



From responsible metrics to responsible research assessment (RRA): progress, obstacles & the way ahead

Rectors' Conference of the Republic of Slovenia, 22 October 2021

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<http://www.researchonresearch.org/>



What I'll aim to cover:

- The move from responsible metrics to responsible research assessment
- Momentum, movers and shapers
- Experiments in RRA: some interim results
- Global Research Council: autumn 2020 survey
- Five priorities for the next five years

A Celebrates Five Years!

18

 **DORA**
Join us as we discuss hiring decisions at research institutions

Live Monday, May 14 – 10:00 to 10:30 EDT #sfDOR

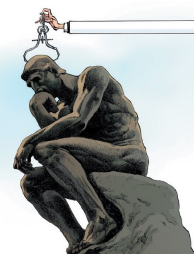


Sandra Schmid, PhD
Cecil H. Green Distinguished Professor in Cellular and Molecular Biology, Chair, Cell Biology Department, UT Southwestern Medical Center



Anna Hatch, PhD
DORA Community

declaration was published in 2013, it has collected signature evaluations and 12,000 individuals. DORA has increased awareness of the Journal Impact Factor and inspired change in the sciences have started referencing the declaration in research assistant guide hiring, promotion, and funding decisions.



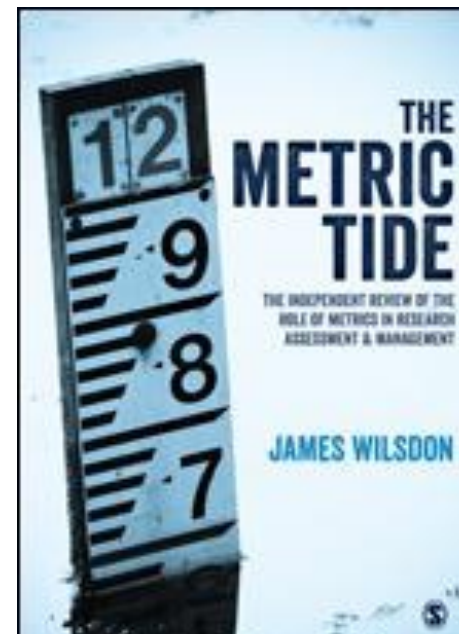
The Leiden Manifesto for research metrics

Use these ten principles to guide research evaluation, urge Diana Hicks, Paul Wouters and colleagues.

Data are increasingly used to govern science. Research evaluations that were once bespoke and performed by peers are now routine and reliant on metrics. The problem is that evaluation is now led by the data rather than by judgment. Metrics have proliferated, usually well intentioned, but always well informed, often ill applied. We risk damaging the system with the very tools designed to improve it, as evaluation is increasingly implemented by organizations without knowledge of, or

advice on, good practice and interpretation. Before 2000, there was the Science Citation Index or ISI from the Institute for Scientific Information (ISI), used by experts for specialist analyses. In 2002, Thomson Reuters launched an integrated web platform, making the Web of Science database widely accessible. Competing citation indices were created: Elsevier's Scopus (released in 2004) and Google Scholar (beta version released in 2004). Web-based tools to easily compare institutional research productivity and impact

were introduced, such as InCites (using the Web of Science) and SciVal (using Scopus), as well as software to analyse individual citation profiles using Google Scholar (published by Peris, released in 2007). In 2005, Jorge Hirsch, a physicist at the University of California, San Diego, proposed the h-index, popularizing citation counting for individual researchers. Interest in the journal impact factor grew steadily after 1995 (see 'Impact factor obsession'). Later, metrics related to social usage



Expert Group on Altmetrics

NEW: Final Report of the Expert Group on Altmetrics is available

Publication date: 20 March 2017

The Expert Group on Altmetrics outlines in this report how to advance a next-generation metrics in the context of Open Science and delivers an advice corresponding to the following policy lines of the Open Science Agenda: Fostering Open Science, Removing barriers to Open Science, Developing research infrastructures and Embed Open Science in society.

The report will be presented and discussed at the Open Science Policy Platform on 20 March 2017

The report can be downloaded here  796 KB

From responsible metrics....

CASE STUDY REPORT

Reimagining Academic Career Assessment: Stories of innovation and change

Bregt Saenen (EUA), Anna Hatch (DORA), Stephen Curry (DORA), Vanessa Proudman (SPARC Europe) and Ashley Lakoduk (DORA)

January 2021

RoRI Working Paper No.3 The changing role of funders in responsible research assessment: progress, obstacles and the way ahead

Stephen Curry, Sarah de Rijcke, Anna Hatch, Dorsamy (Gansen) Pillay, Inge van der Weijden and James Wilsdon

November 2020

Produced in partnership with:

The European University Association and Science Europe Join Efforts to Improve Scholarly Research Assessment Methodologies

14 May 2019

Evaluating research and assessing researchers is fundamental to the research enterprise and core to the activities of research funders and research performing organisations, as well as universities. The European University Association (EUA) and Science Europe are committed to building a strong dialogue between their members, who share the responsibility of developing and implementing more accurate, open, transparent and responsible approaches, that better reflect the evolution of research activity in the digital era.

Today, the outcomes of scholarly research are often measured through methods based on quantitative, albeit approximate, indicators such as the journal impact factor. There is a need to move away from reductionist ways of assessing research, as well as to establish systems that better assess research potential. Universities, research funders and research performing organisations are well-placed to explore new and improved research assessment approaches, while also being indispensable in turning these innovations into systemic reforms.

EUA and Science Europe are committed to working together on building a strong dialogue between their members, with a view to:

- support necessary changes for a better balance between qualitative and quantitative research assessment approaches, aiming at evaluating the merits of scholarly research. Furthermore, novel criteria and methods need to be developed towards a fairer and more transparent assessment of research, researchers and research teams, conducive to selecting excellent proposals and researchers.
- recognise the diversity of research outputs and other relevant academic activities and their value in a manner that is appropriate to each research field and that challenges the overreliance on journal-based metrics.
- consider a broad range of criteria to reward and incentivise research quality as the fundamental principle of scholarly research, and ascertain assessment processes and methods that accurately reflect the vast dimensions of research quality and credit all scientific contributions appropriately.

EUA and Science Europe will launch activities to further engage their members in improving and strengthening their research assessment practices. Building on these actions, both associations commit to maintaining a continuous dialogue and explore opportunities for joint actions, with a view to promoting strong synergies between the rewards and incentives structures of research funders and research performing organisations, as well as universities.

...to responsible research assessment

Defining RRA

Responsible research assessment (RRA) is an umbrella term for approaches to assessment which incentivise, reflect and reward the plural characteristics of high-quality research, in support of diverse and inclusive research cultures.

RRA draws on broader notions of responsible research and innovation (RRI), and applies these to the development and application of evaluation, assessment and review processes.

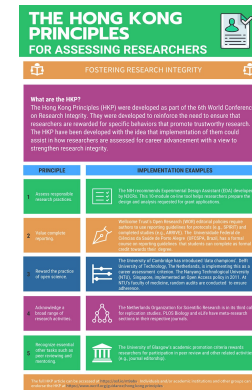
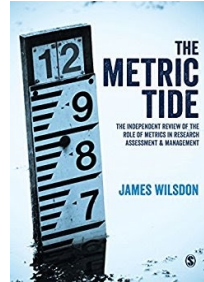
While RRI is commonly used as a broad framework for the governance of research and innovation, and notions of ‘responsible metrics’ can be applied at a micro level to indicators themselves, the idea of RRA encourages funders, research institutions, publishers and others to focus attention on the methodologies, systems and cultures of research assessment.

A moment of opportunity?

