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LIST OF ACRONYMS

BAs Biological Agents Regulations

CEGP Code of Ethics and Good Practices in R&I

ETHNA Ethical Governance of RRI in Innovation and Research in Research Performing

Organisations and Research Funding Organisations.

GAP Analysis with the ETHNA System

GMOs Genetically Modified Organisms

KPIs Key Performance Indicator

RFO Research Funding Organisation

RRI Responsible Research and Innovation

RPO Research Performing Organisation

R&I Research and Innovation

SMART Specific, Measurable, Achievable, Realistic, and Time-bound

4 |

A. WHY IS IT IMPORTANT TO HAVE AN ETHICAL SYSTEM OF GOVERNANCE FOR RESEARCH AND INNOVATION IN ORGANISATIONS?

A

Organisations involved in Research and Innovation (R&I) are encouraged to consider the consequences of their activities and incorporate society's expectations into their work so that they can develop in a sustainable and effective way.

An ethical governance system for research and innovation helps organisations to achieve these aims.

The **implementation of the system and its structures** (or tools) allows for the generation of spaces and mechanisms for participation where funders, researchers and developers along with stakeholders and representatives of the public can discuss:

- the goals to be pursued,
- > the resources to be used,
- the regulatory framework to be followed, and
- > the results to be expected in terms of research and innovation.

ETHNA is a **flexible ethical governance system** designed for implementation in:

- Research Performing Organisations (hereinafter RPOs) and Research Funding Organisations (hereinafter RFOs).
- In five Responsible Research and Innovation (RRI hereinafter) contexts:
 - higher education,
 - organisations funding research and innovation,
 - > research performing organisations,
 - > research and development centres, and
 - public-private partnership for innovation.

The ETHNA System offers **ethical governance structures** based on **a system of flexible blocks** that can be adapted to the needs and particular features of each organisation and their available resources.

The ETHNA System has been designed in a way that allows RPOs and RFO's organisations to:

- **build their own ethical governance** structure for knowledge-generation and innovation processes based on the structure of the ETHNA System, and
- make progress by continuously improving over time.

B. WHO IS THE ETHNA SYSTEM AIMED AT?

B

The ETHNA System may be of interest

- > for any organisation that performs research and innovation or funds it.
- for any organisation that aspires to have a more effective ethical commitment.
- for any organisation that desires to perform their activity in accordance with internationally recognised ethical criteria and carry out science with and for society so that research excellence goes together with attention for social responsibility and public trust.
- for any organisation that intends to apply ethical governance in the field of RRI can use the ETHNA System methodology to align their activity with the ethical standards appropriate for their organisation.
- for RPOs to have specialist structures to generate RRI that supports and guides researchers to achieve responsible R&I as well as generate policies and strategies for continuous improvement.
- for RFOs to have specialist structures to promote RRI in their sphere of influence, so that the medium- and long-term results and impacts of the research and innovation they finance or promote will be better aligned with society's economic, social, and environmental needs, values, and expectations.

C. WHY ADOPT THE ETHNA SYSTEM?

C

Today, research and innovation organisations are constantly in the public eye because of their influence and contribution to progress and social transformation. Trust in research and innovation organisations, and those responsible for their funding, depends on the appropriate societal-ethical justification they can offer for their activities, which results in the maintenance of their credibility and reputation. In today's global context, adopting a public commitment to RRI and managing it through communication and participation is a known and effective way to achieve the goals of the 2030 Agenda for Sustainable Development.

A fundamental benefit provided by the ETHNA System is to ensure that **R&I activities are financed and carried out in a responsible way**. The ETHNA System does this by providing a system of supporting tools, which then helps to build trust among people, administrations, and organisations. The positive impacts of the system derive from public commitment to manage the ethical basis for trust. It is a system based on the inclusion of all stakeholders^{1 2}, so it develops some of the preconditions that promote the institutionalisation of sustainable engagement with citizens and society. The ETHNA System also includes the assessment of activities to transparently communicate achievements and disseminate measures for improvement.

The ETHNA System will help organisations to achieve strong impacts such as:

- 1. **Generate credibility and reliability (trustworthiness)** in the activity and the achieved results by the organisation in R&I.
- 2. Align the policies and strategies of the organisation with European guidelines and thus increase the possibilities for cooperation and funding.
- 3. Facilitate stable relationships with stakeholders by including them in participatory spaces for exchange, debate and understanding so their legitimate interests are considered and, as a result, the quality of results improved.
- 4. Promote a culture that fosters cohesion and a common decision-making position, as well as a healthy working environment that inspires confidence.
- 5. Encourage a **proactive position towards some current challenges of R&I**: research integrity, gender perspective, public engagement, and open access.
- 6. Involve stakeholders to increase economic profitability with the rational and sustainable use of scarce resources.
- 7. Reduce internal and external coordination costs deriving from possible conflicts and misconducts that have an economic and reputational impact.
- 8. Position the organisation in terms of RRI by building trust and a reputation for excellence in R&I.
- 9. Build the character of the organisation by promoting or complying with various existing political and legal frameworks.
- 10. Promote a close relationship with the community and its values and needs by responding to the expectations of society (e.g. sustainability, social justice, data protection, new technologies and AI, health, food/farming, water, among others and integrity research, etc.).

Häberlein, Lisa; Mönig, Julia Maria and Hövel, Philipp (2021). Mapping stakeholders and scoping involvement. A guide for HEFRCs. ETHNA System Project – Deliverable 3.1

² Häberlein, Lisa; Mönig, Julia Maria and Hövel, Philipp (2021). Stakeholder involvement in ethical governance of R&I. A guide for HEFRCs. ETHNA System Project – Deliverable 3.3

D. WHAT IS THE ETHNA SYSTEM?

ETHNA is a **flexible ethical governance system** for the **management of R&I activities** in higher education, research funding organisations, research performing organisations, and organisations that bring scientific and technological innovation to the market.

The ETHNA System consists of a **set of building blocks that are flexible and adaptable to the needs**, idiosyncrasies, and resources of each organisation to progress in RRI over time.

The ETHNA System is based on three **Guidance tools (Column Blocks)** that allow any organisation to guarantee that their R&I activities will be performed in accordance with the internationally recognised ethical standards of RRI (see box on the right).

These three Guidance tools are developed in the Foundation Block and the Column Blocks.

The ETHNA System is based on:

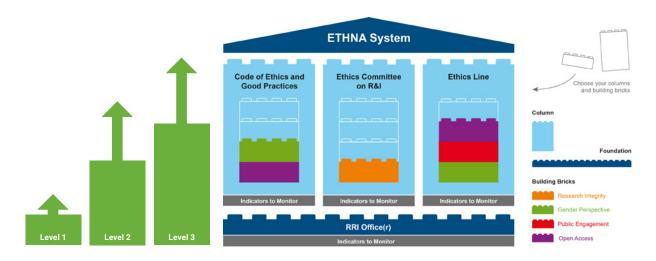
- the four dimensions of responsible innovation: anticipation, inclusion, reflexivity, and responsiveness; and
- applies to the following key areas of RRI: research integrity, governance, gender perspective, public engagement, and open access.

Guidance tools

The Code of Ethics and Good Practices in R&I: This is a self-regulatory document that explicitly outlines the principles, values, and good practices that should guide the activity of the people involved in R&I processes, as well as the policies and programmes of the organisation.

The Ethics Committee on R&I: This is an internal consultation and arbitration body that acts as a forum for participation, reflection, and dialogue between the organisation's different stakeholders in R&I matters.

The Ethics Line: This is a communication channel that allows all stakeholders to easily and safely send the organisation suggestions, warnings, complaints, and reports.



D

To further increase its adaptability, the ETHNA System regards two dimensions as **essential for the institutionalisation of RRI**: the *leadership*, including the support it provides, on the one hand and the *base* on the other hand, i. e. the organisation's research staff with their values, awareness, skills, knowledge, and practices already in place. The latter may vary, depending on the organisational unit and research or innovation field. Both dimensions need to become strong in the long run. Applying *leadership* to the y-axis and the *base* to the x-axis results in a two-dimensional system with four quadrants which can be characterised as follows:

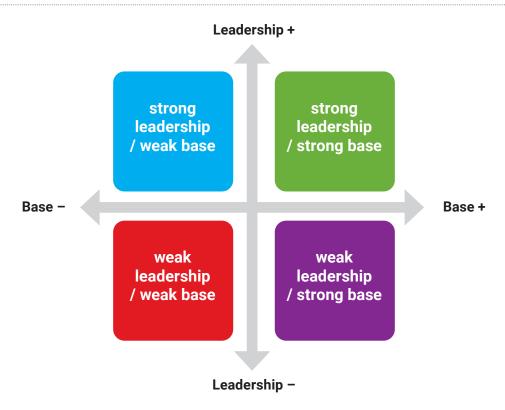


Figure 1: ETHNA RRI Institutionalisation Quadrants – leadership and the base

The ETHNA System is designed to work for all quadrants except the lower left one, i. e. weak leadership in combination with a weak base; the prerequisite for the ETHNA System to work is that at least one dimension needs to be somewhat strong, otherwise there is nothing to build on. Hence, the lower left quadrant is omitted from subsequent considerations.

How this concept applies to the ETHNA System can be found in section F.

E. ANY PRIOR ADVICE?

Different organisations, RPOs and RFOs, have previously used this guide. Their experience provides us with useful advice that it is worth knowing about before starting the process:

- To undertake a deep analysis on your own resources and internal structures (material and human) before deciding the level and type of implementation.
- To involve the organisation's leadership in the process. A strong commitment about the adoption of the ethic management tools is very much needed.
- To set up a work team with a clear Lab Manager that actively leads the implementation process. The team can be relatively small, but it needs to be committed, proactive and able to adapt the ETHNA System tools to the needs of the organisation.
- To internally identify if someone is willing to take up the responsibility to plan, execute and monitor the process when you have limited financial and other resources to support a permanent position such as the RRI Officer.
- To create knowledge and awareness among researchers and innovators on the parts of the ETHNA System that have been decided to be implemented and the RRI. The specific benefits of their implementations for Research and innovation linked activities should be highlighted.
- To obtain the involvement and approval of the smallest units within the organisation structure prior to starting implementing the system within the organisation.
- > To identify external incentives, such as international awards, EU funding requirements (e.g. in case of a Gender Equality Plan), or participation in projects that may work as a starting mechanism. It is necessary to be aware that they alone cannot guarantee the sustainability of the proposed ³ institutional changes.
- To modify, if it is a small part of the organisation, the use of the methodology of the Living Lab for the ETHNA System Guide to be used/applied. In that case, it is better to use participative methods but without iterations.
- > To start the process without aiming at adopting all instruments. If the ETHNA System can work as a tool for reflection that helps the organisation to articulate their most urgent ethical priorities, this is an excellent result in itself.

³ Hajdinjak, Marko (2023) Evaluation report about the implementation of the ETHNA System. ETHNA System Project – Deliverable 6.1

F

The ETHNA System and the RRI Institutionalisation Quadrants

Section D introduced the concept of the four RRI Institutionalisation Quadrants which are structured along the two dimensions leadership and base. Through these two dimensions, each quadrant represents a different scenario in which the ETHNA System needs to function. To successfully adapt to the different scenarios, the ETHNA System foresees three different $model\ houses$ each of which corresponds to one of the quadrants⁴ and can be used to guide the institutionalisation of RRI. Implementers can choose which model house best suits their own circumstances. For the explicit differences of the specific model houses, please see the relevant sections (E1 - E3).

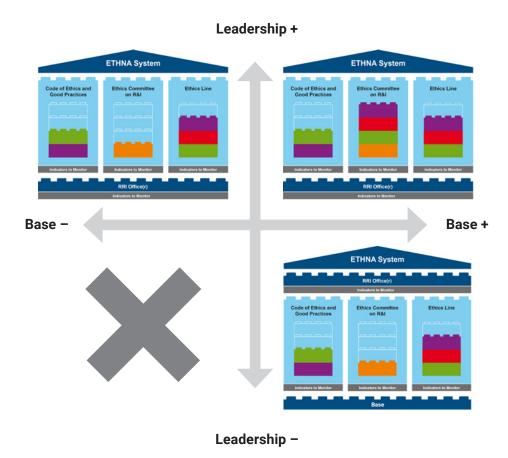


Figure 2: The ETHNA System and the RRI Institutionalisation Quadrant

⁴ with the exception of the lower left quadrant (low leadership and low base) which represents the scenario that lies outside the scope of the ETHNA System

Characteristics of the ETHNA System in each Institutionalisation Quadrant

Strong leadership but weak base (top left quadrant):

In this scenario, leadership is strong in terms of RRI institutionalisation. This strength could be reflected in an increased awareness, sense of urgency, willingness, clarify of vision, leadership skills, resources, or a combination of these factors. Initiatives to drive the institutionalisation of RRI may already be under way but, generally, those have not borne fruit yet, i. e. RRI norms and practices have not broadly been adopted by the base yet – this is the main challenge in this scenario. The guidance will initially focus on designing and implementing relevant activities, i. e. follow a top-down approach.

Strong base but weak leadership (bottom right quadrant):

In this scenario, leadership is weak in terms of RRI institutionalisation. This weakness stems in practice from, e. g. a lack of awareness, vision, willingness, sense of urgency, leadership skills, resources, or a combination of these factors. However, RRI initiatives can already been found in the organisation. In this scenario, those will have been initiated by the base. While many of such initiatives may be found throughout the organisation, they are small and not widely known, and sometimes too specific to be transferred, scaled up, or adopted by other organisational units. Leadership may not have heard about such initiatives, may not care, or may think that elevating them to the organisational level is not feasible. The guidance in this scenario will focus on spreading RRI norms and practices locally first, on building showcases, and on connecting to similar efforts – both internal and external ones – to build a critical mass and reach and involve the leadership.

Strong leadership and strong base (top right quadrant):

This is the ideal scenario: both leadership and base are aligned in terms of RRI institutionalisation needs and efforts. Organisations showing advanced levels of institutionalisation might be considered early adopters in RRI key areas such as open access or public engagement. Typically, they have a long tradition of reflecting and adjusting their research practices, of reacting to external normative efforts (e. g. the adoption of standards), and of building institutional support structures and mechanisms. The guidance in this scenario will focus on giving impulses to further refine their institutionalisation efforts and adopt an anticipatory perspective in terms of future developments of, e. g. societal, technological, environmental, or medical nature.

Each of these three scenarios is considered in a separate chapter following this one, beginning with the *strong leadership but weak base* scenario.

Note:

Remember that an analysis of the leadership and of the resource base is vital for the adoption of the best decision on the level of commitment to be adopted. Also, it is important to remember that the ETHNA System allows for it to be tailored and that it is not needed to follow each of the steps in order to achieve the main objective: an ethics self-governance of the research and innovation processes generated or financed by your organisation.

F.1. STRONG LEADERSHIP, WEAK BASE: HOW IS THE ETHNA SYSTEM IMPLEMENTED?

F.1

In this scenario, the ETHNA System considers **three levels of institutional commitment**, depending on the capabilities and willingness of the organisational leadership.

Progress and performance **indicators are used at all three levels** to monitor the progress of the ETHNA System.

The **indicators**:

- have a scorecard to assess the implementation level of the ETHNA System (build up by the link among Foundation and Column Blocks); and
- clarify the level of commitment to the system.

The Levels of Institutional Commitment (hereinafter The Levels of Commitment): Level 1: The RRI Office(r) will be in charge of: The organisation appoints an disseminating the ETHNA System concepts, > RRI Office(r) and > promoting awareness of principles and values, supports its activity. establishing activities and performance indicators for the (Foundation Block) three-year Action Plan for continuous improvement, and monitoring the progress of the ETHNA System in the organisation through progress indicators. Level 2: The organisation should incorporate in the action plan and target results on at least one of the four major RRI keys: The organisation implements research integrity, gender perspective, open access, and some of the Column Blocks. public engagement. (Column Block) The organisation has designated the RRI Office(r) and Level 3: implemented the three Columns. The organisation fully develops the ETHNA System. The organisation applied a proactive attitude in all the RRI key areas: research integrity, gender perspective, public engagement, and open access.

TO DO: Develop the blocks in line with the Three Levels of Commitment.

This guide is complemented by the publication of the **Toolbox to implement the ETHNA System** composed of seven Guidance tools **(Annex 1 to 7)** that intends to make the implementation of the system easier. In this toolbox, RPOs and RFO's organisations will find guidance to implement each system structure:

NOTE:

The ETHNA system will **provide guidance to RPOs and RFO's organisations to achieve RRI standards** through a systematic and flexible model.

The **Three Levels of Commitment** to the ETHNA System consist of the designation of an RRI Office(r) (Foundation Block), the implementation of some of the columns (Column Blocks), and the full development the ETHNA System.

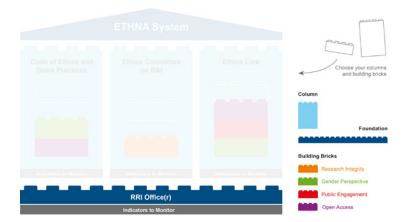
Toolbox	to implement the ETHNA System:	page
ANNEX 1.	GUIDANCE TO CREATE THE ETHNA SYSTEM ACTION PLAN	5
ANNEX 2.	GUIDANCE TO USE AND TO CREATE THE MONITORING INDICATORS: PROGRESS AND PERFORMANCE	12
ANNEX 3.	GUIDANCE TO CREATE THE CODE OF ETHICS AND GOOD PRACTICES IN R&I	25
ANNEX 4.	GUIDANCE TO CREATE THE ETHICS COMMITTEE ON R&I	53
ANNEX 5.	GUIDANCE TO CREATE THE ETHICS LINE	67
ANNEX 6.	GUIDANCE TO CREATE THE EXTERNAL COMMUNICATION PLAN	74
ANNEX 7.	GUIDANCE TO CREATE THE INTERNAL COMMUNICATION PLAN	80

F.1

Level 1.

Foundation Block: The organisation will begin the implementation of the ETHNA System with the designation of an RRI Office(r) (see *Toolbox* Annex 1).

- This may be an individual or a unit that will be approved by the competent governing bodies within the organisation.
- **The RRI Office(r)** will be in charge of oversee:
 - > The preparation of a three-year ETHNA System Action Plan
 - The monitoring of its implementation as well as facilitate the continuous improvement of the ETHNA System in accordance with the agreed level of commitment, which is based on the monitoring indicators.
 - > The implementation of the necessary promotion and dissemination of activities inside and outside the organisation.
 - > The promotion of the principles and values of ethical management in the organisation.
 - The implementation of one or all the column blocks (to be chosen by each organisation).



