

FRAMEWORK FOR GOOD PRACTICE IN RESEARCH

(approved by the Research Council of 10 July 2020 – updated 23 March 2023)

INTRODUCTION

Ghent University recognizes its responsibility to ensure that the highest standards of integrity, ethics, and professionalism are observed while doing research. This framework sets out general principles and guidelines to promote good practice in research across all disciplines and fields of study. Good research practices apply throughout all phases of a research project and career, ranging from planning a research project, preparing publications, collaborating with partners, performing assessment, undertaking societal outreach, supervising other researchers to leading a research unit.

In the conduct of all research, the university expects these topics to be understood and observed by all university employees and other researchers conducting research on university premises or under the auspices of Ghent University (hereafter referred to as researchers). The framework is relevant for researchers at all career stages (early career, postdoc, professors) and needs to be taken up as a shared responsibility.

This framework for good practice is general in nature; specific faculty guidelines may exist. Researchers simultaneously employed at or affiliated with another institution may be expected to additionally comply with codes or guidelines at this other institution.

TOPICS IN ALPHABETICAL ORDER

Academic bibliography (Biblio)

Biblio is both the academic bibliography (overview of published research outputs in the form of publications and datasets) and the institutional repository (digital archive of full texts of publications) of Ghent University. It enables the university as well as researchers to maintain an up-to-date list of their published research outputs, enhance discoverability and visibility of their research, and preserve and disseminate scholarly literature.

The university's policy on scholarly publishing requires (co-)authors to register and deposit their scholarly Ghent University publications in Biblio, and, for publications as of 2023, also to register and link any associated Ghent University research datasets published in an external data repository. To deposit scholarly publications in Biblio, the author's accepted manuscript

(also known as postprint version) and/or the publisher version (also known as version of record) should be uploaded. For scientific journal articles published since 2023, deposit is required of at least a version that is both peer-reviewed and can legally be made publicly available in Biblio (if necessary, after embargo). This means that for scientific journal articles not directly published in open access, deposit of the accepted manuscript in Biblio is mandatory.

https://www.ugent.be/intranet/en/research/impact/schol-publishing/biblio.htm https://www.ugent.be/intranet/en/research/impact/schol-publishing/policy-ugent.htm

Related topics: affiliation, authorship, copyright, open access, research communication, research data

Access and Benefit Sharing

Researchers accessing genetic resources must comply with national and international Access and Benefit-Sharing (ABS) legislations on genetic resources. These include living or dead organisms (such as plants, animals, bacteria, etc.) or parts or derivatives thereof.

ABS legislations often also apply to the access to traditional knowledge (i.e. knowledge, innovations and practices of indigenous and local communities, associated with plants, animals, etc.). Some countries also regulate access to digital information on genetic resources (e.g. DNA sequences).

National ABS legislation from each country of origin may stipulate different requirements and conditions related to the use of (elements of) their biodiversity. Usually a prior informed consent or notification is required. In some countries access is free of obligations, in other countries it may be complex and difficult. Many countries are party to the Nagoya Protocol, which provides a legal framework for ABS implementation. The EU Regulation related to the Nagoya Protocol stipulates that EU countries must ensure that their users comply with all legislation.

Contractual arrangements on sharing the benefits deriving from the use of the genetic resources must often be made with the country of origin before the research starts. These requirements may range from extensive and complex to minimal and administrative. Researchers must gather and keep proof of the exercised due diligence.

https://www.ugent.be/intranet/en/research/ethics/nagoya

Related topics: ethics in research, material transfer agreement

Affiliation

When submitting a research output for publication, researchers must use one of the following affiliation tags:

- Ghent University
- Universiteit Gent
- UGent
- Ghent University Hospital
- UZ Gent
- Ghent University, Campus Kortrijk
- Universiteit Gent, Campus Kortrijk
- UGent, Campus Kortrijk

- Ghent University, Ostend Science Park
- Universiteit Gent, Ostend Science Park
- UGent, Ostend Science Park
- Ghent University Global Campus, Songdo; Ghent University Belgium (including department other than KR01)

Using the correct institutional affiliation is essential to ensure effective attribution of outputs to Ghent University. It is therefore insufficient to only list the faculty, department, or research unit as the author's affiliation.

https://www.ugent.be/intranet/en/research/impact/schol-publishing/policy-ugent.htm

Related topics: academic bibliography, authorship, ORCID

ALLEA code > see Research integrity

Appropriate behaviour

At Ghent University everyone is expected to interact with one another in a caring and respectful manner.

- One specific code of conduct lays down guidelines which the university considers important in the broad context of interpersonal behaviour.
 <u>https://www.ugent.be/intranet/en/human-resources/health-safety/code-of-conduct-inappropriate-behaviour.htm</u>
- Another code of conduct lays down the guidelines which should contribute to the
 elimination of discrimination and to the individual development of the mutual contacts
 and mutual enrichment between university members in order to promote a community
 of diverse backgrounds. https://www.ugent.be/nl/univgent/waarvoor-staat-ugent/diversiteit-en-inclusie/diversiteitsbeleid/non-discriminatieverklaring

Related topics: leadership and supervision, psychosocial well-being

Animals in research

Ghent University believes that research using (laboratory) animals often provides an irreplaceable and indispensable contribution in the development of knowledge benefiting both humans and animals.

This belief goes hand in hand with the requested search for alternative research methods. As far as possible, researchers should aim for a research setting without laboratory animals. When using laboratory animals, researchers should try to find ways to reduce the number of laboratory animals and the suffering and/or distress these animals experience. The use of laboratory animals for research purposes has to comply with national and EU regulations and needs to be approved by an ethics commission before the start of the research.

https://www.ugent.be/en/research/science-society/labanimals/

Related topics: ethics in research

Artificial intelligence

In Europe, the EU ethics guidelines for trustworthy AI have been broadly recognised as the guiding ethical principles on AI. When developing and deploying AI, researchers must take into

account ethical standards on human agency and oversight, privacy and data governance, diversity, non-discrimination and fairness, accountability, transparency, and societal and environmental well-being.

https://www.ugent.be/intranet/en/research/ethics/ai

Related topics: ethics in research

Authorship

Authorship is related to the actual contribution someone makes to a scholarly publication. Ghent University sets out the policy on authorship and recognition of contributions to scholarly publishing. This policy describes the standard that should be met by all researchers, as a minimum standard.

