UKRIO

RESEARCH INTEGRITY OFFICE

Promoting integrity and high ethical standards in research
Providing confidential, independent and expert support

Code of Practice for Research

Promoting good practice and preventing misconduct

Version No.: 3.5

Publication Date: 8/07/2025

DOI: https://doi.org/10.37672/UKRIO.2023.04.codeofpractice

Table of Contents

UKRIO
RESEARCH INTEGRITY OFFICE

Introduction

The UK Research Integrity Office's (UKRIO's) Code of Practice for Research (the Code) has been designed to encourage good conduct in research and help prevent breaches of research integrity such as mistakes, questionable research practices (QRPs), and misconduct. It serves to help organisations and researchers conduct research of the highest quality and sustain a healthy research culture. It provides general principles and standards for good practice in research, applying both to individual researchers and to organisations that carry out, fund, host, or are otherwise involved in research.

The Code applies to all subject areas and does not attempt to micromanage research. Recognising that many forms of guidance already exist, our intention is that research organisations may use the principles and standards outlined in this Code as benchmarks when drafting or revising their own, more detailed, codes of practice. No single publication can expect to cover the nuances of all types of research in all disciplines; therefore, the Code should not be seen as prescriptive but as a set of guiding principles and standards to inform the management and conduct of research.

The Code covers areas of good practice typically included in organisational policies for the conduct of research, drawing upon existing good practices and UKRIO's experiences in supporting good research conduct and addressing breaches of research integrity. Detailed guidance is given on core standards for good practice in research, but particular attention has been paid to areas where UKRIO has most often been approached for guidance, in the hope of passing on lessons learned to the research community.

The Code complements existing guidance on research conduct, including *The Concordat to Support Research Integrity* and materials from regulators, learned societies, research funders, publishers, and others. Similarly, the Code complements organisational policies – such as those for health and safety, raising concerns at work, management of finances or intellectual property, and freedom of speech – and it does not seek to replace them. Using the benchmarks in this Code can help research organisations to fulfil the requirements of regulatory, funding, and other relevant bodies, and ensure that important issues are not overlooked.

Although the Code has been devised by drawing on the UK's systems for research, it is also relevant to researchers and organisations in other countries. When used by persons or institutions outside the UK, the Code's content must be adapted or revised as needed to reflect any legal or regulatory frameworks of the country or countries in question.

UKRIO recognises that there are many organisations which issue guidance on the conduct of research to the UK research community. UKRIO works with a wide variety of organisations aiming to streamline guidance on good practice in research, to ensure clarity for the research community and avoid duplication of effort.

How to use this document

The Code is organised into three sections as follows:

- ***Section 1***
  Recommended Checklist for Researchers – a checklist summarising the key points of good practice in research that applies to all subject areas. The Checklist is based on the more detailed Standards given in Section 3. Researchers should only complete the checklist after reviewing the Standards and with advice from professional services.
- ***Section 2***
  Commitments – refers to the Commitments from *The Concordat to Support Research Integrity*, which define the responsibilities and values of researchers, research-enabling staff, research organisations, funders, and others in the conduct of research.
- ***Section 3***
  Standards for Organisations and Researchers – provides Standards for good practice in research that researchers and research organisations should comply with. The Standards apply to all disciplines of research, but organisations may wish to expand upon them by offering more detailed guidance for certain subject areas or types of research.

It is the responsibility of the organisation to determine the best way to put the promotion and support of good research practice into operation. Only through the endorsement and support of good practice in research at the highest level and implementation through education, training, and supervision, can researchers become aware of their individual responsibilities and the collective responsibility they have to their research organisation and the wider research community.

For the purposes of this Code, "**research**" refers to the following established definitions:

- *The 2029 Research Excellence Framework*: "…a process of investigation leading to new insights, effectively shared.";
- *The Concordat to Support Research Integrity*: "…part of a process leading to new insights."; and
- *The Frascati Manual 2015*: "…creative and systematic work undertaken in order to increase the stock of knowledge – including knowledge of humankind, culture and society – and to devise new applications of available knowledge."

Similarly, for the purposes of this Code,

- "**Organisations**" refers to any bodies which:
  - conduct, host, sponsor, or fund research;
  - employ, support, or host researchers;
  - teach research students; or
  - allow research to be carried out under their auspices.

- "**Researchers**" refers to any person who conducts or supports research *in any discipline*, including but not limited to:
    - a member of staff carrying out research as part of their employment;
    - academic research staff;
    - an independent contractor or consultant;
    - a research student;
    - a postgraduate or undergraduate student conducting research
    - a research assistant;
    - a visiting or emeritus member of staff;
    - a member of staff on a joint clinical or honorary contract;
    - a technician; or
    - a member of research-enabling staff (sometimes referred to as research support), professional services staff, or as research administrators/managers.

UKRIO will regularly review the Code and welcomes feedback from organisations and researchers on the current edition. Organisations and researchers should check our website for updates to the Code.

The website also provides information on how to contact UKRIO to gain access to independent, confidential, and expert advice and guidance on any issues relating to good practice, research culture, and breaches of research integrity.

Section 1: Recommended Checklist for Researchers

The Checklist highlights the key points of good practice for a research project from start to finish and is applicable to all disciplines. Researchers must read the guidance in Section 3 before completing this checklist. A standalone version of this checklist is available from our website.

Part I – Before conducting your research (bearing in mind that, subject to legal and ethical requirements, roles and contributions may change during the research):

1	☐	Does your proposed research address pertinent question(s), and is it designed either to add to existing knowledge about the subject in question or to develop methods for research into it – inclusive of: • repeatability; • reproducibility; • replicability; • trustworthiness; • credibility; • authenticity; and • meta-research?
2	☐	Is your research design and methodology appropriate for your research question(s)?
3	☐	Will you have access to all the necessary skills, training, and resources to do your research?
4	☐	Have you done a risk assessment and due diligence to check for and mitigate: a) potential risks to • your organisation; • the environment; • the research; • the health, safety, and well-being of researchers and research participants; and b) potential risks to research and innovation?
5	☐	Will your research comply with *Trusted Research* guidelines to protect yourself and the research from potential exploitation, misuse, and theft?
6	☐	Will your research comply with legal, organisational, funder, and other requirements/guidelines for the responsible use of emerging tools, methods, and technologies for research, such as artificial intelligence (AI)?

7	☐	Have you signed all contracts (including collaboration agreements if relevant) before commencing the research and will your research comply with contractual and financial guidelines relating to the project?
8	☐	Have you identified any potential intellectual property arising from the research and reviewed ownership, licensing, and protection strategies in accordance with your organisational and funding requirements?
9	☐	Has your research had any necessary ethics review, *especially* if it involves: • human participants; • human material; • personal data; • animals (inclusive of non-ASPA, i.e., animals that do not fall under the Animal Scientific Procedures Act 1986); • animal materials; • microbiomes; • environmentally hazardous agents; • use of emerging tools, methods, or technologies that raise ethical considerations, such as AI; or • dual use research of concern (DURC)?
10	☐	Will your research comply with all legal (including health and safety) and ethical requirements and other applicable guidelines, including those from other organisations and/or countries, if relevant?
11	☐	Will your research comply with good practice requirements and where relevant, follow open research practices?
12	☐	Have you agreed how you will disseminate outputs (inclusive of journal articles, conferences, book chapters, pre-prints, registered reports, abstracts, etc.), and discussed authorship and contributorship?
13	☐	Have you considered how your research will comply with any monitoring, audit, and data management requirements?
14	☐	Have you agreed on the roles of all the researchers and responsibilities for management and supervision?
15	☐	Have all competing interests relating to your research been identified, declared, and addressed?
16	☐	Where applicable (e.g., clinical trials or systematic reviews), has your research been registered with the appropriate body?
17	☐	Are you aware of the policies for addressing breaches of research integrity for all relevant organisations (sometimes called research misconduct policies or investigation procedures), and do you know which policies/procedures will take precedence?

Part II – When conducting your research:

1	☐	Are you following the agreed design and methods for the project?
2	☐	Have any changes to the agreed design, methods, and hypotheses been reviewed and approved, if applicable?
3	☐	Are you following best practices to collect, create, produce, compile, store, and manage your research outputs?
4	☐	Are agreed roles and responsibilities for management and supervision being fulfilled?
5	☐	Is your research complying with any monitoring, audit, and appropriate data management requirements?
6	☐	Is your research in compliance with all requirements and guidelines for the responsible use of emerging tools, methods, and technologies for research (such as AI), including human oversight and transparency?
7	☐	Have you reviewed authorship and contributorship agreements at this stage of the project?

Part III – When finishing your research:

1	☐	Does your research comply with all legal, ethical, and contractual requirements?
2	☐	Are agreements relating to intellectual property, publication, authorship, contributorship, international collaboration, and innovation being complied with?
3	☐	Will all contributions to the research be acknowledged?
4	☐	Will your research and all its findings (inclusive of null results) be reported accurately, honestly, completely, and within a reasonable time frame?
5	☐	Will the research outputs be retained in a secure and accessible form and for the required duration?
6	☐	Will research outputs be made open and accessible?
7	☐	Will research outputs comply with all dissemination requirements and guidelines relating to the use of emerging tools, methods, and technologies for research (such as AI) including full and transparent disclosure of their use?

Section 2: Commitments

Organisations and researchers should adhere to the commitments set out within *The Concordat to Support Research Integrity* (see Box 1).

Organisations and researchers should consider the Commitments when implementing and complying with the core **Standards** described in Section 3 and the **Recommended Checklist for Researchers** in Section 1.

1 Summary of the Concordat's Five Commitments (2025 Edition)

1. **Maintaining the highest standards of research integrity – the principles:** Responsible research practice is grounded in high standards of integrity in all aspects and fields of research, from ideation through to publication and public engagement. The UK recognises five key principles necessary to maintain the highest standards of research integrity.
2. **Maintaining the highest standards of research integrity – expectations and compliance:** Research should be conducted according to appropriate ethical, legal, regulatory, and professional frameworks, obligations, and standards.
3. **Embedding a culture of research integrity:** Creating the conditions, grounded in the principles of research integrity, for individuals and organisations to engage in research responsibly supports the maturing of a positive research culture and environment.
4. **Questionable research practices and potential research misconduct:** The quality of the research environment and robustness of the research record also depend on the effective management of questionable research practices when they occur. This requires a commitment to continuous reflection, learning, and improvement to support the research system to drive positive change.
5. **Accountability and continuous improvement in research integrity:** Upholding, rewarding, and continuously improving responsible research practice is a collective endeavour.

