

RECOMMENDATIONS ON  
RESEARCH RECOGNITION SYSTEMS

**RECOGNISING  
WHAT WE VALUE**

2023

SCIENCE  
**EUROPE**  
Shaping the future of research

# Colophon

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April 2023

## **Science Europe Recommendations on Research Recognition Systems: Recognising What We Value**

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# 1. Introduction

**The rewards, incentives, and recognition systems of research have profound influence over the ways in which research is conceived, conducted, disseminated, communicated, and used. They affect the behaviours and career pathways of all members of the research community and are therefore intrinsically linked to research cultures.**

Researchers, research services, and other community members at Research Funding and Performing Organisations (herein referred to as research organisations) play a key role in establishing recognition systems through the research assessment processes that they implement, and the criteria and weightings that they use. These recognition systems, thus, strongly contribute to determining what is understood as research quality and excellence, which are common high-level targets of assessments around the global but remain inherently hard to define.

At a time when many organisations and initiatives are discussing and setting-up actions to change the way research, researchers, and research institutes are assessed, this Science Europe Paper sets out a vision for future recognition systems and offers a collection of recommendations aimed at research organisations, and good practice examples that provide examples of possible directions for change at institutional level. The recommendations presented herein are particularly timely in relation to the launch of the [Coalition for Advancing Research Assessment \(CoARA\)](#), and other major initiatives that are aiming for the systemic reform of research assessment systems.

## 2. Current Challenges and Opportunities

**In the past decade, a plethora of initiatives have focussed attention on research assessment, and numerous challenges have been identified.**

In 2019, the European University Association conducted a study on [“Research Assessment in the Transition to Open Science”](#) and concluded that universities must broaden the variety of academic activities incentivised and rewarded and review entrenched understandings of concepts such as quality and excellence. Science Europe, in its 2020 [Position Statement and Recommendations on Research Assessment Processes](#) highlighted a number of systemic challenges including; potential bias and discrimination, high competition for limited funds with many high quality proposals and applicants, significant time and effort burdens placed on all involved in assessment processes, and a need to broaden what is understood by research quality. The League of European Research Universities published a [“Framework for the Assessment of Researchers”](#) in 2022 where they note that the assessment of researchers/research remains too strongly focussed on past performance and on individual outputs. The assessment of research institutes has also been put under scrutiny, with the widely recognised misuse of indicators as proxies for quality research and education (see [Gadd, 2022](#) for a short summary).

These are just a few examples that have shone a light on the myriad of challenges that face research systems in the ways that they assess research, researchers, and research organisations. These challenges have spawned a large number of international initiatives, declarations, and recommendations, including the [San Francisco Declaration on Research Assessment \(DORA\)](#), the [Leiden Manifesto](#), and the [Hong Kong Principles](#), as examples. Actions are also taking place within a number of national research systems: the [Dutch Recognition and Rewards Programme](#), the [UKRI Resume for Research and Innovation](#), the [German Research Foundation Measures to Support a Shift in the Culture of Research Assessment](#), and the [Norwegian toolbox for recognition and rewards \(NOR-CAM\)](#), for instance. The Research Foundation Flanders has recently amended its [applications forms](#) for the purpose of broadening

the research(er) profile and responsible research and innovation. All these initiatives point to the need for concerted action on research assessment, engaging all stakeholder levels, covering all disciplines and domains, and being relevant to the many different types of assessment conducted. In recent years, research culture perspectives have also become prevalent, and the topic is a priority action for Science Europe (see our [2021 Research Culture Statement](#)). In this regard, it is also important that the challenges faced by research systems are contextualised according to research culture perspectives such as the values that underpin research systems and the behaviours that policies and practices promote. Here, there is growing consensus that our current systems do not always reflect our shared values (rewards systems promoting individualism rather than collaboration as an example) and do often incentivise perverse behaviours (i.e. the publish or perish phenomenon).