Concern has intensified over several long-standing problems linked to research assessment:

- the **misapplication of narrow criteria and indicators of research quality or impact**, in ways that distort incentives, create unsustainable pressures on researchers, and exacerbate problems with research integrity & reproducibility.
- this narrowing of criteria and indicators has **reduced the diversity of research missions and purposes**, leading institutions and researchers to adopt similar strategic priorities, or to focus on lower-risk, incremental work.
- **systemic biases against those who do not meet—or choose not to prioritise—narrow criteria and indicators** of quality or impact, have reduced the diversity, vitality and representative legitimacy of the research community.
- a **diversion of policy & managerial attention to things that can be measured**, at the expense of less tangible or quantifiable qualities, impacts, assets and values – a trend exacerbated by flawed university league tables.

Fifteen movers and shapers



A yellow rectangular sign with a black border of diagonal stripes. The text is centered and reads:

**CHEERFUL
WHISTLING
PERMITTED**

Experiments in RRA: some interim results

- Cosmetic appropriation
- Calibrating the machine
- Can openers
- Advocacy coalitions
- Institutional culture change
- System change..?



RoRI Working Paper No.3

The changing role of funders in responsible research assessment:

progress, obstacles and the way ahead

Stephen Curry, Sarah de Rijcke, Anna Hatch, Dorsamy (Gansen) Pillay, Inge van der Weijden and James Wilsdon

November 2020

Produced in partnership with:



Home > Elsevier Connect > Advancing responsible research assessment

Advancing responsible research assessment

Elsevier signs Declaration on Research Assessment; implementation steps will include making reference lists of all articles openly available via Crossref

By Andrew Plume, PhD - December 16, 2020



Elsevier has long supported the responsible use of metrics and indicators in the assessment of research. We established the International Center for the Study of Research (ICSR) to work in partnership with the research community to help develop our approach to research assessment. It's vital that we work together to apply the same high standards of evidence to the evaluation of research as scientists apply in their own work.

To support these goals, Elsevier has signed the San Francisco Declaration on

Home > Elsevier Connect > New metrics will mak...

New metrics will make journal assessment more complete and transparent

CiteScore metrics reveal the citation impact of more than 22,200 academic journals on Scopus

By Andrew Plume, PhD and Lisa Colledge, DPhil - December 8, 2016

Elsevier Connect



Home > Rankings > Impact Rankings

Impact Rankings 2021

The *Times Higher Education* Impact Rankings are the only global performance tables that assess universities against the United Nations' Sustainable Development Goals (SDGs). We use carefully calibrated indicators to provide comprehensive and balanced comparison across four broad areas: research, stewardship, outreach and teaching.

The 2021 Impact Rankings is the third edition and the overall ranking includes 1,118 universities from 94 countries/regions.

Read more...



2021

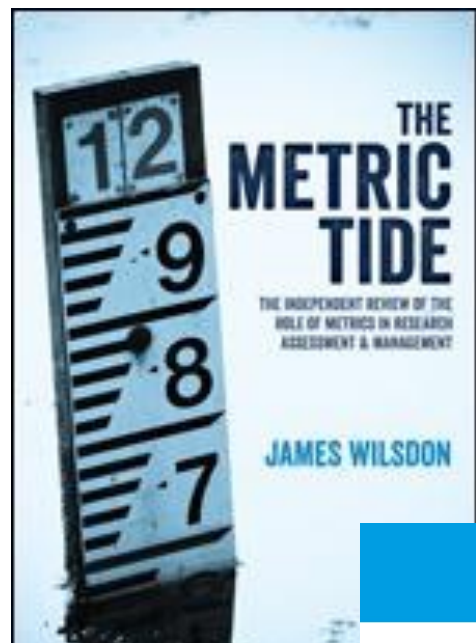
How to get your uni ranked

EXPLORE IMPACT RANKINGS FOR INDIVIDUAL SDGS

OVERALL RANKING	1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH
9 INDUSTRY INNOVATION AND INFRASTRUCTURE	10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS



Calibrating the machine



Next-generation metrics:
Responsible metrics and evaluation for open science

RECOMMENDATIONS from Next-Generation Metrics (2017)

- #1:** Ahead of the launch of its ninth research framework programme (FP9), the EC should provide clear guidelines for the responsible use of metrics in support of open science.
- #2:** The EC should encourage the development of new indicators, and assess the suitability of existing ones, to measure and support the development of open science.
- #3:** Before introducing new metrics into evaluation criteria, the EC needs to assess the likely benefits and consequences as part of a programme of 'meta-research'.
- #4:** The adoption and implementation of open science principles and practices should be recognised and rewarded through the European research system
- #5:** The EC should highlight how the inappropriate use of indicators (whether conventional or altmetrics or next generation metrics) can impede progress towards open science.
- ##10:** The EC should identify mechanisms for promoting best practices, frameworks and standards for responsible use of metrics in support of open science



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 on

sibilizar las diferentes acciones y procesos que se realizan para contar c
 ca en nuestro país

asa de la Universidad de California como sede, el Consejo Nacional de Ciencia
 ntific Evaluation, el cual tiene como objetivo visibilizar las diferentes accion
 o funcionamiento de evaluación científica en nuestro país.



HA Webinar

... exercise is underway to formulate the 4th Medium-term Goals and Plans
 tions and inter-university research institute corporations in Japan. This exerc
 ing appropriate assessment indicators that can be incorporated within new
 uation Subcommittee of the Science Council of Japan, however, has recently
 es fresh questions about the use of metrics, especially for determining proced
 concerns about metrics, assessments and goal setting have understandably se
 ous issues linked to research evaluation.

... and Social Sciences Research Promotion Forum and the various meetings orga
 Network for Social Sciences, Humanities and Arts (JINSHA), which have been
 id in incubating discussions on research evaluation issues in the social scienc
 e "Responsible Research Assessment (RRA)" is one of the key ideas that the n
 rehensive concept that requires all stakeholders to review the assessment ex
 2021, the JINSHA meetings will focus on this RRA to deepen its understandin
 us discussions on evaluation.

... this webinar aims to discuss the role of RRA in the formulation of goal setting
 tutions. In particular, we will focus on debating how and when metrics can be
 activities and guiding management outcomes. This much needed conversat
 will be initiated by two talks that will be delivered by overseas speakers and w
 ts by local speakers.

Responsible Research Assessment

Discussing the role of RRA in University Research Institutions

» We Scientists Shape Science » Activities » Beyond impact factor conference 2018

Conference 2018 «Beyond impact factor, h-Index and university rankings»



Image: Valérie Chételat

The last few decades saw an unprecedented number of scientists and scientific institutions competing for limited resources in terms of employment and research funding. The ambition to allocate resources to the best scientists and science favouring the use of quantitative metrics to assess the scientific quality of the sheer volume of research output. Impact factors related to journals and publications as well as university rankings are the best-known such tools.

Inadvertently, however, these measurements potentially undermine the quality of research because they incite violations of globally accepted research integrity principles. The effects: scientific progress is hampered, the value of science to society and the environment as a trusted and authoritative source is jeopardised, and public research funding is not used effectively.

The international conference held on 21 November 2018 in Bern highlighted the challenges of current metrics in capturing scientific quality, introduced elements of alternative approaches, and considered whether steps are necessary to maintain the health of the Swiss science landscape long-term.

[Conference report "Beyond impact factor, h-Index and university rankings"](#)

[Ellen Hazelkorn: Challenging science – The geopolitics of knowledge and research](#)

Tin openers



Support for more responsible research

11.11.2020



Responsible Research



What makes a fair and responsible university ranking?
Rating the rankings criteria
Version 2. August 2019

Introduction

The International Network of Research Management Societies (INORMS) established a two-year Research Evaluation Working Group (REWG) in 2018. It consists of representatives from a range of global member research management societies all seeking to work towards better, fairer and more meaningful research evaluation. One of our two areas of focus is the burgeoning influence of University Rankings on the behaviours of universities and often poor methodological approaches and practices. The purpose of this work-package is to consider what an international group of research managers, think the characteristics of a fair and responsible University Ranking should look like. The idea is to then 'turn the tables' on the rankings and rate them against our agreed criteria.

