Assessing Research for Philanthropic Funding
Innovative Approaches
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PHILEA RESEARCH FORUM
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INTRODUCTION

The Philea Research Forum is pleased to present this publication on responsible research assessment, which aims to explore diverse approaches to enhance the fairness, transparency and effectiveness of evaluation processes. This publication delves into three distinct methodologies that challenge traditional assessment methods and offer innovative alternatives:

1. Using artificial intelligence (AI)
2. Adopting narrative curriculum vitae (CVs)
3. Implementing randomised selection

While these approaches demonstrate the innovative potential within research assessment, they are by no means an exhaustive representation of all available tools and methods. Nevertheless, they serve as compelling illustrations of the ongoing efforts to revolutionise evaluation practices and foster a more inclusive and equitable research ecosystem. Throughout these pages, you will also find stories of real-world application of these methods by various foundations and organisations.

Through this publication, we aim to stimulate discussion, encourage exploration of additional innovative strategies, and inspire advancements in responsible research assessment. While the primary focus of this publication revolves around assessment tools for responsible research, it is worth highlighting that these innovative approaches can extend beyond the realm of research assessment. The principles and methodologies explored herein can enhance any funder’s evaluation processes, regardless of the specific areas or fields that it focuses on.
FOUNDATIONS OF RESPONSIBLE RESEARCH ASSESSMENT

Characteristics, principles and implementation recommendations

Before exploring the examples of innovative approaches to responsible research assessment, we will provide an overview of its general principles, key framing documents and recommendations for implementing these principles.

What is responsible research assessment and why is it important?

Responsible research assessment refers to the practice of ensuring that the assessment process is fair, transparent and unbiased, and involves considering a broad range of criteria beyond just traditional metrics such as journal impact factor or citation counts. The practice recognises the impact that assessment practices can have on researchers, institutions and the broader research ecosystem, as these practices affect:

- The distribution of resources, such as funding and promotions
- The incentives for researchers and the behaviours of researchers
- The overall quality and impact of research

Traditional research quality assessment can have unintended consequences that harm the research community:

- It can disincentivise recognised individuals even though they have the potential for valuable contributions, creating divisions between research-intensive and non-research-intensive universities.
- Assessment criteria focused on quantity may prioritise productivity over quality, hindering transformative research.
- Interdisciplinary work, which struggles to fit within traditional boundaries, may be undervalued, limiting recognition, promotion and funding opportunities for interdisciplinary researchers, despite their valuable contributions to knowledge and societal challenges.
- Assessment processes that neglect alternative research outputs can perpetuate a narrow definition of excellence.
- The competitive nature of assessment can contribute to stress, burnout and a hyper-competitive research environment.

To counter these problems, a number of organisations have developed principles of responsible research assessment as outlined on the next page.

RESPONSIBLE RESEARCH ASSESSMENT IS

Evaluative
Focusing on the quality, significance and originality of research rather than just its quantity.

Multidimensional and diverse
Recognising the different types of research disciplines, methodologies and outputs as well as their broader societal impact.

Inclusive
Involving the participation and input of diverse stakeholders, including researchers, research users and the broader public.

Proportionate
Balancing the need for assessment with the cost and burden of assessment.
Principles of responsible research: Key frameworks

The concept of responsible research has been evolving over time, and its roots can be traced back to various historical developments. While the precise moment of its emergence is difficult to pinpoint, responsible research gained significant attention and formal recognition in the latter half of the 20th century. In recent years, responsible research has gained further prominence with the emergence of initiatives and frameworks focused on promoting ethical and responsible practices in research.

- In 2013, the American Society for Cell Biology and several scientific journals launched the San Francisco Declaration on Research Assessment, DORA, to end the practice of using the impact factor of journals to assess individual researchers or research groups or even institutions. To date, close to 13,000 institutions and individuals worldwide have signed the DORA.
- The Hong Kong Principles for assessing researchers were formulated and endorsed at the 6th World Conference on Research Integrity in Hong Kong in 2019.
- The Agreement on Reforming Research Assessment, launched in 2022, sets a shared direction for changes in assessment practices for research, researchers and research performing organisations, with the overarching goal of maximising the quality and impact of research.
- Four UK funding bodies have come together to explore alternative approaches to the assessment of UK higher education research performance. This programme of work, called the Future Research Assessment Programme (FRAP), reached a major milestone in December 2022 with the publication of "Harnessing the Metric Tide", revisiting the findings of the 2015 review to take a fresh look at the use of indicators in research management and assessment.

So, how can research funders put these principles into practice?

1. Always start with what you value and work from there

Use frameworks like the SCOPE framework to guide your assessment. The SCOPE Framework was developed by the International Network of Research Management Societies (INORMS) Research Evaluation Group (REG) as a practical way of implementing responsible research evaluation principles to design robust evaluations.

