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A Practical Guide to Implementing Responsible Research Assessment

at Research Funding Organizations

DORA

IN COLLABORATION WITH

GLOBAL RESEARCH COUNCIL

SCIENCE EUROPE
Shaping the future of research

Table of Contents

List of Case Studies, Resources, and Spotlights

Forewords

DORA

When the San Francisco Declaration on Research Assessment (DORA) was launched in 2013, it sparked an important global conversation: how can we move beyond a focus on a narrow range of quantitative metrics and instead value the full breadth of contributions that researchers make to knowledge and society? The Declaration set out 18 practical recommendations for different actors across the research system, calling for greater transparency, fairness, and quality in the ways research is assessed[1].

Over the past decade, DORA has worked to turn those principles into practice—raising awareness, supporting organizations to reform their approaches, and creating resources, case studies, and the *Reformscape* repository to showcase practical actions and innovation in research assessment practices from organizations around the world[2, 3, 4]. Today, with over 27,000 DORA signatories worldwide, and a growing number of responsible research assessment (RRA) initiatives across the globe, the momentum for responsible research assessment is stronger than ever.

Making change is not always easy. Shifting long-established practices requires persistence, creativity, and above all, collaboration across the many actors who make up our complex research system. Yet time and again, we have seen that reform is possible and we know that research funders have a uniquely powerful role to play in leading it. Research funders set the tone and direction of research assessment. The criteria, policies, and expectations they set out ripple outwards, shaping not just funding decisions, but influencing institutional strategies, researcher behaviors, and ultimately, the culture of research.

Time and time again, we have seen that research assessment reform is possible and we know that research funders have a uniquely powerful role to play in leading it.

Following our *Practical Guide for Research Performing Organizations*[5], this second Guide is tailored to the wide range of roles within research funding organizations, including leadership, policy leads, program managers and officers, evaluators, grant administrators, and

Together, research funders can drive evidence-based improvements to research assessment practices and support innovation that has broad impact.

others involved in funding, oversight, and support. The Guide offers practical recommendations for integrating RRA-aligned approaches into funding processes and workflows. Co-developed with funders worldwide, it draws on shared experience of what enables successful research assessment reform.

There is no one-size-fits-all approach to RRA. Funders differ in size, mandate, geography, and disciplinary focus, and this Guide reflects that diversity. We invite readers to use it in full or adapt the elements most relevant to their context and the communities they serve.

Collaboration has been at the heart of the process of creating this Guide from the beginning. We especially thank the Global Research Council's RRA Working Group and Science Europe for their support in co-authoring this Guide with us. We are also grateful for the valuable input of the DORA Funder Discussion Groups[6] and the participants of the CeRRA conference satellite co-creation workshop in Copenhagen (December 2025). Finally, our thanks go to the DORA Steering Committee, Executive Board, and staff team whose dedication made this Guide possible.

We invite you to use the Guide as a catalyst for learning, collaboration, and for trialing and monitoring novel forms of research assessment. Together, research funders can drive and monitor improvements to research assessment practices and support evidence-based innovation that has lasting impact.

Ginny Barbour, Kelly Cobey, Rebecca Lawrence
DORA Co-Chairs and Vice-Chair
May 2026

Global Research Council

GLOBAL RESEARCH COUNCIL

Responsible research assessment (RRA) lies at the heart of a research system that is fair, inclusive, and capable of delivering the knowledge and innovation upon which society depends. As public funders, we help shape the incentives that influence research cultures, and we share a collective responsibility to ensure these incentives support excellence in all its diverse forms. This Practical Guide reflects the Global Research Council's (GRC) conviction that improving assessment practices is essential for sustaining a vibrant and trustworthy global research enterprise. This Guide matters now more than ever as research systems are evolving rapidly due to AI, digital scholarship, interdisciplinarity, and shifting societal expectations. Yet narrow indicators and inequitable evaluation practices remain widespread. As key stewards of research cultures, funders need a coherent, evidence-informed approach to strengthen assessment practices. This Guide provides that timely support.

For five years, the GRC's Responsible Research Assessment Working Group[7] has convened funders from every region worldwide to build a shared understanding of RRA and exchange global good practices. Through this sustained collaboration, anchored by the GRC's Call To Action (2021)[8], the Working Group has contributed to major initiatives like the GRC's Statement of Principles on Recognising and Rewarding Researchers (2023)[9] and has codeveloped key resources such as the Changing Role of Funders in RRA report (2020)[10] and the Transforming Assessment report (2025)[11] with the Research on Research Institute. The Working Group has also developed the Dimensions of RRA framework (2024)[12] to articulate a common foundation, i.e., the funders' vision for RRA and provides practical guidance through its digital library of RRA Case Studies[13]. These contributions have helped shape a clearer, more coherent global vision for responsible assessment.

As key stewards of research cultures, funders need a coherent evidence-informed approach to strengthen assessment practices.

We are pleased to have partnered with DORA and Science Europe in developing this Practical Guide. The collaboration brings together complementary expertise and perspectives resulting in a resource that is both principled and pragmatic, one that recognizes the diversity of funders' mandates and contexts while offering clear and actionable pathways for implementation. The Guide outlines practical activities

Funders can use this Practical Guide to inform policy and strategy, to communicate expectations clearly to applicants, to train reviewers, to design pilot initiatives, and to support benchmarking and alignment at the internal, regional, national, and international levels.

that can help organizations make sustainable system level shifts, broaden definitions of excellence and embed RRA internally to strengthen assessment practices across the full funding cycle and embrace continuous improvement. To complement this Guide, the Working Group has developed a new RRA Self-Assessment Tool for Funders[14] which acts as a companion resource to support funders in reflecting on their current practices and identifying opportunities for alignment with each of the eleven dimensions of RRA, within their own context. Beyond its tools and activities, funders can use this Practical Guide to inform policy and strategy, to communicate expectations clearly to applicants, to train reviewers, to design pilot initiatives, and to support benchmarking and alignment at the internal, regional, national, and international levels. It serves as both a practical toolkit and a catalyst for organizational learning.

The global research landscape is evolving rapidly, shaped by new technologies, new forms of scholarship, and new expectations from society. As these changes accelerate, funders must remain agile, evidence-informed, and committed to sharing best practice and learning from one another. The GRC will continue to support this shared endeavor by convening funders, fostering dialogue, and advancing collective understanding of what responsible assessment looks like in practice. We hope this Practical Guide inspires reflection, experimentation, and collaboration across our global community. By working together, we can build assessment systems that better recognize the richness of research contributions and strengthen the foundations of a more inclusive, impactful, and resilient global research system.

Dr Gugu Moche
Deputy CEO, Research, Innovation, Impact Support and Advancement, National Research Foundation (NRF)

Professor Alejandro Adem
Chair, Global Research Council Governing Board
President, Natural Sciences and Engineering Research Council of Canada (NSERC)

Science Europe

Research assessment has been a long-standing priority at Science Europe. It is a topic that represents the core business of all our member organizations, both research funding and research performing organizations, through grant allocation processes and career progression exercises, respectively.

For Science Europe, responsible research assessment (RRA) is not a technical matter of measures, practices, and procedures, but rather a fundamental process founded on the shared values that research organizations promote across every aspect of the research system: values such as openness and transparency; integrity and ethics; equality, diversity, and inclusion; care and collegiality; collaboration; and autonomy and freedom.

Responsible research assessment is a fundamental process founded on the shared values that research organizations promote across every aspect of the research system.

As the association representing national European research funding and research performing organizations, the majority of whom are signatories to both DORA and the Coalition for Advancing Research Assessment (CoARA), we see firsthand how assessment criteria shape research culture, influence career pathways, and ultimately determine what knowledge is created and valued. Our recent focus on research assessment processes as a key component of positive research culture shifts is highlighted in our recent Vision and Framework for Research Cultures. Our commitment to RRA reflects our broader mission to strengthen and foster the quality, scholarly rigor, and impact of research.

This guide, accompanying the DORA Guide for Research Performing Organizations, represents an important milestone in our ongoing collaboration with DORA and the Global Research Council (GRC), and our contribution to the global reform of research assessment movement. It also complements and shares many synergies with activities ongoing within CoARA, as highlighted in the guide. Combined, these efforts highlight a concerted move from principles to action and signals the strength and good health of this shared reform movement.

Science Europe and its member organizations continue to advance their commitmment to translating principles into actionable changes.

Research funding organizations operate within diverse national contexts, yet share many common challenges. By partnering with DORA and the GRC on this guide, Science Europe and its member organizations continue to advance their commitment to translating principles into actionable change in our own practices while fostering peer learning globally, together with research performing organizations.

We encourage our member organizations and the wider research community to use this guide as a practical tool for continuous improvement: one that will evolve alongside our collective understanding of positive research cultures, the quality and impact of research, and knowledge advancement for the benefit of all.

Professor Mari Sundli Tveit
President of Science Europe
Chief Executive of the Research Council of Norway (RCN)

Introduction

The Guide is designed to be flexible and practical, offering guidance for change rather than a single, prescriptive approach to responsible research assessment (RRA). It is intended for all types of research funders who want to use RRA to enhance the effectiveness and impact of their funding—from government agencies and private philanthropies to not-for-profit research charities and commercial organizations.

Research funders vary widely in size, focus, and readiness to engage with RRA, and what works for one may not work for another. That is why this is a *Practical Guide*; it is intended to have relevance across regions and to the diversity of funders. Proportionality is key: keeping approaches simple, achievable, and suited to the organization's goals and capacity.

Implementing RRA involves trade-offs, with resources, costs, and benefits that need to be considered in each context. Whether just starting to explore RRA or already making changes, organizations are encouraged to draw on the ideas, tools, and examples that best fit their context.

CHAPTER 1.1

How to use the Guide

The Guide focuses on competitive funding programs, where proposals, peer review, and selection processes are the primary levers for implementing RRA.

We acknowledge that many research funders also operate within broader strategic and institutional funding landscapes. These may include block grants, performance-based funding systems, and national frameworks for evaluating research organizations over longer timeframes. In some countries, public research funders are also responsible for designing or coordinating national research assessment exercises, which may evaluate collective performance, research cultures, and institutional capacity for high-quality, impactful research. These forms of assessment raise distinct methodological and policy considerations that extend beyond the scope of this Practical Guide.

The Guide contains many examples of how funding organizations are approaching and implementing RRA, to share learnings, experiences, and provide inspiration for others. We hope to provide enough diversity in these examples to inspire readers in different contexts.

The Guide is organized into Chapters, each of which can stand alone, with options to jump across Chapters and to relevant resources using hyperlinks and QR codes.

Chapter 1 sets the scene; defining the context and rationale for, and introducing, the key principles that underpin RRA.

This chapter includes a Spotlight on the growing use of Artificial Intelligence (AI) in research funding practices and considerations for RRA.

Chapter 2 presents a set of practical activities that research funding staff can use to catalyze and help to embed RRA within their organization. The seven activities are:

1. Engaging the organizational leadership
2. Developing a strategic vision for RRA
3. Exploring the RRA landscape
4. Working with communities inside and outside your organization
5. Mobilizing resources for RRA
6. Creating strong engagement and communication plans
7. Monitoring, evaluating, and reviewing activities and interventions

This chapter includes a Spotlight on the Global Research Council Responsible Research Assessment Working Group, highlighting the practical tools they have developed to support public funders working on RRA. The Group has also played a key role in shaping this Guide[7].

Chapter 3 provides practical tips on how funders can embed RRA into the policies and practices that operate across five moments of the typical research funding cycle, specifically:

1. Establishing funding programs and calls
2. Making funding decisions
3. Setting grant terms and conditions
4. Monitoring and evaluating grants and programs
5. Communicating and engaging with your communities

It also includes two Spotlights and a Case Study:

- Narrative CVs: this Spotlight provides an overview of the current use of narrative CVs by funding agencies in the grant application processes and evidence of impact to date.

- Experimental approaches to make funding decisions fairer: this Spotlight describes how funding agencies are experimenting with new approaches to funding decision making to minimize the potential for, and impact of, bias.

- The Reference Group for the Appropriate Review of Indigenous Research: this case study shows how the Canadian federal funding agencies are working to create inclusive research environments that honor Indigenous knowledge systems and worldviews.

Chapter 4 describes the evolving research system in which RRA sits, explaining how eight central components are intertwined with RRA. For each component, we explain its relationship to RRA and what this means for research funders. The components are:

- Responsible research culture
- Responsible use of metrics
- Research information infrastructure
- Equity, diversity, and inclusion
- Research ethics and integrity
- Open science
- Inter- and transdisciplinary research and societal impact
- Scholarly communication

Finally, the Guide is intended to grow with the funder community. We would love to hear your feedback so we can evolve the Guide over time.

If you create new materials, policies, practices or tools related to RRA or would like to share a case study, please get in touch with the DORA team at: info@sfdora.org

RESOURCE

REFORMSCAPE ↗

Discover DORA's repository of global RRA-aligned policies and practices[4].

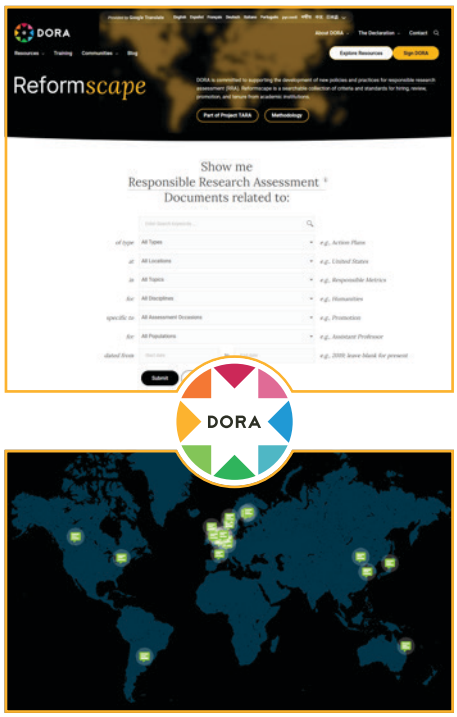
RESOURCE

DORA CASE STUDIES ↗

Discover real examples of RRA implementation across different types of organization[3].

WHAT DO WE MEAN BY
Open Science

UNESCO defines open science broadly as encompassing open access to scientific knowledge, alongside open infrastructures and open engagement with society, including dialogue with Indigenous and traditional knowledge systems[15]. The terms open research and open scholarship are also widely used globally. What these approaches share is a commitment to inclusiveness across the full diversity of the research system, from the arts and humanities to the most basic sciences. For the purposes of this Guide, we use the term open science to refer to this inclusive approach to openness and transparency, while recognizing that other terms may be used in different contexts.



CHAPTER 1.2

Research assessment reform

Assessment reform is an evolving movement aimed at shifting entrenched norms and incentive structures across the research system. Around the world, funders, institutions, policymakers and scholarly communities are experimenting with approaches to evaluating research quality, contribution and impact.

This period of transition is characterized by pilots, learning and adaptation. This has led to a growing number of initiatives working to advocate and coordinate reform in how research quality and impact are assessed, as part of broader efforts to improve research culture and maximize societal benefit from research.

Some initiatives operate globally across multiple actors, while others focus on specific regions and research contexts, helping ensure reform is sensitive to local cultures and needs of specific actors (e.g., DORA[1], Coalition for Advancing Research Assessment (CoARA)[16], Latin American Forum on Research Assessment (FOLEC-CLACSO)[17], Global Research Council Responsible Research Assessment Working Group (GRC RRA WG)[7], International Network of Research Management Societies Research Evaluation Group (INORMS REG)[18]).

Research assessment reform is therefore both a driver and an outcome of broader system change.

As national systems, organizations and disciplines shift to embrace shared values, diverse contributions, and healthier working environments, assessment systems must evolve to reflect and reinforce these priorities.

Conversely, without reform, research cultures are held in place by incentives that reward a narrow set of outputs and discourage inclusive, ethical, and engaged scholarship.

For funders, this landscape of ongoing reform provides opportunities to learn from peers, adopt novel approaches, and contribute to collective efforts. These initiatives provide community building, practical guidance and tools to realign incentives toward collaboration, openness, responsible conduct, and contributions to knowledge and societal impact.

CHAPTER 1.3

The goals and principles of Responsible Research Assessment

We begin by defining what we mean by responsible research assessment (RRA), its goals and underpinning principles, before diving into the key activities in developing and implementing it.

What do we mean by RRA?

How researchers and their work are assessed influences researcher behavior and, in turn, the outputs and impacts they produce. Conventional assessment approaches have often relied on narrow quantitative indicators, such as publication counts and citations, as proxies for quality and performance. While useful in some contexts, these measures do not capture the full range of contributions that underpin robust, impactful research.

"Responsible" research assessment responds to these limitations by promoting more holistic, balanced, and fair approaches to evaluating research and researchers and as part of inclusive research cultures[7, 10, 19].

The approach is guided by three core principles which we explain in turn.

1. Encouraging a holistic view of research contributions and impact
2. Think balanced and broad: valuing quality over quantity
3. Promoting equity

CHAPTER 1.3.1

Encouraging a holistic view of research contributions and impact

RRA recognizes that the value of research extends beyond academic publications and citations.

Researchers contribute in many ways: producing articles and books; sharing data, code, and materials; mentoring and teaching; conducting peer review; and engaging with policymakers, industry, communities, and patients to define research agendas and support the use and impact of research. RRA makes space for recognizing diverse knowledge systems, including Indigenous research practices, which may emphasize different methodologies, contributions, and forms of impact[20, 21].

For funders, RRA involves designing funding schemes and processes that acknowledge this diversity. This includes how calls are framed, how criteria are defined, and how progress and success are evaluated and communicated. A practical starting point is being intentional about what information is collected, both during the application stage and through reporting, so that varied contributions and outputs can be recognized (see Chapter 3).

Funders can invest in systems that make contributions easier to identify, connect and share openly. Open infrastructure, persistent identifiers, and common descriptors help link people, funding, and outcomes. Examples include ORCID[22] identifiers for researchers, DOIs or RRIDs for grants and outputs, and organizational identifiers such as ROR[23, 24, 25, 26]. The adoption of contributor role taxonomies (such as CRediT[27]) provides a further route for individual researchers' contributions to be visible. Initiatives like the Barcelona Declaration[28] reinforce this direction by promoting open, transparent research information as a foundation for fair and accountable assessment (see Chapter 4, Research Information Infrastructure).

Tools such as the **Researcher Impact Framework**[29] and DORA's **Building Blocks for Impact**[30], present practical ways for organizations to define and capture the types of output and impact that are important to them.

RESOURCE

ORCID ↗

Find out how building identifiers into grant systems can help reduce administrative burden[31].

RESOURCE

BUILDING BLOCKS FOR IMPACT ↗

Explore the diversity of researchers' impacts[30].

CHAPTER 1.3.2

Think balanced and broad: valuing quality over quantity

RRA promotes a balanced view of research assessment, that values qualitative contributions alongside more quantitative measures of productivity such as publication-based outputs.

While publishing research remains an essential way to share research findings, the *number* of publications (or where they are published) does not tell you about research quality nor how it creates impact. RRA places strong value on *'research done well'* emphasizing rigor, transparency, and integrity as essential to trustworthy, high-quality research.

