The Ethics Appraisal Scheme in Horizon Europe

Research Ethics & Integrity Sector
SCIENCE POLICY, ADVICE & ETHICS Unit
DG Research & Innovation
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Outline

1. **Guiding principles & eligible activities**
2. **Horizon Europe novelties**
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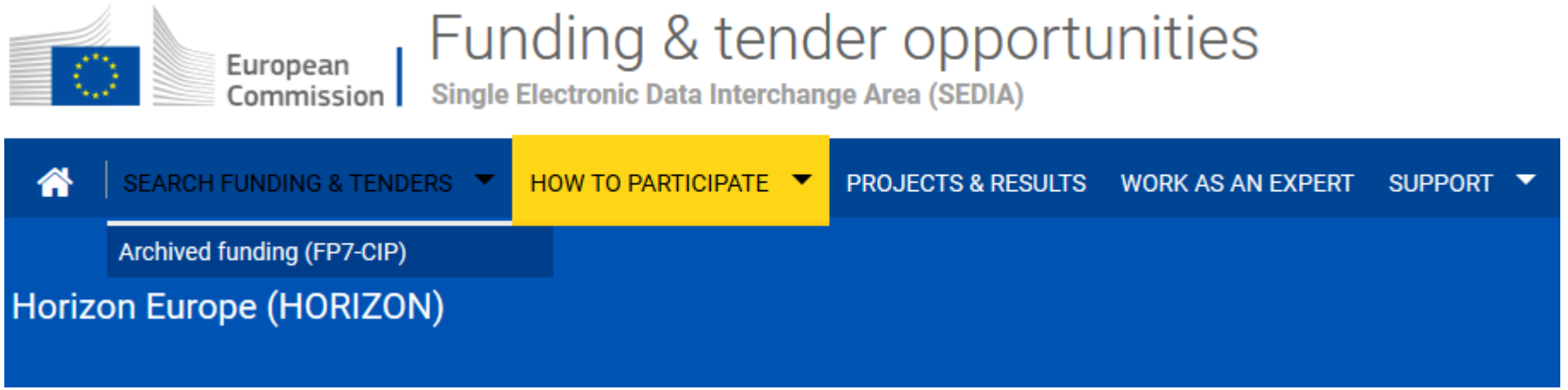
    2. Scientific evaluation questions relevant for the ethics appraisal process
    3. Changes to the ethics issues table
3. **The ethics appraisal process**
    1. Shift towards a risk-based approach
    2. Serious and complex ethics issues
    3. Some other notable changes
4. **Preparing an ethics-self assessment**

Key sources and materials

- How-to complete your ethics self-assessment ('How-to')
- Horizon Europe Programme Guide
- Horizon Europe Model Grant Agreement (MGA) (Article 14 and Annex 5)
- HE Framework Programme Regulation 2021/695: Eligible actions and ethical principles (Article 18) and Ethics (Article 19)
- HE Specific Programme Decision 2021/764



https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/how-to-participate/reference-documents;programCode=HORIZON

Reference Documents

Grants

This page includes reference documents of the programmes managed on the EU Funding & Tenders portal starting with legal documents and the Commission work programmes up to model grant agreements and guides for specific actions.

Please select the programme to see the reference documents.

Procurement

Reference Documents related to tendering opportunities are published on TED eTendering in the calls for tenders.

Filter

Expand all

- Legislation
- Work programme & call documents
- Grant agreements and contracts
- Guidance
- Templates & forms
- Funding & Tenders Portal

European Commission

Special procedures: Ethics review, security scrutiny, Ownership control check

Ethics review

In order to avoid funding of ethically problematic activities, some funding programmes require an ethics review procedure to clear the projects *(e.g. Horizon Europe, AMIF)*.

The details and the scope of the ethics review depend on each programme. Most programmes simply check whether projects raise ethics issues and, if so, whether these are adequately addressed. Some programmes, such as Horizon Europe, have a more elaborated review procedure which includes several steps depending on the complexity of the issues *(see Horizon Europe Programme Guide)*.

The participants will be informed (through the coordinating organisation) of the ethics review result and it will be posted in their Portal library (My Projects > Actions > Manage Project > Document Library).

If the ethics review leads to requirements to be implemented *before* grant signature, you will need to take immediate action to comply (and may also have to adapt the description of the action (DoA Part B) to reflect this). If the review leads to additional requirements to be fulfilled *during* the project, they are automatically added as ethics deliverables into the system and DoA Part A and will be placed in an automatically generated work package called ethics requirements. If the review shows that there are serious ethics issues that cannot be solved, funding may have to be refused.

⚠ You may be asked to provide additional information if this is needed to complete the ethics review *(e.g. in case of serious or complex ethics issues or missing information)*.

Links

- How to complete your ethics self-assessment

https://webgate.ec.europa.eu/funding-tenders-opportunities/display/OM/Special+procedures%3A+Ethics+review%2C+security+scrutiny%2C+Ownership+control+check

Ethics in Horizon Europe

Guiding principles & eligible activities

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Ethics in Horizon Europe

- Integrity and ethics in research are key components and a prerequisite for **achieving excellence** in research and innovation.
- **The key goal is to build and sustain trust in science and innovation, and to encourage and enable** researchers and innovators use the ethics by design approach to bring meaningful added value: the development of knowledge, technology and applications that improve people's lives, prospects and possibilities.
- **Ethics should not be 'red tape' for research, but empower researchers** to do the right thing for our society and to build trust grounded in our values and fundamental rights such as human dignity and privacy protection and security.

Guiding principles

Article 19 - Regulation (EU) 2021/695 establishing Horizon Europe:

- ‘Actions carried out under the Programme shall comply with **ethical principles** and **relevant Union, national and international legislation**, including the Charter of Fundamental Rights of the European Union and the European Convention on Human Rights and its Supplementary Protocols.’

Article 14 - Model Grant Agreement (MGA):

- ‘The action must be carried out in line with the **highest ethical standards** and the applicable EU, international and national law on ethical principles.’

- ‘The beneficiaries must commit to and ensure the respect of basic **EU values** (such as respect for human dignity, freedom, democracy, equality, the rule of law and human rights, including the rights of minorities).’

Guiding principles

Article 19 - Regulation (EU) 2021/695 establishing Horizon Europe:

‘Particular attention shall be paid to:

- the principle of proportionality
- the right to privacy
- the right to the protection of personal data
- the right to the physical and mental integrity of a person
- the right to non-discrimination
- the need to ensure protection of the environment
- the need to ensure high levels of human health protection’

Actions NOT eligible for funding

Article 18 (1)

a) activities aimed at human cloning for reproductive purposes;

b) activities intended to modify the genetic heritage of human beings which could make such changes heritable;

c) activities intended to create human embryos solely for the purpose of research or for the purpose of stem cell procurement, including by means of somatic cell nuclear transfer.'