To be recognized as an author, you must meet at least the following conditions:

- Researchers who contribute significantly to the creation of the publication are added to the authors list. "[...] authorship itself is based on a significant contribution to the design of the research, relevant data collection, or the analysis or interpretation of the results." (European Code of Conduct for Research Integrity)
- In addition researchers contribute to the writing or substantial revision of the work. They approve the work and the agreement before submitting it for publication.

https://www.ugent.be/intranet/en/research/impact/schol-publishing/authorship.htm Related topics: affiliation, ethics in research, research integrity

AVG > see Personal data

BOZI > see Research funding

Clinical studies > See Humans in research

Codex

The Codex aggregates the many regulations and codes of conduct that apply within Ghent University.

https://codex.ugent.be

Combining research with other activities

Professorial staff is expected to take up institutional and societal engagement. But beyond that, researchers might want to combine their job or fellowship at Ghent University with other paid or unpaid activities.

Before taking up any kind of other professional activities or 'secondary employment' (as an independent professional, freelancer, employee, or otherwise), researchers should ensure that they are allowed to do so according to the regulations of Ghent University and/or their funder. In some cases, such activities need to be formally requested and approved, or registered. Researchers should in all circumstances guarantee that they are sufficiently available (time-wise) to carry out their tasks and

- assignments at Ghent University. They should also ensure that their secondary activities do not cause a conflict of interest.
- Researchers in particular PhD candidates and postdoctoral researchers who are considering doing a temporary assignment (eg. internship or secondment), should make sure that they are allowed to do so.
- Researchers who want to combine their job or fellowship with studies, need to ensure that Ghent University and/or their funder allows them to do so.

http://www.ugent.be/en/work/mobility-career/career-aspects/professorial-staff/institutional-societal-engagement.htm

Secondary employment regulations per category:

- Academic staff (AAP and ZAP): https://www.ugent.be/nl/vacatures/mobiliteit-loopbaanpaden/loopbaanpad/aap/nevenactiviteiten/overzicht.htm
- Integratiekader: https://www.ugent.be/intranet/nl/loopbaan/integratie/integratienevenactiviteiten.htm
- IOF Business Developers: https://codex.ugent.be?regid=REG000144&lang=en
- IDC co-ordinators: https://codex.ugent.be/?regid=REG000147&lang=en
- Ghent University PhD scholarship recipients: https://codex.ugent.be/?regid=REG000085&lang=en

Related topics: conflict of interest, entrepreneurship, public engagement

Commercialisation

Commercialisation refers to the process through which ideas or research are transformed into marketable products, capital gains, income from licences and/or revenue from the sale of new products.

Since the university in general does not have the facilities for manufacturing, selling and distributing products, commercialisation almost always involves a third party. This can be achieved either by the university licensing intellectual property to an existing company or setting up a new spin-out company dedicated to developing and exploiting the intellectual property.

All research results that can create value are to be reported to the Technology Transfer Office (Research Department) prior to publication or presentation in whichever shape or form.

https://www.ugent.be/intranet/en/research/impact/valorisation-for-researchers Related topics: copyright, dual-use, entrepreneurship, intellectual property

Confidentiality

Confidentiality refers to the duty or explicit (contractual) obligation of a researcher or third party entrusted with information to keep that information private and guard against unauthorised access.

Data or information is confidential when the dissemination of the data is unlawful and/or may harm the owner, the persons concerned, the business processes or the image of the institution. Personal data and research results that can create value (in terms of commercialisation and/or

implementation) are by definition classified as confidential information. The processing of all personal data is subject to the GDPR and the Ghent University's Generic Code of Conduct for the processing of personal data and confidential information.

General rules on information security should always be applied, but depending on their risk level, confidential data often require extra measures to ensure their security both during and after the research project.

https://www.ugent.be/en/research/datamanagement/during-research/data-security.htm

Researchers should obtain appropriate approval before disclosing confidential information. To formalize or enforce confidentiality, a Non-Disclosure Agreement (NDA) can be signed. Confidentiality clauses are typically included, in for example, the peer review process.

Related topics: information security, intellectual property, non-disclosure agreement, peer review, personal data

<u>Confidential advisors</u> > see Psychosocial well-being

Confidential data > see Confidentiality

Conflict of interest

A conflict of interest is the situation in which a staff member, contrary to the obligation and duty to act for the benefit of Ghent University, exploits the relationship for (in)direct personal benefit. These interests can for instance be financial (e.g., secondary employment, research funding coming from private companies, stock ownership), non-financial (e.g., receiving product samples, media attention), or personal (e.g., family relationships, career ambitions).

In some cases the conflict of interest may not have arisen yet or it may appear as though there is one, when in fact that is not (yet) the case. These situations, too, should be made transparent and monitored.

Ghent University aims to identify, clear up, and avoid or control such conflicts of interests. A code of conduct for conflicts of interest provides for a procedure to regularly evaluate one's activities, assess (potential) conflicts of interest and report them. This code does not apply to PhD scholarship recipients. Staff members should also ask permission to take a (direct or indirect) capital investment or any other financial or ownership interest in a Ghent University Association spin-off or a Ghent University Hospital spin-off. Any (paid or unpaid) secondary employment activities are also subject to prior permission.

It is the responsibility of the researchers to always be transparent about all conflicts of interest, whether of a legal, ethical, moral, financial, personal or other nature. For Life Sciences the framework of the International Committee of Medical Journal editors (ICMJE) must be followed, but potentially this framework offers guidance for all disciplines.

In all cases, the funding of the research must be mentioned.

It is necessary to be as detailed and specific as possible to describe any of the conflicts of interest.

https://www.ugent.be/intranet/en/conflicts-of-interest.htm
https://www.ugent.be/intranet/en/research/conflict-of-interest.htm

Related topics: combining research with other activities, research integrity

Copyright

Researchers are subject to copyright law, both when they make use of the work of others and when they publish their research results in an article or presentation. Researchers who want to use copyright-protected materials of others are required to get the explicit consent of the copyright holder(s), unless the intended use is covered by the copyright exceptions for education and scientific research.

