A8.3, O2: Best practices of ethical framework for stakeholder engagement

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Beneficiaries

- Aalborg University, Denmark
- Dublin City University, Ireland
- Hamburg University of Technology, Germany
- Kaunas University of Technology, Lithuania
- Linköping University, Sweden
- Lodz University of Technology, Poland
- Tampereen Korkeakoulusäätiö sr, Finland
- Universidade de Aveiro, Portugal
- Universitat Autonoma de Barcelona, Spain
- University of Stavanger, Norway
- Universita degli Studi di Trento, Italy
- Institut National des Sciences Appliquées de Toulouse, France
- University of Twente, The Netherlands

- Tecnológico de Monterrey, Mexico

Abstract

ECIU's fourteen[1] universities work hard to further develop their transnational European alliance - the ECIU University - and make the next steps towards becoming a full-fledged European University after the three-year pilot phase. One of the necessary steps involves drafting codes of conduct for mutual internal cooperation and collaboration with stakeholders. As a first step, this report is the result of a quick scan of existing codes of conduct deemed relevant to the ECIU University.

Codes of conduct as a form of self-regulation are rules providing guidelines on the ethical principles and standards of behaviour expected from the ECIU member universities and its management, staff, students, and stakeholders. Based on a review of academic literature, policy documents, existing codes of conduct of the ECIU members as well as other national and international organisations, this report presents general introduction on codes of conducts, codes of conduct on research integrity, research ethics and good governance. For all three topics, recommendations are made on the steps the ECIU University should take in the coming years. The recommendations are:

- Research integrity: take the *European code of conduct on research integrity* as the starting point, develop it in the light of the ECIU vision and its values, align it with the existing codes of the ECIU members already have and, in addition to drafting the rules of conduct itself, pay attention to organisational embedding and internal communication (visibility).
- Research ethics: as the ECIU members have different codes of conduct in this area, it is proposed to arrive at a common understanding and interpretation based on the existing ECIU members' codes. First steps include making procedural agreements how research ethics for joint activities are handled, and peer learning activities to ensure that research ethics committees have similar interpretations of the guidelines, and that these align with ECIU's values.
- Good governance: in the context of currently ongoing discussions on ECIU's organisational structure in the near future, it is recommended that these discussions include the common principles of good governance. These include principles such as lawfulness, check and balances, stakeholder participation, managers ethics, responsiveness, de(centralisation) of decision making, and accountability.

[1] Including Tecnológico de Monterrey, who is associate member of ECIU and in that role may be expected to subscribe its codes of conduct.

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Symbols, abbreviations, and acronyms

AAU	Aalborg University, Denmark
DCU	Dublin City University, Ireland
EC	European Commission
ECIU	European Consortium of Innovative Universities
INSA	Institut National des Sciences Appliquees, France
KTU	Kaunas University of Technology, Lithuania
LiU	Linköping University, Sweden
LUT	Lodz University of Technology, Poland
TAU	Tampereen Korkeakoulusäätiö sr, Finland
TUHH	Hamburg University of Technology, Germany
UA	Universidade de Aveiro, Portugal
UAB	Universitat Autonoma de Barcelona, Spain
UiS	University of Stavanger, Norway
UNITN	Universita degli Studi di Trento, Italy
UT	University of Twente, Netherlands
CHEPS	Center for Higher Education Policy Studies

1 Introduction

For the further roll-out of the ECIU University, codes of conduct should be drawn up and applied. These codes of conduct should serve as ECIU's moral compass for collaborations within the ECIU as well as with external stakeholders. This report presents the results of a preliminary exploration of such codes of conduct as they currently can be found in higher education and scientific research,[2] and how they are currently institutionalized by the fourteen ECIU members. These findings are the result of a review of academic literature, policy documents and examples of codes of conduct from a variety of organisations at national and international level.

An initial scan of codes of conduct in higher education makes it clear that a comprehensive and detailed approach that addresses all topics eligible for inclusion in codes of conduct is not possible within the given time frame. A pragmatic approach was taken by zooming in on the three most developed topics of what can be called "university ethics", or more specifically in the context of research and innovation, "responsible research and innovation".

Ethical behaviour is guided in many diverse ways, ranging from rules and regulations that clearly say what should or should not be done, to hidden cultural norms that quietly tell what is (not) appropriate. At both ends, the norms are general, set by law or culture, and not necessarily specific for higher education. Somewhere in between are the codes of conduct, which reflect specific values important for good teaching and learning, scientific research, and their institutions.

After a general introduction on codes of conduct, we address codes of conduct in the areas of scientific integrity, research ethics and good governance. In these areas, we see various forms of institutionalisation of the codes of conduct in procedures and regulations, with the aim of safeguarding the corresponding values and encouraging appropriate behaviours. We also see new topics emerging in these areas, due to new scientific developments, societal expectations, sudden events, and uncertainties about the scope of a code. The report concludes with several recommendations to the ECIU for the further elaboration and implementation of codes of conduct.

A value that we believe is also vital for universities is academic freedom. This freedom is widely accepted, and even enshrined in law in several countries. Yet its interpretation and implications for university functioning are rather ambiguous. Some aspects of academic freedom are reflected in the three areas covered, but there are hardly any codes and procedures that guarantee it. Therefore, at least for the time being, we do not discuss it separately.

[2] For the sake of readability, in this report "higher education and scientific research" is referred to as "higher education".

2 Codes of conduct

2.1 Definition and functions

Codes of conduct are rules with guidelines on the ethical principles and standards of behaviour expected of the ECIU university, its member universities as well as its management, staff, students, and stakeholders. It is a form of self-regulation, often elaborating on or complementing formal legislation of the national government –and therefore often referred to as 'soft law'. From this perspective, it fits well to the concept of institutional autonomy. It is seen as a moral obligation of institutions to draw up rules of conduct for their functioning, obviously in compliance with formal rules.