2. Measure what matters

Select metrics that truly capture the essence of what is important and meaningful in a given context. Involve the target community in shaping these indicators to ensure that the metrics chosen are not arbitrary or disconnected from the community’s aspirations; rather that they reflect the specific needs, values and goals of the community itself. As an example, some foundations, such as the "la Caixa" Foundation, form evaluation panels that include non-academic experts (practitioners and professionals who deal with social issues) and that take into consideration the social relevance of the proposed projects.

3. Recognise the diversity of contributions

Move away from narrow, quantitative indicators of research quality and impact, such as journal impact factors and citation counts, towards more diverse and contextualised indicators that reflect the multidimensional nature of research.

4. Put equity at the heart of what you do

Co-design and co-interpret research assessments with diverse stakeholders, including researchers, research users and the broader public, and probe your assessments for unintended consequences and discriminatory effects. This also includes providing opportunities for research talent from underrepresented groups. The Humane Metrics Initiative is an example of this approach which values a range of contributions and recognises the diversity of talent in research.

5. Put rankings in their place

Rankings are useful only when there is a limited resource on offer, and it is necessary to pick a winner. However, rankings cannot always be fairly created, and there are usually clusters of similarly performing entities. The increased use of randomisation in funding allocation is challenging the use of rankings.
6. Use a mix of qualitative and quantitative approaches

The Coalition on Advancing Research Assessment prioritises peer review over quantitative methods, but this approach is not without its challenges. Peer review and narrative forms of assessment are often considered the gold standard of research evaluation. However, there are concerns about their quality, transparency, equity and efficiency. While metrics are criticised for not being able to replicate peer-review outcomes, peer review itself does not always produce consistent results. Incentives to participate in peer review are also lacking. Different forms of peer review, such as journal review, grant review and post-publication review, have their own unique issues.

7. Promote international collaboration and agreement

Agree on the core elements of research assessment, such as a core evidence-based narrative CV, to reduce the burden of assessment on researchers and ensure a level playing field across different research contexts. The Global Research Council endorsed a Call to Action calling on participant organisations to support the adoption of responsible research assessment globally by developing a collective understanding of the practice, learning through collaboration and sharing information and best practice.
ARTIFICIAL INTELLIGENCE IN RESEARCH ASSESSMENT

Exploring opportunities, risks and trustworthiness

Building upon the foundation of responsible research assessment and the framing discussions outlined in the previous section, we now turn our attention to one of the prominent approaches revolutionising evaluation practices: the use of artificial intelligence (AI).

In this section, we will provide an overview of why AI has captured the attention of research funders; examine the potential risks and challenges associated with its implementation; and explore the necessary steps to establish trust in AI as a reliable tool for research assessment.

Advantages of AI: A paradigm shift in evaluation methods

Research funders are becoming interested in using AI for research assessment due to several advantages it offers compared to traditional methods:

Efficiency and time savings
AI-powered assessment can automate certain aspects of the evaluation process, saving time and resources for research funders. Algorithms can quickly analyse large volumes of proposals, identify relevant information, and provide initial assessments, allowing funders to handle a greater number of proposals efficiently. In this sense, AI-based assessment also offers scalability.

Cost-effectiveness
While the initial investment in developing and implementing AI systems may be significant, in the long run, AI-powered research assessment can offer cost savings. By streamlining and automating certain processes, funders can optimise their resource allocation and reduce administrative burdens.

Objectivity and consistency
AI algorithms follow predefined criteria and consider a wide range of factors, ensuring objective and consistent evaluation. This reduces the potential for human bias or subjective judgment that may exist in traditional methods, promoting fairness and transparency in funding decisions. However, there are issues around embedded bias in AI, and these need to be understood and addressed (See the section on pages 8-9 on “Challenges”).

Enhanced data analysis
AI algorithms can analyse large datasets and identify patterns, trends and correlations that may not be easily discernible through manual analysis. This allows research funders to gain valuable insights from the data and make more informed funding decisions.

Potential for innovation and impact
AI algorithms have the potential to discover innovative and high-impact research proposals that may have been overlooked in traditional evaluations. By leveraging AI technology, research funders can identify cutting-edge ideas and support research projects with high potential for scientific advancement and societal impact.

Continuous improvement
AI systems can learn from past evaluations and feedback, continuously improving their performance over time. With each iteration, the algorithms can become more accurate and effective, providing research funders with increasingly reliable assessment results.
AI-ASSISTED PRE-SCREENING AND ASSESSMENT PROCESS AT THE “LA CAIXA” FOUNDATION

The “la Caixa” Foundation employs two key tools to optimise its research proposal evaluation process: AI-assisted pre-screening and assessment; and a matching process for remote evaluation. These tools work in tandem to streamline the evaluation workflow and improve resource allocation.

