with-transitional-agreements>

1. Introduction

This report sets out principles, opportunities and challenges for the development of a monitoring and evaluation framework for UK Research and Innovation's open access (OA) policy. In this section we provide definitions for monitoring and evaluation activities, including the range of different types of evaluation that UKRI may consider. We also comment on a range of parallel areas (e.g. integrity, bureaucracy) that have an impact on future monitoring and evaluation efforts by UKRI.

1.1 Project background

Background

UK Research & Innovation (UKRI) commissioned Research Consulting to support the development of its monitoring and evaluation (M&E) framework for its open access (OA) policy. The framework seeks to enable UKRI and the broader sector to assess progress towards OA, including levels of compliance with the UKRI policy and impacts on research stakeholders and society more broadly. M&E efforts are in line with UKRI's commitment to assess critically the effectiveness and impact of its policy requirements, as well as demonstrating accountability and value for money from public spending, in the case of both articles and long-form outputs. UKRI is also committed to working collaboratively with stakeholders in the development and implementation of both the OA policy and the M&E framework.

It should be noted that the present report presents Research Consulting's recommendations, which will be considered by UKRI in the development of its final M&E framework.

Acknowledgements

We gratefully acknowledge:

- The guidance and support received from UKRI over the course of this project, including Amira Burshan, Anisha Ahmed, Claire Symeonides, Joanna Jacklin, Rachel Bruce and Sara Ball (Table A1, Appendix 1, p.47).
- The advice of the UKRI review group including the above individuals as well as Eleanor Symonds, Emma Devine, Melissa Di-Lella, Michael Lee, Rosie Cornelius and Sarah Dimbleby (Table A2, Appendix 1, p.47).
- The insights provided by representatives of UKRI research councils as well as UKRI Strategy (Table A3, Appendix 1, p.47).
- The individuals listed in Table A4 (Appendix 1, p.47), who contributed to this work via interviews, focus groups and/or our discussion workshop.

1.2 Monitoring and evaluation at UKRI

Definitions and terminology

As a whole, M&E can be described as a “**continuous management function to assess if progress is made in achieving expected results, to spot bottlenecks in implementation and to highlight whether there are any unintended effects (positive or negative) from a**

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programme or project and its activities.” It is however important to appreciate the differences in scope and timing between monitoring and evaluation, which the following excerpt from the UK Government's Green Book clarifies:

- Monitoring is the collection of data, both during and after implementation to improve current and future decision making.
- Evaluation is the systematic assessment of an intervention's design, implementation and outcomes.
- Both monitoring and evaluation should be considered before, during and after implementation.

We note that a review stage often follows monitoring and evaluation, and this involves the assessment of whether change is needed after reviewing the results of an evaluation. Information from monitoring may also prompt a review of a small area of a policy, but a substantial review can only take place once a fuller evaluation has been completed.

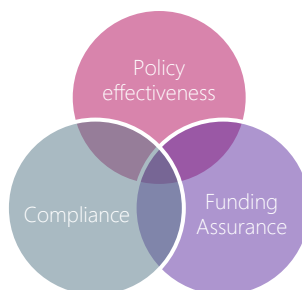
It is also helpful to differentiate between types of evaluations, as discussed in the Magenta Book:

- Process evaluations aim to assess what can be learned from how an intervention was delivered.
- Impact evaluations focus on the changes and measurable achievements that contribute to the objectives of the intervention.
- Value-for-money evaluations consider whether an intervention was the most effective use of resources.

Monitoring and evaluation in a UKRI context

To inform the development of the latest iteration of its OA policy, UKRI undertook an extensive review. An outcome of this process was the decision to develop a monitoring and evaluation framework. Monitoring and evaluation, when applied to a large funder, naturally touches on a wide range of organisational functions. Figure 1 below shows the three main areas that UKRI's final M&E framework will seek to cover: policy effectiveness, compliance and funding assurance. Our work mainly engaged stakeholders to provide input on policy effectiveness. The recommended approach for UKRI's OA policy is an impact evaluation looking to describe and measure changes in publishing practices that can be attributed to the intervention (see the definition above and section 4.2, p.30).

Figure 1. Facets of M&E for UKRI's OA policy.



We highlight the following considerations in developing the final M&E framework, building on Figure 1 and the three types of evaluations described in the previous paragraph:

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- Funding assurance is the subject of [ongoing efforts by UKRI](#), to better understand how OA spend is managed and how organisations can demonstrate they have the appropriate processes in place to ensure spend is compliant with the terms and conditions of UKRI OA block grant awards.
- We have not recommended that UKRI pursue *formal* analysis of value-for-money (e.g. cost benefit analysis) due to the difficulty of implementing this in a complex and multi-stakeholder policy setting (including the excessive methodological and practical burden of doing so) and the fact that other work has previously focused on this (e.g. the report [Economic implications and benefits assessment of an updated UKRI open access policy for peer-reviewed research articles](#)). However, some informal assessment of value-for-money is considered in a range of M&E questions, to support the development of a contribution analysis narrative (see section 4.2).
- Whilst some features of policy compliance are addressed by the recommended M&E questions, how this is operationalised including actions to address non-compliance were considered to be beyond our scope of work. Additionally, we note that contributors showed a strong preference for constructive and positive policy compliance engagement. Regarding non-compliance, UKRI highlighted that it will only act where there is clear evidence that a research organisation has disregarded its obligations under the policy e.g. where there is a pattern of repeated or extensive non-compliance or evidence of research organisations not supporting researchers adequately. In such situations, UKRI may contact the research organisation to find a solution to help the organisation comply with the policy. UKRI's usual practice is that any associated measures will be graduated and aim to support research organisations to address compliance issues.
- In terms of reporting requirements for research organisations, UKRI has noted that it does not expect any requirements other than standard funding assurance processes. This is because the work undertaken so far suggests that monitoring of policy compliance can be done using existing data sources.

Some of our recommended M&E questions do cover process evaluation, but this is done in a qualitative, narrative way and is not the core aim of the approach given that UKRI seeks to minimise burdens. Should UKRI wish to gauge a more holistic picture of the entire policy process and further investigate lessons learned from the delivery of the intervention, we would recommend setting up a dedicated exercise (keeping in mind the potential burdens and assessing whether these would be reasonable and proportionate).

Minimising research bureaucracy

We note that M&E efforts around UKRI's OA policy will need to take into account the findings of the [Review of research bureaucracy](#). This affects the extent to which UKRI may decide to ask research performing organisations to provide input into answering M&E questions.

In principle, UKRI should seek to require the minimum necessary administrative effort and associated data in order to deliver the public value sought, rather than aiming to gather as much data as possible. To ensure connectivity with the bureaucracy review, the review lead, Adam Tickell, has been consulted as part of this project.

Building on the above considerations, we have sought to ensure that the shortlisted M&E questions can in a large part be answered by the use of existing databases and data sources, and only where strictly required consider dedicated input from the research community. This has been achieved by recommending the use of existing engagement

channels and stakeholder groups as far as possible when qualitative investigation is required, and by focusing on a subset of well-scoped open-ended research questions (see Annex A). Consequently, we expect that UKRI will not need significant input from stakeholders for the calculation or development of M&E results and will be well-placed to take the lead on analysis based on the existing bibliometric infrastructure.

1.3 Policy context

UKRI's OA policy

UKRI's OA policy was announced in August 2021 following consultation with the sector. It covers articles and long-form outputs, with a set of specific requirements around routes to OA, technical requirements, licensing conditions and funding models (Figure 2, p.10). The most prominent requirements are immediate OA for all UKRI-funded articles (from April 2022) and OA within 12 months of publication for long-form outputs (from January 2024). Furthermore, we note that UKRI is currently working on the practical implementation of the policy for long-form outputs including the funding mechanism, which means our recommendations should be reviewed once the full guidance is made available.

The stakeholders consulted as part of this project all had high awareness of the requirements in UKRI's OA policy, including that this is aligned with cOAlition S requirements and, as such, shares similarities with other national and international funder policies.

In relation to research articles, for the sake of convenience, this report uses the broadly understood terms 'gold' and 'green' OA, although UKRI's OA policy and block grant conditions label them as routes one and two, respectively.

Building on the OA policy's logic model (M&E results framework)

UKRI developed a logic model for the policy (presented in summary form in Appendix 2, p.50), outlining UKRI's commitments as well as expected effects in the short, medium and long term. In this project, we show how the logic model can be considered as the results framework for M&E questions, meaning that each question is mapped to one or more areas in the logic model (see Annex A for the detailed mapping of questions to the logic model).

By aligning our work with the logic model, we aimed to ensure that UKRI's M&E efforts are in line with the strategy and commitments made when preparing the OA policy. This, in turn, is expected to inform evaluation and review activities that are pertinent to UKRI's ongoing efforts and will yield actionable insights.

It should be noted that the logic model is currently in draft form and may undergo further changes and refinement.

Other relevant policies and initiatives

Although this project focused on UKRI's OA policy, we acknowledge that work is ongoing on a range of other topics which contribute to elements of the logic model. In particular, we note that UKRI's work in the following areas is likely to be relevant to M&E questions:

- Equality, diversity and inclusion (EDI) strategy and OA policy Equality Impact Assessment
- Open data sharing and adoption of FAIR principles
- Research and innovation culture

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- Research integrity and relevant work of the independent UK Committee on Research Integrity (UK CORI)
- Research reproducibility
- Responsible research assessment including UKRI's support for the San Francisco Declaration on Research Assessment (DORA)
- Technical requirements enabling the implementation of the OA policy

As a result, we recommend that relevant UKRI staff are consulted to inform the finalisation of the M&E framework, and that they should be particularly involved in piloting qualitative questions, to ensure alignment between UKRI activities and, potentially, to inform M&E in areas beyond OA.

We also highlight that efforts to monitor and evaluate the impact of UKRI's OA policy will contribute to increasingly widespread efforts in the domain of 'research on research'. This growing international agenda touches on monitoring and evaluation as well as on related areas such as research culture, research(er) assessment, which UKRI is actively investigating or supporting (see bullets above).

Finally, we note that UKRI works in close collaboration with the National Institute of Health Research (NIHR), the Department of Health and Social Care (DHSC), the Foreign Commonwealth and Development Office (FCDO) and other public bodies. Touch points with these organisations should be considered as appropriate, to ensure coherent action.

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Figure 2. High-level summary of UKRI's OA policy.

| | Scope | Routes | Deposit requirements | Licensing | Funding |
|------------------------|--|--|--|---|--|
| Articles | Articles including reviews and conference proceedings submitted on or after 1 April 2022 | <ol style="list-style-type: none"> 1. Publish the article OA in a journal or publishing platform which makes the Version of Record immediately open access via its website 2. Publish the article in a subscription journal and deposit the Accepted Manuscript (or Version of Record, where permitted) in an institutional or subject repository at the time of publication | <ul style="list-style-type: none"> • Embargos are not permitted • Data Access Statements are required regardless of data availability • Biomedical research articles that acknowledge MRC or BBSRC funding must be archived in Europe PubMed Central • Technical requirements must be met by platforms (e.g. PIDs, metadata, ISSN, citations data, preservation) | <ul style="list-style-type: none"> • In most cases: Creative Commons Attribution (CC BY) licence • Exception 1: Open Government Licence (OGL), when an article is subject to Crown Copyright • Exception 2: More restrictive Creative Commons Attribution No-derivatives licence, on a case by case basis | <ul style="list-style-type: none"> • UKRI open access block grant • Cannot use funds to publish in a 'hybrid' journal not part of a Jisc-approved transitional agreement |
| Long-form publications | Monographs, book chapters and edited collections published on or after 1 January 2024 | Make the Version of Record or the Accepted Manuscript free to view and download within 12 months of publication, via an online publication platform, publishers' website, or institutional or subject repository | <ul style="list-style-type: none"> • The open access version should include, where possible, any images, illustrations, tables and other supporting content • Where an Accepted Manuscript is deposited, it should be clear that this is not the final published version • Metadata and PIDs are encouraged but not required | <ul style="list-style-type: none"> • Creative Commons Attribution (CC BY) licence is preferred • Other Creative Commons licences are permitted • Exception: Open Government Licence (OGL), when a publication is subject to Crown Copyright • It is recognised that in some cases it won't be possible to license third-party materials, making OA not viable | UKRI will provide a dedicated open access fund for monographs, book chapters and edited collections from January 2024 |
| Preprints | No firm requirements, but encouraged | | <ul style="list-style-type: none"> • MRC and BBSRC have dedicated policies on preprints (strong encouragement) • UKRI reserves the right to ensure the use of preprints in the context of emergencies | | |

2. Methodology

This section provides an overview of the methodology, which was based on a double diamond design thinking approach. We outline the key activities undertaken within each phase of the project and highlight potential limitations on the breadth of our consultation and the validity of the findings and recommendations outlined in this report. Finally, this section sets out the criteria and principles used to shortlist a prioritised set of questions for inclusion in a monitoring and evaluation framework.

2.1 Approach

Methodology

This project took place between August 2022 and August 2023 and followed a **double diamond** design thinking approach (Table 1), including two main phases:

- Phase 1 consisted of a broad stakeholder consultation in the form of semi-structured interviews and focus groups with OA experts (73 contributors, Appendix 1, p.47). The consultation included questions around key areas that would benefit from monitoring and evaluation in future, as well as considering reflection and lessons learned from existing or past monitoring and evaluation exercises. The experts involved in interviews and focus groups comprised academics, including those with specific research interests or policy development experience relating to OA; professional services within research performing organisations; publishers; and research funders. The stakeholder consultation took place alongside in-depth desk research investigating existing M&E frameworks and the areas covered by these: this process informed the collection and development of a longlist of over 100 potential M&E questions. A range of criteria, including an assessment of feasibility and resource intensity (see Section 2.2, p.13), were then applied to narrow down the longlist of questions and to summarise the questions and consultation findings in an interim report. This formed the basis for a discussion workshop (20 attendees) and engagement with UKRI's project review group, to validate emerging findings.
- Phase 2 built on the feedback received at the end of phase 1, to prepare the final report and a detailed data specification to inform future M&E efforts. This was achieved via an iterative approach and further consultation with UKRI and interviews (3 additional contributors, Appendix 1, p.47).