There are now many international, multi-stakeholder initiatives that are aiming to tackle to well-known dysfunctions in the ways that research ideas, researchers, and research institutes are assessed. These include [DORA and Project TARA](#), the [Reform of Research Assessment Initiative](#) / the Coalition for Advancing Research Assessment (CoARA), and the [Global Research Council activity on Responsible Research Assessment](#). These highlight the strong and ever-growing momentum towards a new research assessment system, yet a common question that has not been clearly answered is what the new system we are moving towards might look like. Building upon Science Europe’s previous work on research assessment, and now focussing on recognition systems, Science Europe presents a vision and recommendations that offer a suggestion of what some aspects of new research assessment systems may look like. This vision, and its recommendations, should act as a reference for ongoing discussions such as those related to [CoARA](#).

# 3. A Vision for Future Recognition Systems

**We envisage research assessment systems that effectively recognise research quality, foster the best research, and support the independence and self-governing nature of research. Research creates new knowledge and generates impact: both academic and non-academic.**

Our understandings of the purpose of research and research quality should acknowledge a wide variety of activities, outputs, and skills. Effective assessment systems allow good ideas to flourish and talented people to thrive by recognising the myriad of contributions, both primary and secondary, that make up modern research: all contributing to knowledge generation and impact. Future recognition systems will:

- clearly reflect the shared values that underpin our research systems.
- include common elements that will enhance transparency and trust.
- focus equally on the research process and research outputs, acknowledging the importance of following the highest ethics and integrity standards and the role that replication, reproducibility, and negative/neutral results in the advancement of knowledge.
- encourage activities and actions that foster public engagement and involvement.
- ensure that all relevant research contributions are acknowledged and valued, thus enabling diversified career pathways throughout the research sector and beyond.
- value and reward the myriad of 'services to research' and support activities that are vital to the functioning and quality of research systems such as peer review, mentoring, leadership, project management, and technical support, as examples. Activities that link research and teaching should also be valued (research-based teaching).
- enable inter- and trans-disciplinary activities (including intersectoral engagement) whilst not requiring them of all research activities.
- reward open science practices, recognising their role in supporting quality and impact.
- incorporate contextual perspectives into the assessment of achievements, acknowledging career stages and different opportunity profiles (e.g., socioeconomic backgrounds, and diversity elements).
- where appropriate, carefully consider 'potential' beyond just the presented track-record.
- emphasize qualitative assessment of the content of activities and outputs supported by the responsible use of appropriate quantitative metrics that may, for instance, be valuable for comparability and transparency.

This vision should be viewed as an adaptable framework, noting that not all points will be relevant in all contexts. Processes and criteria used must remain flexible to be functional for different assessment targets and across different domains.

# 4. Recommendations

**Modern recognition systems should reflect the values that underpin research systems.**

Science Europe builds upon its [Values Framework](#) and offers the following recommendations and good practice examples as a guide for research funding and performing organisations to appraise and adapt their assessment systems in ways that can support broader notions of research quality and promote positive research cultures.

Ultimately, these recommendations should contribute to enabling research systems that can effectively respond to the myriad of internal and external demands placed on research whilst fostering an attractive research environment where ideas and people can thrive.





## Autonomy/Freedom

“Supports the self-governing nature of research and emphasises the importance of the research community and research organisations being free to pursue and express ideas and follow research processes, questions, and activities of their choice responsibly and according to their expertise, interests, and priorities.”

SCIEUR.ORG/VALUES-FRAME



### Good practice examples

- The Academy of Finland (AKA) follows a [“National recommendation on responsible researcher evaluation in Finland”](#) that includes how “characteristics of research fields” are contextualised as part of research assessments to combat potential biases between research fields that, for instance, have different forms of output or rely on different research team sizes etc.
- The Norwegian Career Assessment Matrix (NOR-CAM) offers a toolbox for recognition and rewards in academic careers. The guide is flexible, yet still offers a systematic and structured framework for assessments and promotes the recognition of both individual competencies and achievements in groups in a flexible manner appropriate to the specific assessment being undertaken. [https://www.uhr.no/en/\\_f/p3/i86e9ec84-3b3d-48ce-8167-bbaeof507ce8/nor-cam-a-tool-box-for-assessment-and-rewards.pdf](https://www.uhr.no/en/_f/p3/i86e9ec84-3b3d-48ce-8167-bbaeof507ce8/nor-cam-a-tool-box-for-assessment-and-rewards.pdf)



### Recommendations

1. Balance assessment criteria so that research/researcher potential and innovative ideas are better recognised alongside past performance and previous outputs.
2. Ensure that recognition systems foster free expressions of ideas, balanced with the needs of the local/national research systems, where relevant.