For funders, prioritizing quality means allowing applicants to describe the full range of their contributions, rather than publication counts alone (for example, through narrative CVs (see Spotlight)). It also requires clear guidance for reviewers so that applications are assessed against the aims of the funding scheme. Metrics, including bibliometrics, should inform expert judgement, not replace it.

Frameworks such as the **Leiden Manifesto**[32] and DORA's **Guidance on Indicators**[33] emphasize that, where metrics are used, they should be applied responsibly—and ideally be transparent, provided in context, and aligned with organizational values.

RESOURCE

GUIDANCE ON RESEARCH INDICATORS ↗

Learn more about the responsible use of research indicators[33].

CHAPTER 1.3.3
Promoting equity

RRA necessitates processes and workflows that actively value diversity and innovation.

RRA advocates for the unbiased assessment of scholarly work and recognizes that researchers from diverse disciplines, backgrounds, and career stages contribute in ways that extend far beyond established publications. These contributions often disproportionately fall on women and minoritized individuals.

It highlights often-overlooked roles essential to research, such as data stewards, software developers, technicians, and librarians. RRA's recognition of diverse contributions also makes space for the distinct roles and relationships valued in Indigenous research contexts[34]. This focus is not just about fairness: evidence shows that equitable and diverse teams often outperform less-diverse ones, driving innovation and enhancing impact[35, 36, 37].

Funders can achieve this by ensuring calls are accessible to a broad range of applicants, using inclusive and transparent selection criteria, and valuing varied forms of expertise, perspectives, and contributions. Monitoring grant application and awarding patterns can help to identify and address barriers that disproportionately affect particular groups or disciplines, including those unintentionally embedded in established practices and policies[38, 39] (see Chapter 4, Equity, Diversity and Inclusion).

The principles of RRA, as outlined in this guide, draw primarily from Western scholarly traditions but must also accommodate diverse worldviews and research paradigms, including Indigenous approaches that cannot be adequately represented within conventional academic frameworks rooted in colonial structures[40]. These Indigenous methodologies often emphasize relationality, reciprocity with Country and community, and knowledge co-creation under Indigenous governance, and the importance of research impact and benefit for communities[41]. Funders therefore need to build in flexibility across their processes and practice to accommodate this.

CASE STUDY

REFERENCE GROUP FOR THE APPROPRIATE REVIEW OF INDIGENOUS RESEARCH ↗

Read how Canadian funders work to honor Indigenous knowledge systems and worldviews[42].

CHAPTER 1.4

The importance of collective action on RRA

Funders play a central role in shaping RRA across the research system: their policies and requirements directly influence the research conduct and behaviors of those they fund across organizations where research is performed (e.g., universities and research institutes), and influences research culture more broadly.

RRA also affects funders themselves. A growing body of evidence shows that RRA-aligned practices can help funders to achieve greater value from their investments, specifically:

- **improving research quality and reliability:** by incentivizing robust and rigorous methods and reporting of findings, making research more reliable and reproducible and reducing the risk of potentially unreliable findings being adopted[43, 44].

- **reducing waste and duplication:** transparency, data sharing, and the reporting of negative or null results helps to reduce wasted resources by avoiding unnecessary duplication or research that adds little new knowledge[45].

- **accelerating real-world impact:** improving quality, reducing waste and encouraging collaboration, and the sharing of a wider range of research outputs ultimately helps research to move more quickly into policy and practice, delivering societal impact.

In developing approaches to RRA, there is value in collective action and alignment, while recognizing funders operate under diverse national systems, mandates, and mission-driven priorities shaping their assessment needs. Scholarship is increasingly global and collaborative, with researchers working and moving across borders, disciplines, and sectors. Aligning funders' assessment approaches helps to create consistency, simplifies

processes for those being funded, and supports shared responses to challenges such as research integrity and the responsible sharing of findings. Greater alignment can also reduce the administrative burden for researchers and reviewers working with multiple funders.

RESOURCE

SCIENCE EUROPE VISION & FRAMEWORK FOR RESEARCH CULTURES ↗

Discover Science Europe's guidance for enhancing research culture[46].

Most importantly, if RRA—especially through coordinated approaches—improves efficiency and strengthens research culture at the same time, research funding can deliver greater benefits for society.

The benefits of coordination are made even more pressing by the rapid emergence of artificial intelligence (AI). While AI offers real potential to improve research and funding processes, it also raises new governance and policy challenges (see Spotlight on AI). Working together with other funders and across the wider research system can help the development of shared approaches and ensure that AI is used in ways that support responsible research funding.

Chapter 4 explores evolving topics in research culture, highlights how they are connected to RRA, and sets out the growing momentum for collective action.

SPOTLIGHT ON

The emerging use of AI in research & implications for RRA

Artificial intelligence is rapidly reshaping research, bringing significant opportunities alongside evolving and often unpredictable challenges. For research funders, AI has the potential to transform many aspects of the funding process while also introducing new risks. Given the scientific, financial, reputational, and legal implications of funding decisions, it is therefore important that the adoption of AI within funding contexts is guided by robust management and governance.

Early evidence shows that the use of AI-based tools could bring efficiencies to the grant-funding process: for example, speeding up grant application triage and initial screening processes, in matching reviewers to applications[47], in helping to extract and summarize reviewer comments of grants, and in flagging potential issues with grant proposals that might otherwise be missed[48].

For funding agencies these tools present opportunities to refocus staff and reviewers' time on applications that require greater judgment and deliberation. AI technology can also make it easier and reduce the time burden for researchers to prepare grant applications, which often have strict requirements and involve explaining complex ideas. For example, a concrete, already plausible use case is language and clarity support (e.g., improving written English), which may especially help applicants who are new to applying and/or do not speak English as a first language, provided that responsibility for the content remains with the applicant.

AI technologies might also be applied to other stages in the grant funding life cycle, such as supporting the assessment of interim grant progress reports, tracking funded outputs, and impact evaluation. Taken together, AI has potential to improve how funding is managed and evaluated in ways that align with RRA.

However, AI also poses risks for funders. There is a potential for AI to generate large volumes of grant proposals or reviews of

SPOTLIGHT ON THE EMERGING USE OF AI IN RESEARCH & IMPLICATIONS FOR RRA

uncertain quality that might overwhelm peer review and evaluation workflows. Furthermore, concerns have been raised about an 'AI writes, AI evaluates' dynamic, which could reinforce existing biases and reduce novelty, especially when there is no human oversight. AI tools may also introduce potential bias by, for example, favoring data-rich or model-friendly fields, or unintentionally narrowing the diversity of research questions across portfolios.

Because the field of AI is evolving so fast, funders currently lack shared experience or clear guidance on how to use AI in the most effective and ethical ways. Several funders have raised concerns about the use of AI tools by applicants and reviewers, particularly where confidential proposal content may be unintentionally shared or reused without proper attribution. While often associated with large language models, these confidentiality risks extend more broadly to sharing original material with untrusted third-party tools[49].

The Research on Research Institute (RoRI) published in 2025 the findings of a two-year project, in collaboration with 13 public and private funders from Europe, North America and Australia, to document the experiments and early experiences of the use of AI in various aspects of the research funding process. The GRAIL project (**G**etting **R**esponsible about **AI** and machine **L**earning in research funding and evaluation) resulted in the handbook *Funding by Algorithm*[50], aimed to provide evidence-based guidance to funders on the effective and ethical use of AI technologies in their funding and assessment processes.

Importantly, and closely aligned with the principles of RRA, the RoRI Handbook sets out three criteria that research funding organizations should meet in their use of AI:

1
It is effective
Applications of AI address the goals for which they were designed, and do so in a manner that supports a well-functioning organization.

2
It is ethical
AI applications are designed, implemented and managed to minimize harm to those who may be affected (e.g., staff of funding organizations, researchers, members of the public), and support the good of society.

3
It is equitable
The use of AI helps to close opportunity gaps for individuals participating in the research system and does not unfairly disadvantage one group over another.

SPOTLIGHT ON THE EMERGING USE OF AI IN RESEARCH & IMPLICATIONS FOR RRA

To realize the benefits of AI while safeguarding responsible assessment, funders need to develop appropriate checks and balances. This includes the development and continual review of policies regulating the use of AI, as well as effective monitoring practices and guidance for applicants and reviewers–for example, making sure that AI-assisted processes do not disadvantage small or less-resourced teams[51]. Where disclosure is required, funders should specify what must be declared, what is prohibited, and the consequences of non-compliance to maintain trust and consistent expectations.

As AI becomes more embedded in research funding, funders need to use it with care. While AI can improve efficiency, it should not replace essential human judgement or introduce bias. Transparency, contestability, and auditability are crucial: applicants should know if and how AI is used, humans must be able to override AI outputs, and funders should retain documentation to enable oversight and detect unintended impacts.

> "Rather than seeking nails to hit with the AI hammer, the key is to start with your goals."[52]
>
> —Denis Newman-Griffis, GRAIL project lead

RESOURCE

FUNDING BY ALGORITHM ↗

Discover guidance on the responsible uses of AI and machine learning for research funders[50].

Key activities for embedding Responsible Research Assessment

This Chapter describes seven activities that support the development and effective implementation of responsible research assessment (RRA) approaches in funding organizations. Although they may be read as a sequence, they do not need to be followed in order, and some may not apply in all contexts. Readers are encouraged to focus on the activities most relevant to their needs and setting.

ACTIVITY 1

Engaging the organizational leadership

Engagement from senior leadership is often the single most important factor in advancing changes to research assessment within funding organizations.

Leaders, such as Chief Executives, Directors of Research, Heads of Programs, Department Heads, and Chairs of panels or committees, set priorities and allocate resources. Leadership support for RRA can help to unlock time and capacity and encourage teams to adopt new practices. Leaders who already work across related areas like open science, research culture, ethics and integrity, or equity, diversity, and inclusion (see Chapter 4) may be especially well placed to champion more holistic and inclusive approaches.

Effective engagement starts with a clear, practical case for why RRA matters, outlining both benefits and risks of maintaining current approaches, such as reduced diversity in applications and awards, process inefficiencies, or reputational harm from overly narrow criteria. Prioritize RRA activities that align most closely with the organization's specific mission-driven goals.

It is also important to recognize that some leaders may be unfamiliar with RRA or cautious about making changes to established systems. Make time to listen to concerns and, where helpful, provide evidence of how change can improve organizational performance, efficiency, and reputation (e.g., drawing on examples from peer organizations). It may also be helpful to emphasize that RRA is now a global priority, with the DORA Funder Groups, Global Research Council, Impact Funders Forum, and other initiatives serving as forums and providing a platform for funding agencies to share good practices and "what works" (see Activity 3).

ENGAGING THE LEADERSHIP
Things to Think About

What are the most compelling reasons for research assessment reform and RRA at your organization?

Are there senior leaders that are already interested in RRA? What is their specific interest?

What are the best ways to engage with the leadership about RRA (e.g., setting up a meeting, creating a board paper)?

Can you link RRA to other related initiatives that already have leadership support (e.g., research integrity, open science)?

What are the most likely reasons for resistance to making changes to existing research assessment practices? What would help to mitigate against any resistance?

Positioning RRA as an evolution rather than a revolution (or disruption), and starting with incremental changes or small-scale pilot tests, can help to provide evidence of benefit while managing concerns.

Creating an organizational record or history of why RRA changes are needed, and how they are being tested, can provide a foundation for practices to continue over time, even as leadership changes. Openly publishing the results and evaluations of pilots can support building a global evidence base that documents the benefits of RRA, while generating visibility and external legitimacy required to drive organizational change with your communities (see Activity 4).

DORA and CoARA have short documents with constructive and evidence-based responses that can be used to address common questions about research assessment reform.

RESOURCE

IDEAS FOR ACTION ↗

Discover DORA's factsheet with common myths and constructive responses about the need for research assessment reform[53].

RESOURCE

ADDRESSING DEBATES ↗

Discover CoARA's FAQs to address concerns about research assessment reform[54].

ACTIVITY 2

Developing a strategic vision for RRA

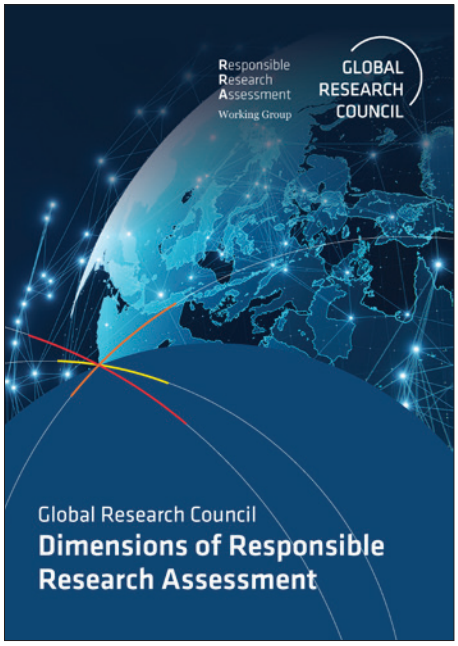
Having a clearly articulated vision for RRA helps to translate intent into coherent policy and action.

It provides a framework for shaping funding policies and resource decisions, while signaling to the research community what the organization values, for example supporting early-career researchers, promoting equity as a foundation of excellence, or advancing open science. A clear vision supports the development of policies and practices that are consistent and purposeful.

RESOURCE

GRC DIMENSIONS OF RESPONSIBLE RESEARCH ASSESSMENT ↗

Explore the GRC's 11 dimensions that provide a shared framework for advancing RRA[12].



Funder commitments to open science is a good example of this link between vision, policy and action. Many funders require open access publishing, Data or Output Management Plans, and the sharing of data, software, methods, and protocols to improve research visibility, reliability, and reuse. Embedding these expectations in policy incentivizes action and helps normalize behaviors, while making a wider range of outputs visible and discoverable, supporting their recognition in assessment processes. In this way, open science enables more holistic and responsible approaches to research assessment (see Chapter 4, Open Science).

RESOURCE

DFG: OPEN SCIENCE AS PART OF RESEARCH CULTURE ↗

Find out how the DFG positions open science[55].

RESOURCE

HOWARD HUGHES MEDICAL INSTITUTE'S OPEN SCIENCE INITIATIVE ↗

Find out how open science and RRA underpin HHMI's strategy[56].

RESOURCE

ALIGNING SCIENCE ACROSS PARKINSON'S OPEN SCIENCE OVERVIEW ↗

Discover ASAP's activities to accelerate discoveries for Parkinson's disease research[57].

When developing a vision and associated policies, it is important to involve those who implement them or are affected by them, such as staff, reviewers, and applicants. Consulting early and testing new policies where possible can build trust and shared ownership (see Activity 4). Over time, collecting and sharing evidence—such as patterns in applications, funding decisions, and outcomes—can help show whether these changes are improving fairness, effectiveness, and impact (see Activity 7).

CASE STUDY

FNR'S VISION FOR RRA ↗

See how the FNR embeds RRA into its funding programs[58].

DEVELOPING A VISION
Things to Think About

Are there other individuals or teams at your organization who can contribute to the development of a vision for RRA?

What evidence can you provide to show why RRA will support your organization?

Can you link RRA to other areas of strategic focus at your organization—such as open science, or research integrity—to create a holistic approach to research culture?

How can the wider research system be involved in shaping, implementing, and iterating the RRA vision over time?

What are the best ways to measure how successfully the vision has been implemented (e.g., indicators of progress)?

ACTIVITY 3

Exploring the RRA Landscape

When developing or strengthening RRA approaches, it is important to understand the existing landscape both within the organization and across peer or related funders. A scan of the landscape can reveal what assessment practices are currently in place, if and how these vary across funding calls, what is already working, where collaboration is possible, and where change can be most practical and effective.

A. Look inside your organization

An effective first step is to map current assessment practices across the organization. Elements of research assessment may already sit across different teams and functional areas within a funder, including grants management, policy, post-award monitoring and evaluation, and communications. Consulting with colleagues and gathering related documentation and materials will help to build a picture of existing research assessment-related practice. This might include:

- **Application formats and required information from applicants**, whether applicants are asked for publication counts or journal-based metrics, whether application forms provide space to report a broad range of contributions and career paths.
- **Grant assessment criteria and scoring rubrics** used by review panels or external assessors.
- **Guidance provided to peer reviewers and panels**, including what information they receive about applicants and what they are asked to consider when making their assessment.
- **Post-award reporting and evaluation processes**, including what outputs or outcomes are tracked, what metrics (if any) are used, and how impact is described.

EXPLORING THE LANDSCAPE
Things to Think About

In your organization, who is working on RRA or related topics (e.g., open science, research integrity, equity, diversity and inclusion)?

What organizational policies, documents, or guidance materials exist related to researcher and research assessment? Are these aligned?

Which funding agencies commonly fund the researchers that you fund? What are their approaches to research assessment? Are there areas of potential alignment?

Which RRA approaches are the priority to explore (e.g., using narrative CVs in grant funding processes)?

What is the current approach to research evaluation of national and international funding agencies in your region?

- **Related policies and frameworks**, such as those on open science, research integrity, or equity, diversity and inclusion, that may already reflect RRA-aligned values.

In examining existing research assessment approaches, consider where there is:

- **Alignment:** where existing practices already support RRA (e.g., Global Research Council's Dimensions of RRA[12]).
- **Discordance:** where language, expectations, or measures might conflict (e.g., heavy focus on publication lists, counts or the use of journal metrics in grant application forms or grant review panel instructions).
- **Gaps and opportunities:** areas where RRA could bring more coherence, fairness, or transparency.

Both the GRC RRA WG and DORA have created resources to help organizations consider their readiness for the development and implementation of new approaches to research assessment.

RESOURCE

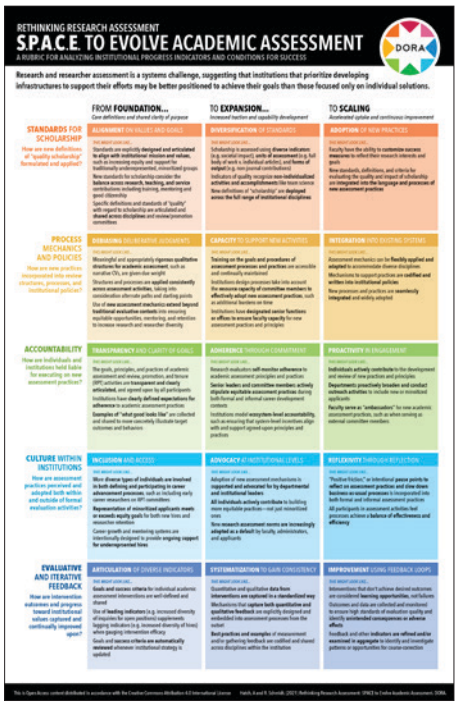
GRC RRA SELF-ASSESSMENT TOOL ↗

Use the tool to assess organizational readiness and opportunities for RRA[14].

RESOURCE

SPACE RUBRIC ↗

Discover DORA's rubric to inform organization readiness for research assessment reform[59].



B. Look outside your organization

Funders do not work in isolation. They are part of a wider research system, where decisions are influenced by, and influence, researchers, institutions, partners, and national and international evaluation frameworks.

Keeping track of the policies and practices of other funders, research organizations and wider policy environment (e.g., national approaches to research assessment) can highlight opportunities for alignment, such as around research integrity, sharing research outputs, and research culture. Being aware of policies and practices at other similar organizations can be especially helpful if it is necessary to make a case quickly when an opportunity arises to discuss RRA.