In their capacity as authors, researchers may be asked to transfer their copyright to a publisher. In that case, they should be well aware of the consequences this may have (e.g. in terms of losing the rights to freely disseminate and reuse their own work without the publisher's permission). If possible, it is therefore preferable that researchers avoid (inadvertently) transferring to the publisher their economic rights granted by copyright, and instead grant the publisher a non-exclusive right to publish their work. Some external research funders' open access requirements may require researchers to at least retain sufficient rights to make the author's accepted manuscript (AAM) version of their publication publicly available via a repository, with zero embargo and with an open reuse licence ('rights retention'). Belgian Open Access legislation already ensures that under specific conditions authors retain the right to make the AAM of their scientific journal articles publicly available after an embargo period.

https://www.ugent.be/intranet/en/research/ethics/copyright.htm https://www.ugent.be/intranet/en/research/impact/schol-publishing

Related topics: commercialisation, intellectual property, open access, research communication

Core Facility > see Research infrastructure

Data management plan

A Data Management Plan (DMP) is a document specifying how research data will be handled both during and after a research project, taking into account what is appropriate given the kind of data being generated or used. It is seen as a good practice in Research Data Management. A DMP identifies key actions and strategies to ensure that research data are of a high-quality, secure, sustainable, and – to the extent possible – accessible and reusable.

A DMP is now required by many research funders, as well as by Ghent University for BOF and IOF funded research granted since 2020 and for projects of doctoral students enrolled since the academic year 2020-2021.

https://www.ugent.be/en/research/datamanagement/before-research/datamanagementplan.htm

Related topics: open science, research data, research data management

Dissemination > see Research communication

DORA > see Research assessment

Dual-use

Dual-use research is research involving goods, software or technology which could be useful for both civil and military purposes. Dual-use research may be carried out at Ghent University, provided that:

- the use of the research results for civil applications is not made impossible,
- the research results cannot be misused for human rights violations at a later stage,
- the research partner is not involved in human rights violations, and
- due care is taken to avoid misuse of the research (results) at a later stage.

Ghent university does not engage in research which is useful only for military purposes.

Dual-use goods, software or technology (including research results) cannot be shared with entities outside of the EU without a governmental export licence. Equally, care should be taken when employing temporary researchers from non-EU countries to work on dual-use technology.

All research proposals involving defence funding, the military or partners in the defence industry, or the export of dual-use goods, software or technology outside of the European Union must be reported to Ghent University's Dual-use Contact Point and must comply with the university's dual-use research policy. The Dual-use Contact Point will help researchers with the necessary screenings, ethics approval and administration (e.g. when applying for a mandatory export licence when sharing dual-use technology) of the research.

https://www.ugent.be/intranet/en/research/ethics/dual-use

Related topics: commercialization, ethics in research, human rights in research

Entrepreneurship

Researchers might want to combine their job or fellowship with setting up their own business, and becoming an entrepreneur. Ghent University actively supports researchers who want to bring an idea or technology to the market.

- A business idea can be based on research findings obtained at Ghent University. If this is the case, researchers can turn to Ghent University's Technology Transfer Office to set up a spin-off company. The university's business developers also support business development activities.
- Researchers can also have a business idea that is not based on their research. In that case, DO! can offer support and general entrepreneurial guidance.

https://www.ugent.be/intranet/en/research/impact/valorisation-for-researchers/enterpreneurship/overview.htm

Related topics: combining research with other activities, commercialisation, intellectual property, secondary employment

Ethics dumping

Ethics dumping is the intentional or unintentional export of research practices that can be deemed unethical, to low- and middle-income countries, where ethical regulations may be less stringent, or governance structures may be less well developed. It is the practice of conducting ethically sensitive research abroad in a manner that would not be tolerated from an ethical

point of view in Belgium. It is appropriate to conduct research that does not necessarily needs to be conducted outside the EU for a specific reason, within the EU.

Ghent University researchers should avoid engaging in projects or co-operations that bear a risk of ethics dumping, or take measures to prevent this risk.

Ghent University endorses the Global Code of Conduct for Research in Resource-Poor Settings as a general ethical framework for scientific research in partnership with, or conducted in, lower- and middle-income countries, making clear that:

- the use of double standards in research, or any other form of ethics dumping, is not acceptable,
- Ghent University advocates fair and equal long-term research relationships between partners in high-income and lower-income environments, based on fairness, respect, diligence, and sincerity.

Researchers should test their international research activities against this code.

https://www.ugent.be/intranet/en/research/ethics/ethics-dumping.htm

Related topics: ethics in research, fieldwork, humans in research, personal data

Ethics in research

Research ethics contribute to the quality and integrity of any research. Ghent University requires its researchers to comply with the highest ethical principles. Thus, the rights, dignity and welfare of anyone involved must be protected, and the research must be conducted in a transparent and independent manner.

Ghent University supports its researchers by identifying and detailing the ethical issues linked to specific research topics, in order to ensure that all research complies with the ethical principles. Institutional ethics committees can provide advice or formal ethics approval.

The following ethics topics can be found as separate entries in this framework:

- Access and Benefit Sharing (including the Nagoya Protocol)
- Animals in research
- Artificial intelligence (AI)
- Dual-use research
- Ethics dumping
- Fieldwork
- Human body material and biobanks
- Human rights
- Humans in research
- Personal data, privacy, GDPR (data protection)
- Public engagement

https://www.ugent.be/intranet/en/research/ethics

Related topics: research integrity

FAIR > see Research data

Feedback and evaluation

Ghent University has several formal and informal evaluation and feedback mechanisms in place. Feedback is seen as a powerful lever for appreciation, motivation and growth, and is an important mechanism in preventing misunderstandings and conflicts. It can be provided ad hoc between employees and managers or between colleagues.