The AI-assisted pre-screening and assessment process aims to decrease the number of proposals to be evaluated and ensure efficient resource allocation. Three AI models based on natural language processing were developed to analyse data from the research programme. Trained on given data, these models categorised proposals into three groups based on the probability of being selected: top, average and low. Using 70% open data, the models were trained and validated with the remaining 30%. Annual retraining occurred with updated datasets. Proposals then underwent assessment by the AI models, which assigned probabilities for each group. If flagged as having low probability, a proposal was designated for human review to confirm or reject the AI assessment. Pre-screened “good” proposals were also included in the review by experts to assess their detection capabilities.

Out of 546 proposals, 116 were pre-rejected by the 3 models, and 30 of these were rescued by the experts. So, 460 proposals proceeded to the real evaluation process. The pilot study successfully identified likely rejected or selected proposals, demonstrating the efficacy of the AI-assisted model. Though one proposal that was ultimately selected had initially been flagged as potentially bad, subsequent retraining improved the AI’s performance.

The AI-assisted model is currently being applied in the real evaluation process for the first time for the 2023 selection round. Its outcomes are yet to be determined: However, the foundation anticipates improved efficiency, cost-effectiveness and identification of eligible proposals. By streamlining the review process, human reviewers can focus on evaluating proposals more likely to require assessment, reducing their workload and increasing efficiency. This optimisation of resource allocation eliminates the need for human evaluation of proposals flagged with low probability of being selected by the AI, resulting in cost savings. The foundation remains committed to leveraging AI to enhance proposal selection and improve research funding outcomes.

Similarly, the matching process for the remote evaluation of research proposals involves several steps. Initially, project leaders provide one to three main keywords and three to five additional keywords that indicate the project’s focus as basic, clinical or translational research. The foundation downloads annually from PubMed the keywords from all the publications from the last ten years of all potential reviewers as first or last author. The matching algorithm then compares the keywords and the type or research provided by the project leaders and reviewers.

To ensure a good match, the algorithm takes into account the frequency of keyword appearances, the depth of the MeSH tree (which represents the hierarchical structure of medical subject headings), and the expertise of the reviewers based on their recent publications. The goal is to find the best group of reviewers who collectively cover the project’s main keywords. The algorithm also considers the number of proposals assigned to each reviewer, aiming for a balance between expertise and workload, and it ensures a minimum of 40% female reviewers.

Both processes undergo continuous evaluation and improvement. The foundation analyses the matching process annually, assessing its quality and making necessary adjustments. This iterative approach involves refining the algorithm, introducing new variables, and incorporating feedback from project leaders and reviewers. By leveraging these two tools, the foundation aims to enhance proposal selection, improve resource allocation, and achieve more efficient and effective research funding outcomes.
While AI offers potential advantages over traditional methods, it also presents ethical and legal risks that necessitate careful examination. This section aims to shed light on the multifaceted considerations surrounding the use of AI in research assessment. It will explore the potential biases embedded in AI algorithms, the challenges posed by the lack of transparency and explainability, and the implications for data privacy and security. It will also look at the discipline-specific challenges and resource-intensive nature of testing and training AI algorithms. By critically examining these dimensions, this section aims to provide a comprehensive understanding of the complex landscape surrounding the use of AI in research assessment.

**Ethical and legal risks**

The ethical and legal risks associated with the use of AI in research assessment by research funders necessitate a thorough examination of the implications of using this tool. Moreover, the collection, storage and access of data raise serious concerns about privacy and security, leaving individuals vulnerable to misuse and unauthorised access.

The ethical considerations surrounding informed consent, conflicts of interest, and sensitive information handling remain uncertain and require careful scrutiny. The reliance on AI may undermine the role of human judgment and understanding in the assessment process, potentially leading to a devaluation of human expertise. Additionally, the broader societal impact, such as the potential displacement of human assessors in the job market, raises significant concerns. Furthermore, legal compliance and adherence to regulations may be insufficient to address the complex ethical challenges associated with the use of AI in research assessment.

To address these risks, funders should prioritise transparency and explainability, ensuring that AI algorithms are auditable and that the decision-making process is clear to researchers and stakeholders. Additionally, robust safeguards for data privacy and security should be implemented, including obtaining informed consent, handling sensitive information responsibly, and complying with relevant regulations to mitigate potential harm and protect individuals’ rights.

**Biases**

AI implementation in research proposal assessment has raised concerns regarding the potential impact of bias. The use of AI carries the risk of embedding historical human biases; expediting flawed or biased decision-making processes; and perpetuating societal inequities. When a machine is trained to “learn”, it relies on a dataset, and typically, larger datasets result in improved AI performance. However, biases in the datasets used for training AI algorithms are diverse, representative and carefully curated to mitigate biases. Furthermore, promoting diversity and inclusivity in the development and training process, and involving individuals with different perspectives and experiences, can help mitigate the risk of biased outcomes. Regular monitoring and auditing of AI systems for fairness and transparency should also be conducted to identify and address any unintended biases that may arise.

