

Framework to Enhance Research Integrity in Research Collaborations



Research + + +
Integrity
in Ireland

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1. Context

Collaboration is central to research and innovation. Increasingly, researchers work together and with a wide range of external stakeholders to deliver outcomes that expand the boundaries of human knowledge and have the potential to deliver real benefits for today's rapidly developing society. Collaborative research can occur within and between national higher education or research performing institutions (**inter-institutional collaboration**), between and across different research disciplines (**inter- or multi-disciplinary collaboration**), across national borders (**international collaboration**), and with a range of different partners including other higher education institutions, state research bodies, public sector organisations, private enterprises and civic/civil society organisations (CSOs) such as charities and voluntary organisations (**inter-sectoral collaboration**).

The purpose of this document is to provide guidance for researchers on how to reinforce a culture of responsible conduct of research (research integrity) in their collaborations so they can, as far as possible, avoid incidences of serious research misconduct and unacceptable research practices occurring during the collaborative work¹. The document outlines a series of topics that should be considered by partners in a research collaboration before the collaboration commences, that may help to avoid problems arising later on. These could be reflected in the typical collaborative research or consortium agreements that are approved by all parties before the collaboration begins. The document focuses on **what** research partners need to consider and **why**, as opposed to **how** they might reach consensus or agreement.

1.1 Research Integrity Principles

In keeping with Ireland's National Policy Statement on Research Integrity and with the European Code of Conduct for Research Integrity (see 'Useful Resources'), collaborating partners need to commit to upholding the fundamental principles that underpin the integrity of all research activity, namely:

- Reliability in how research quality is ensured, as reflected in the design of the work, the methodology applied, analysis undertaken, and in how resources are most effectively and efficiently utilised;
- Honesty in how the research is developed, undertaken, reviewed, reported and communicated: all being done in a transparent, fair, full and unbiased fashion;
- Respect at all times for project colleagues, research participants, society, cultural heritage, ecosystems and the environment;
- Accountability for the research throughout: from its idea to project completion and beyond, for how it is organised and managed, for the training, supervision and mentoring of all researchers involved, and for the wider impacts of the work.

¹ | Research misconduct encompasses the three most serious offences, Fabrication, Falsification, and Plagiarism (FFP), and also unacceptable research practices that may also be damaging to the overall integrity of the research community. Examples of unacceptable practice include claiming undeserved authorship, not preserving primary data where appropriate, mis-using research funds, and peer-review abuse such as unfairly holding up a rival's publication. For a full description of research misconduct, see National Policy Statement on Ensuring Research Integrity in Ireland (2019). See 'Useful Resources' for a link to this document.

2. General Responsibilities

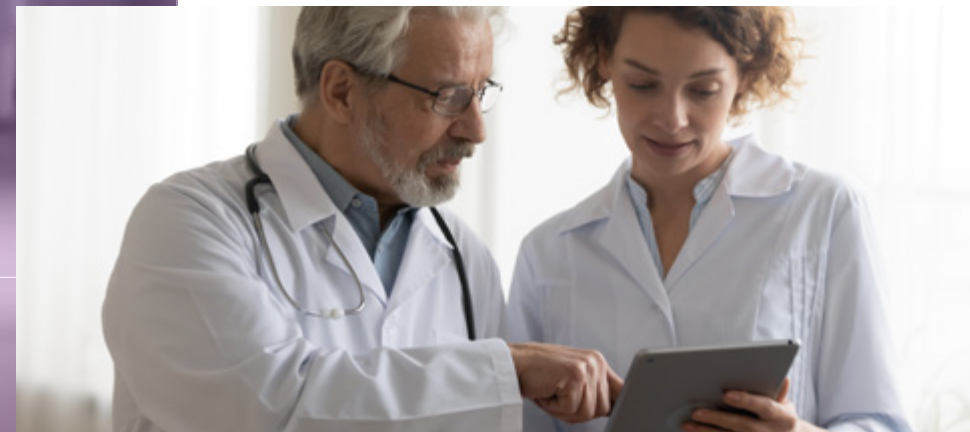
2.1 Roles and Responsibilities

Understanding that upholding research integrity principles is the responsibility of all partners in a research collaboration.