These rules of conduct, which are in principle binding on members, are drawn up **for** and **by** the ECIU community. They clarify values and principles related to professional standards (e.g., in teaching, research and governance). These rules constitute an ethical framework that addresses the desired and expected behaviour and etiquette within the ECIU community and what external stakeholders should expect from the ECIU (norms and standards of behaviour).

Codes of conduct can have several functions.

- A first function is that the codes of conduct give an indication of the ideals and values the ECIU considers worth striving for (aspirational function).
- A second function is that they provide a framework for individual members and the organisation to structure moral considerations in concrete situations (advisory function).
- And a third function is that it serves as an assurance that staff behaviour and performance meet certain standards (disciplining function).

Codes of conduct can thus focus on competent and incorruptible professional practice (e.g., honesty, reliability or no conflicts of interest), on obligations (e.g., property rights, disclosure), or social responsibility (e.g., safety, health, or sustainability).

2.2 Different phases

The ECIU is about to develop and implement codes of conduct. Clearly, the ECIU members already have codes of conduct, developed by themselves, national professional and academic bodies or derived from international codes. This may suggest that the development of ECIU codes is only about designing common codes of conduct – either by finding a pragmatic middle ground, or by achieving the most stringent. However, to be useful, institutionalisation and compliance with the rules of conduct must also receive attention. Ideally, the cycle to be followed is:

- exploration and analysis of existing codes of conduct (in ECIU and elsewhere), based on ECIU's values and working processes,
- resulting in a draft, focusing not only on the rules themselves but also on how they should be organised,
- formal approval of the codes of conduct by the competent body,

- implementation, which includes awareness of the code (addressees knowing its existence and content), compliance and enforcement (with, for example, clarity on whistle blowers), monitoring and feedback and possible adjustment.

These last steps - awareness and acceptance by internal and external stakeholders - are very important to prevent the code of conduct from becoming a paper exercise that has no impact on the daily actions of the organisation and its members.

This report is a first step of the first phase.

2.3 The jungle of codes of conduct

There is a very large number of codes of conduct in circulation in higher education. This is partly due to path and context dependence. National (legal) structures and cultures differ across the European countries. We find codes of conduct at institution level, at national level (government, agencies, interest/professional groups) and at European and international level. At these different levels, codes of conduct cover very different areas (e.g., education, research, outreach, governance) and address different target groups (e.g. academics, students or administrators). Some of the codes of conduct originate in higher education itself, others also refer to laws and regulations from other domains (e.g., privacy laws). In other words, there is a huge number of codes of conduct imaginable that could be relevant to the ECIU and which, moreover, are not necessarily identical, and are sometimes contradictory or open to multiple interpretations.

We have therefore decided in this report to take a pragmatic stance by taking a closer look at a limited number of codes of conduct on topics which according to many address the essence of being a university: research integrity, research ethics and good governance.

2.4 Values of the ECIU

The ECIU has formulated in early stage its values. They would be the appropriate starting point to draft ECIU codes of conduct. The codes of conduct must not conflict with these values and, ideally, are even a correct translation of these general values. Therefore, for the sake of completeness, the ECIU values are mentioned here.

- Academic Quality
- Entrepreneurial mindset
- Open ecosystem
- Agility and flexibility
- Personalised, inclusive community
- Impact on society
- Resilience into the future

However, we note that it is not entirely clear yet how these values relate to members' different organisational values, and to some of the values that are considered basic academic values within the codes of conduct we reviewed.

3 Research integrity

Codes of Conduct for Research Integrity are an essential reference tool to support researchers and research organisations in conducting research of the highest quality and standards. Through core principles for researchers and research organisations, good practice and misconduct in research are addressed. Integrity means conducting research in such a way that others can have confidence and trust in the methods and the findings of the research. Integrity refers to both the scientific integrity of the research conducted and the professional integrity of the researchers. In effect, it is a seal of approval for research well conducted by people who have observed the rules of scientific procedure.

These codes of conduct for research integrity can be found at different levels, which we will cover in the following subsections.

3.1 Research integrity at the global level

At the global level, the guidelines, and principles of the World Conference on Research Integrity can be found. In its Singapore Statement (2010), it lists four principles for research integrity: honesty in all aspects of research, accountability in conducting of research, professional courtesy and fairness in working with others, and good stewardship of research on behalf of others, accompanied by fourteen responsibilities for researchers and research organisations.

In addition, the Montreal Statement on Research Integrity in Cross-boundary Research Collaborations (2013) of the World Conference on Research Integrity lists responsibilities that are particularly relevant to collaborating partners at the individual and institutional levels and that are fundamental to the integrity of collaborative research.

- General collaborative responsibilities (integrity; trust; purpose; goals)
- Responsibilities in managing the collaboration (communication; agreements; compliance with laws, policies, and regulations; costs and rewards; transparency; resource management; monitoring)
- Responsibilities in collaborative relationships (roles and responsibilities; customary practices and assumptions; conflict; authority of representation)
- Responsibilities for research outcomes (data; intellectual property and research records; publication; authorship and acknowledgement; responding to irresponsible research practices; accountability)

In 2017, UNESCO adopted a resolution annexed "Recommendation on Science and Scientific Researchers". This addresses the position of researchers in the context of national policy making, initial education and training of researchers, rights and responsibilities in research, and conditions for success of scientific researchers.

