

POSITION STATEMENT
**INTEGRITY AT THE
HEART OF HEALTHY AND
EFFECTIVE RESEARCH
CULTURES**
2024

SCIENCE
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Shaping the future of research

Colophon

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Position Statement 'Integrity at the heart of healthy and effective research cultures'

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INTEGRITY AT THE HEART OF HEALTHY AND EFFECTIVE RESEARCH CULTURES



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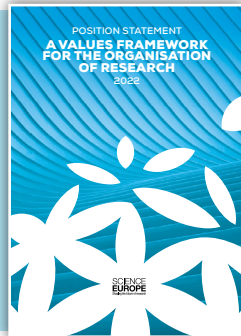
Introduction

Research integrity is a cornerstone of robust and reliable research systems, serving as the foundation for the trustworthiness of all research activities. As such, it also underpins our understanding of research quality: a key priority for organisations that fund and perform research.

In 2021, Science Europe launched its five-year [Strategy Plan](#), including a priority focus on research culture. In a two-year exercise, a set of core values, integral to all aspects of research systems, was discussed and agreed by the Science Europe membership. These shared values included 'Integrity and Ethics', placing the topic at the centre of discussions contributing to the evolution of research cultures in Europe, both nationally and internationally.

A Values Framework for the Organisation of Research (2022)

DOI: [10.5281/zenodo.6637847](https://doi.org/10.5281/zenodo.6637847)



In light of the updated [European Code of Conduct for Research Integrity](#) (2023) by ALLEA, Science Europe and its Member Organisations have taken the opportunity to reflect on and reiterate the importance of research integrity. These reflections are particularly timely as we increasingly focus on holistic understandings of our research and innovation systems by linking the core values that underlie research to the policies and practices of research organisations, and the behaviours and attitudes of the research community.

Further, strategic policy actions such as the open science movement and the reform of research assessment agenda (notably through [CoARA](#)) rely on integrity as a precondition to be successful. It is therefore right that the spotlight is put on research integrity, especially at a time when many challenges and strains that face our research systems may result in elevated levels of misconduct and other breaches of integrity. These challenges include limited funding, research precarity, narrow incentives, and the influence of technologies such as generative artificial intelligence (which also provides opportunities for improving the ways in which research is conducted, communicated, administered, and governed).



Seven Reasons to Care About Integrity in Research (2015)

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In 2015, Science Europe set out seven reasons why research organisations care about research integrity, and each one is as relevant today as it was nearly a decade ago, as research integrity:

1. safeguards the foundations of science and scholarship.
2. maintains public confidence in researchers and research evidence.
3. underpins continued public investment in research.
4. protects the reputation and careers of researchers.
5. prevents adverse impact on patients and the public.
6. promotes economic advancement.
7. prevents avoidable waste of resources.

In this statement, Science Europe and its Member Organisations re-affirm the importance of research integrity, add several new reasons to the list published in 2015, and highlight numerous actions that Science Europe members and research funding and performing organisations in general should consider to ensure that research integrity is at the core of the research systems and cultures they work within. This document also builds on the discussions and conclusions of the 2022 Science Europe High Level Workshop '[Research Ethics and Integrity in the Context of Public Engagement](#)', where integrity and public trust in research were key focuses.

Reflections within Science Europe, and in dialogue with research stakeholders, have led to the renewal and expansion of our 'reasons to care about integrity in research'.

Expanded and Renewed Reasons to Care About Integrity in Research

Research Integrity Underpins Research Quality

Over the last decade, the movement to recognise and implement a more pluralistic understanding of terms such as research quality and excellence has gained momentum (see [DORA 2012](#), [Science Europe 2020](#), [GRC 2020](#), [CoARA 2022](#) as examples). This re-orientates research quality more towards the research process rather than only focussing on research outputs. Research integrity, then, is a key

aspect of this broader notion of research quality and excellence. At the same time, research quality is dependent on the integrity of the processes used, and the data and evidence resulting from the research. Quality is also dependent on the integrity of the policies and practices used by research organisations to administer, manage, and govern research.

Research Integrity Helps Foster Healthy Research Cultures and Attractive Working Environments

Research cultures encompass the behaviours, values, expectations, attitudes, and norms of research systems ([Royal Society 2018](#)). Research Integrity can be a means to draw links from policies and practices implemented by research organisations to the behaviours and actions of researchers. In this way, it can be viewed as both a driver of a strong research culture and a product of one. It is vital that both aspects are considered when research organisations think about how

they can contribute to the evolution of research cultures, nationally and internationally. Fostering an environment where integrity is at the forefront of the research process will lead to more attractive working environments where those involved in research are enabled to produce high-quality research. Equally, positive research cultures allow researchers to focus on the integrity of their work, avoiding misaligned incentives.