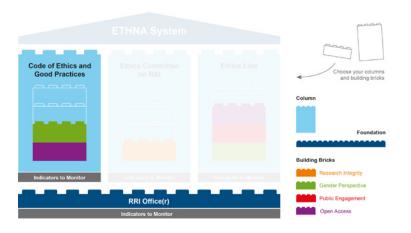
Level 2.

Column Block: The organisation will choose whether to implement one or three of the column blocks.

- It should be decided and implemented depending on the resources, capabilities, and objectives of the organisation:
 - **Option A:** Code of Ethics and Good Practices in R&I (CEGP) covering at least one key area.
 - **Option B:** Ethics Committee on R&I covering at least one key area.
 - **Option C:** Ethics Line column covering at least one key area.

Option A: Code of Ethics and Good Practices in R&I (see *Toolbox* Annex 3). The organisation will have a Code that aligns with the ETHNA System guidelines.

- The organisation is encouraged to have the explicit commitment of senior management and have the approval of the competent governing bodies within the organisation.
- The RRI Office(r) is encouraged to ensure internal and external awareness of the Code of Ethics through training and communication activities.
- > The Code is encouraged to be monitored using progress and compliance indicators.

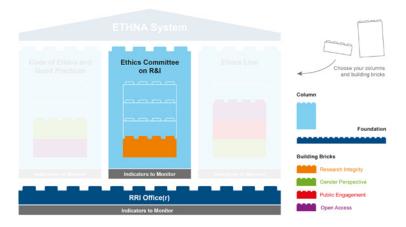


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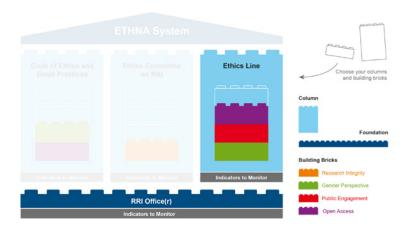
F.1

Option B: Ethics Committee on R&I (see *Toolbox* **Annex 4**). The organisation should define and create their own space for consideration and deliberation that align with the ETHNA System guidelines.

- The training plan for members of the Committee, if it is permanent, will be defined in this block. It will be disseminated among the members, and all members of the organisation will be encouraged to be informed.
 - The training will provide knowledge of the deliberative methods of an ethics committee as well as the code of ethics and good practice or the principles and standards that govern the committee.
 - > New members must have access to the ethics committee's basic training.
- > The progress and performance indicators to assess implementation will also be established.



Option C: Ethics Line column (see *Toolbox* Annex 5). The organisation will implement their own communication channel that aligns with the ETHNA System guidelines. They will also define the process to create a database of frequently asked questions, a repertory of reported cases of misconduct or misbehaviour and will conduct a promotional campaign for the communication and participation channel. The progress and performance indicators to assess implementation will also be established.



Level 3.

The organisation will fully develop the ETHNA System.

The ETHNA System has been designed so that each block can be monitored through progress and performance indicators. In this way, the organisation will be able to select the performance indicators that better suit their circumstances and culture. This will allow each organisation to monitor their compliance with each structure and block.

It is recommended that the results measured by the indicators and the adequacy of the indicators themselves have an annual or biannual review that is integrated into the RRI Action Plan. The RRI Office(r) will be responsible to review these indicators and make progress visible, both internally and externally.

(See Toolbox Annex 1: Guidance to use and to create the Action Plan & Annex 2. Guidance to create the Monitoring Indicators).

ETHNA System - a continuous evolution system towards RRI

Evaluation and Initial Assessment Implementation Phase new Action Plan Stage 1. Mapping Priorities Stage 3. Implementing the RRI Stage 7. Monitoring Indicators Office(r) **ETHNA System** ✔ Resources mapping Stage 4. Implementing the Code Capacity mapping What have we achieved? of Ethics and Good ✓ Goal mapping Practices in R&I ✓ Evaluation of degree of accom-Priority mapping Stage 5. Implementing the plishment based on Indicators **Ethics Committee on R&I** to Monitor: progress and perfor-Stage 6. Implementing the mance Stage 2. Setting the level of **Ethics Line** How do we move forward? commitment ✓ Define the level of commitment Are our levels of commitment OK? ✔ Develop your action plan > Can we "upgrade" our level of commitment or be more in depth in certain new blocks? New Action Plan publicly available Publicly available in a devoted section of the institutional website 4 months 24 months 36 months 36 months

E.1.1. PHASE I: INITIAL ASSESSMENT (STAGES 1&2)

F.1.1

A working group designated by the organisation will be in charge of performing the implementa- Stage 1. tion stages of the ETHNA System (hereinafter the working group).

Step 1.1.

The size and composition of the working group depends on the size and complexity of each organisation.

> It is recommended that the working group include at least 2 members, but no more than 5 members. And at least one representative in senior management should be appointed.

Someone needs to adopt the role of Lab Manager in order to plan, coordinate and facilitate the ETHNA System implementation process, or ETHNA lab.

STAGE 1. Mapping priorities

To best benefit from an ethical governance system, such as the ETHNA System, your organisation might first want to determine their priorities.

STAGE 1 Structure:

	Resource mapping
	Capacity mapping
STEP 1.3.	Goal mapping
STEP 1.4.	Priority setting

NOTE:

- Not all blocks are equally relevant to all organisations.
- It is therefore necessary to identify and evaluate the priorities of your organisation, considering their capabilities and available resources.
- This will help focus the effort of your organisation to implement the system in a viable, effective, and sustainable way and to increase the possibilities and benefits of the system.

STEP 1.1. Resource mapping

TO DO: Identify the material, technological, economic, and human resources available to establish the RRI Office(r).

> Some of the needed resources are a physical and/or a virtual space, funds for operation, technical equipment including ICT, and people qualified in RRI to manage it (e.g. gender research expertise, open access expertise).

F.1.1

Stage 1.

• • • • • F. BUILD YOUR OWN ETHNA SYSTEM MODEL (THREE POSSIBLE TYPOLOGIES OF CONSTRUCTION)

STEP 1.2. Capacity mapping

TO DO: Identify the capabilities of your organisation to implement the RRI Office(r).

Your organisation should identify the following:

- Step 1.2. Step 1.3. Step 1.4.
- Staff with expertise in the different dimensions (anticipation, inclusion, deliberation, reflection, and responsiveness) and the key areas (research integrity, gender perspective, public engagement, and open access) of RRI,
- Activities, action plans, policies, and strategies that already exist in the organisation with respect to the dimensions and areas of RRI,
- > Commissions or committees related to R&I.
- **>** A general Ethics Line for communication with the organisation.

STEP 1.3. Goal mapping

TO DO: Conduct consultations, collaborations and/or involvements with internal and external stakeholders of your organisation on the aspects of RRI considered to already be covered and discuss which aspects need to be reviewed.

Establish goals based on capabilities and resources.

Then **consult and identify** the elements of the ETHNA System that will enable your organisation to achieve these goals.

Possible goals:

- > Raise awareness and communicate the definition of responsible R&I.
- Improve society's trust in your organisation.
- Increase the participation of stakeholders in processes like decision-making or the generation of knowledge and innovation to improve results.
- Minimise cases of bad practice.
- > Promote dialogue between the organisation and society to improve the generation of knowledge and innovation.
- Promote RRI in specific R&I competitive processes.

STEP 1.4. Priority setting

TO DO: Consider the available resources, the capabilities, and identified objectives of your organisation.

Decide the priorities of your organisation with respect to the different building blocks of the ETHNA System.

STAGE 2. Set the level of commitment with the ETHNA System

F.1.1

TO DO: Define the ETHNA System design that best matches the possibilities, objectives, and pri-Stage 2. orities of your organisation in each part of the system (consider the results of the map- Step 2.1. ping priorities)

STAGE 2 Structure:		
STEP 2.1.	Define the Level of Commitment through the selection of Progress Indicators	
STEP 2.1.1.	Define the RRI Office(r) [Foundation Block]	
STEP 2.1.2.	Set priorities concerning the Column Blocks	
	OPTION A: Set the priorities with the Code of Ethics and Good Practices in R&I	
	OPTION B: Set the priorities with the Ethics Committee	
	OPTION C: Set the priorities with the Ethics Line	
STEP 2.2.	Design an Action Plan	

NOTE:

- The existence of the Three Levels of Commitment with the ETHNA System (see chart on page 11).
- The Level of Commitment is expected to be set in an Action Plan (Annex 1).
- The Action Plan will be used by the RRI Office(r) as the compass for the three-year period.
- > After the three-year period an evaluation of progress and performance should be performed and a new Action Plan with a higher or deeper Level of Commitment should be established. The "required" actions ensure a good implementation of the ethical governance system. However, some of these actions may not be applicable due to the characteristics of the organisation. In this case it should simply be recorded that they do not apply. In the case of the "optional" actions, they allow to deepen and improve the ethical governance system.

STEP 2.1.

TO DO: Define the Level of Commitment through the selection of Progress Indicators

- > Based on the priority setting, your organisation can select the level of their engagement with the system.
- The implementation of each block needs some planned actions to show progress and that should be included in the Action Plan.

STEP 2.1.1.

TO DO: Define the RRI Office(r) [Foundation Block]

Any RPO or RFO's organisation that wishes to implement the ETHNA System is recommended to implement at least the Foundation Block (the designation of RRI Office(r)), the indicators to monitor progress with the ETHNA System, and establish a public Action Plan that seeks continuous development towards RRI. The resources mapped at Step 1.1. should be consider at this point.

STEP 2.1.2. Set priorities concerning the Column Blocks



TO DO: Choose if your organisation will need to implement any of the three columns (see be- Stage 2. low OPTIONS A, B & C) of the ETHNA system.

Step 2.1.

These should be implemented depending on the resources, capabilities, and objectives of your organisation.

OPTION A:

TO DO: Set the priorities with the Code of Ethics and Good Practices in R&I (CEGP).

> If your organisation has decided to implement the CEGP, define: its scope (some or all the keys: research integrity, gender perspective, public engagement, and open access), objectives, and content based on the proposal offered by the ETHNA System.

LEVEL 2

Required: Implement the Foundation block [RRI Office(r)] and at least one of three Column blocks [Code of Ethics and Good Practices, Ethics Committee on R&I (permanent or ad hoc) and/or Ethics Line]. At least one of the four RRI keys [research integrity, gender perspective, open access, and public engagement] must be covered.

Code of Ethics and Good practices (CEGP)		
Action 1	Required	Appoint a working group to adapt the ETHNA System's proposed CEGP
Action 2	Required	Establish the goals, tasks, and responsibilities of members of the working group
Action 3	Required	Establish the relevant aspects to be included in the adapted CEGP considering the research, innovation, and/or funding activity of your organisation
Action 4	Required	Decide which RRI aspects the CEGP should cover [cover at least one of the four RRI keys: research integrity, gender, open access, and public engagement]
Action 5	Required	Define a CEGP in a participatory process. An example can be found at the Annex 3 of the Toolbox to implement the ETHNA System
Action 6	Required	Develop a first draft of CEGP for your organisation
Action 7	Required	Launch a participatory process with stakeholders from your organisation to discuss the first draft of the CEGP
Action 8	Required	Develop a second draft of the CEGP reflecting the relevant aspects drawn from the participatory process with stakeholders
Action 9	Required	Obtain the approval of the senior management
Action 10	Required	Take actions to raise internal awareness concerning the Code of Ethics and Good Practices
Action 11	Optional	Take actions to raise external awareness concerning the Code of Ethics and Good Practices
Action 12	Optional	Establish an updating process
Action 13	Optional	Establish a professional/institutional compliance monitoring process
Action 14	Optional	Report to the stakeholders of your organisation about the progress and performance of the CEGF

OPTION B:

F1.1

TO DO: Set the priorities with the Ethics Committee

Stage 2. Step 2.1.

If your organisation has decided to implement the Ethics Committee, define: its scope (some or all the keys: research integrity, gender perspective, public engagement, and open access), composition, competencies, communication channels, and action protocol based on the Ethics Committee proposal offered by ETHNA System.

LEVEL 2

Required: Implement the Foundation block [RRI Office(r)] and at least one of three Column blocks [Code of Ethics and Good Practices, Ethics Committee on R&I (permanent or ad hoc) and/or Ethics Line]. At least one of the four RRI keys [research integrity, gender perspective, open access, and public engagement] must be covered.

Ethics Committee on R&I [decide between a permanent or an ad hoc Ethics Committee on R&I]

Permanent	Permanent Ethics Committee on R&I				
Action 1	Required	Take an explicit decision that the Ethics Committee on R&I will be permanent			
Action 2	Required	Establish the composition of the Permanent Ethics Committee on R&I			
Action 3	Required	Clearly set out the basic functions of the Permanent Ethics Committee on R&I			
Action 4	Required	Elaborate an Action Protocol as a guide for the operation of the Permanent Ethics Committee on R&I			
Action 5	Optional	Elaborate an Action Plan to implement the Permanent Ethics Committee on R&I			
Action 6	Optional	Organise the first meeting to constitute the Permanent Ethics Committee on R&I			
Action 7	Optional	Designate and implement actions to promote the Code of Ethics and Good Practices in R&I or, if your organisation does not have one, use the international guidelines on RRI			
Action 8	Optional	Decide which RRI aspects the permanent Ethics Committee should cover [cover at least one of the four RRI keys: research integrity, gender perspective, open access, and public engagement]			
Action 9	Required	Designate and implement actions to monitor and control the safeguards required for ethical and responsible R&I			
Action 10	Optional	Establish and implement actions to consider, issue reports and make recommendations on principles related to R&I involving ethics.			
Action 11	Optional	Establish the link between the Ethics Committee and the governing body of your organisation (e.g. Office of the Vice-Rector for Research, Management Board, Ministry of Science, Science Quality Agency, etc.)			
Action 12	Optional	Conduct trainings for the members of the Permanent Ethics Committee on R&I to discuss and resolve conflicts related to RRI			
Ad Hoc Ethi	ics Committee	on R&I			
Action 1	Required	Take an explicit decision that the Ethics Committee on R&I will be ad hoc			
Action 2	Required	Clearly set out the basic functions of the Ad Hoc Ethics Committee on R&I and the person responsible for it			
Action 3	Required	Elaborate an Action Protocol as a guide for the operation of the Ad Hoc Ethics Committee on R&I			
Action 4	Required	Develop a database of experts to provide members for the Ad Hoc Ethics Committee on R&I or to advise it every time it meets			
Action 5	Optional	Decide which RRI aspects the Ad Hoc Ethics Committee should cover [cover at least one of the four RRI keys: research integrity, gender perspectives, open access, or public engagement]			

OPTION C:

F1.1

TO DO: Set the priorities with the Ethics Line

Stage 2. Step 2.1.

If your organisation has decided to implement the Ethics Line, define: its scope (some or all the keys: research integrity, gender perspective, public engagement, and open access), communication channels, types of preferred notifications to manage, and the action protocol in line with the model offered by the ETHNA System.

LEVEL 2

Required: Implement the Foundation block [RRI Office(r)] and at least one of three Column blocks [Code of Ethics and Good Practices, Ethics Committee on R&I (permanent or ad hoc) and/or Ethics Line]. At least one of the four RRI keys [research integrity, gender perspective, open access and public engagement] must be covered.

Ethics Line		
Action 1	Required	Designate a person responsible for the Ethics Line
Action 2	Required	Designate and make explicit the group of experts or body/bodies responsible for managing and resolving notifications received via the Ethics Line (e.g. Permanent or Ad Hoc Ethics Committee, RRI Office(r), etc.)
Action 3	Required	Define and make explicit the communication channels of the Ethics Line (e-mail, telephone, online form, app, etc.)
Action 4	Required	Define and make explicit the type of notifications that can be made via the Ethics Line (e.g. suggestions, proposals, queries, complaints, alerts and/or reports)
Action 5	Required	Define and make explicit the way in which the information is collected and managed through the Ethics Line (e.g. confidentially, anonymously, or publicly)
Action 6	Required	Define and make explicit the way in which the information collected and managed through the Ethics Line is archived
Action 7	Required	Define and make explicit the basic functions of the Ethics Line
Action 8	Required	Draw up an action protocol as an operating guide to receive and manage notifications via the Ethics Line (phases, timing, prevention, correction, promotion and dissemination actions, investigation processes for warning, or complaint notifications, etc.)
Action 9	Optional	Decide which RRI aspects the Ethics Line will cover [cover at least one of the four RRI keys: research integrity, gender perspective, open access, and public engagement]
Action 10	Required	Design and implement a process to monitor the proper operation of the Ethics Line
Action 11	Required	Communicate and promote the knowledge and use of the Ethics Line by the internal and/or external stakeholders of your organisation
Action 12	Required	Report to the stakeholders of your organisation about the performance of the Ethics Line (e.g. monitoring report, impact report, web dashboard, newsletter, etc.)

NOTE:

Once your organisation has defined their priorities the Level of Commitment for the next three years will be established and can be reviewed at the end of this period.

For this review your organisation will have the progress and performance indicators (see detailed information Annex 2) and can decide to continue at the same level or to move to a higher Level of Commitment and therefore improve with the elaboration of a new three-year Action Plan.

STEP 2.2.

TO DO: Design an Action Plan

F.1.1

Stage 2. Step 2.2.

NOTE:

- > The ETHNA System is **intended to help generate a culture of continuous improvement**. To do this, it is necessary to design an Action plan, which sets goals and helps your organisation to monitor their progress in achieving them.
- > The ETHNA System provides a set of indicators for your organisation to track the continual development of ethical governance to promote RRI.
 - > Your organisation should adapt the indicators in accordance with the chosen Level of Commitment Annex 1).
- > The priorities of your organisation in the implementation of the ETHNA System will determine the final design and complexity of the Action Plan. Further guidance is provided in the Toolbox (Annex 1).
- > The Action Plan **should be publicly available** on the organisation's website and should include the progress and performance indicators (in accordance with the chosen Level of Commitment).
- > The Action Plan should include all the activities that will be carried out over a three-year period, such as:
 - > This **includes internal awareness activities and actions** to promote the ethical governance for R&I aligned with the ETHNA System concerning the four RRI keys: research integrity, gender perspective, public engagement, and open access
 - > planning and setting possible activities related to the priorities concerning the Column Blocks.

F.1.2. PHASE II: IMPLEMENTATION PHASE (STAGE 3 to 6)

STAGE 3. Implement the RRI Office(r)

Stage 3. Step 3.1.

If your organisation wishes to implement the ETHNA System, it is recommended that they at Step 3.2. least establish the Foundation Block (RRI Office(r)) and activate the progress and performance Step 3.3. indicators related to this block.