Overall, our research revolved around the various facets of UKRI's OA policy (Figure 2, p.10) and logic model (Appendix 2, p.50), but also explored other areas of the OA landscape, building on stakeholder views and desk research.

In designing the recommended M&E approach, we considered the guidance and principles included in the UK Government's Green and Magenta Books, with particular attention to the evaluation methodologies described as part of Annex A of the Magenta Book. We do, however, acknowledge that the Green and Magenta Books do not consider bibliometric analysis as an assessment methodology, which is essential to monitor and evaluate open access policies. As a result, bibliometric analysis has been recommended as an additional methodology.

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Insights supporting our recommended next steps for the operationalisation of the M&E approach are presented across this report. These are **highlighted in dark blue colour**, and then summarised by theme in section 4.

Choice of data sources to inform M&E efforts

This report sought to assess the feasibility of answering M&E questions via the use of open data sources, in combination with proprietary options only where needed. This aimed to demonstrate that a large number of questions on the open access landscape may, in principle, be answered by the means of open data.

The prioritisation of open data sources pursued as part of this report should not be considered as a formal recommendation to UKRI, as no testing has taken place to date to compare results using different sources. As a result, different mixes of open and/or proprietary data may be most appropriate to answer the M&E questions identified.

At this stage, we hypothesise that a degree of iteration will be required prior to the implementation of the M&E approach to learn more about data sources and so that efficiency, value for money and operational needs can be considered alongside the data collection and analysis options presented in the data specification (Annex A).

In addition, we expect that UKRI will need to assess how OA M&E efforts fit with other ongoing M&E activities and data sources already being used within the organisation, to streamline operations and avoid duplication of effort. As part of this report, we have proposed that the above-mentioned iteration and learning takes the form of a pilot stage (see Figure 5, p.43) prior to the formal launch of data collection and reporting.

Table 1. Project methodology (double diamond approach).

| Design thinking phase | Key activities |
|-----------------------|---|
| Discover | Literature review; Stakeholder engagement; Longlisting of potential M&E questions |
| Design | Shortlisting of M&E questions |
| Interim validation | Validation workshop; UKRI review group meeting |
| Develop | Longlisting of approaches and data sources to answer M&E questions |
| Deliver | Iterative refinement of approaches and data sources; Final reporting and delivery of data specification; Final meeting with UKRI review group |

Limitations

This report is subject to the following limitations:

- Study participants were recruited via convenience sampling, that is, we interviewed stakeholders who were both available and willing to participate (see Appendix 1, p.47).
- Our analysis of qualitative data (literature, interview and focus group transcripts, focus group exercises) is underpinned by thematic coding, which relies on a degree of subjective interpretation.

- Our assessment of feasibility and resource intensity for answering M&E questions is based on our understanding of the sector, data sources, available application programming interfaces (APIs)¹ and ease of aggregating information. We note that this project has not sought to answer M&E questions, and that the practical implementation of the M&E framework is likely to take the form of an iterative process based on emerging findings and ongoing technical developments once the initiative is underway.

Overall, we do not consider these limitations to have a significant effect on the credibility or validity of the findings or recommendations outlined in this report. Steps were taken to mitigate these limitations where possible, for example by extending invitations to participate to a very wide range of stakeholders, with individual and organisational diversity in mind. The third point regarding the iterative implementation of the M&E framework will be a longer-term challenge, which we have endeavoured to anticipate and address in the overall M&E approach and timeline recommended.

Supplementary materials This report provides a summary of the findings arising from the consultation delivered by Research Consulting and is accompanied by two additional outputs:

- A standalone executive summary
- A detailed data specification (Annex A)

2.2 Criteria and principles for prioritisation

A set of criteria was used to shortlist a prioritised set of M&E questions mapped to areas in the logic model

Building on the approaches outlined in the *Magenta Book*, we have sought to gather and subsequently prioritise M&E questions that can inform a *useful, credible, robust* and *proportionate* evaluation in the form of contribution analysis (see section 4.1). These principles refer to building an evaluation approach that:

- meets the requirements of the many stakeholders involved
- is credible and objective
- is robust from a methodological perspective and well executed
- requires an amount of resources that is appropriate for the size of the investment, the potential risks that might arise from the implementation of the intervention, and the expected learning potential from the intervention.

In line with the above principles, and with the addition of further strategic considerations shared by UKRI (e.g. desire to use open data sources), we have proposed criteria to prioritise a set of over 100 questions gathered via the literature and stakeholder engagement. These included:

- prominence of the requirement in the OA policy²

¹ An API is a way for two or more computer programs to communicate with each other. It is a type of software interface, offering a service to other pieces of software.

² This criterion seeks to provide a means to prioritise among the requirements contained in the OA policy. For example, the zero-embargo period or the licensing requirements are seen as a priority for M&E compared to checking whether all UKRI-funded articles have been assigned a digital object identifier or other persistent identifier. This is not to say that the latter requirement is a less important element of the policy, but simply that we consider it to be lower priority for M&E purposes.

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- perceived significance of the question to external stakeholders (based on stakeholder views gathered via interviews and focus groups)
- estimation of feasibility and resource intensity, including reporting burden, data management and collection systems and existing technological infrastructure
- availability of open vs closed data sources
- estimated comprehensiveness and accuracy of data (recommended M&E questions include challenges and caveats identified for potential data sources, with mitigating actions identified to address these)
- balance of monitoring and evaluation questions
- balance of qualitative and quantitative questions

3. Key considerations for monitoring and evaluating the UKRI OA policy

This section provides an overview of stakeholder views gauged as part of our research. A desire to focus on good practice sharing is highlighted, alongside the importance of monitoring the long-form output landscape and sharing M&E results openly. Potential limitations in quantitative data sources are identified and qualitative research is recommended to address the potential unintended consequences (positive or negative) of UKRI's OA policy. M&E approaches adopted by other research funders are reviewed and the potential to monitor financial sustainability within the framework is assessed.

3.1 Scope of the M&E approach

M&E questions should focus on supporting and improving policymaking

M&E is crucial to deliver UKRI's ambition for open access because it provides an evidence base to support effective decision making and is UKRI's means of ensuring the policy delivers on its aims. M&E will enable UKRI to assess progress towards open access, compliance with the policy, as well as the effectiveness of the policy and wider impacts of open access. M&E will also provide evidence to support the accountability for investment of public money.

Contributors supported these aims and **recommended that monitoring efforts focus on positively supporting future policymaking and improving communication, awareness-raising and sharing of best practice**. Equally, they noted that positive feedback about high compliance levels and recognition of successes in broader OA activity could encourage and assist the spread of best practice.

We can confirm that, overall, consultation findings validated UKRI's stated direction of travel for the M&E framework, and that the community appeared supportive of the stated aims. In particular, contributors generally welcomed the consultative approach taken to policy and M&E development and emphasised the importance of a continuing role for co-creation with stakeholders and iteration as the policy is implemented.

"I think anything that is monitored, ought to perhaps be done with a view of communicating back on the positive side of this, rather than being seen as an exercise of compliance." – University library

The framework should explicitly consider OA for long-form outputs and the broader landscape

There was recognition that M&E questions around articles are easier to address compared to long-form outputs or broader trends in the OA landscape. Contributors agreed with UKRI's plan to consider these more complex areas and to assess potential questions even if data sources may be limited. For instance, as shown in Table 2, p.18, some international funders do consider long-form outputs as part of their M&E efforts, indicating that they are seen both as important research outputs and worthy of monitoring.

Differences between institutions, funders and other research stakeholders should be considered

Several contributors mentioned the importance of addressing the diversity of organisations involved in OA publishing, to ensure that findings are inclusive. On the one hand, from the point of view of institutions, contributors mentioned the impact of organisational scale on their ability to publish via OA as well as to collect data on OA. Smaller, less research-intensive research performing organisations are likely to have less resource for supporting OA from internal sources, while larger institutions are likely to have higher quality data about their research outputs, potentially building on more developed current research information systems (CRIS). Small institutions may also rely on a single individual for OA monitoring and compliance, who may also have a number of other responsibilities, reflecting the difficulty of supporting OA workflows with limited funding. In this context, the size of UKRI OA block grant awards (to support the policy for research articles) received by institutions also plays a role, and we note that OA block grant awards vary significantly, reflecting the volume of research activity.

On the other hand, from a publisher perspective, the conversation revolved around the fact that the financial flows in the OA landscape are dominated by a few large companies, but these are not the only actors in this field. The long tail of publishing is comprised of a large number of journal and book publishers, often in niche subjects and with limited resources. There are emerging concerns from smaller publishers (particularly, but not only, in the case of books) that existential issues may arise if funding mechanisms, as well as M&E efforts, are focused on the Book Processing Charge (BPC) and Article Processing Charge (APC) models alone. **It is, therefore, important for M&E questions to cover a variety of funding models and not only focus on the APC and BPC approaches.**

3.2 Practical considerations

It will be essential to provide clear definitions understood by the research community

Among a range of recommendations, contributors confirmed that **terminology and clarity are key requirements (Figure 3, p.17); both research performing organisations and publishers offered to sense-check or test definitions prior to implementation.** We recommend that UKRI take up these offers, to ensure that M&E results are clearly understood by the intended target communities. To enable this, the data specification (Annex A) includes the proposed wording of each M&E question as well as its intended purpose.

Reducing burden and bureaucracy is a priority for stakeholders

Contributors shared similar aims for reduced administrative burdens in reporting. However, perceptions of burdens vary. Established systems at some research-intensive research performing organisations that have previously fed data into UKRI reporting spreadsheets would continue to be used for internal activity monitoring.³

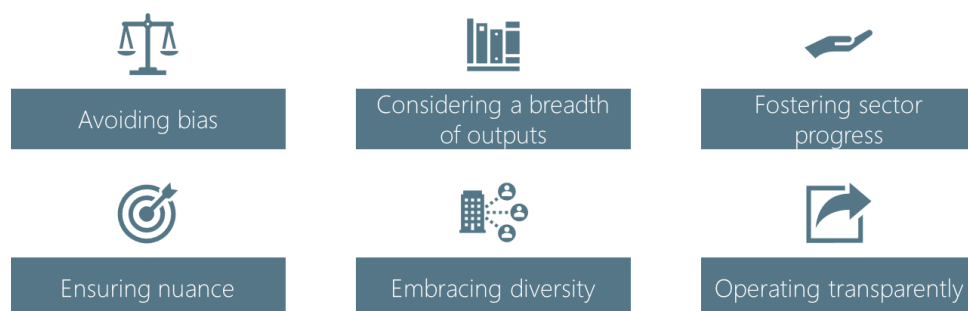
Additionally, the use of Route 2 Licensing statements (also referred to as the green route beyond the UKRI open access policy) and internal OA compliance monitoring are identified as areas of growing administrative burden for research performing organisations. Automated approaches to M&E may place new burdens on small

³ For the RCUK/UKRI OA policy from 2013-2022 ROs submitted spreadsheets to report on OA policy compliance. UKRI has removed this reporting requirement with the new policy.

publishers, to develop a technical infrastructure which integrates with these, as well as requiring new approaches for data-quality checking.

"I think what is very important is clear terminology and clear, simple questions... because there seem to be a lot of instances where people think they're talking about the same thing, but actually have a slightly different understanding of what [question] they're answering." – Publisher

Figure 3.
Recommendations from
the research community.



Current data comes with limitations, which needs to be transparently noted

The data specification (Annex A) sets out challenges and caveats for individual data sources, and provides recommendations for mitigation actions to address issues such as partial or incomplete data or the need to combine different data sources.

Contributors familiar with scholarly communication infrastructure and data sources highlighted the issue of likely imprecision and limitations that may arise if combining different datasets. The combination of datasets is often needed to enrich the analysis of different facets of research outputs, which may be part of different and disconnected data collection efforts. For example, Gateway to Research provides an overview of UKRI-funded outputs, but licensing information on these needs to be sourced externally (e.g. from Unpaywall). As a result, we see the combination of datasets as a key component of UKRI's M&E approach, as existing data sources do not provide a sufficiently rounded picture when considered separately.

"UKRI should be transparent about the weaknesses of existing bibliometric data sources, but also work on the long-term strategy to address these." – University library

The potential for duplication of effort is high and should be carefully mitigated

Contributors commented on the wide range of existing systems and mechanisms that gather different forms of data from institutions, publishers and researchers (e.g. REF, Researchfish, Crossref). There is a clear desire to ensure that UKRI's M&E approach builds on existing efforts and initiatives, which we have reflected in the data specification (Annex A). The potential for overlap with similar M&E exercises run in different countries, or by other funders, is limited, as they tend to focus on specific contexts (Table 2).

In the case of long-form outputs, where the landscape is currently immature, we highlight an opportunity to liaise with other funders as well as relevant international projects to assess potential efficiencies and areas for collaboration (e.g. the [Book Analytics Dashboards \(DIAMAS\)](#), the project '[Policy Alignment of Open Access Monographs in the European Research Area](#)' (PALOMERA), the [OA Books Usage Data Trust](#)).