Section 3: Standards for Organisations and Researchers

Organisations and researchers should comply with the following core Standards, which should be interpreted considering the **Commitments** in Section 2.

Each Standard adopts the order:

- organisations and researchers;
- organisations; and
- researchers.

3.1 General Guidance on Good Practice in Research

3.1.1 **ORGANISATIONS AND RESEARCHERS** must comply with all legal and ethical requirements and other guidelines that apply to their research, such as those in the *Concordat to Support Research Integrity* and materials from regulators, learned societies, research funders, publishers, and others. This includes submitting research proposals for **ethics review** where appropriate and abiding by the outcome of that review. They should also ensure that research projects are approved by all applicable bodies, ethical, regulatory, or otherwise.

3.1.2 When conducting or collaborating in research in other countries, organisations and researchers based in the UK should comply with the legal and ethical requirements existing in the UK and in the countries where the research is conducted. See the *Cape Town Statement* for guidance on fostering fairness, equity and diversity to achieve research integrity goals. Organisations may need to comply with the legal requirements of a third country even if there is no involvement of that country in a specific research project so as not to hinder other research projects that may involve the third country.

3.1.3 Organisations and researchers based abroad who participate in UK-hosted research projects should comply with the legal and ethical requirements existing in the UK as well as those of their own country.

3.1.4 Organisations and researchers should ensure that all research projects have sufficient arrangements for insurance and indemnity **before the research begins**.

3.1.5 Researchers and organisations should remain alert to the opportunities and challenges presented by emerging tools, methods, and technologies for research, including artificial intelligence (AI). Responsible use of such emerging tools should be informed by principles of research integrity – particularly rigour, transparency, and accountability – and by relevant legislation, requirements, guidelines, and ethical approvals/permissions for research.

3.1.6 **ORGANISATIONS** should:

a. ensure that good practice in research forms an integral part of their research strategy or policy;

b. establish clear policies and procedures that cover the Commitments of good practice in research (see Box 1) and offer detailed guidance on the Standards set out in this Code;

c. ensure that these policies and procedures complement and are in accordance with existing organisational policies, such as those for health and safety, reporting channels for raising concerns at work, management of finances or of intellectual property, wellbeing and welfare, and equality, equity, diversity, and inclusivity;

d. make sure that their researchers are aware of these policies and procedures and that all research carried out under their auspices complies with them;

e. provide training, resources, and support to their researchers to ensure that they are aware of these policies and procedures and are able to comply;

f. consider the research culture and environment and its incentives that may influence positively or negatively on good practice in research;

g. establish clear policies and procedures on ***Trusted Research*** that encompass National Protective Security Authority (NPSA) guidelines while maintaining **open research**, where applicable;

h. encourage their researchers to consider good practice in research as a routine part of their work; and

i. have a systematic process of regularly reviewing organisation-specific risk assessment to monitor these measures for suitability, effectiveness, and continuous improvement.

3.1.7 **RESEARCHERS** should:

a. recognise their responsibility to conduct research of high ethical standards;

b. be aware of their organisation's policies and procedures on good practice in research;

c. make sure that their research complies with these policies and procedures, and seek guidance from their organisation when necessary;

d. work with their organisation to ensure that they have the necessary training, resources, and support to carry out their research;

e. suggest to their organisation how guidance on good practice in research might be developed or revised; and

f. comply with open research practices and the *Hong Kong Principles* to ensure trustworthy research, and minimise risks by adhering to *Trusted Research* guidelines. This includes informal discussion in public spaces, conferences, and collaborations.

3.2 Leadership, Supervision, Training, and Development

3.2.1 **ORGANISATIONS AND RESEARCHERS** should promote and maintain an environment which fosters and supports research of high ethical standards, mutual co-operation, professionalism, and the open and honest exchange of ideas. They should foster a culture where good conduct in research is promoted while inappropriate conduct is identified and addressed. Organisations should review regularly and reflect on their research environment using UKRIO's *Self-Assessment Tool*.

3.2.2 **ORGANISATIONS** should provide direction and supervision of research and researchers, setting out clear lines of accountability for the organisation and management of research. They should support supervisors and researchers in meeting the legal and ethical requirements of conducting research. Organisations should offer and encourage training and support in management and leadership to those responsible for the supervision and development of other researchers.

3.2.3 Organisations should provide training for all researchers to enable them to carry out their duties and develop their knowledge and skills throughout their career by:

- **a.** identifying unmet needs for training and development;
- **b.** providing periodic refresher courses or retraining;
- **c.** providing qualified mentors for early-career researchers;
- **d.** providing educational opportunities for more-established researchers;
- **e.** providing ongoing training in responsible research design, conduct, and dissemination; and
- **f.** where relevant, this training should include open research practices, peer review, research ethics, data and image integrity, transparency of programming codes and scripts, and responsible use of emerging tools, methods and technologies for research.

3.2.4 Organisations should support the principles of *The Concordat to Support the Career Development of Researchers.*

3.2.5 Organisations should provide support for student researchers. They should make sure that student researchers understand which standards and organisational policies and procedures they are expected to comply with and the sources of help and support available to them.

3.2.6 Organisations, and individuals in leadership/supervisory roles within them, should promote awareness of good practice in the use of emerging tools, methods and technologies, such as AI. Training and development should be provided to help researchers understand the responsible, ethical and legally compliant use of these tools within their discipline.

3.2.7 **RESEARCHERS** involved in the supervision and development of other researchers should be aware of their responsibilities and ensure that they have the necessary training, time, and resources to carry out that role, and request support if required.

3.2.8 Researchers should undergo training to carry out their duties and to develop their knowledge and skills throughout their career, repeating training where necessary to ensure that skills are kept up to date. The latter is particularly relevant in relation to the responsible use of emerging tools, methods and technologies for research. They should identify needs for training when they arise and report them to their manager or other appropriate person as identified by their organisation.

3.3 Research Design

3.3.1 When designing research projects, **ORGANISATIONS AND RESEARCHERS** should ensure that:

a. the proposed research addresses pertinent question(s) relevant to the community or beneficiaries and is designed either to add to existing knowledge about the subject in question or to develop methods for research into it; context dependent concepts like repeatability, reproducibility, replicability, reliability, trustworthiness, credibility, authenticity, and meta-research are of equal importance to establish quality;

b. the design is justified and appropriate for the question(s) being asked, and addresses the most important potential sources of bias and criticism;

c. the design and conduct of the study, including how the research outputs will be made, gathered, analysed, stored, and managed, are set out in detail in a prespecified research plan or where possible a protocol submitted to a registry. Open research practices are encouraged – see the UK Reproducibility Network (UKRN)'s resources on practising open research in different disciplines;

d. all necessary skills and experience will be available, in the proposed research team or through collaboration with specialists in relevant fields;

e. sufficient resources will be available and that these resources meet all relevant standards;

f. agreements are in place to give appropriate acknowledgement for the intellectual and/or technical contributions to the research output; and

g. any of the above issues are resolved as far as possible before the start of the research.

3.3.2 Organisations (where appropriate) and researchers should conduct a risk assessment of the planned study to determine:

a. whether there are any ethical issues and whether ethics review is required;

b. the potential for risks to the organisation, the research, or the health, safety, wellbeing, and mental health of researchers and research participants, the public, the environment, national security; and

c. what legal requirements govern the research.

Risk assessments should be a continuous process throughout the lifecycle of the research project to mitigate risks, and to communicate them to appropriate staff in the organisation.

3.3.3 Where emerging tools, methods, and technologies – such as AI – are used in the design of research, organisations and researchers should ensure their use is transparent, responsible, and subject to critical review.

3.3.4 Where the design of a study has been approved by a **research ethics committee** (**REC**) or by regulatory or peer review, organisations and researchers should ensure that any later design changes are appropriately reviewed to ensure that they will not compromise the integrity or ethics of the research, or any terms of consent previously given. Information on NHS and non-NHS RECs are provided here:

- NHS Research Ethics Committees; and
- Non-NHS Research Ethics Committees.

3.3.5 Where appropriate, a study should be registered with an appropriate body to align with transparency and openness of the research. For example, a researcher could use pre-registered reports so that the background, study design, methods, and analysis plan are peer reviewed before research begins (if appropriate for their research discipline).

3.3.6 **ORGANISATIONS** should have processes to identify and address risks that proposed research or its results may be misused for purposes that are illegal or harmful (including dual use research of concern, DURC). They should make these systems known to researchers and provide guidance and support to researchers on projects where such risks are identified.

3.3.7 **RESEARCHERS** should aim to identify risks that the proposed research might produce results that could be misused for purposes that are illegal or harmful (including DURC). Researchers should comply with *Trusted Research* guidelines, report any risks to, and seek guidance from, the appropriate person(s) in their organisation and take action to minimise those risks.

3.3.8 Researchers should be prepared to make the original research designs (also known as study protocols) available to peer reviewers and journal editors when submitting research reports for publication.

3.4 Collaborative Working

3.4.1 **ORGANISATIONS AND RESEARCHERS** should follow the *Framework to Enhance Research Integrity in Research Collaborations*, paying particular attention to projects that include participants from different countries or where work will be carried out in another country, due to the additional legal and ethical requirements and other guidelines that may apply. Refer to the *Cape Town Statement* on how to foster equitable research partnerships. See also Sections 3.1.2, 3.1.3, 3.6.2 and 3.7.2.

3.4.2 When conducting or collaborating in research in other countries, organisations and researchers based in the UK should comply with the legal and ethical requirements both in the UK and in the countries where the research is conducted. They should have clarity over who has competency in overseeing research outside the UK as UK RECs are advised to avoid reviewing research projects which already have ethical approval from a REC in another country whose review process is similar to the standards expected in the UK.

3.4.3 Similarly, organisations and researchers based in other countries who participate in UK-hosted research projects should comply with the legal and ethical requirements in the UK as well as those of their own country.