Model Grant Agreement (MGA) Article 14

d) activities that 'lead to the destruction of human embryos (for example, for obtaining stem cells).'

Actions NOT eligible for funding

Article 18 (2)

- Research on human stem cells, both adult and embryonic, may be financed **depending both on the contents of the scientific proposal and the legal framework of the Member States involved**.
- No funding shall be provided within or outside the Union for research activities that are **prohibited in all Member States**.
- No funding shall be provided in a Member State for a research activity which is **forbidden in that Member State**.

Research integrity

2. Legal entities participating in an action shall provide:

(a) an ethics self-assessment identifying and detailing all the foreseeable ethics issues related to the objective, implementation and likely impact of the activities to be funded, including a confirmation of compliance with paragraph 1 and a description of how it will be ensured;

(b) a confirmation that the activities will comply with the European Code of Conduct for Research Integrity published by All European Academies and that no activities excluded from funding will be conducted;

(c) for activities carried out outside the Union, a confirmation that the same activities would have been allowed in a Member State; and

(d) for activities making use of human embryonic stem cells, as appropriate, details of licensing and control measures that shall be taken by the competent authorities of the Member States concerned as well as details of the ethics approvals that shall be obtained before the activities concerned start.

Research integrity

6)	We declare that the proposal complies with ethical principles (including the highest standards of research integrity as set out in the ALLEA European Code of Conduct for Research Integrity, as well as applicable international and national law, including the Charter of Fundamental Rights of the European Union and the European Convention on Human Rights and its Supplementary Protocols. Appropriate procedures, policies and structures are in place to foster responsible research practices, to prevent questionable research practices and research misconduct, and to handle allegations of breaches of the principles and standards in the Code of Conduct.	☐

- Guideline for Promoting Research Integrity in Research Performing Organisations (https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/guideline-for-promoting-research-integrity-in-research-performing-organisations_horizon_en.pdf)

- **Research Integrity Promotion Plan** (RIPP):
  - Research Integrity Training
  - Dealing with Breaches of Research Integrity
  - ….

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Ethics in Horizon Europe

Applicant declarations

Scientific evaluation questions relevant for the ethics appraisal process

Changes to the Ethics Issues Table

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Declarations: Application form

7) We declare that the proposal has an exclusive focus on civil applications (activities intended to be used in military application or aiming to serve military purposes cannot be funded). If the project involves dual-use items in the sense of Regulation 428/2009, or other items for which authorisation is required, we confirm that we will comply with the applicable regulatory framework (e.g. obtain export/import licences before these items are used).	☐
8) We confirm that the activities proposed do not – aim at human cloning for reproductive purposes; – intend to modify the genetic heritage of human beings which could make such changes heritable (with the exception of research relating to cancer treatment of the gonads, which may be financed), or – intend to create human embryos solely for the purpose of research or for the purpose of stem cell procurement, including by means of somatic cell nuclear transfer. – lead to the destruction of human embryos (for example, for obtaining stem cells) These activities are excluded from funding.	☐
9) We confirm that for activities carried out outside the Union, the same activities would have been allowed in at least one EU Member State.	☐

Changes to the Ethics Issues Table

1. Human Embryonic Stem Cells (hESC) and Human Embryos (hE)
2. Human participants
3. Human cells / tissues
4. Personal data
5. Animals
6. Non-EU countries
7. Environment & Health and Safety
8. **Artificial Intelligence – NEW!**
9. Other ethics issues
10. **Crosscutting issue: potential misuse of results***
11. ~~**Exclusive focus on civil applications**~~
12. ~~**Dual use**~~

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Cross-cutting issue: misuse

- The Security Issues Table (application form Part A) covers **misuse from the security perspective**.

  E.g. research activities that could generate knowledge, materials and technologies that could be adapted for criminal/terrorist activities; or result in the development of chemical, biological, radiological or nuclear (CBRN) weapons and the means for their delivery.

Cross-cutting issue: misuse

- **Misuse not related to the security dimension** will be considered under the Ethics Issues Table and analysed as part of the relevant ethics sections (humans, **personal data**, animals, **environment, health and safety**, **artificial intelligence**) or as ‘other ethics issue’.

  E.g. the development of surveillance technologies that could curtail human rights and civil liberties.

  E.g. research that involves minority or vulnerable groups or develops social, behavioural or genetic profiling technologies that could be misused to stigmatise, discriminate against, harass or intimidate people.

→ Guidance note on potential misuse of research results

Scientific evaluation questions relevant for the ethics appraisal process

- **Human Embryonic Stem Cells (hESC)** and **Human Embryos (hE)**:

  Are they involved? Is their involvement necessary to achieve scientific objectives (for hESC)? Does the research result in their destruction (for hE)?

  → Taken into account by ethics evaluators

  → Mandatory **Ethics Assessment**

- Exclusive focus on **civil applications**?

  !! The assessment of the exclusive focus on civil applications will no longer be performed under the ethics appraisal process.

Dual use & Exclusive focus on civil applications

No longer to be assessed by ethics reviewers !!

- Applicant declarations: '*we declare that the proposal has exclusive focus on civil applications*' + '*if the proposal involves dual-use items or other items for which authorization is required, we will comply with the relevant regulatory framework*.'
- For **dual use**, the declaration by the applicant is sufficient (no further checks in evaluation or grant management).
- For **exclusive focus on civil applications** aspects: verified by scientific evaluators.