3.2 Research integrity at the national level

Examples of scientific codes of conduct can, for instance, be found at the national level: Germany, Ireland, Lithuania, Netherlands, Norway, or Spain. Moreover, the ENRIO website – a network for the advancement of research integrity – offers interesting information on institutional structures at the national level with country reports containing information on initiatives taken towards a national structure on research integrity, on established national structures on research integrity and on information on national boards and committees such as the National Research Ethics Committees (FEK) in Norway, the Royal Irish Academy (RIA), the Foundation for Science and Technology (FCT) in Portugal, the German Research Ombudsman, etc.

3.3 Research integrity of the European level

There are many networks and organisations on the European scene working on codes of conduct for research integrity, for example the European Network of Research Ethics Committees (EUREC), Science Europe, European network of Ombuds in Higher Education (ENOHE), PRINTEGER, SATORI (stakeholders Acting Together On the ethical impact assessment of Research and Innovation), European Network of Academic Integrity (ENAI), All European Academies (ALLEA and especially the ALLEA Permanent Working Group on Science and Ethics), and the European Network of Research Integrity Offices (ENRIO).

The European Union has also considered research integrity guidelines. Relevant are the European Code of Conduct for Research Integrity (2017) and the European Charter for Researchers (2005). We will summarise both.

The European Code of Conduct for Research Integrity serves the European research community as a framework for self-regulation across all scientific disciplines and research settings.

This European Code has three sections: principles, good research practices, and violations of research integrity. **Four principles** are distinguished:

- Reliability in ensuring the quality of research, reflected in the design, the methodology, the analysis, and the use of resources.
- Honesty in developing, undertaking, reviewing, reporting, and communicating research in a transparent, fair, full, and unbiased way.
- Respect for colleagues, research participants, society, ecosystems, cultural heritage, and the environment.
- Accountability for the research from idea to publication, for its management and organization, for training, supervision, and mentoring, and for its wider impacts.

Eight issues are referred to in the section on **Good Research Practices**:

- **Research environment**: refers to the responsibility of the research organisations to ensure that there is a good culture, infrastructure and clear policies and procedures on integrity (including transparent and proper handling of violations.
- **Training supervision and mentoring**: researchers receive rigorous training in research design, methodology and analysis, institutions develop appropriate and adequate training in ethics and research integrity for researchers across the entire career path, and (junior) researcher receive proper guidance and mentoring.
- **Research procedures**: Researchers consider the state-of-the-art in developing research ideas and design, carry out, analyse, and document research in a careful and well-considered manner. They make proper and conscientious use of research funds. Researchers publish results and interpretations of research in an open, honest, transparent, and accurate manner, and respect confidentiality of data or findings when legitimately required to do so, and they report their results in a way that is compatible with the standards of the discipline and, where applicable, can be verified and reproduced.
- **Safeguards**: researchers comply with codes and regulations relevant to their discipline; handle research subjects, be they human, animal, cultural, biological, environmental or physical, with respect and care, and in accordance with legal and ethical provisions; have due regard for the health, safety and welfare of the community, of collaborators and others connected with their research; research protocols take account of, and are sensitive to, relevant differences in age,

gender, culture, religion, ethnic origin and social class; researchers recognise and manage potential harms and risks relating to their research.

- **Data practices and management**: researchers and research institutions ensure appropriate stewardship and curation of all data and research materials, including unpublished ones, with secure preservation for a reasonable period; ensure access to data is as open as possible, as closed as necessary, and where appropriate in line with the FAIR Principles (Findable, Accessible, Interoperable and Re-usable) for data management; provide transparency about how to access or make use of their data and research materials; acknowledge data as legitimate and citable products of research; ensure that any contracts or agreements relating to research outputs include equitable and fair provision for the management of their use, ownership, and/or their protection under intellectual property rights.
- **Collaborative working:** all partners in research collaborations take responsibility for the integrity of the research; agree at the outset on the goals of the research and on the process for communicating their research as transparently and openly as possible; formally agree of their collaboration on expectations and standards concerning research integrity, on the laws and regulations that will apply, on protection of the intellectual property of collaborators, and on procedures for handling conflicts and possible cases of misconduct; are properly informed and consulted about submissions for publication of the research results
- **Publication and dissemination**: all authors are fully responsible for the content of a publication, unless otherwise specified; agree on the sequence of authorship; ensure that their work is made available to colleagues in a timely, open, transparent, and accurate manner, unless otherwise agreed, and are honest in their communication to the general public and in traditional and social media; acknowledge important work and intellectual contributions of others; disclose any conflicts of interest and financial or other types of support for the research or for the publication of its results; authors and publishers issue corrections or retract work if necessary, the processes for which are clear, the reasons are stated, and authors are given credit for issuing prompt corrections post publication; authors and publishers should consider negative results to be as valid as positive findings for publication and dissemination; researchers adhere to the same criteria as those detailed above whether they publish in a subscription journal, an open access journal or in any other alternative publication form.
- **Reviewing, evaluating and editing**: researchers take seriously their commitment to the research community by participating in refereeing, reviewing and evaluation; review and evaluate submissions for publication, funding, appointment, promotion or reward in a transparent and justifiable manner; reviewers or editors with a conflict of interest withdraw from involvement in decisions on publication, funding, appointment, promotion or reward; reviewers maintain confidentiality unless there is prior approval for disclosure; reviewers and editors respect the rights of authors and applicants, and seek permission to make use of the ideas, data or interpretations presented.

And finally, the European Code addresses

- **violations** of professional responsibilities and good research practices. These research integrity violations include research misconduct and other unacceptable practices such as fabrication, falsification (manipulation), and plagiarism, as well as manipulating authorship, re-publishing substantive parts of own earlier publications (without duly acknowledging or reference), citing selectively, withholding research results, allowing sponsors to jeopardize independence of the research process, expanding unnecessary the bibliography, accusing a research of misconduct in a malicious way, misrepresenting research achievement,

exaggerating findings, delaying or inappropriately hampering the work of others, misusing seniority, ignoring violations by others, and supporting 'predatory journals'.