3.4.4 **ORGANISATIONS** should work with partner organisations to ensure they agree and comply with common standards and procedures for the conduct of collaborative research, including the resolution of any issues or problems and the investigation of any allegations of breaches of research integrity, including QRPs and research misconduct.

3.4.5 **RESEARCHERS** involved in collaborations should be aware of the standards and procedures for research followed by any collaborating organisations. They should also be aware of any contractual requirements involving partner organisations, seeking guidance and help where necessary and reporting any concerns or irregularities to the appropriate person(s) as soon as they become aware of them.

3.4.6 Researchers should try to anticipate any issues or barriers that might arise because of working collaboratively and agree jointly in advance how they might be addressed, communicating any decisions to all members of the research team. Agreement should be sought on the specific roles of the researchers involved in the project and on issues relating to intellectual property, Trusted Research, open access, publication, and the attribution of authorship and contributorship, recognising that, subject to legal and ethical requirements, roles and contributions may change during the research.

3.5 Competing Interests

3.5.1 **ORGANISATIONS AND RESEARCHERS** must recognise that competing interests (i.e., personal or organisational considerations, including but not limited to rivalry and financial matters) can inappropriately affect research. Competing interests, also known as conflicts of interest (COIs) must be identified, declared, and addressed to avoid poor practice in research or potential breaches of research integrity.

3.5.2 When addressing a competing interest, the organisation should decide whether it is of a type and severity that risks seriously compromising the validity or integrity of the research, in which case researchers and organisations should not proceed with the research, or whether it can be adequately addressed through declarations and/or safeguards relating to the conduct and reporting of the research.

3.5.3 **ORGANISATIONS** should have a clearly written and accessible policy for addressing competing interests, including guidance for researchers on how to identify, declare, and address competing interests, and should disseminate and explain the policy to researchers. Organisations should ensure that researchers understand the importance of recognising, disclosing, and addressing competing interests in the conduct and reporting of research.

3.5.4 Organisations should comply with the requirements of their policy for addressing competing interests, as well as any external requirements relating to competing interests, such as those of funding bodies. Heads of organisations and other senior staff should be aware of potential or actual competing interests at the organisational level and disclose them when they arise so that they can be addressed. Senior staff should also recuse from committees, investigations, and other duties when there are potential COIs or lack of impartiality.

3.5.5 **RESEARCHERS** should comply with their organisation's policy for addressing competing interests, as well as any external requirements relating to competing interests, such as those of funding bodies. This should include declaring any potential or actual competing interests relating to their research to their manager or other appropriate person as identified by their organisation, any ethics committee that reviews their research, and when reporting their findings at meetings or in publications. Competing interests should be disclosed as soon as researchers become aware of them.

3.5.6 Researchers should agree to abide by any direction given by their organisation or any relevant ethics committee in relation to a competing interest.

3.6 Research involving Human Participants, Human Material, or Personal Data

3.6.1 **ORGANISATIONS AND RESEARCHERS** should make sure that research involving human participants, human material, or personal data complies with all legal and ethical requirements and other applicable guidelines such as:

- Information Commissioner's Office (ICO) – *UK GDPR guidance and resources*;
- The National Health Service (NHS) and Health Research Authority (HRA) – *GDPR guidance for researchers and study coordinators*;
- World Medical Association – *Declaration of Helsinki*;
- The Human Tissue Authority (HTA) – guidance on the use of different types of human material;
- The Human Fertilisation & Embryology Authority (HFEA) – guidance on the use of embryos and gametes;
- The Administration of Radioactive Substances Advisory Committee (ARSAC) – resources on the use of radioactive substances on human participants;
- The Medicines and Healthcare products Regulatory Agency (MHRA) – resources on the use of medical devices and clinical trials; and
- NHS – *UK Policy Framework for Health and Social Care Research*.

Appropriate care should be taken when research projects involve vulnerable groups, such as older participants, children or those with mental illness, and covert studies or other forms of research which do not involve full disclosure to participants. The dignity, rights, safety, and wellbeing of participants must be the primary consideration in any research study. Research should be begun and continued only if the anticipated benefits justify the risks involved.

3.6.2 Organisations and researchers should set up systems to ensure the confidentiality and security of personal data relating to human participants and human material involved in research. As part of this, they should assess risks associated with any use of emerging tools, methods, and technologies for research – such as AI – taking action to mitigate those risks and ensure that ethical, legal, and security considerations are fully addressed. This includes issues of informed consent, data minimisation, and algorithmic bias.

3.6.3 Organisations and researchers working with, for, or under the auspices of, any of the UK Departments of Health and/or the NHS must adhere to all relevant guidelines, such as the Health Research Authority (HTA) guidance:

- *UK Policy Framework for Health and Social Care Research*; and
- *Use of human tissue in research*.

Organisations and researchers involved in clinical trials on medicinal products for human use should comply with the principles of *Good Clinical*

Practice (GCP) and the *International Conference on Harmonisation guidelines for Good Clinical Practice (ICH GCP)*.

3.6.4 Organisations and researchers should consider the challenges when working with participants, communities and stakeholders and ensure systems are in place for effective communication, monitoring of compliance with all legal and ethical frameworks throughout the research process, including adherence to *Trusted Research* guidelines.

3.6.5 **ORGANISATIONS** should set up systems to ensure appropriate ethical, regulatory, and peer review of research projects involving human participants, human material, or personal data before, during, and at the end of the study. The systems should include mechanisms to ensure that such research projects have been approved by all applicable bodies, ethical, regulatory, or otherwise.

3.6.6 Organisations should also ensure that appropriate procedures for obtaining informed consent are established and observed in projects involving human participants, having regard to the needs and capacity of the participants.

3.6.7 Organisations should make sure that their researchers are aware of all the above systems and have access to all relevant guidance and legal and ethical frameworks. UKRIO's *Researcher Checklist of Ethics Applications for Research with Human Beings* is a useful tool to consider.

3.6.8 **RESEARCHERS** should submit research projects involving human participants, human material, or personal data for review by all relevant ethics committees and abide by the outcome of those reviews. They should also ensure that such research projects have been approved by all applicable bodies – ethical, regulatory, or otherwise.

3.6.9 Researchers on projects involving human participants must satisfy themselves that participants are enabled, by the provision of adequate accurate information in an appropriate form through suitable procedures, to give **informed consent**, having regard to the needs and capacities of vulnerable groups, such as older participants, children, those with mental illness or those in prison all of whom may require gatekeeper permissions. If a participant or gatekeeper cannot give informed consent, the participant should not be involved in the research. Guidance on ethics and gatekeepers can be found in the following:

- UKRIO – *Gatekeeper permission*;
- Economic and Social Research Council (ESRC) – *Research with children and young people*;
- ESRC – *Research with potentially vulnerable people*;
- ESRC – *Internet mediated research*; and
- UKRIO – *Good practice in research: Internet-mediated research* and additional resources on UKRIO's website here.

3.6.10 Researchers should ensure that co-production, collaboration, or participant and stakeholder involvement in research meets and adheres to appropriate

methodology and ethical frameworks, with considerations for responsibility, accountability, transparency, respect, expectations, management and sharing or use of the research. See the following for guidance:

- ESRC – *Framework on Research Ethics;*
- N8, Research Partnership, and ESRC – *Knowledge that matters: Realising the Potential of Co-Production*;
- NIHR – *Guidance on co-producing a research project; and*
- Vaughn LM, Jacquez F – *Participatory Research Methods – Choice Points in the Research Process*.

3.6.11 Researchers should inform research participants that data gathered during research may be disseminated not only in a report but also in different forms for academic or other subsequent publications and meetings, albeit not in an identifiable form, unless previously agreed to, and subject to limitations imposed by legislation or any applicable bodies, ethical, regulatory, or otherwise.

3.6.12 Researchers should inform research participants of any use of emerging tools, methods, and technologies in the research, such as AI. They must inform them, in non-technical language, of any implications that the tools have for the collection, analysis, storage, and use of their data – for example, any limitations on the right to withdraw participant data from the study.

3.6.13 Researchers who are members of a regulated profession must ensure that research involving human participants, human material, or personal data complies with any standards set by the body regulating their profession.

3.6.14 All health and social care research must be registered in a publicly accessible database so that trusted information about the studies is available for the benefit of all. For clinical trials, it is a *condition of a favourable ethics opinion*. Registering trials reduces research waste, prevents duplication, and allows more participants to engage with the research.

3.6.15 Researchers should publish the findings of all clinical research involving human participants in a timely manner upon completion. They need to be mindful of any restrictions on the reporting period, for example, sponsors of *Clinical Trials of Investigational Medicinal Products (CTIMPs)* are currently expected to publish a research summary of their findings within **12 months** of the study's completion. Forthcoming updates to the *UK Clinical Trials Regulations* – due to take effect from 10 April 2026 – will further strengthen current transparency expectations by introducing new legal requirements for those conducting CTIMPs to register a trial prior to its start, to publish summary of results within 12 months of the end of the trial, and to share trial findings with participants in a suitable format. It is important that research participants are thanked and informed about how their contribution helped in a way that is meaningful to them.

3.6.16 If researchers consider that human participants in research are subject to unreasonable risk or harm, they must suspend the activity that is deemed

harmful and then report their concerns to their manager or other appropriate person(s) as identified by their organisation. Where required, they should also notify the appropriate regulatory authority. Similarly, concerns relating to the improper and/or unlicensed use or storage of human material, or the improper use or storage of personal data, should be reported.

3.7 Research involving Animals and Animal Materials

3.7.1 **ORGANISATIONS AND RESEARCHERS** should make sure that research involving animals adheres to all legal and ethical requirements and other applicable guidelines. They should also ensure responsible use of animal-derived materials (where possible).

3.7.2 They should meet the legal requirements of the **3Rs** for reduction, replacement, and refinement of research involving animals and refer to relevant guidance:

- Home Office – *Research and testing using animals: licences and compliance;*
- Animals in Science Commitee (ASC);
- Laboratory Animal Science Association (LASA); and
- UKRIO – *A primer on research involving animals*.