## Care and Collegiality

“Reflects the need for research processes, activities, and the research community to care for and nurture the ecosystem that research exists within, including responsible resource use and other social/societal considerations. It highlights the responsibility of the entire research community in creating and maintaining a supportive and respectful environment, free from bullying and harassment, for all involved in the research process, facilitating individual and group growth.”

[SCIEUR.ORG/VALUES-FRAME](https://scieur.org/values-frame)



### Recommendations

1. Incentivise and then recognise good leadership, teamwork, and mentorship as a part of research assessment processes in a career-stage specific manner.
  - i. Provide space and guidance on the reporting of leadership, teamwork and mentorship activities in application processes, where relevant.
  - ii. Ensure that all members of teams (senior and junior) are engaged in and responsible for maintaining collegial environments.
2. Ensure that assessment processes enforce proportionate responses to substantiated evidence of bullying or harassment.
3. As part of application forms, explicitly dedicate space for descriptions of professional development activities, undertaken and/or planned.
4. Recognise efforts to incorporate responsible practices, such as careful resource use in proposed research activities, as part of research assessments.



### Good practice examples

- The Luxembourg National Research Fund (FNR) annually presents awards to researchers including for ‘Outstanding Mentorship’
- The Centre for Digital Life Norway has established a responsible research and innovation [policy](#) that promotes considerations of the societal context of research.



# Collaboration



“Relates to the importance of promoting co-operation (including reproducibility and re-use): 1) between people who have complementary expertise within disciplines (Team Science), 2) across disciplines (inter- and trans-disciplinarity), 3) for the research process in general (replication and reproduction activities), 4) with relevant education, policy, and industry sectors, and 5) with society, where relevant. Collaboration, balanced against competition, is necessary to support quality.”



SCIEUR.ORG/VALUES-FRAME

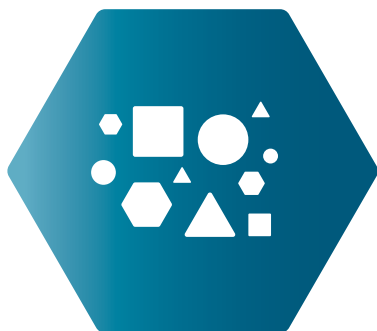
## Recommendations

1. Ensure that all relevant contributions to the research endeavour are appropriately recognised as part of assessments at all levels. This should include research support and management activities and all relevant services to research.
  - i. To enable this, project monitoring and reporting should also include evaluations of management and ‘service to research’ activities.
2. Within academia, assess researchers based upon both individual and team contributions where appropriate, rewarding the identification of collaborative activities where a range of competencies is required for the research activities proposed.
  - i. To enable such collaborations, specific recognition should be given to the skills and competencies needed to create and manage effective collaborative environments.
3. Between academia and society, recognise, where appropriate, activities that include high-quality public engagement and involvement as means of improving research quality and trust.
4. For academia / public and/or private sector collaboration, provide space for descriptions of academia/industry activities, where relevant and beneficial to the research proposed.



