

Incentivizing the sharing of research outputs through research assessment: a funder implementation blueprint [DRAFT 4: July 2018]

Overview

There are several points in the research lifecycle where research and/or researchers are assessed by others, including institutions, funders, publishers and other researchers. Each of these assessment points provides an opportunity to influence researcher behavior. As funders, we have the opportunity and responsibility to aim for greater impact from our grants by shifting the incentives inherent in our grant application systems.

One way to aim for greater impact is to encourage researchers to share their research outputs (articles, data, code, materials, etc.) and to do this, providing the right incentives to support this behaviour is of paramount importance. If we are to be successful in this endeavour, we need to:

- (1) change the perception that publication in high-impact journals is the only metric that counts;
- (2) provide demonstrable evidence that, while journal articles are important, we value and reward all types of research outputs; and
- (3) ensure that indicators like the venue of publication or journal impact factor are not used as surrogate measures of quality in researcher assessment.

This Blueprint seeks to provide funders with a clear approach to help realise these objectives.

A three-step blueprint

Step 1: Policy development and declarations

Guiding principle	
<i>Funders should use their policies and public declarations to incentivise the sharing of research outputs, working in partnership with other funders to develop a harmonized approach based on common values.</i>	
#	Actions
1.1	Develop policies which encourage researchers to maximise the availability of research publications, data, software and materials with as few restrictions as possible.
1.2	Commit to providing the funding required to support the sharing of research outputs, including through allowing applicants to request these costs as part of their main application budget.
1.3	Sign the San Francisco Declaration on Research Assessment (known as DORA). By signing this, funders publicly commit not to use journal-based metrics as surrogate measures of quality in any funding decision and that the value and impact of <i>all</i> research outputs should be taken into account for the purposes of research assessment.
1.4	Sign the TOP Guidelines . These guidelines provide a template to enhance transparency in the science that journals publish. With minor adaptation of the text, funders can adopt these guidelines for research that they fund.

Step 2: Implementation

Guiding principle	
<i>Funders should put their policies into practice and provide demonstrable evidence that, while journal articles are important, all types of research outputs are valued and that journal based metrics are not used as surrogate measures of quality in researcher assessment.</i>	
#	Actions
2.1	Identify and resolve any existing barriers in grant application forms and associated guidance materials, which could lead applicants to report only journal articles as their research outputs.
2.2	Roll out clear guidance and training for staff, reviewers and panel members to ensure the reviews they undertake take into account the intrinsic value and impact of all research outputs.
2.3	Develop approaches to monitor compliance with outputs sharing policies.
2.4	Consider publishing – with the applicant's permission – elements of the full grant application for awarded grants, as a step towards transparency in the funding review process.

Step 3: Engagement

Guiding principle	
<i>Funders should communicate how their research assessment takes into account open research practices.</i>	
#	Actions
3.1	Ensure that relevant web pages and grant application forms make explicit how the scientific productivity of applicants is assessed, and what criteria are used.
3.2	Ensure that staff are fully prepared to explain how the scientific productivity of applicants is assessed when visiting research institutions or attending conferences.
3.3	Work with institutions (where your researchers are located), and other organisations assessing research, to encourage them to develop complementary outputs sharing policies, sign up to DORA and apply these principles to hiring, tenure and promotion policies and staff development
3.4	Proactively celebrate grantees who practice open research well, e.g. by communicating case studies

Templated language to support implementation of Funder Blueprint

Purpose of document

This document seeks to provide funders with some templated language which, if included in funder policies/procedures, would place them in compliance of the *Funder Blueprint*.

To make this easy to implement (and understand) the templated language is shown in relation to six relevant actions identified in the *Blueprint*. The text highlighted in yellow indicates the elements which individual funders can select/complete, as appropriate.

Step 1: Policy development and declarations

Guiding principle

Funders should use their policies and public declarations to incentivise the sharing of research outputs, working in partnership with other funders to develop a harmonized approach based on common values.

Actions

- | | |
|-----|--|
| 1.1 | Develop policies which encourage researchers to maximise the availability of research publications, data, software and materials with as few restrictions as possible. |
|-----|--|

Templated language – maximizing the availability of research publications

Our mission is to [insert mission].

A primary output of this research is new ideas and knowledge, which we [expect or encourage] our researchers to publish as high-quality, peer-reviewed research articles, monographs and book chapters.

We believe that maximising the distribution of these publications – by providing free, online access – is the most effective way of ensuring that the research we fund can be accessed, read and built upon. In turn, this will foster a richer research culture. Specifically, we:

- require electronic copies of any research papers, that have been accepted for publication in a peer-reviewed journal, and are supported in whole or in part by [funder name], to be made available through [an open trusted repository / name of preferred repository] [and/or] the publisher's website as soon as possible and in any event within [maximum embargo period allowed] months of the publisher's official date of final publication. Similarly, [monographs and book chapters] must be made available through [an open trusted repository / name of preferred repository] [and/or] the publisher's website with a maximum embargo of [insert permissible embargo period] months;*
- [require/encourage] authors and publishers to license research publications using the Creative Commons Attribution licence (CC-BY) so they may be freely copied and re-used (for example, for text- and data-mining purposes or creating a translation);*
- affirm the principle that it is the intrinsic merit of the work, and not the title of the journal or the publisher with which an author's work is published, that should be considered in making funding decisions.*

Adapted from: <https://wellcome.ac.uk/funding/managing-grant/open-access-policy>

Templated language – maximizing the availability of other research outputs

As a funder [funder name] works to ensure that the results of the research we fund are applied for the public good. This includes creating an environment that enables and incentivises researchers to maximise the value of their research outputs, including data, code, software, and protocols and materials [add/delete output types as appropriate].