3.7.3 Organisations and researchers should ensure that they continue to address the 3Rs with help from the National Centre for the Replacement, Refinement & Reduction of Animals in Research (NC3Rs).

3.7.4 **ORGANISATIONS** should set up systems to ensure the ethical, regulatory, and peer review of research projects involving animals. The systems should include mechanisms to make sure that such research projects have been approved by all applicable bodies, ethical, regulatory, or otherwise. Organisations should have an institutional **Animal Welfare and Ethical Review Body** (**AWERB**) and follow appropriate guidance (e.g., LASA/RSPCA).

3.7.5 Organisations should ensure that their researchers are open about animal research and abide by the commitments set out in the *Concordat on Openness on Animal Research in the UK*.

3.7.6 Organisations should ensure that their researchers are trained in all procedures necessary to conduct the research.

3.7.7 Organisations should make sure that their researchers are aware of the above systems and have access to all relevant guidance and legal and ethical frameworks.

3.7.8 **RESEARCHERS** should submit a draft project licence application for research projects involving animals for review by their local AWERB and amend their application in accordance with the recommendations of that review. They must have the necessary procedure training and maintain accurate record

keeping. They should also ensure that such research projects have been approved by all applicable bodies, ethical, regulatory, or otherwise before starting the research.

3.7.9 If researchers consider that animals involved in research are subject to unreasonable risk, harm or licence infringement (either or both project and personal Home Office animal licences), they must suspend the activity that is deemed harmful and then report their concerns to their manager or other appropriate person(s) as identified by their organisation, and, where required, to the appropriate regulatory authority (e.g., Home Office).

3.7.10 Researchers should comply with appropriate standards by following the *PREPARE* checklist when planning animal research, in conjunction with the *ARRIVE* guidelines for transparent reporting and dissemination of outputs from research involving animals and/or animal material.

3.8 Health, Safety, and Environmental Protection

3.8.1 **ORGANISATIONS AND RESEARCHERS** should ensure that all research carried out under their auspices, or for which they are responsible, fulfils all requirements of health and safety legislation and good practice. Certain types of research, for example social research in a conflict zone, can present issues of health and safety. They should ensure that all research which involves potentially hazardous or harmful material, or which might cause harm to the environment, complies with all legal requirements and other applicable guidelines for acquisition, use, storage, and disposal.

3.8.2 **ORGANISATIONS** should set up systems to ensure that such research is reviewed in accordance with the organisation's policy on health and safety.

3.8.3 **RESEARCHERS** should submit such research for all forms of appropriate review and abide by the outcome of that review.

3.9 Copyright and Intellectual Property

3.9.1 **ORGANISATIONS AND RESEARCHERS** should ensure that any contracts or agreements relating to research include provision for ownership and use of intellectual property. Intellectual property includes but is not limited to research data and other findings of research, ideas, information, designs, patents, trademarks, processes, software, hardware, apparatus and equipment, substances and materials, and artistic and literary works, including academic and scientific publications.

3.9.2 The use of AI and other emerging tools, methods, or technologies may raise novel questions concerning ownership, copyright, and licensing – particularly when tools generate, modify, or incorporate third-party material. Organisations and researchers should seek appropriate guidance and ensure compliance.

3.9.3 Organisations and researchers should not make any prior disclosure of research or the findings of research when this might invalidate any commercial property rights that could result. Organisations and researchers should recognise, however, that the presumption should be that any intellectual property discovered or developed using public or charitable funds should be disseminated to have a beneficial effect on society at large. That presumption may be overridden where there is an express restriction placed on any such dissemination. Any delay in publication and dissemination pending protection of intellectual property should be reasonable and kept to a minimum.

3.9.4 Organisations and researchers should comply with any additional conditions relating to intellectual property required by funding bodies.

3.9.5 **ORGANISATIONS** should clearly state any exceptions when their standard guidance might not apply; for example, waiving copyright of research theses, dissertations, and articles prepared for publication in journals or books.

3.9.6 Organisations must justify ownership and account for policies that introduce restrictions and barriers to open research.

3.9.7 **RESEARCHERS** should try to anticipate any issues relating to intellectual property at the **project planning stage** or at the earliest opportunity before dissemination and agree jointly in advance how they might be addressed, communicating any decisions to all members of the research team.

3.9.8 Researchers intending to copyright research material or output must comply with relevant legislation and guidelines (see the UK Government's guidelines on copyright), and ensure that these do not conflict with open access terms or other conditions of funding agreements.

3.10 Finance

3.10.1 **ORGANISATIONS AND RESEARCHERS** should ensure that the terms and conditions of any grant or contract related to the research are adhered to.

3.10.2 **ORGANISATIONS** should issue guidelines regarding the legal and ethical purchasing or procurement of materials, equipment, or other resources for research and the hiring of staff for research projects. These guidelines should include statements on the ownership of resources, storage, and maintenance (if applicable), and the rights of researchers to use them. Organisations should also set up procedures for the monitoring and audit of finances relating to research projects.

3.10.3 **RESEARCHERS** should comply with organisational guidelines regarding the use and management of finances relating to research projects. They should cooperate with any monitoring and audit of finances relating to research projects and report any concerns or irregularities to the appropriate person(s) as soon as they become aware of them.

3.11 Generation, Collection, and Retention of Data, Information, or Material

3.11.1 **ORGANISATIONS AND RESEARCHERS** should comply with all legal, ethical, funding body, and organisational requirements for the generation, collection, use, storage, and security of data, especially personal data, where particular attention should be paid to the requirements of data protection legislation. As part of this, they should assess risks associated with any use of emerging tools, methods, and technologies for research, taking action to mitigate those risks and ensure that use of such tools is lawful and ethical. They should also maintain confidentiality where undertakings have been made to third parties or to protect intellectual property rights. Organisations and researchers should ensure that research data relating to publications is available to other researchers, subject to any existing agreements on confidentiality.

3.11.2 Data should be retained for any legally specified period and otherwise for three years at least, subject to any legal, ethical, or other requirements, from the end of the project. It should be kept in a form that would enable retrieval by a third party, subject to limitations imposed by legislation and general principles of confidentiality (see the Medical Research Council's GDPR guidelines on how the law about confidentiality relates to data protection). Use of open access data repositories is encouraged and highly recommended to aid reproducibility and efficient research on research.

3.11.3 Organisations and researchers should comply with any subject-specific requirements for the retention of data; for example, certain disciplines, such as health and biomedicine, may require research data to be retained for a considerably longer period.

3.11.4 If research involves human material obtained from licensed centres, including materials such as embryos and gametes, or through other research processes such as archaeological excavations, organisations and researchers must comply with legal and ethical guidelines for the storage and preservation specified by relevant authorities such as the:

- Human Fertilisation & Embryology Authority (HFEA); and
- Human Tissue Authority (HTA).

3.11.5 If research data (and/or materials) is to be deleted or destroyed, either because its agreed period of retention has expired or for legal or ethical reasons, it should be done so in accordance with all legal, ethical, research funder and organisational requirements and with particular concern for confidentiality and security.

3.11.6 **ORGANISATIONS** should have in place procedures, resources (including physical space), and administrative support to assist researchers in the accurate and efficient collection of data and metadata, and its storage in a secure and accessible form. Guidelines should be in place to ensure that research data will be managed in accordance with the *FAIR Principles* to ensure that it is **Findable**, **Accessible**, **Interoperable**, and **Reusable**; thereby

supporting transparency, reproducibility, and the long-term value of research outputs

3.11.7 Organisations should consider the challenges posed by AI-generated content for intellectual property rights and other research integrity concerns and have clear policy and guidance in place to effectively regulate technology that have potential for harm across all disciplines and wider society. The policy should define who is responsible and accountable for the use of generative AI in research conducted under the auspices of the organisation.

3.11.8 **RESEARCHERS** should consider how data will be gathered, analysed, and managed, and how and in what form relevant data will be made available to others under open research practices, at an early stage of the design of the project.

3.11.9 Researchers should collect data accurately, efficiently, and according to the agreed design of the research project and ensure that it is stored in a secure and accessible form. Processing of personal data must comply with *GDPR* legislation.

3.3.9 The use of AI in data collection or processing must be transparent, reproducible, and documented. Researchers should ensure that data generated or influenced by AI systems is properly archived and described.

3.12 Monitoring and Audit

3.12.1 **ORGANISATIONS AND RESEARCHERS** should ensure that research projects comply with any monitoring and audit requirements. They should make sure that researchers charged with carrying out such monitoring and audits have sufficient training, resources, and support to fulfil the requirements of the role.

3.12.2 **ORGANISATIONS** should monitor and audit research projects to ensure that they are being carried out in accordance with good practice, legal, and ethical requirements, and any other guidelines, adopting a risk-based and proportional approach.

3.12.3 **RESEARCHERS** should consider any requirements for monitoring and audit at an early stage in the design of a project.

3.12.4 Researchers should cooperate with the monitoring and audit of their research projects by applicable bodies and undertake such when required. They should cooperate with any outcomes of the monitoring and audit of their research projects. If they become aware of a need for monitoring and audit where it is not already scheduled, they should report that need to the appropriate person(s).

3.13 Peer Review

3.13.1 **ORGANISATIONS AND RESEARCHERS** should be aware that peer review is an important part of good practice in the publication and dissemination of research and research findings, the assessment of applications for research grants, and in the ethics review of research projects. Organisation should provide appropriate training and/or a mentoring scheme on peer review.

3.13.2 **ORGANISATIONS** should encourage and enable researchers to act as peer reviewers for journals, publications, grant applications, and ethics reviews. This support may include training and mentoring schemes. They should also recognise the obligations of peer reviewers to be thorough and objective in their work and to maintain confidentiality, and should not put pressure, directly or indirectly, on peer reviewers to breach these obligations.

3.13.3 **RESEARCHERS** who carry out peer review should do so to the highest standards of thoroughness and objectivity. They should follow the guidelines for peer review of any organisation for which they carry out such work as well as the Committee on Publication Ethics (COPE) guidance for publication ethics.

3.13.4 Researchers who agree to peer review must be aware of and avoid both status bias (also known as the Matthew effect – see Box 2) and implicit bias (commonly known as unconscious bias – see Box 3) throughout the review process. To facilitate this, they could encourage the relevant body requesting the peer review to anonymise reviewers to author names and affiliations.