## Good practice examples

- As part of the [Dutch Recognition and Rewards Programme](#), academics are recognised for their individual contributions and also their contributions to the performance of relevant teams.
- [CRediT](#) (Contributor Roles Taxonomy) defines roles that contributors have as part of scholarly outputs. Defining roles is key starting point for their recognition as part of assessments. Such role taxonomies could be expanded and applied beyond just research outputs, to the entire research process.
- At the [National Institute for Nuclear Physics \(INFN\)](#) Italy, one of four high level criteria for researcher evaluations is ‘Coordination Activities’ where management activities and services such as positions on editorial committees are considered and evaluated.
- The Health Research Board (HRB) Ireland include public review of Public and Patient Involvement (PPI) activities in research proposals in the majority of their funding schemes: <https://www.hrb.ie/funding/funding-schemes/public-patient-and-carer-involvement-in-research/>



## Equality, Diversity, and Inclusion

“Ensures that all roles within the research community are accessible and accommodating to all, regardless of sex and gender, ethnicity, disability, sexuality, class, faith, and other possible factors. It highlights the importance of supporting a diversity of social categories, experiences, competencies, and merits of individuals within the research community

as well as the research inputs (methods, data, tools) and outputs (communication and dissemination types) that contribute to the research process and the organisational structures that govern them. These should be accessible to any individual, research unit, discipline, or organisation within the research community and beyond.”

[SCIEUR.ORG/VALUES-FRAME](https://scieur.org/values-frame)



### Recommendations

1. Promote diversity within research teams: recognise and reward activities, actions, and provisions that support the inclusion of minority groups in relation to the described research.
2. Ensure that a diverse range of activities, outputs, and outcomes are recognised and contextualised according to different research roles and career stages, taking care to consider and minimise potential forms of bias and discrimination.
  - i. Foster consideration of equality, diversity and inclusion in research proposals and activities by offering guidance and training and providing space for descriptions of such actions.
  - ii. Acknowledge the roles that different societies and cultures have on the career paths of researchers.
3. Promote equality, diversity, and inclusion perspectives at all stages of the research cycle including, for instance, in research agenda setting and across all forms of public engagement activities.



### Good practice examples

- UK Research and Innovation (UKRI) has recently published (March 2023) the first edition of its [EDI Strategy](#) as a central component of the organisations vision and mission. The strategy outlines the organisations ambition for, and actions towards “a thriving research and innovation system, by everyone, for everyone”.
- At the Spanish National Research Council (CSIC) achievement of gender equality has been a key organisational goal since 2002, year in which the Commission for Women in Science was created. The Commission has monitored progress ever since and supported the organisational design of Equality Plans, Action and Prevention Protocols and Guidelines to prevent bias in promotion and recruitment processes.
- The German Research Foundation (DFG) published a [statement](#) in 2020 on the importance of sex, gender and diversity to research projects. Further, in 2022, members of the DFG committed to “[Research-Oriented Equity and Diversity Standards](#)”



# Integrity and Ethics

“Refers to the efforts by all involved to maintain and improve reliability, honesty, respect, and accountability in the research domain through the rigorous conduct and funding of research, as well as in the communication of research processes, outputs, and outcomes. This involves acknowledgement and contextualisation of the current stage of research and of all contributions, standards/

methods, continuous quality control, and includes the facilitation and recognition of all aspects of good and responsible research practice.”



SCIEUR.ORG/VALUES-FRAME

## Recommendations

1. Reflect on how assessment criteria and peer review/panel processes can focus attention on the robust and reproducible research processes and good research practices.
2. Foster the creation and sharing of resources such as data, metadata, code, and software, including the provision and analysis of negative/neutral results that may not fit within the current publishing system but, nevertheless, reflect good research practice.
  - i. Provide guidance and space in applications to allow for descriptions of non-published research outputs and the benefits that they provide to the research community.

document that describes actions to promote good research practice as part of the research process: <https://allea.org/code-of-conduct/>.