- **Dealing with violations** and allegations of misconduct
  - Integrity: investigations are fair, comprehensive, and conducted expediently; parties involved declare any conflict of interest; ensure that investigations are carried through a conclusion; confidentiality; protection of the rights of whistle blowers; violation procedures are publicly available
  - Fairness: Investigations are carried out with due process and in fairness to all parties; persons accused of research misconduct are given full details of the allegation(s) and allowed a fair process for responding to allegations and presenting evidence; action is taken against persons for whom an allegation of misconduct is upheld, which is proportionate to the severity of the violation; appropriate restorative action is taken when researchers are exonerated of an allegation of misconduct; anyone accused of research misconduct is presumed innocent until proven otherwise.

The European Charter for Researchers (2005) sets out general principles and requirements specifying the roles, responsibilities and rights of researchers as well as of employers and/or funders of researchers. The Charter's aim is to ensure that the nature of the relationship between researchers and employers or funders is conducive to successful performance in generating, transferring, sharing, and disseminating knowledge and technological development, and to the career development of researchers. The Charter consists of two parts: one part with principles and requirements applicable to researchers and one applicable to employers and funders.

The part applicable to researchers, addresses the following twelve issues: Research freedom; Ethical principles; Professional responsibility; Professional attitude; Contractual and legal obligations; Accountability; Good practice in research; Dissemination, exploitation of results; Public engagement; Relation with supervisors; Supervision and managerial duties; Continuing professional development.

The second part concerns the responsibilities and duties for employers and funders. No fewer than nineteen topics are covered in this part, basically outlining what is expected of a good employer. The topics are the following: Recognition of the profession; Non-discrimination; Research environment; Working conditions; Stability and permanence of employment; Funding and salaries; Gender balance; Career development; Value of mobility; Access to training & development; Access to career advice; Intellectual property rights; Co-authorship; Supervision; Teaching; Evaluation / appraisal systems; Complaints/appeals; Participation in decision making bodies; and Recruitment.

It is clear that the European Charter goes far beyond the European Code for Research Integrity. For instance, the second part of the Charter in particular deals with 'good employment practices' and hardly at all with research integrity. In fact, also other EU guidelines go beyond research integrity, such as the Guiding Principles for knowledge Valorisation and a Code of Practice for the smart use of Intellectual Property that is in preparation. Some research integrity issues are addressed in these documents, but also issues that we would not classify under research integrity.

3.4 Recommendation on research integrity

For a European University like the ECIU university, it seems advisable to take the European code of conduct on research integrity as a starting point. Specifically, the four principles of this code should be endorsed by the thirteen partners. In addition, the guidelines for good research practice and misconduct should be elaborated and tailored to the ECIU university. Such a draft code will then have

to be submitted to the individual members, which will consider 1) how the new ECIU code of conduct relates to existing local and national university codes and 2) national laws, regulations, and practices.

In designing a joint code of conduct for research integrity, the emphasis should not only be on the code of conduct itself, but also on how:

- the code is made visible within the ECIU and the individual institutions, so that those involved in joint ECIU research projects are aware of its existence and content,
- it is embedded in the ECIU university ('governance'). Regarding the latter, it is advisable to align with the 'good governance' code of conduct (see below).

It should be noted that most codes of conduct relate to good individual behaviour of academics and (sometimes) students or staff employees, and to responsibilities of the organisation as an entity. In line with ECIU values, attention should be paid to how complaints about collaborative research are dealt with when institutionalising a research integrity code. Furthermore, if the ECIU will involve stakeholders in its activities at a considerable level, it should also consider explicating their responsibilities to respect research integrity.

4 Research ethics

Research ethics is an area of university ethics that is steadily growing in terms of topics and disciplinary coverage. Although research ethics are often considered to be really at the core of professional behaviour of scientists, its development is often the result of events that showed extremely negative impact research on its stakeholders. The oldest branch of research ethics is in the medical field, where it has its origins in regulations created after World War II in response to medical research on prisoners in Nazi Germany. Further restrictions and guidelines arose in response to other incidents where patients from minority groups were considered too much as research material rather than human beings.

Ethics for medical research is laid down into international guidelines, and in medical legislation often enacted at the national level. These laws limit the scope for conducting such research, defines the requirements and conditions under which it is permitted, and establishes procedures to ensure that such research is authorised. Related branches include the ethics on animal testing/experimentation and bioethics, which deals with research on biomaterials such as tissues, viruses, and genetic modified organisms.

More recent branches can be found in the social sciences and humanities, in which disciplinary bodies and funders have gradually realised that by investigating human behaviour and social life, they may influence their research subjects. As in medical science, it has become common practice in these fields to ask for consent and predetermine how research material and findings will be handled. This is especially the case when privacy related information is collected and stored for longer periods of time.

Truly new branches, which have not yet evolved into clear guidelines and procedures for obtaining consent to do such research, are in the engineering – although new research areas and their specific applications have led to initiatives to encourage researchers in these areas to discuss such research ethics. Some universities have or had codes restricting organisational participation in military research. The development of nanotechnology led to what some called nano-ethics, which referred to the consequences of nanotechnological applications and subsequently pressure on nano-researchers to take these consequences into account. A similar development is now visible in other new areas such as smart technology, whose applications can radically change the relationships between organisations and their employees, between governments and citizens or shops and their customers.