STAGE 3 Structure:		
STEP 3.1.	Select RRI Office(r)	
STEP 3.2.	Decide the specialist support staff, if necessary	
STEP 3.3.	Choose the location of the RRI Office(r), if applicable	
STEP 3.4.	Develop the Action Plan	
STEP 3.5.	Develop a communication, motivation, and awareness plan for the RRI Office(r)	
STEP 3.6.	Develop monitoring indicators for the RRI Office(r)	

NOTE:

The RRI Office (r) has two main functions: (1) assessing the current state-of-the-art of RRI readiness and progress of the institution, based on which taking responsibility for planning the activities to adopt the ETHNA System and (2) coordinating the actions to develop the envisaged tools by deciding upon the level of commitment and the related activities.

STEP 3.1. Select RRI Office(r)

TO DO: Decide whether a person, unit, or department will be responsible for the proper development of the ETHNA System and then formally establish their competences and responsibilities.

- > It is recommended to have a person in the RRI Office (r), but, if it is not possible, these responsibilities can be assigned to a unit or service in the R&I administrative structure
- It is not necessary to create a new job position or a new physical and administrative structure, just that the functions of ETHNA Representative are well assigned inside the organisation.

STEP 3.2. Decide the specialist support staff, if necessary

TO DO: Decide whether the RRI Office(r) will have specialist support to implement the ETHNA

If yes, define their number, roles, and functions within the system.

STEP 3.3. Choose the location of the RRI Office(r), if applicable

TO DO: Decide whether the RRI Office(r) will have a physical and/or virtual space within your organisation.

> If no such space is available, the RRI Office(r) can also be an external service linked to the R&I decision-making bodies of your organisation.

STEP 3.4. Develop the Action Plan

TO DO: Develop the performance indicators in the Action Plan to generate internal awareness Stage 3. and a self-assessment of the pre-conditions to implement the ETHNA System.

Step 3.4.

> It is recommended to organise activities to spread the idea of ethical governance of Step 3.5. R&I in line with the ETHNA System.

Step 3.6.

Remember the four aspects of RRI (research integrity, gender perspective, public engagement, and open access) should be addressed in this Action Plan.

STEP 3.5. Develop a communication, motivation, and awareness plan for the RRI Office(r)

TO DO: Define the communication, motivation, and awareness-raising actions so that stakeholders are aware of the RRI Office(r) and can participate. This process needs to be supported by the top management.

STEP 3.6. Develop monitoring indicators for the RRI Office(r)

TO DO: your organisation will need to produce two lists of indicators that should be included into the Action Plan:

> The RRI Office(r) should use progress and performance indicators as a compass to monitor implementation and also evaluate the degree of accomplishment and the areas of improvement after the three-year period. (See Toolbox – Annex 2)

LEVEL 3

Required: Implement the Foundation block [RRI Office(r)] and three Column blocks [Code of Ethics and Good Practice, Ethics Committee on R&I (permanent or Ad hoc) and Ethics Line]. All four RRI keys [research integrity, gender perspectives, open access, and public engagement] must be covered.

RRI Office(r)			
Action 1	Required	Self-assessment of the preconditions necessary for the implementation of the ETHNA System	n
Action 2	Required	Ensure that all necessary preconditions for the implementation the ETHNA System are met	
Action 3	Required	Designate an RRI Office(r)	
Action 4	Required	Formulate the core duties of RRI Office(r)	
Action 5	Required	Design an Action Plan for the implementation of the RRI Office(r)	
Action 6	Required	Take actions to raise internal awareness concerning the ETHNA System	
Action 7	Required	Disseminate the idea of ethical governance of R&I in line with the ETHNA System	
Action 8	Required	Generate actions to promote RRI key research integrity	
Action 9	Required	Generate actions to promote RRI key gender perspectives	
Action 10	Required	Generate actions to promote RRI key open access	
Action 11	Required	Generate actions to promote RRI key public engagement	
Action 12	Required	Establish the link between the RRI Office(r) and governing body of your organisation	
Action 13	Required	Offer accountability to RPO or RFO stakeholders for the progress and impacts of the ETHNA System	solidat

- 1) Progress indicators to check that the organisation is con Performance indicators to show the implementation actions that
- have been performed and their effect.

Implement the Code of Ethics and Good Practices in R&I Stage 4.

(See Toolbox Annex 2: Guidance for Creating or Adopting a Code of Ethics and Good Practices in R&I).

Stage 4. Step 4.1.

The ETHNA System's Code of Ethics and Good Practices in R&I (CEGP) is a formal and public Step 4.2. document that identifies, outlines, and offers reasons for values, principles, and good practices. In addition, it is the organization commitment expression to develop and or to fund an ethical and responsible research and innovation.

STAGE 4 Structure:5		
STEP 4.1.	Establish the working group	
STEP 4.2.	Develop a map of risks and good practices in R&I	
STEP 4.3.	Identify the aspects to be covered by the CEGP of your organisation	
STEP 4.4.	Make a first draft of an adapted CEGP	
STEP 4.5.	Promote a participatory process to improve the adapted draft of the CEGP	
STEP 4.6.	Develop the final proposal for the adapted CEGP	
STEP 4.7.	Approve the adapted CEGP	
STEP 4.8.	Implement the CEGP	
STEP 4.9.	Propose a process to communicate improvements and/or warnings concerning the CEGP	
STEP 4.10.	Develop the CEGP monitoring indicators	

STEPS TO BE FOLLOWED (always adapt it to the particular features of your organisation):

STEP 4.1. Establish the working group

TO DO: Select the people in the working group to adapt the ETHNA System CEGP proposal. Then, hold a meeting to organise the working group, specify goals and actions, as well as the responsibilities of the members.

STEP 4.2. Develop a map of risks and good practices in R&I

TO DO: Formulate a map of R&I risks (possible misconduct) linked to the activity of your organisation or to the type of research and innovation they fund. Also identify the best practices the organisation wants to promote.

STEP 4.3. Identify the aspects to be covered by the CEGP of your organisation

TO DO: Identify the relevant aspects that should be included in the CEGP considering the research, innovation, and/or funding activity of the organisation.

This stage requires a process of stakeholder mapping and stakeholder engagement. The following guides could be useful: Häberlein, Lisa; Mönig, Julia Maria and Hövel, Philipp (2021). Mapping stakeholders and scoping involvement. A guide for HEFRCs. ETHNA System Project – Deliverable 3.1; Häberlein, Lisa; Mönig, Julia Maria and Hövel, Philipp (2021). Stakeholder involvement in ethical governance of R&I. A guide for HEFRCs. ETHNA System Project - Deliverable 3.3

STEP 4.4. Make a first draft of an adapted CEGP

F.1.2

TO DO: Make a first draft of an adapted CEGP. The final version of the document could include Stage 4. relevant sections such as:

Step 4.4. Step 4.5.

Step 4.6.

Open letter from top management	Draft it under the approval process (see Step 4.7. Approve the adapted CEGP)
Own principles and/ or values in R&I	Select and include the values and principles that best match and guide the R&I activity and R&I risks for your organisation
Professional and organisational good practices	Express the selected values and principles in the form of good practices (behaviours and specific procedures) expected of everyone involved in the research and innovation processes at your organisation. Your organisation should adopt good practice guidelines with consideration of their own activity.
Monitoring and compliance system	Explain the procedure followed to develop the Code and how suggestions for improvement or warnings regarding conduct can be communicated. Also monitor and comply the system with the Code, as well as the actions that will be implemented to raise awareness.

STEP 4.5. Promote a participatory process to improve the adapted draft of the CEGP

TO DO: Engage in a dialogue with relevant stakeholders of your organisation to gather opinions, suggestions, and proposals for the improvement of the CEGP draft.

This process may include distributing questionnaires, organising group dynamics, and conducting in-depth interviews with leading figures.

STEP 4.6. Develop the final proposal for the adapted CEGP

TO DO: Collect data from the participatory process and develop a final proposal for a CEGP adapted to the needs of your organisation.

STEP 4.7. Approve the adapted CEGP

TO DO: Promote the approval of the adapted CEGP through the competent body. It is recom- Stage 4. mended that this function be performed by the highest authority in the organisation or, Step 4.7. if delegated, by the highest authority for research and innovation in your organisation. Step 4.8.

Step 4.9.

This approval will be summarised in a letter from the head of the organisation to:

- > Declare the commitment of senior management and the entire organisation to the principles, values, and practices of the Code.
- Underline the connection between the Code and the vision, mission, and strategic plans of your organisation.
- Highlight the participatory procedure that has been followed to create the Code.
- > Extend an invitation to the entire organisation to learn about the Code and make a commitment to follow, improve, and uphold it.
- Acknowledge the CEGP of the organisation is based on the model proposed by the ETHNA System.

STEP 4.8. Implement the CEGP

TO DO: Establish a process to disseminate the CEGP and raise its awareness.

- This includes trainings so that stakeholders are aware and can internalise it.
- > The CEGP updating procedure should also involve stakeholders to improve its content.
- The process may include internal and external communication actions to disseminate the CEGP.
- It may include trainings to raise awareness and provide knowledge about its content, as well as participatory processes and / or deliberative stakeholder events to review and update the content of the CEGP.

STEP 4.9.

TO DO: Propose a process to communicate improvements and/or warnings concerning the CEGP. Propose a communication process so that the stakeholders of the organisation can receive notifications.

It could be defined by an e-mail address, a web form, a computer app, or a telephone number, among others) of improvements or alerts (reports, complaints) concerning the content of the CEGP.

STEP 4.10. Develop CEGP monitoring indicators

TO DO: Define indicators that show the level of progress and performance in achieving the goals Stage 4. of the CEGP in R&I and measure the scope and results of related activities.

Step 4.10.

> your organisation will need to confirm two lists of indicators and include them in the Action Plan.

LEVEL 3

Required: Implement the Foundation block [RRI Office(r)] and three Column blocks [Code of Ethics and Good Practice, Ethics Committee on R&I (permanent or Ad hoc) and Ethics Line]. All four RRI keys [research integrity, gender perspectives, open access, and public engagement] must be covered.

tives, open access, and public engagement] must be covered.			
Code of	Code of Ethics and Good Practices (CEGP)		
Action 1	Required	Appoint a working group to adapt the proposed CEGP of the ETHNA System	
Action 2	Required	Establish the goals, tasks, and responsibilities of members of the working group to adapt the proposed CEGP of the ETHNA System	
Action 3	Required	Establish the relevant aspects to be included in the adapted CEGP considering the RPO's / RFO's research, innovation, and/or funding activity	
Action 4	Required	Decide if all the RRI aspects of the CEGP could be considering the RPO's / RFO's research, innovation, and/or funding activity	
Action 5	Required	Define a participatory process in order to achieve the CEGP based on the ETHNA System	
Action 6	Required	Develop a first draft of the CEGP for your organisation	
Action 7	Required	Launch a participatory process with RPO/RFO stakeholders to discuss the first draft of the CEGP	
Action 8	Required	Compile and draw up a second draft of the CEGP reflecting the relevant aspects drawn from the participatory process with stakeholders	
Action 9	Required	Obtain the approval of the senior management	
Action 10	Required	Take actions to raise internal awareness concerning the CEGP	
Action 11	Optional	Take actions to raise external awareness concerning the CEGP	
Action 12	Required	Establish an updating process	
Action 13	Optional	Establish a professional/institutional compliance monitoring process	
Action 14	Optional	Offer accountability to RPO or RFO stakeholders for the progress and performance of the CEGP	

- 1) Progress indicators to check that the organisation is consolidating 2) Performance indicators to show the implementation actions that
 - have been performed and their effect.

STAGE 5. Implement the Ethics Committee on R&I

F1.2

(See Toolbox Annex 4. Guidance for Setting up an Ethics Committee on R&I).

Stage 5. Step 5.1.

The Ethics Committee on R&I is a participatory space for dialogue on the values, conduct, procedures, and commitments concerning the ETHNA System's Code of Ethics and Good Practices in R&I or the four RRI keys (research integrity, gender perspective, public engagement, and open access). It is also a place to discuss notifications of proposals, suggestions, consultations, warnings, complaints, and reports received by the RRI Office(r) via the Ethics Line or any other means.

STAGE 5 Structure:		
STEP 5.1.	Decide the objectives of the Ethics Committee on R&I	
STEP 5.2.	Decide the scope and principles of action of the Ethics Committee on R&I	
STEP 5.3.	Decide the Ethics Committee on R&I model	
STEP 5.4.	Decide the composition of the Ethics Committee on R&I	
STEP 5.5.	Decide the functions of the Committee on R&I	
STEP 5.6.	Establish the work methodology of the Ethics Committee on R&I	
STEP 5.7.	Approve the Ethics Committee on R&I	
STEP 5.8.	Develop monitoring indicators for the Ethics Committee on R&I	

STEP 5.1. Decide the objectives of the Ethics Committee on R&I

TO DO: Decide the general and specific objectives of the Ethics Committee on R&I.

- For example, to serve as a space for participation and deliberation on one or more of the following issues:
 - managing notifications from the Ethics Line,
 - > resolving ethical conflicts related to research and innovation,
 - updating and improving the Code of Ethics and Good Practices in R&I,
 - and debating a specific case etc.

STEP 5.2. Decide the scope and principles of action for the Ethics Committee on R&I

TO DO: Decide whether the Ethics Committee on R&I will be a space for internal and/or external participation.

Determine if members only from within your organisation will be able to participate or if people or groups from outside your organisation can be involved.

STEP 5.3. Decide the Ethics Committee on R&I model

TO DO: Decide whether to follow a permanent or ad hoc Ethics Committee on R&I model.

Stage 5. Step 5.3.

> The permanent model involves establishing a group of experts and/or stakeholders Step 5.4. for a fixed and renewable period.

Step 5.5.

The ad hoc model involves establishing a group of experts and/or stakeholders Step 5.6. to discuss any aspect, proposal, specific, or emerging conflict related to the op- Step 5.7. eration of the ETHNA System and to implement the values, behaviours, and pro- Step 5.8. cedures in its Code of Ethics and Good practices. The ad hoc committee is dissolved once the case has been resolved or the report has been prepared.

STEP 5.4. Decide the composition of the Ethics Committee on R&I

TO DO: Begin the composition of the Ethics Committee on R&I with consideration of the general and specific objectives of the committee and the type of model desired for implementation (permanent or ad hoc). Whether your organisation has decided to implement a permanent or ad hoc committee model, they should indicate the number of experts and/ or stakeholders participating and the reasons why they have been chosen. Do not forget to describe the roles of the committee members. The committee should at least have a chairperson, a secretary, and an ordinary member.

STEP 5.5. Decide the functions of the Committee on R&I

TO DO:: Detail the duties of the committee based on their capabilities, resources, and objectives.

STEP 5.6. Establish the work methodology of the Ethics Committee on R&I

TO DO: Establish the methodology for action in the Ethics Committee on R&I.

Take into consideration: the meetings, decision making, reports, and monitoring.

STEP 5.7. Approve the Ethics Committee on R&I

TO DO: Decide the body that will approve the establishment of the Ethics Committee on R&I, as well as its composition, roles, and functions.

STEP 5.8. Develop monitoring indicators for the Ethics Committee on R&I.

TO DO: Establish two lists of indicators and include them in the Action Plan, which will serve to show the degree of progress and performance concerning the objectives of the Ethics Committee on R&I and measure the scope and results of its activity.

Progress indicators to check that your organisation is consolidating all phases of the process.

Performance indicators to show the implementation actions that have been performed and their effect.

LEVEL 3

F.1.2

Required: Implement the Foundation block [RRI Office(r)] and three Column blocks [Code of Ethics and Good Practice, Ethics Committee on R&I (permanent or Ad Hoc) and Ethics Line]. All four RRI keys [research integrity, gender perspectives, open access, and public engagement] must be covered.

Stage 5.

Ethics Committee on R&I [decide between a permanent or an ad hoc Ethics Committee on R&I]

Permanent	Ethics Commi	ittee on R&I
Action 1	Required	Decide and made explicit that the Ethics Committee on R&I will be permanent
Action 2	Required	Establish the composition of the Permanent Ethics Committee on R&I
Action 3	Required	Establish and clearly set out the basic functions of the Permanent Ethics Committee on R&I
Action 4	Required	Elaborate an Action Protocol as a guide for the operation of the Permanent Ethics Committee on R&I
Action 5	Optional	Elaborate an Action Plan for implementing the Permanent Ethics Committee on R&I
Action 6	Optional	Held a first meeting to constitute the Permanent Ethics Committee on R&I
Action 7	Optional	Designate and implement actions to promote the Code of Ethics and Good Practices in R&I or, if you do not have one, the international guidelines on RRI
Action 8	Required	Designate and implement actions to monitor and control the safeguards required for ethical and responsible R&I
Action 9	Optional	Establish and implement actions to consider, issue reports and make recommendations on principles related to R&I involving ethics and professional ethics
Action 10	Optional	Link the Ethics Committee on R&I with any RPO/RFO governing body (e.g. Office of the Vice-Rector for Research, Management Board, Ministry of Science, Science Quality Agency, etc.)
Action 11	Optional	Carried out actions aimed at training the members of the Permanent Ethics Committee on R&I in discussing and resolving conflicts related to RRI
Ad Hoc Ethi	cs Committee	e on R&I
Action 1	Required	Decide and made explicit that the Ethics Committee on R&I will be ad hoc
Action 2	Required	Establish and made explicit the basic functions of the Ad Hoc Ethics Committee on R&I and the person responsible for it
Action 3	Required	Elaborate an Action Protocol as a guide for the operation of the Ad Hoc Ethics Committee on R&I
Action 4	Required	Develop a database of experts to provide members for the Ad Hoc Ethics Committee on R&I or to advise it every time it meets
Action 5	Optional	Design and implement actions to promote the Code of Ethics and Good Practices in R&I or, if you do not have one, the international guidelines on RRI, among the experts making up the database for the Ad Hoc Ethics Committee on R&I
Action 6	Optional	Create a guide to inform the experts appearing in the database for the Ad Hoc Ethics Committee on R&I in discussing and resolving conflicts related to RRI
Action 7	Optional	Link the Ad Hoc Ethics Committee on R&I with any RPO/RFO governing body (e.g. Office of the Vice-Rector for Research, Management Board, Ministry of Science, Science Quality Agency, etc.)
Action 8	Optional	Carried out communication actions to offer accountability to RPO/RFO stakeholders for the progress and performance of the Ad Hoc Ethics Committee on R&I (e.g. monitoring report, impact report, web dashboard, newsletter, etc.)