The UK Forum for Responsible Research Metrics

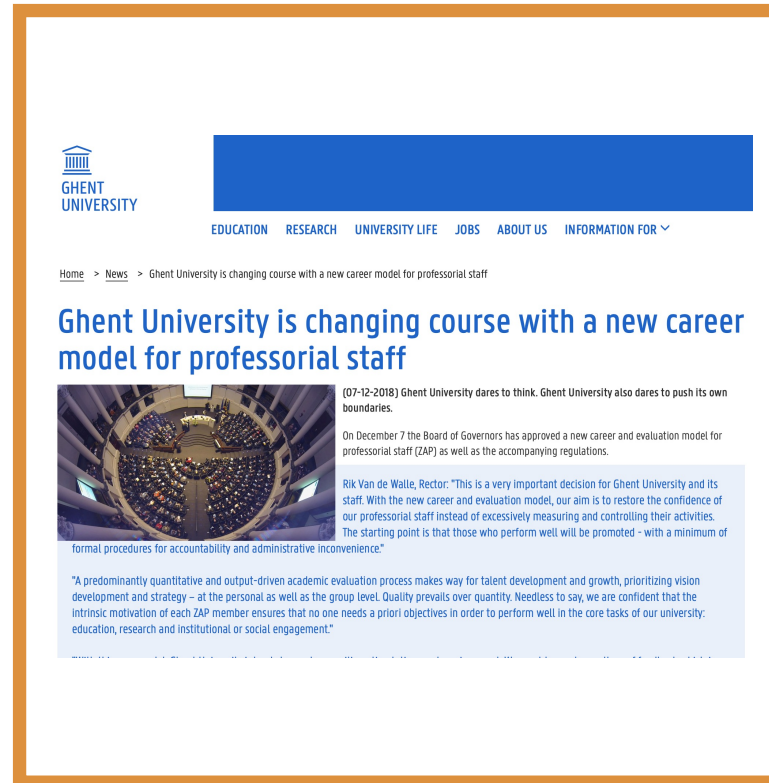
A group of research funders, sector bodies, and infrastructure experts are working in partnership to promote the responsible use of research metrics.

The Forum for Responsible Research Metrics, chaired by Professor Max Lu (Vice-Chancellor at the University of Surrey), supports the responsible use of research metrics in higher education institutions and across the research community in the UK. The Forum have a programme of activities, including:

- Advice to the higher education funding bodies on quantitative indicators in the Research Excellence Framework (REF) 2021
- Advice on, and work to improve, the data infrastructure that underpins metric use
- Advocacy and leadership on the use of research metrics responsibly
- International engagement on the use of metrics in research and researcher assessment

Advocacy coalitions

Institutional culture change



The screenshot shows the Ghent University website with a blue header and navigation menu. The main content area features a news article titled "Ghent University is changing course with a new career model for professorial staff". The article includes a photograph of a large, ornate hall and a quote from Rik Van de Walle, Rector, regarding the new career and evaluation model. The text discusses the approval of a new career and evaluation model for professorial staff (ZAP) on December 7, aiming to restore confidence and prioritize talent development.

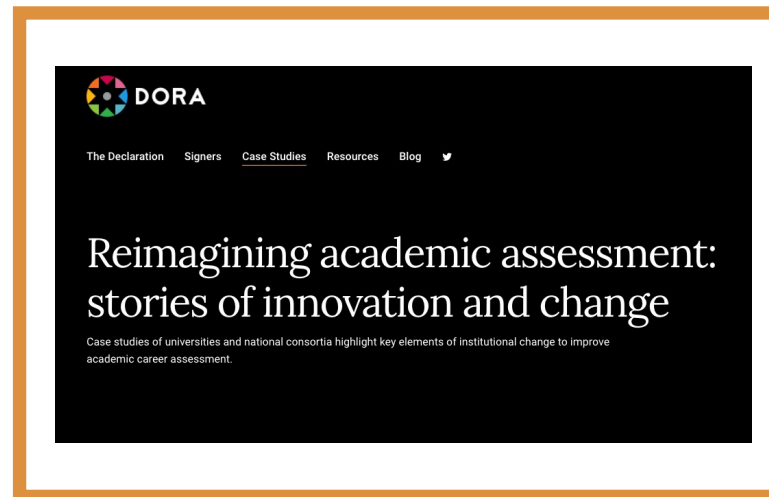
Ghent University is changing course with a new career model for professorial staff

(07-12-2018) Ghent University dares to think. Ghent University also dares to push its own boundaries.

On December 7 the Board of Governors has approved a new career and evaluation model for professorial staff (ZAP) as well as the accompanying regulations.

Rik Van de Walle, Rector: "This is a very important decision for Ghent University and its staff. With the new career and evaluation model, our aim is to restore the confidence of our professorial staff instead of excessively measuring and controlling their activities. The starting point is that those who perform well will be promoted - with a minimum of formal procedures for accountability and administrative inconvenience."

"A predominantly quantitative and output-driven academic evaluation process makes way for talent development and growth, prioritizing vision development and strategy – at the personal as well as the group level. Quality prevails over quantity. Needless to say, we are confident that the intrinsic motivation of each ZAP member ensures that no one needs a priori objectives in order to perform well in the core tasks of our university: education, research and institutional or social engagement."



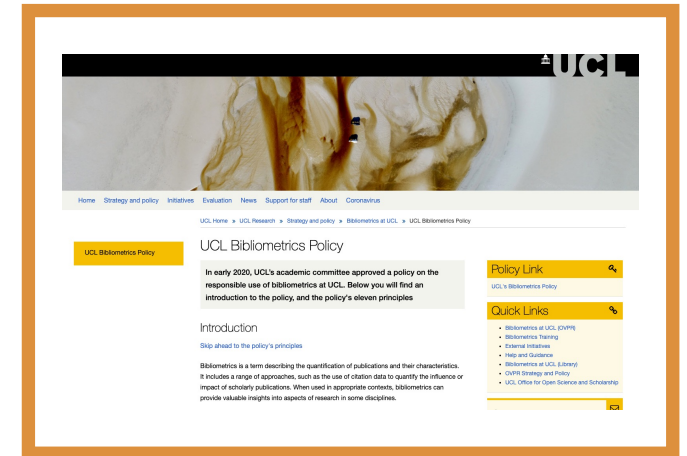
The screenshot shows the DORA website with a dark background and white text. The DORA logo is at the top left. The main heading is "Reimagining academic assessment: stories of innovation and change". Below the heading, there is a sub-heading: "Case studies of universities and national consortia highlight key elements of institutional change to improve academic career assessment."

DORA

The Declaration Signers Case Studies Resources Blog

Reimagining academic assessment: stories of innovation and change

Case studies of universities and national consortia highlight key elements of institutional change to improve academic career assessment.



The screenshot shows the UCL Bibliometrics Policy page. The header includes the UCL logo and navigation links. The main content area is titled "UCL Bibliometrics Policy" and includes an introduction section. The text states that in early 2020, UCL's academic committee approved a policy on the responsible use of bibliometrics at UCL. The page also features a "Policy Link" section and a "Quick Links" section with various links related to bibliometrics and research assessment.

UCL Home » UCL Research » Strategy and policy » Bibliometrics at UCL » UCL Bibliometrics Policy

UCL Bibliometrics Policy

In early 2020, UCL's academic committee approved a policy on the responsible use of bibliometrics at UCL. Below you will find an introduction to the policy, and the policy's eleven principles

Introduction

Bibliometrics is a term describing the quantification of publications and their characteristics. It includes a range of approaches, such as the use of citation data to quantify the influence or impact of scholarly publications. When used in appropriate contexts, bibliometrics can provide valuable insights into aspects of research in some disciplines.