4.1 Bioethics in research

4.1.1 Medical research on human subjects and biomaterials

In most countries, if not all, ethical review of medical research involving human subjects is organised at national level, according to provisions stipulated in medical legislation. Ethical principles and good practices are guided by international guidelines, established by professional bodies such as the World Medical Association (WMA) and by the World Health Organization (WHO). Key aspects of these guidelines include that such research should:

- be preceded by a careful assessment of the risks and burdens for the people involved, which should be weighed against foreseeable benefits for them or other individuals in similar circumstances,
- if possible, avoid including people from vulnerable groups in the research, and if this is not possible, consider specific protective measures,
- be clearly described in a protocol, submitted to a research ethics committee for review,

- and not be conducted without informed consent of the human subjects involved in the research.

More elaborative guidelines, which include, for example, the different steps within the research process, and further involvement of the community of stakeholders, the training of research staff and responsibilities for dissemination of results, have been formulated in the International Guidelines for Health-related Research Involving Human Subjects of the Council of International Organizations of Medical Sciences.

The area of medical research ethics is well developed and includes guidelines for more specific situations such as for medical research on children, research on human tissue and other biomaterials, clinical trials, and epidemiological studies. Given the strong international institutionalisation of the guidelines and the translation into national laws and regulations, we assume that ethical principles and their practical implications for conducting medical research on human subjects and biomaterials are quite similar for all ECIU members. However, there might be procedural differences, as for the other research ethics areas.

A specific concern for the ECIU might be that researcher in the engineering sciences working on medical technologies and devices, collaborate with medical scientists and increasingly must comply with the medical research ethics as well.

4.1.2 Use of animals in research

The use of animals in academic research and for testing the impact of new substances is controversial and subjected to European directives, aimed at minimising the number of animals used and finding innovative research approaches that can replace the use of animals in research. Also in all European countries, researchers who want to involve animals in their research must have their research projects ethically reviewed and clearly show that the use of animals is necessary, that the protocol protects the animals from unnecessary pain and burden, that the number of animals used is as small as possible, and that the project is likely to generate new knowledge. As some of the ECIU members do practice animal experimentation, this ethical issue needs to be addressed properly in the future.

4.2 Non-medical research involving human subjects

Non-medical research projects involving human subjects, especially in the social and behavioural sciences, are increasingly subject to prior ethical review. Especially in the behavioural sciences, the rules and regulations tend to converge with those acting in medical sciences – especially when humans are studied under strict laboratory conditions. But also, in fields such as anthropology and ethnography, the growing understanding of their potential impact and the need to show that human subjects and their culture are treated with respect has led to the development of ethical guidelines and review procedures.

In general, two key topics can be identified, namely (1) the responsibilities of the researcher towards the human subjects and organisations studied, and (2) the responsible data-management, including the balance between concern for privacy issues and compliance with the principles of FAIR data (findability, accessibility, interoperability and retrievable).

There is a myriad of ethical guidelines and principles, some formulated by the university community, others by national bodies, or by disciplinary organisations. General principles include:

- Respect for the dignity of humans and their environment by avoiding exploitation, by treating participants and their communities with respect and care, and protecting those with diminished autonomy.
- Minimization of harm, and equitable distribution of benefits and burdens, with respect for the potentially conflicting interests of diverse (groups of) participants, communities, and society.
- Researchers demonstrate an ethical attitude by i) actively considering the ethical issues that may arise during or because of their research, ii) initiating a thorough assessment of the potential drawbacks of the research for individuals, communities, and society, and iii) monitoring developments that may affect the ethical aspects of the research.
- Researchers can account for, and communicate on their ethical reflection vis-à-vis different stakeholders, such as the participants and their communities, the own organization, scientific peers, students, funding agencies, and society.
- Researchers conduct research that is scientifically valid, and that will plausibly lead to relevant insights in the field of the social and behavioural sciences.

Currently, research ethics committees handling the applications for ethical review of projects in this area of research ethics, tend to operate at faculty level. This is because interpretations of what constitutes responsible interactions with people and stakeholders, and what provisions are needed to ensure responsible behaviour, vary across disciplines, and may depend on methodology and epistemological principles.

The area of research ethics is still in flux. Therefore, it is likely that there are quite a few differences in interpretation and actual procedures in this area. A quick scan of the websites of ECIU members shows that some members really emphasise the importance of research ethics and provide researchers with extensive resources, guidance, and procedural support. On other (English-language) websites, the topic is not readily apparent.

4.3 Open Science, Data management and privacy

A relatively new topic in relation to research ethics (and research integrity) are data management and privacy regulations. The background of this development is threefold. First, universities must comply with the General Data Protection Regulation, which stipulates that EU citizens have the right to protection of their personal data. The regulation acknowledges the value of scientific research and its need to collect data, including on the individual level. However, it also makes clear that such data collection and analysis should done carefully, should consider ethical principles and should only be done when there is a clear scientific or public interest.

Secondly, policies of open access, open science and open data stimulates researchers to make their data available. This should increase the transparency and quality of research outputs, provide opportunities for replication of research, and reuse of data in other studies. The core values here are **f**indability, **a**ccessibility, **i**nteroperability, and **r**euse of data. To organize this on a larger scale, FAIR guiding principles for data management and stewardship have been formulated.

Thirdly, procedures for complaints about possible violations of scientific integrity allow research to be complained about within at last ten years. Consequently, researchers are expected to store research data for that period and thus need to store these data responsibly.

Nowadays, good data management and good data management plans are required by all major research funders, including the European Commission. Probably all ECIU members have data management procedures and provide guidelines and opportunities for staff and students.

However, the ideas behind the three drivers mentioned do not fully match. Research data may not always be stored according to FAIR guiding principles, because of the GDPR, and prolonged storage of actual data in case of research integrity procedures, may actually also harm interests of stakeholders, who need to be protected according to these same integrity codes that call for such storage. As a result, actual data management practices, requirements and capabilities may differ between universities and disciplines.