Research Integrity Guides Public Research in Navigating New Challenges and Opportunities

The research system evolves rapidly as technologies advance and our collective knowledge base expands. This impacts all aspects of research including research conception and conduct, administration, management, and governance. New technologies such as machine learning offer many opportunities to support research of the highest integrity standards, with possibilities to improve the efficiency and effectiveness of research processes and procedures. It also offers new means for detecting potential violations and misconduct. At the same time, technological advances create challenges for our research systems and demand

that research organisations and decision makers proactively and pre-emptively ensure conditions that allow the effective use of new technologies whilst guarding against misuse.

As an example, the recent boost of applications around generative AI tools has significantly impacted our current research landscape. Existing research integrity standards and policies can inform the proper use of AI tools in research. However, AI tools can also be subject to misuse and be applied to falsifying, modifying, altering, or simply inventing non-existing data that can

be tailored to the desired outputs. An in-depth review of integrity guidelines is needed to take account of the evolving context in research facilitated by AI tools.

Further, national and political priorities and orientations change rapidly, and this influences approaches to research and research policy. It is vital that integrity remains at the core of the research endeavour as topics such as open stra-

tegic autonomy, research security, and dual-use research play an increasing role in setting conditions for research in certain domains. Equally, open science and research assessment reform movements, have greatly influenced the direction of public research over the past decade, and it is essential that integrity as a core element of research quality is a forethought as these initiatives are enacted through institutional, national, and international policies and practices.

Research Integrity Acts as a Frame for Good Conduct at Every Step in the Research Life Cycle

The earlier in the research life cycle that high standards, best practices, and integrity are considered, the simpler and more efficient it will be for all involved to maintain and deliver those standards on the way to creating high-quality and impactful research. This journey begins at the conception of research ideas and should be a central consideration at grant application stage (or as part of career progression exercises), both in terms of the content of the research proposal and the conduct followed throughout the submission process. Here, the concepts of scientific ownership/legitimate authorship (as applied to publications) must also apply to research

proposals and applications in the sense of the applicant taking full responsibility for the content presented.

Integrity during the knowledge production phase of research is well-covered by the [European Code of Conduct](#), but considerations of integrity must also continue after the completion of projects and dissemination of results. Integrity as part of public engagement and science communication activities is also a vital consideration, and concerns researchers, research managers, research organisations, science communicators, journalists, and the media.

Roles & Responsibilities of Research Organisations

Research funding and performing organisations exert influence over all aspects of the research system and have a myriad of responsibilities when it comes to how research is conceived, conducted, disseminated, and managed. They are also responsible for engaging with the research community and other stakeholders to ensure that the policies and practices that delineate our research systems are fair, effective, efficient, and transparent.

Research integrity is one policy area where research organisations are particularly influential. This section highlights a few key areas where research organisations are currently focussing their attention and offers recommendations for action, split according to the specific competencies of research performing and research funding organisations, where needed.

Research management and governance

Research organisations have a responsibility to ensure that research integrity standards and potential misconduct issues are considered across the entire life cycle of the research process. Guidance and training should be provided to support this, wherever needed. Areas of concern include a lack of transparency in the submissions of duplicate proposals, plagiarism within research proposals/applications, and reviewer/panellist misconduct during research assessment processes.

In view of the international nature of research and the mobility of researchers between countries, research organisations (referring to both research funding and performing organisations, unless otherwise specified) should share experiences and best practices. Further, where information is in the public domain, research organisations should collaborate between national systems to ensure that misconduct from one national system does not prevail or impact upon another system. Further, research funding and performing organisations should document investigated cases of misconduct and publish them in an anonymised form wherever possible. The data published should include types of cases investigated, outcome of the procedures, and measures taken. Where possible, this anonymised information should be progressively shared at institutional, national, and international levels.

Research organisations should consider ways to recognise and reward those that work to ensure the highest standards of integrity and improve research cultures, including committing resources to small steps and system-wide initiatives that contribute to fostering research integrity and thriving research cultures. Research funding organisations should empower the researchers and research organisations that they fund to work with the highest standards of integrity as a norm, and research performing organisations should ensure conditions that allow researchers and staff across career stages feel included, respected, and supported in their work towards high quality research.

Engaging with stakeholders and public trust in science

Public trust in research is a key concern for all research organisations, and research integrity plays a central role in maintaining and supporting trust. This extends beyond simply the conduct of research, and includes how research is disseminated and communicated, as well as how stakeholders are engaged in the research endeavour. Science Europe explored the topic of '[research ethics and integrity in the context of public engagement](#)' in 2022, highlighting numerous areas of action.

Research organisations should support and enable research community initiatives to effectively engage stakeholders in discussions around research integrity and trust in research, and further, provide guidance for all involved on navigating the research process whilst following high standards and best practices. Such guidance should be tailored to the specific needs of different stakeholder groups, recognising the different roles and responsibilities that exist at different levels.