Because researchers and reviewers often work with multiple organizations, aligning approaches where it makes sense can help keep practices up to date and reduce burden and complexity for everyone involved (see Chapter 1.4)

RESOURCE

POLICIES ON RESPONSIBLE RESEARCH CONDUCT ↗

Discover Wellcome's guidance for its grantees[60].

RESOURCE

TRANSFORMING ASSESSMENT: GRC SURVEY OF FUNDERS ↗

A global picture of funders' RRA practices, with policies and practicies of 55 GRC participants[11].

RESOURCE

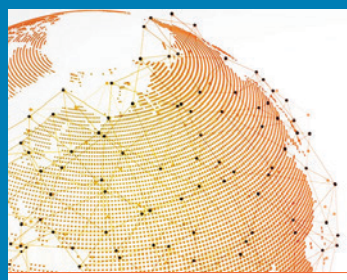
GRC RRA CASE STUDY LIBRARY ↗

Find examples of how funders are embedding RRA through their working practices[13].

SPOTLIGHT ON

The work of the Global Research Council RRA Working Group

The Global Research Council[61] brings together approximately one hundred heads of science and engineering funding agencies from around the world and is dedicated to promoting the sharing of data and best practices to strengthen high-quality collaboration among research funders.



GLOBAL RESEARCH COUNCIL

RESPONSIBLE RESEARCH ASSESSMENT WORKING GROUP

In 2020, the GRC partnered with the Research on Research Institute (RoRI) to produce *The Changing Role of Funders in Responsible Research Assessment*[10].

Following the report, which identified persistent challenges, including narrow metrics, incentives that drive improper research, systemic biases, and reduced diversity in research missions, the GRC recognized the need to modernize assessment practices across global research systems.

The GRC issued a *Call to Action*[8] and established its Responsible Research Assessment Working Group to convene funders and advance coordinated action.

With participation from over 40 experts across 25 organizations, the group developed an *Action Plan*[62] with four major objectives, through which they produced key outputs that aim to support funders as they embed assessment approaches that reward diverse, high-quality research and strengthen equitable research cultures globally.

SPOTLIGHT ON THE WORK OF THE GLOBAL RESEARCH COUNCIL RRA WORKING GROUP

OBJECTIVE 1
Advocate globally for the importance of RRA and work towards a shared understanding and vision for RRA

- **Dimensions of RRA**[12]: a global framework that defines key aspects of RRA, with 11 dimensions organized according to three categories to provide a common reference point for implementing RRA practices globally.
- **Transforming Assessment survey report**[11]**:** the most comprehensive global picture of funders' RRA practices to date, with policies and practices of 55 GRC participant organizations conducted in collaboration with the Research on Research Institute. A de-identified version of the survey data[63] is also openly available.

OBJECTIVE 2
Share practice and guidance in implementing and embedding RRA practices

- **GRC RRA Case Study Booklet**[64] and **digital library**[13]: a booklet and accompanying digital library that showcases examples of RRA implementation across GRC regions. Recordings of certain case studies can also be found on the GRC's YouTube channel playlist[65].
- **Annual Statements of Principles**: The group continues to ensure that RRA considerations are reflected in annual GRC discussions and statements of principles, including the 2023 *Statement of Principles on Recognising and Rewarding Researchers*, which is available in English[9], French[66], and Arabic[67].
- **Global Engagement**: The group regularly engages GRC participants to co-create, receive input and showcase outputs of their ongoing work.

OBJECTIVE 3
Galvanize support and enable coordinated action

- **RRA Self-Assessment Tool for Funders**[14]: a tool to help funders situate their practices within the broader RRA landscape and identify opportunities for further RRA implementation within their local context.
- **Partnerships**: The RRA working group operates in close collaboration with many other international initiatives and groups that aim to support action towards RRA implementation globally. This includes a collaboration with DORA and Science Europe to produce this Practical Guide.

OBJECTIVE 4

Provide continued support to extend the knowledge base where gaps and barriers persist or emerge

- In 2026–27, the group aims to engage GRC participant organizations on how it can best support their continued progress on embedding RRA practices. It will further explore opportunities for collaboration and synergy with other initiatives that support global action towards RRA and in alignment with GRC priorities.

Together, the resources developed by the RRA Working Group and the conversations it facilitates are meant to guide funders in understanding the complexity and diverse facets of RRA, to highlight ways in which funders may take actionable steps towards implementing RRA practices, and to provide the tools that funders can rely upon as they embed RRA in a manner best adapted to their own unique contexts.

The group's vision is for GRC participant organizations to embed approaches to assessment that incentivize and reward the diverse attributes of high-quality research, contributing to a healthier, more equitable research culture.

ACTIVITY 4

Working with communities inside and outside the organization

RRA is not something a single team or even a single organization can do effectively alone. It works best when approached from a system-wide perspective, learning from and engaging with organizations and initiatives within and beyond the organization.

A. Build connections inside the organization

Building strong links and having regular conversations across teams can help to embed RRA in an organization. Connecting with colleagues who are working in areas like policy and evaluation, grants management, and communications helps to share expertise and align ways of working, even where teams have different roles.

Engaging senior leaders, such as department heads, directors, and committee chairs, is also important. Understanding their perspectives and priorities (see Activity 1) can help to secure their support, and once engaged, they can champion change and set the tone across the organization (see Activity 6).

Creating regular opportunities for discussion, such as through internal webinars, all-staff meetings or 'town-halls', or small group discussions, allows staff to share ideas, raise challenges, and learn from what already works well. Simple feedback mechanisms, such as short surveys or forms, can also provide valuable insight into how changes are landing and where further support is needed. Providing discussion opportunities and building on existing activities can make any planned changes feel more manageable.

B. Build connections outside the organization

Consider how to engage with external communities to learn, share evidence of what works, and stay informed about emerging directions in RRA. Consider how to align with initiatives that complement and intersect with

RRA, such as those focusing on open science and EDI (see Chapter 4). Building connections with peer funders, government departments, evaluation bodies, and national academies can create opportunities for collaboration and aligned approaches to research assessment and evaluation. Funders also have a unique opportunity, given their influence in the research system, to champion key issues and share their own experiences of assessment reform with others.

Joining communities of practice or engaging with global initiatives such as the DORA Funders Group[6], CoARA, FOLEC-CLACSO, or the Global Research Council's RRA Working Group (see Spotlight) can provide ready access to practical tools and guidance to support RRA. Becoming a signatory or drawing upon the guidance of RRA-aligned initiatives signals to your community an intent and commitment to RRA, even if your organization is not ready to act straightaway.

RESOURCE

CoARA WG IMPROVING PRACTICES IN ASSESSMENT OF RESEARCH PROPOSALS ↗

See the technical guide for inspiration for improving evaluation processes[68].

The 'Metascience' or research-on-research community is an increasingly important source of evidence on how research assessment practices shape behaviors, research cultures, and the outcomes of research. Initiatives like the UK-based Research on Research Institute (RoRI[69]), bring together funders, universities, and publishers to explore shared challenges and generate evidence to inform improvements in how research is funded, evaluated, and communicated.

RESOURCE

THE EXPERIMENTAL RESEARCH FUNDER'S HANDBOOK ↗

Explore research underway to build the evidence base for RRA[70].

WORKING WITH COMMUNITIES

Things to Think About

Who is/are most likely to be impacted by changes to research assessment practice(s)?

Which internal and external communities matter most for achieving your RRA goals (e.g., staff, reviewers, applicants, peer funders, or sector bodies)?

What skills or knowledge do your staff and reviewers need to engage confidently with RRA, and how can you support their professional development?

What ways of engaging will work best to bring people together and support open constructive discussion (e.g., round tables, in person meetings)?

Which trusted external partners can you learn from, pilot with, or benchmark against when exploring new approaches to assessment?

Which existing initiatives or networks focused on research assessment would be most useful to connect with (e.g., DORA, including its Funder Discussion Groups, CoARA, GRC, FOLEC)?

ACTIVITY 5

Mobilizing resources for RRA

Putting RRA into practice is much easier when sufficient time, people, and practical support are in place. Even well-designed approaches benefit from clear commitment and capacity to ensure they can be implemented effectively.

Because RRA is rooted in aligning practices with institutional values, missions, and strengths, it has the potential to improve coherence and ensure that limited resources are used where they have the greatest impact.

When planning changes, a useful first step is to establish a small cross-organizational group with the right mix of expertise and decision-making authority to develop ideas, test approaches, and support implementation. This may include staff with a strong commitment to RRA, alongside specialist input such as IT or systems support where needed.

Importantly, not everything needs to be built from scratch: identifying synergies with existing activities, adapting processes already in place, integrating RRA-related content into current training programs (rather than creating new ones), leveraging existing tools and good practices from peers, as well as learning from national and international initiatives, can significantly reduce both time and cost (see Activity 4).

For approaches that require new ways of working or additional resources, starting small can be effective. Piloting changes allows funders to test ideas, gather feedback, identify unintended effects, and build confidence before scaling up.

MOBILIZING RESOURCES
Things to Think About

What resources are needed for RRA, how much will it cost, and over what timespan?

What are the strongest arguments for RRA to secure resources to support activity?

Are there resources across teams that are currently working on RRA-related topics that could be easily expanded or repurposed to support plans?

Does it make sense to conduct a pilot or test-phase (with modest resource requirements) before requesting substantial resources?

How will you demonstrate the costs and benefits of implementing RRA, including any required investments or trade-offs in resources?

You may need time, funding, or capacity to support activities such as:

- Securing opportunities to talk about RRA with leadership
  ↪ Chapter 2, Activity 1
- Writing a vision for RRA and incorporating it across various documents and policies
  ↪ Chapter 2, Activity 2
- Undertaking landscape reviews, internally and externally, of the policies and practices and opportunities to align
  ↪ Chapter 2, Activity 3
- Engaging with (inter)national networks to stay informed about emerging directions in RRA
  ↪ Chapter 2, Activity 4
- Developing and actioning communications plans to explain new approaches
  ↪ Chapter 2, Activity 6
- Capturing feedback from your communities following new or adapted approaches
  ↪ Chapter 2, Activity 7
- Making time to consult with relevant communities when shaping new funding calls
  ↪ Chapter 3, Moment 1
- Adapting grant systems to accommodate new approaches
  ↪ Chapter 3, Moment 1
- Providing training to support new approaches (e.g., to grant reviewers)
  ↪ Chapter 3, Moment 2
- Pilot testing RRA-aligned approaches and analyzing their impact
  ↪ Chapter 3, Moment 4

ACTIVITY 6

Creating strong engagement and communication plans

Clear and consistent communication about why RRA matters helps build interest and support its implementation.

Explaining how RRA can contribute to the delivery of organizational strategies and using practical examples, such as funding diverse teams or recognizing contributions beyond high-impact publications, helps staff and stakeholders to understand the potential and value of RRA.

Aim to accompany any new RRA policies or processes with a communication plan and opportunities for engagement and feedback.

Consider how events such as webinars, town halls, or online forums, can provide the space for open discussion and cross-pollination of ideas, and strengthen buy-in to new approaches. Top tips for helping to ensure effective engagement include:

- **Engage early.** Staff, reviewers, and the research community value being involved in shaping change, not just hearing about it once decisions are made (see Activity 4). Early engagement can generate valuable ideas and reduce resistance to change.

- **Be transparent.** Clear, consistent communication through websites, FAQs, webinars, workshops and newsletters, reduces confusion and builds trust. It also avoids concerns that new approaches are opaque or unplanned.

- **Plan ahead.** Allow time for consultation, pilot testing and iteration before rolling out major changes. A strong lead-in period can help all those affected to adapt and make implementation smoother.

- **Create channels for feedback.** Develop routes for those involved and potentially impacted to provide feedback, for example by setting up a dedicated email contact point, an online feedback form, and/or running information webinars or discussion fora. Providing opportunities for feedback helps communities to feel heard and ensures that you keep ahead of potential issues that may emerge over time.

- **Empower advocates.** Team leaders, peer review committees and reviewers, and staff across different teams can help to share key information and reinforce messages where needed. Consider whether a champion, ambassador program or 'community of practice' might help build and sustain momentum around RRA.

CREATING ENGAGEMENT & COMMUNICATION PLANS

Things to Think About

Are the goals and benefits of RRA and associated activities at your organization clearly articulated?

What communication expertise is available to input into RRA-related messaging?

Have senior leadership provided input into the RRA messaging? What are the best ways to secure their input?

What channels are available to provide feedback on RRA activity from the community?

What examples of how other relevant organizations are doing RRA might be useful?

ACTIVITY 7

Monitoring, evaluating, and reviewing activities and interventions

As RRA-aligned policies are put into practice, it is important to check how well they are working.

Changes to established ways of working take time to embed, and using evidence to guide decisions and sharing what you learn can help to build trust with those directly involved in the funding process. This includes program staff, applicants, and reviewers, as well as the wider communities who are invested in different ways in the outcomes of research such as taxpayers, patients, and the public.

Most funding agencies monitor and evaluate their funding-related activities to:

1. **Show what difference their funding makes:** to demonstrate impact, explain why money was invested, and guide future decisions.
2. **Be open and accountable:** to share evidence about what their funding achieved and build trust with their community (e.g., grantees, reviewers, the public).
3. **Learn, improve, and strengthen the organization:** to see what is working and what is not, using the evidence to refine their programs, and become more effective and resilient over time.
4. **Strengthen the funding system:** sharing what they learn and collaborating with other funders to drive efficiencies and impact.

RESOURCE

FRENCH OPEN SCIENCE MONITOR ↗

Discover how the evolution of open science in France is being monitored[71].

In developing monitoring and evaluation (M&E) specifically to support RRA activity, there are several practical considerations that can support implementation:

- **Be clear about what success looks like:** decide what you want to achieve and how to tell if it is working.
- **Use simple planning tools:** developing a logic model or Theory of Change focused on RRA activity and interventions can be a useful way to map out the aims and track progress.
- **Gather feedback regularly:** gather views from applicants, reviewers, and staff through surveys or other quick feedback channels.
- **Test and improve as you go:** start small, see what impact changes have, review before-and-after data, and adjust before scaling up.
- **Share what you learn:** communicate the results –good or bad–as part of learning and continuous improvement.

RESOURCE

INORMS SCOPE FRAMEWORK ↗

Discover how to incorporate responsible research evaluation principles into evaluation design[72].

CASE STUDY

REVIEWER PERFORMANCE ASSESSMENT ↗

See how the National Natural Science Foundation of China (NSFC) monitors and assesses its grant peer reviewers[73].

MONITORING YOUR INTERVENTIONS

Things to Think About

What resources are needed to undertake M&E of interventions?

What information and indicators are needed to track progress and success?

Who will be responsible for tracking indicators and capturing feedback?

How to ensure that the data collected (e.g., application patterns, review outcomes, experiences of participants) are analyzed with an equity lens to detect bias or structural barriers?

What are the best ways to keep leadership, researchers, and staff informed about the results of M&E?

Key moments in funding agency research assessment

This Chapter outlines how funders can integrate responsible research assessment (RRA) into the policies, workflows, and practices used across the research funding lifecycle.

The way research is funded—the processes and workflows used—directly affects who receives funding, what research is conducted, how it is carried out, and the knowledge it produces. To be fully inclusive requires recognizing the experiences, rights, and values of everyone on whom research depends on and for whom it is intended.

It is particularly important to give explicit attention to Indigenous knowledge systems, histories, and lived experiences that have historically been marginalized in research and now in research assessment. Doing so helps to build trust and reciprocity and enriches science itself, grounding it in diverse worldviews and place-based understanding.

The Chapter is structured into five distinct funding tasks which, while described separately, are interdependent and each one can influence and shape the others.

CASE STUDY ON

The Reference Group for the Appropriate Review of Indigenous Research

Full case study available in the DORA case study library[42].

The Canadian federal funding agencies recognize that appropriate review of Indigenous research cannot be achieved without the co-leadership of Indigenous Peoples in the design of policies, processes, and criteria that affect them.

The impacts of colonization in Canada have caused profound and ongoing harms to First Nations, Inuit, and Métis Peoples. In 2015, the Truth and Reconciliation Commission of Canada[74] (TRC) issued 94 Calls to Action[75] and highlighted the important role of research in advancing understanding of reconciliation.

The United Nations Declaration on the Rights of Indigenous Peoples[76] (UNDRIP) was introduced into Canadian law in 2021 as a key step in renewing the Government of Canada's relationship with Indigenous peoples, with important implications for research ethics, accountability and Indigenous knowledge stewardship.

Along with other legislative and policy instruments that have research-related components, like the Indigenous Languages Act (2019) and the Inuit Nunangat Policy (2022), the UNDRIP Act contributed to creating an enabling environment for the initiatives featured in this case study.

In 2017, the Canada Research Coordinating Committee (CRCC) was created to improve coordination among Canada's granting agencies (the Natural Sciences and Engineering Research Council (NSERC), the Canadian Institutes of Health Research (CIHR) and the Social Sciences and Humanities Research Council (SSHRC), referred to as the granting agencies or the *Tri-agency*), along with the Canada Foundation for Innovation (CFI).

CASE STUDY ON THE REFERENCE GROUP FOR THE APPROPRIATE REVIEW OF INDIGENOUS RESEARCH

In response to the TRC's call to establish a new relationship with Indigenous Peoples, the CRCC set a key priority to advance Indigenous research and reconciliation. SSHRC, on behalf of the federal research granting agencies, organized a national dialogue to co-develop with Indigenous communities a new, interdisciplinary Indigenous research and research training model, leading to the implementation of the Setting New Directions to Support Indigenous Research and Research Training in Canada[77] (SIRC) strategic plan.

Consultations that informed the SIRC identified the following key issues, concerns, and opportunities for action:

- Decolonizing research
- Data governance and intellectual property rights
- Research ethics and protocols
- Funding eligibility and accessibility
- Research partnerships and community-led research
- Supporting Indigenous students
- Indigenous leadership and representation

As a collaborative tri-agency initiative, the strategy's key directions aim to address these issues and opportunities by:

- building relationships with First Nations, Inuit and Métis Peoples;
- supporting the research priorities of Indigenous Peoples;
- creating greater funding accessibility to granting agency programs; and
- championing Indigenous leadership, self-determination and capacity-building in research.

CREATING A REFERENCE GROUP FOR REVIEWING RESEARCH

The granting agencies recognize that appropriate review of Indigenous research cannot be achieved without the co-leadership of Indigenous Peoples in the design of policies, processes, and criteria that affect them.

The Reference Group for the Appropriate Review of Indigenous Research[78] brings together First Nations, Inuit and Métis individuals, including Knowledge Keepers, youth, and academics across career stages to offer guidance to the granting agencies on ethically sound and culturally safe peer review approaches and practices for research conducted by and with Indigenous rightsholders.

The Reference Group's collective understanding of Indigenous research and Indigenous Knowledges is highly valued, as they advise the granting agencies on the following common priority areas:

- Analyzing data related to existing peer review models for Indigenous research, identifying potential improvements, and areas where the agencies can harmonize their processes.
- Developing peer review policies, frameworks, and guidelines to ensure the culturally safe review of Indigenous applications.