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**Lack of predictability and explainability**

Research funders often express concerns about the reliability and accuracy of AI algorithms when it comes to assessing research proposals. These algorithms generate results based on the training data and predefined criteria they have been programmed with. However, interpreting these results can sometimes be challenging. Unlike traditional algorithms, advanced AI systems operate by automatically identifying valuable patterns, making it difficult for humans to fully understand their decision-making process. This lack of transparency poses a significant hurdle in determining the reasons behind the rejection or acceptance of specific proposals by AI...

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It is important to acknowledge that datasets are not completely objective: They inherently contain biases, assumptions and preferences. Biases can manifest as unfair advantages or disadvantages for certain groups. For instance, an AI algorithm that assesses research proposals based on past funding decisions may inadvertently favour proposals originating from a specific institution or geographic region. In addition, the lack of diversity in the programming and selection of algorithms can impact the effectiveness and accuracy of AI systems. If the development and training of algorithms are dominated by a homogeneous group of individuals with similar perspectives, experiences and biases, the resulting AI systems may inadvertently reflect those biases. This lack of diversity can limit the range of perspectives and insights considered during the development process, potentially leading to skewed evaluations and biased outcomes.

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acceptance or rejection of specific proposals by AI, and it introduces unpredictability into the behaviour of the algorithm. As a result, research funders face the risk of relying on AI systems that may produce results that are difficult to interpret and understand, ultimately impacting the fairness and objectivity of the assessment process.

Explainable AI (XAI) techniques can help address these challenges. XAI techniques make AI systems more transparent and understandable by providing insights into their decision-making processes. Additionally, promoting research and innovation in XAI can help enhance the interpretability and accountability of AI algorithms, ensuring that the assessment process remains fair, reliable and objective.

**Discipline-specific challenges**

When considering the use of AI for research assessment, it is important for research funders to recognise that the applicability of AI algorithms can vary across different thematic areas. While AI algorithms have shown promising results in certain domains, such as biomedical information processing, their effectiveness may be limited in other disciplines. For example, in social sciences, research proposals may involve qualitative data, textual analysis and nuanced interpretations of human behaviour. AI algorithms, which primarily rely on quantitative data and pattern recognition, may not possess the level of contextual understanding and interpretative abilities necessary to evaluate research proposals accurately in these domains.

While AI can augment and support the evaluation process, human expertise and judgment remain essential in disciplines where subjective interpretation and contextual understanding play a significant role. Funders should consider a hybrid approach that combines AI technologies with human expertise. By leveraging AI algorithms to assist in certain aspects of evaluation while ensuring that human judgment and contextual understanding are incorporated, funders can achieve a more comprehensive and accurate assessment process. Additionally, it is crucial to allocate resources for domain-specific research and development of AI algorithms that can effectively handle qualitative data and nuanced interpretations, catering to the unique requirements of different disciplines.

**Limitations in current systems**

The accuracy and effectiveness of AI algorithms can be impacted by the limitations in existing systems used for research assessment. For example, when a research funder is using an AI algorithm to identify proposals related to sustainable energy solutions, if the algorithm is limited to selecting only a few keywords, it may overlook relevant proposals that use alternative terms or approaches to describe sustainable energy. This could lead to inaccurate assessments and potentially exclude high-quality proposals that could contribute to the funder’s goals.

This issue highlights the need for more flexible and comprehensive approaches to keyword selection to ensure a more accurate and inclusive evaluation of research proposals.

**Time and resource intensive process**

Using AI for research assessment poses challenges in testing and training algorithms, a process that requires significant time and resources. It is necessary to experiment with different models, train them and evaluate their performance using real data to identify effective algorithms. This process is time-consuming due to the complexity of research assessment, requiring diverse datasets and rigorous evaluation. Additionally, training and testing algorithms may demand substantial computational power and infrastructure.

To address these challenges, research funders should allocate adequate resources to support thorough experimentation, testing and optimisation. This investment enables the development of accurate AI systems, improving research assessment and informing funding decisions for impactful research outcomes.
For research funders interested in seeing just how far AI can go in research assessment, it is essential to approach the transition to using AI with caution and ensure the presence of certain indicators that instil confidence in the technology. Here are some key considerations:

1. **Reliability and accuracy**
   AI algorithms should achieve comparable or superior performance to human assessors and minimise errors or inconsistencies.

2. **Transparency and interpretability**
   Researchers and funders should be able to understand how the AI algorithm arrives at its evaluations and interpret the factors and criteria used in order to identify and address any potential biases or shortcomings.

3. **Robustness and generalisation**
   AI algorithms should maintain consistent performance across different datasets, disciplines and contexts by generalising well to new and diverse research proposals instead of overly relying on specific characteristics of the training data.

4. **Ethical considerations**
   AI systems should avoid biased or discriminatory outcomes; ensure privacy and data protection; and promote fairness and inclusivity throughout the assessment process.