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"In terms of sharing between [organisation] and UKRI, I would like to see as much cross working and sharing as possible, not only on specific data, but especially on methods to ensure as little duplication of effort as possible." – Research funder

Table 2. M&E approaches by international research funders.

| Region and Funder | Scope | Format | Data sources |
|-------------------------------------|--|---|--|
| Austria, FWF | Journal articles, conference proceedings, book chapters, books | Dataset (record-level data) | Grant reporting via Researchfish, Dimensions |
| European Union, European Commission | Journal articles, conference proceedings, book chapters, books, datasets | Report + dataset (record-level data) | Grant reporting, OpenAIRE, Crossref, DataCite, Unpaywall, OpenAPC, DOAJ, re3data |
| Germany, DFG | Journal articles, conference proceedings, book chapters, books, dataset, software, preprints | Report | Institutional reporting, Web of Science, Unpaywall |
| Netherlands, NWO/ZonMw | Journal articles (long-form publications to be considered in the future) | Report + dataset (aggregated data) | Dimensions, Web of Science, Crossref, Unpaywall |
| UK, Wellcome | Journal articles | Report + dataset (record-level data) Internally facing dashboard | Grant reporting via Researchfish, Dimensions, EuropePMC |

The inclusion of qualitative analysis will enable UKRI to assess the potential unintended consequences of the OA policy

During our interviews and focus groups, most suggestions for M&E questions were directly related to a quantitative assessment of whether UKRI's OA policy requirements are being met, which is the approach taken by most existing M&E exercises on OA.

However, contributors also commented that some qualitative questions would be beneficial, particularly with regard to the evaluation side of the approach.

Qualitative approaches may also be useful for recognising unintended consequences (positive as well as negative) and exploring wider impacts of the policy. This has been reflected in our prioritised M&E questions, with a significant focus on the qualitative investigation of the expectations and experiences of individual researchers, institutions and publishers. This may include, for example, the impact of OA on individuals at different career stages or Equality, Diversity and Inclusion (EDI) considerations, building on the findings of UKRI's [OA policy Equality Impact Assessment](#) (see Annex A).

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It was also noted that there are significant challenges associated with this kind of investigation. These include variations in how EDI data are disclosed and recorded, lack of comparability of data between institutions of different sizes, non-linear career progression and potential for additional reporting burdens in collating this data.

"The quantitative data should not supplant expert testimony and qualitative assessment – they should support that. You have to take a mixed approach, because there will be content that falls between stools, and there will be content that is misrepresented." –
University library

There is strong demand for the results of M&E questions to be shared publicly

Contributors recommended that M&E results and lessons learned are shared publicly, consistent with both the spirit of open data and the need for transparency and accountability regarding use of public funding. Open sharing of data can also reduce reporting burden and bureaucracy by enabling access to information which can be used in addressing different reporting needs. Importantly, we acknowledge that the recent report [Harnessing the metric tide: indicators, infrastructures and priorities for responsible research assessment in the UK](#) calls for the use of data for good, highlighting the need for responsible research information management, openness, transparency and open and interoperable data infrastructures (i.e. infrastructures that can communicate, work together and exchange information).

Some limitations with regard to open sharing are likely to arise in cases where M&E questions can only be addressed by the means of internal or licensed data (e.g. transaction data from [Jisc](#) or [OA Switchboard](#), [Overton](#) data). In these cases, where concerns may focus on the commercial sensitivity of the data itself or where data is (or needs to be combined with) commercially available licensed data, we recommend that UKRI pursues the highest possible level of transparency and data sharing in agreements with data providers, or explicitly states as part of the M&E methodology that quality assurance and accountability have been provided by the data owners (where appropriate). Key points raised in relation to sharing M&E results included:

- An accompanying narrative, potentially including qualitative and mixed methods approaches, would help to contextualise the data by drawing out key features of change over time within the areas covered by the policy and in the broader OA landscape.
- The narrative around levels of OA activity or compliance should seek to avoid causing direct reputational or other types of damage to the stakeholder groups it describes. Should negative effects occur, UKRI should proactively make plans to mitigate them in the next iteration of the M&E exercise.
- Data should be openly licensed and reusable wherever possible, ideally using a [Creative Commons Public Domain Dedication \(CC0\)](#).
- An interactive, dashboard-style interface may be helpful, but should not be the only way the data are made available. The use of commercial dashboarding solutions is seen as appropriate if the underlying data and information are publicly available.

Additionally, institutions would value feedback on their individual progress and performance, and it was recommended that this is presented as a positive learning opportunity. In this context, contributors also asked for UKRI to make it clear that M&E

results are not used for ranking purposes, although it is recognised that data in the public domain may be used by any third party for benchmarking or comparison.

Potential use cases for openly shared monitoring and evaluation data include:

- Raising awareness of OA among researchers.
- Providing evidence to inform negotiations between research performing organisations and publishers.
- Enhancing or checking institutional or publisher data on OA publishing.
- Using identified compliance issues to improve and strengthen the information provided to authors by institutions and as part of journal submission workflows.
- Enhancing an institution's ability to comply with OA requirements (including beyond UKRI-funded works).
- Assessing any unintended consequences of the current approach to OA funding (e.g. impact of TAs).
- Identifying steps that can be taken to facilitate a sustainable transition to OA for specific journals or long-form outputs or publishers.
- Availability of data to inform author choice of publication venue.
- Understanding the impact of OA publishing on a range of stakeholders.
- Improving OA-related practices, support and workflows building on examples and success stories shared by other research performing organisations or publishers.
- Better assessing the impact of institutional repositories in the OA landscape.
- Understanding disciplinary differences in the uptake of OA among institutions and publishers.
- Providing an evidence base for future work to gauge value-for-money of UKRI OA block grant awards and institutional investments around OA.

"The data should be available in a form that can be used for secondary analysis, because then scholars can look at what's happening, carry out analysis themselves, which itself can inform understanding of what the consequences from the policy are. Harnessing that collective intelligence through sharing the data is really important, as well as enabling institutions to see how they compare with others." – Academic expert

3.3 Articles

Contributors acknowledged clear benefits that may arise from M&E in the context of articles

During our consultation, contributors shared several potential benefits arising from M&E, which were in line with UKRI's stated intentions for the framework:

- Demonstrating the social and economic impact of OA.
- Demonstrating the impact of OA publishing on the UK's wider research and innovation landscape and "science superpower" ambitions.
- Enhancing accountability and transparency, by openly sharing M&E results covering at least: the route(s) taken to OA (e.g. green, gold, diamond); licensing; and embargo periods (recognising these should be zero under UKRI's OA policy).
- Demonstrating appropriate use of public funds in accordance with its aims.
- Providing evidence to inform policy development (within UKRI and beyond).
- Providing feedback to institutions and other stakeholders to support the improvement of engagement activities, systems and workflows around OA. This

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may also help stakeholders to identify and act on emerging issues or risks and enable UKRI to respond appropriately to act to maximise the benefit of its investment and to understand the effect of the policy.

- Supporting the advancement of specific aspects in the broader open science agenda (e.g. data access statements, licensing).
- Informing UKRI's decisions about its OA policy priorities and facilitating communication about the outcomes and impacts of these, including celebrating successes and impact arising from the OA policy.
- Assessing the effects of Transitional Agreements (TAs) and transformative journals.

We note that M&E results on research articles could also helpfully inform policy development at the international level, including through UKRI's participation in cOAlition S.

"The UK is actually one of the leaders really in terms of the [transitional] agreements that it's got in place. It's exemplary in terms of how to support a sustainable route to immediate access to research. I feel that some countries are probably looking at the UK, which is worth highlighting." – Publisher

Some challenges and limitations apply to the monitoring and evaluation of open access articles

Contributors generally considered that monitoring compliance with the OA requirements for articles is feasible with today's data and infrastructure. The main gap in terms of monitoring is the poor quality of (meta)data on research funders and organisational affiliations, including a high level of inconsistency between the completeness of metadata submitted by different publishers. This is partly responsible for difficulties in assessing the overall population of UKRI-funded articles and, to a lesser extent, that of UK-affiliated articles. We recommend the use of Researchfish submissions, as reflected in Gateway to Research, which are reported by researchers, to identify the population of UKRI-funded outputs.

We acknowledge that this approach has some limitations for monitoring and evaluating the UKRI open access policy and note the following:

- Research outcomes that are made publicly available on UKRI's Gateway to Research are reported through Researchfish, which covers UKRI's seven disciplinary research councils.⁴ This, however, does not capture outputs arising from research funded by **Research England** (responsible for supporting research and knowledge exchange at higher education institutions in England) and **Innovate UK** (the UK's innovation agency supporting innovative businesses).
- UKRI estimates that only a small percentage of all UKRI outputs within the scope of the UKRI OA policy that are not already acknowledging one of UKRI's seven disciplinary research councils arise from funding from Research England or Innovate UK (based on Dimensions data for publication year 2021). This suggests that the likely impact of outputs funded by Research England or Innovate UK and not otherwise captured is minimal. Optionally, information from Gateway to Research

⁴ UKRI's seven disciplinary research councils include: Arts and Humanities Research Council (AHRC), Biotechnology and Biological Sciences Research Council (BBSRC), Economic and Social Research Council (ESRC), Engineering and Physical Sciences Research Council (EPSRC), Medical Research Council (MRC), Natural Environment Research Council (NERC) and Science and Technology Facilities Council (STFC)

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may be supplemented with additional records for Research England and Innovate UK, for example from Crossref and the OA Switchboard, and enriched with additional metadata (e.g. on affiliation) from other sources.⁵ Details on how to achieve this are provided in our data specification (Annex A). It may also be possible to enhance information from Gateway to Research using internal UKRI data where this is available, for example via monitoring of funding activities where research publications in scope of the UKRI open access policy are recognised outputs. However, it will be important to carefully consider the resource involved to do this, since it may not be proportionate to the very small number of outputs.

In terms of evaluation, the extent to which specific outcomes or impacts in the research landscape (or beyond) might have arisen as a direct result of UKRI's OA policy, in line with the logic model (Appendix 2, p.50), is particularly complex to assess. The key challenge in this case is the difficulty of separating UKRI's OA policy from those of other national and international funders and institutions, which makes it close to impossible to establish direct causal links between these and observed benefits or disbenefits of OA publications. This point had a considerable influence on our recommendation to use contribution analysis as the overarching M&E strategy (see section 4.1).

Additionally, we note that it will be difficult to fairly assess and compare vastly different contexts using a bibliometric approach, for example across institutions (with UKRI OA block grant awards and without), individuals (different career stages, UKRI-funded versus non-UKRI-funded, supported by quality-related funding) and disciplines. Should this be required, we would recommend the use of other theory-based impact evaluation methods such as realist synthesis, which may allow UKRI to '*understand "what works, for whom in what circumstances, in what respects and how"*'.

Given the gaps in funder and organisational affiliation metadata and the complexity of assessing wider outcomes and impacts, **we recommend that a pilot stage is considered to reassess and update the prioritised M&E questions based on emerging results and discussion.** Further information on implementation challenges is covered in Annex A.

Other research funders have ongoing M&E exercises, mostly focusing on quantitative measures

The funders listed in Table 2 (p.18) already have M&E approaches in place, which tend to focus on quantitative measures and on the monitoring element, as noted above. German funder DFG is a notable exception, as their approach includes qualitative methods such as an online survey of funded and non-funded institutions as well as a number of in-depth interviews.

Overall, the examples in Table 2 indicate that the bibliometric/quantitative monitoring element of UKRI's M&E framework is likely to be feasible in the short to medium term, particularly with regard to compliance questions based on existing metadata, such as around routes to OA, licences or embargo periods (which should be zero under UKRI's OA policy).

A number of countries also have, or are developing, nationwide monitoring frameworks, sometimes as part of national infrastructure for research information and, once again,

⁵ Following informal discussion with Crossref, we note that there may be opportunities to enrich their funder affiliation data by sharing outputs listed on Gateway to Research with them. We recommend that this avenue is further explored in future, as it is likely to minimise the burden of data aggregation on UKRI's part while also contributing to enhancing sector-wide (meta)data on publishing.

with a focus on quantitative analysis (e.g. [French Open Science Barometer](#),⁶ [National Open Research Analytics – Denmark](#), [Austrian Transition to Open Access – AT2OA²](#), [Universities of the Netherlands](#), [Swiss R&P Deal Monitoring](#), [Expression of interest by the Irish National Open Research Forum](#)).

Finally, what several existing approaches have in common is the reliance on either institutional or grantee reporting or proprietary data sources, in some cases in combination. In the development of our recommended M&E methodology for bibliometric questions, we have sought to rely on a mix of grantee reporting and open data sources, with the intention of minimising additional reporting burdens and maximising the use of open data in scholarly communication.

“We have to release our data in a form that can be shared, and enable new infrastructure to be built for not only [one country], but, for example, for Europe, or maybe also for international funding. I guess it’s still work in progress – it’s hard, because everyone is reporting on similar things, but with differences.” – Research funder

3.4 Long-form outputs

Long-form publications would benefit significantly from improved understanding and increased awareness

There is a significant desire to include long-form outputs as part of UKRI's M&E framework, which strongly aligns with the need to monitor this aspect of UKRI's OA policy. The majority of contributors acknowledged that, although progress has been made over the past few years, our understanding of OA long-form outputs remains limited. Consequently, UKRI's M&E approach may shed some light on researcher needs and behaviours as well as on publication business models, potentially informing further work and experimentation. The provision of case studies and success stories on long-form outputs is seen as a positive contribution to behavioural and cultural change, too.

Another area that could benefit from further exploration is assessing the impact of versions of record that are different from the OA copy (e.g. if third-party materials are used). This is not included in our list of recommended M&E questions, as the effort required to answer such a broad question is likely to be disproportionate.

“I think there’s a question about responsiveness. The books policy is quite a new area for the UK. So if the funding isn’t enough in year one, how is UKRI going to iterate? And how can the M&E framework be used to inform how the policy and related funding might need to evolve for year two?” – Publisher

⁶ Notably, the French Barometer relies exclusively on open data sources.