Feedback can also be integrated in formal evaluation procedures. Specific career evaluation policies – with dedicated requirements, aims, procedures and timelines – apply to professorial staff, assistant academic staff and research staff. PhD students are required to submit an annual self-reflection report. Externally funded researchers are also evaluated by their funding agency. These formal evaluations can be crucial for career progression and/or for the continuation of the research project.

https://www.ugent.be/en/work/mobility-career/leadership/open-feedback-culture.htm https://www.ugent.be/en/work/mobility-career/career-aspects

Related topics: leadership, psychosocial well-being, research assessment, training and researcher development

Fieldwork

When conducting fieldwork or other research activities off-campus and abroad, researchers should act according to local legislation but should also regard Belgian and EU legislation as minimum standard. In order to adhere to the highest professional standards during fieldwork, researchers should also follow some ethical guidelines.

Ghent University endorses the Global Code of Conduct for Research in Resource-Poor Settings as a general ethical framework for research activities conducted in lower- and middle-income countries. This code provides guidance for researchers, both behavioural and scientific. It stipulates good practices and identifies activities that aid in striving towards equivalent and respectful co-operations. Researchers should at all times respect local cultures, attitudes and expectations. Working with research participants in other countries, especially non-EU or developing countries, can raise specific ethical issues that require an ethics approval. Local ethics approval may be required depending on the type of research and country of destination.

Considering the impact of the taking of physical samples is an important ethical reflection. Also, transnational co-operation is preferred to one-way extraction of samples or information.

It is strongly recommended to conduct a prior risk assessment, especially when travelling to non-EU countries or to remote or potentially hazardous settings. A risk assessment aims at protecting the researchers and others involved in the fieldwork (staff, students, hired personnel, participants, ...), but also the environment they will be working in.

Several of the guidelines on fieldwork also apply to other off-campus activities, such as research visits, conferences, or other (also private) activities linked to Ghent University activities abroad or in the field.

https://www.ugent.be/intranet/en/research/ethics/fieldwork.htm

Related topics: Access and Benefit Sharing, ethics dumping, ethics in research, health and safety, personal data

Financial management

All researchers should adhere to the terms and conditions of any grant or contract related to a project. They should also comply with the university's guidelines regarding the purchasing or procurement of materials, equipment or other resources, and the hiring of staff. Finally, they should co-operate with any legitimate external or internal monitoring or audit of finances relating to the project.

Ghent University uses SAP as financial project management system for all types of projects and financial transactions and has introduced a front office model which will lead to better support of researchers by pooling knowledge and skills.

https://www.ugent.be/intranet/en/research/projectmanagement.htm

Related topics: research information system, research funding

Funding Academy > see Research funding

GDPR > see Personal data

Genetic resources > see Access and Benefit Sharing

GISMO

The Ghent University Research Information System or GISMO is available for researchers to facilitate elements of the administrative lifecycle of research (application for BOF and IOF funding, management of one's personal profile, curation of one's academic cv, registration of research units, registration of contracts). GISMO also acts as the database of research projects.

- All active Ghent University researchers are obligated to indicate at least one research discipline (level 4) in their personal profile.
- Researchers can complete and update the mandatory information on their research projects via the project forms.
- Certain information is also made available externally via the research explorer.

https://www.ugent.be/intranet/en/research/organisation/gismo.htm

Related topics: ORCID

Hazardous substances > see Health and safety

Health and safety

Research may involve potentially hazardous situations, e.g. the use of potentially harmful equipment, substances or organisms. The safety of participants and of researchers and other personnel must be given priority at all times, and health and safety regulations must be strictly observed. Relevant to their research, researchers should be familiar with, and comply with, health and safety policy and standards and codes set forth both by the university and by their research unit.

Appropriate and thorough risk assessments must in particular be undertaken when research involves potentially harmful material or might cause harm to the environment. Appropriate

steps as well as procedures adopted to remove, reduce or manage the risks effectively should be put in place.

Support and resources for risk assessments are available via the Internal Health and Safety Office and Environmental Office.

https://www.ugent.be/intranet/en/human-resources/health-safety/laboratoryrules.pdf

https://www.ugent.be/intranet/en/human-resources/health-safety/accident.htm

https://www.ugent.be/intranet/nl/op-het-werk/welzijn/veiligheid

https://www.ugent.be/intranet/nl/op-het-werk/milieu

Related topics: fieldwork, psychosocial well-being, workplace

Human body material and biobanks

Research involving human body material is subject to strict legislation. Prior approval by a recognised medical ethics committee is required in most cases. When using human body material, researchers must take into account the consent and rights of the donor.

The Committee for Medical Ethics of Ghent University Hospital deals with requests concerning human body material.

A biobank stores human body material, together with data on the material and its donor(s). The collection and storage of human body material for scientific research needs to comply with these regulatory requirements:

- every collection and storage of human biological material for scientific research needs to obtain an ethics approval;
- all biobanks need to be registered with the Federal Agency for Medicines and Health Products (FAMHP). In collaboration with HIRUZ (UZ Gent) Ghent University has established a central biobank registry and facilitates the central registration with FAMHP. Ghent University and Ghent University Hospital researchers need to register their biobank.

https://www.ugent.be/intranet/en/research/ethics/human-material.htm https://www.ugent.be/intranet/en/research/ethics/biobank

Related topics: ethics in research, humans in research

Humans in research

All research involving human participants, material and/or data must comply with the relevant legal and ethical requirements. Particular care must be taken with research involving vulnerable groups (such as the very elderly, children and those suffering from mental illness), and with covert studies or other projects which do not involve full disclosure to participants.

Research using humans in a medical context requires a prior approval of the Committee for Medical Ethics of Ghent University Hospital. Research using humans in a non-medical context might need a prior approval from an ethics committee as well.

Researchers engaging in <u>clinical studies</u> are required to register their projects with a designated contact point before applying for funding.

https://www.ugent.be/intranet/en/research/ethics/ethics-human.htm

https://www.ugent.be/intranet/en/research/ethics/ethics-human-nonmedical.htm

Related topics: human body material, ethics in research, personal data

Human rights in research

In order to prevent contributing to, or benefiting from, human rights violations, all research collaborations must be subject to a human rights impact assessment. The promotor must check whether human rights might be violated during the planned activities, whether the research results may be misused for human rights violations at a later stage, or whether the partner may be involved in human rights violations.