- 1) Progress indicators to check that the organisation is consolidating 2) Performance indicators to show the implementation actions that
- have been performed and their effect.

F1.2

Stage 5.

Ethics Committees may have functions related to:

1. Promote the Code of Ethics and Good Practices by:

- promoting internal (junior and senior researchers and other staff linked to R&I) and external training on the Code; and
- encouraging reflections on aspects that might be controversial or other emerging issues.
- 2. Advise research staff, and others interested, in the committee's assessment on Research Ethics issues.

3. Reflect, issue reports, and make recommendations on ethical principles relating to R&I activity by:

- providing advice on the interpretation of the Code, international guidelines, and controversial issues;
- > issuing information in the event of legal reports or allegations of bad practice;
- promoting and publicising laws, regulations, and reports relevant for the ethics in R&I; and/or
- > encouraging the revision of the Code when there is new evidence or advances in thought on controversial topics.

4. Monitor and control the guarantees required to conduct scientific R&I by:

- > resolving notifications regarding suggestions, warnings, and complaints made via the ethics hotline or other channels established by your organisation;
- > implementing a procedure for action in the event of scientific or R&I bad practice; and
- acting as an arbitration body in conflicts linked to R&I practices.

STAGE 6. Implement the Ethics Line

(See Toolbox Annex 4. Guidance for Setting up an Ethics Committee on R&I).

Stage 6. Step 6.1.

The Ethics Line will allow your organisation to have an open channel of communication with their Step 6.2. internal and/or external stakeholders in the field of R&I. It will improve research and innovation activities and advance towards society's expectations.

Step 6.3. Step 6.4.

STAGE 6 Structure:		
STEP 6.1.	Decide the scope of the Ethics Line	
STEP 6.2.	Decide the type of Ethics Line channel	
STEP 6.3.	Decide who is responsible for the Ethics Line	
STEP 6.4.	Decide the Ethics Line communication mechanism	
STEP 6.5.	Decide the type of notifications that can be sent via the Ethics Line	
STEP 6.6.	Decide who will be responsible for the management of the Ethics Line data	
STEP 6.7	Formulate the Ethics Line action protocol	
STEP 6.8.	Decide the communication, motivation, and awareness-raising plan for the Ethics Line	
STEP 6.9.	Draft monitoring indicators for the Ethics Line	

STEP 6.1. Decide the scope of the Ethics Line

TO DO: Establish whether the Ethics Line will be an internal or external communication channel and select the participating stakeholders.

STEP 6.2. Decide the type of Ethics Line channel

TO DO: Establish whether the Ethics Line will use anonymous, confidential, or public communication channels.

STEP 6.3. Decide who is responsible for the Ethics Line

TO DO: Establish the person responsible for the proper operation of the Ethics Line, as well as their duties and competences.

It is recommended this function to be performed by the RRI Office(r).

STEP 6.4. Decide the Ethics Line communication mechanisms

TO DO: Establish the communication tools to be used by the Ethics Line to complete and resolve notifications.

such as traditional mail, e-mail, web questionnaires, telephone, face-to-face, etc.

STEP 6.5. Decide the type of notifications that can be sent via the Ethics Line

TO DO: Establish the type of information your organisation wishes to collect and manage via the Stage 6. Ethics Line:

Step 6.5.

> Suggestions to improve the ETHNA System and its different elements: Code of Ethics Step 6.7. and Good Practices, Ethics Line, etc.

Step 6.6.

Proposals for best practices in research and innovation

Step 6.8.

Step 6.9.

- **Queries** on the ETHNA System and its implementation
- **Complaints** that involve grievances, unease, and inappropriate behaviour, etc.
- **Warnings** of possible bad practice and misconduct
- > Complaints of breaches in the values and behaviours of the Code of Ethics or noncompliance with it

STEP 6.6. Decide who will be responsible for the management of the Ethics Line data

TO DO: Designate the person responsible for the management, custody, and/or confidentiality of the data and information collected via the Ethics Line.

It is recommended that this function be performed by the RRI Office(r).

STEP 6.7. Formulate the Ethics Line action protocol

TO DO: Establish an action protocol to receive, manage, and resolve Ethics Line notifications.

It should contain information on notification acknowledgement, resolution times, data management, and the notification resolution process.

STEP 6.8. Decide the communication, motivation, and awareness-raising plan for the Ethics Line.

TO DO: Establish communication, motivation, and awareness actions to increase stakeholder knowledge and participation in the Ethics Line.

STEP 6.9. Draft monitoring indicators for the Ethics Line

TO DO: Establish indicators two lists of indicators and introduce them in the Action Plan to show the degree of progress and performance concerning the objectives of the Ethics Line and measure the scope and results of its activity.

- Progress indicators to check that the organisation is consolidating all phases of the process.
- > Performance indicators to show the implementation actions that have been performed and their effect.

F. BUILD YOUR OWN ETHNA SYSTEM MODEL (THREE POSSIBLE TYPOLOGIES OF CONSTRUCTION)

LEVEL 3

F.1.2

Required: Implement the Foundation block [RRI Office(r)] and three Column blocks [Code of Ethics and Good Practice, Ethics Committee on R&I (permanent or Ad Hoc) and Ethics Line]. All four RRI keys [research integrity, gender perspectives, open access, and public engagement] must be covered.

Stage 6.

Ethics li	ne	
Action 1	Required	Designate a person responsible for the Ethics Line
Action 1	Required	Designate and make explicit the group of experts or body/bodies responsible for managing and resolving notifications received via the Ethics Line (e.g. Permanent or Ad Hoc Ethics Committee, RRI Office(r), etc.)
Action 3	Required	Define and make explicit the Ethics Line's communication channels (e-mail, telephone, online form, app, etc.)
Action 4	Required	Define and made explicit the type of notifications that can be made via the Ethics Line (e.g. suggestions, proposals, queries, complaints, alerts and/or reports)
Action 5	Required	Define and made explicit the way in which the information collected through the Ethics Line is collected and managed (e.g. confidentially, anonymously or publicly)
Action 6	Required	Define and made explicit the way in which the information collected and managed through the Ethics Line is archived
Action 7	Required	Define and made explicit the basic functions of the Ethics Line
Action 8	Required	Draw up an action protocol as an operating guide for receiving and managing notifications via the Ethics Line (phases, timing, prevention, correction, promotion and dissemination actions, investigation processes for warning or complaint notifications, etc.)
Action 9	Required	Design and implemented some kind of process to monitor the proper operation of the Ethics Line
Action 10	Required	carried out communication actions aimed at improving knowledge and use of the Ethics Line by the RPO's/RFO's internal and/or external stakeholders
Action 11	Required	To carry out communication actions to offer accountability to RPO/RFO stakeholders for the progress and performance of the Ad Hoc Ethics Committee on R&I (e.g. monitoring report, impact report, web dashboard, newsletter, etc.)

- 1) Progress indicators to check that the organisation is consolidating 2) Performance indicators to show the implementation actions that
 - have been performed and their effect.

F.1.3. PHASE III: EVALUATION PHASE (STAGE 7)

F.1.2

(See Toolbox Annex 2. Guidance Monitoring Indicators: progress and performance)

Stage 7.

STAGE 7. Monitoring Indicators of the ETHNA System

The adoption of the different tools that constitute the blocks of the ETHNA System requires the establishment of Guidance Monitoring Indicators to show the degree of achievement of the goals and measure the scope and results of their activity.

The **Guidance Monitoring Indicators** includes:

Progress indicators are common for all types of organisations.

Each organisation will choose the progress indicators in relation with their specific commitment to the ETHNA System.

Performance indicators will be used to show the implementation actions that have been performed and their effect.

The **monitoring of progress indicators** will inform the ETHNA System of the level of accomplishment. The monitoring of performance indicators will report on compliance and the effectiveness of the Action Plan. Both could be shown in a graphical dashboard that is easy to use by the RRI Office(r).

After the implementation phase, the Action Plan will be evaluated based on its level of accomplishment in implementation and performance indicators. Then a new Action Plan will be established for a continuous evaluation system towards RRI.

F.2. STRONG BASE, WEAK LEADERSHIP: HOW TO IMPLEMENT THE ETHNA SYSTEM

The premise in this scenario is a weak leadership in terms of RRI institutionalisation, combined with a strong base. This strength may result from already existing bottom-up RRI initiatives that are often of small scale and may not be widely known. The ETHNA System focus on strengthening the base to the point where a critical mass is reached. The first stages comprise spreading RRI norms and practices locally, building showcases, and connecting to similar internal and, where opportune and feasible, external efforts. The expectation is that a critical mass of bottom-up activities and established practices applies pressure to the leadership to change its passive – or, in the worst case, counterproductive – stance and to assume an active role in promoting the institutionalisation of RRI.

The approach to planning and implementing institutionalisation activities is vastly different from the top-down approach described in the previous sections. Many activities will seem frugal as the resources available to carry them out are often scarce. The vast majority of activities are bottom-up in nature, i. e. they will need to rely on self-organisation among the research staff⁶. Progress may often seem slow, stagnant, or even imperceptible; the base will need to be in for the long run to achieve its goals. Typically, goals are often modest and may evolve when a milestone (planned or unforeseen) is reached.

As depicted in the figure below, the foundation of the model house is comprised by the base. Consequently, the planning and implementation of activities will need to rely on bottom-up efforts.

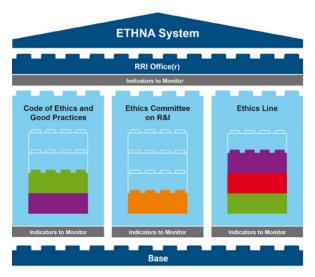


Figure 3: ETHNA System model for the strong base but weak leadership scenario

In contrast to the model described in the previous sections, the absence of a RRI Office(r) means that there is no central entity – backed by the leadership – that coordinates and facilitates the institutionalisation efforts. The role that it plays will need to be assumed by a different, more organic structure that suits an individual organisational setup: self-organised groups of individuals with

the term research staff is used loosely here, it includes individuals interested in initiating or supporting RRI institutionalisation efforts, irrespective of their status or role, such as administrative or support staff, students, leaders of smaller organisational sub-units, or external "allies"

• • • • • F. BUILD YOUR OWN ETHNA SYSTEM MODEL (THREE POSSIBLE TYPOLOGIES OF CONSTRUCTION)

a shared vision of the ultimate goals that need to be achieved. Roles and responsibilities may be allocated to several individuals to avoid overburdening, remain within personal limits, and ensure progress despite the barriers – institutional and otherwise – that the base faces in this scenario.

Commitment: In contrast to the previous scenario, the commitment here does not correspond to the levels of commitment of the leadership; instead, it comes from the commitment from the base, stemming from their shared understanding of and dedication to the cause of institutionalising RRI.

Indicators: As the planning of activities is decentralised in this scenario, establishing indicators to monitor progress over time is often not a priority because it would mean an additional burden that further stretches out already scarce resources. Goals can be an implicit part of the collective efforts but there is an advantage in making them explicit, namely when spreading RRI norms and practices to broaden the base – here, communication and show-casing are key.

Guidance: In scenarios with a strong leadership, the guidance can be somewhat *prescriptive*; this will not work here since there is no leadership support in this scenario and because institutional settings are vastly different – they are, in fact, too numerous to consider them all. Instead of showing *how to do things*, the guidance in this scenario will focus on showing what *could be done*, the how will need to be left up to those who make the *what* a reality.

Phases (or the lack of): There are no phases in their strict sense in this scenario, as there are no defined beginnings or endings. Instead, activities very much rely on what already exists at an organisation (or organisational sub-unit). It will be vital to build on already existing initiatives rather than starting from scratch. Existing initiatives often have a 'history', i. e. why they came to be, who is involved (and who is not), what has worked well in the past and what has not, etc.; in addition to understanding the history, understanding where the efforts currently stand is crucial, as is to know strengths and weaknesses. In this sense, three useful phases can be identified: I) Reflection of the current situation, II) Action to work towards agreed-upon goals, and III) Reorientation to gauge the progress and determine which course of action to follow next. Alternatively, a cyclical process between reflection and actions seems to be quite organic for bottom-up efforts, with potentially modest intermediate goals and relatively short cycle times.

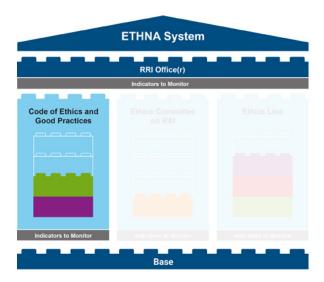
Broadening the base: A key success factor in this scenario is to continue developing a strong base to the point where it reaches a critical mass, a point in time where RRI values and practices become the cultural norm in the organisation. Building showcases, aligning efforts across suborganisational borders or across research fields, ensuring that these are seen and heard throughout the organisation are critically important to elevate ongoing efforts to the next level.

BUILD YOUR OWN ETHNA SYSTEM MODEL (THREE POSSIBLE TYPOLOGIES OF CONSTRUCTION)

STRONG BASE, WEAK LEADERSHIP - Code of Ethics & Good Practices

Code of Ethics and Good practices (CEGP)

Establishing a Code of Ethics and spreading good practices may be the most challenging block to build, especially since there is a lack of leadership in this scenario. The vacuum due to the absence of a central force to lead efforts on the ethics front is typically filled with by a strong interest found in the base in conducting research that is aligned with the principles of research ethics. In many cases it is safe to assume that bottom-up initiatives exist; if they do not in a given research field, it may be worth looking at neighbouring or even unrelated research fields or to topdown best practices, if they exist. Building on existing experiences is considerably less difficult than starting from scratch. That said, care should be taken, especially when trying to transfer good practices (GP) from one research domain or field to another - some GP may not be transferable, at least not without serious reflection and adaptation; adopting those GP without reflection could cause more harm than good.



STRONG BASE, WEAK LEADERSHIP - Code of Ethics & Good Practices - PHASE I: Reflection

Latching on to and reinforcing existing CEGP initiatives means jump-starting institutionalisation efforts. Those initiatives can be expected to have already established a certain Code of Ethics and possibly even defined a set of GP. It might be worth mentioning that in some cases a Code of Ethics and Best Practices are more of an implicit nature and it first must be made more explicit so as the inspiring principles and practices can be used in a broader institutional setting. If there is an established Code of Ethics and set of GP available, the main task is to ensure that the CEGP is increasingly adopted by the base. The Reflection Phase will need to consider relevant actions such as

- raising the awareness of the research base by
 - showcasing the difference that the adherence to the Code of Ethics makes in everyday research activities, making transparent the involved efforts as well as the gains
 - offering training for the base on all levels (early career researchers to senior researchers, incl. support or administrative staff where it makes sense), which might require the strengthened cooperation of 'lower-level' units or persons in the absence of explicit topdown support
 - organising events to promote the reflection on research practices and the Code of Ethics

• • • • • F. BUILD YOUR OWN ETHNA SYSTEM MODEL (THREE POSSIBLE TYPOLOGIES OF CONSTRUCTION)

- spreading GP by inviting researchers from different organisational units or fields to share lessons learnt on key issues and challenges, and how to overcome them
- showing how CEGP can help work transparently and responsibly, to engage with the research community and the public

STRONG BASE, WEAK LEADERSHIP - Code of Ethics & Good Practices - PHASE II: Action

There will be a constant need for activities described in Phase I because issues change over time, as does the base – people leave, new people join, expertise may be lost and needs to be rebuilt. Expertise also needs to be renewed, which further increases the demand for trainings, events, or reflective spaces that could be set up to support community building.

These activities happen under an assumed self-organised group of individuals but it is worth exploring how such groups form and operate. Similar to the two building blocks described below, the need for some form of facilitation will grow the more such activities are planned or the higher the demand for such activities becomes. The bottom-up nature of this scenario has strict limitations in terms of resources that each involved individual can muster. One way to alleviate those restrictions is to spread the responsibilities and workload among a bigger number of individuals interested in contributing to the cause and facilitating the institutionalisation. Each group will need to find their own way of recruiting new facilitators and possibly rotating assignments.

STRONG BASE, WEAK LEADERSHIP - Code of Ethics & Good Practices - PHASE III: Reorientation

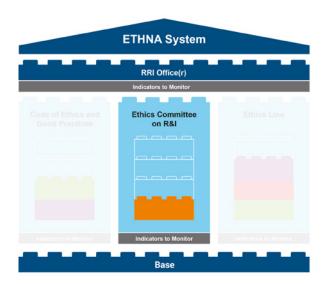
It will be necessary to devise a few mechanisms by which to gauge the progress made, to see where the biggest wins are and determine where further actions or improvements are needed. Less of importance is how simple or complex such mechanisms are, it is more important to ensure that they are measuring what really captures progress. For instance, the number of workshops provided to early career researchers may be interesting to know but it is more insightful to learn if participants have learnt something that helps them in their professional life while supporting the adoption of a CEGP.

F.2

STRONG BASE, WEAK LEADERSHIP - Ethics Committee

F.2

Ethics Committee



A bottom-up way to establish and operate an Ethics Committee (EC) is ad-hoc. Ad hoc EC typically deal with individual cases, but a formation over a certain period of time may be possible and alleviate some of the burdens that ad-hoc formations entail. Regardless, a certain degree of facilitation is required to guarantee that ad-hoc EC are being formed when need. The individual(s) interesting in setting up such EC may serve as initial facilitator(s) but it will help in the medium to long run to ensure that a group of people will be able to ensure a continuous facilitation. This may require some form of recruitment of individuals who volunteer as facilitators.

STRONG BASE, WEAK LEADERSHIP - Ethics Committee - PHASE I: Reflection

In the first phase, the focus is on important considerations of forming EC ad hoc. It will be necessary to clearly define the scope of its role and mandate, as well as its responsibilities, principles, and protocols to follow.

Principles and protocols guide the actions of the EC. A wide variety of examples already exist at many RPO and are openly accessible. The facilitators could pick from those sources to define a starting set of principles and protocols for their ad-hoc EC. They can later be refined as needed.

STRONG BASE, WEAK LEADERSHIP – Ethics Committee – PHASE II: Action

During the Action Phase it is important to pay attention to the prerequisites for an effective and widely recognised (by the base) ethics committee. A crucial point is the expertise required by members of an ad-hoc EC. Since the formation time should be kept short, it should be well known who the potential members are. This is easier done when the pool of recruitable candidates is small but a challenge when the number of cases surges and the need to form ECs increase significantly. Tools such as spreadsheets or databases may help if used properly (allowing filtering by, e. g. availability, expertise, level of experience, research field, gender, or career level).