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The (meta)data for long-form OA outputs is significantly underdeveloped compared to articles

It was noted that the representativeness and accuracy of responses to M&E questions about long-form outputs are likely to vary, but that this should not be seen as a reason for not pursuing them. **The M&E approach for long-form outputs has particular scope for iteration, review and change over time**, not least because further policy guidance in this area is yet to be released by UKRI.

The complexity of transitioning long-form outputs to OA, which partly originates from the diversity in their formats, gives rise to concerns around licensing, infrastructure, workflows, publication business models, financial sustainability and more. Contributors commented that M&E activities on long-form outputs need to navigate a complex landscape characterised by different author and publisher needs and funder policies that are only beginning to develop in the UK and internationally. We also note that future availability of metadata will vary considerably between different types of long-form outputs: for book chapters, which are often assigned DOIs, some aspects of M&E can be approached in similar ways as for research articles, while for books and monographs, the situation is more difficult. As a result, we recommend that nuanced commentary is provided alongside M&E results, to ensure that misinterpretations are avoided and that findings help influence future developments in the area.

Furthermore, the limited use of persistent identifiers for long-form outputs, as well as limited availability of information on funding and affiliations, make it difficult to identify an overall population to use as a reference (i.e. as the denominator when calculating shares or percentages). Overall, (meta)data for long-form outputs has been described as a complex field, and contributors recommended careful consideration on how to seek improvements. It was noted that Crossref and/or existing (meta)data providers may not be the best option in the case of long-form outputs, but there was agreement that UKRI has a role to play in contributing to improvements in collaboration with other funders and also with publishers.⁷ **COPIM** is a notable example of these efforts, as the project has received £2.2m in UKRI funding via a Research England RED grant.

The above has been considered as part of our data specification (Annex A), and we have recommended Gateway to Research as a data source for UKRI-funded long-form publications. A key feature of this data source is that it is not limited to research outputs with a DOI, which helps capture a broad range of long-form outputs. In order to improve future reporting, we recommend that UKRI seeks to encourage the inclusion of ISBNs in Researchfish submissions with regard to long-form outputs and include ISBNs in Gateway to Research data export formats.

“UKRI is in a leading position here to influence the culture across the UK and internationally, because the others are looking at what’s happening here. [If UKRI can] get its monitoring framework set up and then get it published, then it’s going to pull the culture along.” – Academic expert

⁷ Publishers in the arts, humanities and social sciences noted that funders may not be well-placed to set requirements or expectations around (meta)data for long-form outputs, as the number of outputs that they fund or support is limited. These publishers suggested that peer pressure (i.e. from other publishers or sector organisations) may be more effective in this regard, thus suggesting that a degree of collaboration and coordination is key.

3.5 Broader OA landscape

Contributors recognised many facets of international OA publishing that would benefit from M&E efforts

Some of the issues in the broader OA landscape are reflected in the discussions of articles and long-form outputs, for example around routes to OA (e.g. green, gold, diamond), licensing and data access statements. Additional aspects of the broader landscape which were mentioned by contributors included:

- Monitoring the uptake of emerging open science practices (e.g. use of preprints).
- Assessing the content and quality of data access statements.
- Assessing the alignment of UKRI's policy with the requirements of other national and international funders (e.g. cOAlition S funders, NIHR, OSTP, UNESCO).
- Understanding the challenges and opportunities of UKRI's policy for institutions and publishers.
- Understanding the impact of UKRI's policy on publishing venues and platforms that do not offer routes to OA.
- Understanding the impact of UKRI's policy on career progression, especially for early career researchers (ECRs), reflecting the commitment in UKRI's [OA policy Equality Impact Assessment](#).
- Understanding the impact of UKRI's policy on cementing the current publishing markets (small number of publishers with high market share).
- Investigating outputs that are an established part of open science practices but not within the scope of UKRI's OA policy (e.g. grey literature, working papers).
- Scanning the horizon for innovative scholarly communication models, including publishing platforms and types of publications and research objects.
- Scanning the horizon for innovative business models beyond article processing charges, book processing charges and transitional agreements.

It is recognised that many of these areas, although highly relevant in terms of assessing progress towards open research practices, are beyond the scope of UKRI's policy. Based on the findings of the discussion workshop and further consultation with UKRI, a subset of the above questions has been reflected in the recommended M&E questions and data specification (Annex A).

"The question is how do you link open access funding to the broader open science values and principles of enhancing collaborations and getting the knowledge where it should get to, to solve issues or to advance knowledge." – Research funder

It is desirable to monitor the impact of OA on society, but questions should be defined carefully to avoid scope creep

Although participants noted the specific focus on monitoring and evaluation of UKRI's OA policy, wider considerations, such as evidencing the impact of OA on various different public audiences, industry and the economy, as well as on academic discourse, were felt to be relevant and beneficial aspects of this work. **We recommend that a small and tightly scoped set of broader impacts are analysed as part of M&E questions** and note that UKRI should identify an appropriate frequency for qualitative investigation that takes account of the resources available and the likely burden on respondents (including as a minimum researchers, research performing organisations and publishers). To provide a holistic overview of societal impact, it is clear that engagement with industry and the broader public would also be beneficial, but the cost, time input and burden required for this

should be carefully assessed. In practice, we envisage a lower frequency for qualitative research compared to quantitative or bibliometric analysis, and we would expect UKRI to mainly engage with researchers, research performing organisations and publishers, although this would lead to limitations in the assessment of societal impact.

A change management process is needed to assess the M&E framework in the future

Overall, we acknowledge that the UKRI OA policy is embedded in both broader UKRI policies and a complex set of external developments. As the M&E framework is operationalised, it will be important to include a change management process to ensure that shifts in either the organisational or external environment can be effectively reflected in future iterations. Part of this will require a clear understanding of what is currently *not* being monitored and evaluated, leading to an ability to reassess the approach critically on an annual basis and adjust if required.

"For anything that is required of institutional reporting around open access, the test is: Was there public value in providing that information? [...] What's the minimum you can do in order to meet that public value? Rather than: What's the maximum data you can get?" – University leader

3.6 Affordability of OA publications

Several financial parameters can be monitored around OA articles

Contributors noted that assessing how UKRI OA block grant awards are spent on OA publications is important, but that the analysis should not stop at surface level. A wide range of financial parameters could be considered in addition to the UKRI OA block grant spend, for example:

- Monitoring levels of APCs paid and covered via UKRI OA block grant awards via (i) a high-level analysis of in-scope articles vs the overall UKRI OA block grant spend; and (ii) sampling a subset of research performing organisations.
- Monitoring the cost of TAs and transformative journals across the research ecosystem.
- Monitoring the costs involved in starting and operating diamond OA journals and platforms.
- Monitoring costs involved in the green route and the financial impact of self-archiving on institutions.
- Evaluating the impact of using block grant awards in furthering the open science agenda, including in comparison to other funders, the use of institutional funds and Research England's *Enhancing research culture* funding allocation.

As part of this discussion, we note that several contributors commented on the desire for UKRI (as well as other funders) to invest in alternative publishing models and/or platforms, aiming to increase diversity as well as reduce the dependency on large publishers.

Our prioritisation of M&E questions (Table 3, p.31 and Annex A) has taken some of the above suggestions into consideration, chiefly based on feasibility and on the anticipated insights to be gleaned and their actionability. Notably, the OA block grant only represents part of the funding that institutions devote to supporting OA publications and infrastructures. We have recommended this approach given the scope of the UKRI OA

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policy, and we acknowledge that this will not cover financial flows beyond UKRI's own contribution to the OA landscape.

The M&E approach should consider the difference between funding models and funding amounts for OA articles

In the case of articles, UKRI provides eligible institutions with annual OA block grant awards. In terms of publication costs, these can cover costs associated with green OA (including repository provision), gold OA publication (both APC-based and non-APC based) as well as publication in hybrid venues that are part of Jisc-approved TAs.⁸

In our consultation, the TA route was described as potentially affecting the publishing choices made by authors/researchers. For example, contributors noted that, in some cases, authors may pick journals because they are part of a TA, even if they may not be their first choice. The perceived ease of providing author affiliation via a publisher platform (TA route) compares favourably to the internal administrative processes to manage invoices and payments for individual articles within a research performing organisation.

Furthermore, the current OA block grant awards allocated by UKRI to research performing organisations total approximately £40m (2022/23 awards). The sum allocated to each institution is based on research volume and varies widely: from the lowest allocation of about £5k (Bournemouth University) to a maximum of about £3m (University College London). Contributors noted that it is not uncommon for institutions not in receipt of OA block grant awards to allocate funds for OA publications. In these cases, however, funds to cover APCs tend to be prioritised based on institutional criteria, which may include the estimated impact of individual articles on REF results.

Finally, we note that research council institutes are subject to the OA policy, but funding for OA costs associated with their core business is dealt with separately to the UKRI OA block grant on a council-by-council basis. However, research council institutes may additionally receive an OA block grant award if they are awarded competitive UKRI grants. This nuance is discussed in Annex A, as part of qualitative M&E questions.

"But where [less research-intensive organisations] have academics who are QR-funded these aren't holding a grant, or they're doing bits of grants all over the place. As a result, sometimes it's really hard to work out whether an output arises from a UKRI grant or it may be partly funded. At what point do you consider it as not being funded by UKRI?" – Research manager

The long-form outputs landscape is immature, so monitoring financial sustainability is difficult

Contributors noted that there is currently limited guidance on UKRI funding for long-form outputs, which reflects the policy start date of January 2024. In particular, we report uncertainties amongst both research performing organisations and publishers about how allocated funding will be used (e.g. for BPCs or to support other OA publishing models) and how far this will go.

In the case of authors who are currently negotiating contracts for long-form outputs (including monographs, books and book chapters) due to be published before January 2024, UKRI's [frequently asked questions \(February 2023\)](#) state that the policy includes an

⁸ For the sake of convenience, we use the terms 'gold' and 'green' OA, although UKRI's OA policy and block grant conditions label them as routes one and two, respectively.

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exception if a contract has been signed between the author and the publisher before this date. Either way, in these circumstances UKRI “strongly encourages authors and publishers to make publications open access within a year of the publication date”. Although this guidance clarifies the situation for authors, their organisations and publishers, it does introduce additional complexity in monitoring aspects of financial sustainability in the short to medium term. There are certainly some areas of financial sustainability that can be considered for M&E questions, but we recommend that these are reassessed once the final position (and funding) for long-form outputs is clarified by UKRI.

Key opportunities arising from investigating the financial sustainability of funding models for long-form outputs include:

- Monitoring the uptake of various models for funding open access for long-form outputs.
- Evaluating the effect of UKRI's policy position on the diverse ecosystem of book publishers, including the extent to which this may distort the market.
- Evaluating the broad variation in the cost of publishing long-form outputs, including value for money considerations.
- Evaluating the impact(s) of the embargo period applicable to long-form outputs on publishers and authors.

As mentioned above, the lack of maturity of the OA book landscape limits the potential for automating M&E questions in this area. We have included recommendations in Annex A, although we note that the results will only be indicative for the reasons outlined above.

Organisational and global equity should be considered as part of M&E efforts

Differences between institutions, funders and other research stakeholders should be considered, including in the context of research performing organisations, where small institutions may have less resource to support open access in their internal systems; and in the context of the diversity of publishers with a stake in scholarly communication ecosystem.

We recommended that UKRI considers monitoring the impact of its open access policy on global equity. Global inequalities in open access publishing include the reliance on the APC publication model in high-income countries, which is known to create barriers to access for authors in a range of low- and middle-income countries.

UKRI's M&E findings may support **ongoing efforts** to investigate globally fair pricing models for open access publishing, feeding into work led by cOAlition S, UNESCO, the International Science Council, the Open Access 2020 Initiative, Electronic Information for Libraries, the Association of African Universities and Science Europe. The emergence of such initiatives further stresses the international nature of academic publishing and the need for reliable data as well as partnership to address global equity challenges.

“The fact that certain funders in the Global North seem to default to a BPC model of publishing runs the risk that open access becomes something that only scholars in the Global North can do. And there is a risk that this then becomes the default also in regions such as [South] America, where diamond open access, community labs and university and institution-supported open access might have to transition to these [BPC] models just to keep up.” - Academic

4. Recommendations

This section sets out an overarching M&E strategy together with a set of 20 recommended questions focusing on impact and process evaluation, alongside their purposes and estimated complexity. The section recommends the use of open data sources for M&E and notes that collaboration with existing data providers is key to minimise burdens and maximise automation.

4.1 Overarching M&E strategy

Components of an M&E approach

M&E approaches are typically comprised of four components, as follows:

- A results framework: a way to organise the results of the M&E assessment (logic model, see Appendix 2, p.50), to verify whether measurable changes have taken place as a result of the programme or project (the UKRI OA policy).
- An M&E plan: a description of the functions required to gather the relevant data on the set questions or indicators and the required methods and tools to do so, including timelines.
- Processes and methods: the practical approaches for M&E, including quantitative and qualitative analysis and economic impact assessment.
- A management information system (out of scope): an organised repository to store and share the information captured as part of the M&E assessment.

The first three of these components are covered in this report, and more detailed information on specific analysis methods is available in Annex A.

Contribution analysis is recommended as the core evaluation strategy

As noted in the Magenta Book, theory-based approaches are most appropriate when interventions (i.e. the introduction of the OA policy in this case) sit in a dynamic environment, have complex causal pathways, may vary in implementation and are dependent on context. In this project, it was essential to acknowledge that other funder OA policies operate alongside UKRI's, leading to difficulties in attributing effects to the intervention being studied, as well as the fact that publishing is a highly international and multi-stakeholder activity characterised by significant disciplinary variation. This suggested that it would not be possible to collect definitive evidence of causal links between the effects observed via quantitative analysis and UKRI's OA policy.