CASE STUDY ON THE REFERENCE GROUP FOR THE APPROPRIATE REVIEW OF INDIGENOUS RESEARCH

- Supporting the development of culturally safe learning materials and tools for reviewers (based on the above recommended frameworks, guidelines, and criteria).
- Analyzing reviewer capacity to develop strategies and frameworks that will increase the number of reviewers able to conduct ethically and culturally safe evaluations of research proposals by and/or with Indigenous communities.

The Reference Group and supporting Tri-agency staff jointly develop the workplan. It reflects both Tri-agency priorities and the priorities of diverse Indigenous rightsholders, and is designed to remain flexible and responsive to evolving needs and opportunities.

The group's current focus is to develop a unique peer review process that will be applied to the new Indigenous Innovation and Leadership in Research (IILR) Network Grants[79]. This funding opportunity results from targeted investments by the Canadian government to support Indigenous researchers and their communities. The IILR Network Grants funding opportunity was co-developed in close collaboration with the Indigenous Leadership Circle in Research[80] (another Tri-agency advisory body) and Tri-agency staff after consultation with various Indigenous groups. The Reference Group is now leading the development of an appropriate review model for this funding opportunity.

This Reference Group developed the following research assessment changes as part of this unique peer review process for the IILR Network Grants:

- New Indigenous specific evaluation criteria that are reflective of Indigenous priorities and culture.
- New guidelines that complement the established conflict of interest policy, focusing on relationships among application participants and emphasizing transparency and shared accountability through the committee.
- A consensus-based assessment model, specific to an Indigenous context.
- Required inclusion of an Elder to guide the peer review process and its reviewers.
- Required establishment of a fully Indigenous review committee.

MOMENT 1

Establishing funding programs and calls

Setting up funding programs and issuing funding calls are key ways for funders to action their priorities and communicate their values.

Because early design decisions shape who applies and who ultimately succeeds, aligning programs and calls with RRA means attending to fairness, inclusion, transparency, and proportionality from the outset.

How programs are designed and advertised can encourage a wide range of high-quality applications or unintentionally discourage them.

This initial moment in the funding life cycle has a strong signaling power that can showcase your understanding of research quality and impact. By intentionally broadening what a program and a call values, funders can prevent the narrow focus incurred with conventional approaches, which includes leading research that is focused on lower-risk incremental work.

RRA draws attention to your local and particular contexts, representing an opportunity for the assessment process to be negotiated, ensuring the programs and calls are fit for your specific purpose and communities.

Table 1 highlights the main opportunities to build RRA alignment into funding programs and call design.

TABLE 1

Integrating RRA considerations into the design of funding programs and calls

KEY MOMENT	SUGGESTED INTERVENTION TO SUPPORT RRA
Setting funding priorities	When setting the funding priorities, funders can: • Develop funding initiatives that directly support organizational goals (e.g., early career researcher (ECR)-focused schemes, schemes that encourage interdisciplinary collaboration, or 'team science'). • Include features in funding initiatives that reflect organizational values. For example, if open science is a priority, incorporate requirements such as open access publishing, data sharing, or collaboration. • Consult with experts and intended beneficiaries when designing funding. This consultation could include potential applicants, research partners, clinicians, patient groups, industry, citizen scientists, and the wider public, to ensure funding is well targeted and meets real needs.
Designing & advertising funding calls	When designing and advertising funding calls, consider: • Promoting funding calls widely across diverse research communities and institutions, not just established networks. Targeted events, such as webinars or partnerships, can help reach underrepresented groups or attract novel applications. • Setting eligibility criteria that do not inadvertently exclude certain groups (e.g., Indigenous researchers) or narrow the pool (e.g., through geographic restrictions, specific career stage requirements, or publication-based track records). • Allowing sufficient time for applications and decisions, avoiding major holidays or busy periods. Adequate time supports fairness, reduces stress, and improves application quality. • Providing clear ways for applicants to get help or clarification, such as FAQs or a dedicated contact point. This is particularly useful for early career applicants or those new to an organization.

INCLUSIVE FUNDING PROGRAM DESIGN ↗

See how the Tanzania Commission for Science and Technology (COSTECH) is designing a funding program with the input of its intended research recipients[81].

TABLE 1 (CONTINUED)

KEY MOMENT	SUGGESTED INTERVENTION TO SUPPORT RRA
Designing application processes	When designing the application process for a funding scheme or program: • Provide clear guidance on the assessment process and timeframe (e.g., through FAQs). • Explain specific policies and expectations for applicants, such as the acceptable use of AI-generated text, data sharing, and open access publishing. • Consider if a multi-stage process (e.g., including an initial 'Expression of Interest' stage) might reduce administrative burden for applicants. Only ask for information that is needed at each stage. • Apply screening and selection criteria aligned with RRA principles, avoiding requirements that could disadvantage particular groups (e.g., geographic restrictions, career stage limits, or publication-based track records). • Clearly communicate expectations for applicants' host institutions, such as adherence to organizational principles around equity, diversity, and inclusion, and ethics and integrity requirements. • Design application forms to allow applicants to share contributions that matter to the funding program and organization. For example, narrative CVs enable highlighting achievements beyond publications (see Spotlight on Narrative CVs).

RESOURCE

UKRI RÉSUMÉ RESOURCES LIBRARY ↗

Explore materials to support the adoption and use of narrative CVs[82].

SPOTLIGHT ON

The use of Narrative CVs in funding decision-making

Narrative CVs are increasingly being adopted by funding agencies to make grant application processes more inclusive and aligned with RRA, and as part of broader initiatives to enhance and improve research culture.

Defined as "a type of CV format that provides structured written descriptions of academics' or researchers' contributions and achievements that reflect a broad range of relevant skills and experiences,"[83] narrative CVs include a broader range of contributions and achievements than is often seen in a conventional academic CV.

Narrative CVs invite researchers to tell their own story, showcase what *they* consider to be their biggest research-related impacts, and highlight the breadth of their contributions. They can provide particular flexibility for community-based and Indigenous researchers, enabling them to narrate non-linear career paths alongside relational contributions, such as community leadership and co-creation with knowledge holders, that are integral to their research yet otherwise difficult to substantiate[84].

Commonly, narrative CVs ask applicants to describe their work and impacts across four areas:

1. **Contributions to knowledge**: new ideas, methods, publications, policy, practice recommendations.
2. **Collaborations, teamwork, and mentoring**: building teams, supporting others and examples of leadership.
3. **Wider research impact**: strengthening the research and innovation system.
4. **Broader societal impact**: contributions to users, audiences, and communities.

For funders, these formats can reduce reliance on conventional metrics, broaden the evidence base for decisions, and promote equity, diversity, and inclusion by recognizing varied career paths and experiences. These formats also encourage applicants to reflect on their professional growth and articulate their role in collective

SPOTLIGHT ON THE USE OF NARRATIVE CVS IN FUNDING DECISION MAKING

achievements, giving reviewers a richer, more qualitative understanding of a researcher and/or research team's profile.

Over the last decade, adoption has been growing. The US National Institutes of Health (NIH) has used a Biosketch and SciENcv since 2015 and the Royal Society in the UK introduced its Résumé for Researchers[85] in 2019.

Funders across the world have been testing and introducing narrative CVs. This includes, in Europe, the DFG (Germany), HRB[86] (Ireland), SNSF[87] (Switzerland), FNR[88] (Luxembourg), and UKRI[89] (UK). In Canada, the Tri-Agency (CIHR, NSERC, SSHRC) recently introduced a narrative-style CV template for use across the agencies[90] and New Zealand's Ministry of Business, Innovation and Employment (MBIE) introduced them for the Endeavour Fund.

EVIDENCE OF IMPACT

While there is not yet strong evidence that narrative CVs significantly change funding outcomes, evidence does suggest that their use consistently encourages reviewers to consider a more holistic view of research[91, 92]. Studies from funders using narrative CVs—including the HRB, FNR, DFG—report generally positive feedback from both applicants and reviewers on their early use, though more research is needed[93, 94, 95].

A study by the Research on Research Institute (RoRI) set out five recommendations for funders to consider when implementing narrative CVs into their application processes and highlighted the importance of accompanying these changes with clear guidance and training for reviewers[96]:

1. Pick the right Panel Chair and brief them.
2. Offer live instructions to all who assess narrative CVs (like panelists and reviewers), for example in a presentation or a video.
3. Make sure that program evaluation criteria align with the intended uses of narrative CVs.
4. Seek dialogue about resistance to narrative CVs.
5. Diversify review panels.

DORA has also produced a factsheet on the use of narrative CVs to reduce bias in funding decisions.

CASE STUDY

NARRATIVE CVs AT THE MBIE ↗

Find out how the MBIE in Aotearoa New Zealand adopted narrative CVs for its Endeavour Fund[97].

RESOURCE

FNR'S RESOURCES ON NARRATIVE CVs ↗

Find out how the Luxembourg National Research Fund uses and evaluates the use of narrative CVs in its grant processes[88].

RESOURCE

USING NARRATIVE CVs ↗

Discover DORA's factsheet on using narrative CVs to reduce bias in funding decision making[98].

MOMENT 2

Making funding decisions

Embedding RRA principles in decision-making processes helps to ensure fairness, transparency, and consistency, while strengthening the organization's credibility and reputation.

Funding decisions influence not only what research is supported but also how a funder is seen by the research community (see Chapter 2, Activity 2). External experts, reviewers, and funding panels are central to funding decision making. How these groups are recruited, trained, and supported directly impacts the quality of, and confidence in, their assessments (see Chapter 2, Activity 4). Recruitment and training practices also greatly impact the inclusion of Indigenous and other underrepresented perspectives in the decision-making process.

Table 2 outlines approaches to embed RRA at key points in the funding decision-making process.

TABLE 2

Embedding RRA into funding decision-making processes and workflows

KEY MOMENT	SUGGESTED INTERVENTION TO SUPPORT RRA
Recruiting panels & committee members	When recruiting experts for your funding panels and committees: • Recruit members with diverse expertise, perspectives, and lived experiences that reflect the breadth of the communities that your organization serves. • Consider how panel or committee member roles are advertised. Open advertisements can help to secure greater diversity than through closed and peer nominated routes. • Use transparent reviewer selection criteria that are aligned with the aims and values of the funding scheme (e.g., openness, EDI). Take care to avoid criteria that might unnecessarily exclude underrepresented groups. • Ensure panel and committee members understand and support the organization's values, such as open science, data sharing, and EDI, and make these expectations clear during recruitment. • Monitor and, where possible, transparently report the diversity of panels and committees to identify gaps and reduce potential bias. • Rotate membership and consider term limits to broaden participation, share learning opportunities, and distribute the reviewing workload across the research community.

RESOURCE

HELSINKI INITIATIVE ON MULTILINGUALISM ↗

Sign the manifesto on recognising and assessing research communicated in multiple languages[99].

RESOURCE

UNINTENDED COGNITIVE AND SYSTEMS BIASES ↗

Discover DORA's factsheet on avoiding unintended bias in funding panel and committee recruitment[100].

RESOURCE

DEBIASING COMMITTEE COMPOSITION ↗

Discover DORA's guidance on strategies to reduce bias in committee-based decision making[101].

TABLE 2 (CONTINUED)

KEY MOMENT	SUGGESTED INTERVENTION TO SUPPORT RRA
Providing reviewers' guidance & training	When onboarding and working with reviewers, and panel and committee members: • Clearly communicate the remit, roles and responsibilities of reviewers as part of the peer review and decision-making process, including expectations around fairness, integrity, and alignment with your organization's approach to RRA. • Explain how reviewers are selected or assigned to proposals, ensuring transparency and confidence in the process. • Provide clear guidance on how to apply assessment criteria consistently (including scoring guidance) and how to interpret information provided as part of the application process (e.g., Narrative CVs). • Specify tools (e.g., AI-based) and metrics that reviewers must not use (e.g., journal prestige, H-index). • Consider offering broader training to help reviewers recognize and mitigate bias during the review and decision-making process. RESOURCE **OPEN GRANT REVIEWERS VIDEO COLLECTION ↗** Discover the guidance by PREreview and the Open Research Funders Group to make grantmaking equitable and inclusive[102, 103]. RESOURCE **BALANCED, BROAD, RESPONSIBLE: A PRACTICAL GUIDE FOR RESEARCH EVALUATORS ↗** Discover DORA's training video for research evaluators, in partnership with FNR[104].
Designing RRA-aligned decision-making workflows	When designing decision-making workflows: • Design workflows that are proportionate, transparent and minimize unnecessary burden, while still enabling robust, timely decision-making. • Build in processes that support consistent and fair scoring, such as using standardized scoring systems and scheduling calibration discussions to align reviewer judgement before final decisions. • Create space to pilot, evaluate, and iterate new approaches (e.g., modified lottery, distributed peer review) to improve fairness and inclusion.

TABLE 2 (CONTINUED)

KEY MOMENT	SUGGESTED INTERVENTION TO SUPPORT RRA
	• Share insights and outcomes from these experiments openly, to support shared learning and improvement across the funding community.
	SPOTLIGHT **EXPERIMENTAL APPROACHES TO MAKE FUNDING DECISIONS FAIRER**
Sharing funding decisions with applicants & reviewers	When sharing information about funding decisions: • Clearly explain the decision-making process and, where possible, share this with applicants and reviewers (e.g., using a visual diagram), including how applications are assessed and final decisions made. • Provide timely, constructive feedback. Even brief feedback can help applicants to understand outcomes, learn, and plan next steps, whether they are successful or not. • Acknowledge and recognize reviewer contributions and service. • Give reviewers feedback on overall funding decisions where possible, to keep them engaged, support learning, and inform future funding cycles. • Share summaries of application and award trends when appropriate, to promote transparency, build trust, and support learning for all involved.

SPOTLIGHT ON

Experimental approaches to make funding decisions fairer

Most research funders rely on experts to help them to decide which proposals to support ('peer review'). While peer review has long been viewed as essential to ensure quality and fairness, it is increasingly under strain. Finding enough qualified reviewers is difficult, academic time spent doing peer review for others is rarely recognized and rewarded, and reviewing presents a significant burden on researchers—both in terms of time and the opportunity cost to research. And today, where many funders are experiencing increasing grant application numbers, this is adding to the burden on both funders and reviewers.

There is also growing evidence of the actual and innate subjectivity of peer review, and the consequent potential for bias and conservatism in the grant funding system[105, 106, 107].

Even when unintentional—and especially when funding budget and time are tight—peer review is thought to potentially disadvantage innovative, interdisciplinary, or unconventional ideas, and reinforce inequalities across disciplines, institutions, or career stages. This can include cultural biases that marginalize Indigenous and non-Western research paradigms. These issues have implications for fairness and efficiency and are directly relevant to RRA. If assessment processes inadvertently favor the familiar over the original, the system risks missing out on the very diversity and creativity it typically seeks to fund.

Recognizing these challenges, many funders are starting to experiment with alternative and complementary approaches to peer review. The goal is not to abandon expert judgement in the grant reviewing process but to redesign parts of the decision-making processes so they are more transparent, efficient, and reduce the potential for bias, and especially from the premise that peer review, owing to its fundamental subjectivity, can lack precise specificity in decision-making[108].

If assessment processes inadvertently favor the familiar over the original, the system risks missing out on the very diversity and creativity it seeks to fund.

SPOTLIGHT ON EXPERIMENTAL APPROACHES TO MAKE FUNDING DECISIONS FAIRER

Among the most common new approaches suggested (and now being used) to support funding decision-making are modified or partial lotteries[109, 110, 111], where all applications that meet a quality threshold are entered into a random selection process; distributed peer review (DPR), where applicants themselves act as reviewers for others in the same funding round; and double-blind (or 'double anonymous') peer review in grant assessment, where both applicants' and reviewers' identities are concealed. These adapted approaches to peer review aim to make funding decisions more equitable and efficient—and thus are RRA-aligned—while reducing the heavy administrative burden and subjective biases often associated with conventional peer review.

RESOURCE

FWF'S 1000 IDEAS PROGRAM ↗

Find out how the Austrian Science Fund used double-blind and partial-lottery approaches for its 1000 Ideas program[112].

EVIDENCE OF IMPACT

Many funders are today experimenting with modified or partial lottery approaches for some of their funding schemes, and especially smaller grants and/or schemes targeted at more risky, innovative research—including the Austrian Science Fund (FWF)[112], the Health Research Council of New Zealand[113], the Swiss National Science Foundation[114] and the Volkswagen Foundation[115]. This approach shifts the focus for reviewers to identifying all grant applications that meet a clear standard of quality (e.g., fundable). While more evidence is needed on the long-term impacts, evidence to date suggests that lottery approaches for some funding schemes are broadly acceptable to researchers and offer benefits to funding agencies by allowing reviewers to reduce the time burden of making arbitrary decisions between grants proposals that have been deemed fundable[116].

Early studies of the impact of DPR show that it has potential to reduce overall reviewer burden and shorten grant review times, especially when dealing with a large volume of applications in a funding cycle[117, 118]. Additionally, analysis of the use of DPR by the UKRI for a cohort of Metascience AI early career fellowships, found that it increased the consistency of scoring for grants which helped to simplify decision-making about which grants to fund, as well as providing learning benefits for reviewers, including improving grant-writing skills and increasing understanding of their research field[119].

The Villum Foundation in Denmark has developed a grant scheme designed to support bold, unconventional research ideas: the Villum Experiment[120] (VEX). It is one of the few grant schemes currently

SPOTLIGHT ON EXPERIMENTAL APPROACHES TO MAKE FUNDING DECISIONS FAIRER

using a double-anonymized decision-making process (applications are submitted anonymously and are reviewed anonymously). This approach aims to remove the potential for bias in the grant assessment process, particularly related to applicant gender. However, an analysis of more than 2,000 VEX applications from 2017–2021 still found a small gender differential in success rates, with women funded at slightly lower rates than men, primarily within the life sciences[121].

Because reviewers had no access to applicants' identities, the authors argue that these differences likely reflect broader structural inequalities in academia, such as gender imbalances within disciplines and the underrepresentation of senior women researchers, given that applicants later in their careers tend to have higher funding success rates. The findings suggest that while double-anonymous review can reduce opportunities for bias, it cannot by itself address systemic inequities. Nevertheless, such practices can be used to ensure a grant review process focuses on the quality of ideas rather than the reputation or affiliation of the applicant.

No single approach is likely to work for all funders or in all contexts, but continued experimentation, shared learning, and open reporting of results across agencies are critical to understanding which approaches work best, for which types of schemes, and under what conditions.

MOMENT 3

Setting grant terms and conditions

Grant terms and conditions define the relationship between funders and researchers and reflect what the funder values.

Grant terms, delivery practices, and reporting requirements become practical tools for putting RRA into action, supporting inclusive and culturally responsive research practices.

RRA-aligned conditions are designed to be flexible, proportionate, and supportive of a partnership built on trust and shared responsibility, rather than purely on compliance.

Table 3 highlights the opportunities to align grant conditions, policies, and practices with RRA.