5. **Continuous improvement and adaptability**
   AI algorithms should have the capacity to incorporate new data; feedback from researchers and assessors; and advancements in research evaluation practices.

6. **Stakeholder confidence and acceptance**
   Research funders should actively engage with stakeholders to ensure their perspectives are considered and address any concerns or reservations they may have regarding AI-driven research assessment.

While AI has the potential to enhance research assessment, complete reliance on AI without human involvement may not be desirable or feasible in all cases. Striking the right balance between human expertise and AI capabilities is crucial to ensuring a comprehensive and robust evaluation process.
UNVEILING THE POWER OF NARRATIVE CVs

Enhancing understanding, transparency and inclusivity in research assessment

While AI has garnered significant attention for its transformative potential in evaluation practices, the narrative CV offers a unique and valuable perspective in assessing researchers’ contributions.

The role and benefits of narrative CVs in fostering responsible research assessment

By embracing narrative CVs alongside traditional methods, research funders can enrich the assessment process, foster collaboration and cultivate a trustworthy and comprehensive research environment. Current evaluation methods often prioritise a limited set of activities, such as publications, keynote talks, grants and prizes while overlooking the qualitative aspects of researchers’ work, such as the significance of their contributions, their collaborations and the challenges they have overcome.

Unlike metrics-based approaches, narrative CVs allow researchers to offer a more comprehensive and nuanced view of their skills, expertise and impact. By considering these narrative accounts, reviewers gain a deeper understanding of the researchers’ achievements, their unique perspectives and the broader contexts in which their work is situated.

In addition to promoting a more inclusive evaluation, the narrative CV facilitates transparency and accountability by allowing researchers to justify their contributions, ensuring fair recognition and evaluation of their work. Additionally, narrative CVs promote self-reflection among researchers, encouraging them to critically assess and articulate their own contributions.

Assessing the value and relevance of narrative CVs depends on the type of funding scheme and its objectives. Research funders can use narrative CVs strategically, particularly in funding schemes where they can provide meaningful insights into the applicants’ backgrounds, experiences and potential.

Challenges associated with the narrative CV

The use of narrative CVs for research assessment presents several challenges that need to be addressed.

Researchers may face difficulties in determining the appropriate content to include in their narrative CVs, given the evolving standards of what is considered impressive over time. There is also a challenge in mitigating potential self-selection bias and equity issues that may arise if the narrative CV format becomes overly burdensome or inadvertently excludes certain groups as reviewers. Balancing the needs of applicants and reviewers requires innovative approaches to ensure a fair and inclusive evaluation process. Additionally, the integrative CV format poses challenges in terms of peer review and comparability, as researchers may have varying writing skills. There is also a risk of a consultancy layer emerging to produce favourable CVs for grant applications.

The problem of scale arises when dealing with a large number of applications. While narrative CVs can provide valuable insights into an applicant’s background and experiences, it becomes increasingly challenging to thoroughly assess and compare a significant volume of narratives. When faced with a large applicant pool, the time and resources required for a comprehensive assessment using narrative CVs may become impractical or inefficient. This approach may be more suitable for situations where the number of applications is limited, allowing for a more detailed evaluation of each candidate.
IN PRACTICE: EMBRACING THE NARRATIVE CV FRAMEWORK AT THE UNIVERSITY OF OXFORD

In the context of responsible research assessment, the University of Oxford has adopted a narrative CV framework that introduces four distinct themes, inviting applicants to articulate their contributions in a more comprehensive and diverse manner:

1. Generation of knowledge, including not just journal publications, but other output types such as datasets, software and policy documents.

2. Development of individuals, including mentoring, supervision, collaboration and strategic leadership.

3. Contributions to the wider research community, including activities such as editing, peer review and sitting on national committees.

4. Engagement with broader society, including engagement with organisations outside of academia to generate benefits to society, the economy, health and public policy.

These modules expand the typical view of what a researcher or academic should look like. To facilitate this process, the CV format is presented as a text-based template, allowing applicants to provide information in 4 designated sections of approximately 300 words each.

The university is exploring how to support researchers who are using the narrative CV in funding applications, drawing on the lessons from a pilot project exploring the use of narrative CVs in research assessment at the University of Glasgow, which revealed valuable insights and led to recommendations for improvement. The project involved early career researchers developing their own narratives, which were evaluated by a mock panel of assessors. Challenges identified included significant workload and stress for both writers and assessors, as well as unintended disadvantages for non-native speakers, minority groups and those in organisations that do not provide support. Consequently, the recommendation emerged that the current metrics-based academic CV should not be entirely replaced by a narrative CV format. Instead, the suggestion was to explore a more structured template with subheadings and clear guidance for applicants and reviewers, allowing for contextualisation while providing clarity and direction.

The pilot study’s findings reflect the evolving nature of the narrative CV approach and highlight the importance of adapting and refining its implementation based on the lessons learned.
There are also concerns that individuals who are already successful may have an advantage in the narrative CV format due to their existing opportunities for conversations and outsourced support. This could create an imbalance and disadvantage for less privileged individuals or those with fewer resources.