As a result, **we recommend the use of contribution analysis as the core evaluation strategy**, to understand the likelihood that the intervention has contributed to a series of observed outcomes. The outcomes to be used as proxies for policy effectiveness (see Table 3, p.31) have been shortlisted by the consulting team in close collaboration with UKRI and project contributors, building on the logic model. One of the strengths of contribution analysis as a methodology is that a broad range of evidence types can be used to inform conclusions, and such a mix is necessary to examine a complex policy landscape that involves multiple stakeholders. In essence, contribution analysis argues that a reasonable causal claim can be made if, after assessing the impact of influencing or confounding factors, three elements are present:

- a reasoned theory of change is in place (see Appendix 2, p.50);
- activities were implemented as per the theory of change; and

- the chain of expected results occurred, and the theory of change has not been disproved.

Our work focused on designing an approach to collect evidence to inform the above, to allow UKRI to build a credible story around the impacts arising from its OA policy. Such evidence encompasses quantitative (including bibliometric) data on individual research outputs to assess policy effectiveness and compliance, plus qualitative information on the publishing landscape to collect narratives and experiences around policy implementation. The evidence collected via the recommended M&E questions will also provide insight into value for money, but we note that a full assessment in this direction would require the consideration of additional financial data and is beyond the scope of this work.

It should be noted that contribution analysis does not provide definitive proof, but rather “an evidenced logical line of reasoning which gives some level of confidence of an intervention’s contribution”, which is in line with the challenges described above.

A difference-in-difference approach can be used to inform contribution analysis

Difference-in-difference analysis is a quasi-experimental method that compares trends across comparable groups before and after the introduction of an intervention. To enable this, we have recommended the collection of data for both UKRI-funded (i.e. the proposed ‘treated group’) and non-UKRI-funded but UK-affiliated authors (i.e. the proposed control group), so that behaviours in key policy dimensions can be tracked from the time the policy was introduced (e.g. no embargo period, choice of appropriate licence, choice of appropriate OA pathway).

In practice, the difference-in-difference approach will allow UKRI to estimate the counterfactual trend for the treated group, meaning the subset of authors that were affected by the introduction of the OA policy. A potential limitation of difference-in-difference analysis is its reliance on large amounts of data points to deliver reliable results. However, this is not seen as an issue for UKRI’s M&E approach, given the large number of publications made available each year.

4.2 M&E questions

The recommended M&E questions address a number of aspects of the UKRI OA policy, and their purposes are reflected in Table 3, below. It should be noted that some rows have been merged in the ‘Purpose’ column: these groupings refer to the recommended methodology to answer M&E questions, and further detail on this is available in Annex A. Our indicative estimation of the level of complexity, as a combined assessment of feasibility and resource intensity, is noted in the form of a Red (complex or not feasible) / Amber (feasible with caveats) / Green (feasible) rating, alongside the proposed focus on articles 📄, long-form outputs 📖 or the broader OA landscape 🌐. Feasibility was assessed by considering availability and estimated comprehensiveness of relevant data, and the existence of suitable data analysis methods to answer the M&E questions. Resource intensity was assessed by considering reporting burdens, data management and collection systems and existing technological infrastructure.

In some cases, we also note that questions may enable a comparison between UKRI-funded research outputs with the broader landscape of UK-affiliated outputs 🇬🇧. Where M&E questions are marked as ‘Qualitative’ in Table 3, the wording is intentionally high-level, to signify that a question would need a nuanced approach and to touch on a range

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of sub-topics. Our recommendations of the sub-topics to consider as part of qualitative questions are available as part of the data specification, alongside an overview of qualitative research methods and their respective advantages and disadvantages (Annex A).

Finally, we highlight that the prioritised M&E questions in Table 3 should be considered as a starting point based on our analysis and external stakeholder consultation; the primary focus of questions 1-16 is on impact evaluation, while questions 17-20 also provide some insight into process evaluation.






















We note that the final set of M&E questions deployed by UKRI may differ, based on further iteration and a practical assessment of feasibility.

Table 3. Prioritised list of M&E questions.

| # | M&E question | Type | Focus | Purpose |
|----|---|----------------------------|---|---|
| 1 | What is the number of UKRI-funded outputs annually? How do these figures compare to outputs with an author affiliated with a UK-based research performing organisation? (by discipline, publisher) | Quantitative |    | Define the set of outputs that forms the basis for the monitoring exercise (including comparison of UKRI-funded outputs and all UK outputs) and allow subsequent grouping by discipline, research performing organisation and publisher |
| 2 | What is the percentage of UKRI-funded outputs compliant with UKRI's OA policy? (by OA route, license, embargo period) How does this compare to the findings of M&E frameworks run by other funders? (approximated comparison) | Quantitative |    | Assess overall compliance with the UKRI OA policy and identify the use of the different OA routes (full gold OA journals, hybrid journals in transitional agreements, and green OA), including in the form of year-on-year comparisons |
| 3 | What is the share by publisher of UKRI-funded vs UK outputs? (overall and by OA model) | Quantitative |    | |
| 4 | What is the percentage of UKRI-funded articles published in journals under Jisc-approved transitional agreements? | Quantitative |  | Assess where UKRI-funded and UK-affiliated authors publish over time and chart the different OA models used by venues in which UKRI-funded (and UK-affiliated) researchers publish |
| 5 | What are the OA options offered by journals in which UKRI-funded / UK-affiliated authors publish? (by discipline, journal, publisher) | Quantitative |   | |
| 6 | To what extent does UKRI's OA policy affect the number of (inter)national collaborations involving UKRI-funded authors? To what extent are (inter)nationally co-authored publications compliant with policy requirements? | Quantitative |  | Investigate and assess trends in collaboration over time and try to isolate the effect of the UKRI OA policy |
| 7 | What are the reasons for non-compliance with UKRI's OA policy's terms? (incl. technical requirements, allowed exceptions) | Mixed (mainly Qualitative) |   | Assess reasons for non-compliance, and any differences across different dimensions, e.g. disciplines or research performing organisations |
| 8 | What is the percentage of UKRI-funded articles available as an author accepted manuscript in a repository, with a Route 2 Licensing statement? | Quantitative |  | Monitor the use of a Route 2 Licensing statement (also known as the green route) when using the repository route and the requirement to include a Data Access Statement |
| 9 | What is the percentage of UKRI-funded articles that include a Data Access Statement? | Quantitative |  | |
| 10 | What is the percentage of UKRI-funded articles in journals / repositories meeting | Quantitative |  | Monitor technical standards for journals and repositories |

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| # | M&E question | Type | Focus | Purpose |
|----|---|-----------------------------|---|---|
| | technical standards as set out in the UKRI OA policy? | | | |
| 11 | How often are UKRI-funded (OA) publications cited/downloaded compared to UK-affiliated OA publications and to UK-affiliated non-OA publications? | Quantitative |    | Assess usage and impact of UKRI-funded OA publications, both within academia and within society |
| 12 | How often are UKRI-funded (OA) publications used/discussed (altmetrics) compared to UK-affiliated OA publications and to UK-affiliated non-OA publications? | Quantitative |    | Assess impact of the UKRI OA policy compared to other OA publications by UK-affiliated authors |
| 13 | To what extent does OA affect the diversity of affiliation countries of authors citing published outputs , for UKRI-funded and UK-affiliated authors? (by discipline) | Quantitative |    | Monitor global reach and impact of OA publications by looking at affiliation countries of citing researchers, compared to non-OA publications in the same journals/disciplines |
| 14 | What is the proportion of UKRI OA block grant funding going towards gold OA (including diamond OA), hybrid OA (via TAs) and green OA (via investment in repository infrastructure and staff)? | Mixed (mainly Quantitative) |    | Assess how costs for OA publishing under the UKRI OA policy are divided between OA models, as well as how these costs are covered (e.g. through UKRI OA block grant or institutional means) |
| 15 | What is the (estimated) annual expenditure of institutions towards reading and publishing? (by publishing model) | Mixed (mainly Quantitative) |   | |
| 16 | What is the number of OA publications funded via UKRI OA block grant awards/OA fund/other institutional means, and what is the estimated average article/book processing charge? (by discipline, journal, publisher) | Mixed (mainly Quantitative) |    | |
| 17 | What do institutions expect/experience to be the main challenges/opportunities arising from UKRI's OA policy? (incl. around EDI, career progression, research evaluation) ⁹ | Qualitative |  | Study expectations and experiences around the UKRI OA policy among various stakeholders over time, including impact of OA on society |
| 18 | What do publishers expect/experience to be the main challenges/opportunities arising from UKRI's OA policy? (incl. around EDI, career progression, research evaluation) | Qualitative |  | |
| 19 | What do researchers expect/experience to be the main challenges/opportunities arising from UKRI's OA policy? (incl. around EDI, career progression, research evaluation) | Qualitative |  | |
| 20 | What difference has access to OA outputs made for non-academic stakeholders? (e.g. industry, general public, practitioners) | Mixed (mainly Qualitative) |  | |

⁹ Note that more detail on the specific dimensions to be addressed in Questions 17-20 is provided in Annex A.

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Notable exclusions

The bullets below provide a list of notable areas that were excluded from the prioritised shortlist, including the rationale for this:

- **Data sharing:** this is not formally required by the UKRI open access policy, which focuses on open access for publications and not data or other outputs. The assessment of data sharing behaviours based on data access statements, which are required by the policy, is very complex and requires sophisticated analysis approaches. This is mainly due to the high diversity in formats of data access statements and their limited reflection in metadata records that can be analysed at scale. We acknowledge that the UKRI open access policy encourages the use of “standard-format machine-readable data availability statements encoded in openly accessible publication metadata”, but uptake is limited at present. Further commentary on the analysis of data access statements is available in Annex A.
- **Preprint posting:** preprints are not within the scope of the UKRI open access policy. However, to facilitate open research practices, UKRI encourages the use of preprints across the research disciplines they support. UKRI also reserves the right to ensure the use of preprints in the context of emergencies. This area may be of interest should UKRI wish to monitor specific subject areas or the change in behaviours across the disciplinary spectrum, but we did not assess this as a priority.
- **Price transparency:** this is already being analysed by cOAlition S, which has developed ‘a secure, free-of-charge service that enables libraries, library consortia, and funders to better understand if the fees they pay are commensurate with the publication services delivered’. As a result, we would recommend avoiding duplication of effort, though UKRI could potentially assess this from a UK perspective.
- **Value for money and affordability:** this can be partly assessed through the inclusion of questions around average APCs/BPCs, the distribution of institutional spending across OA publishing routes as well as the annual expenditure of institutions towards reading and publishing. Other aspects of value for money and affordability, such as publisher profit margins, are not within UKRI's remit and have therefore not been considered as part of M&E questions.
- **Alignment of funders' OA policies:** given the large number of research funders and the frequency of policy changes, this question may be labour intensive and not give rise to actionable insights. We also note that UKRI works closely with other funders as part of cOAlition S and other multi-lateral fora, so information on this aspect is likely to be gauged as part of existing discussions (although potentially not in structured form).
- **International trends** in OA publishing: this presents a high burden for data preparation and curation if considered as an integral part of UKRI's M&E framework. Comparison with other countries and contexts can be sought less formally by (i) reviewing the results of other M&E frameworks (Table 2, p.18); (ii) following developments in the upcoming [monitoring framework following the UNESCO Recommendation on Open Science](#); (iii) continuing to engage with cOAlition S funders; and (iv) considering external solutions or databases, either open (e.g. COKI)¹⁰ or commercial (e.g. Dimensions). A limitation of this approach is that

¹⁰ It should be noted that Cameron Neylon, one of the report's authors, is one of the leads of the COKI project.

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external stakeholders are unlikely to follow the exact same methodology as UKRI, so results may not be fully comparable.

- Relationship between UKRI's OA policy and the **broader research policy landscape**: the monitoring and evaluation of UKRI's OA policy may give rise to insights into how this relates to other policy developments and activities by other stakeholder groups in the research landscape (e.g. Universities UK, GuildHE, Department for Science, Innovation and Technology). Given that these developments and activities are not strictly within the scope of UKRI's own OA policy, but feed into a better understanding of the broader landscape, we recommend that they are not explicitly included as part of M&E questions, but further explored if and when highlighted by contributors.

Furthermore, we note the following constraints for the recommended M&E questions:

- Technical requirements for journals and platforms are only addressed in general terms as part of our data specification. This reflects the fact that (i) UKRI is actively investigating technical requirements for the implementation of the OA policy; and (ii) no comprehensive data sources are available to accurately assess technical requirements for journals and platforms (more information on this and potential questions are available in Annex A). We acknowledge that partial assessments of technical requirements are, however, possible, as highlighted in the [Landscape and community readiness analysis](#) on metadata previously delivered for UKRI by the MoreBrains Cooperative and CORE.
- Access to and usage of research outputs by non-academic stakeholders is covered only partially. This area is covered in question #12 from a quantitative standpoint and in question #20 from a qualitative standpoint, but qualitative results would be limited by the use of quantitative information as a starting point. For example, appropriate stakeholders to be interviewed or engaged would need to be identified by leveraging sources focusing on policy citation, social media usage or citation of research outputs within patents. It should also be noted that input from non-academic stakeholders is likely to be difficult to secure, as they may not see practical benefits from engaging with UKRI to inform this exercise.
- Financial reporting on OA expenditure (e.g. from block grant awards or core funding) lacks granularity, as UKRI is no longer requiring detailed reports on this. In some cases, financial information may be gauged from external sources (e.g. Jisc, OA Switchboard), but we note that there will be some limitations to M&E results, based on the final choice of data sources and on whether the sampling of UKRI-funded and UK-based research performing organisations is pursued.