TABLE 3

Building RRA-aligned grant conditions

KEY MOMENT	SUGGESTED INTERVENTION TO SUPPORT RRA
Developing grant terms & conditions	When developing grant terms and conditions: • Include clear descriptions of the funder's goals and values, alongside legal requirements (e.g., commitment to open science; research ethics and research integrity). • Emphasize the importance of adhering to any existing policies that enable RRA (e.g., open access publishing, data sharing, mentoring, and inclusive approaches to team recruitment). • Build flexibility into grant terms to accommodate life circumstances and challenges (e.g., parental leave, illness, caring responsibilities, cultural obligations) and encourage early, open dialogue to keep projects on track. • Create places where grant terms and conditions can be accessed so that grant applicants and grantees can easily understand the requirements that they will be signing up to (e.g., via FAQs on a website).
Supporting the implementation & delivery of a grant	To support the implementation and ongoing delivery of a grant: • Provide onboarding support to grantees, including reminders about funding goals and what progress and success look like in practice. • Offer training and resources to help grantees meet expectations and policy requirements, such as research ethics, integrity, security, data sharing, open science, leadership, and mentorship. Collaboration with other funders or third-party providers can be considered. • Create opportunities for dialogue with grantees, including a contact point and regular check-ins, so questions can be addressed early, and small issues do not become major problems.
Establishing grant reporting requirements (see Moment 4)	When setting up grant reporting requirements: • Inform grantees early about reporting requirements. Explain reporting expectations and timelines as part of the grant conditions so that grantees can plan and prepare. • As a rule, keep grant-related reporting proportionate. Only ask for information that you need and consider how the reporting requirements might draw upon other sources of information (e.g., an ORCID profile) to minimize the administrative burden for researchers.

MOMENT 4

Monitoring and evaluating grants and programs

The way progress is monitored and the information requested after funding is awarded influences what grantees prioritize and report.

RRA-aligned monitoring and evaluation focuses on capturing activities and outputs that are meaningful to the organization and encourages reflection on successes and challenges, rather than serving as a 'box-ticking' exercise.

Clear guidance on what information will be shared publicly and how monitoring data will be used, further promotes transparency and engagement.

Table 4 highlights where RRA-aligned approaches can be integrated into monitoring and evaluation activity across key points in the funding lifecycle.

TABLE 4

Building RRA-alignment into funding monitoring and evaluation

KEY MOMENT	SUGGESTED INTERVENTION TO SUPPORT RRA
Developing evaluation frameworks	When developing an evaluation framework for a funding scheme, program, or stream: • Define success upfront by agreeing on the aims, desired outputs, outcomes, and impacts of the funding with leadership and key staff. • Capture information across the full funding cycle, including who applies, who is funded, project progress, and resulting outputs, outcomes, and impacts. • Focus on what matters: collect data that shows the funding is achieving its aims and take a balanced, broad view (e.g., discovery, collaboration, career progression, data sharing, policy or practice influence). • Be practical: choose progress measures that are meaningful and feasible for both the organization and grantees.
Monitoring funding data	When monitoring grant funding data (*applications, awards, outputs and impacts*): • Monitor application and award data over time and across different schemes to spot anomalies and act when needed. • Track application and reporting burden and adjust when needed. • Use benchmarks to provide context, drawing on data from other schemes, programs, or organizations to explain trends (e.g., policy changes at one funder may affect applications to another). • Share grant and funding trend data, as well as survey feedback, openly where possible (e.g., on the organization website or in a grantee newsletter).
Developing grant reporting requirements	When developing individual grant reporting requirements for funding schemes and programs: • Keep reporting timely and proportionate, using interim and end-of-grant reports. Scale requirements based on the type and size of the grant, and only request information that will be used. • Be clear and transparent with grantees about what information is needed, why, and how it will be used. • Focus on what matters: collect only information that helps understand progress and take a balanced, broad view. • Encourage reporting of all results, including null or negative outcomes, to reduce research waste and support integrity. • Align questions across funding schemes where possible to enable benchmarking and comparisons, including with other funders.

TABLE 4 (CONTINUED)

KEY MOMENT	SUGGESTED INTERVENTION TO SUPPORT RRA
Grant progress reporting	While a grant is ongoing: • Use progress reporting to support learning as well as tracking, understanding context, challenges, and the support that grantees need to make the most of the funding. • Allow flexibility in reporting timelines to accommodate changing circumstances, such as caring responsibilities or illness.
Evaluating grant-related information	When evaluating grant-related output and impact information: • Acknowledge effort and close the loop by showing grantees how their reporting and outcomes information has been used and contributed to learning and decision-making. • Share analysis, outputs, and impacts publicly where appropriate to build trust, support learning, and enable others to build on funded research. RESOURCE **ALIGNING SCIENCE ACROSS PARKINSON'S (ASAP) OUTPUT CATALOG ↗** Discover ASAP's approach to sharing the outputs of its research for discovery and reuse[122]. • Provide opportunities for applicants, awardees, and reviewers to give feedback on funding processes, especially after introducing new processes, to improve future scheme design and delivery. • Consider how strategic evaluation can guide future investments and provide evidence-informed decisions. The information gathered through grant reporting can support both formative evaluations (to refine processes and improve impact during a funding program) and summative evaluations (after a program ends, to understand outcomes and longer-term impacts).

MOMENT 5

Communicating and engaging with your communities

Effective communication of the importance of RRA, and following its principles in communication mechanisms and materials, helps to make RRA part of an organization's identity.

Being clear and consistent in how you explain the value and importance of RRA to the organization will help to make it part of everyday culture and practice.

Ensure there are clear feedback loops so community input informs how you refine and improve your policies and practices over time.

Table 5 highlights opportunities to align communication and engagement activities with RRA.

RESOURCE

HEALTH RESEARCH BOARD IRELAND ANNUAL REPORT ↗

See how the HRB showcases qualitative and quantitative outputs and impacts[123].

RESOURCE

UKRI ANNUAL REPORT ↗

Discover how the UKRI showcases the diversity of outputs and impacts from its funding[124].

TABLE 5

Building RRA-alignment into communication and engagement

KEY MOMENT	SUGGESTED INTERVENTION TO SUPPORT RRA
Developing externally facing policies & position statements	When developing external-facing policies and position statements: • Align policies with the organization's approach to RRA, ensuring new and existing policies (e.g., EDI, open science, data management, ethics, research security) are consistent. • Communicate policies clearly and frequently to staff, reviewers, applicants, and grantees, making them easy to access. • Explain how new policies will be implemented, what changes mean in practice, and how their impact will be monitored and reviewed. • Provide easy routes for community queries and feedback.
Internal communication activity & events with staff	When shaping internal communication with staff: • Provide regular opportunities for leaders and managers to discuss what "good research" means for the organization and how it aligns with RRA values. • Reinforce these messages consistently across internal channels, such as newsletters, intranet, webinars, staff meetings, and town halls, to embed expectations and support a culture that enables RRA.
External & corporate communication about your funding	In external events and materials that talk about funding: • Take a balanced and broad approach in annual reports, impact stories, and strategic documents. Explain how funded projects connect to the organization's mission and values (e.g., collaboration, openness, teamwork, policy influence, societal benefit). • A high-profile publication might be very important but if you want to talk about that, emphasize why the research itself and its findings are important. • Talk about all types of progress, including null, confirmatory or inconclusive results, to be transparent, provide a realistic picture of how research works, and to build trust in science. • Highlight research done well, regardless of the results, by celebrating good practice, collaboration, and integrity, not just final outputs. • Encourage grantees to use the same language and values when sharing their research successes.

Responsible Research Assessment and its place in the research system

The scholarly research and publishing system is a global, interconnected system: every part of it influences, and is influenced by, each other part.

Responsible research assessment (RRA) is inseparable from the wider system of values, practices, and change movements that shape research culture. Today, there are many initiatives and movements that, like RRA, aim to improve and enhance the context and culture of research.

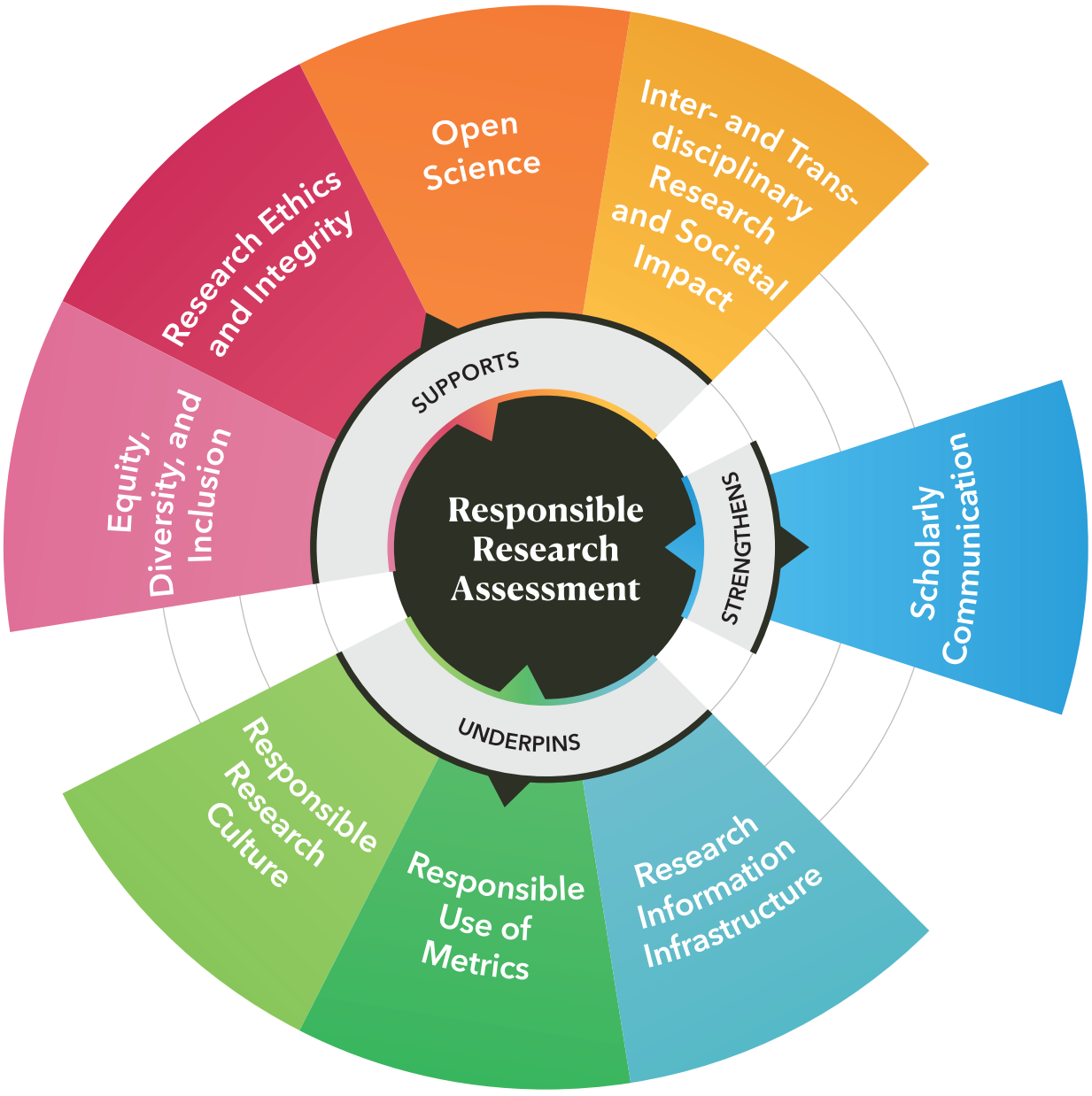
In this Chapter, we have identified the central components of the research system that are most closely intertwined with RRA. For each component we provide a high-level overview, describe its relation to RRA, and its relevance to funders.

How RRA interconnects with core components of the research system

The context of research culture and RRA can vary significantly across disciplines, institutions, and geography. As a result, starting points for reform differ, and progress often happens through interconnected changes across multiple components that reinforce each other.

This graphic highlights three key relationships: components that underpin RRA and are shaped by it; components that RRA supports and is supported by; and scholarly communication, which plays a distinctive role in strengthening RRA and is, in turn, shaped by it. These bidirectional relationships are explored further in this chapter.

Figure 1 **RRA and its relationship to key components of the research system**



COMPONENT 1

Responsible research culture

Research culture encompasses the behaviors, values, attitudes and norms that shape what and how research is conducted and rewarded across the entire system, from individual researchers to national and international organizations. It influences career paths, team dynamics, leadership and management practices, and the overall working environment, including social safety, well-being and mental health. Healthy research cultures enable researchers and research teams to thrive[125], while unhealthy ones can amplify biases, distort incentives, and are well documented to erode ethics and integrity[126, 127].

Relationship to RRA

Assessment systems profoundly shape research culture. What is evaluated and rewarded and how, influences the behaviors researchers and teams adopt, the risks they are willing to take, and the career paths they feel empowered to pursue. When assessment systems overemphasize narrow quantitative metrics or short-term outputs, they can unintentionally discourage collaboration and team science, overlook essential competencies, and contribute to precarious working environments.

Similarly, research cultures also influence RRA adoption: without supportive cultures, even well-designed assessment reforms can struggle to take hold or be unsustainable. Organizational, disciplinary and national cultures shape whether reviewers feel safe to make holistic judgements, whether teams can fairly distribute recognition, and whether institutional evaluations can be focused on learning rather than compliance.

Novel approaches share new visions for research cultures that are values-centered (e.g., HuMetricHSS[128], Science Europe[46, 129]), in which leadership and management practices promote collegiality and mitigate harmful competitive dynamics. They also recognize the centrality

of collaboration within and across teams, disciplines and with society as fundamental to research quality and societal contribution.

Relevance to funders

For funders, it is fundamental to understand the intended and unintended consequences of their funding approaches on research culture[130]. Funding programs, criteria, and evaluation processes shape the incentives and working conditions that influence the entire research life cycle: from nurturing early-stage ideas and teams to harvesting societal impact. Funders play a systemic role, as their approaches can either reinforce narrow, competitive cultures or support values-aligned, collaborative, and responsible cultures in which RRA can thrive, much beyond the immediate researchers, programs, and projects they support.

The design of funding programs and calls can encourage collaboration, team science, openness, and proportionate risk-taking by clarifying to funding applicants what a funder values from the outset (Chapter 3, Moment 1). Decisions about who participates in assessment via panel composition, briefing, and reviewer guidance shape whether holistic judgement, care, and fairness are practiced in reality or constrained by established habits (Moment 2). Grant terms and conditions, along with monitoring and reporting approaches, can further support healthy cultures by prioritizing learning, reflection, and good research practice over compliance alone (Moment 3 and Moment 4). How funders communicate decisions, recognize contributions, and share outcomes plays a powerful role in reinforcing expectations of integrity, collaboration, and respect (Moment 5).

COMPONENT 2

Responsible use of metrics

Quantitative indicators can play a valuable role in research assessment, but their value depends on their careful and contextualized use. The responsible use of metrics is an essential component of RRA. For decades, academic cultures have been shaped by metrics-based proxies for quality: lists of outputs, journal-level indicators, grant income, rankings, and other numerical signals that are easy to collect but do not reflect the full richness, diversity, and societal value of research and researchers. Used uncritically, metrics like the Journal Impact Factor, h-index or raw citation counts can systematically disadvantage certain disciplines, knowledge types, methodologies, languages and career stages. They can also reinforce inequities, privilege established networks and incentivize unintended and undesired behaviors, such as misconduct and hyper-competition.

Relationship to RRA

Irresponsible metric use spills over beyond the use of numbers per se. A focus on outputs and quantitative approaches, with their misperceived neutrality and objectivity, becomes a lens adopted in assessment practices such as "laundry-list" CVs that emphasize quantity over quality, prestige bias that equates institutional reputation with merit, the overvaluation of grant income as a proxy for competence, and a reliance on rankings over a unit's mission or strategy. These practices create cultures where the publication of null results and risk-taking are punished, teamwork and collegiality are undervalued, and research care work such as service, mentoring and work supporting integrity is overlooked.

Without considering other facets of RRA, reforming the use of metrics will result in only partial progress. Similarly, implementing RRA without addressing the use of irresponsible metrics will leave most of the undesired incentives intact.

Initiatives promoting the responsible use of metrics consistently recommend that quantitative indicators should be used to complement and support qualitative, expert assessments (e.g., Leiden Manifesto[32], DORA Guidance[33]). RRA further advocates that assessment and evaluation data should be accessible and auditable where possible, and that the methods used to calculate metrics are open and transparent[28]. When indicators are used responsibly, they signal that research quality and impact are multifaceted and context-dependent.

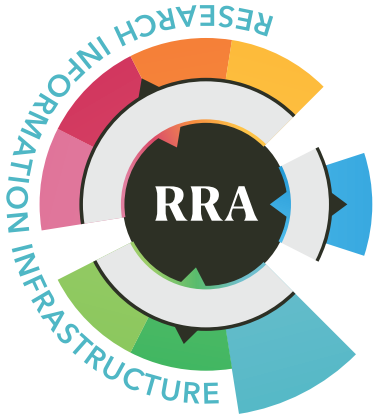
Relevance to funders

For funders, clarity and transparency about the criteria and metrics used in research assessment helps avoid unintended incentives, reduces the risk of disadvantaging particular disciplines, types of research, and cohorts of researchers, and signals what is valued in funding decisions. One of the biggest challenges is that these policy changes also need to be embedded into practice. Evidence from panel observations shows that reviewers often continue to rely on equivalent prestige signals or quantitative shortcuts when confronted with uncertainty, time pressure or formats they find unfamiliar[96]. Diverse interpretation of new criteria also prevents change, unless consistent briefing and reinforcement are in place. When funders invest in reviewer training, diversifying panels, and structure decision making, they can support the shift away from deeply ingrained habits and shape practice in addition to policy.

Choices made during the design of programs and calls, such as what information is requested from applicants and which indicators are explicitly discouraged, set expectations about how metrics should or should not be used (Chapter 3, Moment 1). During funding decision-making, reviewer guidance, panel calibration, and training are critical levers for ensuring that indicators support expert judgement, instead of quietly reasserting themselves as decision shortcuts (Moment 2). Which activities and outputs are valued and how performance is interpreted are shaped by grant terms, reporting requirements, and monitoring approaches (Moment 3 and Moment 4). The communication of outcomes and impacts further determines whether metrics are treated as contextual evidence or as proxies for quality, either normalizing a careful, transparent use or perpetuating status-based signals (Moment 5).

COMPONENT 3

Research information infrastructure



Research information infrastructure refers to the systems, standards, metadata, and persistent identifiers that enable research outputs, people, organizations, funding, and contributions to be accurately captured, connected, shared, and evaluated. It includes the technical and organizational components, such as Grant Management Systems (GMS) and Current Research Information Systems (CRIS), repositories, open metadata, and identifiers like ORCID, ROR and PIDs. These determine what information is collected and visible to decision-makers and reviewers, and what gets communicated to the research community and society.

Relationship to RRA

Recognizing diverse forms of knowledge production and dissemination is a central tenet of RRA. Legacy systems are designed primarily around established publications such as articles and monographs, and many current GMS and CRIS systems, HR systems, and bibliometric databases default to English-language journal outputs, compounding the problem. Without changes to the research infrastructure, diverse forms of scholarship and contributions remain practically invisible. Robust, reliable and interoperable metadata and tools such as persistent identifiers (PIDs) are essential enablers for RRA. Investing in recognizing contributions beyond publications and tracking its use and reuse, and accurately attributing team roles and contributionships across multilingual work are fundamental to making RRA easier.