Further, there is a worry that this approach may prioritise “good storytellers” or researchers with excellent communication skills over those who may be more modest in presenting their accomplishments. This could potentially result in biased evaluations and favour individuals who can effectively highlight their achievements, regardless of the actual quality or impact of their research. This kind of variation in the ability to sell oneself in a narrative CV has been identified by some research funders as an area where gender-based differences may play a role. Another gender-related issue is that men may have more activities to list, while women may have fewer but with better outcomes.

**Strategies for addressing challenges**

The narrative CV framework is being embraced internationally, but there is still work to be done to ensure coherence and rigour in the evaluation process. To address the challenges of the narrative CV and promote responsible research assessment, the following strategies can be implemented:

1. **Provide guidance and training**

Researchers should receive comprehensive guidance and training on effectively completing the narrative CV template. This includes understanding how to choose and present content; providing specific and concrete examples that showcase their accomplishments and contributions instead of relying on vague or generic statements; and focusing on impact rather than just activity.

2. **Maintain rigour and consistency in assessing societal impact**

It is crucial to make sure that the assessment approach is informed by indicators and language that accurately reflect the quality, and align with, the desired outcomes. Indicators can provide measurable and objective criteria to evaluate the societal impact of research. They can help in quantifying and comparing the impact across different projects or researchers.

3. **Expand the evaluation framework**

Consider incorporating the narrative CV framework in other settings, such as recruitment, promotion selection, and commissioning prizes. This widens the application of the framework and reinforces its role in recognising and evaluating researchers’ contributions.

4. **Enhance accessibility and inclusivity**

Ensure that the framework is accessible to a diverse range of applicants. This may involve providing clear guidelines, examples of successful applications, and resources that help applicants and reviewers assess and contextualise non-traditional experiences and qualifications.

5. **Diversify the pool of reviewers**

Aim for a diverse pool of reviewers who can evaluate applications from different perspectives. This diversity mitigates bias and provides constructive feedback to applicants, contributing to a fair and robust evaluation process.

6. **Test and refine**

Integrate the evaluation process within a pilot programme to test and refine the narrative CV approach, considering the specific context in which it will be applied. Utilise existing resources and gather feedback from grantees to develop new ways of providing guidance, improving the effectiveness of the narrative CV format.

7. **Share learning and resources**

Foster collaboration and knowledge-sharing among funders, institutions, and researchers to build resources and share best practices. Continued experimentation and refinement of the narrative CV framework will contribute to its wider acceptance and effectiveness.

8. **Strike a balance between standardisation and customisation**

Funders should collaborate to develop a standard structure and definitions for the narrative CV. This approach helps to promote consistency and comparability across evaluations, facilitating the assessment and comparison of researchers’ contributions. This also reduces the burden that writing different narrative CVs for different funders places on applicants. However, it is equally essential to provide flexibility to allow for customisation and personalisation.
Overcoming reviewer bias: Shifting from metric emphasis

A particular challenge lies in working with reviewers who are accustomed to focusing on metrics when evaluating research proposals. Research funders can play a crucial role in helping reviewers shift their perspectives and assess narrative CVs with a different lens. Research funders can educate reviewers on the purpose and benefits of narrative CVs in capturing a candidate’s broader contributions; organise training sessions or workshops for reviewers to familiarise them with the evaluation of narrative CVs; provide best practices and resources that can help reviewers develop a more comprehensive and balanced evaluation approach; create platforms for reviewers to engage in discussions and share their experiences and challenges when evaluating narrative CVs; and continuously evaluate the effectiveness of the evaluation process, including collecting feedback from reviewers and applicants to identify areas for improvement, and refining the guidelines and evaluation criteria accordingly.

Research funders can also offer explicit instructions to reviewers, such as:

1. Consider career stage and disciplinary differences when evaluating achievements and societal impact, recognising that access to certain experiences and opportunities may be easier in some disciplines than others.

2. Evaluate achievements based on the opportunities that were available to the individual, considering the context in which they were achieved.

3. Focus on assessing the quality of outcomes and actions taken, rather than solely relying on self-presentation. Prioritise objective assessment based on the actual impact of the research.

4. Score each section of the narrative CV in addition to providing an overall score. This helps identify the emphasis placed on different sections and their relative importance.

5. Find a balance between evaluating the project and considering the team’s qualifications. While the project’s significance should be a priority, it is important to also consider the expertise and experience of the research team in executing the project effectively.

