

Next-generation AI: explainable AI

Distributed Peer Review – Rules and Guidelines

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These guidelines were compiled with reference to DPR Rules and Guidelines set out by the European Southern Observatory (ESO) and the Volkswagen Stiftung Foundation

Introduction

Background to Distributed Peer Review

The [Independent Review of Research Bureaucracy 2022](#) recommended that funders should consider innovative models of application assessment to improve and simplify processes. Subsequently, the [Review of Peer Review 2023](#) study specifically explored

the use and effectiveness of peer review mechanisms in grant-making processes, recommending that funders use of a range of review interventions in order to vary their assessment processes i.e. application, review, and decision-making processes should be tailored for each scheme.

Distributed peer review (DPR) is one such review intervention. In DPR, applicants are also assessors and review other applications submitted to the same funding opportunity to decide who gets funding. By submitting an application, applicants agree to act as reviewers and to have their application reviewed by their peers. This innovative approach has produced positive results so far, including in applications to the European Southern Observatory (ESO) and for the Volkswagen Stiftung foundation's [Open Up](#) funding. The Dutch Research Council (NWO) are also trialing DPR for their [Open Competition Domain Science – XS](#).

DPR has the potential to democratise the peer review process by improving the speed and quality of feedback available to applicants, as well as increasing the consistency and expertise of reviews, since a larger pool of reviewers are available, and each application is reviewed a greater number of times. DPR lessens the administrative burden on external peer reviewers and shortens the review process, by removing the need to recruit and run external review panels.

Why UKRI is trialling Distributed Peer Review

DPR democratises funding and empowers researchers to shape their field beyond their own projects. The process allows us to gather a wider range of perspectives than either expert review or assessment panels. This range of perspectives can then be drawn together to form a robust evidence base and identify the most promising ideas.

By participating in peer assessment, reviewers can also deepen and broaden their understanding of the funding opportunity, gain high-level insights into the funding landscape, and build their own expertise in developing competitive applications.

Finally, traditional peer review places a considerable burden on researchers and funders, particularly when a funding opportunity is expected to attract a high level of interest.

Distributing this burden among a larger set of people who are already deeply familiar with the opportunity's scope and criteria reduces an acute point of resourcing pressure for members of our Peer Review Colleges.

The pilot is an opportunity to test DPR on innovative, risky ideas from early- and mid-career researchers to improve AI explainability. However, we acknowledge that DPR requirements can be challenging for applicants in ECR roles and in part-time working arrangements and, to make the application and DPR process more accessible, we are

allowing other members of the applicant team to act as peer reviewers, alongside project leads.

To ensure that this process is run as effectively as possible, UKRI is working with the [UK Metascience Unit](#) to trial DPR. Embedded in UKRI, the UK Metascience Unit was established in 2024 to identify more effective ways of conducting, funding, and supporting research and innovation. This includes trialling innovations in how research funding opportunities are designed and delivered. The UK Metascience Unit have already trialled Distributed Peer Review in other UKRI funding opportunities, such as [UKRI Metascience AI early career fellowships](#).

The DPR process and outcomes will be evaluated by the Metascience Unit. Applicants will be approached for feedback following the process.

Rules and guidelines for applicants

General

All eligible applications submitted to explainable AI pilot funding opportunity will undergo DPR.

As part of their application, each applicant team will be asked to nominate up to two team members who are equipped to act as reviewers. The applicant team should only nominate individuals with the capacity, knowledge and confidence to provide comprehensive, quality reviews.

By submitting an application, applicants accept the following terms and conditions:

- All applicant teams will receive around 8 proposals to review
- Failing to provide the reviews by the deadline will lead to the automatic rejection of the application in which the given reviewer is involved, unless justified by extenuating circumstances
- Each reviewer is expected to carefully read all of their assigned applications, rate them and provide feedback to the applicants following the rules and guidelines of the funding opportunity
- If moderators find that one reviewer's set of reviews are of consistently poor quality (for example, no justification of scores given), the application in which the review is involved may not proceed.

A common concern with DPR is that applicants may give tactically lower scores in order to improve their own relative position. Applicants to the explainable AI pilot should be reassured that protections are in place to ensure that it is extremely difficult for applicants to 'game' the system.

Single-anonymous peer review ensures that applicants will not know who is reviewing their application.

Applications will be assigned to two different pools. Using a ring allocation method, reviewers associated with applications in Pool A will only be assigned to review

applications from Pool B, and vice versa. As a result, the scores a reviewer gives to other applications cannot impact the score-based ranking of their own application. Reviewers will not receive applications from their own institution.

To mitigate against collusion, we will use an allocation algorithm that avoids having any reciprocal pairs within which reviewers review one another.

UKRI will use moderators to check that reviewers have adhered to the guidelines for this funding opportunity. These moderators will advise on any reviews that should be excluded from the assessment process. If an applicant does attempt to 'game' the overall scoring system (for example, by giving consistently negative reviews and low scores without clear justification), the application they are involved with may not proceed.