3.13.5 Researchers should maintain strict confidentiality and not retain or copy any material under review without the express written permission of the organisation which requested the review. Maintaining confidentiality includes not sharing any material with generative AI tools. They should not make use of research designs, data, or research findings from a grant application, manuscript, or other material under review without the express permission of the author(s) and should not allow others to do so. Researchers acting as peer reviewers must declare any relevant competing interests and decline to peer review if they have significant conflicts.

3.13.6 While carrying out peer review, researchers may become aware of possible breaches of research integrity or have ethical concerns about the design or conduct of the research. In such cases they should inform, in confidence, an appropriate representative of the organisation which requested the review, such as the editor of the relevant journal, publisher staff, or the chair of the relevant grants or ethics committee. Investigation of alleged breaches of research integrity is the responsibility of the publisher, funder, organisation, or other relevant bodies.

3.13.7 Researchers who submit material containing research data or information derived from machine learning algorithms and non-sensitive data should ensure all programming scripts (e.g., using Python, R or other scripting language) and data are openly accessible to reviewers.

3.13.8 Researchers must not use AI to support peer review without explicit permission. Uploading confidential manuscripts into generative tools may breach trust or policy.

2 The Matthew Effect (Status Bias)

Originally developed by Merton (1968) to describe the situation in which individuals who begin in a position of relative advantage accrue greater incremental gains over individuals who begin at a position of relative disadvantage.

For example, a reviewer may give a higher score to a grant application or accept a manuscript for publication if the author is a well-known and established researcher with an excellent track record. However, if the same grant or manuscript is submitted by a relatively unknown researcher (e.g., someone at the early-mid career stage), the reviewer may give a lower score on the grant or reject the manuscript for publication.

3 Implicit Bias (Unconscious Bias)

Various biases developing gradually in the subconscious because of beliefs, assumptions and attitudes (which may or may not be ethnocentric) that reinforce stereotypes and assign judgements on others. Examples include but are not limited to:

- name bias;
- confirmation bias;
- conformity bias;
- affinity bias;
- gender bias; and
- ageism.

3.14 Dissemination of Research Outputs

There are a wide variety of research outputs. While not exhaustive, the REF 2021 guidance listed the different types of research outputs as follows:

"217. In addition to printed academic work, research outputs may include, but are not limited to: new materials, devices, images, artefacts, products and buildings; confidential or technical reports; intellectual property, whether in patents or other forms; performances, exhibits or events; and work published in non-print media."

3.14.1 **ORGANISATIONS AND RESEARCHERS** should accept their duty to disseminate research outputs in a manner that reports the research and all the findings of the research accurately and without selection that could be misleading. They should ensure that any use of emerging tools, methods, and technologies for research adheres to, and has been declared in line with, publisher, organisational, and other requirements and guidelines. Compliance with open research practices will add another layer of protection against this; the *Transparency and Openness Promotion (TOP)* guidelines are useful in implementing transparent research.

3.14.2 Organisations and researchers should consider and mitigate risks associated with research following interpretation of early results (e.g., from rapid publications in open peer review journals where review process is incomplete or preprints) by the media, general public, or other beneficiaries.

3.14.3 Researchers must clearly disclose the use of AI – for example in writing, translating, or visualising research outputs – in line with funder and publisher requirements. Organisations should support researchers in meeting these standards.

3.14.4 **ORGANISATIONS** should ensure that sponsors and funders of research respect the duty of researchers to publish their research and the findings of their research, do not discourage or suppress appropriate publication or dissemination, and do not attempt to influence the presentation or interpretation of findings inappropriately. Practices supporting open research (including reproducibility and replicability) should be supported.

3.14.5 Organisations should provide training and support to guide researchers in the publication and dissemination of research and the findings of research that involves confidential or proprietary information, issues relating to patents or intellectual property, findings with serious implications for public health, contractual or other legal obligations, and/or interest from the media or the general public.

3.14.6 **RESEARCHERS** should address issues relating to publication and authorship, especially the roles of all collaborators and contributors, at an early stage of the design of a project, recognising that, subject to legal and ethical requirements, roles and contributions may change during the research. Decisions on publication and authorship/contributorship should be agreed jointly and communicated to all members of the research team (see COPE guidelines).

3.14.7 Authorship should be restricted to those contributors and collaborators who have made a significant intellectual or practical contribution to the work. See the *Contributor Roles Taxonomy (CRediT)* guidelines. No person who fulfils the criteria for authorship should be excluded from the submitted work. Authorship should not be allocated to honorary or "guest" authors (i.e., those who do not fulfil criteria of authorship). Researchers should be aware that anyone listed as an author of any work should be prepared to take public responsibility for that work and ensure its accuracy and be able to identify their contribution to it. For this reason, it is unacceptable to include any AI, including but not limited to generative AI, as an author or co-author of a research output.

- COPE provides further guidance in *Authorship and AI tools*.
- The *Method Reporting with Initials for Transparency (MeRIT)* system may be useful to clarify author contributions.

3.14.8 Researchers should list the work of all contributors who do not meet the criteria for authorship as an acknowledgement, with their permission. All funders and sponsors of research should be clearly acknowledged, and disclosure of interests listed.

3.14.9 Researchers must clearly acknowledge all sources used in their research and seek permission from any individuals if a significant amount of their work has been used in the publication.

3.14.10 Researchers must adhere to any conditions set by funding or other bodies regarding the publication of their research and its findings in open access repositories within a set period.

3.14.11 Researchers should declare any potential or actual competing interest in relation to their research when reporting their findings at meetings, on social media, or in publications.

3.14.12 Researchers should be aware that submitting research outputs as publications to more than one potential publisher at any given time (i.e., duplicate submission) or publishing findings in more than one publication without disclosure and appropriate acknowledgement of any previous publications (i.e., duplicate publication) is unacceptable.

3.14.13 Researchers who are discouraged from publishing and disseminating their research or its findings, or subjected to attempts to influence the presentation or interpretation of findings inappropriately, should discuss this with the appropriate person(s) in their organisation so that the matter can be resolved.

3.15 Open Access to Research Outputs, Data, Findings, or Outcomes

3.15.1 **ORGANISATIONS AND RESEARCHERS** should adhere to the recommendations of the *Budapest Open Access Initiative (BOAI)* when considering whether open access is granted immediately for research theses and dissertations submitted to a repository that promotes interoperability and facilitates

efficient dissemination, or to embargo for a defined period with restricted access to abstract and metadata.

3.15.2 Organisations and researchers should abide by the *Concordat on Open Research Data* and follow guidance on good practice in open research and regulatory frameworks according to disciplinary norms.

3.15.3 **ORGANISATIONS** should consider the resources available to them for open access and ensure guidelines and policies are in place for accountability and transparency of research material, data, metadata, and outputs when made available for open access.

3.15.4 **RESEARCHERS** should consider whether open access is granted immediately to support dissemination, reproducibility, and integrity of research outputs, findings, data, and other research material or to embargo full access for a limited period.

3.15.5 Researchers must specify terms that permit universal re-use, redistribution, and interoperability of research data and outputs disseminated under an **open licence** (e.g., Creative Commons) of the appropriate type and level. The data and outputs must be available in full in a format that is convenient and modifiable.

3.16 Funding and Collaboration in Research and Enterprise

3.16.1 **ORGANISATIONS AND RESEARCHERS** collaborating with commercial or other non-research organisations must have a **collaboration agreement** signed before any work commences that stipulates key roles, responsibilities, obligations, and rights of all parties, and how the research will be jointly managed. The agreement should clarify ownership of intellectual property, authorship, and specify exemptions to open licensing terms for the use of research material and legally protected databases. The agreement must reflect any funding terms and conditions including conditions for funding transfer between sponsors and collaborators or commercial partners.

3.16.2 Before agreeing to any collaboration with multinational organisations or researchers outside the UK, organisations and researchers must undertake a risk assessment and due diligence to ensure national security and compliance with legal requirements and financial agreements in the UK and all relevant countries. Ethical approvals (if applicable) must be in place from all relevant countries and research protocol(s) agreed upon by all parties.

3.16.3 Organisations and researchers must conduct a risk assessment for research that is subject to export control restrictions, acquiring an export licence if needed, and manage the research under appropriate *Trusted Research* guidelines. See the following for additional guidance:

- The Research Collaboration Advice Team (RCAT) provides advice on national security risks linked to international research.
- The Higher Education Export Control Association (HEECA) provides guidance and training on export control compliance for universities.

- Universities UK (UUK), the Centre for the Protection of National Infrastructure (CPNI – now known as the NPSA) and UK Research and Innovation (UKRI) have published guidelines on *Managing risks in international research and innovation*.

3.16.4 **ORGANISATIONS** must ensure that agreements are in place that specify relevant terms and conditions for engaging any research partners, including commercial and other non-research organisations, in research funded by a major grant award to the organisation or other funding agreement held by the organisation.

3.16.5 Organisations must exercise due diligence when accepting funds from businesses and multinational co-operations, including foreign government associates. Funding should only be accepted from funders with a good track record of awarding research grants and with terms and conditions of funding that do not carry risks to security, finance, or reputation, and are compliant with legal and ethical regulations and requirements.

3.16.6 **RESEARCHERS** must ensure that any relevant ethical approvals or permissions are in place before starting **contract research** or research with high economic impact. Such research should be conducted in accordance with relevant *Trusted Research* guidance and appropriate sector-specific guidelines. For example:

- **Health and life sciences**: *The National Directive on Commercial Contract Research Studies* from the NHS HRA and NIHR; and
- **Arts, humanities, and social sciences**: *Business R&D in the arts, humanities and social sciences* from the Creative Industries Policy & Evidence Centre and Nesta.