→Guidance note on research focusing exclusively on civil applications

→*Commission Recommendation on internal compliance programmes for controls of research involving dual-use items under Regulation (EU) 2021/821 (coming soon)*

Scientific evaluation questions relevant for the ethics appraisal process

- **Do no significant harm** (DNSH) principle ('Taxonomy Regulation' 2020/852)
  - → assessed in the excellence criterion
  - → taken into account by ethics evaluators
  - → Full webinar: https://ec.europa.eu/research/participants/docs/h2020-funding-guide/other/event210421.htm

- **Artificial intelligence**? Is it technically robust?
  - →Assessed in the excellence criterion
  - →Taken into account by ethics evaluators

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Horizon Europe novelties

1. Applicant declarations
2. Scientific questions
3. Changes to the Ethics Issues Table
   - ~~Dual use and exclusive focus on civil application~~
   - Misuse as cross-cutting issue
   - New issue: Artificial intelligence
4. **Risk-based process: focus on serious and complex cases**

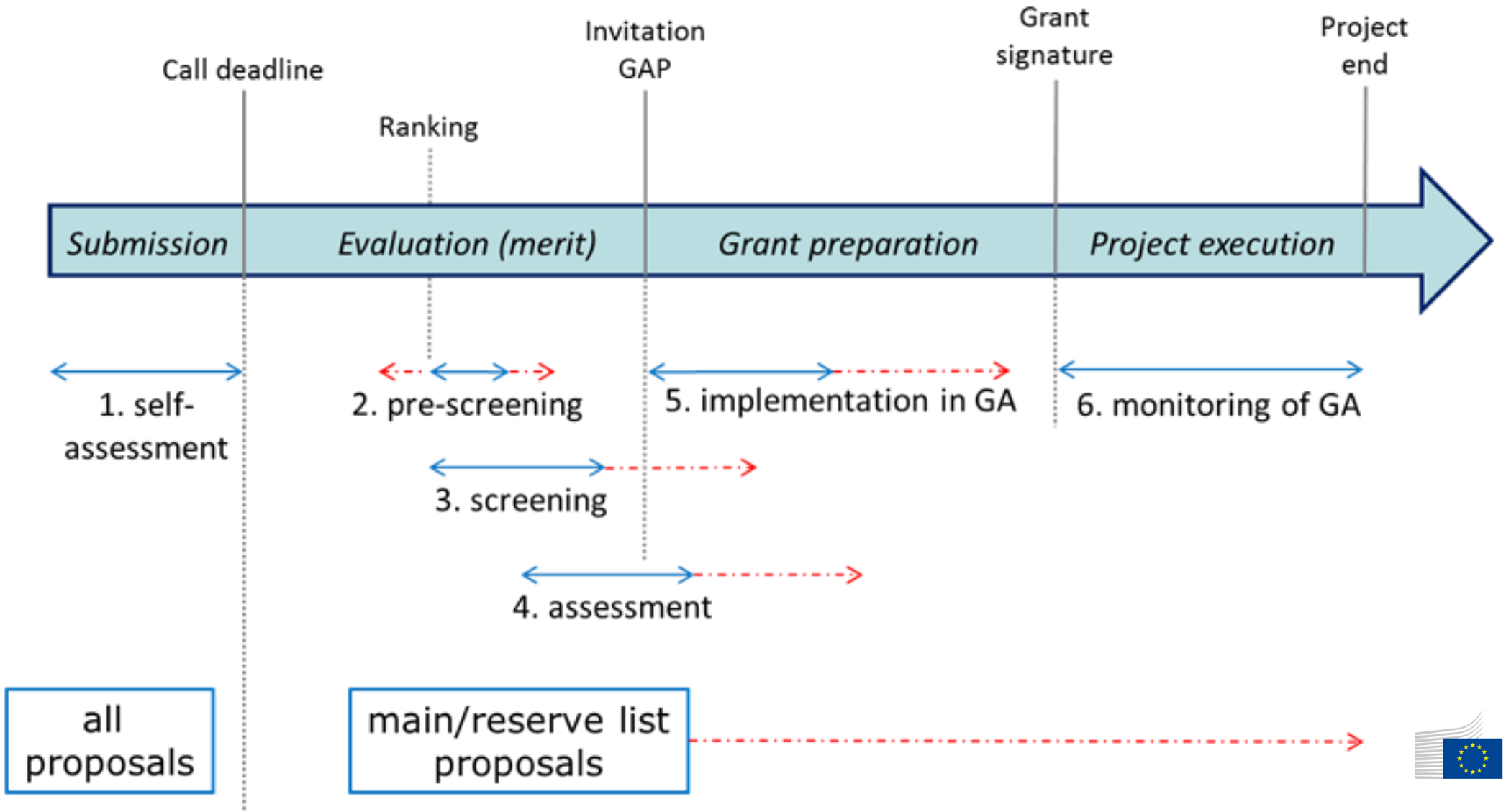
The Ethics Appraisal Process

Shift towards a risk-based approach

Serious and complex ethics issues

Some other notable changes

Ethics Appraisal Process – Overview



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1. Ethics Self-Assessment

- **Mandatory for all proposals** with one ‘yes’ in the Ethics issues Table. (Article 19.2(a) HE regulation)
- Now included in **Part A of the proposal** (web-based forms generated by the IT system, based on the information entered by the participants through the submission system)
- Applicants must **describe** the ethical dimension of their proposal and the compliance with ethics principles

(2. Ethics Pre-screening)

- **Optional** filtering step of all proposals (with and without ethics issues flagged)
- By at least two ethics evaluators (external experts or qualified members of staff)
- **Simplified version of the Ethics Issues Table**: the ethics categories, but not the detailed questions
- Possible outcomes:

→**Ethics issues?**

→ **NO? ➔ ETHICS CLEARANCE**

→ **YES? ➔ FLAGGED for SCREENING**

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3. Ethics Screening

- All proposals (with and without ethics issues flagged) OR flagged proposals after pre-screening
- By at least two ethics evaluators (external experts)
- **Key goal: Identifying proposals that raise serious or complex ethics issues** and must undergo a **full ethics assessment, where ethics requirements can be defined.**
- **All other, non-critical proposals are cleared without ethics requirements.**

3. Ethics Screening: Possible outcomes

→ **Ethics issues?**

→ **NO? ➔ ETHICS CLEARANCE**

→ **YES? ➔ Serious and/or complex ethics issues?**

1. **NO**: Beneficiaries further deal with ethics issues in accordance with national and European legislation – **no further analysis or requirements** in the Ethics Summary Report ➔ **ETHICS CLEARANCE**

2. **NO**: Beneficiaries further deal with ethics issues in accordance with national and European legislation BUT **need to appoint external independent ethics advisor or board** ➔ **CONDITIONAL ETHICS CLEARANCE**

3. **YES**: ➔ **ETHICS ASSESSMENT**

External independent ethics advisor or board

- **Mandate**:
  - to advise the beneficiary on how to deal with ethics issues and to report to the Commission/Agency/Funding Body.
  - ! Not responsible for ethics management and compliance, and remain independent from the beneficiary.
- The choice between a single **external independent** ethics advisor and an ethics board (with a minimum of three experts) reflects **the size of the grant and the seriousness/complexity of the ethics issues**.
- Ethics requirements also offer the possibility to request the appointment of an **'ethics mentor',** when there is lower ethics risk/ no need for an independent advisor/board.