Submission of an application

Applications must be submitted through UKRI's Funding Service. When you write your application, you must adhere to the application form provided and abide by stipulated conditions such as maximum word counts and rules for embedding images.

Your complete application must have been received before the deadline via UKRI's Funding Service. After this deadline, you can no longer submit an application.

By applying for this funding opportunity, you are consenting to take part in a trial of Distributed Peer Review (DPR). Please do not apply for this particular opportunity if you would prefer not to take part in the DPR process.

Eligibility checks

Each application will be checked by UKRI at the point of submission to ensure that the application and named applicants are eligible for funding according to the criteria detailed on the UKRI Funding Finder page for this funding opportunity.

Any application which does not meet these criteria will be rejected with feedback on why it could not proceed.

In the event that your application is rejected, you will not be asked to act as a reviewer for other applications.

We aim to notify applicants of any such decisions within four weeks of the closing date of this funding opportunity.

Assessment criteria

Reviewers will be asked to assess the following areas of each application assigned to

them:

- Vision and approach
- Applicant and team capability to deliver
- Risk and reward
- Resources and cost justification
- Ethics and responsible research and innovation (RRI)

Reviewers should base their assessment solely on the assessment criteria for each section. These criteria can be read on the UKRI Funding Finder page for this funding opportunity, and will also be available through the UKRI Funding Service when completing reviews on system.

Review system

Reviews are performed through the [UKRI Funding Service](#), our online funding application system.

Reviewers will receive an email notification from UKRI for each application they have been allocated to assess. The email will contain:

- a summary of the application
- details of the applicant involved so you can identify any conflicts of interest
- a 'respond now' button which will take you to the UKRI Funding Service to accept (or decline) the invitation

You do not need to sign in or create an account to accept reviews. You can accept reviews through the button in the invitation email.

Once you have accepted your invitation to review, you will need to either sign in or create an account to carry out your review. You can either start this immediately, or come back to the Funding Service later.

If you do not have a Funding Service account, clicking the 'Respond now' button in your invitation email will take you through the account creation process.

If you already have a Funding Service account, you can sign in using your email address and password.

Find out more about [how reviewers use the UKRI Funding Service](#).

Rules and guidelines for reviewers

General

By submitting an application, you have accepted to review on average 8 applications submitted by your peers. You will have 3 weeks to complete your reviews, including scores and comments. Reviewers will be assigned 8 or 4 applications to review depending on whether the PL or the PL and PcL are contributing reviews.

Failing to submit the assigned reviews by the given deadline will lead to the automatic rejection of the proposal in which you are involved.

As each applicant team is asked to nominate reviewers, we ask that you check that nominated reviewers have no planned leave (such as annual leave) which would prevent them from acting as a reviewer.

We understand that individual circumstances can be unpredictable, and that there may be emergencies in a reviewer's personal life which may cause delays or prevent them from submitting their reviews. Please inform us as early as possible if there are exceptional circumstances impacting any of your nominated reviewers. You can do this by emailing AI.Robotics@epsrc.ukri.org.

Reviewer conduct

During the entire review process, you are expected to behave ethically. This covers confidentiality matters but also the feedback you will be providing for each of the applications you are assigned.

Any attempts to 'game' the system i.e. by providing consistently bad reviews and low scores without justification will lead to the rejection of the application in which you are involved.

As a reviewer, your role is to provide constructive feedback, using appropriate, factual, and non-offensive language. In doing this, keep in mind that your comments will be passed unedited to the applicants. UKRI will take seriously possible cases of offensive and inappropriate language used by the reviewers.

During the review you should be objective and focus on the strengths and weaknesses of the proposal.

The UKRI Funding Service does not currently allow the anonymisation of applications. As a reviewer, you must provide your feedback in a completely anonymous way. The phrasing must be neutral and must not disclose, directly or indirectly, your identity.

The use of generative models (ChatGPT, CoPilot etc.) in the preparation of reviews is not permitted in view of the confidentiality of the review process. Documents provided for

review are confidential and may not be used as input for generative models. Please refer to the [UKRI Policy on the use of generative AI in applications](#)

Important note on confidentiality: As a reviewer you will have access to information which is covered by intellectual property. None of that information can be disseminated, copied or plagiarised. Should you have downloaded or printed the proposals which were assigned to you, you must remove/destroy them at the end of the review once the process is completed. UKRI will take violations of the non-disclosure agreement seriously.

Please refer to [EPSRC's guidance on carrying out a peer review](#) for further information.

Conflicts of interest

We will consider obvious conflicts of interest when matching proposals to reviewers. When you are assigned applications to review, you will be able to declare conflicts of interest. Note that you should restrict yourself to those where you feel you are not in a position to express an objective opinion. Conflict flagging must not be used to reduce the number of reviews you have to deliver by the given deadline. In instances where a conflict has been identified, UKRI will likely reassign applications to you.