It is important to collect qualitative information alongside quantitative data from the very beginning

Our consultation clearly identified the need to begin capturing qualitative information from the very beginning of the M&E process, to achieve richness of narrative and storytelling as part of the framework. This presents significant challenges, however, as qualitative research is time and cost intensive and it adds burdens on contributors, which would mainly consist of research performing organisations.

The M&E framework should therefore seek to achieve a balance between the collection of new evidence and the creation of consultation burdens for external stakeholders (including, for example, higher education institutions, researchers and publishers). In particular, we recommend the following:

- Questions #7, #17 and #18 would be best addressed via advisory input, for example by leveraging a panel of publishers and institutions who may provide input regularly

(e.g. via focus groups or workshops). This would cover reasons for non-compliance, the challenges and opportunities arising from UKRI's OA policy as well as its impact on EDI considerations, career progression and researcher evaluation. We note that existing engagement mechanisms which UKRI has in place (e.g. [Open Access Policy Stakeholder Forum](#)) may be expanded to include input in these areas, to minimise burdens on these stakeholders.¹¹ A key consideration in addressing questions #7, #17 and #18 will be to ensure representation from a diverse cohort of organisations (e.g. size, turnover, national focus)

- **Question #19 requires views from researchers, which we believe should be sought in a more structured way given their far larger numbers compared to institutions or publishers.** Furthermore, in the case of researchers, it is also difficult to identify suitable individuals with protected characteristics, which indicates that casting a wide net is likely to be needed to gather the input required (in contrast, organisations can talk about their approaches to EDI in general terms). We would recommend the use of an online survey as a starting point, potentially complemented by a set of in-depth interviews depending on available resources and level of insight required. Such a survey may either be added to existing mechanisms (smaller number of questions) or be run as a standalone exercise (larger number of questions)
- **Question #20 seeks to develop narrative case studies, building on publicly available information as well as in-depth engagement with specific stakeholder groups.** The recommended approach for delivery would include an investigation of quantitative data to identify individuals and organisations to be reviewed and engaged
- Across all the above engagement mechanisms (existing focus groups, workshops, consultation mechanisms, surveys), we recommend the inclusion of questions to gauge views on challenges and opportunities arising from UKRI's OA policy. We recommend this is done in a light touch manner, as the overall M&E strategy has been designed chiefly as an impact evaluation: information on policy implementation would feed into the contribution analysis narrative as opposed to being the focus of the approach. Examples of possible questions in this area are available in Annex A.

We suggest that questions #7, #17, #18 and #19 are considered from the beginning of the M&E exercise (Years 0 and 1), as they need baseline discussions to assess progress in time. On the other hand, Question #20 does not need baseline values, as its key aim is storytelling to encourage higher uptake of OA publishing, based on cases where UKRI-funded research has made an impact. As a result, we recommend considering this question a few years into the M&E approach, to complement the initiation of the evaluation exercise (Year 3), and then repeat it every few years depending on available resources.

Although the above is our recommendation, we have provided an overview of qualitative research methods as well as specific questions in Annex A. This can be used by UKRI to balance the perceived need for evidence in these areas against available resources, including to inform any decision to commission qualitative research to third parties. In this context, we would recommend that Questions #7, #17 and #18 are covered by UKRI in-

¹¹ An example of this may be the expansion of the scope of an existing advisory or working group, potentially via the addition of a new meeting to discuss these topics.

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house and note that the potential for commissioning qualitative research is highest for questions #19 and #20.

"I think that some form of baselining is the right thing to do to be convinced that, when things are moving in the right direction, the benefits are proportionate to the amount of money that is being invested in [open access]." – University leader

Based on the investment and resources available, UKRI can adjust the shape of the M&E approach

Building on the discussion in the previous paragraphs, it is clear that practical approaches to M&E can reflect a range of different resourcing (Figure 4).

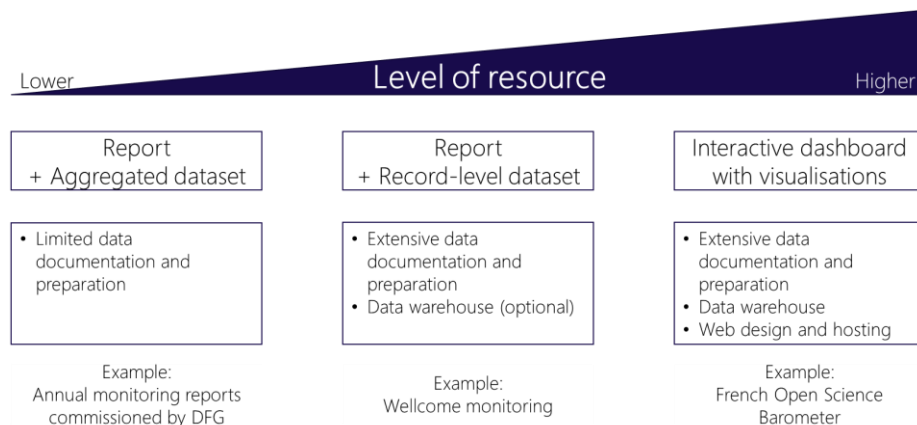
For example, at a lower level of resource, limited data preparation or documentation would be required. A report and an aggregated dataset would be the main outputs from this approach. An example of such an approach is the [Annual monitoring reports commissioned by German funder DFG](#).

With a moderate level of resource, some data preparation would be needed, potentially underpinned by a data warehouse infrastructure. A report with a record-level dataset would be the main output. An example of this approach is the [Wellcome & Charity Open Access Fund \(COAF\) Open Access Spending](#) collection using the Figshare platform. The added benefit in this case is the public availability of record-level information, which may be reused for other purposes. On the other hand, the aggregated dataset discussed above would only present summarised information rather than data on each output within its scope.

With a higher level of resource, data preparation and documentation would be needed, along with a data warehouse and web design and hosting. This would provide an interactive dashboard with visualisations, such as the [French Open Science Barometer](#). The core benefit at this level of resource is accessibility: M&E results can be made easier to view, browse and filter via a web browser, which in the case of a dataset would only be possible via a manual data analysis approach (e.g. using Excel).

Importantly, UKRI's ability to share record-level data and/or display this via a dashboard will depend on licensing terms. Should UKRI choose to use open data only, we consider all approaches to be feasible; should a mix of open and proprietary data be used, liaison with the data providers will be needed to investigate sharing options.

Figure 4. High-level approaches to reporting.¹²



4.3 Open versus proprietary data sources

It is important for UKRI to consider the implications of endorsing open or proprietary data

Recent work by funders (e.g. European Commission) and national-level organisations (e.g. French Open Science Barometer) provides evidence that working only with open data is feasible. Their work and our high-level analysis challenge the long-established idea that proprietary databases offer superior coverage, and Table 4 (p.38) highlights other aspects that should also be considered when selecting the most appropriate data sources.

In practice, UKRI could seek to appropriately combine a mix of open and proprietary datasets to address M&E questions, considering efficiency, value for money and operational needs. Although working exclusively with open data provides some benefits, the broader organisational context should be considered, too, reflecting for example the extent to which bibliometric datasets are currently used within UKRI for purposes other than open access M&E. One limitation of using proprietary datasets is likely to be around licensing, as these often do not allow mixing and matching with other datasets and subsequent data sharing.

We note that using open data communicates a commitment to open science and open sharing, which is in line with the ethos of UKRI's OA policy and wider open research strategy. As part of this, we also note that contributors mentioned that UKRI and other funders have a role to play in supporting open scholarly communication data sources in the longer term.

Finally, we note that our findings are broadly in line with the Science Europe [briefing paper on Open Access Monitoring](#), which acknowledges that there is no "perfect" data source for M&E exercises, and that any quantitative information should be accompanied by a narrative discussion to synthesise record-level figures into actionable advice for a diverse set of stakeholders. The sharing of data as well as a clear methodology are also advocated by the Briefing Paper, alongside the need to keep adapting M&E questions to an ever-changing policy and practice landscape.

¹² Please note that this visual refers to monitoring and quantitative aspects of M&E. Qualitative or mixed-methods work would need to complement these, chiefly for evaluation purposes

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Table 4. Qualitative assessment of the implications of using different data sources.

| Type of data source | Open data only | Proprietary data only | Combination of open and proprietary data (if/where allowed) |
|--|---|--|--|
| Coverage | It is broadly proven that gaps exist in any data source, whether open or proprietary only. | | |
| Credibility (extent to which the sources are likely to be seen as valid by stakeholders) | May require awareness raising and reassurance, particularly if used to assess policy compliance | High credibility given historical usage by research stakeholders | May require awareness raising and reassurance, depending on the balance of open vs proprietary sources |
| Costs to access data | Limited/null | High | Medium to High, depending on the extent to which the approach relies on proprietary data |
| Open sharing | No limitations | Subject to licensing | |
| External perceptions | Communicates a commitment to open science and open sharing | May suggest that open data is 'not good enough' | |

Collaboration with existing data providers is key to minimise burdens

The [Independent Review of Research Bureaucracy](#) highlighted a need to reduce burdens on research performing organisations. UKRI is committed to doing so, including as part of its OA policy and M&E efforts. For example, under UKRI's new OA policy, research organisations **no longer need to submit block grant spend return forms**. To seek assurance that the block grant awards have been spent in line with eligible costs, research organisations will be required to provide overall information about their spend against the block grant through their Final Expenditure Statement (as is standard for grants), and the block grant awards will be part of [Funding Assurance Reviews](#).

To mitigate the impact of the loss of granular information due to this change in approach to reporting, as well as to capture additional information to answer M&E questions (e.g. on financial sustainability), **it will be essential for UKRI to explore the potential to collaborate with existing data providers, to minimise data collection burdens where open data may not be available**. As part of this work, we have engaged a range of players such as Jisc¹³ and the OA Switchboard, who are open to discussing the exchange of information with UKRI to inform answers to M&E questions. We highly recommend an early assessment of data quality and potential for aggregation as soon as possible, based on any relevant information that third parties may be willing to share.

Furthermore, when it comes to open data providers (Table 5, p.41), there is an important role for research stakeholders to play, to ensure that these remain available, and that their

¹³ UKRI recognises Jisc as a core partner in the delivery of open access in the UK. UKRI has provided funding to Jisc to undertake activities to support the implementation of its OA policy, which includes M&E activities.

data is updated and maintained in the long term. We recommend that UKRI considers whether it would be appropriate to support these data providers (e.g. via funding), as doing so would aid their sustainability and contribute to elevating their status in the eyes of the research community. We acknowledge that UKRI has commissioned ongoing work to develop a [roadmap for improvements to the open access research information landscape](#), which is expected to deliver a series of recommendations for further work in this direction and, ultimately, to help improve (meta)data quality on OA publications.

4.4 Technologies and potential for automation

A small number of custom datasets can be used to answer multiple M&E questions

In the data specification (Annex A), we have recommended the creation of a small number of datasets to answer the shortlisted M&E questions (with the exclusion of qualitative questions, where data would need gathering through consultation). This does require a degree of preparatory work and data matching, but the benefits arising from such an approach are significant: aggregated datasets will support the analysis of specific monitoring questions (compliance) as well as providing flexibility of analysis when considering evaluation questions, which outperforms and is more efficient than using separate datasets. In addition, the aggregation of information from several sources will allow UKRI to create a more comprehensive (number of records) and complete (number of data points per record) database. As shown in Annex A, aggregated datasets will allow data to be cut in many different ways, to allow for a nuanced exploration of the impacts of UKRI's OA policy (e.g. number of articles with a compliant licence, split by publisher, OA model or institution). **The methodology to implement the above should be shared transparently by UKRI, including any known limitations of the approach.**

The results from any qualitative or mixed-methods research do not form part of the above, and would be presented as separate evidence such as survey results, coded findings, case studies or narrative reports. To inform contribution analysis, it will be important for UKRI to provide a narrative that brings together the quantitative/bibliometric evidence and any qualitative or mixed-method outputs, recognising that the latter are likely to come in a range of formats that are more difficult to harmonise or simplify.

Several approaches to technical implementation can be pursued, with varying levels of automation

Depending on the chosen set of data sources, approaches may range from manually downloading a csv file to automatically accessing data via an API. Similarly, the combination of data from various sources into one dataset (e.g. by matching based on persistent identifiers) and its subsequent analysis can be delivered manually, using spreadsheet software, or with an automated approach based on SQL, R or Python. While the former approach requires more limited technical expertise, it is less transparent and reproducible, limiting everyone's ability (including UKRI's) to rerun the analysis or edit one or more of its steps or components.

Furthermore, some data is incompatible with a spreadsheet format, for example in cases where a given research output is associated with multiple repository locations. This is a common occurrence in bibliometric data, and several parameters would similarly see multiple values assigned to a given variable. This issue is typically addressed via approaches such as the use of JSON data objects or other database technologies.

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For the above reasons, we recommend that UKRI employs an automated approach to data collection and analysis as much as possible, and we note that this is also likely to be less resource intensive and more streamlined (e.g. via software automation, including potentially using cloud technologies and APIs). An automated approach may be developed in-house or leverage existing infrastructure to store, ingest, combine and analyse data from different data sources, and we note that the use of existing infrastructure will likely be more efficient.

Here, too, lies an opportunity to not only use and support open data sources wherever possible, but also to use and support existing open infrastructure for data processing and analysis.¹⁴

¹⁴ Although definitions of open scholarly infrastructures may vary, *SCOSS* define them as “the scholarly communication resources and services, including software, that we depend upon to enable the scientific and scholarly community to collect, store, organise, access, share, and assess research.” We also note that some of these infrastructures may be open source and/or allow access to all data to their users. In the context of the statement referencing this footnote, examples of open scholarly infrastructure include platforms with analytics and/or dashboarding capabilities, such as *COKI*, *CORE.ac.uk*, *Lens.org* or *OpenAlex* (listed alphabetically).