As noted in Chapter 1, RRA is influencing the information standardization of people, organizations, outputs, and contributions, as the use of PIDs (e.g., ORCID IDs[22], DOI[24, 25], RRIDs[26]) help make research more discoverable, trackable, and connected across systems. This enables funders to recognize the full diversity of research activities, processes and outputs—including data, software, methods, and team contributions—supporting holistic assessments

of quality, integrity, and societal impact. Initiatives like the Barcelona Declaration[28] and the Bogotá Manifesto[131] also promote the use of open science infrastructures and systems so that information about all aspects of research—including how it is assessed—is transparent and auditable.

Relevance to funders

For funders, capturing diverse types of information on research processes and using interoperable metadata and PIDs across parts of their funding systems and processes, has the potential to improve the transparency and tracking of research and reduce administrative burden, enabling both researchers and funders to focus on the research itself rather than navigating fragmented or inconsistent records.

Decisions in program and call design, including how application systems are configured and which identifiers or metadata are required, shape whether diverse outputs, team roles, and affiliations are captured in consistent and reusable ways (Chapter 3, Moment 1). The quality, interoperability, and presentation of research information influence whether reviewers can make holistic, contextual judgements or default to familiar but limited signals (Moment 2). Grant terms, reporting requirements, and monitoring processes further influence these dynamics by determining whether information flows across the funding cycle (Moment 3 and Moment 4). Communication and engagement activities are shaped by the underlying infrastructures that can support transparent reporting, discovery, and reuse of funded research and their contributions (Moment 5).

COMPONENT 4

Equity, diversity, and inclusion

In a research and education context, equity, diversity, and inclusion (EDI) broadly refers to *'efforts to ensure that all individuals can fully participate in research and innovation activities, regardless of gender, race, ethnicity, or other personal characteristics'*[132] and to this end, is very aligned with RRA.

Relationship to RRA

Current assessment approaches often privilege narrow profiles of success (e.g., linear uninterrupted career paths, publication quantity, citation-rich disciplines). These patterns disproportionately disadvantage researchers from minoritized groups, those with caring responsibilities, and people with disabilities, and increasingly do not reflect the norm for most researchers. Structural inequities are reinforced and remain embedded in the rules and norms of evaluation, where recognition and funding flows disproportionately to those already advantaged.

These dynamics are exacerbated in resource-constrained environments even where there are policy-level commitments, and implementation can break down due to misaligned incentives, workload pressures, and lack of capacity.

RRA aims to evaluate research on its intrinsic merits and broader contributions, but this is only possible when assessment processes include diverse perspectives, which recognize a wide range of roles and outputs, and which mitigate biases in reviewer judgement. EDI frameworks can support RRA implementation, as they emphasize inclusive assessment processes, transparency, and recognition of diverse roles and career paths as ways to strengthen research quality.

Brought together, RRA and EDI frameworks also have the potential to elevate Indigenous worldviews and research methodologies, including data sovereignty protocols and community-led evaluation practices.

A growing range of initiatives support funders, institutions, and reviewers to embed EDI meaningfully in assessment systems (e.g., Global Research Council EDI Working Group[133], EDI Caucus[134], Wellcome Institutional Research Culture Community[135] (IRCC)). These initiatives collectively help organizations move beyond high-level commitments toward specific, tested practices that reduce bias and increase fairness.

Relevance to funders

For funders, integrating EDI into assessment (e.g., on funding panels, across reviewer pools) helps to expand participation and perspectives, reduce bias, and ensure that funding decisions reflect merit rather than systemic advantage. Where relevant, research assessment should incorporate Indigenous evaluation criteria alongside conventional metrics[136, 137, 138] (see Case Study Reference Group for the Appropriate Review of Indigenous Research). Monitoring decision-making patterns (e.g., success rates), reducing procedural barriers (such as jargon-heavy calls, rigid formats or unrealistic timelines), and equalizing of grant awards[139], can benefit those who today are disproportionately affected.

The design of programs and calls shapes who applies and feels eligible to participate, signalling openness to diverse research profiles, career paths, and lived experiences (Chapter 3, Moment 1). The composition and preparation of panels, alongside the use of transparent and bias-aware criteria, determine whether contributions are assessed in context or filtered through narrow proxies of excellence (Moment 2). Grant terms, conditions, and monitoring processes can further support inclusion by enabling flexibility around life circumstances, recognizing diverse team roles, and tracking patterns in applications and awards to identify potential inequities (Moment 3 and Moment 4). How funders choose whose work is highlighted and how success is portrayed helps reinforce expectations around fairness, representation, and belonging (Moment 5).

COMPONENT 5

Research ethics and integrity

Research ethics and integrity refers to the systems, principles and practices that ensure research is conducted responsibly, ethically and transparently. It applies across all disciplines and sectors, and helps to ensure that research is ethical, high quality, and of benefit to society[140, 141]. A strong ethical culture, one in which responsible conduct of research is visibly prioritized, is essential for RRA, as it shapes researcher behavior, promotes responsible decision-making, and underpins the credibility and societal value of research.

Relationship to RRA

RRA aims to focus the evaluation of research and researchers on their intrinsic contributions, including methodological rigor and societal contribution. When research evaluation systems can identify and reward transparency and responsible practice, these behaviors are incentivized and become the norm. By contrast, systems that focus mainly on speed and volume of publication counts—the 'publish or perish' culture—have inadvertently contributed to many of the current integrity problems that we see, including papermills, questionable authorship practices, predatory journals, data manipulation, and more, and which lead to the increasing numbers of retracted papers—all of which serve to undermine trust in research[142, 143, 144]. By aligning incentives with ethical research practices, RRA can help counteract the systemic forces that fuel questionable practices and misconduct.

Ethical and integrity frameworks are also contextually shaping RRA. They inform how conflicts of interest are managed, how errors and misconduct are handled, and how researchers are protected from harm or undue pressure. RRA risks being inconsistently applied or poorly understood without strong integrity systems, such as clear codes of conduct, training, reporting mechanisms, and oversight.

A range of international efforts strengthen research integrity and align it closely with RRA. They include diverse efforts such as The Hong Kong Principles[145, 146], Global Research Council Statement on Research Integrity[147], OECD Global Science Forum project on "Research Integrity and Security"[148], the Global Federation of Reproducibility Networks[149] and the G7 Common Values and Principles on Research Security and Research Integrity[150]. These initiatives collectively emphasize that integrity is both a cultural and technical endeavor requiring coordinated action from funders, institutions, publishers, and researchers, and the need to reward behaviors that support integrity in assessment practices.

Relevance to funders

For funders, this link between assessment and researcher behavior is crucial. By setting clear expectations and providing training on research integrity best practices within grant conditions, funders encourage responsible research practices, strengthen research quality, and support a healthier research culture overall. Incorporating proportionate checks on ethical, security and data governance requirements and reducing unnecessary burdens that may encourage shortcuts are some of the ways to support research integrity through RRA.

Program design and call framing establish expectations around ethical conduct, data governance and responsible research practices from the start, influencing how researchers plan and resource their work (Chapter 3, Moment 1). Transparent criteria, appropriate handling of conflicts of interest and the inclusion of relevant expertise can position integrity as an integral dimension of research quality during funding decision-making (Moment 2). Grant terms, conditions and monitoring approaches may further reinforce ethical norms by shaping whether integrity activities are supported through learning, reflection and dialogue over the course of a project, rather than enforced through compliance alone (Moment 3 and Moment 4). How funders communicate expectations, decisions and lessons learned contributes to normalizing integrity as a shared responsibility across the research system (Moment 5).

COMPONENT 6

Open science

The United Nations Educational, Scientific and Cultural Organization (UNESCO) defines the aims of open science as: "Making scientific knowledge openly available, accessible and reusable. The key elements of open science include: open access to scientific knowledge (including open access to scientific publications, data, educational resources, software and hardware); open infrastructures; open engagement with society and dialogue with indigenous and traditional knowledge systems, among others."[15]

Relationship to RRA

Without RRA, these contributions are invisible during assessment moments like setting national policies, hiring and promotion, and funding decisions. Implementing RRA approaches can help foster the behavior change needed to implement and incentivize open science. The UNESCO Recommendation specifically recognizes the need to "improve the ways in which the scientific outputs are evaluated" to foster implementation.

Conversely, by broadening access to, and visibility of, diverse research activities and outputs, open science directly supports RRA. It enables assessment systems to reward practices that support transparency, usability, and societal impact. Additionally, open science practices provide a concrete means to assess a broader range of research activities that go beyond narrow metrics.

While open science expands what can and should be assessed, the practical tools, standards, and evaluative frameworks for doing so are still being developed. A growing number of initiatives are helping funders and institutions navigate this transition (e.g., HELIOS Open[151], Open Research Funders Group[152] (OFRG), Make Data Count[153], HiddenREF[154]).

Emerging challenges around research security and data and digital sovereignty are increasingly relevant to

RRA and open science[155]. As research data are shared, reused, and assessed across borders, questions about who controls data, where they are stored, and how they can be accessed are becoming more prominent. RRA frameworks and open science practices need to balance transparency and openness with legal, ethical, and security requirements, ensuring that data sharing supports trust, equity, and international collaboration without undermining national regulations or researcher protections[156].

The OECD actively promotes open science and has provided recommendations that adhere to open science principles while enabling efficient and responsible data sharing across research sectors (e.g., private vs. public) and countries[157]. UNESCO's recommendations on open science also highlight this issue[15]. Evaluating openness responsibly means recognizing when openness is appropriate, when controlled access is necessary, and when ethical or legal constraints require alternative models[158].

Relevance to funders

Funders can actively promote open science by embedding clear expectations in their funding policies, criteria, and conditions. These expectations need to be proportionate and supported by appropriate safeguards for data security, privacy, and sensitivity. When aligned with assessment processes, open science policies create practical incentives for researchers to invest time in practices that improve transparency, reuse, and trust.

Early choices in program and call design determine whether openness is framed as central to research quality or treated as ancillary (Chapter 3, Moment 1). During funding decision-making, assessment practices test whether open science contributions such as data stewardship or participatory work can genuinely be recognized alongside more conventional outputs (Moment 2). Grant terms, conditions, and monitoring processes further shape whether openness is supported as a learning-oriented practice over time, rather than as a compliance exercise (Moment 3 and Moment 4). Communication and engagement activities play a critical role in normalising openness by making diverse outputs, transparent reporting, and reuse visible and valued (Moment 5).

COMPONENT 7

Inter- and trans-disciplinary research and societal impact

Inter- and transdisciplinarity approaches focus on the collaborative mode of knowledge co-production in which academic disciplines work together between themselves and with actors beyond academia to jointly and integratively use concepts, theories, data and methods from two or more disciplines. Collaboration across disciplines, sectors, and knowledge systems is increasingly required to address today's complex challenges, such as climate change, public health, and digital transformation. Such research is typically connected to the concept of "societal impact", which refers to the longer-term benefits, changes, or value beyond academia, evidenced through reach, use, and relevance of research for specific beneficiaries.

Relationship to RRA

The focus of RRA on intrinsic merits of research is particularly beneficial to these types of projects. RRA helps to broaden what is recognized and valued in assessment, creating space for diverse contributions, including engagement with Indigenous and other knowledge systems, and supporting research that is potentially beneficial for, or aimed at, real-world outcomes.

Inter- and transdisciplinary research, together with a focus on societal impact, also play an important role in advancing RRA itself. These approaches encourage funders and evaluators to rethink how quality is defined, and ask for a greater attention to collaboration across sectors, diverse research outputs, multiple pathways to impact, and inter- and transdisciplinary work. They expose the limits of conventional metrics and provide concrete test cases for RRA principles to be exercised.

Many funding assessment processes still reflect narrow disciplinary norms and conventional outputs, which can disadvantage interdisciplinary, transdisciplinary, and cross-cultural projects. These projects may, for example, be penalized by assessment panels that bring monodisciplinary expertise, disregard non-article outputs, and do not recognize the longer timeframes needed for co-creation and formative integration work.

Initiatives such as td-net[159], EViR[160], INSciTS[161], and the Impact Funders Forum[162] demonstrate how cross-sector collaboration can strengthen research quality, relevance, and societal impact by linking funders, researchers, and practitioners across boundaries.

Relevance to funders

Funders play a central role in creating conditions where interdisciplinary research and diverse ways of knowing can thrive to deliver societal benefits. This requires assessment processes that are flexible enough to evaluate cross-disciplinary proposals fairly and avoid disadvantaging innovative or unconventional projects with high transformative potential. This includes clear scheme-level definitions and criteria, rubrics that recognize integration and co-production, and panels with experts knowledgeable of inter- and transdisciplinarity research methods and qualities[163].

Impact-supportive practices are most effective when embedded throughout the funding cycle—for example, involving societal actors and knowledge holders in program design, resourcing collaboration, recognizing varied impact pathways, and supporting researchers in planning and engagement. By aligning policies and practices across the funding process, funders can better enable research that is both innovative and societally relevant.

Program design and call framing influence whether proposals centred on collaboration, co-creation, and longer-term impact pathways are seen as legitimate and competitive (Chapter 3, Moment 1). Diverse expertise, integration quality, and engagement beyond academia can be meaningfully evaluated alongside disciplinary excellence during funding decision-making (Moment 2). Time for relationship-building, iterative learning, and impact development can be recognized in grant terms, conditions, and monitoring approaches as part of research quality (Moment 3 and Moment 4). How funders communicate outcomes and portray success reinforces expectations around what counts as valuable research contribution, including whose knowledge is recognized and how societal relevance is understood (Moment 5).

COMPONENT 8

Scholarly communication

Scholarly communication refers to the processes, practices and infrastructures through which research methods, results, interpretations and outcomes are shared, reviewed/verified, preserved and reused. Its aim is to ensure that trusted knowledge circulates efficiently, as transparently as possible, and equitably across the global system. The scholarly publishing system continues to be a core feature of research communication, and is also evolving in response to the needs of researchers, funders, and assessment reform. Innovation in publishing can accelerate access to research findings more transparently and inclusively, while supporting the broader goals of RRA and open science.

Relationship to RRA

Conventional assessment systems have fueled scholarly communication that has concentrated visibility in a narrow set of English-language, 'high-prestige' journals and has undervalued diverse formats and languages. As a result, publishing behavior has been shaped in ways that include selective reporting, 'salami slicing' overproduction, the growth of low-quality or predatory journals, and even fraudulent practices[164]. RRA shifts the focus away from journal-based metrics and quantity, towards the content, quality, and contribution of research. This supports recognition of a wider range of outputs, encourages preprints and early sharing, and reduces pressure to publish frequently by prioritizing integrity over volume.

At the same time, RRA depends on changes in scholarly communication. Research outputs need to be visible and accessible to be fairly assessed. Many publishers now support sharing a wider range of outputs, improving transparency, reproducibility, and reuse, while preprint initiatives (e.g., ASAPbio[165]) are further accelerating access to research findings. There is also a move towards article-level metrics that better reflect reach and influence, rather than relying on journal-level measures like the Journal Impact Factor.

Uptake of innovations in scholarly communication will only gain traction if researchers receive adequate rewards for using such approaches as part of assessment practices. As such, there are growing movements to align RRA with scholarly communication reform such as the International Science Council (ISC) Forum on Publishing and Research Assessment[166] and the collaboration between DORA, ASAPbio, ISC and CWTS[167].

A number of global initiatives further reflect the shift toward research communication practices that are aligned with RRA. For example, the Committee on Publication Ethics (COPE[168]) promotes integrity and responsible editorial standards, addressing challenges associated with publication pressures; the Helsinki Initiative on Multilingualism[99] supports the recognition of research communicated in multiple languages, advancing inclusivity and societal relevance; and the UN SDG Publishers Compact[169] encourages publishing practices that prioritize research addressing global challenges.

Relevance to funders

For funders, embedding RRA-aligned expectations for scholarly communication in funding policies influences how research findings are communicated. Such policies guide researcher behavior and encourage publishers and service providers to continue to develop more transparent, accessible, and flexible publishing models.

Early decisions in program design and call framing influence what forms of communication and outputs are considered legitimate, signalling whether openness, early and multilingual dissemination, and non-article outputs are encouraged or marginalized (Chapter 3, Moment 1). Assessment practices during funding decision-making test whether evaluators can focus on the content, quality, and contribution of research outputs (Moment 2). Grant terms, conditions, and monitoring processes further shape behavior by determining expectations around open access, data and code availability, attribution, and reuse, and by making diverse outputs visible over time (Moment 3 and Moment 4). Finally, how funders communicate results, impacts, and funded research portfolios reinforces what counts as credible and valued scholarship (Moment 5).

Resources and references

All online sources were accessed and correct as of April 2026.