F.2

For an EC to be accepted and supported by the base, it will need to be fully functional and offer short processing times, without overregulating research. It needs to become widely known and keep building a track record (the Ad hoc EC in general, not (just) individual instances) to be universally recognised.

STRONG BASE, WEAK LEADERSHIP - Ethics Committee - PHASE III: Reorientation

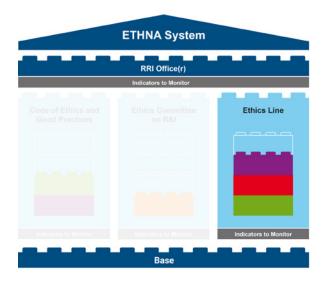
During the Reorientation Phase, the goal is to assess whether the ad-hoc EC suit their purpose and adhere to the requisites defined in the previous two phases. This can be done informally in a sub-organisational unit or formally, depending on the resources available. The important aspect here is to take feedback seriously and implement improvements as far as feasible; communicate transparently the improvements that are (currently) infeasible to implement to ensure long-term acceptance in the base.

STRONG BASE, WEAK LEADERSHIP - Ethics Line

F.2

Ethics Line

TODO: refer to the concept of the Ethics Line



STRONG BASE, WEAK LEADERSHIP - Ethics Line - PHASE I: Reflection

If the base is convinced that an Ethics Line needs to become an integral part of the RRI institutionalisation efforts, the first phase needs to focus on self-organising the setup of the Ethics Line. It will need to take into consideration the following factors:

- > scope of the Ethics Line
- required expertise
- > protocols to be put in place
- communication channels to provide and use
- staffing

STRONG BASE, WEAK LEADERSHIP - Ethics Line - PHASE II: Action

The border between Phases I and II are somewhat fluid because planning and implementation may go hand in hand. As is the case for other building blocks, it is essential to gather the resources required to operate the Ethics Line. Permanent staffing may not be possible, alternative forms may include rotating staffing or ad-hoc assignments matching available expertise and expertise required by the individual case. It may not be possible to muster the required expertise for all cases, which is why it will be necessary to come up with a mechanism that can be applied in these situations.

Some form of facilitation is needed to ensure the longevity of the Ethics Line, that improvements are applied if necessary, and that it is being expanded if needed and feasible. Efforts should include showcasing the purpose and usefulness of the Ethics Line and recruiting potential volunteers. Presentations back-to-back with RRI-related events would be particularly suitable.

In addition to the above factors, it may be worth looking beyond organisational borders and align with ongoing inter-organisational or national efforts. Potentially, some of the responsibilities can be delegated or additional expertise be consulted.

F.2

STRONG BASE, WEAK LEADERSHIP - Ethics Line - PHASE III: Reorientation

To ensure that the Ethics Line is – and keeps – working as intended, ways to gather feedback from those involved in the process (incl. cases) need to be considered. Feedback will need to be scrutinised by a neutral entity, typically consisting of a small group of individuals that can be formed ad-hoc, that can make recommendations on improving the provided service. It is then within the responsibility of the facilitators to ensure that those recommendations are being addressed appropriately.

F.3. STRONG LEADERSHIP, STRONG BASE: HOW TO IMPLEMENT THE ETHNA SYSTEM

F.3

The last implementation scenario to be presented is the ideal case when the top leadership has already embraced and supports the institutionalisation of RRI and certain supporting structures have already been implemented within the organisation. This scenario is visually represented in the top right corner of the RRI institutionalisation quadrant (cf. p. 8).

The most commonly encountered barriers to the institutionalisation of RRI, as identified through an extensive consultation⁷ process with the involvement of more than 900 stakeholders from RPOs and RFOs, are as follows:

- 1. the lack of resources (human/financial/time/etc.) to deal with RRI issues in addition to the 'usual' daily work of RPOs;
- 2. the lack of awareness and/or understanding about specific RRI key areas;
- 3. the lack of support from the leadership to launch or implement RRI keys;
- 4. the lack of institutional support structures and practices for certain RRI keys; or
- 5. the lack of practical actions to implement high-level policies or strategies (i.e. goals are not being translated into practices).

In this ideal scenario, barriers (3) and (4) are no longer relevant since top-down leadership support is a given and since there are support structures present in the organisation. This implies that sufficient resources have already been allocated to efforts addressing key RRI issues (1), which in turn resulted in practical actions (5). It is further to be expected that the organisation is implementing such practical actions, including an advanced degree of each of the three guidance tools envisaged in the ETHNA System (column blocks⁸), as well as the development of progress measures or more advanced indicators concerning each of these tools. The existence of such practical actions should also increase the awareness and understanding of the RRI key areas (2) since all employees are likely to encounter at least one of them in their daily work.

This means that, if such a 'mature' state of RRI institutionalisation exists in a given organisation, the ETHNA System may be of use mainly in terms of showcasing one of the many possible implementation pathways towards Commitment Level 3 (the full implementation of the ETHNA System), as well as offering some general recommendations towards finetuning the content, structure and operation of the RRI tools developed (see also Annex 1-7 'Toolbox to implement the ETHNA System' for best practices to each guidance tool).

Within this context we highlight the following action points that could be the focus of an RRI Office(r)'s work with the aim of further fine-tuning an already well-functioning RRI governance system (broken down per each phase according to the model house detailed in Section F.1):

⁷ using a mix of primary research methods comprising semi-structured interviews, participatory workshops, and an online survey

⁸ i. e. a code of ethics and good practices (CEGP), an ethics committee, and an ethics line

Phase I. Initial Assessment

F.3

Targeted awareness-raising or training actions – the overall knowledge on the RRI governance system might be appropriate at an organizational level but there might be lower-level units (departments or even persons, dependent on the size of the institution) in need of further awareness-raising or capacity development in terms of certain RRI keys needed to reach Commitment Level 3 (e.g. some units might be lacking in knowledge or skills on open access or public engagement). This might be addressed through tailor-made actions following for instance an institution-level survey on available knowledge and skills of RRI key areas, which could be the core task of a newly conducted resource and capacity mapping (Step 1.1 and Step 1.2). Where a certain knowledge gap is identified for an RRI key, knowledge pooling, training and other awareness-raising actions can be planned and implemented by the RRI office(r) to specifically support the research unit in need. Knowledge pooling can for example include the identification, understanding and sharing of good practices for the RRI key in need of capacity-building, with a potential focus on better aligning with the requirements of national or international funding bodies. The elaboration of practical online or offline guides or databases can significantly contribute to raised awareness of topical RRI issues and to better time and resource management (see next point).

These activities might also require the potential revision and update of an Internal and External Communication Plan is of utmost importance (see Section G).

Tackling potential resource misallocation – top-down management might be fully committed to providing the requisite (human / financial) resources for an RRI governance system but there is always room for controlling the actual use of such resources. This means that the resources and capabilities could be well known and mapped (Step 1.1 and Step 1.2) but the **goals and priorities** (Step 1.3 and Step 1.4) **might be re-evaluated at regular intervals** based on the progress achieved in RRI key areas. The ultimate goal is to reach Commitment Level 3 by re-allocating resources to those guidance tools where progress is still needed in terms of certain RRI keys (stage 2). This commitment should be reflected in the potentially new or revised priorities concerning the column blocks (Step 2.1.2) and the ensuing new or revised Action Plan (Step 2.2).

When re-mapping or re-evaluating goals and priorities for such purposes, it is highly beneficial to discuss and consider **new perspectives stemming from internal** (representatives from various units within the organisation) **or external stakeholders**. Various formats of **participatory actions** could be of use here, dependent on the profile and resources of organisations. For instance, the establishment and regular operation of 'reflection' spaces providing an informal venue for internal stakeholders on how ethics and other RRI aspects can become a more integral part of research and innovation activities might prove impactful. In addition, in case societal engagement has already taken up in the framework of the organisation, a more formalised involvement of a diverse group of external stakeholders might be envisaged by setting-up a permanent stakeholder board, discussing providing recommendations concerning critical research and innovation aspects.

Interested persons may learn more about how to identify internal and external stakeholders from the following document: H\u00e4berlein, Lisa; M\u00f6nig, Julia Maria and H\u00f6vel, Philipp (2021). Mapping stakeholders and scoping involvement. A guide for HEFRCs. ETHNA System Project – Deliverable 3.1

¹⁰ Interested persons may use the cover letter template provided by D3.1 (see citation in the previous footnote)

Phase II. Implementation Phase

Focus on specific RRI keys for each of the guidance tools – for the RRI governance system to become truly functional, all RRI keys should be appropriately addressed in relevant internal tools and practices. This could be ideally done at a regular re-evaluation of the objectives and scope of each of the operating guidance tools (see Step 4.3 for CEGP; Steps 5.1 and 5.2 for the Ethics Committee; and Step 6.1 for the Ethics Line). Among others, the fulfilment of the following aspects of different RRI keys can be considered in order to reach Commitment Level 3 (non-exhaustive list):

Code of Ethics and Good Practices¹¹

- Good practices might include the broader topics around open access, thus focusing on open science and innovation (depending on the character of the organisation) – cf. Step 4.2 and Step 4.3
- ➤ The requirements of RFOs should be taken up for each RRI key, meaning that, e.g. gender equality plans or open access strategies should form a core part of the code – cf. Step 4.2 and Step 4.3
- External stakeholders, incl. non-academic actors or vulnerable people (potentially affected by research activities) should be involved in re-evaluating the CEGP, thus bringing in new perspectives through an enhanced public engagement – cf. Step 4.5

Ethics Committee

- The Ethics Committee should check where in which RRI key areas they might be a need for employing dedicated support staff; for instance, scientific data or open access support – cf. Step 5.3 and Step 5.4
- To foster a culture of open access and science, the Ethics Committee should deal with incentives of sharing data as well as mitigating common worries in the topic (e.g. misuse of data, IPR) cf. Step 5.5
- ➤ The Ethics Committee might consider introducing awards for promoting ethical or genderaware research activities – cf. Step 5.5

Ethics Hotline

- The scope of the hotline can include gender-related issues (gender perspective) but might exceed to notices on other types of discrimination, such as based on race, age, religion or disability – cf. Step 6.5
- Addressing scientific misconduct could include more general advices on best practices, e. g. on open access – cf. Step 6.5
- ➤ The hotline should be ready to explain in a simple language complex issues in the relevant RRI keys, such as ethics, research integrity or gender perspective cf. Step 6.7

Please check H\u00e4berlein, Lisa; M\u00f6nig, Julia Maria and H\u00f6vel, Philipp (2021). Gauging the potential societal contributions of research and innovation – a guide for HEFRCs. ETHNA System Project – Deliverable 3.2. Page 8 shows how needs of HEFRCs can be addressed through a Code of Ethics and Good Practices

Phase III. Evaluation Phase

F.3

Development of a set of indicators for each RRI key area – the re-evaluation of goals, priorities and re-checking of available resources and capacities, as well as the enhanced inclusion of each RRI key to all ETHNA System guidance tools could only be successful if a **consistent set of indicators is developed and monitored for each RRI key area**. Within an advanced state of RRI governance, the already developed monitoring indicators for each guidance tool (cf. Step 4.10, Step 5.8 and Step 6.9) should be continuously re-evaluated in accordance with the revised goals and priorities towards reaching a full implementation of the ETHNA System (Commitment Level 3). This might entail the development or improvement of monitoring indicators – assessing the compliance with the level of commitment in terms of each RRI key – based on progress indicators checking the level of accomplishment for each guidance tool.

Such indicators might involve **novel topics** deemed relevant for the full implementation of the ETHNA System. These indicators make such evaluations possible that contribute to overcoming a specific barrier in front of RRI institutionalisation. RPOs need to incentivise their employees to consider RRI aspects during their daily work in each RRI key; for instance, there might be a need for an updated evaluation system for employee performance which goes beyond the traditional measures¹² by taking into account and rewarding ethics or research integrity compliance, open-access publications and open science activities, societal engagement efforts (e.g. collaboration frequency or patterns with relevant external stakeholders), or endeavours fostering gender awareness or tackling gender inequalities.

Here, the existing international benchmarks can be consulted, such as the Monitoring the Evolution and Benefits of Responsible Research and Innovation (MoRRI) indicators¹³ that may serve as a first guide on how to measure progress and impact of each RRI keys implemented through the guidance tools.

Going beyond the ETHNA System – the ETHNA SYSTEM model houses encompassing the guidance tools detailed in this guide should not be understood as a fully-fledged RRI governance system, even in case of reaching Commitment Level 3. There is more than enough room to further advance the institutionalisation of RRI, with new and innovative methods applied on the basis of the individual capacities and needs of each organisation. As new (international) standards and guidelines might be available, these might include ideas on what to focus in terms of goals, practices and indicators. Stage 7 should focus its evaluation efforts on exploring such new ways of RRI institutionalisation.

More importantly, an anticipatory stance towards future developments of societal, technological, environmental, or medical nature is highly recommended. For instance, **ethics and AI** has become a crucial topic but, adding more mature levels of quantum computing to the mix raises numerous concerns which require answers before such new technologies become widely available.

¹² Please check Häberlein, Lisa; Mönig, Julia Maria and Hövel, Philipp (2021). Gauging the potential societal contributions of research and innovation – a guide for HEFRCs. ETHNA System Project – Deliverable 3.2. This document may help out when it comes to the need for a consolidated and structured research policy – for example in orientation to "The European Charter for Researchers" and "The Code of Conduct for Recruitment" initiated as part of the Human Resources Strategy for Researchers (HRS4R).

¹³ https://op.europa.eu/en/publication-detail/-/publication/2c5a0fb6-c070-11e8-9893-01aa75ed71a1/language-en/format-PDF/source-170166807

G. COMMUNICATING AND CREATING CULTURE

(See: Toolbox **Annexes 6 & 7:** Guidance to create the Internal Communication Plan & Guidance to create the External Communication Plan).

The **success of the ETHNA System depends**, to a large extent, on the ability of your organisation to adopt an ethical culture and establish communication, dissemination, exploitation, and participation mechanisms.

Communication is a powerful tool used to stimulate internal change and encourage decision-making aligned with the blocks and tools of the ETHNA System.

- It **means that** the stakeholders of your organisation are aware of the ETHNA System and use its different blocks.
- It is essential to carry out a constant communication process to support the development of the ETHNA System at the different levels of implementation.
- It is essential maintain a balanced dialogue with your stakeholders to know and incorporate its reasonable expectations.
- It is recommended that your organisation should have an internal and external communication plan to promote the greatest possible awareness of the ETHNA System, in accordance with the guidelines provided in this report.

REMEMBER THAT YOU CAN FIND HELP IN:TOOLBOX TO IMPLEMENT THE ETHNA SYSTEM

- ANNEX 1. GUIDANCE TO CREATE THE ETHNA SYSTEM ACTION PLAN
- ANNEX 2. GUIDANCE TO USE AND TO CREATE THE MONITORING INDICATORS: PROGRESS AND PERFORMANCE
- ANNEX 3. GUIDANCE TO CREATE THE CODE OF ETHICS AND GOOD PRACTICES IN R&I
- ANNEX 4. GUIDANCE TO CREATE THE ETHICS COMMITTEE ON R&I
- ANNEX 5. GUIDANCE TO CREATE THE ETHICS LINE
- **ANNEX 6.** GUIDANCE TO CREATE THE EXTERNAL COMMUNICATION PLAN
- ANNEX 7. GUIDANCE TO CREATE THE INTERNAL COMMUNICATION PLAN

Toolbox to implement the ETHNA System

(Ethical Governance of RRI in Innovation and Research in Research Performing Organisations and Research Funding Organisations)

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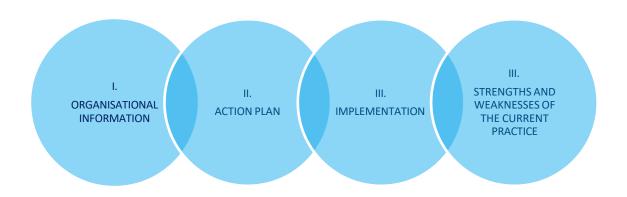
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ANNEX 1: GUIDANCE TO CREATE THE ETHNA SYSTEM ACTION PLAN

OBJECTIVE	SCOPE
The purpose of this guide is to help the Research Performance Organisation (RPO) and Research Funding Organisation (RFO) in the process of drafting their own ETHNA System Action Plan.	This guide is aimed at the people responsible for drafting the ETHNA System Action Plan designated by the top management of the organisation.



1. ORGANISATIONAL INFORMATION

TO DO: Fill in the corresponding own data/information in terms of Staff and Structures and Policies at your RPO or RFO's organisations 's organisation.

May be just a couple lines explaining why the relevant concepts are essential and very important if it should be a correspondence between the name position body and the dimension or key related.

Relevant Concepts: Dimensions of Responsible Innovation	Relevant Concepts: RRI Keys	
 Anticipation 	❖ Integrity	
❖ Inclusion	❖ Gender	
Reflexivity	Public Engagement	
 Responsiveness 	 Open Access 	

An example of the TEMPLATE to be completed will be:

STAFF	Name and position	Dimension (s) and key (s) related.
Researchers with RRI expertise or knowledge (indicate the RRI dimension or key related)		
Administrative or support R&I with RRI expertise or knowledge (indicate the RRI dimension or key re- lated)		
STRUCTURES AND POLICIES		Dimension (s) and key (s) re- lated
Services or units providing support for RRI (indicate the RRI dimension or key related)	Ex. Gender Unit focus on research and innovation perspective	Gender equality
	Ex. Data Protection officer	Open Access
	Ex. Deontological committee	Reflexivity and integrity
	Ex. Database of experts in ethics issues for evaluation of programmes.	Reflexivity, integrity.
Statements and policies	Ex. Members of ALLEA and users of "The European Code of Conduct for Research Integrity"	Integrity
	Ex. An Organisational Ethics Code of Conduct.	
Ongoing activities, action plans, or strategies in R&I	Ex. Data Management Plan	
and related with RRI.	Ex. Gender Equality Plan	
	Ex. Training programme for junior researchers in RRI	

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2. ACTION PLAN

TO DO: Identify the weaknesses or strengths between your organisation and the ETHNA System through a GAP-Analysis. And in response to it define a list of all Proposed ACTIONS to be undertaken by the organisation for the implementation of the ETHNA System.

NOTE:

- > The Action Plan is encouraged to be published and easily accessible on the website of the organisation.
- The Action Plan **should include the necessary actions** for the implementation of the ETHNA System **according to the level of commitment** chosen by the organisation.
- ➤ The Action Plan should allow for the evaluation of the organisational progress and performance with the ETHNA System after a three-year period.

STEP II.1: Identify **the weaknesses or strengths** between your organisation and the ETHNA System through a GAP-Analysis.