Moreover, to allow Ghent University to respond to future human rights violations, cooperation agreements contain a human rights clause. This enables Ghent University to terminate a collaboration when the partner is involved in a serious or systematic violation of human rights. A Human Rights Policy Committee advises researchers on planned collaborations.

https://www.ugent.be/en/ghentuniv/principles/internationalisation/humanrights.htm

Related topics: ethics in research

Impact

Impact is the effect research has. This can limit itself to academic or scientific impact (i.e. shifting understanding and advancing scientific method, theory and application across and within disciplines) but in most cases impact means the changes we can see (demonstrate, measure, capture), beyond academia (in society, economy, environment) which happen because of research (caused by, contributed to, attributable to). The process that underlies impact is referred to as (societal) value creation, although many other concepts are widely uses such as knowledge exchange or mobilization. The activities undertaken within this process (or 'pathways to impact') are also varied, e.g. public engagement, science communication, action research, technology transfer etc. There is no 'one size fits all' in value creation or impact. Impact may be big or small, local or global, instrumental (direct change) or conceptual (ideas, feelings), quantitative (products, jobs, revenues) or qualitative. There is no single type of impact nor a single type of impact pathway.

https://www.ugent.be/intranet/en/research/impact

Related topics: media engagement, public engagement, research assessment, research communication

Information security

Information is an asset that is extremely valuable in all business processes of Ghent University. When processing, storing, sharing and sending information, researchers should appropriately secure their data and apply the information security policy of Ghent University. Special attention should go to securing confidential, personal or sensitive information. Depending on their risk level, these data often require extra measures to ensure their security (confidentiality, integrity and availability) both during and after the research project.

https://www.ugent.be/en/facilities/ict/information-security

https://www.ugent.be/en/research/datamanagement/during-research/data-security.htm

Related topics: personal data

Informed consent

When research involves human participants, researchers need their informed consent for participation in the research. In an informed consent process, participants are provided with full and comprehensible information about the main aspects of the research and if applicable, the processing of personal data. They are also given clear assurance that participation is voluntary and can be terminated at all times. Afterwards, their agreement to participate is indicated by a specific form of consent, e.g. a signature on a consent form, an oral consent.

In the declaration of consent participants should be asked for their permission to: participate in the study, be re-contacted in the future (if applicable), archive their data and if necessary, publish the data and/or make the data available for future research.

If the processing of personal data within a research project is based on consent as the legal ground, researchers additionally need to ask explicit consent to collect and process the personal data from their research participants. In this case researchers need to make sure that this consent and the information provided to the participants, meet several conditions to be legal.

https://onderzoektips.ugent.be/en/tips/00002009/

Related topics: ethics in research, humans in research, personal data

Intellectual property

Ghent University wants to protect results from research performed at the university by means of intellectual property (IP) rights with a view to commercialisation, as well as safeguard the IP rights of third parties.

Researchers are required to take all appropriate steps to enable protection of research results with commercialisation potential by means of IP rights (such as patents), in accordance with the <u>General Research and Co-operation Regulations of Ghent University Association</u>. They should consult the Technology Transfer Office when developing an appropriate IP protection and exploitation strategy, before their research results are made public through any kind of publication or presentation.

https://www.ugent.be/intranet/en/research/impact/valorisation-for-researchers/intellectual-property/ipsupportpage.htm

Researchers should also seek the assistance of the Technology Transfer Office if they want to provide or receive research materials to and from other institutions or corporate entities, including (but not limited to) information that needs to be kept confidential. The Technology Transfer Office will provide legal assistance with regard to the drafting and negotiating of the appropriate contracts (e.g., Non-Disclosure Agreement, Material Transfer Agreement).

https://www.ugent.be/intranet/en/research/impact/valorisation-for-researchers/legal/overview.htm

Notwithstanding the requirements regarding the protection of IP, researchers are expected to communicate and disseminate their research findings. If necessary, publication may have to be temporarily postponed to ensure protection of research results.

Related topics: commercialisation, confidentiality, copyright, non-disclosure agreement, material transfer agreement, open access, open science, research communication

Internship > see Combining research with other activities

Laboratory rules > see Health and safety

Leadership and supervision

Leadership at Ghent University comprises a wide range of responsibilities, roles and commitments.

- Senior researchers (in particular department chairs, group leaders and principal investigators) are expected to create a sound research environment in which good research practices are promoted and in which all researchers can develop their research project as well as themselves. Support is given according to five different leadership roles (leader, coach, manager, expert, and entrepreneur). https://www.ugent.be/en/work/mobility-career/leadership
- For PhD candidates, the Faculty officially appoints one or more PhD supervisors and/or a doctoral guidance committee. The mutual expectations and responsibilities of all parties involved in a PhD trajectory are made explicit in the <u>Charter for doctoral</u> students and supervisors.

Related topics: appropriate behavior, feedback and evaluation, psychosocial well-being

Mailing lists

Researchers who make use of mailing lists (consisting of postal addresses or e-mail addresses) for their research (e.g. sending invitations to participate in a survey/interview) or for research activities (e.g. sending invitation to an event/conference) need to be aware that they are gathering personal data that fall within the scope of the General Data Protection Regulation (AVG/GDPR).

https://onderzoektips.ugent.be/en/tips/00001981/

Related topics: personal data, surveys

Material transfer agreement

A material transfer agreement (MTA) is a contract that defines proprietary protection when either providing or receiving research materials to and from other institutions or corporate entities. Research materials include, but are not limited to, cell lines, cultures, bacteria, nucleotides, proteins, transgenic animals, pharmaceuticals, or chemicals. Apart from stipulating the ownership of material, it also often includes use limitation, intellectual property protection and confidentiality clauses (cf. non-disclosure agreement). Each exchange of proprietary research material requires an MTA. Other exchanges also often benefit from a material transfer agreement.