1. DORA. *San Francisco Declaration on Research Assessment*. https://sfdora.org/
2. Saenen, B., Hatch, A., Curry, S., Proudman, V., and Lakoduk, A. (2021). *Reimagining academic career assessment: Stories of innovation and change.* European University Association. https://www.eua.eu/publications/reports/reimagining-academic-career-assessment-stories-of-innovation-and-change.html
3. DORA. *Reimagining research assessment: Stories of innovation and change*. https://sfdora.org/dora-case-studies/
4. DORA. *Reformscape*. https://sfdora.org/reformscape/
5. Allen, L., Barbour, V., Cobey, K., Faulkes, Z., Hazlett, H., Lawrence, R., Lima, G., Massah, F., & Schmidt, R. (2025). *A practical guide to implementing responsible research assessment at research performing organizations*. Declaration on Research Assessment (DORA). https://doi.org/10.5281/zenodo.15000683
6. DORA. *Funder Discussion Groups*. https://sfdora.org/funder-discussion-groups/
7. Global Research Council. *Responsible Research Assessment Working Group*. https://globalresearchcouncil.org/about/responsible-research-assessment-working-group/
8. Global Research Council (GRC). *Responsible research assesment: Call to action*. https://globalresearchcouncil.org/fileadmin/documents/PDF_Links/Responsible_Research_Assessment_Call_to_Action.pdf
9. Global Research Council Responsible Research Assessment Working Group (GRC RRA WG). (2023). *Statement of principles on recognising and rewarding researchers* [English version]. https://globalresearchcouncil.org/fileadmin/documents/GRC_Publications/SoP_Recognising_and_Rewarding_Researchers.pdf
10. Curry, S., de Rijcke, S., Hatch, A., Pillay, D. (Gansen), van der Weijden, I., & Wilsdon, J. (2022). *The changing role of funders in responsible research assessment: Progress, obstacles and the way ahead (RoRI Working Paper No. 3)*. Research on Research Institute. https://doi.org/10.6084/M9.FIGSHARE.13227914.V2
11. Rushforth, A., Trinh, A.-K., Fraser, C., Newman-Griffis, D., Wilsdon, J., Ahmad S. Al-Shamsi, M., Gogadze, N., Kolarz, P., & McGuirk, S. (2025). *Transforming assessment: The 2025 Global Research Council survey of funder approaches to responsible research assessment.* Research on Research Institute. https://doi.org/10.6084/M9.FIGSHARE.28856480.V5
12. Benamara, A., Fahal, A., Kowaltowski, A., Trinh, A.-K., Cody, A., Firth, C., Fraser, C., Verónica Jeppesen, C., Youlden, D., Madeira, D., Estillore, G., Morris, J. P., Faure, J.-E., Clarkin, J., Looyen, J., Kiesselbach, M., Ahmad S. Al-Shamsi, M., Aubert Bonn, N., Dube, N., … Li, W. (2024). *Dimensions of Responsible Research Assessment (full report and summary)*. figshare. https://doi.org/10.6084/M9.FIGSHARE.26064223.V3
13. Global Research Council Responsible Research Assessment Working Group (GRC RRA WG). *Case Study Library.* https://globalresearchcouncil.org/about/responsible-research-assessment-working-group/case-study-library/
14. Global Research Council Responsible Research Assessment Working Group. (2026). *A responsible research assessment self-assessment tool for funders*. https://doi.org/10.6084/m9.figshare.31455505
15. United National Educational, Scientific and Cultural Organization (UNESCO). *Open science.* https://www.unesco.org/en/open-science
16. Coalition for Advancing Research Assessment (CoARA). https://www.coara.org/
17. Latin American Forum on Research Assessment (FOLEC-CLACSO). https://www.clacso.org/folec/
18. International Network of Research Management Societies Research Evaluation Group (INORMS REG). https://inorms.net/research-evaluation-group/

Resources and references

19. Academy of Medical Sciences. (2015). *Reproducibility and reliability of biomedical research: Improving research practice*. https://acmedsci.ac.uk/policy/policy-projects/reproducibility-and-reliability-of-biomedical-research
20. Johnson, P. (2024). On the (in)comparability of Indigenous community-based research within university merit systems. *Canadian Journal of Program Evaluation, 39*(1), 49–61. https://doi.org/10.3138/cjpe-2024-0010
21. McGregor, C., McIvor, O., Rosborough, P. (2016). Indigenous communities and community-engaged research: Opportunities and challenges. *Engaged Scholar Journal, 2*(1), 1–16. https://doi.org/10.15402/esj.v2i1.195
22. ORCID. https://orcid.org/
23. Research Organization Registry (ROR). https://ror.org
24. Crossref. https://www.crossref.org/
25. DataCite. https://datacite.org/
26. Research Resource Identifier. https://www.rrids.org/
27. CRediT – Contributor Role Taxonomy. https://credit.niso.org/
28. Barcelona Declaration on Open Research Information. https://barcelona-declaration.org/
29. Lima, G., & Bowman, S. (2022). *Researcher impact framework: Building audience-focused evidence-based impact narratives*. Trinity College Dublin. https://doi.org/10.25546/98474
30. Schmidt, R. (2022). *Building Blocks for Impact*. Zenodo. https://doi.org/10.5281/zenodo.7249187
31. ORCID. *ORCID for funders and facilities*. https://info.orcid.org/orcid-for-funders-and-facilities/
32. Hicks, D., Wouters, P., Waltman, L., de Rijcke, S., & Rafols, I. (2015). Bibliometrics: The Leiden Manifesto for research metrics. *Nature, 520*(7548), 429–431. https://doi.org/10.1038/520429a
33. DORA. (2024). *DORA releases new guidance on research indicators*. https://sfdora.org/2024/05/06/dora-releases-new-guidance-on-research-indicators/
34. Louie, D. W. (2019). Aligning universities requirements of Indigenous academics with the tools used to evaluate scholarly performance and grant tenure and promotion. *Canadian Journal of Education/Revue Canadienne de l'Éducation, 42*(3), 791–815. https://journals.sfu.ca/cje/index.php/cje-rce/article/view/3903
35. Vedres, B., & Vásárhelyi, O. (2023). Inclusion unlocks the creative potential of gender diversity in teams. *Scientific Reports, 13*(1). https://doi.org/10.1038/s41598-023-39922-9
36. Xu, H., Liu, M., Bu, Y., Sun, S., Zhang, Y., Zhang, C., Acuna, D. E., Gray, S., Meyer, E., & Ding, Y. (2024). The impact of heterogeneous shared leadership in scientific teams. *Information Processing & Management, 61*(1), 103542. https://doi.org/10.1016/j.ipm.2023.103542
37. Yang, Y., Tian, T. Y., Woodruff, T. K., Jones, B. F., & Uzzi, B. (2022). Gender-diverse teams produce more novel and higher-impact scientific ideas. *Proceedings of the National Academy of Sciences, 119*(36). https://doi.org/10.1073/pnas.2200841119
38. Witteman, H. O., Hendricks, M., Straus, S., & Tannenbaum, C. (2019). Are gender gaps due to evaluations of the applicant or the science? A natural experiment at a national funding agency. *The Lancet, 393*(10171), 531–540. https://doi.org/10.1016/s0140-6736(18)32611-4
39. Almashni, S. Y., Viveiros, M. D., Makary, M. S., Ajam, A. A., Fritz, J., & Cubbison, A. M. (2026). Gender disparities in NIH radiology grant funding: A 15-year analysis. *Current Problems in Diagnostic Radiology*. https://doi.org/10.1067/j.cpradiol.2026.01.013
40. Love, T. R., & Hall, C. M. (2020). Understanding Indigenous exploitation through performance based research funding reviews in colonial states. *Frontiers in Research Metrics and Analytics, 5*. https://doi.org/10.3389/frma.2020.563330

Resources and references

41. Bainbridge, R., Tsey, K., McCalman, J., Kinchin, I., Saunders, V., Watkin Lui, F., Cadet-James, Y., Miller, A., & Lawson, K. (2015). No one's discussing the elephant in the room: contemplating questions of research impact and benefit in Aboriginal and Torres Strait Islander Australian health research. *BMC Public Health, 15*(1). https://doi.org/10.1186/s12889-015-2052-3

42. DORA. *Canadian federal funding agencies.* https://sfdora.org/case-study/ref-group-indigenous-research/

43. Ioannidis, J. P. A., Greenland, S., Hlatky, M. A., Khoury, M. J., Macleod, M. R., Moher, D., Schulz, K. F., & Tibshirani, R. (2014). Increasing value and reducing waste in research design, conduct, and analysis. *The Lancet, 383*(9912), 166–175. https://doi.org/10.1016/s0140-6736(13)62227-8

44. UK Reproducibility Network Steering Committee (2021). From grassroots to global: A blueprint for building a reproducibility network. *PLOS Biology, 19*(11), e3001461. https://doi.org/10.1371/journal.pbio.3001461

45. Chalmers, I., & Glasziou, P. (2009). Avoidable waste in the production and reporting of research evidence. *The Lancet, 374*(9683), 86–89. https://doi.org/10.1016/s0140-6736(09)60329-9

46. Sapcariu, S., Šinkūnienė, J., & Morris, J. P. (2025). *A vision & framework for research cultures: Improving the condition for researchers, research ideas, and the research endeavour.* Science Europe. https://doi.org/10.5281/zenodo.15124386

47. Research on Research Institute (RoRI), Bouzón Arnáiz, I., Jorstad, A., Carbonell Cortés, C., Hagemeijer, A., Okasa, G., Thelwall, M., van den Berg, N., & Buckley Woods, H. (2025). *AI and reviewer matching in research funding: Three case studies.* Research on Research Institute. https://doi.org/10.6084/M9.FIGSHARE.30885269.V3

48. Checco, A., Bracciale, L., Loreti, P., Pinfield, S., & Bianchi, G. (2021). AI-assisted peer review. *Humanities and Social Sciences Communications, 8*(1). https://doi.org/10.1057/s41599-020-00703-8

49. Science|Business. (2023). *European Research Council issues warning on AI's use in grant applications.* https://sciencebusiness.net/news/ai/european-research-council-issues-warning-ais-use-grant-applications

50. Research on Research Institute (RoRI), Newman-Griffis, D., Buckley Woods, H., Youyou, W., Thelwall, M., & Holm, J. (2025). *Funding by algorithm – A handbook for responsible uses of AI and machine learning by research funders* (ISBN 978-1-7397102-2-4) (Version 1). Research on Research Institute. https://doi.org/10.6084/M9.FIGSHARE.29041715.V1

51. Okasa, G., de León, A., Strinzel, M., Jorstad, A., Milzow, K., Egger, M., & Müller, S. (2025). A supervised machine learning approach for assessing grant peer review reports. *Quantitative Science Studies*, *6*, 1189–1214. https://doi.org/10.1162/qss.a.23

52. Research Professional News. (2025). *Funders' use of AI must start with people and problems.* https://www.researchprofessionalnews.com/rr-news-uk-views-of-the-uk-2025-june-funders-use-of-ai-must-start-with-people-and-problems/

53. Hatch, A. & Schmidt, R. (2020). *Rethinking research assessment: Ideas for action*. https://doi.org/10.5281/zenodo.15266830

54. Coalition for Advancing Research Assessment (CoARA). *Addressing Debates.* https://www.coara.org/about/addressing-debates/

55. Deutsche Forschungsgemeinschaft. (2022). *Open science as part of research culture. Positioning of the German Research Foundation*. Zenodo. https://doi.org/10.5281/zenodo.7194537

56. Howard Hughes Medical Institute (HHMI). *Open Science Initiative.* https://www.hhmi.org/research/open-science

57. Aligning Science Across Parkinson's (ASAP). *Open Science Overview.* https://parkinsonsroadmap.org/open-science-overview/

58. DORA. *Case Studies.* https://sfdora.org/case-study/fnr

Resources and references

59. Hatch, A. & Schmidt, R. (2021). *SPACE to evolve academic assessment: A rubric for analyzing institutional conditions and progress indicators.* Zenodo. https://doi.org/10.5281/zenodo.4927605

60. Wellcome Trust. *Responsible Conduct of Research.* https://wellcome.org/research-funding/guidance/policies-grant-conditions/responsible-conduct-research

61. Global Research Council (GRC). https://globalresearchcouncil.org/

62. Global Research Council (GRC). *GRC Responsible Research Assessment Working Group: Action plan*. https://globalresearchcouncil.org/fileadmin/documents/RRA_WG/2024-09_GRC_RRA_Action_Plan.pdf

63. Research on Research Institute (RoRI). (2025). *The 2025 Global Research Council survey of funder approaches to responsible research assessment: Anonymised dataset and codebook* [Dataset]. Research on Research Institute. https://doi.org/10.6084/M9.FIGSHARE.29046254

64. Global Research Council Responsible Research Assessment Working Group (GRC RRA WG). *GRC Responsible Research Assessment Case Studies*. https://globalresearchcouncil.org/fileadmin/documents/RRA_WG/2025-05_GRC_Responsible_Research_Assessment_Case_Study_Booklet.pdf

65. Global Research Council Responsible Research Assessment Working Group (GRC RRA WG). *GRC RRA Case Studies*. https://www.youtube.com/playlist?list=PLbur59LB5zsoZPfc5soLIS9sjefH5QgIb

66. Global Research Council Responsible Research Assessment Working Group (GRC RRA WG). (2023). *Statement of principles on recognising and rewarding researchers* [French version]. https://globalresearchcouncil.org/fileadmin/documents/GRC_Publications/SoP_Recognising_and_Rewarding_Researchers_French.pdf

67. Global Research Council Responsible Research Assessment Working Group (GRC RRA WG). (2023). *Statement of principles on recognising and rewarding researchers* [Arabic version]. https://globalresearchcouncil.org/fileadmin/documents/GRC_Publications/SoP_Recognising_and_Rewarding_Researchers__Ar_KACST_082023__1_.pdf

68. CoARA Working Group 'Improving Practices in the Assessment of Research Proposals'. (2026). *Improving practices in the assessment of research proposals: Discussing ways to implement CoARA commitments 1, 2 and 3 in research funding criteria, procedures and culture*. Zenodo. https://doi.org/10.5281/zenodo.17977045

69. Research on Research Institute (RoRI). https://researchonresearch.org/

70. Bendiscioli, S., Firpo, T., Bravo-Biosca, A., Czibor, E., Garfinkel, M., Stafford, T., Wilsdon, J., & Woods, H. B. (2022). *The experimental research funder's handbook (final version)*. Research on Research Institute. https://doi.org/10.6084/M9.FIGSHARE.19459328.V1

71. Jeangirard, E. (2019). Monitoring Open Access at a national level: French case study. *ELPUB 2019 23d edition of the International Conference on Electronic Publishing*. OpenEdition Press. https://doi.org/10.4000/proceedings.elpub.2019.20. See also https://frenchopensciencemonitor.esr.gouv.fr/

72. International Network of Research Management Societies - Research Evaluation Group. (2023). *The SCOPE framework (version 1)*. The University of Melbourne. https://doi.org/10.26188/21919527.V1

73. DORA. *Case Studies*. https://sfdora.org/case-study/nsfc/

74. National Centre for Truth and Reconciliation. *Truth and Reconciliation Commission of Canada*. https://nctr.ca/about/history-of-the-trc/truth-and-reconciliation-commission-of-canada/

75. National Centre for Truth and Reconciliation. *Truth and Reconciliation Commission of Canada: Calls to Action*. https://nctr.ca/about/history-of-the-trc/truth-and-reconciliation-commission-of-canada-calls-to-action/

76. United Nations Human Rights, Office of the High Commissioner. (2013). *The United Nations declaration on the rights of Indigenous peoples: A manual for national human rights institutions.* https://www.ohchr.org/en/publications/special-issue-publications/united-nations-declaration-rights-indigenous-peoples-manual

Resources and references

77. Government of Canada. *Setting new directions to support Indigenous research and research training in Canada.* https://www.canada.ca/en/research-coordinating-committee/priorities/indigenous-research/strategic-plan-2019-2022.html

78. Canadian Institutes of Health Research (CIHR). *Reference Group for the Appropriate Review of Indigenous Research*. https://cihr-irsc.gc.ca/e/52136.html

79. Government of Canada. *Indigenous Innovation and Leadership in Research Network Grants.* https://sshrc-crsh.canada.ca/en/funding/opportunities/indigenous-research-network-grants.aspx

80. Government of Canada. *Indigenous Leadership Circle in Researc*h. https://www.canada.ca/en/research-coordinating-committee/priorities/indigenous-research/indigenous-leadership-circle-in-research.html

81. DORA. *Case Studies.* https://sfdora.org/case-study/costech/

82. UK Research and Innovation. *Résumé Resources Library: support for adopting narrative CVs.* https://www.ukri.org/what-we-do/supporting-healthy-research-and-innovation-culture/research-and-innovation-culture/supporting-the-community-adoption-of-r4r-like-narrative-cvs/resume-resources-library-support-for-adopting-narrative-cvs/

83. Fritch, R., Garrard, S., Hatch, A., Hazlett, H., Noone, H., Quinn, L., Strinzel, M., Thomson, A., & Vinkenburg, C. (2024). *Using narrative CVs: Identifying shared objectives and monitoring effectiveness (Version v1).* Zenodo. https://doi.org/10.5281/zenodo.10845837

84. Tsosie, R. L., Grant, A. D., Harrington, J., Wu, K., Thomas, A., Chase, S., Barnett, D., Hill, S. B., Belcourt, A., & Brown, B. (2022). The six Rs of Indigenous research. *Tribal College: Journal of American Indian Higher Education, 33*(4), 20–25. https://tribalcollegejournal.org/the-six-rs-of-indigenous-research/

85. The Royal Society. *Résumé for researchers.* https://royalsociety.org/news-resources/projects/research-culture/tools-for-support/resume-for-researchers

86. Health Research Board (HRB). *HRB narrative-style CV.* https://www.hrb.ie/funding/hrb-narrative-style-cv

87. Swiss National Science Foundation (SNSF). *Your curriculum vitae – all about the CV format.* https://www.snf.ch/en/gKcnwW6aEft4bMPF/page/your-curriculum-vitae-all-about-the-cv-format

88. Luxembourg National Research Fund (FNR). *Narrative CV.* https://www.fnr.lu/narrative-cv/

89. UK Research and Innovation (UKRI). *Résumé for Research and Innovation (R4RI): Guidance.* https://www.ukri.org/apply-for-funding/develop-your-application/resume-for-research-and-innovation-r4ri-guidance/

90. Canadian Institutes of Health Research (CIHR). *Tri-agency CV.* https://cihr-irsc.gc.ca/e/53574.html

91. Bordignon, F., Chaignon, L., & Egret, D. (2023). Promoting narrative CVs to improve research evaluation? A review of opinion pieces and experiments. *Research Evaluation, 32*(2), 313–320. https://doi.org/10.1093/reseval/rvad013

92. Aubert Bonn, N., Morris, J. P., Sapcariu, S., & Stroobants, K. (2025). Are Narrative CVs contributing towards shifting research culture? Workshop Report from the 2023 Recognition and Rewards Festival. *F1000Research, 13*(332). https://doi.org/10.12688/f1000research.146108.2

93. DORA. *Findings from the Health Research Board Ireland on the Implementation of a Narrative CV.* https://sfdora.org/2021/04/12/findings-from-the-health-research-board-ireland-on-the-implementation-of-a-narrative-cv

94. Luxembourg National Research Fund (FNR). *Report on implementation & feedback results.* https://www.fnr.lu/narrative-cv/#report-on-implementation-feedback-results

95. Deutsche Forschungsgemeinschaft. (2024). *Einführung eines einheitlichen CV-Musters – Zwischenbilanz ein Jahr danach / Introduction of a Standardised CV Template – Interim Report After One Year.* Deutsche Forschungsgemeinschaft (DFG). https://doi.org/10.5281/zenodo.18314376

Resources and references

96. Research on Research Institute (RoRI), Varga, J., & Kaltenbrunner, W. (2025). *RoRI Insights: Implementing Narrative CVs – Five Recommendations for Funders.* Research on Research Institute. https://doi.org/10.6084/M9.FIGSHARE.28524755.V1

97. DORA. *Case Studies.* https://sfdora.org/case-study/mbie/

98. Fritch, R., Hatch, A., Hazlett, H., & Vinkenburg, C. (2021). *Using narrative CVs: Process optimization and bias mitigation.* Zenodo. https://doi.org/10.5281/zenodo.5799414

99. The Helsinki Initiative on Multilingualism. https://www.helsinki-initiative.org

100. Hatch, A., & Schmidt, R. (2020). *Rethinking research assessment: Unintended cognitive and systems biases.* DORA. https://doi.org/10.5281/zenodo.15266914

101. Schmidt, R. (2022). *Debiasing committee composition and deliberative processes.* Zenodo. https://doi.org/10.5281/zenodo.7249223

102. Garduño-Magaña, A., Saderi, D., McKiernan, E. C., Mercado-Lara, E., Tananbaum, G., Hicks, J., Franko, M., Granados, M., & Fairhurst, V. (2023). *Open Grant Reviewers – Rubrics and Clear Evaluation Criteria* (A. Wong, Ed.). Zenodo. https://doi.org/10.5281/zenodo.8400558

103. Open Research Funders Group (ORFG). *Exploring unconscious bias in grant review.* https://www.orfg.org/news/2023/10/6/exploring-unconscious-bias-in-grant-review

104. Luxembourg National Research Fund (FNR). *Balanced, broad, responsible: A practical guide for research evaluators.* https://www.youtube.com/watch?v=q_NCE80xi_w

105. Pier, E. L., Brauer, M., Filut, A., Kaatz, A., Raclaw, J., Nathan, M. J., Ford, C. E., & Carnes, M. (2018). Low agreement among reviewers evaluating the same NIH grant applications. *Proceedings of the National Academy of Sciences, 115*(12), 2952–2957. https://doi.org/10.1073/pnas.1714379115