Identify those gaps based on the Progress Indicators in reference to each one of the blocks:

() RRI Office(r) // () CEGP // () Ethics Committee on R&I // () Ethics Line // () Internal and External Communication Plan.

(See following section III for more detailed information on how to proceed together with Annex 2 in relation to Progress Indicators, pag....)

STEP II.2: Please fill in a **list of all Proposed ACTIONS to be undertaken** in the ETHNA System by the organisation to address the identified weaknesses or strengths in the GAP-Analysis.

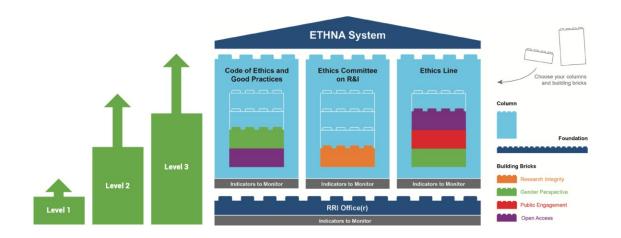
Proposed ACTIONS

	GAP with ETHNA System	Timing (at least by year(s)/ quarter(s)/ semester(s))	Responsible Unit	Progress Indicator	Performance Indicator
ACTION 1					
ACTION 2					
ACTION 3					
ACTION 4					
ACTION 5					
ACTION 6					
ACTION 7					

NOTE: Add as many actions as needed

3. STRENGTHS AND WEAKNESSES OF THE CURRENT PRACTICE

TO DO: Please provide an overview of the strengths and weaknesses of the current practices under the ethical research and innovation governance structure at your RPO or RFO's organisation.



RRI Office(r)
Strengths and weaknesses (max. 800 words)
Code of Ethics and Good Practices in R&I (CEGP)
Strengths and weaknesses (max. 800 words)
Ethica Committee on DOI
Ethics Committee on R&I
Strengths and weaknesses (max. 800 words)
Ethics Line
Ethics Line
Ethics Line
Ethics Line
Ethics Line

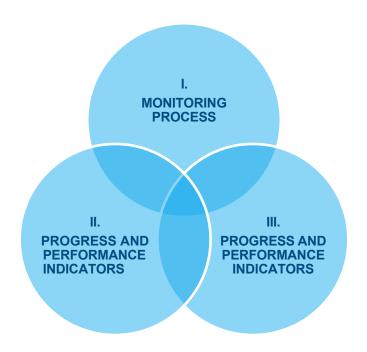
4. IMPLEMENTATION

TO DO: Please provide in detail the aspects of the progress indicators (see Annex. 2).
A general overview of the expected implementation process of the Action Plan:
(max. 1000 words)
How will the RRI Office(r) manage the timely and efficient implementation of the Action Plan?
Detailed description and justification (max. 500 words)
How will the organisation proceed to align their policies and strategies with the ETHNA System? How will the organisation ensure that the ETHNA System is recognised in their research strategy as the overarching R&I policy?
Detailed description and justification (max. 500 words)
How will the organisation ensure that the proposed actions are implemented?
Detailed description and justification (max. 500 words)

How will the organisation monitor the progress (timeline)?
Detailed description and justification (max. 500 words)
How will the organisation measure progress (indicators) with consideration of the next assessment?
Detailed description and justification (max. 500 words)
Additional remarks or comments about the proposed implementation process:
(max. 1000 words)

ANNEX 2: GUIDANCE TO USE AND CREATE THE MONITORING INDICATORS: PROGRESS AND PERFORMANCE

OBJECTIVE	SCOPE
The objective of this guidance is to help the Research Performance Organisation (RPO) and the Research Funding Organisation (RFO) to define the Progress Indicators and the Performance Indicators that should be used to monitor and promote the improvement of the ETHNA System within the organisation.	This guide is aimed towards the RRI Office(r) and should be related to the Action Plan of the ETHNA System defined by the RPO or RFO's organisations.



1. MONITORING PROCESS

The **progress indicators** will be used to check that the RPO or RFO's organisations is consolidating all phases of the process. These **are common for any organisation** that wants to implement the system.

- ➤ All actions are *required* in the foundation block.
- > Some of the actions are also required in the columns to ensure sufficient efficiency in the implementation.
- ➤ However, other actions are only recommended to ensure a commitment to the ethical governance that covers the RRI dimensions and keys.
- > Some of the actions may not be applicable to some organisations in this case the organisation should report why the action is not applicable.

The **performance indicators**:

- > Will be used to show the implementation actions that have been performed and their effect.
- > Will be fully linked to the Action Plan.
- > Those performance indicators are merely examples.
- **Each organisation should insert their own adjusted actions** in this table that they believe will best show their achievement of progress.

Below are tables of **progress and performance indicators for each of the foundation and column blocks** that could be configured by the ethical governance R&I system (ETHNA System) in the organisation.

2. PROGRESS AND PERFORMANCE INDICATORS

RRI Office (r)					
Progress Indicators see page 14	Performance Indicators see page 15				
Code of Ethics and	Good Practices in R&I				
Progress Indicators see page 16	Performance Indicators see page 17				
Permanent Ethic	Permanent Ethics Committee on R&I				
Progress Indicators see page 18	Performance Indicators see page 19				
Ad Hoc Ethics	Committee on R&I				
Progress Indicators see page 20	Performance Indicators see page 21				
Ethics Line					
Progress Indicators see page 22	Performance Indicators see page 23				

RRI Office(r) – Progress Indicators

NOTE: At least one key should be chosen, but if you are at a Level 3 Commitment then all the keys should be covered.

Progress	s Actions	Required	Realised	Not appli- cable
	ou performed a self-assessment of the y preconditions to be able to implement the System?	√		
precondit met?	taken actions to ensure that all necessary ions for implementing the ETHNA System are	V		
Have you	designated an RRI Office(r)?	√		
Have you	established your core RRI Office(r) duties?	√		
Have you implemen	designed an Action Plan for RRI Office(r)	√		
generate	designed and implemented actions to internal awareness of the ETHNA System?	√		
	designed and implemented actions to publicise of ethical governance of R&I in line with the System?	V		
	designed and started actions to tackle RRI earch Integrity?	√		
Have you RRI key 0	designed and implemented actions to tackle Gender?	√		
	designed and started actions to tackle RRI n Access?	√		
	designed and implemented actions to tackle Public Engagement?	√		
erning bo search, G	RRI Office(r) been linked to any RPO/RFO gov- dy (e.g., Office of the Vice Chancellor for Re- Governing Board, Spanish Ministry of Science, ce Quality Agency, etc.)?	V		
Have you accounta progress	carried out communication actions offering bility to RPO or RFO stakeholders for the and impacts of the ETHNA System (e.g., g report, impact report, web dashboard,	√		

Performance indicators (an example) RRI Office(r)

Indicator	Number
Indicate the number of actions you have implemented to generate internal awareness of the ETHNA System (e.g.: Newsletter, information congress, corporate web banner, etc.).	
Indicate the number of actions you have taken to self-assess the preconditions required for implementing the ETHNA System (e.g.: Benchmarking, Situation analysis, materiality survey, etc.).	
Indicate the number of actions you have taken to meet the preconditions required for implementing the ETHNA System (e.g.: request for technical resources, request for a suitability study, request for financial resources, etc.).	
Indicate the number of activities you have carried out to extend the idea of ethical governance of R&I in line with the ETHNA System (e.g.: public presentation of the system, monthly newsletter, information session, corporate web banner, infographics and visual pills, insertions in social networks, etc.).	
Indicate the number of proposals, suggestions, queries, complaints, alerts or report received (notifications).	
Indicate the number of actions implemented to tackle RRI keys: Integrity, Gender, Open Access and Public engagement.	
Indicate the number of RPO/RFO governing bodies linked to the RRI Office(r) (e.g., Office of the Vice-Rector for Research, Governing Board, Spanish Ministry of Science, Science Quality Agency, etc.).	
Indicate the number of times the collaboration of the RPO/RFO governing bodies has been requested during the last year.	
Indicate the number and type of RPO/RFO committees and/or services related to RRI with which the RRI Office(r) currently interacts or cooperates (e.g., Data Management Officer, Gender Unit, Professional Ethics Committee, Research Bioethics Committee, etc.).	
Indicate the number of times the collaboration of the RPO/RFO Committees and/or services related to RRI with which the RRI Office(r) currently interacts or cooperates (e.g., Data Management Officer, Gender Unit, Professional Ethics Committee, Research Bioethics Committee, etc.) has been requested during the last year.	
Indicate the number and type of communication actions that the RRI Office(r) has carried out during the last year with the aim of being accountable to stakeholders for the progress and impact of the ETHNA System (e.g., monitoring report, impact report, web dashboard, newsletter, etc.).	

Code of Ethics and Good Practices in R&I – Progress Indicators

NOTE: At least one key should be chosen, but if you are at a Level 3 Commitment then all the keys should be covered.

Progress Actions		Required	Realised	Not appli- cable
	ointed a working group to P of the ETHNA System?	√		
Has the working group to proposed CEGP begun i	adapt the ETHNA System's ts duties?	√		
Have you established the responsibilities of member adapt the ETHNA System	ers of the working group to	V		
	e relevant aspects to be CEGP taking into account the nnovation and/or funding	V		
Have you defined a parti ETHNA Systems?	cipatory CEGP based on the	√		
Have you developed a fire	st draft of your CEGP?	√		
Have you decided if the aspects?	CEGP will cover Integrity			
Have you decided if the aspects?	CEGP will cover Gender			
Have you decided if the Access aspects?	CEGP will cover Open			
Have you decided if the Engagement aspects?				
Have you launched a pa RPO/RFO stakeholders your CEGP?	rticipatory process with to discuss the first draft of	\checkmark		
	drawn up a second draft of relevant aspects drawn from with stakeholders?	V		
	ed on the ETHNA System	V		
Have you defined an integrocess?	rnal CEGP awareness	V		
(website, other tools offe the Code of Ethics and G				
Have you established an	. 51			
Have you established a property compliance monitoring p				

Performance indicators (an example) Code of Ethics and Good Practices in R&I

Indicator	Number
Indicate the number of actions implemented to generate internal awareness of the contents of the CEGP and its benefits (e.g., corporate web banner, institutional email, insertions in social networks, specific seminars, etc.).	
Indicate the number of actions implemented during the past year to generate external awareness of the contents of the CEGP.	
Indicate the number of actions implemented during the last year to train RPO/RFO professionals in the contents of the CEGP. (e.g., Transversal training course, etc.).	
Indicate the number of actions implemented during the last year to improve and/or update the contents of the CEGP.	
Indicate the number of actions implemented during the last year to monitor the level of compliance by professionals and by the institution according to the CEGP values/principles and behaviours.	
Indicate the number of notifications received regarding complaints, warnings and/or reports of possible non-compliance with the CEGP.	
Indicate the number of notifications received concerning suggestions for the improvement and/or proposed good practices (behaviours or procedures) that could be included as good practices in the contents of the CEGP.	
Indicate the number of actions implemented to tackle the RRI keys: Integrity, Gender, Open Access and Public engagement (e.g., Transversal training, awareness day, etc.).	
Indicate the number of actions implemented to tackle the RRI keys: Integrity, Gender, Open Access and Public engagement (e.g., Transversal training, awareness day, etc.).	
Indicate the number of internal and/or external committees and/or services related to RRI the CEGP is linked to (e.g., Ethics Committee on R&I Data Management Officer, Gender Unit, Professional Ethics Committee, Research Bioethics Committee, etc.).	
Indicate the number of times internal and/or external committees and/or services related to RRI with which the CEGP is linked has requested collaboration during the last year.	

Permanent Ethics Committee on R&I – Progress Indicators

NOTE: At least one key should be chosen, but if you are at a Level 3 Commitment then all the keys should be covered.

Р	Progress Actions	Required	Realised	Not applicable
	lave you decided and made explicit that the thics Committee on R&I will be permanent?	V		
	lave you established the composition of the Permanent Ethics Committee on R&I?	√		
b	lave you established and clearly set out the asic functions of the Permanent Ethics Committee on R&I?	$\sqrt{}$		
g	Has an action protocol been developed as a uide for the operation of the Permanent Ethics Committee on R&I?	$\sqrt{}$		
in	Have you designed an Action Plan for mplementing the Permanent Ethics Committee n R&I?			
	Have you held a first meeting to constitute the Permanent Ethics Committee on R&I?			
to P	Have you designed and implemented actions or promote the Code of Ethics and Good Practices in R&I or, if you do not have one, the international guidelines on RRI?			
th C	lave you carried out actions aimed at training ne members of the Permanent Ethics Committee on R&I in discussing and resolving onflicts related to RRI?			
	las the Ethics Committee covered aspects on RRI key Research Integrity?			
R	las the Ethics Committee covered aspects on RRI key Gender Perspective?			
R	las the Ethics Committee covered aspects on RRI key Open Access?			
R	las the Ethics Committee covered aspects on RRI key Public Engagement?			
to re	Have you established and implemented actions of consider, issue reports and make ecommendations on principles related to R&I involving ethics and professional ethics?			
m	lave you designed and implemented actions to nonitor and control the safeguards required for thical and responsible R&I?			
a th B	las the Ethics Committee on R&I been linked to iny RPO/RFO governing body (e.g., Office of ne Vice-Rector for Research, Management Board, Ministry of Science, Science Quality agency, etc.)?			
o' th	Have you carried out communication actions to after accountability to RPO/RFO stakeholders for the progress and performance of the Permanent Ethics Committee on R&I (e.g., monitoring report, mpact report, web dashboard, newsletter, etc.)?			

Performance indicators (an example) Permanent Ethics Committee on R&I

Indicator	Number
Indicate the number, type, and frequency of actions the organisation has taken to promote the Code of Ethics and Best Practices in R&I or, if they do not have one, the RRI international guidelines.	
Indicate the number of actions implemented to tackle on RRI keys: Integrity, Gender, Open Access and Public engagement.	
Indicate the number of meetings (ordinary, extraordinary, ad hoc, etc.) held by the Ethics Committee on R&I during the last calendar year.	
Indicate the number of actions aimed at reflecting, reporting and making recommendations on principles related to R&I ethics and professional ethics (e.g.: complaints, proposals for improvement, management issues, activity report, etc.).	
Indicate the number of issues discussed and addressed at meetings of the Standing Committee on R&I during the last year (e.g.: queries, alerts, etc.).	
Indicate the number of decision reports (suggestions, complaints, warnings, etc.) issued by the Ethics Committee on R&I during the last year.	
Indicate the number of RPO/RFO governing bodies linked to the Permanent Ethics Committee on R&I (e.g., Office of the Vice-Rector for Research, Governing Board, Spanish Ministry of Science, Science Quality Agency, etc.).	
Indicate the number of times that RPO/RFO governing bodies have requested the collaboration of the Permanent Ethics Committee on R&I.	
Indicate the number of RPO/RFO committees or departments with which the Permanent Ethics Committee on R&I currently interacts or cooperates (e.g., Data Management Officer, Gender Unit, Professional Ethics Committee, Research Bioethics Committee, etc.).	
Indicate the number of times RPO/RFO committees or departments with which the Permanent Ethics Committee on R&I currently interacts or cooperates has requested collaboration during the last year.	
Indicate the number of communication actions aimed at reporting to RPO/RFO stakeholders on the progress and performance of the Permanent Ethics Committee on R&I (e.g., monitoring report, impact report, web dashboard, newsletter, advertising inserts etc.).	

Ad Hoc Ethics Committee on R&I – Progress Indicators

NOTE: At least one key should be chosen, but if you are at a Level 3 Commitment then all the keys should be covered.

Progress Actions	Required	Realised	Not appli- cable
Has the organisation taken an explicit that the Ethics Committee on R&I will be ad hoc?	√		
Has the organisation clearly set out the basic functions of the ad hoc Ethics Committee on R&I and the person responsible for it?	V		
Has an action protocol been developed as a guide for the operation of the ad hoc Ethics Committee on R&I?	V		
Has the organisation developed a database of experts to provide members for the ad hoc Ethics Committee on R&I or to advise it every time it meets?	V		
Have you designed and implemented actions to tackle RRI key: Integrity?			
Have you designed and implemented actions to tackle RRI key: Gender?			
Have you designed and implemented actions to tackle RRI key: Open Access?			
Have you designed and implemented actions to tackle RRI key: Public engagement?			
Has the organisation designed and implemented actions to promote the Code of Ethics and Good Practices in R&I or, if they do not have one, the international guidelines on RRI, among the experts making up the database for the ad hoc Ethics Committee on R&I?			
Has the organisation created a guide to inform the experts that appear in the database for the Ad Hoc Ethics Committee on R&I when discussing and resolving conflicts related to RRI?			
Has the ad hoc Ethics Committee on R&I been linked to any RPO/RFO governing body (e.g., Office of the Vice-Rector for Research, Management Board, Ministry of Science, Science Quality Agency, etc.)?			
Has the organisation offered accountability to its stakeholders for the progress and performance of the ad hoc Ethics Committee on R&I (e.g., monitoring report, impact report, web dashboard, newsletter, etc.)?			

Performance indicators (an example) Ad Hoc Ethics Committee on R&I

Indicator	Number
Indicate the number, type, and frequency of actions the organisation has taken to publicise the Code of Ethics and Best Practices in R&I or, if they do not have one, the RRI international guidelines.	
Indicate the number, type, and frequency of actions that have been performed during the last year to guide the experts and advisers who have participated in the Ad Hoc Ethics Committee on R&I in the deliberation and conflict resolution processes.	
Indicate the number, type, and frequency of issue discussed and addressed at the meetings of the Ad Hoc Committee on R&I during the last calendar year.	
Indicate the number, type, and frequency of decision reports (suggestions, complaints, warnings, etc.) issued by the Ad Hoc Ethics Committee on R&I during the last year.	
Indicate the number, type, and frequency of actions implemented to tackle the RRI keys: Integrity, Gender, Open Access, and Public Engagement.	
Indicate the number and type of RPO/RFO governing bodies linked to the Ad Hoc Ethics Committee on R&I (e.g., Office of the Vice-Rector for Research, Governing Board, Spanish Ministry of Science, Science Quality Agency, etc.), as well as the frequency that it has requested collaboration during the last year.	
Indicate the number and type of RPO/RFO committees or departments with which the Ad Hoc Ethics Committee on R&I has cooperated during the past year (e.g., Data Management Officer, Gender Unit, Professional Ethics Committee, Research Bioethics Committee, etc.), as well as the frequency that it has requested their collaboration during the last year.	
Indicate the number, type, and frequency of communication actions aimed to report to the RPO/RFO stakeholders on the progress and performance of the Ad Hoc Ethics Committee on R&I (e.g., monitoring report, impact report, web dashboard, newsletter, etc.).	