<u>https://www.ugent.be/intranet/en/research/impact/valorisation-for-researchers/legal/nda.htm#MaterialTransferAgreement(MTA)</u>

Related topics: Access and Benefit Sharing, ethics in research, intellectual property, nondisclosure agreement

Media engagement

Working with the media can help to inform and educate different groups, inspire people about new discoveries or explain poorly understood issues. To be effective it requires careful planning and consideration. Researchers looking for advice on their media or communication strategy can turn to the Department of Communication and Marketing.

https://www.ugent.be/intranet/en/communication

Related topics: affiliation, public engagement, research communication

Military application of research > see Dual-use

Nagoya Protocol > see Access and Benefit Sharing

Non-disclosure agreement

A non-disclosure agreement (NDA) is a contract that protects confidential data, proprietary information and/or intellectual property. It is typically signed when receiving, providing or exchanging information that needs to be kept confidential, or can be part of a project or consortium contract. It can be signed between two (or more) institutions or corporate businesses (most often a mutually agreed non-disclosure agreement). Another type of non-disclosure agreement can exist between an employer and its employee.

https://www.ugent.be/intranet/en/research/impact/valorisation-for-researchers/legal/nda.htm Related topics: confidentiality, intellectual property, material transfer agreement

Off-campus activities > see Fieldwork

Ombudspersons > see Psychosocial well-being

ON/OFF campus working > see Workplace

Open Access

Open Access refers to the practice of making research outputs freely available online to readers inside and outside the research community in order to maximise the impact of the research, with minimal reuse restrictions.

Researchers can make their scholarly publications openly available by publishing directly in Open Access via an Open Access journal, publisher or publishing platform, and/or they can deposit a full text version of their publication in a repository such as Biblio and make it publicly accessible there (so-called self-archiving, also known as secondary publishing).

Ghent University requires researchers to comply with any applicable research funder's as well as the institutional policy on Open Access to publications. For scholarly publications deposited in Biblio, the university expects as a minimum that they are accessible within the Ghent University network, and strongly encourages Open Access, preferably with an open licence if possible. For scientific journal articles published since 2023, an opt-out Open Access policy

applies: author's accepted manuscripts (AAM) in Biblio are made publicly available after an embargo period in accordance with the provisions of Belgian Open Access legislation, unless the researcher explicitly requests an opt-out.

For published datasets, Ghent University researchers are expected to follow the principle 'as open as possible, as closed as necessary', i.e. to make research data publicly available, unless (temporary) access restrictions are necessary for legitimate reasons such as privacy, ethical considerations, commercialisation, intellectual property rights, contractual obligations, etc.

https://www.ugent.be/intranet/en/research/publications.htm

Related topics: academic bibliography, copyright, confidentiality, open science, research data

Open Science

Ghent University is committed to fostering and supporting Open Science. Open Science aims to open up the results, process and tools of scientific research. It encompasses a wide variety of practices, including ensuring that research outputs (such as publications and research datasets) and educational resources are accessible and reusable, but also engaging non-professional scholars in research (for example through citizen science).

Many research funding agencies strongly encourage or even require beneficiaries to implement open science practices, notably in terms of open access to publications and FAIRness of data resulting from the research funded by these agencies.

Researchers who engage in Open Science activities should take into consideration and balance their practices with requirements regarding e.g. confidentiality and the protection of personal data.

https://www.ugent.be/en/research/research-strategy/open-science.htm

Related topics: confidentiality, impact, intellectual property, open access, public engagement, research data

<u>ORCID</u>

ORCID refers to Open Researcher and Contributor iD, a unique and persistent identifier that unambiguously identifies individual researchers and distinguishes them from other researchers. An ORCID also allows attribution of research outputs (such as publications and datasets) to the correct person.

All active researchers at Ghent University must register for an ORCID, connect it to their Ghent University account, and mention it on their published research outputs wherever possible. In addition, they need to include it in their grant proposals (BOF, IOF, FWO) and in their research outputs wherever possible.

Due to the wide range of potential uses of the ORCID, it is advisable to create an ORCID before the start of research. The possibility to create and connect an ORCID is available directly via orcid.ugent.be (or via GISMO and Biblio). A researcher's ORCID profile must be set to 'public' in order for it to be consulted during assessment procedures.

https://www.ugent.be/intranet/en/research/impact/schol-publishing/orcid.htm

Related topics: academic bibliography, GISMO, open science, research communication

Organisational units for research

Although there is no formal organisational chart for research and almost all researchers are affiliated with a department, Ghent University supports the registration of organisational units for research.

https://www.ugent.be/intranet/en/research/research-admin/svo.htm

Related topics: Core Facility, GISMO

Peer review

Peer review (also known as refereeing) is the process of subjecting an author's scholarly work (e.g. publications, manuscripts, grant applications) to the scrutiny of others who are experts in the same field.

Ghent University encourages researchers not only to publish in high-quality peer reviewed journals, but also to act as peer reviewers for grant applications, journals, other forms of publications and ethical reviews. Peer review must be carried out to the highest professional standards – at least in accordance with the European Code of Conduct for Research Integrity - and in accordance with the guidelines of the organization for which the work is being carried out. The confidentiality of materials being reviewed should be maintained at all times.

Related topics: confidentiality, conflict of interest, research assessment, research communication, research integrity

Personal data

In research projects where personal data are collected and/or processed researchers must meet the requirements of the European privacy legislation, i.e. the General Data Protection Regulation (GDPR, known as AVG in Dutch), and the <u>Generic Code of Conduct for the processing of personal data and confidential information of Ghent University.</u>

https://www.ugent.be/en/research/datamanagement/policies/privacy.htm https://www.ugent.be/intranet/en/research/ethics/ethics-human.htm https://www.ugent.be/intranet/en/research/ethics/ethics-human-nonmedical.htm

Related topics: confidentiality, ethics in research, humans in research, mailing lists, research data, surveys

Privacy > see Personal data

Psychosocial well-being

Ghent University highly values the good mental health and psychosocial well-being of all its researchers. Trustpunt is the university's dedicated point of contact for all work-related mental well-being issues. Trustpunt offers online information as well as training sessions on how to deal with issues such as fear of failure, conflict, unwanted behavior, stress and burnout. Specific guidance is available for supervisors on how to address well-being issues within their team.