106. Guthrie, S., Ghiga, I., & Wooding, S. (2018). What do we know about grant peer review in the health sciences? *F1000Research, 6*(1335). https://doi.org/10.12688/f1000research.11917.2

107. Bendiscioli, S. (2019). The troubles with peer review for allocating research funding. *EMBO Reports, 20*(12). https://doi.org/10.15252/embr.201949472

108. EMBO Science Policy Programme. (2021). *Dealing with the limits of peer review with innovative approaches to allocating research funding*. European Molecular Biology Organization. https://www.embo.org/documents/science_policy/peer_review_report.pdf

109. Fang, F. C., & Casadevall, A. (2016). Research Funding: the Case for a Modified Lottery. *mBio, 7*(3). https://journals.asm.org/doi/10.1128/mbio.00422-16

110. Adam, D. (2019). Science funders gamble on grant lotteries. *Nature, 575*(7784), 574–575. https://doi.org/10.1038/d41586-019-03572-7

111. Feliciani, T., Luo, J., & Shankar, K. (2024). Funding lotteries for research grant allocation: An extended taxonomy and evaluation of their fairness. *Research Evaluation, 33*. https://doi.org/10.1093/reseval/rvae025

112. Austrian Science Fund (FWF). *1000 Ideas*. https://www.fwf.ac.at/en/funding/portfolio/projects/1000-ideas

113. Liu, M., Choy, V., Clarke, P., Barnett, A., Blakely, T., & Pomeroy, L. (2020). The acceptability of using a lottery to allocate research funding: a survey of applicants. *Research Integrity and Peer Review, 5*(1). https://doi.org/10.1186/s41073-019-0089-z

114. Swiss National Science Fund (SNSF). *Drawing lots as a tie breaker.* https://www.snf.ch/en/JyifP2I9SUo8CPxI/news/news-210331-drawing-lots-as-a-tie-breaker

115. VolkswagenStiftung. *Partially Randomized Procedure – Lottery and Peer Review.* https://www.volkswagenstiftung.de/en/funding/peer-review/partially-randomized-procedure-lottery-and-peer-review

Resources and references

116. van der Meer, M., Antheunis, M. L. & Haverkort, B. R. (2024). The practicalities of a partial lottery to allocate research funding. *Research Evaluation*. https://doi.org/10.1093/reseval/rvae023

117. Meyer, J. D., Corvillón, A., Carpenter, J. M., Plunkett, A. L., Kurowski, R., Chalevin, A., Bruenker, J., Kim, D.-C., & Macías, E. (2022). Analysis of the ALMA Cycle 8 Distributed Peer Review Process. *Bulletin of the AAS, 54*(1). https://doi.org/10.3847/25c2cfeb.4ece85d4

118. Corvillon, A., & Carpenter, J. M. (2023). *An insight into ALMA's distributed peer review*. https://doi.org/10.5281/zenodo.7647119

119. Research on Research Institute (RoRI), Butters, A., Benson Marshall, M., Pinfield, S., Stafford, T., Bondarenko, A., Neubauer, B., Nuske, R., Schwidlinski, P., & Denecke, H. (2025). *Applicants as reviewers: Evaluating the risks, benefits, and potential of distributed peer review for grant funding allocations (RoRI Working Paper No. 17)*. Research on Research Institute. https://doi.org/10.6084/M9.FIGSHARE.29994841.V2

120. Villum Fonden. *Villum Experiment*. https://villumfonden.dk/en/group/grantsubarea/villum-experiment

121. Madsen, E. B., Mongeon, P., & Schneider, J. W. (2025). Gender disparity in funding rates in double-blind grant peer review: The case of the Villum Experiment. *Quantitative Science Studies, 6*, 774–795. https://doi.org/10.1162/qss.a.5

122. Aligning Science Across Parkinson's (ASAP). *Output Catalog*. https://parkinsonsroadmap.org/catalog/

123. Health Research Board (HRB). *Annual Report 2024*. https://www.hrb.ie/wp-content/uploads/2025/08/HRB-Annual-Report-Part-1-2024-FINAL.pdf

124. UK Research and Innovation (UKRI). *Annual Report and Accounts 2024–2025*. https://assets.publishing.service.gov.uk/media/68762c9aa8d0255f9fe28e9c/UKRI_Annual_Report24_25_print.pdf

125. McCray, A. T., Van Vactor, D., Gould, J., Li, X., Patrnogić, J., Shamu, C., & Walsh, M. C. (2024). Research culture in biomedicine: what we learned, and what we would like to do about it. *Communications Biology, 7*(1). https://doi.org/10.1038/s42003-024-06237-y

126. Uttley, L., Falzon, L., Byrne, J. A., Tricco, A. C., Munafò, M. R., Moher, D., Stoeger, T., Matandika, L., Labbé, C. & Naudet, F. (2025). Research culture influences in health and biomedical research: rapid scoping review and content analysis. *Journal of Clinical Epidemiology, 178*, 111616. https://doi.org/10.1016/j.jclinepi.2024.111616

127. UK Royal Society. (2018). *Research culture: changing expectations conference report*. https://royalsociety.org/topics-policy/projects/research-culture/changing-expectations/

128. Humane Metrics Initiative. https://humetricshss.org/

129. Science Europe. (2022). *A values framework for the organisation of research*. https://doi.org/10.5281/zenodo.6637848

130. National Health and Medical Research Council (NHMRC). (2025). *Good institutional practice guide*. https://www.nhmrc.gov.au/about-us/publications/good-institutional-practice-guide

131. CLASCO-FOLEC. (2025). *Bogotá Manifesto: Towards open, democratic, and socially relevant science in Latin America and the Caribbean*. https://www.clacso.org/manifiesto-de-bogota-hacia-una-ciencia-abierta-democratica-y-socialmente-relevante-en-america-latina-y-el-caribe/

132. Organisation for Economic Co-operation and Development (OECD). (2023). *Equity and inclusion in education*. OECD Publishing. https://doi.org/10.1787/e9072e21-en

133. Global Research Council (GRC). *Equality, Diversity, and Inclusion Working Group*. https://globalresearchcouncil.org/about/equality-diversity-and-inclusion-working-group/

134. EDI Caucus. *EDICa*. https://edicaucus.ac.uk/

Resources and references

135. Towers, S., Attenborough, R., Uwadiae, F., Asani, F., Bhajam, T., & Dias, R. (2024). *Launching Wellcome's Institutional Research Culture Community*. Zenodo. https://doi.org/10.5281/zenodo.14361754

136. Australian Institute of Aboriginal and Torres Strait Islander Studies (AIATSIS). (2020). *AIATSIS Code of ethics for Aboriginal and Torres Strait Islander research*. AIATSIS. https://aiatsis.gov.au/sites/default/files/2020-10/aiatsis-code-ethics.pdf

137. Health Research Council of New Zealand. (2010). *Te Ara Tika: Guidelines for Māori research ethics: A framework for researchers and ethics committee members*. https://www.hrc.govt.nz/resources/te-ara-tika-guidelines-maori-research-ethics-0

138. National Health and Medical Research Council (NHMRC). (2018). *Ethical conduct in research with Aboriginal and Torres Strait Islander peoples and communities: Guidelines for researchers and stakeholders*. https://www.nhmrc.gov.au/about-us/publications/ethical-conduct-research-aboriginal-and-torres-strait-islander-peoples-and-communities

139. Canadian Institutes of Health Research (CIHR). *Removing barriers to funding for racialized people and persons with a disability*. https://cihr-irsc.gc.ca/e/53907.html

140. UK Research Integrity Office (UKRIO). *Research Integrity*. https://ukrio.org/research-integrity/

141. Morris, J. P., Boehme, O., Boland, M., Guyard, L., Kolu, P., Lachat, F., Montoliu, L., Ottinger, T., Rouby, A., Steinberger, M., Szymańska-Skolimowska, E., & Veitch, R. (2024). *Position Statement 'Integrity at the heart of healthy and effective research cultures'* (L. Borrell-Damián & I. Groeneveld, Eds.). Science Europe. https://doi.org/10.5281/zenodo.12705713

142. Bolland, M. J., Avenell, A., & Grey, A. (2024). Publication integrity: what is it, why does it matter, how it is safeguarded and how could we do better? *Journal of the Royal Society of New Zealand, 55*(2), 267–286. https://doi.org/10.1080/03036758.2024.2325004

143. Yaraş, Y. S., & İşlek, D. (2025). Ethical challenges of the "publish or perish" culture in clinical research: Insights from the COVID-19 pandemic. *Balkan Medical Journal*. https://doi.org/10.4274/balkanmedj.galenos.2025.2025-6-80

144. Alam, S. (2024). Trends in research integrity concerns and the evolving role of the publisher. *Insights: the UKSG Journal, 37*. https://doi.org/10.1629/uksg.663

145. World Conferences on Research Integrity (WCRI). *Hong Kong Principles*. https://www.wcrif.org/guidance/hong-kong-principles

146. Moher, D., Bouter, L., Kleinert, S., Glasziou, P., Sham, M. H., Barbour, V., Coriat, A.-M., Foeger, N., & Dirnagl, U. (2020). The Hong Kong Principles for assessing researchers: Fostering research integrity. *PLOS Biology, 18*(7), e3000737. https://doi.org/10.1371/journal.pbio.3000737

147. Global Research Council (GRC). *Statement of Principles for Research Integrity*. https://globalresearchcouncil.org/fileadmin/documents/GRC_Publications/grc_statement_principles_research_integrity_FINAL.pdf

148. Organisation for Economic Co-operation and Development (OECD). *Global Science Forum*. https://www.oecd.org/en/networks/global-science-forum.html

149. Global Federation of Reproducibility Networks. https://reproducibility.global/

150. Government of Canada. (2022). *G7 Common Values and Principles on Research Security and Research Integrity*. https://science.gc.ca/site/science/en/safeguarding-your-research/general-information-research-security/international-research-security-resources/g7-common-values-and-principles-research-security-and-research-integrity

151. Helios Open. https://www.heliosopen.org/

152. Open Research Funders Group (ORFG). https://www.orfg.org/

153. Make Data Count. https://makedatacount.org/

Resources and references

154. Hidden Ref. https://hidden-ref.org/
155. Council of Canadian Academies (CCA). (2025). *Balancing Research Security and Open Science*. Council of Canadian Academies. https://doi.org/10.60870/FMT9-9559
156. Arita, M. (2025). Data sovereignty and open sharing: Reconceiving benefit-sharing and governance of digital sequence information. *Data Science Journal, 24*. https://doi.org/10.5334/dsj-2025-009
157. Organisation for Economic Co-operation and Development (OECD). *OECD Legal Instruments*. https://legalinstruments.oecd.org/en/instruments/OECD-LEGAL-0463
158. European Commission, European Research Executive Agency. *Open Science*. https://rea.ec.europa.eu/open-science_en
159. Swiss Academies of Arts and Sciences. *Network for Transdisciplinary Research td-net*. https://en.transdisciplinarity.ch/
160. Ensuring Value in Research (EViR). https://evir.org/
161. International Network for the Science of Team Science (INSCITS). https://www.inscits.org/
162. Pew Charitable Trusts Evidence Project. https://www.pew.org/en/projects/evidence-project/impact-funders-forum
163. Lyall, C., Bruce, A., Tait, J. & Meagher, L. (2011). Assessing the route: Evaluating interdisciplinary proposals, programmes and publications. In *Interdisciplinary research journeys: practical strategies for capturing creativity*, pp.137–163. Bloomsbury Publishing Plc. https://doi.org/10.5040/9781849661782.ch-007
164. International Science Council (ISC). (2023). *The case for reform of scientific publishing*. International Science Council. https://doi.org/10.24948/2023.14
165. ASAPbio. https://asapbio.org/
166. International Science Council (ISC). *ISC Forum on Publishing and Research Assessment*. https://council.science/our-work/forum-science-publishing-assessment/
167. ASAPbio. *Coordinating Research Assessment and Publishing Reform: Action Groups*. https://asapbio.org/focus-areas/recognitions-rewards/pisa-action-groups/
168. Committee on Publication Ethics (COPE). https://publicationethics.org/
169. United Nations. *Sustainable Development Goals Publishers Compact*. https://www.un.org/sustainabledevelopment/sdg-publishers-compact/

ANNEX

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NAME	AFFILIATION	COUNTRY
Allen, Liz	DORA	United Kingdom
Andersen, Kristin	NordForsk	Norway
Averill, Rachel	Royal Society Te Apārangi	New Zealand
Ball, Sara	UK Research and Innovation (UKRI)	United Kingdom
Barbour, Virginia	DORA, Queensland University of Technology (QUT)	Australia
Bendiscioli, Sandra	EMBO	Germany
Béu, Bruno	Foundation for Science and Technology (FCT)	Portugal
Bolliger, Isabel	Swiss National Science Foundation (SNSF), Global Research Council RRA Working Group	Switzerland
Boman, Julia	European Science Foundation (ESF)	France
Borrell-Damián, Lidia	Science Europe	Belgium
Bueso, Yensi Flores	University College Cork, Global Young Academy	Ireland
Bustos, Regla	Spanish State Research Agency (AEI)	Spain
Capdevila, Montserrat	La Caixa Foundation	Spain
Catterall, Janet	DORA	Australia
Cobey, Kelly	DORA, University of Ottawa Heart Institute	Canada
Crawford, Krista	National Health and Medical Research Council (NHMRC)	Australia
Crone, Lisbet	Independent Research Fund Denmark (DFF)	Denmark
Daley, Mark	Western University	Canada
Dube, Nosisa	National Research Foundation (NRF), Global Research Council RRA Working Group	South Africa
Dubowska, Marta	National Science Centre (NCN)	Poland
Firth, Catriona	UK Research and Innovation, Research England, Global Research Council RRA Working Group	United Kingdom
Ford, Emily	Open Research Funders Group (ORFG)	United States

* EU Presidency High-level Conference on Reforming Research Assessment. https://www.cerra.aau.dk/about

NAME	AFFILIATION	COUNTRY
Harbour, Valerie	Natural Sciences and Engineering Research Council (NSERC)	Canada
Harris, Lee	Australian Research Council (ARC)	Australia
Hassibi, Sam	Royal Society Te Apārangi	New Zealand
Holm, Jon	Research Council of Norway (RCN)	Norway
Ijaz, Mohsin	Ministry of Business, Innovation and Employment (MBIE)	New Zealand
Jeppesen, Cynthia	National Scientific and Technical Research Council (CONICET), Global Research Council RRA Working Group	Argentina
Jonge, Hans de	Dutch Research Council (NWO)	The Netherlands
Kikuchi, Noel	Center for R&D Strategy, Japan Science and Technology Agency (JST)	Japan
Kirk, Louisa	Australian Research Council (ARC)	Australia
LeMay, Kate	National Health and Medical Research Council (NHMRC)	Australia
Lawrence, Rebecca	DORA, Taylor & Francis	United Kingdom
Lewis-Wilson, Shomari	Wellcome	United Kingdom
Lima, Giovanna	DORA	Ireland
Looyen, Joanne	Ministry of Business, Innovation and Employment (MBIE), Global Research Council RRA Working Group	New Zealand
McGuirk, Shawn	Natural Sciences and Engineering Research Council (NSERC), Global Research Council RRA Working Group	Canada
Michel, Tony	Social Science and Humanities Research Council (SSHRC)	Canada
Miklavič, Klemen	Slovenian Research and Innovation Agency (ARIS)	Slovenia
Miyamoto, Ben	The Pew Charitable Trusts, Impact Funders Forum	United States
Montesanti, Annalisa	Health Research Board (HRB)	Ireland
Morris, James	Science Europe, Global Research Council RRA Working Group	Belgium
Nakano, Asa	Kyoto University	Japan
Navarro, Diego	Royal Society Te Apārangi	New Zealand
Neves, Kleber	Serrapilheira Institute	Brazil
Olneck-Brown, Benjamin	The Pew Charitable Trusts	United States
Passmore, Sarah	Canadian Institutes of Health Research (CIHR)	Canada
Penders, Stefan	Dutch Research Council (NWO)	The Netherlands
Philipp, Tobias	Swiss National Science Foundation (SNSF)	Switzerland
Quinn, Laura	Research Ireland (RI)	Ireland
Ralph, Emma	Academy of Medical Sciences	United Kingdom
Recio-Saucedo, Alejandra	National Institute for Health and Care Research (NIHR)	United Kingdom
Rushforth, Alex	CWTS, Leiden University, Research on Research Institute (RoRI)	The Netherlands

NAME	AFFILIATION	COUNTRY
Sapcariu, Sean	Luxembourg National Research Fund (FNR), Global Research Council RRA Working Group	Luxembourg
Seumenicht, Elvisa	Austrian Science Fund (FWF)	Austria
Smith, Sarah	Natural Sciences and Engineering Research Council (NSERC)	Canada
Spanache, Ioana	Executive Agency for Higher Education, Research and Innovation Funding (UEFISCDI)	Romania
Stagg, Mark	Royal Society Te Apārangi	New Zealand
Thibault, Robert	Aligning Science Across Parkinson's (ASAP)	United States
Thostrup, Peter	Lundbeckfonden	Denmark
Tidswell, Olivia	Royal Society Te Apārangi	New Zealand
Trif, Ioana	Executive Agency for Higher Education, Research and Innovation Funding (UEFISCDI)	Romania
Trinh, Anh-Khoi	Natural Sciences and Engineering Research Council (NSERC), Global Research Council RRA Working Group	Canada
Uwineza, Joséphine	Natural Sciences and Engineering Research Council (NSERC), Global Research Council RRA Working Group	Canada
Valosaari, Kata-Riina	Research Council of Finland (AKA)	Finland
Wangel, Josefin	Formas: a Swedish Research Council for Sustainable Development	Sweden
Walter, Nicolas	European Science Foundation (ESF)	France
Wilson, Jennifer	Canadian Cancer Society	Canada
Xu, Fang	Institutes of Science and Development, Chinese Academy of Sciences (CAS)	China
Yiwei, Zhang	National Natural Science Foundation of China (NSFC), Global Research Council RRA Working Group	China

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This Guide was conceived and written by a diverse, global group of human authors. AI-based tools were used selectively to support clarity during editing. The human authors remain fully responsible for the content and retain full ownership of every word in this Guide.

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Authors are ordered alphabetically by surname.

AUTHOR CONTRIBUTIONS (USING CRediT)

Allen, L.	Conceptualization; Project Administration; Writing – Original Draft; Writing – Review & Editing
Barbour, V.	Conceptualization; Visualization; Writing – Original Draft; Writing – Review & Editing
Borrell-Damián, L.	Writing – Review & Editing
Cobey, K.	Conceptualization; Visualization; Writing – Original Draft; Writing – Review & Editing
Dube, N.	Writing – Review & Editing
Firth, C.	Writing – Review & Editing
Lawrence, R.	Conceptualization; Visualization; Writing – Original Draft; Writing – Review & Editing
Lima, G.	Conceptualization; Project Administration; Visualization; Writing – Original Draft; Writing – Review & Editing
McGuirk, S.	Writing – Original Draft; Writing – Review & Editing
Morris, J.	Writing – Original Draft; Writing – Review & Editing
Trinh, A.-K.	Writing – Original Draft; Writing – Review & Editing
Uwineza, J.	Writing – Original Draft; Writing – Review & Editing

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