4.4 Emerging science and technologies

New science and technologies are accompanied by new impacts and related ethical implications. For decades, such impacts have been managed rather differently. Sometimes they are considered simply as inevitable and not taken as an issue of concern. Others were or still are publicly discussed and might even have led to special regulations that urge scientists to deal with such consequences responsibly. An early and exemplary case in this area is the research and development of genetically modified organisms. As scientists were exploring the potential of genetic engineering to optimize crops and livestock, animal protection and environmental groups expressed concerns about its impacts on animal welfare and biodiversity. The intense social, political and legal controversy led to strict international regulation of GMO research and development, based on the precautionary principle. This principle states that where human activities may lead to morally unacceptable harm that is scientifically plausible but uncertain, measures shall be taken to avoid or diminish that harm. The translation of this principle into GMO regulation is that research on GMOs is still possible under strict circumstances, but the actual development into marketable products has become de facto impossible.

For nanotechnology similar controversies were foreseen. Based on the lessons learned from the GMO debate, researchers started thinking about social and ethical impacts of their research in an early stage, together with regulators, science and society experts, ethicists, NGOs, and governments. The precautionary principle was translated into an ethical responsibility of researchers: if there is plausible, but uncertain knowledge that a technological application or a development of a research field may lead to ethically unacceptable consequences for health, society, or the environment, the researchers in the field concerned should strive to contribute knowledge relevant to compliance with the precautionary principle. As the result of that, nanotechnology and its application are now finding their way into existing regular frameworks such as the European regulation for chemical substances, REACH.

At the same time, the Commission sought to stimulate further ethical reflection and responsible research and innovation in nanotechnology, through a Code of Conduct for responsible nanosciences and nanotechnologies research. It is based on seven principles, which reflect the scope of discussion and deliberation in preparing the code of conduct:

- **Principle of well-being**: N&N research should primarily serve the interest of the well-being of individuals and society and should respect fundamental rights and that research funds should only be given to research that is useful to the general public.
- **Principle of sustainability**: N&N research should not harm or create a biological, physical, or moral threat to people, animals, plants, or the environment.
- **Principle of precaution**: research should anticipate potential environmental health and safety impacts and maintain a high level of protection, avoiding risks without impeding innovation
- **Principle of democracy**: all stakeholders should participate in the decision-making process on N&N, and research should be conducted transparently, and the presentation of research results should be clear, balanced, and comprehensible and made generally accessible.
- **Principle of excellence**: N&N research should meet the best scientific standards (3.5), for which in particular the Member States and the research bodies are responsible.

- **Principle of innovation:** N&N research should take place within an innovation-friendly environment (3.6), public authorities and standardising organisations should develop N&N research standards (4.1.11) and the Member States and research funding bodies should devote an appropriate part of research funds to risk assessment, standardisation, and the refinement of metrology methods
- **Principle of responsibility:** Researchers and research organisations should remain accountable for the social, environmental, and human health impacts that their N&N research may impose on present and future generations

The nano-code does not only address responsibilities and good conduct of individual researchers, but also of research organisations, funding bodies and governments.

The objective of the recommendation of the Commission published along with to code of conduct, namely the voluntary application of the code by the Member States, has not been achieved. Nor has the Commission further evaluated its effects and relevance. However, the approach developed for nanoscience and -technology is also used now for other areas of emerging science and technology. Typical examples are artificial intelligence, smart technology, quantum computing and the like, for which researchers, research organisations and their stakeholders are also trying to anticipate on ethical, social and legal implications (ELSI).

4.5 Recommendation on research ethics

A quick scan of websites of the ECIU members suggests that the organisation of research ethics by the universities varies. Whether that also reflects different interpretations of research ethics, is difficult to say. For the further development of the ECIU University, we recommend that the ECIU develops a joint approach to research ethics, drawing as much as possible on the organisation of research ethics already in place within each of the member universities, and stimulate peer learning between key actors responsible for research ethics.

A core element of the joint approach will be procedural agreements, on at least,

- a minimum set of principles for good procedures for internal ethical review of projects. That minimum set can be derived from current procedures,
- which research ethics committee(s) are responsible for reviewing projects? Common practice is for the principal investigator or project leader to request such a review within his/her organisation. However, other options are possible, e.g., if a project member performs significant tasks quite independently, the review is done by the local ethics community, or for projects using very specialised methodologies or research materials, the review is done by a committee with sufficient expertise in that field,
- which committee(s) will monitor the violation of ethical principles by one or more project members, how committees will collaborate on such issues if necessary, and how boards will coordinate their final decisions,
- the application of research ethics and the related procedures to teaching and learning activities,
- how the ECIU, as a responsible organisation, promotes responsible and ethical attitudes among its community; this includes the visibility of research ethics on websites,
- how ECIU involves its stakeholders and especially external collaborating partners in promoting and ensuring research ethics.

For **medical research on human subjects and biomaterials and research on animals**, which is guided by internationally agreed principles and for which procedures are often laid down in national

legislation, we recommend starting with an inventory of procedures and a peer learning activity to ensure that procedures and expectations do indeed match as expected.

For **non-medical research involving human subjects and for data-management and privacy**, it is likely that there are quite a few differences in actual codes, procedures, and expectations of how researchers in practice should ensure compliance with the ethical principles. Such differences may stem from different disciplinary methodologies, guidelines, and professional practices and ECIU, like any other university organisation, should be cautious to maintain standards against disciplinary professional codes. But if differences merely reflect local differences in how research ethics have been applied, the ECIU should seek convergence to reduce uncertainties.