HOW TO BALANCE THE NEED FOR STANDARDISATION AND CUSTOMISATION

One solution to achieve this balance is the development of a narrative CV template that individuals can populate with relevant information and update as they progress in their research careers. This template serves as a foundation, providing a consistent structure and guidelines. When a funding call is announced, applicants can draw from the template and tailor their narratives to highlight the specific aspects most relevant to the funding opportunity. This approach enables both standardisation and flexibility, as it ensures a consistent format while allowing applicants to emphasise their unique contributions.
PARTIAL RANDOMISATION OF RESEARCH FUNDING

In this last section, we explore the concept of randomised selection as the third innovative approach to responsible research assessment.

We begin by providing a clear definition of the randomised selection process in the context of research funding. Furthermore, we showcase an example of how a prominent foundation successfully implemented randomised selection in its funding programmes. By examining this real-world case, we gain insights into the practical application and outcomes of this approach. Additionally, we highlight the important considerations that research funders should keep in mind when implementing randomised selection.

How randomised selection works

Randomised selection, also known as a randomised lottery system, is a novel approach in research funding that aims to enhance the evaluation process and promote fairness in funding decisions by introducing an element of chance and reducing potential biases in decision-making. In the randomised selection process, some of the proposals under consideration are selected through a randomised lottery system. This means that instead of relying solely on the judgment of reviewers, a subset of proposals is chosen at random to receive funding.

The randomised selection process typically follows a multi-step evaluation procedure. Initially, proposals are received and screened for basic eligibility based on pre-defined criteria. Once the eligible proposals are identified, they undergo an initial assessment by a panel of experts to determine their scientific quality and alignment with the funding programme’s objectives.

After the initial assessment, a subset of proposals that meet certain predetermined criteria or scoring thresholds enters the randomised selection pool. This pool represents a diverse range of proposals with varying scientific potential.

The randomised selection is conducted using a transparent and auditable process, ensuring the integrity of the process. Proposals are assigned a unique identifier to anonymise the applicants’ identities and institutional affiliations, further minimising potential biases.

The selection is carried out using a randomisation algorithm, such as a computer-generated random number creator, to ensure a fair and unbiased distribution of funding opportunities.

Once the randomised selection is completed, the selected proposals are announced and awarded funding.
IN PRACTICE: VOLKSWAGEN FOUNDATION’S IMPLEMENTATION OF A PARTIALLY RANDOMISED APPROACH IN RESEARCH FUNDING

In the Experiment Funding Initiative, the Volkswagen Foundation employed a partially randomised approach in response to issues with the traditional review process, such as an overloaded and slow system; potential bias; and declining reviewer engagement.

This high-risk funding programme focused on ideas in the life sciences, natural sciences and engineering, offering small grants. The partially randomised approach was utilised in four out of the eight calls for proposals.

The foundation followed a multi-step evaluation and selection process for grant proposals, incorporating both quantitative and qualitative criteria:

**Step 1** Applications were shortlisted based on specific formulas and programme criteria.

**Step 2** A jury reviewed the applications and categorised them into three groups: top proposals (to be funded); good proposals eligible for the lottery (to level the playing field for the applications in the grey zone); and non-fundable proposals, which were eliminated before moving on to the next step.

**Step 3** A lottery randomisation process was conducted to identify additional grants to be awarded. For quality assurance, an initial assessment phase was included to validate the effectiveness of the process.

With this approach, a portion of the proposals was placed into a lottery, aiming to alleviate the burden on reviewers faced with evaluating numerous equally high-ranking proposals. By integrating the logic that lottery-based decisions are free from bias and group dynamics, the foundation sought to ensure a fair and impartial selection process.

The implementation of a lottery system in the research assessment process yielded several notable outcomes. This selection process did not contribute to an increase in the overall number of applications. However, after undergoing an internal selection process, the success rate improved to approximately 5% (which initially stood at 3.5%).

The research community reacted positively to the introduction of the randomised element. The transparency offered by the lottery system was well received as it helped counteract conservative decision-making tendencies. Applicants also responded favourably, as the inclusion of a randomised element provided greater opportunities for innovative and risky ideas to be considered. Notably, the foundation made a conscious decision not to disclose to the grantees which applications were selected by the jury versus the lottery. The fact that all proposals were considered fundable, whether they were selected by lottery or not, made them equally prestigious.
Critical considerations for implementation

The use of a randomised selection process in research funding serves as a valuable complement to peer review, enhancing the evaluation process. However, it should not replace the essential role of peer review in assessing the scientific merit of proposals. When the randomised selection process is openly communicated and integrated into the review process, it can increase the likelihood of funding for risky research proposals. This approach is particularly beneficial for small brand initiatives and certain positions where innovative and exploratory projects are encouraged.

Transparency and open communication are vital throughout the funding process, including addressing the limitations and potential drawbacks of partial randomisation. By providing clear explanations and managing expectations, stakeholders can understand the rationale behind the use of randomised selection and its role in promoting fairness and diversity in funding decisions.

Making decisions in the face of a large number of high-quality applications can be a challenging task. The randomised lottery system offers a way to manage the evaluation process effectively. However, accepting this approach may pose a psychological challenge for some individuals, as it deviates from the traditional evaluation methods and requires a shift in mindset. Overcoming this challenge requires fostering a culture that values innovation and risk-taking while maintaining trust in the funding process.