- Bibliometrics at UCL (2019)
- Bibliometrics Training
- External Initiatives
- Help and Guidance
- Bibliometrics at UCL (2016)
- UCL's Strategy and Policy
- UCL Office for Open Science and Scholarship

44. Research England encourages providers to support the principles of open research in their research environment. Most Research England funding is deployed by universities at their discretion and is not intended to lead to specified outputs. In such cases, outputs cannot be attributed directly to Research England funding and no acknowledgement of Research England funding is expected or necessary. Such outputs are therefore out of scope of the UKRI Open Access policy. Where funding is given for particular purposes, and where that funding leads directly to particular research outputs, those outputs will be subject to the UKRI Open Access policy and providers will be required to include acknowledgement of Research England's funding.

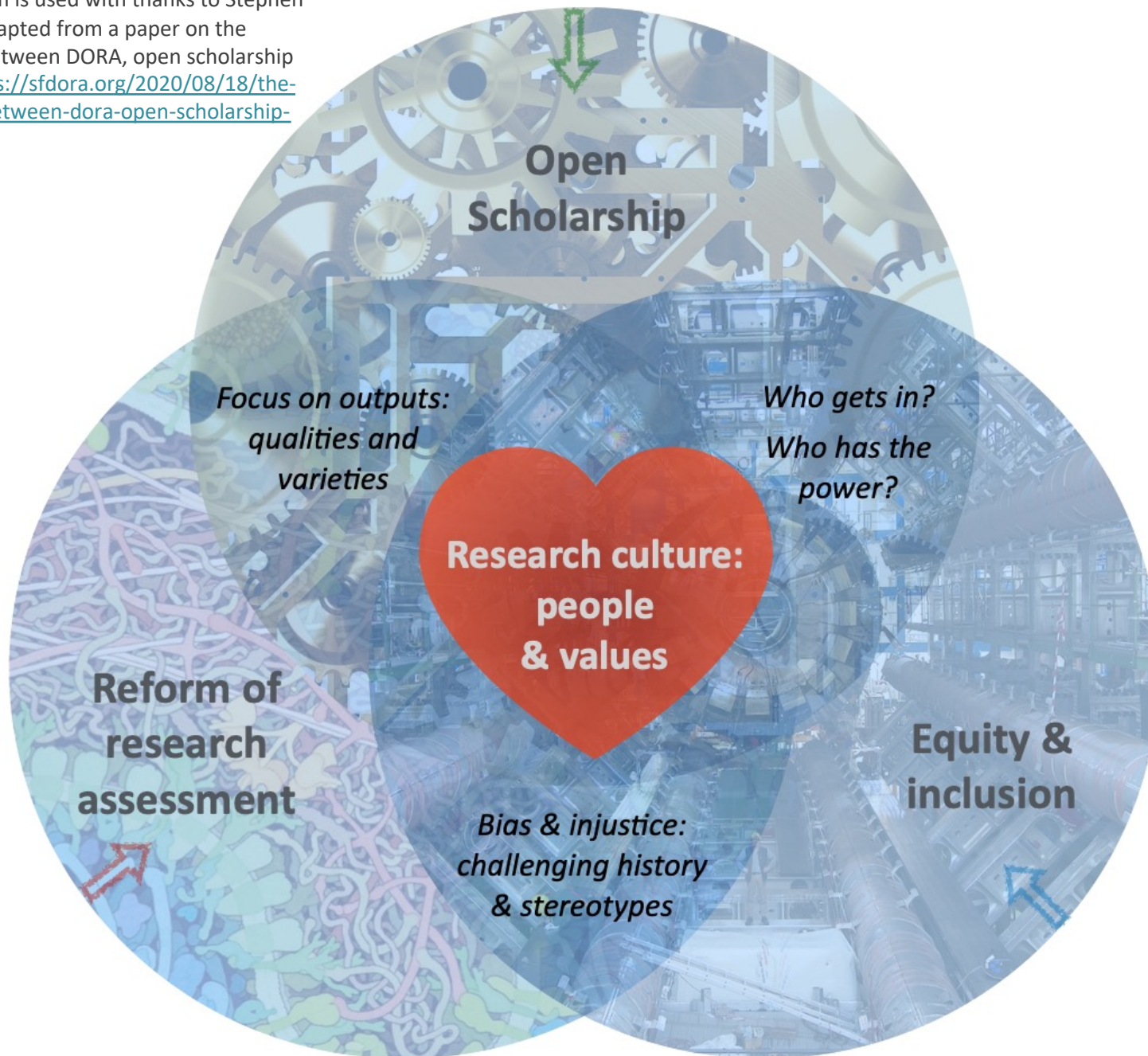
Responsible research assessment

45. Our expectation is the providers we fund will comply with the principles of the San Francisco Declaration on Research Assessment (DORA)⁸, Leiden Manifesto⁹ or equivalent. Research England commits to assessing the intrinsic merit of research and will not consider the publication channel, its impact factor (or other journal metrics), or the publisher when assessing quality.

Equality, diversity and inclusion

46. We expect higher education providers to ensure that equality, diversity and inclusion is considered and supported in the use of our funding, taking into account UK Research and Innovation policies and principles¹⁰ for equality, diversity and inclusion. Providers' approaches to supporting equality, diversity and inclusion are expected to exceed all relevant legal obligations, including but not limited to those of the Equality Act 2010.

NB. This diagram is used with thanks to Stephen Curry, and is adapted from a paper on the intersections between DORA, open scholarship and equity <https://sfdora.org/2020/08/18/the-intersections-between-dora-open-scholarship-and-equity/>