→Guideline on Roles and Functions of Ethics Advisors/Ethics Advisory Boards in EC-funded Projects

4. Ethics Assessment

- An **in-depth analysis** of the ethics issues for:
    1. All proposal involving **hE and/or hESC** (directly to assessment)
    2. Proposals raising **serious and/or complex ethics issues**
- Panel of at least 5 external experts
- **Key goal: to identify additional measures that must be implemented during grant preparation or later during grant implementation,** for ethics issues not satisfactorily addressed in the proposal.
- **!** Ethics requirements in proportion to the severity of the ethics issues, according to a risk-based approach.

4. Ethics Assessment: Possible outcomes

1. **ETHICS CLEARANCE** → GA is finalized

2. **CONDITIONAL ETHICS CLEARANCE**

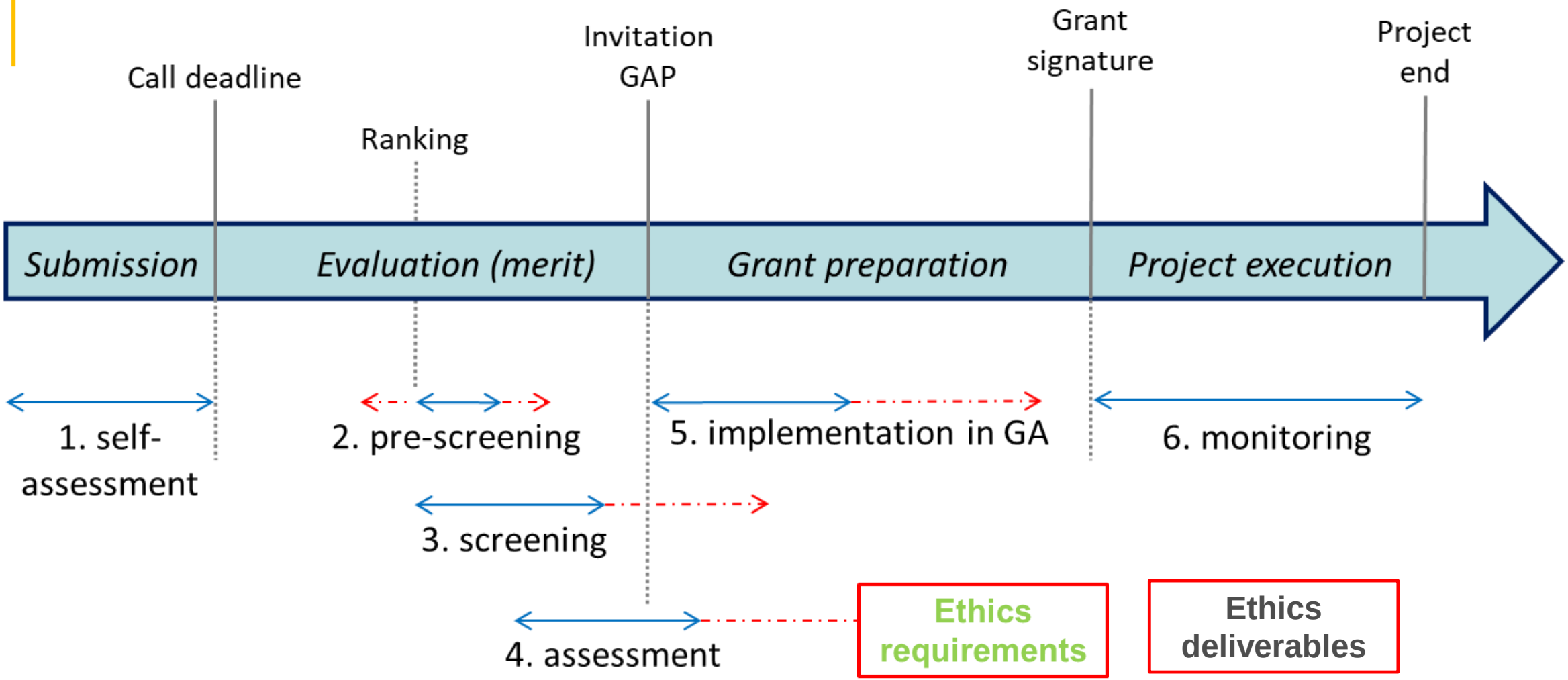
   →The Ethics Summary Report contains **ethics requirements that need to be fulfilled**

   →Before GA and/or contractual obligations included in GA

   →**Ethics work package & Ethics deliverables** *(e.g. information on consent procedures, copies of ethics approvals, …)* as part of project reporting and monitoring

3. ***Second ethics assessment or more information needed*** → GA is postponed

4. **NO ETHICS CLEARANCE (after second assessment)** → Proposal cannot be funded


Call deadline
Ranking
Invitation GAP
Grant signature
Project end
Submission
Evaluation (merit)
Grant preparation
Project execution
1. self-assessment
2. pre-screening
3. screening
4. assessment
5. implementation in GA
6. monitoring
Ethics requirements
Ethics deliverables

Legal basis

Article 19 (2)

‘Entities participating in the action shall provide:
(a) an ethics self-assessment (…)’

Article 19 (3)

‘Proposals shall be systematically screened to identify those actions raising complex or serious ethics issues and submit them to an **ethics assessment**. (…)’

Legal basis

Article 19 (5)

‘If appropriate, ethics checks shall be carried out by the Commission or the relevant funding body. (…)’

Article 19 (6)

‘Actions which do not fulfil the ethics requirements referred to in paragraphs 1 to 4 and are therefore not ethically acceptable, shall be **rejected or terminated once the ethical unacceptability has been established**.’

5. Implementation

When ethics requirement are defined (following Ethics Assessment):

= Horizon 2020

- Either as ethics deliverables (e.g. to request supporting documents or additional reports)
- Or in the grant agreement before signature e.g. by changing the Description of the Action (Annex 1) in order to introduce a justification, change a methodology, …

Ethics requirements – some examples…

- 1.3. Information on the origin of embryos must be provided **before grant signature**.
- 2.6. The applicant must clarify whether vulnerable individuals/groups will be involved, and the measures to protect them and minimise the risk of their stigmatisation must be included **in the grant agreement** before signature.
- 4.1 The beneficiary must check if special derogations pertaining to the rights of data subjects or the processing of genetic, biometric and/or health data have been established under the national legislation of the country where the research takes place and **submit as a deliverable** a declaration of compliance with respective national legal framework(s).
- 5.4. The applicant must clarify whether non-human primates will be involved in this study and justify their inclusion in the research. This information must be included **in the grant agreement** before signature.