Ethics Line – Progress Indicators

NOTE: At least one key should be chosen, but if you are at a Level 3 Commitment then all the keys should be covered.

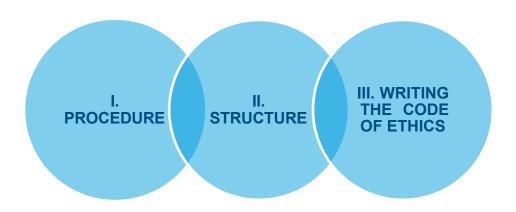
Progress Actions	Required	Realised	Not appli- cable
Has the organisation designated a person responsible for the Ethics Line?	V		
Have you designated and made explicit the group of experts or body/bodies responsible for managing and resolving notifications received via the Ethics Line (e.g., Permanent or Ad Hoc Ethics Committee, RRI Office(r), etc.)?	V		
Have you defined and made explicit the Ethics Line's communication channels (e-mail, telephone, online form, app, etc.)?	V		
Have you defined and made explicit the type of notifications that can be made via the Ethics Line (e.g., suggestions, proposals, queries, complaints, alerts and/or reports)?	V		
Have you defined and made explicit the way in which the information collected through the Ethics Line is collected and managed (e.g., confidentially, anonymously or publicly)?	V		
Have you defined and made explicit the way in which the information collected and managed through the Ethics Line is archived?	\checkmark		
Have you defined and made explicit the basic functions of the Ethics Line?	\checkmark		
Have you drawn up an action protocol as an operating guide for receiving and managing notifications via the Ethics Line (phases, timing, prevention, correction, promotion and dissemination actions, investigation processes for warning or complaint notifications, etc.)?	$\sqrt{}$		
Have you designed and implemented actions to tackle RRI key: Integrity?			
Have you designed and implemented actions to tackle RRI key: Gender?			
Have you designed and implemented actions to tackle RRI key: Open Access?			
Have you designed and implemented actions to tackle RRI key: Public engagement?			
Have you defined a process to generate Frequently Asked Questions (FAQ)?			
Have you elaborated and specified an updated document for Frequently Asked Questions (FAQ)?			
Have you designed and implemented some kind of process to monitor the proper operation of the Ethics Line?	V		
Have you carried out communication actions aimed at improving the knowledge and use of the Ethics Line by the RPO's/RFO's internal and/or external stakeholders?	V		
Have you carried out communication actions to offer accountability to RPO/RFO stakeholders for the progress and performance of the Ad Hoc Ethics Committee on R&I (e.g., monitoring report, impact report, web dashboard, newsletter, etc.)?	V		

Performance indicators (an example) Ethics Line

Indicator	Number
Indicate the number of Ethics Line communication channels (e.g.: e-mail, telephone, online form, app, etc.).	
Indicate the number of actions implemented to tackle the RRI keys: Integrity, Gender, Open Access and Public engagement (e.g.: Inclusion of the keys in the notification forms).	
Indicate the number of notifications sent in the last year (e.g.: inquiries, complaints, etc.)	
Indicate the number, type, and frequency of notifications the Ethics Line has received in the last year.	
Indicate the number of notifications sent in the last year (e.g.: inquiries, complaints, etc.)	
Indicate the number of reports you have completed in the last year (e.g.: Conflict of interest, buying, etc.)	
Indicate the number, type, and frequency of reports the Ethics Line has made in the last year.	
Indicate the number of investigation procedures for notifications of complaints, warnings or reports carried out in the last year (e.g.: Conflict of interest, buying, etc.).	
Indicate the number of notifications satisfactorily resolved.	
Indicate the number of notifications that have remained unresolved in the last year.	
Indicate the number of complaints, warnings and reports received concerning reprisals against people who have used the Ethics Line.	
Indicate the number of RPO/RFO committees, departments and/or services with which the Ethics Line has cooperated during the past year (e.g., Data Management Officer, Gender Unit, Professional Ethics Committee, Research Bioethics Committee, etc.).	
Indicate the number of times that RPO/RFO committees, departments and/or services have requested the collaboration of your Ethics Line.	
Indicate the number of communication actions aimed at reporting to RPO/RFO stakeholders on the progress and performance of the Ethics Line (e.g., monitoring report, impact report, web dashboard, newsletter, etc.).	

ANNEX 3. GUIDANCE TO CREATE THE CODE OF ETHICS AND GOOD PRACTICES IN R&I (CEGP)

OBJECTIVE	SCOPE
The purpose of this guide is to help the Research Performance Organisation (RPO) and Research Funding Organisation (RFO) in the process of adapting or creating a Code of Ethics and Good Practices in R&I (CEGP).	This guide is aimed at the people responsible for drafting the Code of Ethics and Good Practices R&I and its implementation. It should help to make the best decisions in performance research and innovation (RPO's activity). It should also help to develop the calls and assessment of programmes or projects (RFO's).



1. PROCEDURE

(This document does not purport to be an exhaustive analysis of all the existing resources. It does include excerpts from guides and examples to illustrate the process as much as possible).

The **process of adapting or creating** the CEGP in an organisation committed to the system and coordinated by the RRI Office can be performed using **different tools and methodologies such as:**

Prior consultation with members of the organisation.

- > This can be useful to learn researchers' perceptions, their knowledge, and their expectations in different areas of RRI in advance.
- This may facilitate a much more horizontal and bottom-up approach to the writing process.
- ➤ This can be carried out through different channels. For example, a **survey** of all the researchers in an organisation or through **discussion groups** with these members.
- ❖ Development of a Guidance Document for the drafting process of the CEGP:

This Guidance Document is expected to follow these steps:

FIRST STEP	Adapt or create a draft of the Code of Ethics and Good Practices in R&I to the RPO or RFO's organisations 's organisations based on the level of commitment already accepted by the organisation.
SECOND STEP	Create an R&I risk map with possible situations of research misconduct for the RPO or RFO's organisations 's organisations as well as a selection of aspects that should be included in the Code of Ethics and Good Practices in R&I with consideration of the activity(ies) of the organisation.
THIRD STEP	Prepare the first draft following section 3. Writing the CEGP (see page 26).
FOURTH STEP	Develop a process of discussion and feedback among the different stakeholders identified as relevant in the previous phases of the system (RRI Office).
FIFTH STEP	Prepare a second draft.
SIXTH STEP	Receive feedback and approval by the competent authorities of the Code of Ethics and Good Practices in R&I.

NOTE:

- There is no single "right" way of carrying out the process, although it is advisable to do it with participation.
- It is important that the Code of Ethics is not imposed from the top down.
- > The ETHNA System suggests be carried out by the working group (see page 14 of the Guide).
- It is important that **different groups of stakeholders** cooperate and participate in the Code of Ethics.
- The development process for the Code of Ethics can serve to generate an RRI culture (especially when this process is realised in a participatory manner).
- It is important to consult or consider the existence of international guides that include key information, instructions, policies or regulations on different aspects of RRI that could be very useful for those responsible for their own Code of Ethics.

2. STRUCTURE

> The structure may take different forms depending on how each organisation adapts the CEGP to their nature and policies in the different areas of RRI.

It is important to include the following ASPECTS:

- Definition of commitments in the different areas of RRI: Integrity, Gender, Open Access, and Public Engagement.
- ❖ Details of best practice commitments and responsibilities at both the professional and organisational level (i.e., what can be expected from the organisation and what can be expected from the researcher).
- Inclusion of the procedure for creating, monitoring, and updating the code.

Remember this is a "living" document that can be adapted and improved over time.

3. WRITING THE CEGP

This section provides guidance for organisations to draft their own CGGP.

TO DO: Writing the CEGP depending on the final CEGP structure agreed (see table on the right for options).

Code of Ethics and Good Practices in R&I

STRUCTURE

Code of Ethics and Good Practices in R&I could include the following sections:

- A. Open letter from the organisation
- B. The organisation's principles and values in R&I
- C. Professional and organisational good practices in terms of:
 - a. Research Integrity;
 - b. Gender Perspective;

 - c. Open Access;d. Public Engagement.
- D. Viable method to monitor and enforce compliance with the Code of Ethics and Good Practices in R&I

Follow the structure

An open letter from the organisation

It allows the Code of Ethics to be contextualised, as well as provide an initial approach to the commitment of the organisation.

Even though the content can vary, it is recommended that:

- The letter should not be too long and the language should be easily comprehensible.
- It may include a demonstration of commitment from the top management and the whole organisation to the principles, values, and practices in the Code of Ethics.
- Link to the vision, mission, and strategic plans of the organisation, as well as their articles of association and code of ethics, if it has them.
- > Reflect the participatory procedure followed in the drafting process.
- **Encourage the whole organisation** to be aware of the CEGP, follow it, improve it, and uphold compliance with it, to generate an ethical and responsible culture.

The organisation's principles and/or values in R&I

It includes the principles and values that guide R&I activity, are then shaped into good practices that are expected to be followed by both the researchers and organisations.

It is recommended that:

- The actions of the CEGP is expected to be expressed using language of principle or values.
- > It is relevant to link the Code of Ethics to other documents and statements from the organisa-
- It is relevant to link the Code of Ethics to the vision and mission of the organisation.
- The Code of Ethics should be in line with international guidelines and standards.
- The organisation includes 4 to 7 principles.

Key sources

The working group can be inspired by the principles formulated by several scientific communities or academic societies.

- IEEE Code of Conduct. These principles and values have been drawn from: the European
 Code of Conduct for Research Integrity (2017);
- The European Charter and Code for Researchers (2005);
- UNESCO Recommendation on Science and Scientific Researchers (2017);
- The <u>Netherlands Code of Conduct for Research Integrity</u> (2018).
- Research Integrity Practices in Science Europe Member Organisations (2016)

International Guidelines & Examples of Principles & Values

(See below a Set of Boxes that include references for international guidelines as well as provide examples that have already been developed).

- > The aim is to provide clear visualisation of the type of content that can be included in a code.
- ➤ It is important for each organisation to set out their principles, values, good practices in line with their disciplines.

Examples of principles and/or values in R&I	Example of Principles: The European Code of Conduct for Research Integrity (2017)
 Accountability Exhaustiveness Freedom Honesty Impartiality Independence Recognition Respect Responsibility Thoroughness Transparency Veracity 	Reliability in ensuring the quality of research, reflected in the design, the methodology, the analysis and the use of resources. Honesty in developing, undertaking, reviewing, reporting, and communicating research in a transparent, fair, full and unbiased way. Respect for colleagues, research participants, society, ecosystems, cultural heritage, and the environment. Accountability for the research from idea to publication, for its management and organisation, for training, supervision, and mentoring, and for its wider impacts.



Example of Principles

Netherlands Code of Conduct for Research Integrity (2018)

- Honesty: Honesty means, among other things, reporting the research process accurately, taking alternative opinions and counterarguments seriously, being open about margins of uncertainty, refraining from making unfounded claims, refraining from fabricating or falsifying data or sources and refraining from presenting results more favourably or unfavourably than they actually are.
- 2. **Scrupulousness**: Scrupulousness means, among other things, using methods that are scientific or scholarly and exercising the best possible care in designing, undertaking, reporting, and disseminating research.
- 3. Transparency: Transparency means, among other things, ensuring that it is clear to others what data the research was based on, how the data were obtained, what and how results were achieved and what role was played by external stakeholders. If parts of the research or data are not to be made public, the researcher must provide a good account of why this is not possible. It must be evident, at least to peers, how the research was conducted and what the various phases of the research process were. At the very least, this means that the line of reasoning must be clear and that the steps in the research process must be verifiable.
- 4. Independence: Independence means, among other things, not allowing the choice of method, the assessment of data, the weight attributed to alternative statements or the assessment of others' research or research proposals to be guided by non-scientific or non-scholarly considerations (e.g., those of a commercial or political nature). In this sense, independence also includes impartiality. Independence is required at all times in the design, conduct and reporting of research, although not necessarily in the choice of research topic and research question.
- 5. **Responsibility**: Responsibility means, among other things, acknowledging the fact that a researcher does not operate in isolation and hence taking into consideration within reasonable limits the legitimate interests of the researcher of human and animal test subjects, as well as those of commissioning parties, funding bodies and the environment. Responsibility also means conducting research that is scientifically and/or societally relevant.

Principles can be regarded as 'virtues' of a good researcher, guiding them towards the right choices in all kinds of circumstances. The most important of these are specified in chapter 3, in the form of standards. By their very nature, however, principles are less subject to change than the standards they give rise to, which sometimes need to be adapted or extended as research practices change. All such revisions must remain true to the principles underlying them.

Principles are also guiding factors in cases not covered by the standards described in chapter 3. In such cases, even if an action is in conflict with a principle, as long as it violates none of the standards itemised in chapter 3 nor any additional standard established by a discipline or organisation, then sanctions as mentioned in chapter 5 will not be imposed.

Principles may sometimes clash. On occasion, for example, responsibility towards a commissioning party or the need to safeguard public security restricts the extent to which a researcher can be transparent. In such cases, it will be necessary to determine which principles should be given priority. Where possible and necessary, these considerations have already been taken into account in drafting the standards listed in chapter 3.



Example of Values and basic principles

Code of Good Practice in Research. Autonomous University of Barcelona (2020)

Freedom

The principle of freedom refers to both the choice and the conduct of research. However, this freedom is limited by the ethical principles contained in the aforementioned UAB Statutes, in the corresponding agreements and international declarations, and in the legal precepts applicable to each case, which are referred to at the end of this Code.

Honesty

Researchers must be honest in their research activities and also towards those of other researchers and the organisation itself. This applies to all research work, including initial formulation of hypotheses, methodological design, data analysis, publication of results, acknowledgement of contributions from other researchers and arrangements for review and assessment.

Researchers must clearly, unequivocally, and explicitly acknowledge collaboration and contributions, both direct and indirect, from colleagues.

Researchers must respect industrial or intellectual property rights and must not engage in plagiarism or self-plagiarism or manipulate results.

Rigour

Researchers' honesty itself implies rigour when conducting their own research. Researchers must therefore carry out an accurate process of discovery and interpretation. This requires a detailed revision of results obtained before these are published and, should major errors be detected after publication, these must be rectified publicly and explicitly as soon as possible.

Conflicts of interest

Conflicts of interest are present in all facets of human activity: appearing whenever a criterion applied to a primary interest (for example, knowledge of a subject area, selection of persons, or appraisal of research work) could be unduly influenced by a secondary interest (for example, financial gain or heightened status for the researcher or direct associates).

It is not intrinsically unethical to be in a situation of conflict of interest: what is needed is to recognise the situation and manage it appropriately. Therefore, researchers must pay considerable attention to possible conflicts of interest that they might incur. If any are detected, they should be avoided or else made public and addressed appropriately in accordance with the policies of contracting bodies, evaluation bodies or publishers.

Responsibility

As members of the UAB, researchers must ensure that their research is carried out in conformity with the principles expressed in the UAB Statutes, and with the terms and conditions set by the funding entity or agreed between the UAB and funding bodies. This includes ensuring the following.

- The research follows both economic and environmental sustainability criteria.
- The research is conducted as set out in the original proposal submitted to the funding entity, unless amendments have been agreed upon.
- The funding is used only for the objectives established, unless authorisation is obtained for other uses
- Reports reflect the work done exactly and are submitted on time.
- Conditions on publication, authorship and intellectual property are met.

Researchers must appropriately and responsibly report to the Research Commission any known case of malpractice that violates these principles.

Professional and organisational good practices in terms of:

Integrity

Research integrity is a difficult concept to define precisely, but it is undoubtedly an essential objective in promoting RRI.

Defines their commitments and expectations of the researchers.

Key sources

- ALLEA. The European Code of Conduct for Research Integrity;
- Good practice in research: authorship UKRIO (2017);
- Committee on Publications Ethics COPE;
- Council of Science Editors:
- International Committee of Medical Journal Editors (ICMJE);
- Taxonomy CRediT.

NOTE: It would be relevant to develop the good practices and the professional ethics taking into consideration the different disciplines existing at your organisation and their specificities. **SARTORI guideline** is a very useful tool to fulfil this objective.

At the organisational level

It is encouraged to promote integrity. This can be done with a policy that promotes a specific research environment.

The organisation may consider the **INCLUSION of certain ASPECTS** such as:

- Promote awareness and ensure a prevailing culture of research integrity
- Define competent bodies and procedures for the identification, handling, and management of scientific misconducts
- Demonstrate leadership by providing clear policies and procedures on good research practice and the transparent and proper handling of violations (e.g., regarding research integrity, gender perspective, open access, or public engagement)
- Support proper infrastructure for the management and protection of data and research materials in all their forms (encompassing qualitative and quantitative data, protocols, processes, other research artefacts, and associated metadata) that are necessary for reproducibility, traceability, and accountability
- Reward open and reproducible practices in hiring, promotion, or funding of researchers
- Ensure that researchers have or receive rigorous training in research design, methodology, and analysis. To decide the training and supervision process concerning the values, principles, and behaviours included in the CEGP. It could be implemented through:
 - The establishment of a plan for trainings about the CEGP for all members of the organisation
 - Allow senior researchers, research leaders, and supervisors to mentor their team members
 - Offer specific guidance and training to properly develop, sign, and structure their research activity and to foster a culture of research integrity.

Regarding the content of the CEGP, it is important to include a description of good practices in research in diverse matters, such as:

- authorship;
- collaborative working;
- · research procedures;
- publication and dissemination;
- curriculum vitae description;
- review in scientific publications;
- monitoring and training;
- · conflicts of interests; and
- · use and acknowledgement of financial resources.

Various **aspects often generate conflicts** in integrity investigation processes. It is suggested to implement the following actions:

- define who is the author and then decide the order of their names in the work;
- comply with the expectations of an objective review process;
- · include honest disclosure of conflicts of interest.

At the individual level: defining good practices in authorship

TO DO: When drafting the code, it is essential to know the concerns of the researchers in the organisation.

It can be extremely useful to follow international guidelines as part of the code drafting process.

The CEGP development working group can suggest their own **Authorship Integrity Guidelines**, for example, as follows:

Identifying authors

TO DO: Consider anyone who makes a clear and active contribution to research as an author.

NOTE: Authors must meet four conditions:

- Made a substantial contribution to the creative process
- Critically reviewed the publications or made contributions
- Able to present their personal contribution in detail
- Accept, in writing, the final draft of the original manuscripts to be processed for registration or publication

The digital profile of the researcher

TO DO: Create a digital profile on the main identification platforms involved in their area of research and use the same name on these platforms and in publications.