We recommend that in these two areas discussed, the ECIU should undertake a larger peer learning initiative aimed at aligning procedures within each of its member universities. It may be useful to prepare a joint textbook on research ethics as guide for both researchers and research ethics committees. Such a textbook could be based on typical projects currently under review by research ethics committees, as well as some complex cases, and describe the ethical issues involved in these projects, how researchers are expected to properly address these issues in their methodology, and how a research ethics committee should look at such a project.

For **ethics on new science and technologies**, we recommend that the ECIU further develops its own values with respect to the ethical, social, and legal impacts of new science and technologies, considering the precautionary principle and the above mentioned seven principles. One possible approach is to use an area in which the ECIUs is at the forefront of science and innovation, such as smart technology, as a case study and bring together researchers, science and society experts, ethicists and program managers and stakeholders to develop a framework for responsible research and innovation on smart technology for the ECIU. The aim of the framework would be to guide joint strategies and initiatives of the ECIU to stimulate responsible research and innovation in the field as well as set clear expectations among stakeholders.

5 Good governance

5.1 Roles and good governance

The code of conduct for good governance should be tailored to the different roles the ECIU wants to play, considering its core values (see 2.4). In our view, the following roles can be distinguished:

- The ECIU is a legitimate organisation that observes the **principle of legality**. Principles of the rule of law and legitimacy are a prerequisite for its acting. Its tasks, authorities and responsibilities are clearly formulated, and its rules and procedures are transparent
- The ECIU is a **responsive** organisation. It is aware of and consciously responds to the dynamics in society. Interaction with society is of great importance.
- The ECIU is a **networked** organisation that collaborates internally and with external organisations to contribute to the achievement of societal goals. Establishing alliances, external relations, dialogue, and interaction form the basis for this. A common agenda and shared ownership, while maintaining ECIU's own responsibility and identity, is part of its actions.
- The ECIU is a **performing** organisation that carries out its tasks and deploys public resources effectively and efficiently. Performance forms the basis for planning and control, while respecting other central values. Planning and control are timely, fair, and transparent.

In our view, the first role – a legitimate organisation that respects the principle of legality – forms the core of a code of good governance, 'supplemented' by elements from the other roles.

5.2 Good governance codes: points of departure

Codes of good governance can be found at various levels and both in the private and public sectors. In fact, the number of good governance codes of conducts has exploded after the millennium. For example, at the global level the United Nations indicates that good governance codes should include guidelines on participation, rule of law, transparency, responsiveness, consensus-oriented, equity and inclusiveness, effectiveness and efficiency, and accountability.

Many good governance codes of conduct can also be found in the field of higher education, but (surprisingly) not at the European level. The EU has not drawn up an explicit code of good governance for higher education (as it has, for example, in the case of research integrity). The existing codes of good governance in higher education have been issued by individual institutions or, in many cases, umbrella organisations. In the United Kingdom, for example, there is a code of good governance for universities, drawn up by the Committee of University Chairs - The Code of Good Governance for Universities (the CUC code). The Dutch Universities of the Netherlands has done the same: Code for Good Governance in Dutch Universities. In Ireland, the Higher Education Authority (HEA) and the Irish Universities Association (IUA) published the Code of Governance for Irish Universities (2019). The size, scope, subjects, and style of these codes vary considerably. For example, the Dutch code ha 18 pages while the Irish code has more than 80 (and more than 160 pages including the annexes).

Besides the diversity in codes of conduct for good governance, it should be noted that many issues mentioned in other codes of conduct, in higher education and beyond, also apply to good university governance. For example, honesty, respect, reliability, and accountability can be expected not only from researchers -see code research integrity- but also from governors and managers. Moreover, in the code of research integrity behavioural expectations are expressed towards leadership and management (e.g., taking care of a good infrastructure and being a good employer).

For pragmatic reasons, in the remainder of this section we will look more closely at guidelines for good governance at the European level. Since these guidelines do not exist for higher education, the focus is on good governance for local public authorities - which universities are in a way. These guidelines might be tailored to the situation of the ECIU University and supplemented where necessary.

The Council of Europe has developed 12 principles of good governance, seen as the responsible conduct of public affairs and management of public resources. They cover issues such as ethical conduct, rule of law, efficiency and effectiveness, transparency, sound financial management and accountability. In more detail and tweaked (*in italics* by us) for universities:

Fair conduct of elections, representation, and participation

- Elections *for representative bodies* are conducted freely and fairly, according to international standards and national legislation, and without any fraud.
- *Members of the university community* are at the centre of *university* activity, and they are involved in clearly defined ways in *university* life at local level.
- *Members of the university community* can have a voice in decision-making, either directly or through legitimate intermediate bodies that represent their interests. Such broad participation is built on the freedoms of expression, assembly, and association.
- All voices, including those of the less privileged and most vulnerable, are heard and considered in decision-making, including over the allocation of resources – not relevant.
- There is always an honest attempt to mediate between various legitimate interests and to reach a broad consensus on what is in the best interest of the whole community and on how this can be achieved
- Decisions are taken according to the will of the many, while the rights and legitimate interests of the few are respected – to be discussed.

Responsiveness

- Objectives, rules, structures, and procedures are adapted to the legitimate expectations and needs of the *university community*.
- Public services are delivered, and requests and complaints are responded to within a reasonable timeframe.

Efficiency and effectiveness

- Results meet the agreed objectives.
- Best possible use is made of the resources available.
- Performance management systems make it possible to evaluate and enhance the efficiency and effectiveness of services.
- Audits are carried out at regular intervals to assess and improve performance.

Openness and transparency

- Decisions are taken and enforced in accordance with rules and regulations.
- There is public access to all information which is not classified for well-specified reasons as provided for by law (such as the protection of privacy or ensuring the fairness of procurement procedures).
- Information on decisions, implementation of policies and results is made available to the *university community* in such a way as to enable it to effectively follow and contribute to the work of the *university*.