Ethics Screening – key changes

Horizon 2020

Screening

Ethics issues → Formulation of ethics requirements

= contractual obligations in Grant Agreement

Horizon Europe

Screening

Ethics issues → Flagged, but no specific ethics requirements are formulated

5. Implementation

!!! **No ethics requirements =/= no ethics obligations**

- The **applicant declarations** and **ethics self-assessment** become part of the description of the action (Annex 1 of the grant agreement) and create obligations for the beneficiaries.
- The **Ethics Summary Report (EthSR)** will remind applicants/beneficiaries of the ethics issues raised by their proposal: Applicants/beneficiaries are **responsible** for complying with ethics standards and rules as applicable to their project. They must keep all relevant documents on file and submit individual documents on request

➔ **Risk-based & trust-based approach**

Ethics summary report after screening

– General requirement applicable to all grants

The beneficiaries must ensure that all ethics issues related to activities in the grant are addressed in compliance with ethical principles, the applicable international and national law, and the provisions set out in the Grant Agreement. This includes the ethics issues identified in this report and any additional ethics issues that may emerge in the course of the grant. In case any substantial new ethics issues arise, beneficiaries should inform the granting authority. For each ethics issue applicable, beneficiaries must follow the guidance provided in the How to complete your ethics self-assessment

5. Implementation

!!! **No ethics requirements =/= no ethics obligations**

- Proposals ‘cleared’ after screening without ethics requirements can still:
  - may have to **appoint an independent ethics advisor or ethics board**
  - be subject to an **ethics check or ethics review**

Ethics obligations

Article 19 (4)

Legal entities participating in an action **shall obtain all approvals or other mandatory documents** from the relevant national, local ethics committees or other bodies, such as data protection authorities, before the start of the relevant activities. Those documents **shall be kept on file** and provided to the Commission or the relevant funding body upon request.

3.3 Ethics issues checklist

3 HUMAN CELLS / TISSUES		YES/ NO		Information to be provided in the proposal	Documents to be provided on request
Does your activity involve the use of human cells or tissues (other than those covered by *section 1*)**?**		☐	☐	Please provide information in one of the subcategories below.	
If **YES:**	Are they human embryonic or foetal cells or tissues?	☐	☐	1) Origin of human foetal tissues/cells. 2) Details on informed consent procedures. 3) Confirmation that the informed consent has been obtained. 4) If applicable, details on the induced human pluripotent cell lines.	1) Copies of ethics approvals. 2) Informed consent forms and information Sheets. 3) If applicable, registration certificates of the cell lines and project from the hPSCreg.
	Are they available commercially?	☐	☐	1) Details on cell types and provider (company or other).	1) Copies of import licences (if relevant).

	Are they obtained from a biobank?	☐	☐	1) Details on cell types 2) Details on the biobank (name and country where it is located) 3) Details of the legislation under which material is stored. 4) Confirmation that material is fully anonymised or that consent for secondary use has been obtained.	1) Copies of import licences (if relevant). 2) Statement of biobank that informed consent has been obtained.

Does your activity involve further processing of previously collected personal data *(including use of pre-existing data sets or sources, merging existing data sets)***?**	☐	☐	1) Details of the database used or of the source of the data. 2) Details of the data processing operations. 3) Explanation as to how the rights of the participants/data subjects will be safeguarded. 4) Explanation as to how all of the processed data is relevant and limited to the purposes of the project ('data minimisation' principle) 5) Justification of why the data will not be anonymised/ pseudonymised (if relevant).	1) Confirmation that the data controller has a lawful basis for the data processing and that the appropriate technical and organisational measures are in place to safeguard the rights of the data subjects 2) Permission by the owner/manager of the data sets *(e.g. social media databases)* (if applicable). 3) Informed Consent Forms + Information Sheets + other consent documents (if applicable).

6. Monitoring: Ethics Checks & Reviews

- During the lifetime of the project, to:
  - **assist the beneficiaries** to deal with the ethics issues raised by their research and if necessary
  - to take preventive or/and corrective measures
- **When are Ethics Reviews* requested?**
  - For projects raising serious / complex ethics issues
  - Compliance with ethics requirements needs to be checked during the implementation
  - Decision by the Project officer in the EC/Agency (i.e. documents provides are unsatisfactory)
  - ! All documents 'to be kept on file' may be requested !

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6. Monitoring

- An **Ethics Check:**
  - internal check by the project officer or ethics officer who may be supported by ethics experts.
- An **Ethics Review:**
  - more elaborate and in-depth procedure carried out by up to 5 external ethics experts (formerly know as 'Ethics Check' in H2020)
- Depending on the **size** of the grant and the **seriousness/complexity** of the ethics issues.

Ethics and Grant Agreement Preparation (GAP) - Time to grant

- From the submission of proposals, the Regulation (Article 31) establishes:
  - a maximum period of five months to inform all applicants of the outcome of the evaluation
  - a maximum period of eight months to sign all grant agreements with successful applicants
- However… The periods set forth by the regulation may be exceeded when actions are submitted to an **ethics assessment**

Ethics Assessment?

An **in-depth analysis,** by panel of up to **5 ethics experts,** of the ethics issues raised by

1. All hE or hESC proposals
2. Proposals raising **serious and/or complex ethics issues**

Changes to the Ethics Issues Table

1. ~~Human embryos & foetuses~~ **Human Embryonic Stem Cells (hESC) and Human Embryos (hE)**
2. Human participants
3. **Human cells / tissues**
   - **Does your research involve the use of human embryonic or foetal cells or tissues?**
4. Personal data
5. Animals
6. Non-EU countries
7. Environment & Health and Safety
8. Artificial Intelligence – NEW!
9. Other ethics issues
10. Crosscutting issue: potential misuse of results*
11. ~~Exclusive focus on civil applications~~
12. ~~Dual use~~

Application Forms	
Proposal ID **XXXXXXXXX**	*Acronym* **XXXXXXX**

4 – Ethics and Security

Ethics issues table

This table should be completed as an essential part of your proposal. Please go through the table and indicate which elements concern your proposal by answering 'Yes' or 'No'. If you answer 'Yes' to any of the questions,

- *indicate in the adjacent box at which page in your full proposal further information relating to that ethics issue can be found, and*
- *provide additional information on that ethics issue in the Ethics Self-Assessment section.*

For more information on each of the ethics issues and how to address them, including detailed legal references, see the guidelines 'How to Complete your Ethics Self-Assessment'.