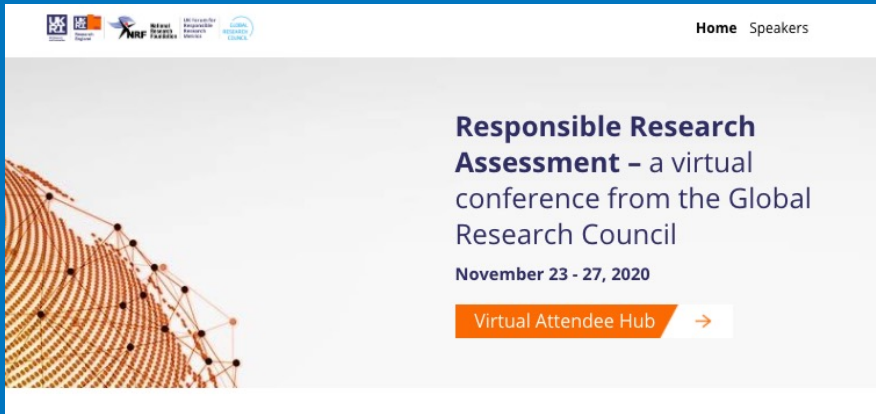
Culture & system change


Department for
Business, Energy
& Industrial Strategy

R&D People and Culture Strategy

People at the heart of R&D

Global Research Council Survey methodology



Online survey: 23 questions

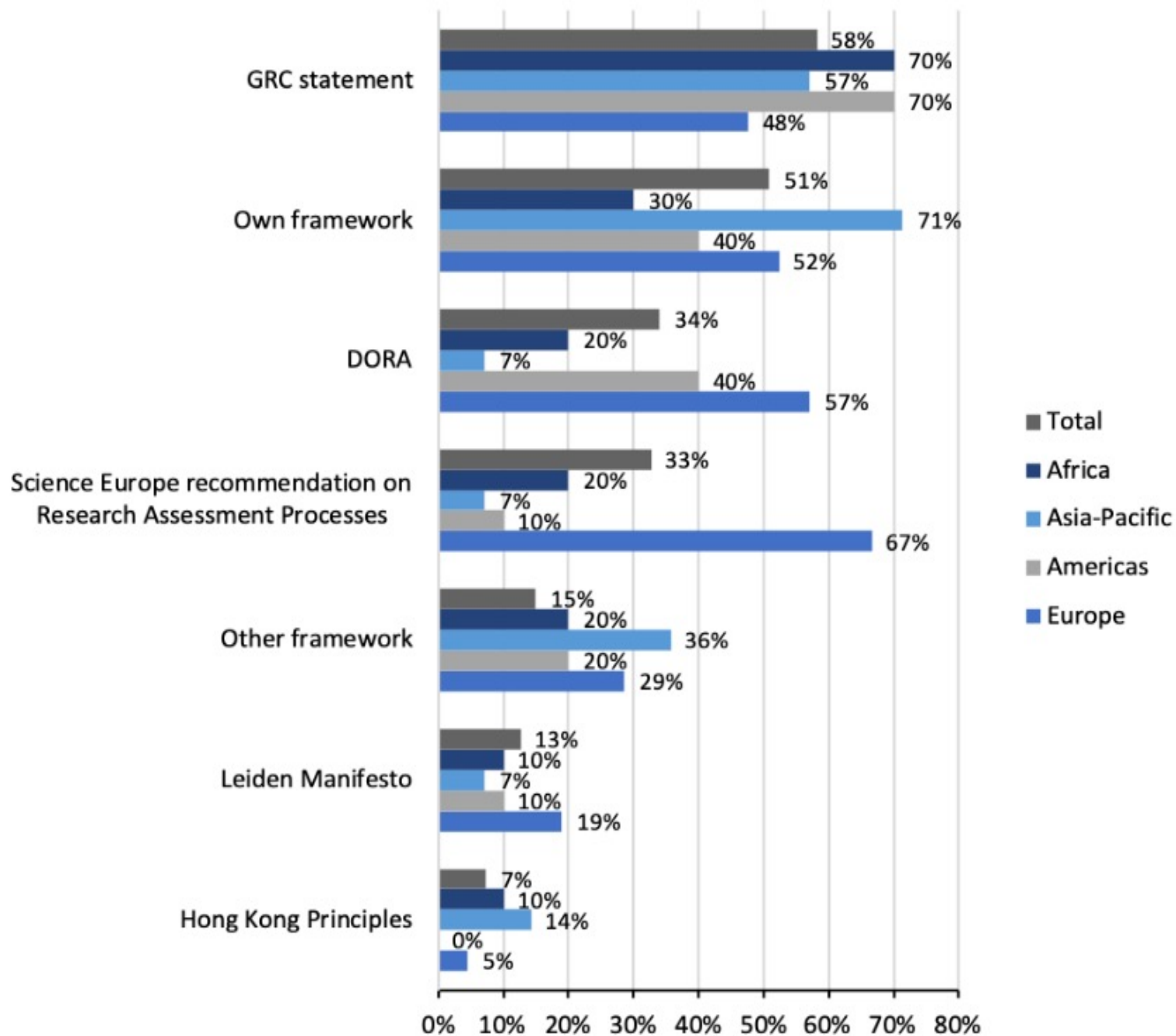
Open from September-October 2020

Completed by 55 organisations / 46% response rate

	N	%
Africa and Middle-East <i>(Sub-Saharan Africa, North Africa & Middle East)</i>	10	18.2
Asia-Pacific	14	25.5
Americas	10	18.2
Europe	21	38.2
<i>Total</i>	55	100

Table 1: Respondents by geographical region

Endorsements of existing RRA Frameworks



Research Assessment Indicators

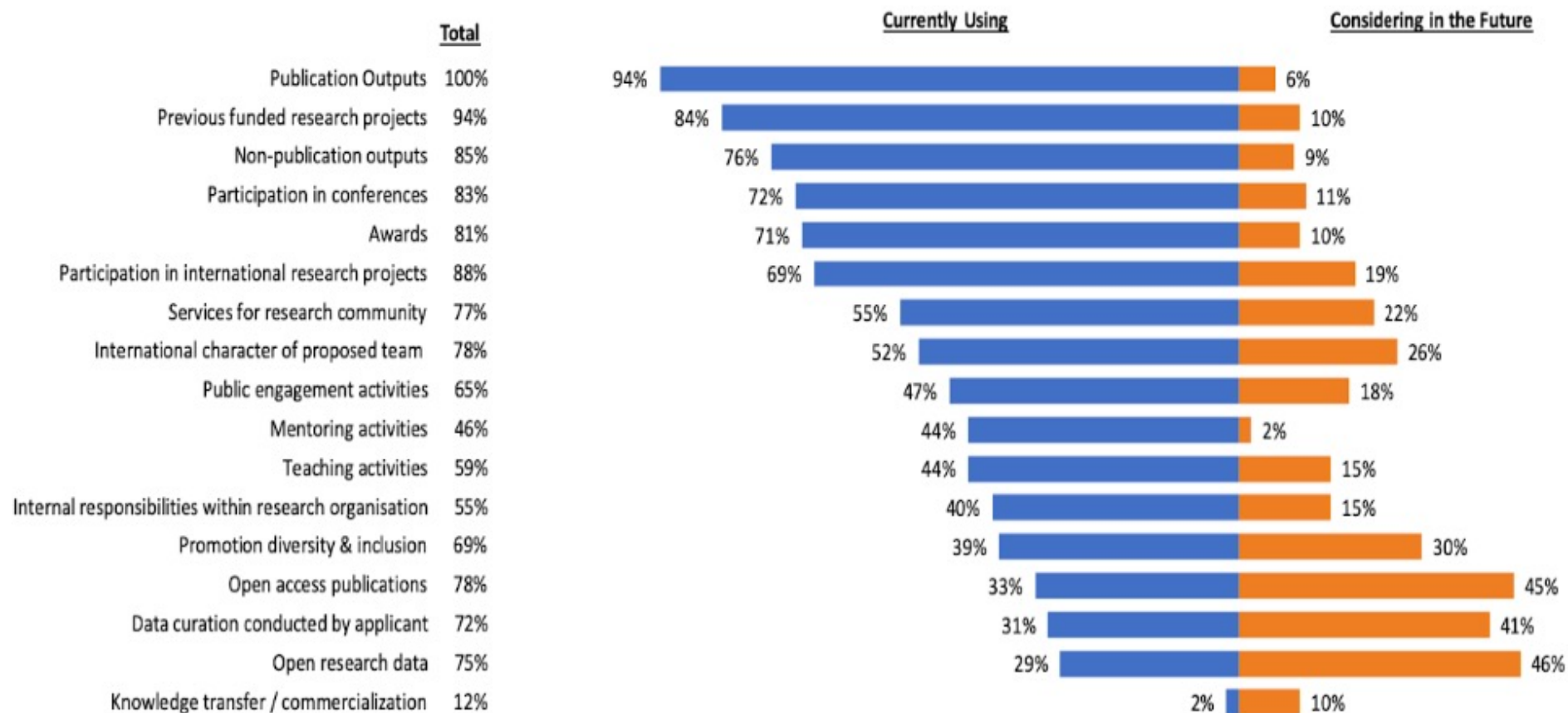
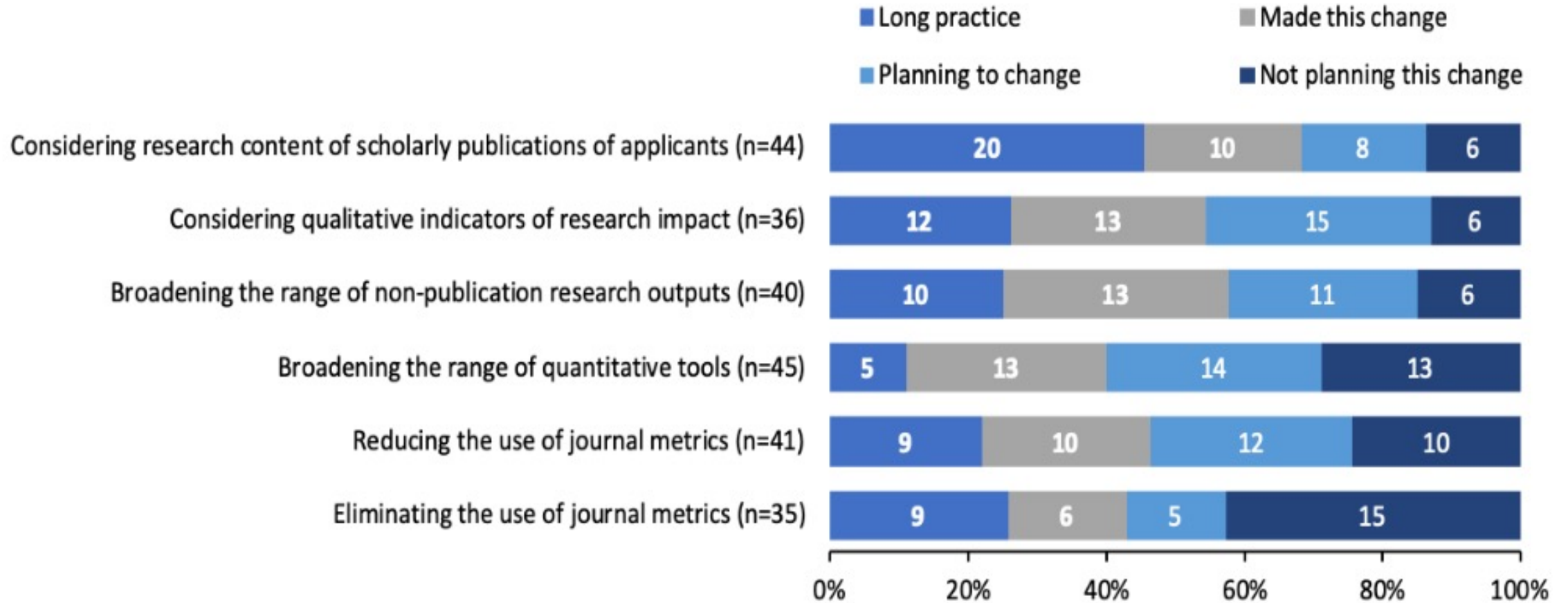