3.17 Breaches of Research Integrity: Research Misconduct and Questionable Research Practices

3.17.1 **ORGANISATIONS** should define what they consider to be misconduct in research and make it known to their researchers. UKRIO recommends adoption of the definition in *The Concordat to Support Research Integrity*:

> "research misconduct constitutes the behaviours and deliberate actions that fall short of the principles in Commitment 1 of the Concordat, occurring at any point in the research lifecycle. This includes behaviours associated with the ideation of research proposals, reviewing the work of others, and the reporting of research findings.
>
> Research misconduct can take many forms, including:
>
> - **fabrication**: making up results, other outputs (for example, artefacts) or aspects of research, including documentation and participant consent, and presenting and/or recording them as if they were real

- **falsification**: inappropriately manipulating and/or selecting research processes, materials, equipment, data, imagery and/or consents
- **plagiarism**: using other people's ideas, intellectual property, or work (written or otherwise) without acknowledgement or permission
- **failure to meet**: legal, ethical, and professional obligations, for example:
    - not observing legal, ethical and other requirements for human research participants, animal subjects, or human organs or tissue used in research, or for the protection of the environment
    - breach of duty of care for humans involved in research whether deliberately, recklessly or by gross negligence, including failure to obtain appropriate informed consent
    - misuse of personal data, including inappropriate disclosures of the identity of research participants and other breaches of confidentiality
    - improper conduct in peer review of research proposals, results or manuscripts submitted for publication. This includes failure to disclose conflicts of interest; inadequate disclosure of clearly limited competence; misappropriation of the content of material; and breach of confidentiality or abuse of material provided in confidence for the purposes of peer review
- **misrepresentation of**:
    - data, including suppression of relevant results/data or knowingly, recklessly or by gross negligence presenting a flawed interpretation of data
    - involvement, including inappropriate claims to authorship or attribution of work and denial of authorship/attribution to persons who have made an appropriate contribution
    - interests, including failure to declare competing interests of researchers or funders of a study
    - qualifications, experience and/or credentials
    - publication history, through undisclosed duplication of publication, including undisclosed duplicate submission of manuscripts for publication

- **improper dealing with allegations of misconduct**: failing to address possible infringements, such as attempts to cover up misconduct and reprisals against whistle-blowers, or failing to adhere appropriately to agreed procedures in the investigation of alleged research misconduct accepted as a condition of funding. Improper dealing with allegations of misconduct includes the inappropriate censoring of parties through the use of legal instruments, such as non-disclosure agreements.

Honest errors and differences in, for example, research methodology or interpretations do not constitute research misconduct."

3.17.2 Organisations should define what they consider to be Questionable Research Practices (QRPs) and communicate this to their researchers. UKRIO recommends adoption of the definition in *The Concordat to Support Research Integrity*:

" QRPs refer to minor infractions or research practices, including avoidable errors, which fall short of the definition of intentional research misconduct. They may arise due to a lack of knowledge or attention to detail, negligence, or deliberate action, and may occur where there is no evident intention to deceive."

3.17.3 Organisations should establish and publicise a **procedure to investigate allegations of breaches of research integrity** (as in Section 3.1.5(b)) that has the scope and process to investigate, in a proportionate and appropriate manner, any type of alleged breach: avoidable errors, other QRPs and research misconduct. They must ensure that any such allegations are investigated thoroughly, fairly, and transparently, in a timely manner and with appropriate provisions of confidentiality. The *UKRIO Procedure for the Investigation of Misconduct in Research* outlines a standard process for investigating alleged breaches of research integrity.

3.17.4 Organisations should identify and make known one or more members of staff (i.e., the **Named Person**) who have a thorough understanding of research conduct in compliance with *The Concordat to Support Research Integrity* to be responsible for investigating alleged breaches of research integrity, and who researchers and external organisations, such as journals, research collaborators, or funders can contact with any concerns about the conduct of research. A staff member other than the Named Person should be designated as the **Alternative Named Person** who will lead any appeals against the findings of an investigation procedure. Organisations should make sure that staff who investigate allegations and appeals have the necessary training, resources, and support to fulfil the requirements of the role.

3.17.5 Organisations should make it clear to researchers that breaches of research integrity are unacceptable and should be reported, that researchers who are

found to have committed research misconduct deliberately will be subject to disciplinary proceedings, and that where researchers are members of a regulated profession, serious breaches of research integrity will be referred to the body regulating their profession. They should also make it clear that researchers who are found not to have committed breaches of research integrity will be supported and appropriate steps taken to restore their reputation and that of any relevant research project(s).

3.17.6 Organisations should support those who raise concerns about the conduct of research in good faith and not penalise them. This support should be in accordance with the organisation's policy on raising concerns or "whistleblowing".

3.17.7 Throughout the investigation period, organisations should ensure adequate support for the welfare and wellbeing for all individuals affected, including the **respondent(s)** against whom the allegation is raised.

3.17.8 **RESEARCHERS** should know what constitutes a breach of research integrity and report any suspected breaches through the relevant procedure of the organisation as soon as they become aware of it. They should recognise that good practice in research includes reporting concerns about the conduct of research and should cooperate with any investigation into breaches of research integrity when requested. Researchers should work with their institution to support those who raise concerns in good faith about the conduct of research and those who have been exonerated of suspected breaches.

3.18 Research Culture

3.18.1 **ORGANISATIONS AND RESEARCHERS** should promote good practice to improve research culture and encourage attendance at internal and external research integrity training courses, and these should be clearly and efficiently communicated to staff (inclusive of research assistants, technicians, and research-enabling staff) and students across the organisation at the institutional, faculty, and departmental levels.

3.18.2 Organisations and researchers should ensure an environment that encourages and facilitates **equality, equity, diversity, and inclusivity** (**EEDI**) at all levels of the organisation and have specific support to ensure the environment is as inclusive as possible. This includes but is not limited to provisions for individuals with protected characteristics such as:

a. visible and invisible disabilities;

b. neurodiversity;

c. religion, faith, and no faith;

d. minority groups (e.g., ethnicity, gender); and

e. caring duties.

3.18.3 Organisations and research supervisors/managers/leaders should incorporate awareness, understanding, recognition, and management of stress, depression, anxiety, or other mental health conditions of researchers and research-enabling staff in routine training programmes.

3.18.4 Organisations and those who supervise, manage, or lead researchers and research-enabling staff should promote a positive workplace culture and:

- **a.** be encouraging to and motivate other researchers;
- **b.** encourage good behaviour and attitude;
- **c.** accommodate flexible working;
- **d.** maintain work-life balance;
- **e.** support provisions for sick leave, parental leave, and caring duties;
- **f.** avoid presenteeism; and
- **g.** avoid unrealistic demands that increase workload but decrease productivity. Time pressure and workload issues have a significant impact on good research culture and can open the door to questionable research practices that may lead to breaches of research integrity.

3.18.5 Organisations and researchers should foster a culture where responsible, creative, and ethical use of emerging tools, methods, and technologies – such as AI – is supported through training, policy, and critical dialogue.

3.18.6 **ORGANISATIONS** should define what they consider to be the key supportive activities to promote a healthy research culture. These need to be tailored to specific disciplines and be:

- **a.** sustainable and flexible;
- **b.** secure and funded;
- **c.** collaborative and friendly;
- **d.** diverse, inclusive, and fair;
- **e.** creative, open, and encouraging;
- **f.** stimulating and inspiring;
- **g.** innovative and rewarding;
- **h.** honest and rigorous; and
- **i.** balanced.

3.18.7 A well-signposted report and support system should be in place that provides a simple way for anyone to raise concerns of inappropriate behaviour, bullying, harassment, and violence. This ensures that organisations have a robust and consistent management tool to implement long-term preventative solutions and improve workplace culture.

3.18.8 Organisations should have clear policies for explicitly tackling online bullying, harassment, and hate incidents. This should be strengthened with good reporting structures and networks, having professionally trained staff at all levels, and embedding education and training for students within their curriculum and for staff throughout their employment.

3.18.9 Organisations should allocate funds and have mechanisms in place to address the concerns of researchers and research-enabling staff. They should establish rigour and reproducibility by reviewing grant applications or research outputs to improve quality prior to submission. Funds may be designated for internal and external validation of research data, creative works, products, results, or information.

3.18.10 Organisations should integrate **research integrity training** into induction and orientation programmes and offer courses and workshops to researchers and, where appropriate, for research-enabling staff. They should require that researchers and, where appropriate, research-enabling staff have ongoing education on research ethics, governance, integrity, and culture, and provide the necessary reporting to support them.

3.18.11 Organisations should provide training and clear guidelines for dealing with staff and students suffering from depression, anxiety, and other mental health conditions and ensure adequate support for researchers and research-enabling staff affected as well as resources for staff providing support.

3.18.12 Organisations should acknowledge and reward departments, researchers, and research-enabling staff that promote research integrity, encourage interdisciplinary interaction (social and academic), and participate in national and international networks or forums for exchange of knowledge and resources.

3.18.13 Organisations should use UKRIO's *Self-Assessment Tool* to regularly review the effectiveness of their policies on improving research culture, and highlight issues that need to be addressed.

3.18.14 **RESEARCHERS** should undertake regular research integrity and ethics education and training and participate in integrity events and public engagement activities to promote trust in research. UKRN have useful resources on how different disciplines can practise open research.

3.18.15 Researchers who supervise or otherwise manage/lead research staff (inclusive of research assistants, technicians, and research-enabling staff) or students should have adequate training in supervision and management to avoid disconnected leadership and seek support and advice from experienced colleagues, their institution, and/or other supporting bodies.

3.18.16 Research supervisors/managers/leaders should ensure that they have adequate psychosocial support for themselves as well as for their staff or students.

3.19 Research Assessment

3.19.1 **ORGANISATIONS AND RESEARCHERS** should consider the principles, commitments and framework set out in *The Agreement on Reforming Research Assessment* (see Box 4) by the Coalition for Advancing Research Assessment (CoARA) when assessing research outputs, practices and activities. Judge research based on quality, reliability, reproducibility and/or authenticity rather than on the popularity of the authors, their affiliation, the journal or other output mechanisms. For additional guidance and approaches on the evaluation of researchers, see the following:

- INORMS – *SCOPE Framework for Research Evaluation*;
- Joint Funders Group (JFG);
- Alternative Uses Group (AUG); and
- Royal Society – *Résumé for Researchers*.