1. HUMAN EMBRYONIC STEM CELLS AND HUMAN EMBRYOS			Page
Does this activity involve Human Embryonic Stem Cells (hESCs)?		○ Yes ○ No	
If **YES**:	Will they be directly derived from embryos within this project?	○ Yes ○ No	
	Are they previously established cells lines?	○ Yes ○ No	
	Are the cell lines registered in the European registry for human embryonic stem cell lines?	○ Yes ○ No	
Does this activity involve the use of human embryos?		○ Yes ○ No	
If **YES**:	Will the activity lead to their destruction?	○ Yes ○ No	

Human embryos (hE) and human embryonic stem cells (hESC)

- **Mandatory Ethics Assessment** (Article 19(3))
- Programme committee (Member State) approval
  - Ethical tensions (e.g. debate on the moral status of the embryo) and diverse regulatory situations in Member States
  - ! Non-eligible activities, e.g. destruction of human embryos
  - In accordance with the principles of **Commission Statement:** https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021C0512(01)&qid=1622740780199&from=EN

Human embryonic stem cells (hESC)

- Scientific review: **Necessity** of using stem cells to achieve the scientific objectives
- Ethics review:
  1. cells **NOT derived from embryos specially created for research** or by **somatic cell nuclear transfer**
  2. the project uses **existing cultured cell lines** only
  3. cell lines were derived from **supernumerary non-implanted embryos** resulting from in vitro fertilisation
  4. **Informed consent** has been obtained
  5. **Personal data and privacy** of donors are **protected**
  6. **NO financial inducements** were provided for the donation of embryos.

Ethics Assessment?

What are serious and/or complex ethics issues?

General criteria:

- The research has the potential to **violate fundamental rights and freedoms or undermine fundamental EU values**
- The research has the potential to result in **significant harm** to researchers, research participants, the public, animals or the environment
- The area of research is the subject of widespread **ethical debate** among scientists and ethicists
- There are grave doubts regarding the **capacity** of the researchers or the participating institutions to mitigate effectively the risks

Ethics Assessment?

What are serious and/or complex ethics issues?

Specific criteria and indicators:

1. Human embryonic stem cells (hESCs), human embryos (hEs), human cells and tissues
2. Humans
3. Safety and security
4. Animals and the environment
5. Research in non-EU countries
6. Data protection
7. Development, deployment and use of AI and other new and emerging technologies
8. Misuse

→ **Guidelines on serious and complex ethics issues**: https://ec.europa.eu/info/funding-tenders/opportunities/docs/2021-2027/horizon/guidance/guidelines-on-serious-and-complex-cases_he_en.pdf

What are serious and/or complex ethics issues?

3.1 Human embryonic stem cells (hESCs), human embryos (hEs), human cells and tissues

For all research activities involving human embryos or human embryonic stem cells, an **ethics assessment is mandatory**, the provision of Statement by the Commission on ethics/stem cell research – Art. 19 apply, and the funding of hESC or hE proposals requires and must be approved by the Horizon Europe Programme Committee.[7]

The ethics issues pertaining to the use in research of other categories of human tissues/cells may be considered "serious and/or complex" if these are, for example:

- **collected** within the project **from vulnerable groups** (e.g. children, unconscious patients, or patients otherwise lacking capacity to consent, prison populations) or involve **foetal or embryonic tissue** (other than hESC) collected within the project or
- used in **organoid research concerned with neurological conditions** or applications; or involving human multi-organoid complexes or related to the development of **synthetic/artificial reproductive cells or organs** (e.g. development of ova, in vitro gametogenesis (IVG)), or involving gastruloids or embryoids.

What are serious and/or complex ethics issues?

- **Examples**:
  - Research involving untested forms of **human bio-engineering, human-machine integration or human-animal chimeras**
  - Research that includes **children/minors/people unable to give informed consent**, with **no clear justification** for their participation or benefit to them
  - Research that includes **vulnerable participants** in first in-human or early-stage clinical studies for new therapeutics (including new chemical entities, biologics, gene therapies), medical applications and procedures
  - Research that deploys or develops medical devices, particularly implanted devices, that aim to or have the potential to bring about **involuntarily behaviour change** or therapeutic ‘adherence’
  - Research that involves studies on **human sexuality and/or assisted reproduction** (e.g. fertility, pregnancy termination, gender reassignment and transgender issues)

What are serious and/or complex ethics issues?

- **Examples**:
  - Research that appears to **take advantage of differences in standards or the absence of legislative protection** for research participants, local researchers and other local staff, data protection and privacy, animals, the environment or the public, particularly in lower-income settings.
  - Research resulting in the **transfer of special category data to countries with inadequate data protection regimes**, without the knowledge or explicit consent of the data subjects.

What are serious and/or complex ethics issues?

!!! Established fields of scientific research, such as **medicine and clinical practice**, are subject **to legal regulation and well-established norms and principles** through which serious and complex ethics issues can be identified and addressed

➔ If the activities are standard practices, with a clear legal/ethics framework, the related ethics issues should be **addressed by at local, regional and national level**.

!! The seriousness and complexity of the ethics issues are assessed on a **proposal-by-proposal basis**.

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Key conclusions for applicants/beneficiaries

- ➔Proper Ethics self-assessment is pivotal
- ➔Full responsibility for proper ethics compliance management
- ➔Make sure to be able to submit proof of compliance at all times

The Ethics Appraisal process

Preparing an ethics self-assessment

European Commission

and contracts (including financial transactions and audits).	
6) We declare that the proposal complies with ethical principles (including the highest standards of research integrity as set out in the ALLEA European Code of Conduct for Research Integrity, as well as applicable international and national law, including the Charter of Fundamental Rights of the European Union and the European Convention on Human Rights and its Supplementary Protocols. Appropriate procedures, policies and structures are in place to foster responsible research practices, to prevent questionable research practices and research misconduct, and to handle allegations of breaches of the principles and standards in the Code of Conduct.	☐
7) We declare that the proposal has an exclusive focus on civil applications (activities intended to be used in military application or aiming to serve military purposes cannot be funded). If the project involves dual-use items in the sense of Regulation 428/2009, or other items for which authorisation is required, we confirm that we will comply with the applicable regulatory framework (e.g. obtain export/import licences before these items are used).	☐
8) We confirm that the activities proposed do not – aim at human cloning for reproductive purposes; – intend to modify the genetic heritage of human beings which could make such changes heritable (with the exception of research relating to cancer treatment of the gonads, which may be financed), or – intend to create human embryos solely for the purpose of research or for the purpose of stem cell procurement, including by means of somatic cell nuclear transfer. – lead to the destruction of human embryos (for example, for obtaining stem cells) These activities are excluded from funding.	☐
9) We confirm that for activities carried out outside the Union, the same activities would have been allowed in at least one EU Member State.	☐
10) *[Additional option for LUMP SUM Grants:* For Lump Sum Grants with a detailed budget table: We	

Step 1: The Ethics Issues Table

Application Forms	
Proposal ID **XXXXXXXXX**	*Acronym* **XXXXXXX**

4 – Ethics and Security

Ethics issues table

This table should be completed as an essential part of your proposal. Please go through the table and indicate which elements concern your proposal by answering 'Yes' or 'No'. If you answer 'Yes' to any of the questions,

- *indicate in the adjacent box at which page in your full proposal further information relating to that ethics issue can be found, and*
- *provide additional information on that ethics issue in the Ethics Self-Assessment section.*

For more information on each of the ethics issues and how to address them, including detailed legal references, see the guidelines 'How to Complete your Ethics Self-Assessment'.