Researchers can turn to the university's confidential advisors and to the faculty's confidential contacts for individual support. They can also discuss psychosocial problems with an external prevention officer psychosocial aspects. PhD researchers who are having difficulties which they feel unable to discuss with their supervisor can contact their faculty ombudsperson for doctoral students or the institutional ombuds office.

https://www.ugent.be/intranet/en/human-resources/health-safety/psycosocial-welfare https://www.ugent.be/en/research/doctoralresearch/ombudspersons-phd.htm https://www.ugent.be/intranet/en/human-resources/health-safety/psycosocial-welfare/contactpersons/externalpreventionadvisorpsychosocialaspects

Public engagement

Ghent University is strongly committed to achieving impact through excellent research and considers it good practice to target communication and public engagement at a range of relevant audiences, as well as allow for co-creation of knowledge. Researchers should make all reasonable attempts to maximize the impact of their work, whether this involves the academic community, potential users or the public.

https://www.ugent.be/intranet/en/research/soc-value/public-engagement.htm

Related topics: impact, media engagement, open science, research communication

Publishers > see Copyright

Purchases

Purchasing and expenditure of funds must take place in accordance with the terms and conditions of any grant or contract held for the research and the university's financial regulations.

https://www.ugent.be/intranet/nl/op-het-werk/finadmin/richtlijnen/richtlijnen.htm

Research assessment

Research assessment refers to the evaluation of the quality and impact of research. Research assessment is at the core of the academic rewards and incentives system. It plays a key role in the recruitment and promotion of researchers, in the evaluation of research groups and institutions, in the distribution of research funding etc. A wide variety of research outputs and outcomes (scholarly publications, data and software, influence on policy and practice, public engagement etc.) can be evaluated, using qualitative and/or quantitative methodologies (including the application of bibliometric indicators and peer review).

In order to promote appropriate evaluation methodologies for a wide range of evaluation purposes Ghent University has signed the San Francisco Declaration on Research Assessment (DORA) and developed guiding principles for the evaluation of research (including guidance on the responsible use of indicators, and a portfolio of research dimensions).

https://www.ugent.be/en/research/research-ugent/research-strategy/research-evaluation.htm Related topics: feedback and evaluation, impact, peer review, public engagement, research communication

Research communication

Researchers are expected to communicate about their research. Ghent University respects the researchers' right to select the most appropriate route and method for the dissemination of their research. Researchers are invited to use a variety of channels and tools to maximise the impact of their research. They should not limit themselves to scholarly publishing (e.g., peer-reviewed scholarly publications or presentations at academic conferences) or to research results. Researchers can, for instance, also undertake public engagement or other activities as pathways to impact.

Researchers are expected to respect the Open Access policy of Ghent University and (if applicable) of their funding agency. Before their research results are made public, they should take all appropriate steps to protect the intellectual property rights arising from the research.

Related topics: authorship, impact, intellectual property, open access, peer review, public engagement, research assessment

Research data

In the context of Research Data Management (RDM), data sharing refers to the practice of publicly sharing (or 'publishing') data from completed (parts of) research, i.e. outside a project or research team. Sharing research data is not an all-or-nothing choice, but a spectrum. It ranges from making data fully open on one end, to keeping them fully closed on the other, with various possible forms of restricted/controlled access in-between.

https://www.ugent.be/en/research/datamanagement/after-research/sharing.htm

When considering data sharing, it is important to adhere as much as possible to the FAIR principles. These principles describe attributes that enable and enhance the reuse of data (and other digital objects) by both humans and machines. The guiding principles are caught in the acronym FAIR, which stands for: Findable, Accessible, Interoperable, Reusable. FAIR does not mean that data have to be fully open. Rather, the 'A' in FAIR means that it is clear how data can be accessed, and - if applicable- under which conditions. In other words, data that are only shared under certain restrictions can still be FAIR. Using a trustworthy data repository already goes a long way towards making research data FAIR. It is therefore the preferred option to publish research data.

https://www.ugent.be/en/research/datamanagement/after-research/fair-data.htm

Open research data is defined as data that can be 'freely used, modified and shared by anyone for any purpose' (opendefinition.org). There is a growing consensus among research funders, institutions (including Ghent University) and other stakeholders that access to research data should be 'as open as possible, as closed as necessary'.

It is highly recommended that Ghent University researchers register any research datasets they have published in a data repository as output in the academic bibliography, and if applicable, link it to their associated publication(s). For scholarly publications published since 2023, registration in the academic bibliography of any associated Ghent University datasets published in a data repository is mandatory.

https://www.ugent.be/intranet/en/research/impact/schol-publishing/policy-ugent.htm

Related topics: academic bibliography, open access, open science, personal data, research data management

Research data management

Research Data Management (RDM) entails all actions needed to ensure that data are secure, easy to find, understand, and (re)use, not only during a research project, but also in the longer term

According to the RDM policy of Ghent University researchers are encouraged (and sometimes obliged) to write a Data Management Plan (DMP) at the start of their research, to carefully manage and store their research data during their research, and to preserve (and to the extent possible) share relevant data for verification and reuse purposes after their research (preferably via a trusted data repository). If applicable, researchers also need to take into account the data management and sharing requirements of external funding agencies and publishers, as well as relevant legislation (such as the GDPR).

https://www.ugent.be/en/research/datamanagement

Related topics: data management plan, open access, open science, research data

Research Explorer > see GISMO

Research funding

For an overview of the most current research funding opportunities, consult the specific web section and/or register for the electronic newsletter ('BOZI')

The <u>Ghent University Funding Academy</u> offers support to all researchers who are developing a grant proposal.

Before submitting a research funding proposal to an external funding agency, researchers must seek approval of the application by the advisors in the funding units of the Research Department. They will help to draw up a budget according to the funding agency's rules and regulations, check whether the funding call criteria are met, request a financial check and advise on all relevant matters regarding the application procedure.

https://www.ugent.be/intranet/en/research/research-admin/projectmanagement.htm

For certain types of research funding mandatory reporting of research output is expected using Biblio and GISMO.

It is important that the interests of all stakeholders as well as the interests and reputation of the individual applicant and the university as a whole are safeguarded when seeking and accepting external funding.