All partners in a research collaboration are responsible for ensuring a culture of responsible conduct of research in the collaboration. It is important that all partners understand their role at the outset of the collaboration in order to avoid potential misunderstandings or conflict later. These should be set out in a collaborative research agreement signed prior to the commencement of the project.

- The professional, legal and ethical responsibilities of all partners in the research collaboration should be clear and agreed from the outset.
- All research partners should have a clear understanding of the expected research integrity standards (e.g., rules regarding data management, authorship, supervision/co-supervision requirements etc.), and should ensure that all researchers participating in the collaboration are aware of these standards, backed up where necessary by training to reinforce this shared understanding.
- While each partner will have specific work deliverables, all partners take responsibility for the integrity of the research.
- Research integrity considerations should be factored into the design of the research activity.
- Research integrity considerations include a duty of care towards training the next generation of researchers. Any individual acting in a supervisory capacity should have access to appropriate training and be officially acknowledged for this role.
- All research partners should commit to ensuring that any research students contributing to the research collaboration are facilitated to complete their programme of study within an appropriate timeframe.

ALL PARTNERS IN A RESEARCH COLLABORATION
ARE RESPONSIBLE FOR ENSURING A CULTURE
OF RESPONSIBLE CONDUCT OF RESEARCH
IN THE COLLABORATION



3. Protection of Good Research Practice

3.1 Governance

Putting in place good governance arrangements in accordance with standard collaboration agreements, including dispute resolution mechanisms.

Research partners should establish and maintain good governance and oversight structures within a collaboration. Having these in place will help support rigorous, high-quality research practices and avoid conflicts within the partnership.

- Governance structures should be informed by the requirements of those funding, or otherwise supporting, the research and any other relevant national policies².
- Establishing robust governance and internal reporting mechanisms should allow full and open co-operation and communication between all parties in the collaboration, support the proper management and conduct of research activity and address potential conflicts or allegations of misconduct.
- Governance and reporting mechanisms should demonstrate that the researchers involved understand their responsibilities and can “stand over” practices when queried.

- The following elements should be kept in mind when establishing structures, including when formalising processes, drafting policies, managing risk, and establishing reporting mechanisms,

- **Independence:** effective decision making needs an appropriate degree of independence between those deciding on matters, and those individuals directly involved. As a result, potential conflicts of interest will need to be managed using appropriate policies and processes.
- **Accountability:** the lead investigators in each research partner should demonstrate accountability through their ways of working. Reporting requirements for researchers, managers, and all other participants should be clear, regular, and productive and avoid “box-ticking”.
- **Responsiveness:** processes and policies should allow quick and agile responses to situations as they arise, and also the early establishment of agreements in advance of relevant activity.



² For example, in the area of intellectual property management, Irish HEIs should adhere to the National IP Protocol (2019) – Ireland’s Framework for Research Commercialisation. See ‘Useful Resources’ for a link to this document.

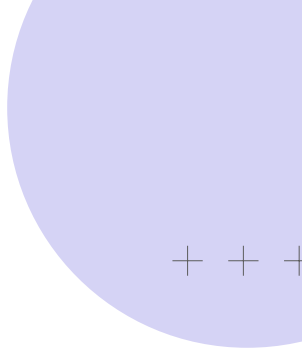
2.2 Customary Practices and Assumptions

Acknowledging, and facilitating where appropriate, the different research practices across disciplines and cultures.

As research collaborations often involve wide partnerships that go beyond disciplinary, national, and sectoral boundaries, differences in customary practices that might impact perceptions of responsible research practices should be considered and addressed when developing a collaboration agreement.

- Research partners should acknowledge the existence of customary research practices and assumptions; the often-unspoken norms widely accepted across certain research disciplines or cultures that include, for example, attribution of authorship, seniority levels and corresponding duties.
- How customary practices will be managed should be addressed by the research partners at partnership-building stage.
- Research partners should also be alert to issues involving customary practices arising during the project lifetime, and should move quickly to seek solutions, consulting national and international advice if necessary.