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2. HUMANS			Page
Does this activity involve human participants?		○ Yes ○ No	
If **YES**:	Are they volunteers for nonmedical studies (e.g. social or human sciences research)?	○ Yes ○ No	
	Are they healthy volunteers for medical studies?	○ Yes ○ No	
	Are they patients for medical studies?	○ Yes ○ No	
	Are they potentially vulnerable individuals or groups?	○ Yes ○ No	
	Are they children/minors?	○ Yes ○ No	
	Are they other persons unable to give informed consent?	○ Yes ○ No	
Does this activity involve interventions (physical also including imaging technology, behavioural treatments, etc.) on the study participants?		○ Yes ○ No	
If **YES**:	Does it involve invasive techniques?	○ Yes ○ No	
	Does it involve collection of biological samples?	○ Yes ○ No	

4. PERSONAL DATA				Page
Does this activity involve processing of personal data?			○ Yes ○ No	
If **YES**:	Does it involve the processing of special categories of personal data (e.g.: sexual lifestyle, ethnicity, genetic, biometric and health data, political opinion, religious or philosophical beliefs)?		○ Yes ○ No	
	If **YES**:	Does it involve processing of genetic, biometric or health data?	○ Yes ○ No	
	Does it involve profiling, systematic monitoring of individuals, or processing of large scale of special categories of data or intrusive methods of data processing (such as, surveillance, geolocation tracking etc.)?		○ Yes ○ No	
Does this activity involve further processing of previously collected personal data (including use of preexisting data sets or sources, merging existing data sets)?			○ Yes ○ No	
Is it planned to export personal data from the EU to non-EU countries?			○ Yes ○ No	
If **YES**:	Specify the type of personal data and countries involved:			

Step 2: Self-assessment

If any YES in the Ethics issues Table… → Ethics Self-assessment

HE Regulation (Article 19 (2)):

- ‘Legal entities participating in an action shall provide:

(a) an ethics self-assessment identifying and detailing all the foreseeable ethics issues related to the objective, implementation and likely impact of the activities to be funded, including a confirmation of compliance (…) and a description of how it will be ensured.’

ETHICS SELF-ASSESSMENT

If you have entered any issues in the ethics issue table, you must perform an ethics self-assessment in accordance with the guidelines 'How to Complete your Ethics Self-Assessment' and complete the table below

Ethical dimension of the objectives, methodology and likely impact
Explain in detail the identified issues in relation to: – objectives of the activities (e.g. study of vulnerable populations, etc.) – methodology (e.g. clinical trials, involvement of children, protection of personal data, etc.) – the potential impact of the activities (e.g. environmental damage, stigmatisation of particular social groups, political or financial adverse consequences, misuse, etc.)
Compliance with ethical principles and relevant legislations
Describe how the issue(s) identified in the ethics issues table above will be addressed in order to adhere to the ethical principles and what will be done to ensure that the activities are compliant with the EU / national legal and ethical requirements of the country or countries where the tasks are to be carried out. It is reminded that for **activities performed in a non-EU countries**, they should also be allowed in at least one EU Member State.

Step 2: Self-assessment

- Explain how identifies ethics issues will be addressed

  →Describe the ethical and legal requirements applicable to your research and how they will be met

    →!! Depending on the call: possibility to submit additional information and/or supporting documents in separate annex to **Part B**

    →Risk-based approach: Submission of evidence of ethics compliance only if and as needed (e.g. hESC proposals)

- List appropriate documents that will be provided/kept on file as evidence
- Applications should be 'Ethics Ready'

Step 2: ‘How-to’

Section 2: HUMANS		YES/ NO		Information to be provided in the proposal	Documents to be kept on file and provided on request
Does your activity involve human participants?		☐	☐	Please provide information in one of the subcategories below	
If **YES:**	Are they volunteers for nonmedical studies (e.g. social or human sciences research)?	☐	☐	1) Details on recruitment, inclusion and exclusion criteria and informed consent procedures. 2) Details on unexpected findings policy.	1) Copies of ethics approvals (if required by law or practice). 2) Informed consent forms and information sheets.
	Are they healthy volunteers for medical studies?	☐	☐	1) Details of the recruitment, inclusion and exclusion criteria and informed	1) Copies of ethics approvals. 2) Informed consent forms and information sheets.

If **YES**:	Does it involve the processing of special categories of personal data *(e.g. sexual lifestyle, ethnicity, genetic, biometric and health data, political opinion, religious or philosophical beliefs)*?	☐	☐	1) Justification for the processing of special categories of personal data (if relevant). 2) Justification to why the project objectives cannot be reached by processing anonymised/pseudonymised data (if applicable).	
	If **YES:** Does it involve processing of genetic, biometric or health data?	☐	☐		1) Declaration confirming compliance with the laws of the country where the data were collected.