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Table 5. Existing data sources and recommended starting points.

Bold and pink emphasis indicates recommended starting points.

Please note: The recommended data sources are based on the experience of the authors and on high-level testing. We highlight that a different mix of data sources may also enable UKRI to answer the chosen M&E questions.

The recommendations made in this table are used as an example and further discussed in the data specification (Annex A). The choice of a different mix of data sources would likely require an adaptation of the analysis approach as presented in the data specification.

| Focus | Potential data sources |
|-----------------------------|--|
| UKRI-funded publications | <ul style="list-style-type: none"> • Crossref • Dimensions • Europe PMC • Gateway to Research • Lens.org • PubMed • Scopus • Web of Science |
| Publication characteristics | <ul style="list-style-type: none"> • OpenAlex • ROR |
| OA characteristics | <ul style="list-style-type: none"> • DOAB • DOAJ • ESAC • Journal Checker Tool • Sherpa Romeo • Unpaywall |
| Downloads and usage | <ul style="list-style-type: none"> • Altmetric.com • Crossref Event Data • IRUS-UK • Journal Usage Statistics Portal (JUSP) • Overton (policy citation) • Lens.org (patents) |
| Financial characteristics | <ul style="list-style-type: none"> • ESAC • Journal Checker Tool • Jisc • OA Switchboard • Open APC • UKRI internal data |
| Preservation ¹⁵ | <ul style="list-style-type: none"> • CLOCKSS • ISSN Keepers Registry • Jasper • Portico |
| Institutional repositories | <ul style="list-style-type: none"> • BASE • CORE • OpenDOAR |
| Aggregation and analysis | <ul style="list-style-type: none"> • COKI • Dimensions |

¹⁵ (Digital) preservation is a set of activities and infrastructures seeking to ensure long-term retention of and access to scholarly outputs.

5. From design to implementation

This section provides an implementation timeline, including a recommended set of activities and deliverables for the first years of UKRI's M&E efforts, acknowledging the opportunity for UKRI to be one of a small number of leaders in the area. UKRI should work closely with sector stakeholders as well as with other funders, with the key aims of seeking alignment and fostering good practice sharing.

The deployment of the M&E approach requires planning and liaison with external stakeholders

The indicative timeline in Figure 5 showcases the recommended first years of the framework's operation, which we recommend are preceded with a pilot phase to review M&E questions in light of more detailed testing on a range of data sources. This will enable UKRI to iterate and tweak questions if needed as well as to pick the most appropriate mix of open and/or proprietary data sources that maximise efficiency and value for money and fit with other ongoing M&E activities and data sources already being used within the organisation.

The indicative timeline is not tied to a specific year, but it is expected to be as soon as feasible. We recommend that the pilot phase includes a degree of further validation with a small set of key stakeholders (at least research performing organisations and publishers), to ensure that M&E questions are perceived to be unbiased and clear, and that initial results are quality assured and discussed before publication or sharing.

During the pilot stage, baseline data to inform future analysis and comparison should be prepared and shared (see Annex A for more information on baseline data). In addition, we note the following:

- The M&E approach would continue after 'Year 5' with annual monitoring, evaluation and review activities (this is not shown for convenience), under the assumption that core policy requirements remain unchanged. Should these vary, the design of new M&E questions may be needed.
- Some M&E questions may be considered at varying frequency (e.g. every few years), based on available data sources, expected burdens and the extent of automation implemented.¹⁶
- The cycle of review and change management may operate every two years, with the first one focusing on review and the second on change management and implementation. The pace of such a cycle should be tied to UKRI's planned policy review timelines, and the timelines for implementation of relevant changes may vary based on UKRI's strategic priorities. We note that bibliometric data is likely to be analysed on an accelerated timeline, reflecting UKRI's commitment to review the policy's effectiveness two years after it came into place. This may be implemented via a retrospective difference-in-difference analysis of licences and embargo periods (if any) of UKRI-funded articles.
- A more detailed project plan would need to be developed to implement the M&E approach, including more granular milestones. Deliverables such as 'release of...'

¹⁶ We note that this is particularly likely to be the case for qualitative questions, as the expected burdens for respondents and costs to UKRI (e.g. staff time or cost of outsourcing) would be high. As a starting point, we suggest that these qualitative questions are considered in Year 1 and then every three years subsequently (e.g. Year 4, Year 7, ...).

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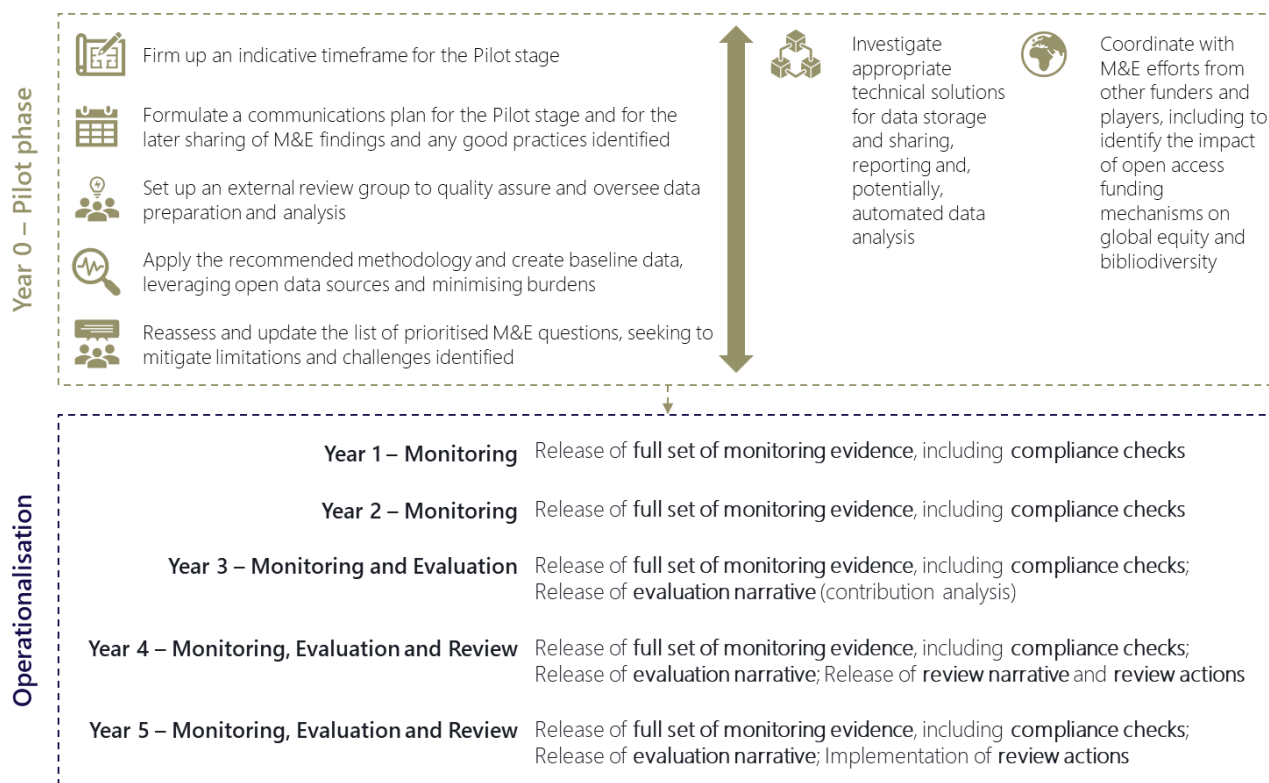
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(see Figure 5) are likely to involve a range of communication activities seeking to demonstrate the scope and ambition of UKRI's commitment to OA.

- A detailed timeline needs to be established for the collection of data to inform bibliometric analysis, considering when data sources are typically populated or updated as well as the time by which outputs for previous years are likely to be captured in these. Notably, collecting data on a predefined schedule improves comparability of data over time.

The final decision on how to operationalise the M&E framework rests with UKRI, based on available resources and the mix of skills and expertise available in-house. However, we highlight that, should UKRI outsource a large portion of M&E efforts, there may be a risk of reaching a vendor lock-in situation, with UKRI lacking sufficient in-house expertise to implement the framework. As a result, we recommend that the ownership of the activities in Figure 5 is carefully assessed as part of the first steps for implementation.

Figure 5. Recommended monitoring, evaluation and review cycles, including expected deliverables by year.



A set of guiding principles should be followed in the operationalisation of the M&E framework

Our consultation confirmed that UKRI's desire to deploy an M&E framework for the OA policy would be welcomed by the community, as long as some overarching principles are kept in consideration. These principles are however relatively easy to follow, as they are in line with UKRI's plans (Figure 3, p.17).

In particular, the research community is interested in unbiased and clear M&E questions, which consider the nuances typical of the research and publishing landscapes. This includes the diversity of stakeholders (both organisations and individuals) and of outputs, ensuring that long-form publications are not deprioritised for the benefit of quicker wins around articles.

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To enable the above, UKRI should establish an appropriate approach to the governance of the M&E framework, building on the efforts implemented throughout the present project (for example, by creating an internal review group as an oversight mechanism).

A full set of recommendations arising from our consultation is presented on the following page, split by theme. As UKRI prepares to take forward M&E efforts focusing on the OA policy, these recommendations should be carefully considered and balanced against the broader organisational context as well as availability of resources, skills and technical infrastructure.

In addition to our recommendations, we propose the following practical next steps, to establish quality assurance mechanisms as well as ensuring that best practices are considered in the next phases of work:

- Select a small set of key stakeholders to form an external group of experts (including some UKRI representatives) to quality assure and advise on the data preparation and analysis process, so that the first data release (baseline data, before the beginning of Year 1) as well as subsequent ones are seen as credible by the research community.
- Formulate and deploy a communications plan, covering all steps from the dissemination of the findings of the present work to an indicative schedule of activities over the first two years of the M&E framework (pilot stage and Year 1).

Several opportunities may arise from the analysis and sharing of M&E results, potentially positioning UKRI as one of a small number of leaders in this area

Our consultation indicated that **a record-level dataset** (i.e. a dataset where each row describes a research output and each column some relevant features, such as licence, DOI, etc.) **would be important to external stakeholders, and we therefore recommend that UKRI considers this as a starting point, in combination with additional qualitative evidence**. We note that the specific licensing terms of the data source(s) chosen will determine whether this is possible in practice.

Interactive visualisations (Figure 4, p.37) for quantitative M&E questions have been described as useful, and we recommend these are considered if sufficient budget, resources and skills are available. In the case of monitoring, opportunities are clear and, to an extent, straightforward. Greater transparency around OA publication routes, licences, use of public funds and other aspects of the policy is seen as a potential tool to enhance accountability across the sector, as well as a significant resource to help shape the future of publishing models such as APCs, BPCs, TAs and alternative models. To achieve this, UKRI should work in partnership with existing data providers, particularly Jisc, and choose the right balance and mix of data sources. We acknowledge that (meta)data for long-form publications is currently immature, and there is a need for improvement before analysis at scale becomes practical and reliable. This is something to which the operationalisation and results of the M&E process are likely to contribute and inform.

The most significant opportunity is perhaps in the domain of evaluation and review, which are not explored as frequently by research funders. UKRI could join a small number of leading organisations who are exploring qualitative data as well as bibliometric information to better understand the short-, medium- and long-term impacts of OA policies, including their unintended consequences. These insights could potentially feed into future policymaking, moving beyond a monitoring approach that focuses mainly on compliance and helping to explore the expectations and experiences of the stakeholders affected. Such findings could be helpfully shared with peer organisations, potentially leading to impactful changes in OA policymaking at the international level.

Recommendations for the monitoring and evaluation of the UKRI OA policy arising from our analysis and consultation.

Principles for monitoring and evaluation

UKRI should:

- focus on positively supporting future policymaking and improving communication, awareness-raising and sharing of best practice
- use contribution analysis as the core evaluation strategy
- seek to achieve a balance between the collection of new evidence and the creation of consultation burdens for external stakeholders (including, for example, higher education institutions, researchers and publishers)
- monitor the use of a variety of funding models and not only focus on the use of article processing charges and book processing charges
- consider monitoring the impact of the open access policy on global equity

Practical next steps

UKRI should:

- ensure that terminology is clear, by engaging research performing organisations and publishers to test definitions prior to implementation
- consider a pilot stage to reassess and update the prioritised monitoring and evaluation questions based on emerging results
- iterate and review the monitoring and evaluation approach for long-form outputs as the landscape continues to develop
- carefully scope out questions on the societal impact of open access, to avoid scope creep

Technical implementation

UKRI should:

- consider the use of open data sources, in combination with external datasets where proprietary or confidential information is required and can be used for the intended purposes
- pursue an automated rather than manual approach to data collection and analysis, leveraging Application Programming Interfaces (APIs) and cloud-based analytics tools as appropriate
- explore potential to collaborate with existing data providers, to minimise data collection burdens where open data may not be available

Outputs and public sharing

UKRI should:

- produce a monitoring and evaluation report as well as a record-level dataset and additional qualitative evidence (in line with the licensing terms of the data source(s) chosen)
- share monitoring and evaluation results and lessons learned publicly, in the spirit of open data and transparency
- clearly note the limitations of the chosen set of data sources as part of the published monitoring and evaluation methodology and any data releases

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UKRI should engage with external M&E activities as they finalise and deploy its framework

We acknowledge that other funders and sector organisations, as well as government departments, have been monitoring developments around OA publishing (see for example Table 2, p.18). In a UK context, these efforts initially coalesced after the [2012 Finch Review](#), where an approach was set up to collectively monitor the progress towards OA, with oversight from the Universities UK Open Access Coordination Group. Additionally, the launch of Plan S in 2018 (which [UKRI endorses](#)) as well as growing interest from policymakers, helped highlight the global nature of OA and the growing need to monitor progress internationally, including for example the impact of OA policies developed in the UK on low- and middle-income countries (see for example the research paper "[Open Access: challenges and opportunities for Low- and Middle-Income Countries and the potential impact of UK policy](#)", commissioned by the Foreign, Commonwealth & Development Office in collaboration with National Institute for Health Research and UKRI).