3.2 Compliance

Complying with relevant institutional, national and international guidelines and laws and understanding the potential differences between the guidelines and laws that apply to each research partner.

Compliance with relevant legal, regulatory, or policy requirements may appear daunting but, in the majority of cases, research practice as currently carried out in Ireland sits comfortably within international norms. What is important, as in the establishment of governance structures (see 3.1 above), is clarity of direction and communication at a research project management level, from as early as possible.

- The research partners should identify what relevant guidelines and legislative requirements apply to the research activity being carried out. For the most part, these will be obvious and well-known to researchers in the disciplinary field, but what is considered appropriate in one discipline might not be considered appropriate in another (see 2.2 above). Reinforcing these early and often will support the rigour of the research practice.
- Engaging early with data management requirements will help address many potential issues before they arise. Ensuring that appropriate agreements around data ownership, sharing, and controlling are drafted and signed off from the outset is central here.
- Where conflicts arise between applicable laws or policies (between jurisdictions or across institutions, for example), typically the laws or policies “closest” to the research activity being carried out would be applied³.

3| Note that in area of intellectual property management, the National IP Protocol (see ‘Useful Resources’) stipulates that Irish law should govern all research collaborations between Higher Education Institutions/Research Performing Organisations and industry.

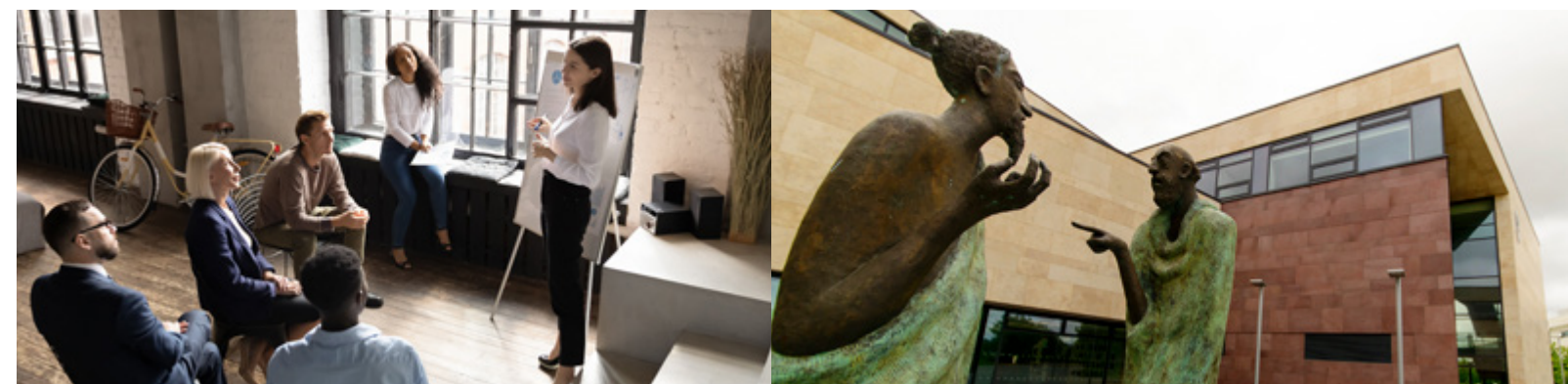


3.3 Responding to Research Misconduct

Agreeing at the outset how research misconduct investigations will be managed if they arise, acknowledging that it can be complex when it involves different institutions, countries and / or sectors.