Figure 3: Research assessment indicators (to be) used by GRC participating organisations who responded to the survey (n=50, missing n=5)

Changes in the way research proposals are assessed





Support for more responsible research

11.11.2020



Responsible Research

eua
EU
UN
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BRIEFING

Reflections on University
Research Assessment
Concepts, issues and
S

 Leiden University | CWTS B.V. | Other CWTS sites

Home News Blog People Research Education

News » Transforming Research Excellence: New Ideas from the Global South

Transforming Research Excellence: New Ideas from the Global South

January 28th, 2020

Editors: Erika Kraemer-Mbula, Robert Tijssen, Matthew L. Wallace & Robert McLean


This recently released book takes a critical view of conceptual issues and practical problems that inevitably emerge when 'excellence' takes center stage in science systems in the Global South. What is 'excellent science'? And how to recognize and assess it? After decades of inquiry and debate there is still no satisfactory answer.

Confronting sticky problems and uncomfortable truths, it contains many insights and recommendations that point towards new solutions.



Priority 1: Continue to build national and international coalitions for responsible research assessment

Priority 2: Strengthen guidance & templates to translate principles into institutional policies & practices




RETHINKING RESEARCH ASSESSMENT SPACE TO EVOLVE ACADEMIC ASSESSMENT

A RUBRIC FOR ANALYZING INSTITUTIONAL PROGRESS INDICATORS AND CONDITIONS FOR SUCCESS

Research and researcher assessment is a systems challenge, suggesting that institutions that prioritize developing infrastructures to support their efforts may be better positioned to achieve their goals than those focused only on individual solutions.

	FROM FOUNDATION... <i>Core definitions and shared clarity of purpose</i>	TO EXPANSION... <i>Increased traction and capability development</i>	TO SCALING <i>Accelerated uptake and continuous improvement</i>
STANDARDS FOR SCHOLARSHIP <i>How are new definitions of "quality scholarship" formulated and applied?</i>	ALIGNMENT ON VALUES AND GOALS <i>THIS MIGHT LOOK LIKE...</i> Standards are explicitly designed and articulated to align with institutional mission and values, such as increasing equity and support for traditionally underrepresented, minoritized groups New standards for scholarship consider the balance across research, teaching, and service contributions including training, mentoring and good citizenship Specific definitions and standards of "quality" with regard to scholarship are articulated and shared across disciplines and review/promotion committees	DIVERSIFICATION OF STANDARDS <i>THIS MIGHT LOOK LIKE...</i> Scholarship is assessed using diverse indicators (e.g. societal impact), units of assessment (e.g. full body of work v. individual articles), and forms of output (e.g. non-journal contributions) Indicators of quality recognize non-individualized activities and accomplishments like team science New definitions of "scholarship" are deployed across the full range of institutional disciplines	ADOPTION OF NEW PRACTICES <i>THIS MIGHT LOOK LIKE...</i> Faculty have the ability to customize success measures to reflect their research interests and goals New standards, definitions, and criteria for evaluating the quality and impact of scholarship are integrated into the language and processes of new assessment practices
PROCESS MECHANICS AND POLICIES <i>How are new practices incorporated into review structures, processes, and institutional policies?</i>	DEBIASING DELIBERATIVE JUDGMENTS <i>THIS MIGHT LOOK LIKE...</i> Meaningful and appropriately rigorous qualitative structures for academic assessment, such as narrative CVs, are given due weight Structures and processes are applied consistently across assessment activities, taking into consideration alternate paths and starting points Use of new assessment mechanics extend beyond traditional evaluative contexts into ensuring equitable opportunities, mentoring, and retention to increase research and researcher diversity	CAPACITY TO SUPPORT NEW ACTIVITIES <i>THIS MIGHT LOOK LIKE...</i> Training on the goals and procedures of assessment processes and practices are accessible and continually maintained Institutions design processes that take into account the resource capacity of committee members to effectively adopt new assessment practices, such as additional burdens on time Institutions have designated senior functions or offices to ensure faculty capacity for new assessment practices and principles	INTEGRATION INTO EXISTING SYSTEMS <i>THIS MIGHT LOOK LIKE...</i> Assessment mechanics can be flexibly applied and adapted to accommodate diverse disciplines Mechanisms to support practices are codified and written into institutional policies New processes and practices are seamlessly integrated and widely adopted
ACCOUNTABILITY <i>How are individuals and institutions held liable for executing on new assessment practices?</i>	TRANSPARENCY AND CLARITY OF GOALS <i>THIS MIGHT LOOK LIKE...</i> The goals, principles, and practices of academic assessment and review, promotion, and tenure (RPT) activities are transparent and clearly articulated, and agreed upon by all participants Institutions have clearly defined expectations for adherence to academic assessment practices Examples of "what good looks like" are collected and shared to more concretely illustrate target outcomes and behaviors	ADHERENCE THROUGH COMMITMENT <i>THIS MIGHT LOOK LIKE...</i> Research evaluators self-monitor adherence to academic assessment principles and practices Senior leaders and committee members actively stipulate equitable assessment practices during both formal and informal career development contexts Institutions model ecosystem-level accountability, such as ensuring that system-level incentives align with and support agreed-upon principles and practices	PROACTIVITY IN ENGAGEMENT <i>THIS MIGHT LOOK LIKE...</i> Individuals actively contribute to the development and review of new practices and principles Departments proactively broaden and conduct outreach activities to include new or minoritized applicants Faculty serve as "ambassadors" for new academic assessment practices, such as when serving as external committee members
CULTURE WITHIN INSTITUTIONS <i>How are assessment practices perceived and adopted both within and outside of formal evaluation activities?</i>	INCLUSION AND ACCESS <i>THIS MIGHT LOOK LIKE...</i> More diverse types of individuals are involved in both defining and participating in career advancement processes, such as including early career researchers on RPT committees Representation of minoritized applicants meets or exceeds equity goals for both new hires and researcher retention Career growth and mentoring systems are intentionally designed to provide ongoing support for underrepresented hires	ADVOCACY AT INSTITUTIONAL LEVELS <i>THIS MIGHT LOOK LIKE...</i> Adoption of new assessment mechanisms is supported and advocated for by departmental and institutional leaders All individuals actively contribute to building more equitable practices—not just minoritized ones New research assessment norms are increasingly adopted as a default by faculty, administrators, and applicants	REFLEXIVITY THROUGH REFLECTION <i>THIS MIGHT LOOK LIKE...</i> "Positive friction," or intentional pause points to reflect on assessment practices and slow down business-as-usual processes is incorporated into both formal and informal assessment practices All participants in assessment activities feel processes achieve a balance of effectiveness and efficiency
EVALUATIVE AND ITERATIVE FEEDBACK <i>How are intervention outcomes and progress toward institutional values captured and continually improved upon?</i>	ARTICULATION OF DIVERSE INDICATORS <i>THIS MIGHT LOOK LIKE...</i> Goals and success criteria for individual academic assessment interventions are well-defined and shared Use of leading indicators (e.g. increased diversity of inquiries for open positions) supplements lagging indicators (e.g. increased diversity of hires) when gauging intervention efficacy Goals and success criteria are automatically reviewed whenever institutional strategy is updated	SYSTEMATIZATION TO GAIN CONSISTENCY <i>THIS MIGHT LOOK LIKE...</i> Quantitative and qualitative data from interventions are captured in a standardized way Mechanisms that capture both quantitative and qualitative feedback are explicitly designed and embedded into assessment processes from the outset Best practices and examples of measurement and/or gathering feedback are codified and shared across disciplines within the institution	IMPROVEMENT USING FEEDBACK LOOPS <i>THIS MIGHT LOOK LIKE...</i> Interventions that don't achieve desired outcomes are considered learning opportunities, not failures Outcomes and data are collected and monitored to ensure high standards of evaluation quality and identify unintended consequences or adverse effects Feedback and other indicators are refined and/or examined in aggregate to identify and investigate patterns or opportunities for course-correction