As a result, it is important for UKRI to engage its international peers, to encourage joined up efforts across national borders. As noted throughout the report, we believe there are several opportunities for UKRI to do so, particularly in the context of cOAlition S and alongside a number of like-minded funders with similar requirements around OA. As the framework is finalised and deployed, we recommend that UKRI sets up discussions (e.g. workshops) with its peers, aiming to identify pathways for information sharing, mutual learning and continuous improvement.

Final remarks

As part of the project's discussion workshop, a broad range of stakeholders were brought together to validate our findings. UKRI's desire to minimise reporting and/or consultation burdens whilst capturing the impact of the OA policy (and OA in general) appears both possible and achievable. Data sources have evolved significantly since discussions on reporting burdens first started, and it is understood that *some* burdens are necessary for UKRI to demonstrate the public value of its investment in OA.

Furthermore, it was recognised that long-form outputs should and, at this point, *can* be part of M&E efforts. There are several caveats around this, including that it is currently difficult to estimate the number of long-form outputs published every year, but this is seen as an area where M&E findings could productively inform future developments in the (meta)data infrastructure.

Overall, there is appreciation of the fact that, to produce and maintain good quality data on publications, more stakeholder collaboration is needed, and that no individual stakeholder group is well-positioned to single-handedly improve the (meta)data landscape. In this context, contributors recognised a need for UKRI and other funders to endorse and support not only open data sources but also (shared) open analytics infrastructure as far as possible.

In order to "assess progress towards open access, compliance with the policy, as well as the effectiveness of the policy and wider impacts of open access", UKRI will need to continue engaging the research and innovation community, to validate both questions and findings and to ensure that organisations can learn from one another when M&E results are interpreted.

Appendix 1. Project contributors

Table A1. UKRI project team (sorted by last name).

| Name | Role |
|-------------------|--|
| Anisha Ahmed | Strategy Lead: Open Research |
| Sara Ball | Strategy Lead: Open Research |
| Rachel Bruce | Head of Open Research |
| Amira Burshan | Senior Analyst: Open Research and Research Culture |
| Joanna Jacklin | Senior Analyst: Open Research and Research Culture |
| Claire Symeonides | Lead Analyst: Open Research and Research Culture |

Table A2. UKRI review group (sorted by last name; members also included the individuals listed in Table A1).

| Name | Role |
|------------------|--|
| Rosie Cornelius | Deputy Director Analysis and Performance |
| Emma Devine | Senior Funding Policy Manager |
| Melissa Di-Lella | Funding Policy Manager |
| Sarah Dimbleby | Head of Policy Analysis (until September 2022) |
| Michael Lee | Head of Policy Analysis (from October 2022) |
| Eleanor Symonds | Evaluation Lead |

Table A3. Other UKRI contributors, including colleagues from research councils and UKRI Strategy (sorted by last name).

| Name | Organisation | Role |
|---------------------|---|--|
| Avril Allman | UKRI - Natural Environment Research Council (NERC) | Head of Research and Funding Operations |
| Juan Bicarregui | UKRI - Science and Technology Facilities Council (STFC) | Head of the Data Division, Scientific Computing Department |
| Michael Cherrington | UKRI - Medical Research Council (MRC) | Information Officer |
| Callum Day | UK Research and Innovation (UKRI) | Senior Programme Manager |
| Lesley Hambelton | UK Research and Innovation (UKRI) | Project Manager |
| Sally Reid | UKRI - Natural Environment Research Council (NERC) | Head of National Capability |
| Ben Ryan | UKRI - Engineering and Physical Sciences Research Council (EPSRC) | Senior Evaluation Manager |
| Sarah Stacey | UKRI - Engineering and Physical Sciences Research Council (EPSRC) | Data and Information Manager |
| Allan Sudlow | UKRI - Arts and Humanities Research Council (AHRC) | Director of Partnerships and Engagement |
| Maggie Wilson | UKRI - Science and Technology Facilities Council (STFC) | Head of Skills and Programme Delivery |
| Tahia Zaidi | UK Research and Innovation (UKRI) | Senior Strategy Advisor |

Table A4. Project contributors (sorted by last name).

| Name | Organisation | Role |
|---------------|---------------------|--|
| Janneke Adema | Coventry University | Associate Professor, Research Centre in Postdigital Cultures |

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| Name | Organisation | Role |
|----------------------|--|---|
| Becky Atkins | Bath Spa University | Research Publications Librarian |
| Laura Bandura Morgan | Open Access Publishing in European Networks (OAPEN) Foundation | Funder Relations Manager |
| Chris Banks | Imperial College London | Director of Library Services |
| Chloe Beswick | York St John | Copyright, Licensing and Research Librarian |
| David Boyt | Geological Society of London | Head of Editorial Development |
| Allan Bracey | University College London | Open Access Compliance Officer |
| Yvonne Campfens | Open Access (OA) Switchboard | Executive Director |
| Dominique Capostagno | National Institute for Health and Care Research (NIHR) | Programmes Analyst |
| Angela Crawford | Loughborough University | Research Policy Manager |
| Caroline Cummins | Publishers Association | Head of Policy and Public Affairs |
| Hans de Jonge | Nederlandse Organisatie voor Wetenschappelijk Onderzoek (NWO) | Head of Open Science Policies |
| Amy Devenney | Jisc | Senior Research Manager |
| Victoria Eva | Elsevier | Vice President, Global Policy and Industry Relations |
| Richard Fisher | Independent Publishers Guild (IPG) | Academic and Policy Correspondent |
| Sarah Fricker | Institute of Physics (IOP) | Senior Group Legal Advisor |
| Elizabeth Gadd | Loughborough University | Research Policy Manager |
| Victoria Gardner | Taylor and Francis | Director of Policy |
| Rupert Gatti | Open Book Publishers | Director |
| Adam Goodger | Department of Health and Social Care | Senior Research Policy Officer |
| Anna Grey | Edge Hill University | Director of Research Office |
| Bethany Harris | Jisc | Senior Data Analyst |
| Ruth Harrison | Imperial College London | Head of Scholarly Communications Management |
| Peng Peng Hatch | Bournemouth University | Research Assistant |
| Angela Holzer | Deutsche Forschungsgemeinschaft (DFG) | Programme Director, Scientific Library Services and Information Systems |
| Hannah Hope | Wellcome | Open Research Lead |
| Azhar Hussain | Jisc | Head of Product, Open Research |
| Nick Jennings | Loughborough University | Vice-Chancellor and President |
| Roger Kain | University of London, School of Advanced Study | Professor |
| Daniel Keirs | Institute of Physics (IOP) | Head of Journal Strategy and Performance |
| Martina Kunzmann | Fonds zur Förderung der wissenschaftlichen Forschung (FWF) | Administration Analysis |
| Malavika Legge | Open Access Scholarly Publishing Association (OASPA) | Open Access Program Manager |
| Valerie McCutcheon | University of Glasgow | Research Information Manager |
| Noelle McDougall | Abertay University | Library Research Support Manager |

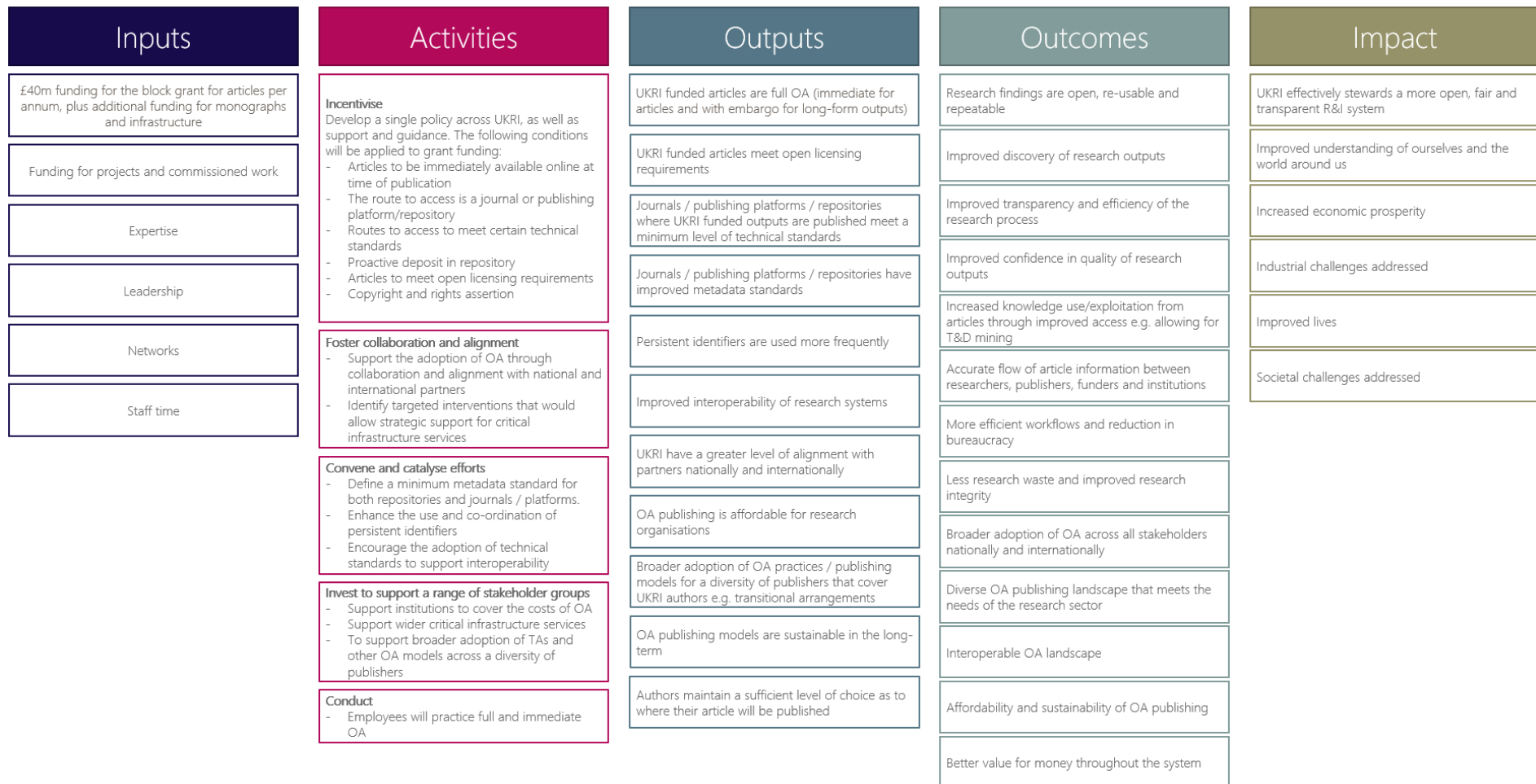
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| Name | Organisation | Role |
|-------------------------|---|---|
| Caren Milloy | Jisc | Director of Licensing |
| Jess Monaghan | Springer Nature | Director, Policy and Performance, OA |
| Leila Moore | Wiley | Director, Open Access Policy |
| Samuel Moore | University of Cambridge | Scholarly Communication Specialist |
| Lou Peck | The International Bunch | Chief Executive Officer |
| Ana Persic | United Nations Educational, Scientific and Cultural Organisation (UNESCO) | Senior Programme Specialist |
| Stephen Pinfield | University of Sheffield | Professor |
| Frances Pinter | Central European University Press | Executive Chair |
| Dani Preedy | National Institute for Health and Care Research (NIHR) | Assistant Director, Portfolio Insight and Publications; Head of the EME Programme |
| David Prior | Falmouth University | Creative Specialist |
| Ros Pyne | Bloomsbury Publishing | Global Director, Research and Open Access |
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| Claire Rawlinson | British Medical Journal (BMJ) | Director of Publishing Strategy & Transformation |
| Claire Redhead | Open Access Scholarly Publishing Association (OASPA) | Executive Director |
| Katharina Rieck | Fonds zur Förderung der wissenschaftlichen Forschung (FWF) | Open Science Manager |
| Jennifer Sanchez-Davies | Jisc | Product Manager (Open Research Services) |
| Bal Sandhu | Loughborough University | Research Policy Officer |
| Charles Shannon | Ulster University | Head of Research Management |
| Catherine Sharp | University College London | Head of Open Access Services |
| Wayne Sime | Association of Learned and Professional Society Publisher | Chief Executive |
| Ronald Snijder | Open Access Publishing in European Networks Foundation | Deputy Director |
| Jeroen Sondervan | Utrecht University | Open Access Publishing Consultant |
| Niels Stern | Open Access Publishing in European Networks Foundation | Director |
| Tiffany Straza | United Nations Educational, Scientific and Cultural Organisation (UNESCO) | Senior Programme Specialist |
| Adam Tickell | University of Birmingham | Vice-Chancellor and Principal |
| Steven Vidovic | University of Southampton | Open Research Development Manager |
| Dan Wake | Universities UK (UUK) | Policy Manager |
| Christie Walker | Royal College of Art | Head of Research Development |
| Chris Wickham | University of Oxford | Professor |
| Tim Williams | Edward Elgar publishing | Managing Director |
| Sherri Young | Institute of Electrical and Electronics Engineers (IEEE) | Product Manager, Science & Technology Publishing and Media |

Appendix 2. Draft Logic Model for UKRI's OA policy

This logic model is a draft version, which will be iterated and improved upon following further input from both internal and external stakeholders. Please note that this logic model refers to articles, and that a separate logic model is being developed regarding long-form outputs.





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