Research information system > see GISMO

Research infrastructure

Research infrastructure encompasses all facilities and resources that facilitate the conduct of research. In addition to scientific infrastructure such as apparatus and equipment, this also embraces collections, natural habitats, corpora and databases, including their digital accessibility (licences, databases, etc.) (also often called e-resources). Ghent University is seeking to create an overview of its research infrastructure which will allow more transparency and sharing.

Ghent University stimulates the availability and exploitation of highly specialised and indispensable scientific expertise, services and research infrastructure in a real or virtual entity (whether or not across disciplines and/or user groups) by the formal recognition as Core Facility.

https://www.ugent.be/en/research/research-ugent/corefacilities.htm

Research integrity

Research integrity (RI) is a conceptual framework that describes the attitude of researchers and those involved in research whereby they conduct their research according to appropriate ethical, legal and professional frameworks, obligations and standards. It is about doing the right things, doing them right, and at the right time, whether no one is watching or a lot of people are watching. RI is considered to be part of the basic professional responsibilities of researchers and is inherently connected to the quality assurance of daily research practice.

Because RI describes an approach for organising and conducting good scientific work, it is more about interpretation and appreciation, about making the right choices within a certain framework. Although there is no international consensus on the definition of RI, the European Code for Research Integrity or ALLEA code provides full guidance for researchers. The code describes the core values of research (integrity) and gives guidance by formulating good research practices, clear descriptions of unacceptable behaviour and fraud, including a determination of the responsibility of all stakeholders within science. Ghent University endorses the ALLEA code and expects every researcher to comply with its principles and to ensure the compliance of those around them.

Researchers who want to get more hands-on with research integrity are welcome to register for the online training course Mind the GAP: training on Good Academic research Practices.

Any questions or potential cases of unacceptable behavior or fraud can be reported to the Commission for Research Integrity (CWI).

https://www.ugent.be/intranet/en/research/research-integrity

Related topics: authorship, conflict of interest, ethics in research

Risk assessment > see Health and safety

Scholarly publishing > see Academic bibliography

SDGs > see Sustainability in research

Secondary employment > see Combining research with other activities

Secondment > see Combining research with other activities

Signatures

If a research proposal, letter of intent or offer needs to be formally signed in the name of Ghent University, the rector is the only person entitled to do so. One needs to get in touch with the relevant funding unit of the Research Department in order to take care of the signature procedure.

https://www.ugent.be/intranet/en/research/research-admin/projectmanagement.htm

Spin-off > see Entrepreneurship

Surveys

When conducting a survey, chances are that personal data will be collected and/or processed. Personal data are legally protected by the GDPR and researchers must comply to this European privacy legislation. Using a survey to collect ((special categories of) personal) data from research participants might raise specific ethical issues that require an ethics approval. Survey questions should be developed taking into account the methodological standards within one's field.

Ghent University has a campus licence for the online survey tool Qualtrics. Other survey tools are no longer centrally supported.

https://onderzoektips.ugent.be/en/tips/00001983/ https://onderzoektips.ugent.be/en/tips/00002102/

Related topics: ethics in research, mailing lists, personal data

Sustainability in research

Ghent University encourages its researchers to minimise the environmental impact of their research activities. The sustainable implementation of a research project starts at the planning stage and continues throughout the lifetime of the project. Researchers should consider actions and measures such as reducing, reusing and recycling materials, promoting green purchasing for project-related materials, ensuring the sustainability of events, using low-emission forms of transportation, using sustainable and renewable forms of energy, ...

Also, the United Nations' Sustainable Development Goals (SDGs) are increasingly being used as an overarching framework to anchor sustainability thinking in the workings of governments, organisations, and also in research. Researchers are encouraged to make themselves familiar with the SDG framework and to apply it in an integrated and constructive way in their research when relevant.

https://www.ugent.be/intranet/en/research/soc-value/sdg-research.htm

Related topics: impact, work-related travel

SVO > See Organisational units for research

Training and development

Ghent University offers training and development opportunities to all researchers. These initiatives include formal training, mentoring and other activities to help researchers grow in their different roles (e.g., as professional, lecturer and supervisor). All researchers are strongly encouraged to take a proactive role in their personal and professional development. They must complete the relevant mandatory training (e.g., obligatory courses for researchers who work with lab animals). Supervisors are expected to stimulate the career and professional development of their researchers.

- PhD candidates can participate in the Doctoral Training Programme co-ordinated by the Doctoral Schools. For some PhD candidates completing (part of) the programme is obligatory. https://www.ugent.be/doctoralschools
- Postdoctoral researchers can join Ghent University's Postdoc Talent Management Programme or mentoring programme. https://www.ugent.be/en/work/mobility-career/postdoc-talent-management
- Newly appointed professors can participate in trainings about teaching, research, well-being and leadership. Several of these training courses are mandatory.
 https://www.ugent.be/en/work/mobility-career/career-aspects/professorial-staff/supportive-program/professonial-development-programmes/development newprofessors.htm

https://www.ugent.be/intranet/en/research/career/training

Related topics: feedback and evaluation, leadership and supervision

<u>Trustpunt</u> > see Psychosocial well-being

Workplace

Ghent University opts for a structural combination of working at the office (on campus) and teleworking (off campus/online) as a sustainable form of work organisation.

https://www.ugent.be/intranet/en/workplace-buildings/working-on-off-campus/overview.htm Related topics: fieldwork, health and safety

Work-related travel

For all work-related travel with at least one overnight stay researchers must submit a travel request via SAP before the trip. Without a travel request a researcher may not be covered by relevant insurance or will not be able to reclaim expenses (if applicable).

https://www.ugent.be/intranet/nl/loopbaan/dienstopdracht-buitenland https://www.ugent.be/intranet/en/human-resources/financial/reimbursement.htm

Researchers are advised to check if the destination is secure before organising the trip: https://www.ugent.be/en/administration/insurances/travel-insurance-staff.htm (section Safety abroad).

Researchers also need to adhere to Ghent University's sustainable travel policy. https://www.ugent.be/en/ghentuniv/principles/sustainability/quidelines/travel