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RESOURCE

SPACE to evolve academic assessment: A rubric for analyzing institutional conditions and progress indicators

ADVOCACY RESOURCES TOOLS FOR: RESEARCH INSTITUTES

This is part of DORA's toolkit of resources to support academic institutions that are improving their policies and practices. Find the other resources in the toolkit [here](#).

Improving research and scholarship assessment practices requires the ability to analyze the outcomes of efforts and interventions. However, when conducted only at the unit level of individual interventions, these evaluations and reflections miss opportunities to understand how institutional conditions themselves set the table for the success of new efforts, or how developing institutional capabilities might improve the effectiveness and impact of these new practices at greater scale. The SPACE rubric was developed to help institutions at any stage of academic assessment reform gauge their institutional ability to support interventions and set them up for success.



RETHINKING RESEARCH ASSESSMENT SPACE TO EVOLVE ACADEMIC ASSESSMENT

A RUBRIC FOR ANALYZING INSTITUTIONAL PROGRESS INDICATORS AND CONDITIONS FOR SUCCESS

Research and researcher assessment is a systems challenge, suggesting that institutions that prioritize developing infrastructures to support their efforts may be better positioned to achieve their goals than those focused only on individual solutions.

	FROM FOUNDATION... <i>Core definitions and shared clarity of purpose</i>	TO EXPANSION... <i>Increased traction and capability development</i>	TO SCALING <i>Accelerated uptake and continuous improvement</i>
STANDARDS FOR SCHOLARSHIP <i>How are new definitions of "quality scholarship" formulated and applied?</i>	ALIGNMENT ON VALUES AND GOALS <i>THIS MIGHT LOOK LIKE...</i> Standards are explicitly designed and articulated to align with institutional mission and values, such as increasing equity and support for traditionally underrepresented, minoritized groups New standards for scholarship consider the balance across research, teaching, and service contributions including training, mentoring and good citizenship Specific definitions and standards of "quality" with regard to scholarship are articulated and shared across disciplines and review/promotion committees	DIVERSIFICATION OF STANDARDS <i>THIS MIGHT LOOK LIKE...</i> Scholarship is assessed using diverse indicators (e.g. societal impact), units of assessment (e.g. full body of work v. individual articles), and forms of output (e.g. non-journal contributions) Indicators of quality recognize non-individualized activities and accomplishments like team science New definitions of "scholarship" are deployed across the full range of institutional disciplines	ADOPTION OF NEW PRACTICES <i>THIS MIGHT LOOK LIKE...</i> Faculty have the ability to customize success measures to reflect their research interests and goals New standards, definitions, and criteria for evaluating the quality and impact of scholarship are integrated into the language and processes of new assessment practices

OPEN ACCESS

PERSPECTIVE

Assessing scientists for hiring, promotion, and tenure

David Moher, Florian Naudet, Ioana A. Cristea, Frank Miedema, John P. A. Ioannidis, Steven N. Goodman

Version 2 | Published: March 29, 2018 | <https://doi.org/10.1371/journal.pbio.2004089>

Article	Authors	Metrics	Comments	Related Content
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Abstract

- Introduction
- Methods
- Results
- Supporting Information
- Acknowledgments
- References

- Reader Comments (2)
- Media Coverage (3)
- Figures

Abstract

Assessment of researchers is necessary for decisions of hiring, promotion, and tenure. A burgeoning number of scientific leaders believe the current system of faculty incentives and rewards is misaligned with the needs of society and disconnected from the evidence about the causes of the reproducibility crisis and suboptimal quality of the scientific publication record. To address this issue, particularly for the clinical and life sciences, we convened a 22-member expert panel workshop in Washington, DC, in January 2017. Twenty-two academic leaders, funders, and scientists participated in the meeting. As background for the meeting, we completed a selective literature review of 22 key documents critiquing the current incentive system. From each document, we extracted how the authors perceived the problems of assessing science and scientists, the unintended consequences of maintaining the status quo for assessing scientists, and details of their proposed solutions. The resulting table was used as a seed for participant discussion. This resulted in six principles for assessing scientists and

DORA

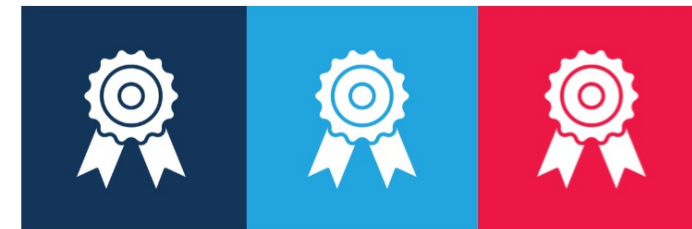
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Reimagining academic assessment: stories of innovation and change

Case studies of universities and national consortia highlight key elements of institutional change to improve academic career assessment.

What should we do with research 'excellence'?

30.09.2021 | PROJECT UPDATES



Over the last 20 years, the notion of 'excellence' has permeated almost every inch of the research ecosystem - from research funding schemes, evaluation frameworks to publishing decisions. Once believed to be a way to measure the best of the best, 'excellence' is now more likely to be viewed as too ambiguous, the source of undesirable behaviours and a barrier to an inclusive research culture.