Rule of Law

- The *universities* abide by the law and judicial decisions.
- Rules and regulations are adopted in accordance with procedures provided for by law and are enforced impartially.

Ethical conduct

- The public good is placed before individual interests.
- There are effective measures to prevent and combat all forms of corruption.
- Conflicts of interest are declared in a timely manner and persons involved must abstain from taking part in relevant decisions.

Competence and capacity

- The professional skills of those who deliver governance are continuously maintained and strengthened to improve their output and impact.
- *Leadership and management* are motivated to continuously improve their performance.
- Practical methods and procedures are created and used to transform skills into capacity and to produce better results.

Innovation and openness to change

- New and efficient solutions to problems are sought and advantage is taken of modern methods of service provision.
- There is readiness to pilot and experiment new programmes and to learn from the experience of others.
- A climate favourable to change is created in the interest of achieving better results.

Sustainability and long-term orientation

- The needs of future generations are considered in current policies.
- The sustainability of the *society* is constantly considered.
- Decisions strive to internalise all costs and not to transfer problems and tensions, be they environmental, structural, financial, economic, or social, to future generations.
- There is a broad and long-term perspective on the future of the *university* community along with a sense of what is needed for such development.
- There is an understanding of the historical, cultural, and social complexities in which this perspective is grounded.

Sound financial management

- Charges do not exceed the cost of services provided and do not reduce demand excessively, particularly in the case of important public services – to be discussed.
- Prudence is observed in financial management, including in the contracting and use of loans, in the estimation of resources, revenues and reserves, and in the use of exceptional revenue.
- Multi-annual budget plans are prepared, with consultation of the *university community*.
- Risks are properly estimated and managed, including by the publication of consolidated accounts and, in the case of public-private partnerships, by sharing the risks realistically.
- The *university* takes part in arrangements for inter-*university* solidarity, fair sharing of burdens and benefits and reduction of risks (equalisation systems, *inter-university* co-operation, mutualisation of risks…).

Human rights, cultural diversity, and social cohesion

- Within the *university's* sphere of influence, human rights are respected, protected, and implemented, and discrimination on any grounds is combated.
- Cultural diversity is treated as an asset, and continuous efforts are made to ensure that all have a stake in the *university*, identify with it and do not feel excluded.
- Social cohesion and the integration of disadvantaged areas are promoted.
- Access to essential services is preserved, in particular for the most disadvantaged sections of the *community*.

Accountability

- All decision-makers, collective and individual, take responsibility for their decisions.
- Decisions are reported on, explained, and can be sanctioned.
- There are effective remedies against maladministration and against actions of local authorities which infringe civil rights.

5.3 Recommendation on good governance

The ECIU is currently considering its (legal) organisational structure. More clarity is expected around the turn of the year (2022/23). It is therefore too early to come up with a final proposal for a ECIU code of conduct for good governance. However, it is recommended that the discussions on the possible new structure include principles on good governance and ensure good mutual coordination between the new structure and the new code of conduct.

Based on the above considerations, we would argue that the ECIU code of good governance should cover:

- A clear description of the tasks, responsibilities, and authority of the established governing and administrative bodies for the ECIU, with due regard for (inter)national legislation *(legality, lawfulness)*
- The allocation of tasks, responsibilities, and competences between the different governing bodies of the ECIU respects the principle of *checks and balances.* This means, for example, paying attention to stakeholder participation (e.g., staff and students), but also to an ombudsman or whistle-blowers.
- Integrity provisions are included for the board members of the various governance bodies (as integrity codes exist at national and European level for public officials)[3] with e.g., provisions on preventing corruption and conflicts of interest ('*manager ethics'*).
- Methods and mechanisms of cooperation and interaction with internal and external stakeholders *(responsiveness and networks)*
- Constructive guidelines for mutual alignment between the ECIU and the individual universities, all bound by national legislation and national rituals. Among other things, a balance needs to be struck between centralisation and decentralisation, collective and self-identity, and a sharing of benefits and burdens.
- It should also indicate how the ECIU or one of the individual universities can appeal to another university at the time when guidelines of good governance are exceeded.

[3] See for example the European Code of Conduct for all Persons Involved in Local and Regional Governance (2018)

- Accountability for the way in which the ECIU creates public value, justifies the use of public funds, and assures the quality of its services in teaching, research, and community outreach *(performance)*.

6 General recommendation

From our initial assessment of codes of conducts in three academic areas, it is evident that for the ECIU to develop further as a meaningful organisational form for academic research and higher education, it needs to consider how it properly assures research integrity, research ethics and good governance. For all these issues, we strongly recommend that the ECIU builds on existing principles, guidelines, codes of conduct and procedures already used by its member universities. There is no point in trying to develop new guidelines and codes of conduct that at best will merely reflect what is already available, and at worst increase uncertainty about the implications of these issues for good and responsible research, education, innovation, and governance.

We note that for each area, procedures and expectations are likely to differ. To what extent such difference truly reflects differences in underlying values, we have not investigated, and thus cannot say. Nevertheless, we consider such differences problematic, as they may limit the ECIU's ability to really promote and ensure research integrity, research ethics and good governance and its ability to address issues when the underlying values are under tension or even under attack. Therefore, we have made suggestions for each of the three areas on how the ECIU can create more convergence.

It should be noted that codes of conduct in higher education are often seen as a guide to individual behaviour, but it is evident that there is also a responsibility for the member universities and the ECIU University as a whole. As part of moving towards more convergence, we therefore do recommend that the ECIU agrees on how issues of research integrity, research ethics and good governance are addressed collectively and for joint activities.

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