4 Summary of CoARA's Ten Commitments (2022 Edition)

1. Recognise the diversity of contributions to, and careers in, research in accordance with the needs and nature of the research.
2. Base research assessment primarily on qualitative evaluation for which peer review is central, supported by responsible use of quantitative indicators.
3. Abandon inappropriate uses in research assessment of journal- and publication-based metrics, in particular, inappropriate uses of Journal Impact Factor (JIF) and h-index.
4. Avoid the use of rankings of research organisations in research assessment.
5. Allocate resources to reforming research assessment as is needed to achieve the changes organisations are committed to.
6. Review and develop research assessment criteria, tools and processes.
7. Raise awareness of research assessment reform and provide transparent communication, guidance, and training on assessment criteria and processes as well as their use.
8. Exchange practices and experiences to enable mutual learning within and beyond the Coalition.

9. Communicate progress made on adherence to the Principles and implementation of the Commitments.

10. Evaluate practices, criteria and tools based on solid evidence and the state-of-the-art in research on research and make data openly available for evidence gathering and research.

3.20 Artificial Intelligence (AI)

3.20.1 **ORGANISATIONS AND RESEARCHERS** should recognise that while AI offers considerable benefits, its use also raises legal, ethical, and integrity-related risks.

3.20.2 To uphold research integrity, researchers and organisations must ensure that the use of AI is transparent, proportionate, accountable, and in line with applicable laws, policies, and disciplinary standards. This includes understanding and mitigating the limitations of AI systems, ensuring robust oversight, and documenting AI use clearly.

3.20.3 Organisations and researchers should recognise that the use of AI in research may raise issues related to data protection, intellectual property, transparency, explainability, fairness, and accountability, as well as ethical considerations. These issues and considerations apply to both off-the-shelf and bespoke tools, regardless of where AI is used – in research design, data collection, analysis, dissemination, or peer review.

3.20.4 Organisations and researchers should use AI tools in ways that are consistent with relevant laws and sector guidance. For example, the UK Department for Science, Innovation and Technology white paper *AI Regulation: a pro-innovation approach* sets out five principles for responsible AI use:

- Safety, security and robustness;
- Appropriate transparency and explainability;
- Fairness;
- Accountability and governance; and
- Contestability and redress.

3.20.5 UKRIO provides detailed and practical guidance on the responsible use of AI in research in *Embracing AI with integrity: A practical guide for researchers*.

3.20.6 Ethical risks associated with AI use – such as informed consent, data security, social bias and inequality, environmental impact, and potential dual-use/misuse – should be assessed and, where appropriate, reviewed by a research ethics committee (REC). Where the use of AI poses significant or novel risks, early engagement with research integrity, governance, and ethics support is recommended.

3.20.7 Organisations and researchers should ensure that the use of AI in research is subject to proportionate oversight. Human review and critical thinking remain essential throughout the research lifecycle to verify AI-generated content and guard against misuse or error. Fostering creativity alongside critical evaluation helps researchers leverage AI responsibly without diminishing original insight or intellectual contribution.

3.20.8 As part of this, they should consider whether the training data or algorithms used by an AI system may introduce bias, be incomplete, or lack appropriate provenance. This is particularly critical in high-stakes research areas such as health and social care, environment, or public policy.

3.20.9 Organisations and researchers should maintain accurate records of AI use in research, including inputs, tool versions, settings, and outputs. This is important for reproducibility, accountability, and responding to queries about the research record.

3.20.10 AI use should be disclosed transparently in research outputs. Many publishers and funders have introduced specific requirements, such as the following, for declaring AI-assisted writing or analysis. Researchers must follow these and ensure acknowledgements accurately reflect how AI tools were used:

- Committee on Publication Ethics (COPE) – *Authorship and AI*; and
- JAMA – *Reporting Use of AI in Research and Scholarly Publication—JAMA Network Guidance*.

3.20.11 Organisations and researchers must also remain vigilant to new forms of breaches of research integrity facilitated by AI, including fabricated citations or content, undisclosed use of AI-generated writing, breaches of peer review confidentiality, or breaches of ethical protocols and other permissions for research.

3.20.12 **ORGANISATIONS** should develop and keep up-to-date clear policies, systems and guidance on the use of AI in research. These should:

a. cover topics such as acceptable use, approved tools, risk assessment, data protection, and requirements for ethical approval;

b. explicitly incorporate the protection and maintenance of the research record, including guidelines on documentation and archiving of AI-generated data and outputs; and

c. provide clear guidance on AI's role in research dissemination practices, including peer review and publishing, to promote transparency, uphold quality standards, and manage ethical considerations linked to AI-assisted outputs.

3.20.13 Organisations should communicate to researchers any limitations or prohibitions on specific AI services and, where possible, provide access to approved AI tools under institutional licences to support accountability and responsible use.

3.20.14 Organisations should provide training and development to help researchers develop AI literacy, with a focus on legal compliance, ethical considerations, transparency and protecting the research record, good dissemination practices, bias mitigation, and ensuring critical thinking.

3.20.15 Organisations should establish mechanisms to assess emerging risks associated with AI, including review of high-risk projects (e.g., AI in health, defence, or international partnerships) in light of national frameworks for research security such as *Trusted Research* and the *National Security and Investment Act (2021)*.

3.20.16 **RESEARCHERS** should reflect critically on whether the use of AI is appropriate, proportionate, and necessary at each stage of the research process. For each proposed use of AI, they should consider whether it enhances or diminishes transparency, rigour, originality, and ethical standards.

3.20.17 Researchers should adopt Explainable AI (XAI), a growing area of research focused on making the decision-making processes of AI systems transparent and understandable. By ensuring clarity, XAI can reduce biases, minimise errors, and improve trust – particularly when AI is used for decision support or predictive tasks. For further insight, The Royal Society has produced a helpful policy briefing titled *Explainable AI: the basics*.

3.20.18 Researchers should not use AI tools to process or store personal or sensitive data unless this is lawful, justified, and approved by their organisation. They should review AI providers' terms, privacy policy, and data handling practices to assess risk. It is strongly advised that any information that could identify an individual – known as personal data – should not be entered into an AI system.

3.20.19 Any use of AI must be in line with data protection laws such as *the UK General Data Protection Regulation (UK GDPR)* and *the Data Protection Act 2018*. See also ICO's *Guidance on AI and Data Protection*.

3.20.20 When using AI tools for writing, image generation, or data analysis, researchers should maintain human oversight and not rely uncritically on outputs. They should be especially cautious of "hallucinated" or otherwise inaccurate content or fabricated citations and always verify references manually.

3.20.21 AI should not be used to support peer review or grant assessments unless explicitly permitted. Uploading confidential material into AI systems without permission may breach journal, funder, organisational, or data protection requirements.

3.20.22 Research students should avoid using AI to complete assessments unless this is expressly permitted and declared. Undisclosed use may constitute academic misconduct.

3.20.23 Researchers should maintain a proactive commitment to creativity, ensuring AI tools complement rather than replace critical thinking, human oversight, and innovation. They should stay informed about the use of AI in research,

recognising that it is evolving rapidly and that expectations for transparency, reporting, and responsible use are likely to continue developing. If researchers are uncertain about any aspects of AI use, they should seek expert advice from their supervisor or manager, their organisation's research integrity officer, or other expert resources before proceeding.

Acknowledgements

This revised Code is an update to version 3.0 published online in 2023.

Authors

James Parry – *concept, research, initial draft, editing, reviewing*.

Dr Josephine Woodhams – *research, drafting, editing, reviewing*.

Dr Mohi Ahmed – *research, drafting, editing, reviewing, formatting*.

Contributors and Reviewers

Kathryn Dally – *reviewed and commented on 2025 edition.*

Matt Hodgkinson – *reviewed and commented on 2023 edition*.

Stephanie Neave – *reviewed and commented on 2025 edition*.

Nicola Sainsbury – *reviewed and commented on 2023 edition*.

Jasper Scott – *editing, formatting*.

UKRIO advisors: Inke Näthke; Jeremy Barraud; Patricia Henley; Sam Broadhead; Matthew Billington; Thereza Deaguiar; Ruth Moran; Jennifer Wright; Robert N. Wyllie; Bushra Khair – *reviewed and commented on 2023 edition*.

Health Research Authority: Clive Collett – *feedback on 2023 edition.*

Competing Interests

Dr Mohi Ahmed, Kathryn Dally, James Parry, Jasper Scott and Dr Josephine Woodhams are employees of UKRIO.

Funding

This work was funded by UKRIO.

Further Reading

UKRIO recommends consideration of the following, as well as the webinars and collated resources on our website:

- ARMA and UKRIO. (2020). Research Ethics Support and Review in Research Organisations. https://doi.org/10.37672/UKRIO-2020.01-ARMA
- Royal Society and UKRIO. (2018). Integrity in Practice toolkit. https://ukrio.org/wp-content/uploads/UKRIO-Royal-Society-Integrity-in-Practice.pdf
- UKRIO. (2023). Procedure for the Investigation of Misconduct in Research. https://doi.org/10.37672/UKRIO.2023.01.misconduct
- UKRIO. (2023). A short guide to research misconduct. https://ukrio.org/news/research-misconduct-a-short-guide/
- UKRIO. (2021). Self-Assessment Tool for The Concordat to Support Research Integrity. https://doi.org/10.37672/UKRIO.2021.02.self-assessment
- UKRIO. (2025). Embracing AI with integrity: A practical guide for researchers. https://doi.org/10.37672/UKRIO.2025.06.embracingAIwithintegrity
- UKRIO. (2019). A primer on research involving animals. https://doi.org/10.37672/UKRIO.2019.01.animals
- UKRIO. (2023). Advice on research ethics and gatekeeper permissions for international researchers wishing to undertake research in the UK. https://ukrio.org/our-work/get-advice-from-ukrio/answers-to-common-enquiries/advice-on-research-ethics-and-gatekeeper-permissions-for-international-researchers/
- Universities UK *et al.* (2025). The Concordat to Support Research Integrity. https://ukcori.org/research-integrity-concordat/
- Vitae. (2019). The Concordat to Support the Career Development of Researchers. https://researcherdevelopmentconcordat.ac.uk/
- Universities UK, Research Councils UK, Higher Education Funding Council for England, Wellcome Trust. (2016). Concordat on Open Research Data. https://www.ukri.org/wp-content/uploads/2020/10/UKRI-020920-ConcordatonOpenResearchData.pdf
- Understanding Animal Research. (2014). Concordat on Openness in Animal Research in the UK. https://concordatopenness.org.uk
- Coalition for Advancing Research Assessment (CoARA). (2022). Agreement on Reforming Research Assessment. https://coara.eu/agreement/the-agreement-full-text/

