Ethical aspects in R&D projects

While **scientific research and technological innovation** are considered drivers **of progress and benefits** for society and individuals, they can also bring **new risks and ethical dilemmas**.
Today, "**Responsible Research and Innovation**" aims to develop a research and innovation approach that contributes to the creation of a fairer society in which R&I practices aim for **sustainable**, **ethically acceptable** and **beneficial** results.

This ambition is particularly relevant in the context of Innoviris, as the subsidies granted come from public funds – and therefore from Brussels citizens. This is an additional argument, if one were needed, for **projects recommended for funding to be evaluated not only for their scientific and economic qualities, but also through an ethical point of view.**

Taking ethical aspects into account also means daring **to go beyond legal criteria** and questioning **the ethical dimensions** of scientific research and innovation **projects**.

In order to **provide** the best possible **guidance** to project leaders, Innoviris has developed this **methodological guide to identifying ethical issues that** may be raised and **taken into account in projects submitted** for funding.

Once these aspects have been identified, it is expected that:
- **their impacts are assessed** both in terms of research and development and in terms of the intended use of the product or service
- **strategies to mitigate any negative impacts are integrated** into the project

The aim is to improve the quality of the projects submitted and to promote **responsible research and innovation.**

This guide is **not** intended **to be exhaustive** and is not set in stone. **New technologies**, **new applications** and therefore **new ethical aspects** are always likely to be added.
It is clear that a project is **not necessarily concerned with all** ethical **aspects**. It is therefore necessary to **choose** which aspects seem **most relevant** and **most questionable**.
It should be noted that some positive ethical aspects are **reinforced** by the project, while **other ethical aspects** will **require further consideration**. There is therefore **a tension between benefits and risks.** When designing the project, it is critical to focus on mitigable risks for which concrete actions are realistic.

This guide is therefore **not a new checklist** and should be seen as a starting point for **reflection aimed at the continuous improvement of the projects supported.**

Ethical aspects that can be addressed

Acceptability

The new innovative service/product meets all the conditions that make it **"acceptable" to users and experts in the field**, where the benefits reasonably outweigh the potential disadvantages.

Accessibility

This is the possibility of accessing a product or service. It is therefore important to **consider the barriers** (material or otherwise) that limit access to the new solution.

Autonomy

To be autonomous, people must have access to **appropriate information** from **relevant sources**. They must also be **able to make their own decisions** in accordance with their values and needs.

Confidentiality

At the legal level, personal data must comply with the **GDPR**. Care must be taken with **sensitive data**, its sharing and anonymisation.

Consent

"*An act of will by which one **decides or declares expressly** that one does not oppose a specific action initiated by another person*." This **deliberate** and **informed choice** is made after an event or in response to a question.

Data quality

Quality data can be understood as **representative**, **diverse**, correctly **labelled** data, etc.

Data security

Essential **cybersecurity** mechanisms must be guaranteed for data **storage**, **encryption** and **sharing**.

Democratic participation

The use of the product and service is **optional** and cannot be imposed.

Dignity

The definition is complex. In the context of this methodological guide, dignity is defined as "**respect for the humanity of the person**".

Equity

The product/service guarantees **fair**, **impartial** and **proportionate** treatment for all individuals, **taking** into **account their differences** and specific situations.

Non-discrimination

The right of an individual to choose **not to receive certain information**, particularly concerning their health or future.

Proportionality principle

The balance between the advantages and disadvantages of a new product/service must be sought on a case-by-case basis.

Reinforcement of biases and prejudices

Care must be taken to ensure that a product/service **does not reinforce social, racial or gender biases**. This risk is particularly high when **AI algorithms** reflect the **implicit values** of those involved in the collection, selection or use of training data. In such cases, the results generated are **not neutral, fair or equitable**.

Reliability and robustness

The **results** are **consistent**, **repeatable** and **scientifically valid**.

Respect for privacy

The concept **of privacy** is similar to **modesty**, the **right to exclude** oneself from others and to grant others the same privilege. It also refers to **respect for the separation between private and public space** for mental and social balance.

Safety

The product/service must **avoid physical and psychological harm** (linked to the principle of proportionality).

Solidarity

Solidarity is an **essentially relational concept** that highlights the importance of **protecting social ties and working to break down social isolation**.
Solidarity can be at odds with autonomy.

Stigmatisation

Stigmatisation is a **dynamic process of devaluation** that "significantly discredits" an individual in the eyes of others (or in their own eyes in the case of self-stigmatisation). It **perpetuates negative stereotypes and prejudicial and discriminatory behaviour** towards these individuals.

Sustainability

The product/service is available for a **sufficient period of time**, making it **accessible over time**. This aspect also relates to **environmental sustainability**.

Transparency

This ethical principle promotes **openness, honesty** and **accessibility** of information in interactions, decision-making processes and actions.