Partial randomisation has the potential to encourage diversity in the pool of funded projects and reduce bias by offering an equal opportunity to all applicants.

Partial randomisation has the potential to encourage diversity in the pool of funded projects and reduce bias by offering an equal opportunity to all applicants. However, it is important to acknowledge that biases may persist despite efforts to minimise them. Regular evaluation and adjustment of the process are necessary to ensure fairness and mitigate any unintended biases.

The pre-selection process, conducted by a panel, plays a crucial role in determining which projects from the initial pool are fundable. Some proposals from this selection are then put into the randomised lottery. This step enables initial assessment based on predetermined criteria, setting up the foundation for the subsequent evaluation. In the funding decision-making process, qualitative discussion takes precedence over quantitative scoring, as it allows for a comprehensive assessment of the project’s potential and impact. This qualitative approach ensures that factors beyond the applicant’s CV, such as the novelty and significance of the research idea, are given due consideration.

In conclusion, while the use of a randomised selection process in research funding can bring numerous benefits, it should be regarded as a complementary approach to peer review. Open communication, transparency and careful consideration of the fundable applications, along with addressing potential biases, contribute to a robust and fair funding evaluation process.
Looking Ahead with the Philea Research Forum

The three methods outlined in this publication open up new ways of looking at the process of evaluating proposals for research funding. We hope the information and insights provided in this publication will help you consider innovative approaches to your own processes for evaluating and selecting research to fund.

Continue exploring responsible research assessment with the Research Forum

In the strong belief that we have much to learn from each other, we cordially invite research funders to join our peer network – Philea’s Research Forum – and engage in a dynamic dialogue where we can collectively share experiences, challenges and insights on responsible research. By participating in this collaborative platform, we can foster meaningful connections, exchange best practices and collectively work towards enhancing the fairness, transparency and effectiveness of research funding processes. Together, let’s shape the future of responsible research assessment and create a positive impact in the research community. Join us in this important conversation and contribute to building a more inclusive and equitable research ecosystem.

About the Research Forum

We are a group of research-funding philanthropic organisations that facilitates more effective philanthropic support for research through transnational cooperation and information exchange. We do this by creating a sustainable, broad-based network of independent research-funding foundations and providing for them a platform to learn, collaborate and advocate together.

Our focus areas include European Data Protection Regulation; evaluation and peer review; excellence in research; global science; intellectual property rights; public engagement; responsible research & innovation (RRI); societal challenge; STEM education; and sustainability.

Our activities include biannual stakeholders’ conferences on topics of current interest to the broader research community; ad hoc working groups to explore in-depth issues of particular concern to research-funding foundations; exploratory workshops; peer-learning activities; roundtable discussions; and seminars.

The Research Forum is one of the follow-up initiatives to the 2005 European Conference and Expert Group Report on the role of foundations and the non-profit sector in boosting investment in research and innovation. It was launched in 2007 as the European Forum for Philanthropy and Research Funding.

Previous Research Forum projects

In 2012, Research Forum members led by the “la Caixa” Foundation, launched the Responsible Research and Innovation Tools project to provide guidance to stakeholders involved in different stages of the research and development chain. The project was funded by the European Commission under the 7th Framework Programme and was publicly launched at a major European event. Coordinated by a consortium of institutions, including research funders, science centres, universities, and business associations, the Toolkit aims to address the needs and constraints of responsible research and innovation. National RR&I Hubs were established to ensure dissemination and use of the Toolkit, and a multimedia collaborative platform was developed to gather best practices and engage stakeholders. The Toolkit includes strategic action plans and a database of international actions. Training programmes and advocacy initiatives were organised to encourage its use and foster stakeholder engagement. The Toolkit was developed with the ambition to establish a future European Community on RR&I, facilitating international collaboration and knowledge exchange.

CONTACT

Ilaria d’Auria
Head of Programmes – Thematic Collaborations
ilaria.dauria@philea.eu
ABOUT

Philea – Philanthropy Europe Association

Our vision is for philanthropy to use its full potential to co-shape and support a pluralistic, just and resilient society that centres people and planet. To achieve this, our mission is to enable, encourage and empower the philanthropic community to build a better today and tomorrow.

We nurture a diverse and inclusive ecosystem of foundations, philanthropic organisations and networks in over 30 countries that work for the common good. With individual and national-level infrastructure organisations as members, we unite over 10,000 public-benefit foundations that seek to improve life for people and communities in Europe and around the world.

We galvanise collective action and amplify the voice of European philanthropy. Together we:

- Co-create knowledge and learn from effective practices
- Collaborate around current and emerging issues
- Promote enabling environments for doing good

In all we do, we are committed to enhancing trust, collaboration, transparency, innovation, inclusion and diversity.

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