Specifically we:

- expect our researchers to maximise the availability of research data, code, software and materials, and protocols [add/delete output types as appropriate] with as few restrictions as possible. As a minimum, the data underpinning research papers should be made freely and publicly available in an established, open repository at the time of publication [specify embargo if permitted], as well as any original code and software that is required to view*

datasets or to replicate analyses;

- *require anyone applying for [name of funder] funding to consider their approach to managing and sharing anticipated outputs at the research proposal stage. In cases where these outputs are significant – generating data, code, software, materials or protocols [add/delete output types as appropriate] that will hold clear value as a resource for others in academia or industry – applicants will need to include an outputs management plan explaining their planned approach;*
- *expect researchers to make sure their shared outputs are discoverable, use recognised community repositories for data and other outputs where these exist and use persistent identifiers for these outputs wherever possible;*
- *recognise and value a range of research outputs – including inventions, code, datasets, software, protocols, and materials, as well as publications – in assessing the track record of researchers. Guidance to our committees, reviewers and staff emphasises that our funding decisions should take account of the full and diverse range of outputs that results from research and efforts made by researchers to use outputs to deliver health benefits or assist further research;*
- *[Funder name] will also consider whether researchers have managed and shared their research outputs in line with our requirements, as a critical part of the end of grant reporting process.*

Adapted from: <https://wellcome.ac.uk/funding/managing-grant/policy-data-software-materials-management-and-sharing>

- | | |
|-----|---|
| 1.2 | Commit to providing the funding required to support the sharing of research outputs, including through allowing applicants to request these costs as part of their main application budget. |
|-----|---|

Templated language – covering the cost of research publications

- *[Funder name] recognizes that there are costs associated with making research outputs open access. As such [Funder name] will [provide grantholders with funding to cover open access publication charges **OR** will allow researchers to include these costs in their research grants. Select which option is most appropriate]*

Templated language – covering the cost to support the sharing of other research outputs

- *[Funder name] also recognizes that there are costs associated with making other research outputs openly available. As such [Funder name] will [provide grantholders with funding to cover these costs **OR** will allow researchers to include these costs as part of the main research application and funded where they are justified. Select which option is most appropriate]*

- | | |
|-----|--|
| 1.3 | Sign the San Francisco Declaration on Research Assessment (known as DORA). By signing this, funders publicly commit not to use journal-based metrics as surrogate measures of quality in any funding decision and that the value and impact of <i>all</i> research outputs should be taken into account for the purposes of research assessment. |
|-----|--|

- | | |
|-----|--|
| 1.4 | Sign the TOP Guidelines . These guidelines provide a template to enhance transparency in the science that journals publish. With minor adaptation of the text, funders can adopt these guidelines for research that they fund. |
|-----|--|

Step 2: Implementation

Guiding principle	
<i>Funders should put their policies into practice and provide demonstrable evidence that, while journal articles are important, all types of research outputs are valued and that journal based metrics are not used as surrogate measures of quality in researcher assessment.</i>	
#	Actions
2.1	Identify and resolve any existing barriers in grant application forms and associated guidance materials, which could lead applicants to report only journal articles as their research outputs.
Templated language – removing barriers to reporting all outputs, not just journal articles	
<ul style="list-style-type: none"> Update grant application forms to encourage the reporting of <u>all</u> outputs <p><i>List up to [insert number] of your most significant research outputs. For [all/insert number] of these outputs, provide a statement describing their significance and your contribution (up to [insert number] words per output)</i></p> <p><i>Research outputs may include (but are not limited to):</i></p> <ul style="list-style-type: none"> <i>Peer-reviewed publications and preprints</i> <i>Datasets, code, software, protocols, and research materials</i> <i>Inventions, patents and commercial activity</i> <i>[add/delete output types as appropriate]</i> 	
2.2	Roll out clear guidance and training for staff, reviewers and panel members to ensure the reviews they undertake take into account the intrinsic value and impact of all research outputs.
Templated language – guidance for staff, reviewers and panel members	
<ul style="list-style-type: none"> Update guidance to all those involved in reviewing grant applications <p><i>When reviewing an applicant's suitability or track record for a grant application, consider the diverse range of possible research outputs. Bear in mind that the most appropriate type of output can vary between projects and disciplines, and may include not just research articles but also data, code, protocols and research materials [add/delete output types as appropriate]</i></p>	
2.3	Develop approaches to monitor compliance with outputs sharing policies.
2.4	Consider publishing – with the applicant's permission – elements of the full grant application for awarded grants, as a step towards transparency in the funding review process.

Step 3: Engagement

Guiding principle	
<i>Funders should communicate how their research assessment takes into account open research practices.</i>	
#	Actions
3.1	Ensure that relevant web pages and grant application forms make explicit how the scientific productivity of applicants is assessed, and what criteria are used.
Templated language – Commitment to transparency on how researchers are assessed	
<i>We [funder name] commit to publishing on our web site – and in grant application forms – how the productivity of applicants is assessed and the criteria we use to award grants.</i>	
3.2	Ensure that staff are fully prepared to explain how the scientific productivity of applicants is assessed when visiting research institutions or attending conferences.
Templated language – Commitment to ensuring all appropriate staff can communicate about how researchers are assessed	
<i>We [funder name] commit to ensuring that all appropriate staff are fully aware of how the productivity of applicants is assessed and the criteria we use to award grants. Training will be provided as required.</i>	
3.3	Work with institutions (where your researchers are located), and other organisations assessing research, to encourage them to develop complementary outputs sharing policies, sign up to DORA and apply these principles to hiring, tenure and promotion policies and staff development
3.4	Proactively celebrate grantees who practice open research well, e.g. by communicating case studies