- International Network of Research Management Societies (INORMS) – Research Evaluation Group. (2023). The SCOPE Framework. https://inorms.net/scope-framework-for-research-evaluation/

- UK Research and Innovation (UKRI). (2021). Joint Funders Group (JFG). https://www.ukri.org/what-we-offer/supporting-healthy-research-and-innovation-culture/research-and-innovation-culture/joint-funders-group/

- UK Research and Innovation (UKRI). (2021). Alternative Uses Group. https://www.ukri.org/what-we-offer/supporting-healthy-research-and-innovation-culture/research-and-innovation-culture/alternative-uses-group/

- The Royal Society. Résumé for Researchers. https://royalsociety.org/topics-policy/projects/research-culture/tools-for-support/resume-for-researchers/

- Health Research Authority (HRA). (2018). GDPR guidance for researchers and study coordinators. https://www.hra.nhs.uk/planning-and-improving-research/policies-standards-legislation/data-protection-and-information-governance/gdpr-guidance/

- Information Commissioner's Office (ICO). (2018). Guide to the UK General Data Protection Regulation (UK GDPR). https://ico.org.uk/for-organisations/guide-to-data-protection/guide-to-the-general-data-protection-regulation-gdpr/

- Medical Research Council (MRC). (2020). GDPR: Lawful basis, research consent and confidentiality. https://www.ukri.org/wp-content/uploads/2021/08/MRC-0208212-GDPR-lawful-basis-research-consent-and-confidentiality.pdf

- National Protective Security Authority (NPSA). (2023). Trusted Research for Academia and Industry. https://www.npsa.gov.uk/trusted-research

- Universities UK (UUK), the Centre for the Protection of National Infrastructure, (CPNI), UK Research and Innovation (UKRI). (2022). Managing risks in international research and innovation: an overview of higher education sector guidance. https://heeca.org.uk/videos/docs/managing-risks-in-international-research-and-innovation-uuk-cpni-ukri.pdf

- Health Research Authority, National Institute for Health Research (NIHR). (2021). National Directive on Commercial Contract Research Studies. https://www.england.nhs.uk/wp-content/uploads/2022/01/B1195-national-directive-on-commercial-contract-research-studies-031221.pdf

- Health Research Authority, NHS Research Scotland, Public Health Agency, Health and Care Research Wales. (2023). UK Policy Framework for Health and Social Care Research. https://www.hra.nhs.uk/planning-and-improving-research/policies-standards-legislation/uk-policy-framework-health-social-care-research/uk-policy-framework-health-and-social-care-research/

- National Research Integrity Forum (NRIF). (2019). Framework to Enhance Research Integrity in Research Collaborations. https://www.iua.ie/wp-

content/uploads/2022/02/Framework-to-Enhance-Research-Integrity-in-Collaborations.pdf

- Medicines and Healthcare products Regulatory Agency (MHRA). (2023). Government response to consultation on legislative proposals for clinical trials. https://www.gov.uk/government/consultations/consultation-on-proposals-for-legislative-changes-for-clinical-trials/outcome/government-response-to-consultation-on-legislative-proposals-for-clinical-trials

- Human Fertilisation & Embryology Authority (HFEA). Code of Practice. https://portal.hfea.gov.uk/knowledge-base/read-the-code-of-practice/

- Human Tissue Authority (HTA). https://www.hta.gov.uk/

- European Medicines Agency. (2018). International Conference on Harmonisation: Guideline for Good Clinical Practice (ICH GCP). https://ichgcp.net/

- Home Office. (2013). Animal testing and research: guidance for the regulated community. https://www.gov.uk/guidance/research-and-testing-using-animals

- Animals in Science Committee (ASC). https://www.gov.uk/government/organisations/animals-in-science-committee

- Laboratory Animal Science Association (LASA). https://www.lasa.co.uk/current_publications/

- RSPCA and LASA. (2015). Guiding Principles on Good Practice for Animal Welfare and Ethical Review Bodies. A report by the RSPCA Research Animals Department and LASA Education, Training and Ethics Section. (M. Jennings ed.). https://science.rspca.org.uk/documents/1494935/9042554/Guiding+principles+on+good+practice+for+Animal+Welfare+and+Ethical+Review+Bodies+%282015%29+%28PDF+1.76MB%29.pdf/aa989204-69df-f57e-1f2c-4674ad000441?t=1552928220037

- National Centre for the Replacement, Refinement & Reduction of Animals in Research (NC3Rs). https://nc3rs.org.uk/

- Department for Culture, Media & Sport. (2023). Video Games Research Framework. https://www.gov.uk/government/publications/video-games-research-framework/video-games-research-framework

- Budapest Open Access Initiative (BOAI). https://www.budapestopenaccessinitiative.org/read/

- Committee on Publication Ethics (COPE). Guidance. https://publicationethics.org/guidance/Guidelines

- Contributor Roles Taxonomy (CRediT). https://credit.niso.org/

- Methods Reporting with Initials for Transparency (MeRIT). https://www.merit.help/

- Research Collaboration Advice Team (RCAT). https://www.gov.uk/government/groups/research-collaboration-advice-team-rcat
- The Higher Education Export Control Association (HEECA). https://heeca.org.uk/index.cfm?action=main&reload=true
- World Conferences on Research Integrity. (2022). The Cape Town Statement on Fostering Research Integrity through Fairness and Equity. https://www.wcrif.org/guidance/cape-town-statement
- World Conferences on Research Integrity. (2010). Singapore Statement on Research Integrity. https://www.wcrif.org/guidance/singapore-statement
- World Conferences on Research Integrity. (2013). Montreal Statement on Research Integrity in Cross-Boundary Research Collaborations. https://www.wcrif.org/guidance/montreal-statement
- Center for Open Science. (2020). Guidelines for Transparency and Openness Promotion (TOP) in Journal Policies and Practices "The TOP Guidelines". https://osf.io/9f6gx/wiki/Guidelines/
- Organisation for Economic Co-operation and Development (OECD) Global Science Forum. (2009). Investigating Research Misconduct Allegations in International Collaborative Research Projects: A Practical Guide. https://web-archive.oecd.org/2012-06-14/118158-42770261.pdf
- MI TALENT, Research England, Technician Commitment. (2022). Research Culture: A Technician Lens. https://www.mitalent.ac.uk/write/MediaUploads/research%20culture/TALENTResearchCulture_Report_V10.pdf
- N8 Research Partnership, Economic & Social Research Council (ESRC). (2016). Knowledge that matters: Realising the Potential of Co-Production. https://www.n8research.org.uk/view/5163/Final-Report-Co-Production-2016-01-20.pdf
- The National Institute for Health and Care Research (NIHR). (2021). Guidance on co-producing a research project. https://www.learningforinvolvement.org.uk/content/resource/nihr-guidance-on-co-producing-a-research-project/
- World Medical Association (WMA). (2024). World Medical Association Declaration of Helsinki: Ethical Principles for Medical Research Involving Human Subjects. https://www.wma.net/policies-post/wma-declaration-of-helsinki/
- Vaughn LM, Jacquez F. (2020). Participatory Research Methods – Choice Points in the Research Process. *Journal of Participatory Research Methods*. https://doi.org/10.35844/001c.13244
- Bakhshi H, Breckon J, Puttick R. (2021). Business R&D in the arts, humanities and social sciences. London: Creative Industries Policy & Evidence Centre and Nesta.

https://pec.ac.uk/policy-briefings/business-r-d-in-the-arts-humanities-and-social-sciences

- Merton RK. (1968). The Matthew Effect in Science: The reward and communication systems of science are considered. *Science*. **159**:56-63. https://doi.org/10.1126/science.159.3810.56

- Moher D, Bouter L, Kleinert S, Glasziou P, Sham MH, Barbour V, *et al*. (2020). The Hong Kong Principles for assessing researchers: Fostering research integrity. *PLoS Biol*. **18**:e3000737. https://doi.org/10.1371/journal.pbio.3000737

- Kilkenny C, Browne WJ, Cuthill IC, Emerson M, Altman DG. (2010). Improving Bioscience Research Reporting: The ARRIVE Guidelines for Reporting Animal Research. *PLoS Biol*. **8**:e1000412. https://doi.org/10.1371/journal.pbio.1000412

- Smith AJ, Clutton RE, Lilley E, Hansen KEA, Brattelid T. (2018). PREPARE: guidelines for planning animal research and testing. SAGE journals: *Laboratory Animals*. **52**:135-141. https://doi.org/10.1177/0023677217724823

UKRIO

RESEARCH INTEGRITY OFFICE

Promoting integrity and high ethical standards in research
Providing confidential, independent and expert support

The UK Research Integrity Office (UKRIO) is an independent charity, offering support to the public, researchers and organisations to further good practice in academic, scientific and medical research. We pursue these aims through a multi-faceted approach:

- Education via our guidance publications on research practice, training activities and comprehensive events programme.
- Sharing best practice within the community by facilitating discussions about key issues, informing national and international initiatives, and working to improve research culture.
- Giving confidential expert guidance in response to requests for assistance.

Established in 2006, UKRIO is the UK's most experienced research integrity organisation and provides independent, expert and confidential support across all disciplines of research, from the arts and humanities to the life sciences. We cover all research sectors: higher education, the NHS, private sector organisations, and charities. No other organisation in the UK has comparable expertise in providing such support in the field of research integrity.

UKRIO welcomes enquiries on any issues relating to the conduct of research, whether promoting good research practice, seeking help with a particular research project, responding to allegations of fraud and misconduct, or improving research culture and systems.

UK Research Integrity Office

Impact Hub London Euston, 1 Triton Square, London NW1 3DX
Tel.: +44 (0)20 3828 1325 Email: info@ukrio.org Web: www.ukrio.org
Registered Charity No: 1147061 Registered Company No: 7444269

For the full list of UKRIO publications, visit www.ukrio.org