Higher education institutions and state-funded research organisations typically have research integrity policies and procedures that include details of how research misconduct is investigated and what sanctions might be applied. However, these may differ between institutions, especially if they are located in different countries. Private companies, public sector organisations and civic / civil society organisations (CSOs) may not have dedicated policies and procedures for research integrity. While there are no right or wrong answers as to how research misconduct should be investigated in research collaboration, the following should be considered:

- Research partners should acknowledge at the outset that, despite best efforts, research misconduct and the use of unacceptable research practices can arise in any collaboration, and plan for appropriate responses;
- Research partners should identify potential complications if research misconduct were to arise in a collaboration e.g., where researchers are moving between different research partners;
- Before the collaboration begins, the research partners should agree that regardless of how or where an allegation of misconduct arises, they will co-operate fully and openly on any investigations, through the senior person with responsibility in each institution;
- Where conflicts arise between applicable laws or policies between jurisdictions or across institutions, typically the laws or policies in the institution or country where the research misconduct occurs would be applied;
- Where investigations must be carried out in more than one institution, it is best if they are run sequentially, rather than in parallel, and agreement on sequencing of investigations should be made in advance by the research partners.



3.4 Transparency

Agreeing how research data and outputs will be shared with partners and the world and ensuring openness about financial, political or personal influences that a researcher brings to a collaboration.

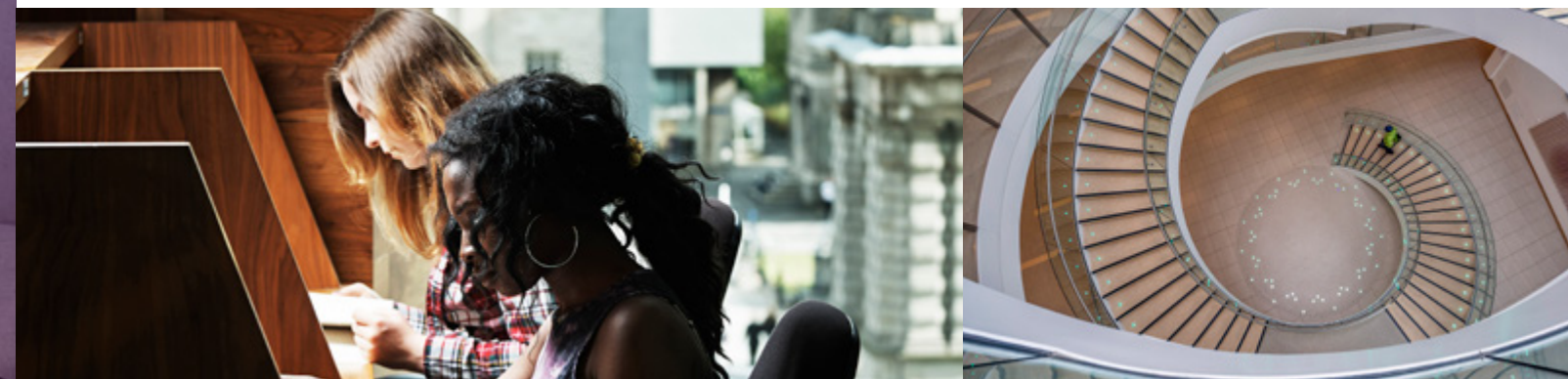
TRANSPARENCY BUILDS TRUST AMONG RESEARCHERS IN THE ACADEMIC COMMUNITY AND ENHANCES COLLABORATIVE RELATIONSHIPS BETWEEN SECTORS AND WITH THE PUBLIC. TRANSPARENCY SHOULD ENCOMPASS:

- How research data and outputs will be shared and disseminated;
- How the partners are managing their part of the partnership;
- Any financial, political or personal influences that a researcher brings to a collaboration that might influence how they approach the research questions being posed, the agreed upon methodology and design of the project, the manner in which results are analysed and interpreted, and the mechanisms for dissemination of the results (both textual and data).

IN CONSIDERING ANY CONFLICTS OF INTEREST, THE PARTNERS SHOULD BE AWARE OF THE RELEVANT INSTITUTIONAL POLICIES AND SHOULD AGREE AT THE OUTSET:

- What constitutes a conflict of interest in their specific collaboration?
- How and when partners should declare conflicts of interest?
- How potential conflicts can be managed?

AGREEING HOW RESEARCH DATA AND OUTPUTS WILL BE SHARED WITH PARTNERS AND THE WORLD AND ENSURING OPENNESS ABOUT FINANCIAL, POLITICAL OR PERSONAL INFLUENCES THAT A RESEARCHER BRINGS TO A COLLABORATION.