For research funding organisations, such training and guidance should be made available to those involved in peer review and panel assessments, and should also be provided to programme managers and administrators. For research performing organisations, the use of training and guidance should be incentivised and should be recognised in career development and progression exercises.

Collaboration between research organisations

As research systems become increasingly interconnected and our outlook for research becomes more international, it is vital that broader and deeper co-operations between different levels of organisation are fostered. The European Code of Conduct sets out a framework for the European research community, and it is the responsibility of research organisations to translate and make links between this European guidance, and national frameworks and legislation.

It is also the responsibility of research organisations to promote European good practices and standards on a global stage and as part of the international collaborations that they involve themselves in. International collaboration on research integrity standards and combatting misconduct benefits all and improves the quality of our collective knowledge base upon which all national research systems depend.

Research funding and performing organisations should develop means to further facilitate information sharing between stakeholders and national systems, and build stronger co-operation on issues of misconduct and the promotion of good practices and common standards.

Co-operation with decision-making bodies such as national ministries and competent authorities is key to combatting breaches of research integrity within national systems. Research funding organisations should engage with their national communities and competent authorities to establish standards and procedures to address integrity issues and do the same internationally through the European Research Area.

Guiding research communities on the use of new technologies and in an evolving policy landscape

Research communities look towards research funding and performing organisations for guidance as new technologies emerge that can influence and impact the research process and research cultures. On the recent emergence of generative AI, the European Commission has already produced 'living guidelines on the responsible use of generative AI in research', and research organisations should consider this as a reference for developing their own institutional and national positions ([European Commission, 2024](#)).

Research organisations should establish (or re-assess) clear guidelines and standards for the use of any influential new technologies (such as AI tools), encouraging researchers to benefit from technological advances while understanding the potential for misuse, avoiding breaches of integrity, and understanding the possible consequences of misuse for researchers and their organisations. Research funding organisations should fund and facilitate the development of training and guidance resources, if applicable, and research performing organisations should encourage and incentivise researchers to engage with such resources to promote proper use in a timely manner.

Research funding and performing organisations play a key role in defining new policies and practices as new strategic priorities are established at institutional, national, or international levels. Research funding and performing organisations should ensure that new policies and practices are founded on-, and reinforce the core values that are at the centre of our research systems ([Science Europe, 2022](#)), including integrity and ethics. This may be done through consultations with research communities, knowledge sharing between organisations, and pilot and experiments. Reinforcing research integrity and ensuring good research practice should be a central consideration for research funding and performing organisations as evolving priorities such as dual-use research, open science, research assessment reform, or the societal impact of research influence the development and implementation of policies and practices.

Ways Forward and Next Steps for Science Europe

Science Europe, as part of its strategic priority on research culture, is committed to engaging with relevant stakeholders on all topics that have influence over the ways in which research is conceived, conducted, and communicated. A draft of this statement was presented at the World Conference on Research Integrity (WCRI), where an interactive survey was launched to collect feedback from participants on the focus of this statement, and the actions of research funding and performing organisations. The following question was asked of WCRI 2024 participants:

- What support do you expect from research funding and performing organisations in ensuring that research integrity is at the centre of the way research is conceived, conducted, and communicated?

The following common messages were received:

- Appropriate incentives and rewards are key to the effective support of research integrity by research funding and performing organisations.
- The implementation of formal agreements (a research integrity contract) between research funding organisations and funded researchers, projects, and organisations can set a clear framework for good research practice.

- Monitoring processes such as confidential research integrity surveys, implemented by research funding and performing organisations, at key points in research projects may provide evidence of how both research misconduct arises and good research practices are supported during the conduct of research.
- Training and guidance resources should be funded and supported, and engagement with these resources should be valued and incentivised.

This statement marks a renewal of Science Europe's focus on research integrity as part of its activities to contribute to the evolution of research cultures and support research quality.

The feedback gathered from stakeholders will be taken forward, and discussions on practical actions to implement the recommendations made will be facilitated. Research integrity considerations will be reflected in all relevant policy discussions, particularly those relating to open science and the reform of research assessment, and Science Europe is committed to facilitating actions at national levels within Europe, at a European level through the European Research Area, and internationally.



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Science Europe is the association of major research funding and research performing organisations in Europe.

Our vision is for the European Research Area to have the optimal conditions to support robust education and research & innovation systems.

We define long-term perspectives for European research and champion best-practice approaches that enable high-quality research for knowledge advancement and the needs of society.

We are uniquely placed to lead advancements to the European Research Area and inform global developments through participation in research initiatives where science is a strong and trusted component of sustainable economic, environmental, and societal development.

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