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Step 3: Further guidance

- In the ‘how-to’:
  - Brief explanation of the ethics issues and how to address them.
  - Reference to background documents & further reading, e.g.:
    - Ethics for Clinical Trials on Medicinal Products Conducted with Paediatric Population
    - Note on ethics and data protection
    - Functional Magnetic Resonance Imaging
    - …

Step 3: Further guidance

- EDPB Guides and recommendations:
  - EDPB Document on response to the request from the European Commission for clarifications on the consistent application of the GDPR, focusing on health research Adopted on 2 February 2021:

    https://edpb.europa.eu/sites/default/files/files/file1/edpb_replyec_questionnaireresearch_final.pdf

  - EDPB Guidelines on the processing of personal data for scientific research purposes *(currently under preparation, due later in 2021).*

Other relevant documents

- **Brexit:**
  - Notice To Stakeholders Withdrawal Of The United Kingdom And EU Rules In The Field Of Substances Of Human Origin (Blood, Tissues And Cells, Organs): https://ec.europa.eu/info/sites/default/files/brexit_files/info_site/substances_of_human_origin_en.pdf
  - Adequacy decision for international data transfer (adopted 28/07/2021)

Artificial Intelligence

A new ethics issue

European Commission

Artificial intelligence: Ethics by Design

- **Why?** Various ethical concerns raised by the development and use of AI-based applications:
  - Discrimination & bias. *E.g. selection and recruitment tools, clinical decision support tools, etc.*
  - Safety & Liability. *E.g. Self-driving cars, etc.*
  - Transparency and the algorithmic 'black box'
  - Privacy & data protection. *E.g. surveillance, facial recognition, etc.*

- "Ethics by Design" = addressing ethical issues during development

Artificial intelligence

- **Unethical applications**. E.g. violating physical or mental integrity, create addiction, risk damaging social processes and public institutions (e.g. by social scoring or contributing to misinformation)
- Key requirements:
  - ➔People must be made aware that they are interaction with an AI system, its abilities and limitations, risks and benefits
  - ➔Mechanisms for human oversight, transparency and auditability must be ‘built in’ the AI system
  - ➔AI-system must be designed to avoid bias in input data and algorithmic design
  - ➔Compliance with data protection and privacy principles, e.g. data minimisation, must be demonstrated
  - ➔…

Artificial intelligence

- Trustworthy and Ethical Artificial Intelligence, respects key values:

1. Human agency and oversight
2. Privacy and data protection
3. Fairness, diversity and non-discrimination
4. Accountability
5. Transparency
6. Societal and environmental well-being

Artificial intelligence

Self-assessment: Could the AI system/technique stigmatise or discriminate against people (based on sex, race, ethnic/social origin, age, disability, sexual orientation, religion, political affiliation, etc.)?

→ Explain how potential bias, discrimination and stigmatization will be avoided.

→'**Ethics by design' methodology**: concrete steps for each phase in the development process. E.g.:

- Check for algorithmic bias during the detailed development phase. Data could be processed in a biased way, and therefore algorithms should be checked for this. (E.g. by using counterfactual evaluation methods)
- Ensure that interface design honours principles of universal accessibility, and avoid the introduction of functional biases in the detailed development phase that make the system unequally functional for different end-users.

Artificial intelligence

The ethics risk assessment and risk mitigation measures must cover the development, deployment and post-deployment phases.

Not only the development, also the use of AI-based systems or techniques in your research!

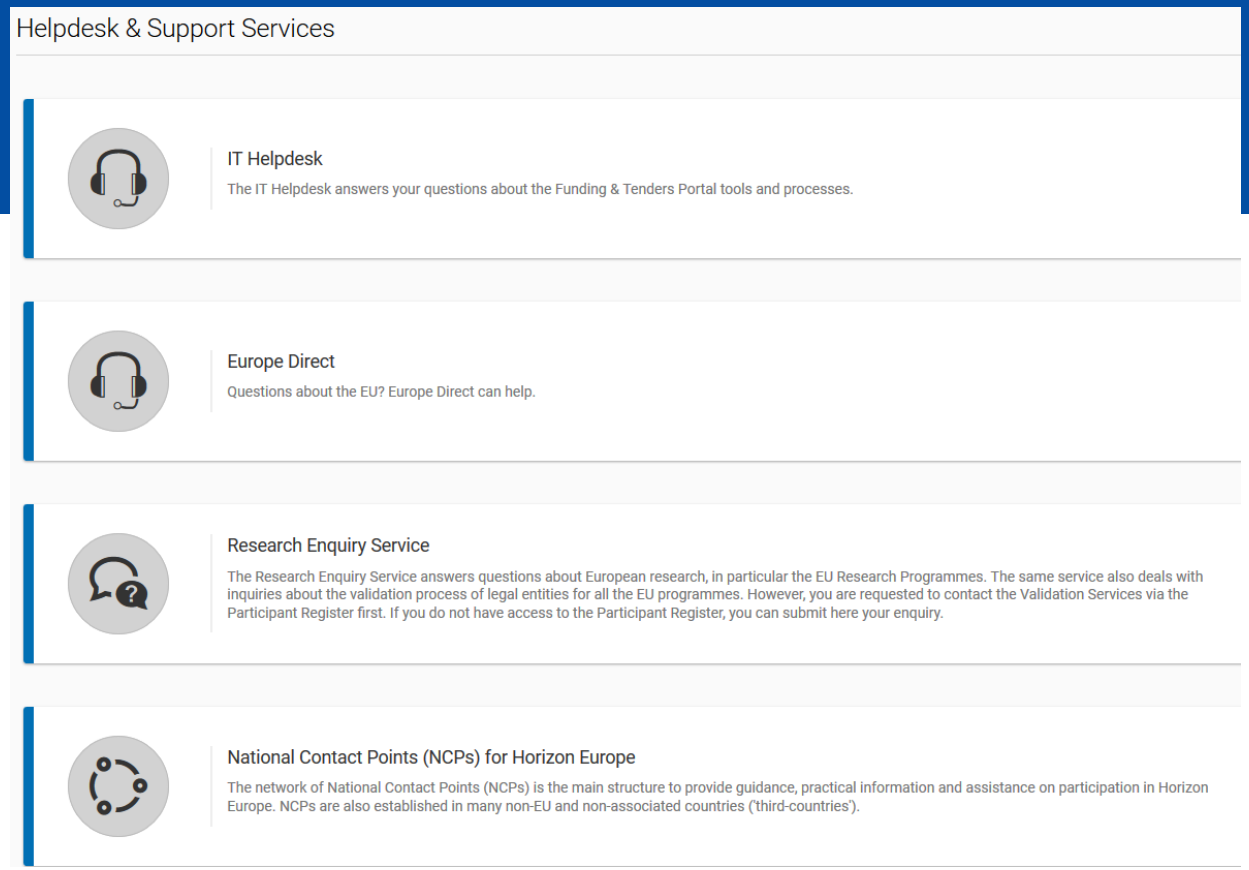
E.g. AI-based data analytics

➔ During acquisition and implementation of AI-based application, you must assess and monitor the system to ensure compliance.

Further reading

- Ethics guidelines for trustworthy AI (Independent High-Level Expert Group on AI)
- Assessment List for Trustworthy Artificial Intelligence (ALTAI) for self-assessment (Independent High-Level Expert Group on AI)
- Guidelines on ethics by design/operational use for AI — *to be published soon*

Help is on its way!



https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/support/helpdesks;programCode=HORIZON

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Questions?

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Thank you

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