- The Spanish National Research Council (CSIC) published a revised edition of its [Code of Good Research Practices in 2021](#). This new Code is aimed at encouraging responsible conduct and excellence in research. It focuses on scientific work paying special attention to research on human beings and animals and to the security and health of researchers and the rest of society, including environmental protection. The Code also addresses good practices in the context of science-communication activities.
- The German Research Foundation (DFG) hosts an open portal where the research community is invited to share best practices related to the DFGs Code of Conduct “Guidelines for Safeguarding Good Research Practice”: <https://wissenschaftliche-integritaet.de/en/>.
- Research Foundation Flanders (FWO) has published profiles, that provide descriptions of what is expected, of supervisors, PhD students, post-doctoral researchers, and host institutions, and what is and is not acceptable in relation to research integrity: <https://www.fwo.be/en/the-fwo/research-policy/research-integrity/research-integrity-within-the-fwo/>



## Good practice examples

- This recommendation is in alignment with The Hong Kong Principles of The World Conferences on Research Integrity, and implementation examples are provided by WCRIF: <https://wcrif.org/best-practice>.
- The European Code of Conduct is a well-established international reference



## Openness and Transparency

“Describes the need for all aspects of research to be shared and accessible for examination (whenever possible), re-use, and extension (whilst respecting ethics and integrity) and emphasises the necessity that the research process (from data sharing to evaluation processes) is appropriately explained and justified to relevant stakeholders at all levels.”



SCIEUR.ORG/VALUES-FRAME

### Recommendations

1. Open science practices should be explicitly recognised in assessment processes, where relevant, and research organisations should provide clear guidance on the types of open science practices that they recognise, and how to report these practices.
  2. Provide clear guidance and, where possible, suggest standardised means of reporting all relevant contributions in application process.
    - i. A structured approach to achievement and track-record reporting can increase transparency of the types of contributions that will be recognised.
- reporting a variety of contributions including peer review and research resource use.
  - The Academy of Finland (AKA) continually and transparently adapts its processes and policies in support of openness. For instance, policies related to Data Management Plans (DMPs) have been adapted in recent years. AKA now views DMPs as the start of a co-operative process between projects and research services, and all projects are asked to provide information on their data management and openness processes and outputs as part of their final reporting - <https://www.aka.fi/en/research-funding/apply-for-funding/how-to-apply-for-funding/az-index-of-application-guidelines2/data-management-plan/data-management-plan/>



### Good practice examples

- Science Europe provides practical guidance and templates for research data management activities aimed at research organisations, reviewers, and researchers: <https://www.scienceeurope.org/our-priorities/research-data/research-data-management/>
- Research methods and protocols can be made openly available on platforms such as [protocols.io](https://www.protocols.io). Wellcome offer guidance on research records, for instance.
- [ORCID](https://orcid.org) integration as part of application processes offers a standardised structure for reporting a variety of contributions including peer review and research resource use.
- The [FAIRsFAIR project](https://www.fair4research.eu) (Fostering Fair Data Practices in Europe) provides policy recommendations and a support programme towards the realisation of FAIR data across all aspects of the research process based on the findings that emerged during the project lifetime.
- The Executive Agency for Higher Education, Research, Development, and Innovation Funding of Romania (UEFISCDI) published in December 2022 [the White Paper on the Transition to Open Science 2023-2030](#), following an extensive consultation and collaboration with initiatives and experts. The document defines a vision for the time horizon of 2030 together with a set of 8 strategic objectives and the necessary actions to achieve them. One of its strategic objectives is focused on adapting the process of evaluating and rewarding research in the new context of open science.

## 5. Next Steps

**Care must be taken when considering changes to research assessment criteria, and it is evolution instead of revolution that is needed.**

The recommendations in this report offer examples of the types of changes that can help contribute to the evolution of research assessment and thus also research culture. Changes to assessment criteria and weighting need to be tested and appraised under controlled conditions (such as pilot schemes) in as open a manner as possible to increase transparency, contribute

to research-on-research, and to foster mutual learning. In this regard, Science Europe commits to establishing a forum where member organisations and other stakeholders can share knowledge and insight, collectively appraise changes made, and discuss further actions to maintain momentum in the collective push for the evolution of research systems.

### Contributors

**This Science Europe paper was developed by the Task Force on Recognition Systems in consultation with the Working Group on Research Culture and was commented on by the Science Europe Governing Board. A written consultation of key research stakeholders was also conducted.**

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