4. Dissemination, Communication & Exploitation of Research Results

4.1 Authorship and Acknowledgement

Agreeing at the outset how fair recognition for the contribution that all individuals make to published research and data can be ensured, while taking account of disciplinary norms.

The Committee on Publication Ethics (COPE) Guidelines (see 'Useful Resources') acknowledges that defining "authorship" can be problematic and the criteria for authorship will vary widely across disciplines and even across individual journals within the same discipline. To avoid all too common disagreements about authorship and acknowledgement in a collaboration, all research partners should be aware of their institutional policies on authorship, and the rules applied by the journals in which they plan to publish.

- All researcher partners in a collaboration should establish clear agreements on authorship and acknowledgement criteria at the outset, consistent with established principles provided by COPE.
- For interdisciplinary research, research partners should agree the level of flexibility required to accommodate disciplinary norms, while remaining consistent with established principles.
- Research partners should agree a mechanism to ensure that all contributors to published research output are formally aware of their inclusion on submitted research outputs, including giving all authors the right to withdraw as authors.

4.2 Inventorship

Agreeing at the outset what constitutes inventorship and how this will be established, recognised and communicated.

Assignment of ownership and rights to use Foreground Intellectual Property (IP) developed in a collaborative project are typically set out as part of the consortium /collaboration agreement and follow clear rules as set out in the National IP Protocol (see 'Useful Resources'). Research collaborations by their nature may lead to IP that is created jointly by the collaborating parties and ownership disputes are likely to arise if the principle of inventorship has not been agreed in advance of an invention disclosure or protecting IP, such as filing a patent application. To reduce this possibility:

- Research partners should agree at the outset what does and does not constitute inventorship⁴.
- Research partners should be clear about the process for capturing and recording intellectual contribution and inventorship, setting out expectations for maintaining adequate and secure records and invention dates.
- Research partners should ensure that all collaborating research teams receive adequate training on what does and does not constitute inventorship with accompanying communication / training.



4 | Useful advice on this can be found in Patrick G. Gattari, Intellectual Property & Technology Law Journal, Volume 17, Number 5, May 2005 and at <https://www.mewburn.com/law-practice-library/inventorship-and-ownership> (accessed 26th March 2021).

- Expectation with respect to informing inventors and collaborators on protecting IP, such as filing of a patent application, and procedures for disputes in relation to this between parties should also be established in the collaboration agreement that underpins the project.
- Research partners should agree upfront who will lead the commercialisation of outputs and IP.

4.3 Open Research

Agreeing at the outset how Open Research practices in support of responsible research and innovation will be managed by the collaboration.

Open Research⁵ is key to supporting the principles of research integrity in a number of ways, in particular in relation to improving the reproducibility and transparency of research results through, for example, open publishing and research data management practices. Setting out the principles by which research outputs will be disseminated and available for interrogation, prior to the onset of collaborative research, ensures that everyone is aligned in putting best practices to the fore. To ensure this:

- Research partners should agree at the outset how they will communicate openly about their work, receive and provide feedback from the partners in the collaboration and share findings with the wider

public. The types of work or research outputs include, but may not be limited to, preprints, peer-reviewed publications, software, and any data arising from a programme of research.

- A plan for the management of research outputs arising from the project should ideally be put in place from the start of a collaborative project to support this agreement.
- In developing an agreement, research partners should be aware of their funders' policies and / or national positions in relation Open Research for example, Ireland's National Framework on the Transition to an Open Research Environment (see 'Useful Resources').
- If a collaborative piece of research is being undertaken across multiple jurisdictions and / or disciplines, researchers may be subject to varying Open Research requirements. The requirements to which the researchers will adhere should be identified and agreed to prior to the dissemination of research outputs arising from the collaborative project to facilitate and align potential variances in Open Research requirements within a collaboration.
- Researchers should identify and make use of the resources available to them in their institutions, such as library services and data stewards, to ensure alignment with all relevant Open Research policies.