Reviewing and grading applications

Your Funding Service account will list your allocated reviews and the deadline for reviewing each application.

Before you start a new review you will be asked to read and confirm that you accept the [reviewer protocols](#). These are the rules you must follow when carrying out your review.

You can use the Funding Service to:

- read the full applications online in your browser
- see the questions and assessment criteria for each application section
- open and download any attachments uploaded by the applicant
- view the full application as a PDF to read offline or print out

Providing a high quality review

The main purpose of a review is to describe the strengths and weaknesses of applications in a constructive manner. Both positive and constructive feedback can be useful to applicants in further developing their ideas and preparing future applications.

The following points should help you to write good reviews.

Familiarise yourself with the specified assessment criteria and scoring system

Bear in mind that you may be reviewing applications from different disciplines to your own.

Provide comments and recommendations that are consistent with, justify, and explain your scores.

Ensure your comments are comprehensive but concise.

Be objective and as specific as possible when commenting on the proposal. Avoid generic statements that could apply to most proposals.

You do not need to summarise the proposal: the applicants know it very well. If useful, start with a brief outline of the application.

Clearly identify the major strengths and weaknesses of the application in a constructive manner, to help the applicant understand which aspects of their proposal are strong, and which could be improved.

Take care to ensure that the strengths and weaknesses you identify do not contradict each other.

Do not ask questions: this process does not include an applicant response stage. If your question stems from a weakness, state the weakness explicitly.

All reviews should be impersonal, critiquing the proposal and not the applicant. For example, do not write "The applicant did not [...].", but instead write "The proposal did not [...]".

Write in plain English, avoiding jargon.

Use complete sentences when writing your reviews. Try to use correct grammar, spelling, and punctuation.

Do not use inappropriate, offensive, sarcastic and/or insulting language, even if you think a proposal could be greatly improved.

Once you have completed your assessments, re-read your comments as if you were the recipient. If they do not sound useful and/or constructive, edit them.

Check that the strengths and weaknesses identified are consistent with the assigned grade. Do not give a low grade without listing any weaknesses, and do not give a high grade if you have listed more than minor weaknesses.

Writing and submitting your review

To write your review, you can either:

- use the text box in the Funding Service – you can save your unfinished review to come back to later

- use an alternative writing tool such as Word to write your review and then copy it into the text box

You will need to structure each of your reviews using the assessment questions as subheadings.

Remember that your feedback will be passed on to the candidates unedited and that you are solely responsible for the content and integrity of your comments.

Scoring applications

You also need to score each application from 1 (poor) to 6 (exceptional). You must ensure that you select a score which is clearly justified by your written review, according to the scoring range definitions.

6: Exceptional

The application is outstanding. It addresses all of the assessment criteria and meets them to an exceptional level.

5: Excellent

The application is very high quality. It addresses most of the assessment criteria and meets them to an excellent level. There are very minor weaknesses.

4: Very good

The application demonstrates considerable quality. It meets most of the assessment criteria to a high level. There are minor weaknesses.

3: Good

The application is of good quality. It meets most of the assessment criteria to an acceptable level, but not across all aspects of the proposed activities. There are weaknesses.

2: Weak

The application is not sufficiently competitive. It meets some of the assessment criteria to an adequate level. There are, however, significant weaknesses.

1: Poor

The application is flawed or of unsuitable quality for funding. It does not meet the assessment criteria to an adequate level.

There is further guidance in the Funding Service to help you write a good review and decide the score.

You can preview and check reviews before submitting them. When each review is finished, submit it to UKRI.

Please note that once submitted, reviews cannot be edited.

Decision making

Applications will be ranked within their pools according to their average scores.

Where applications receive markedly divergent reviewer scores, or a reviewer has consistently given low scores without clear justification, the independent moderators will advise on any reviews that should be excluded from the assessment process.

Applications will then be assigned to tiers based on their ranking:

- Tier 1, the highest quality, prioritised for funding
- Tier 2, highly competitive, to be considered for funding
- Tier 3, not competitive enough to be considered for funding

A portfolio balancing approach may be taken to ensure that applications selected for funding are:

- appropriate to the scope of this funding opportunity
- not duplicative of our other major investments
- could not have been supported through other UKRI routes to research funding
- distributed across a range of research areas and disciplines
- representative of our funding landscape, including UK geographies and spread of research organisation.

Feedback to applicants

Distributed Peer Review is itself the feedback mechanism for this funding opportunity. Your review and score will help the applicant team to understand why their application either was or was not recommended for funding. It could also be useful for future applications.

As such, it is particularly important that you, as a reviewer, provide comprehensive and constructive feedback to your peers. This feedback should be of the same quality you are expecting from your peers.