To dig into this, RoRI's [EXCELLENCE project](#) is exploring how the concept of 'excellence' is defined and used when it comes to research funding and evaluation. The project has two parts: the first is an [extensive literature review analysing how 'excellence' has evolved and been understood](#); and the second is an empirical study looking at the use of 'excellence' by funders.

Priority 3: Experiment, evaluate & amplify what works

Responsible assessment faces the acid test

The University of Liverpool is planning lay-offs using controversial measures. How should the movement for responsible research respond?

A leading UK university has become mired in a public dispute over how it is assessing researchers' performance. The evolving situation at the University of Liverpool is being watched closely by concerned academics around the world – and is raising questions about whether more needs to be done to ensure that universities assess their researchers equitably. At the end of last month, the leaders of some of the world's foremost responsible-research initiatives – the Hong Kong Principles, the INORMS Research Evaluation Group, the Leiden Manifesto and the Metric Tide – wrote a strongly worded letter arguing that the University of Liverpool's proposals remain

“Does the research community need a body with the

redundancy. In response to the threat of redundancies, researchers took industrial action during May, June and July.

One influential initiative is choosing to negotiate privately with the university. This is the organization behind the San Francisco Declaration on Research Assessment (DORA), an international voluntary agreement through which research organizations vow to conduct research assessment responsibly.

DORA's signatories pledge not to use metrics such as the Journal Impact Factor to evaluate researchers, and to be transparent in the criteria used to make decisions on matters such as hiring and promotion. Liverpool is one of some 2,200 organizations that have signed the declaration. DORA is in talks with the university, but choosing not to reveal further details. A statement on DORA's website says that it expects signatories to abide by their pledges, while also reiterating that it is not a regulatory body.

DORA's approach – to resolve disputes constructively but without publicity – has had some effect. Liverpool initially included the field-weighted citation metric on its criteria for redundancies, but dropped that after consultation with DORA. However, there are conflicting views of whether this puts Liverpool in the clear. The university told *Nature* its amended criteria are “in keeping with the principles of DORA”. In response, a DORA spokesperson said there are “ongoing concerns”. Such mixed messages show

LEIDEN MANIFESTO FOR RESEARCH METRICS



Professor Dame Janet Beer, Vice-Chancellor of the University of Liverpool.

cc: Professor Anthony Hollander, Pro-VC for Research, University of Liverpool
Professor Louise Kenny, Executive Pro-VC for Research, Faculty of Health and Life Sciences, University of Liverpool
All members of the Senate of the University of Liverpool.

25th June, 2021.

Dear Professor Dame Janet Beer,

We write as recognised experts in the responsible use of research metrics.

We note from the published document '[Managing Change: Project SHAPE Phase 2 Amended Proposals](#)', that the primary metric used by the University of Liverpool in the 'rounded assessment' used for redundancy selection is research grant income. We further note that a range of other qualitative metrics are used in the selection process, along with some broader categories such as "evidence of significant non-research income."

However, we remain highly concerned that those proposals remain very squarely out of line with accepted practice in the sector.

First, we do not see it as acceptable that a University can remove staff *en masse* primarily because of a failure to meet a specified research income threshold. We believe that any issue of research performance must be dealt with using established procedures that have broad support of academic staff, and that those procedures should take into account the full range of contributions to research. We note, in particular, that none of the published criteria recognise essential research tasks like peer review, supervision and mentoring. This narrow view of research contribution does not address the need for humility and diversity, set out in *The Metric Tide*, and is in breach of principle 5 of the *Hong Kong Principles for Assessing Researchers* and principle 2 of the *Leiden Manifesto*.

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How should Dora be enforced?

By Stephen Curry

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Dispute over Liverpool's use of metrics is best resolved through dialogue, says Stephen Curry

This January, reports emerged that the University of Liverpool was using research metrics to identify academic staff at risk of redundancy in its restructuring of the Faculty of Health and Life Sciences. Such processes are always painful, but Liverpool's methods—notably its use of the field-weighted citation index (FWCI) and grant income targets—saw the issues spill beyond the normal boundaries of industrial disputes.

Priority 4: Develop more sophisticated frameworks for compliance, accountability & enforcement



Speeding up to keep up: exploring the use of AI in the research process

Jennifer Chubb¹ · Peter Cowling² · Darren Reed³

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Abstract

There is a long history of the science of intelligent machines and its potential to provide scientific insights have been debated since the dawn of AI. In particular, there is renewed interest in the role of AI in research and research policy as an enabler of new methods, processes, management and evaluation which is still relatively under-explored. This empirical paper explores interviews with leading scholars on the potential impact of AI on research practice and culture through deductive, thematic analysis to show the issues affecting academics and universities today. Our interviewees identify positive and negative consequences for research and researchers with respect to *collective* and *individual use*. AI is perceived as helpful with respect to information gathering and other narrow tasks, and in support of impact and interdisciplinarity. However, using AI as a way of 'speeding up—to keep up' with bureaucratic and metricised processes, may proliferate negative aspects of academic culture in that the expansion of AI in research should assist and not replace human creativity. Research into the future role of AI in the research process needs to go further to address these challenges, and ask fundamental questions about how AI might assist in providing new tools able to question the values and principles driving institutions and research processes. We argue that to do this an explicit movement of meta-research on the role of AI in research should consider the effects for research and researcher creativity. Anticipatory approaches and engagement of diverse and critical voices at policy level and across disciplines should also be considered.



GRANTS

AI is selecting reviewers in China

The tool is already saving time for the country's major grant funding agency.

BY DAVID CYRANOSKI

China's largest funder of basic science is piloting an artificial intelligence (AI) tool that selects researchers to review grant applications, in an attempt to make the process more efficient, faster and fairer. Some researchers say the approach by the National

Natural Science Foundation of China (NSFC) is world-leading, but others are sceptical about whether AI can improve the process. Choosing researchers to peer review project proposals or publications is time-consuming and prone to bias. Several academic publishers are experimenting with AI tools to select reviewers and carry out other tasks. And a few

funding agencies, including some in North America and Europe, have trialled simple AI systems, some of which match keywords in grant applications to those in publications of grant scientists to identify potential reviewers. The NSFC is building a more sophisticated system that will crawl online scientific-literature databases and scientists' personal

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ARTICLE

<https://doi.org/10.1057/s41599-020-00703-8>

OPEN



AI-assisted peer review

Alessandro Checco¹ , Lorenzo Bracciale² , Pierpaolo Loreti², Stephen Pinfield¹ & Giuseppe Bianchi²

The scientific literature peer review workflow is under strain because of the constant growth of submission volume. One response to this is to make initial screening of submissions less time intensive. Reducing screening and review time would save millions of working hours and potentially boost academic productivity. Many platforms have already started to use automated screening tools, to prevent plagiarism and failure to respect format requirements. Some tools even attempt to flag the quality of a study or summarise its content, to reduce reviewers' load. The recent advances in artificial intelligence (AI) create the potential for (semi) automated peer review systems, where potentially low-quality or controversial studies could be flagged, and reviewer-document matching could be performed in an automated manner. However, there are ethical concerns, which arise from such approaches, particularly associated with bias and the extent to which AI systems may replicate bias. Our main goal in this study is to discuss the potential, pitfalls, and uncertainties of the use of AI to approximate or assist human decisions in the quality assurance and peer-review process associated with research outputs. We design an AI tool and train it with 3300 papers from three conferences, together with their reviews evaluations. We then test the ability of the AI in predicting the review score of a new, unobserved manuscript, only using its textual content. We show that such techniques can reveal correlations between the decision process and other quality proxy measures, uncovering potential biases of the review process. Finally, we discuss the opportunities, but also the potential unintended consequences of these techniques in terms of algorithmic bias and ethical concerns.

Priority 5: RRA needs to anticipate and keep pace with new tools and technologies of assessment and evaluation



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