RESEARCH PARTNERS SHOULD AGREE UPFRONT WHO WILL LEAD THE COMMERCIALISATION OF OUTPUTS AND IP.

⁵ For example, providing open access to research outputs (including publications and data), pre-registration of studies, producing pre-prints, participation in open peer-review.

RESEARCH PARTNERS SHOULD AGREE AT THE OUTSET HOW THEY WILL COMMUNICATE OPENLY ABOUT THEIR WORK, RECEIVE AND PROVIDE FEEDBACK FROM THE PARTNERS IN THE COLLABORATION AND SHARE FINDINGS WITH THE WIDER PUBLIC.

Checklist

Research partners have a clear understanding of their role and responsibilities in the collaboration	✓
Research integrity considerations have been factored into the design of the research activity	✓
Customary practices and assumptions have been identified and a plan to manage them has been put in place	✓
Transparent governance and oversight structures have been put in place	✓
The relevant guidelines and legislative requirements applying to the research activity have been identified and factored into the research plan and governance / oversight arrangements	✓
Plans for managing research misconduct investigations - if they arise - have been put in place	✓
Conflicts of interest have been identified and a plan to manage them (and any new conflicts that arise during the collaboration) has been established	✓
Research partners have agreed how authorship and / or inventorship credit will be managed in the collaboration, taking into account any disciplinary differences	✓
Plans for open dissemination of research results and the management of research data have been put in place	✓

Useful Resources

National Policy Statement on Ensuring Research Integrity in Ireland (2019)

<https://www.iua.ie/wp-content/uploads/2021/04/National-Policy-Statement-on-Ensuring-Research-Integrity-in-Ireland.pdf>

European Code of Conduct for Research Integrity (2017)

<https://allea.org/code-of-conduct/>

Committee on Publication Ethics (COPE) Guidelines

<https://publicationethics.org/guidance/Guidelines>

How to handle authorship disputes: a guide for new researchers (2018)

<https://publicationethics.org/resources/guidelines-new/how-handle-authorship-disputesa-guide-new-researchers>

CRedit (Contributor Roles Taxonomy)

<http://credit.niso.org/>

Montreal Statement on Research Integrity in Cross-Boundary Research Collaborations

<https://wcrif.org/guidance/montreal-statement>

National IP Protocol - Ireland's Framework for Research Commercialisation (2019)

<https://www.knowledgetransferireland.com/Reports-Publications/Ireland-s-National-IP-Protocol-2019-.pdf>

National Framework on the Transition to an Open Research Environment (2019)

<https://norf.ie/index.php/publications/>



About the National Research Integrity Forum

The National Forum on Research Integrity ('the National Forum') has its origins in the publication in 2014 of the first edition of the National Policy Statement on Ensuring Research Integrity in Ireland. The National Forum was established in June 2015 with representation from research performing organisations, research funders and other stakeholders to ensure continual development and adoption of good practice towards a strengthened approach to ensuring research integrity in Ireland. The Forum is coordinated by the Technological Higher Education Association and the Irish Universities Association and is chaired by Professor Anita Maguire from University College Cork. The Deputy Chair is Dr Jennifer Brennan from the Technological Higher Education Association.

Key responsibilities of the National Forum:

- To support the implementation of research integrity policies and processes in a harmonised manner across the research performers;
- To support national research funders in implementing harmonised research integrity statements in grant conditions and associated audit processes;
- To agree a process and format for the public dissemination of the outcome of research integrity investigations having regard to existing regulations relating to misconduct and discipline in the research-performing organisations, and the Terms and Conditions of grants awarded by the research funding organisations;
- To support the development and roll-out of research integrity training programmes for staff and students in the research performers;
- To monitor international developments and policy in the area of research integrity, and making appropriate recommendations for adjustments in research integrity policy and practice in Ireland;
- To communicate the importance of research integrity to the Irish research community and to the general public.

More information on the members and role of the Forum can be found at <https://www.iaa.ie/for-researchers/research-integrity/>





www.iua.ie/research-innovation/research-integrity/

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