Order of authors

TO DO: There are different customs and practices in different areas. It is encouraged to consider some of the following ones recognised as best practices.

- When there are different levels of contribution to authorship:
 - The first author is the one who has made the greatest effort in the research or publication and in the preparation of the first draft.
 - The rest of the authors can follow according to their degree of contribution and involvement, an order depending on their importance, or alphabetical order.
- If all the authors have made the same effort in a publication, then alphabetical order will be used. It should state that all authors have made the same contributions.

Authorship of reports

TO DO: Authorship of data collection, sampling, analysis, or reports performed by third parties should be acknowledged in the acknowledgements section.

Such participation does not necessarily justify authorship. It is advisable to establish a communication and authorship plan for research and innovations in advance.

Correcting errors and public retraction

TO DO: When an error is detected that alters the value of the published results, the authors should publish a correction in the same journal or medium as soon as possible.



Example on authorship and conflict of interest in a University

The University of Sheffield's Policy on Good Research & Innovation Practices

Decisions about authorship (e.g., the criteria for deciding who can be named as an author and the author sequence) and about acknowledgement (i.e., people who have contributed but who do not fulfil the authorship criteria) normally result from a process of ongoing communication, reflection and/or revision as the project evolves over its duration.

The University trusts its researchers, as in all other matters, to remain professional and reasonable when communicating on this subject; the goal being to ensure that all individuals who fulfil authorship criteria are named as authors and all other contributors are acknowledged.

Open discussion with colleagues and collaborators at an early stage is advised to avoid problems arising later on.

Minimal acceptable practices in authorship and acknowledgement which the University expects to be followed:

(...) v. Authorship should be restricted to individuals who have made a substantial intellectual contribution to the research, meaning to all of the following:

- conception and design, and/or collection and/or analysis and interpretation of research data;
 AND
- drafting the research output (e.g., article, paper, book) or revising it critically for important intellectual
- content; AND
- final approval of the version of the research output to be published; AND
- agreement to be accountable for all aspects of the research output, ensuring that questions
 related to the accuracy or integrity of any part of the research output are appropriately investigated and resolved. (Securing research funding, providing space, collecting research data, or
 managing or supervising researchers involved in the project do not by themselves justify authorship).

[This is the definition of authorship criteria used by the International Committee of Medical Journal Editors (ICMJE), which many journals have adopted. Where individual researchers use different authorship criteria to the above, following the norms of their research disciplines, they should be able to clearly explain and robustly justify their criteria to others outside their own disciplines.]".



Example of Good Practice Guidelines to be followed to avoid conflicts of interest

The University of Sheffield's Policy on Good Research & Innovation Practices

An individual researcher may undertake a range of activities in addition to research and teaching. Researchers have external links with, and provide expert advice to, the private sector, public sector, voluntary organisations and local communities, are involved in collaborations, may be peer reviewers, journal editors, be involved in spin-out companies, and may also be engaged in other activities in a personal capacity not related to their contract of employment with the University. Such activities extend the University's reach and influence nationally and internationally. Researchers need to remain aware, however, of any real or potential conflicts of interest that may arise from undertaking a wide range of activities.

It is expected that the primary responsibility, interest and loyalty of the University's researchers will rest with the University, and that their primary commitment of time and intellectual energies should be to the University's activities; otherwise, a conflict of commitment arises.

Conflicts of interest should not adversely influence professional judgement. A conflict of interest can be real or reasonably be perceived by the wider public to be real (i.e., real or potential). A conflict of interest is real when the researcher has interests in the outcome of the project that may lead to a personal advantage (or benefit a member of the researcher's family and/or friends) and which might, therefore, compromise the integrity of the R&I project. Personal advantage can be financial and/or non-financial (e.g., the outcome of the project may promote or appear to promote a researcher's personal and/or ideological beliefs).

It is acceptable to have a conflict(s) of interest so long as the researcher is transparent about its existence and, where appropriate, takes steps actively to manage the conflict(s) of interest effectively in order that it does not compromise the integrity of the project.

It is expected that researchers will undertake, and be seen to undertake, research in an impartial, independent manner, irrespective of who is funding the research.

Minimal acceptable practices in handling conflicts of interest that the University expects to be followed:

- 1. Recognise all real or potential conflicts of interest that could compromise the trustworthiness of their work (i.e., real and/or which other people could reasonably perceive to be conflicts of interest) and take steps transparently to disclose the conflicts of interest. Practical steps a researcher might take: declaring conflict(s) of interest by listing them on a webpage that has been set up about the project; when evaluating a potential conflict of interest, consider how it might be perceived by the wider public (would others trust the researcher's judgement if they knew s/he was in this situation?);
- 2. Real or potential conflicts of interest must be reported immediately to the Head of Department or Director of Finance, whichever is more appropriate;
- 3. If a conflict of interest is of a type and severity that poses a risk of fatally compromising the integrity of the research, the researcher should not proceed with the research;
- 4. Openly declare and justify all real or potential conflicts of interest at all stages in the project and, particularly, at the following key stages:
 - a. In research funding applications;
 - b. Where applicable, in research ethics applications and research governance applications;
 - c. Where applicable, when seeking to recruit participants (i.e., as part of the process of seeking consent);
 - d. Where feasible, when communicating with the public about research;
 - e. In research publications;
 - f. During commercialisation;
 - g. Where applicable, when undertaking peer review.



Example of a guideline on authorship

International Committee of Medical Journal Editors

The ICMJE recommends that authorship be based on the following four criteria:

- 1. Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND
- 2. Drafting the work or revising it critically for important intellectual content; AND
- 3. Final approval of the version to be published; AND
- 4. Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. In addition to being accountable for the parts of the work he or she has done, an author should be able to identify which co-authors are responsible for specific other parts of the work. In addition, authors should have confidence in the integrity of the contributions of their co-authors.
 - All those designated as authors should meet all four criteria for authorship, and all who meet the four criteria should be identified as authors. Those who do not meet all four criteria should be acknowledged—see Section II.A.3 below. These authorship criteria are intended to reserve the status of authorship for those who deserve credit and can take responsibility for the work. The criteria are not intended for use as a means to disqualify colleagues from authorship who otherwise meet authorship criteria by denying them the opportunity to meet criterion #s 2 or 3.
 - Therefore, all individuals who meet the first criterion should have the opportunity to participate in the review, drafting, and final approval of the manuscript.
- 5. In most situations a declaration of a conflict of interest, with a brief written record of that declaration, will suffice. However, sometimes agreement will be needed on how real or potential conflicts of interest can be actively managed.

Practical steps a researcher might take:

- modifying the project's plan;
- · severing relationships that create real or potential conflicts of interest;
- declaring a conflict(s) of interest in a meeting if the researcher believes there is an issue under discussion where the researcher has, or might reasonably be perceived to have, a conflict of interest (and not taking part in the discussion);
- resolving not to act as a particular person's supervisor;
- divesting or placing in trust certain financial interests; declaring an interest to a sponsor or third party;
- standing aside from any involvement in a particular project.
- 6. All researchers should disclose and justify real or potential conflicts of interest in line with the University's Financial Regulations;
- 7. The University's Policy Statement 'Personal relationships and conflicts of interest in the work-place' should be consulted.

Misconduct in research and publication

TO DO: The CEGP is expected to include information on misconduct in research and publication alongside commitments to good integrity practices.

It is advisable to consult an international guide and to check how other universities or research centres include this type of description.

Several **aspects are recommended** for this section:

- It is advisable to specify the research misconducts that are most important for your organisation, depending on the type of research being done.
- There is the possibility to rank research misconduct depending on the seriousness with which your organisation considers them (some organisation do this). Your organisation may also choose to detail the consequences incurred in any of these research misconduct here.
- Again, there are many guides that explain and detail the significance of each bad practice. These instruments can serve as a reference for those drafting the code.

Particular attention is encouraged to be paid to certain research misconduct, such as:

- Fabrication
- Falsification
- Plagiarism
- False authorship (ghost-writing or paid-for writing)
- o Duplicate publication or self-plagiarism
- Fraudulent review
- o Breach of personal data protection regulations
- o Abuse of power towards research staff in inferior positions
- Avoidance of conflicts of interest



Example of a definition of misconduct in research and publication

The European Code of Conduct for Research Integrity

Research misconduct is traditionally defined as fabrication, falsification, or plagiarism (the socalled FFP categorisation) in proposing, performing, or reviewing research, or in reporting research results:

- Fabrication is making up results and recording them as if they were real.
- Falsification is manipulating research materials, equipment or processes or changing, omitting
 or suppressing data or results without justification.
- Plagiarism is using other people's work and ideas without giving proper credit to the original source, thus violating the rights of the original author(s) to their intellectual outputs.

These three forms of violation are considered particularly serious since they distort the

research record. There are further violations of good research practice that damage the integrity of the research process or of researchers. In addition to direct violations of the good research practices set out in this Code of Conduct, examples of other unacceptable practices include, but are not confined to:

- Manipulating authorship or denigrating the role of other researchers in publications.
- Re-publishing substantive parts of one's own earlier publications, including translations, without duly acknowledging or citing the original ('self-plagiarism').
- Citing selectively to enhance own findings or to please editors, reviewers or colleagues.
- Withholding research results
- Allowing funders/sponsors to jeopardise independence in the research process or reporting of results so as to introduce or promulgate bias.
- Expanding unnecessarily the bibliography of a study.
- Accusing a researcher of misconduct or other violations in a malicious way.
- Misrepresenting research achievements.
- Exaggerating the importance and practical applicability of findings.
- Delaying or inappropriately hampering the work of other researchers.
- Misusing seniority to encourage violations of research integrity.
- Ignoring putative violations of research integrity by others or covering up inappropriate responses to misconduct or other violations by organisations.
- Establishing or supporting journals that undermine the quality control of research ('predatory journals')



Example of misconduct in research and publication

OECD (2008) Best Practices for Ensuring Scientific Integrity and Preventing Misconduct.

Core "Research Misconduct"	Research practice misconduct
Fabrication of data	Using inappropriate (e.g., harmful or
Falsification of data	dangerous) research methods
Plagiarism	Poor research design
FFP normally includes:	Experimental, analytical, computational errors
Selectively excluding data from analysis	Violation of human subject protocols
Misinterpreting data to obtain desired results (including inappropriate use of statistical methods)	Abuse of laboratory animals
Doctoring images in publications	
Producing false data or results under pressure from a sponsor	
Data-related misconduct	Publication-related misconduct
Not preserving primary data	Claiming undeserved authorship
Bad data management, storage	Denying authorship to contributors
Withholding data from the scientific community	Artificially proliferating publications ("salami-slicing")
NB: The above applies to physical research materials as well	Failure to correct the publication record
Personal misconduct	Financial, and other misconduct
Inappropriate personal behaviour, harassment	Peer review abuse e.g., non-disclosure of
Inadequate leadership, mentoring, counselling of students	conflict of interest, unfairly holding up a rival's publication
Insensitivity to social or cultural norms	Misrepresenting credentials or publication record
	Misuse of research funds for unauthorised purchases or for personal gain
	Making an unsubstantiated or malicious misconduct allegation



Example of misconduct in research and publication related to University

The University of Sheffield

The following are practices that the University defines as unacceptable practices in publication and authorship (full details are in the University's Good Research & Innovation Practices policy - Annex 2).

Gift, guest or honorary authors - naming as authors those who took little or no part in the research in order to improve the chances research will be published or to increase the perceived status of a publication or to enhance an individual's career development; also, including individuals as authors (e.g., as lead author or co-author) without their agreement or permission to be named as authors.

Ghost authorship - not naming as authors those who did take part in the research.

Salami slicing – undisclosed duplication of publication - breaking a publication down into least publishable units so as to be able to present a larger number of published titles.

Plagiarism - general misappropriation or use of others' ideas, IP or work (written or otherwise), and submitting them as your own without acknowledgement or permission), including double submission /self-plagiarism - resubmitting previously submitted work on one or more occasions (without proper acknowledgement); and collusion - where two or more people work together to produce a piece of work, all or part of which is then submitted by each of them as their own individual work.

Misrepresentation of data (e.g., knowingly presenting a flawed interpretation of data).

Improper conduct in peer review of research proposals or results (including manuscripts submitted for publication) (e.g., failure to disclose conflicts of interest; inadequate disclosure of limited competence; misappropriation of the content of material; rejecting a paper in order to suppress a contrary opinion; and breach of confidentiality or abuse of material provided in confidence/taking undue or calculated advantage of knowledge obtained during the peer review process).

Gender perspective

TO DO: Promote the gender perspective **at the organisational level** and **at a researcher and individual level**. In terms of any policies the organisation may have to promote equality as well as promote potential good professional practices among the members.

At the organisational level

TO DO: Know the commitments of the organisation before drafting the code.

It is encouraged to **answer questions** to reflect on aspects such as:

- **Is there a Gender Equality Plan** to reduce the vertical and horizontal segregation of women in some areas of research and innovation?
- How will this plan be implemented and assessed?
- How will the results or improvements be reported to members?

Choose to promote different aspects of equality on these issues, such as:

(This is not an exhaustive list, just open options)

- Encourage the equal participation of men and women in research teams at all levels (include quotas if necessary)
- Create working conditions and culture that allow men and women to have equally fulfilling careers
- Ensure open and impartial selection procedures in selection and recruitment:
 - use mixed selection panels;
 - o train panel members on gender bias;
 - o advertise open posts widely;
 - o explicitly encourage women to apply; and
 - accommodate atypical career patterns.
- Reward gender-sensitive research and innovation in the configuration of teams when applying for funding
- Recognise an added value to proposals and results that sufficiently integrate the gender perspective
- Include experts who are sensitive to gender balance in the assessment process of projects or funds to R&I
- Identify good practices and examples of gender equality in R&I and disseminate in the RPO and RFO

Examples of useful International Guides for implementing policies with a gender perspective

Gender Equality in Academia and Research - GEAR tool. 2016

This tool provides universities and research organisations with practical advice, examples, and tools through all stages of organisational change, from setting up a gender equality plan to evaluating its real impact.

Examples of useful practical guidelines for funders to promote gender equality

Key Guidelines for Research Funding Organisations

This includes key gender equality issues to consider when funding research.

At a researcher and individual level (i.e., their responsibilities)

TO DO: Include in the CEGP a series of principles or aspects intended to promote gender equality among researchers.

The **integration of gender perspective** into research and innovation processes can address various **aspects** that affect **both the research process** and the **establishment of work teams**, such as:

In terms of the research process:

- Address the realities of women and men at all stages of the research and innovation cycle (design, proposal, research, evaluation, and dissemination)
- Consider gender-specific research to fill knowledge gaps
- Break down data by sex and analyse data in a gender-sensitive way
- Identify possible gender stereotypes, inequalities, and gender biases in the research or innovation project
- Compile a list of references (literature review) for the research with gender-sensitive literature and research projects conducted in the field
- Use gender-sensitive language in the research
- Use gender-sensitive identification for users or beneficiaries

In terms of the establishment of work teams:

- Foster the leadership of women researchers in research teams, with a special focus on STEM areas
- Create gender-balanced work teams
- Train researchers in gender-sensitive methodologies

Useful examples of organisations (universities or research centres) that have introduced gender equality programmes and plans

The University of Helsinki Equality and Diversity Plan 2019-2020

This is a good example of the contents, methodology, and results of an equality plan.

This example was collected from the good practices in equality in academia and research in EIGE's

The Christine Mohrmann Programme – changing gender (im)balance at Radboud University (NL).

A programme that:

- 1. stimulates gender balance and diversity through extra attention to recruitment;
- 2. fosters awareness in order to create a culture of diversity; and
- 3. supports working conditions that allow for a healthy combination of family life and an academic career.

It has been defined by the **European RRI practices project** as an example for best practices in promoting equality.

Open access

TO DO: Establish principles that will guide open access at the **organisational** and **professional** level.

Define the open access policies of the organisation as well as good practices in terms of **research** results, data management, administration, management of intellectual property rights, and patents.

At the organisational level:

Define aspects such as the following:

- The open access policy at the organisation
- Programmes that promote and are sensitive to best open access practices

Your organisation should promote good practices in open access in different aspects such as:

- Data management and administration
- Storage and preservation
- Results protection management
- Intellectual property, transfer policy, and collaborative and contract research

Your organisation should consider the **promotion of aspects** such as:

- Training in open access resources
- Encourage support for the formulation of a Data Management Plan per project
- Generate data management and administration support structures to:
 - obtain;
 - o record;
 - o store;
 - o safeguard and preserve materials and results (including unpublished works); and
 - o hold securely for a reasonable period (e.g., promote the creation of open repositories).
- Ensure access to data is as open as possible, as closed as necessary, and, where appropriate, in line with the FAIR Principles (Findable, Accessible, Interoperable, and Reusable) for data management
- Be transparent about how to access or utilise the data and research materials

Examples of Useful Reference Sources to define the open access policies and principles in the organisation

Budapest Open Access Initiative.

Declaration marking a milestone in the open access movement. It is also useful for the definitions it provides and its guidelines and recommendations.

Fair Open Access Alliance (FAIR).

Offers guidelines to transform academic publication conventions and return control of the publication process to the academic community.

Guidelines to the Rules on Open Access to Scientific Publications and Open Access to Research Data in Horizon 2020.

These guidelines explain the rules on open access to scientific peer reviewed publications and research data that beneficiaries have to follow in projects funded or co-funded under Horizon 2020.

Open Access Policy Guidelines and Template for Funding Agencies.

It follows the UNESCO open access guidelines, the 2012 recommendations of the European Commission and the requirements of the Horizon 2020 programme to provide a set of best practices in open access for funding agencies.

Plan S - Making full and immediate Open Access a reality.

An initiative that attempts to promote the open access status of academic publications resulting from research finances with public subsidies.

Commission of the European Communities (2008). Commission Recommendation on the management of intellectual property in knowledge transfer activities and Code of Practice for universities and other public research organisations.

At the individual level

It is important that the code also includes recommendations that researchers can make on an individual basis to promote open access. There are different aspects and recommendations that can be included in the code regarding, for example:

- The use of institutional repositories (and the deposit of papers in their author's Original Manuscript (AOM) version)
- Recommendations on open data
- Recommendations on the type of journals in which to publish (and which are aligned with open access).
- Recommendations on how to disseminate the research through various channels.

NOTE:

Be aware that open access (and its different paths) is not always understood by researchers.

It is a complex and changing field that is subject to various negotiation processes with the publishing sector.

The working group drafting the CEGP should be aware that the policies have been changing for some time.

Public funding programmes often include mandatory clauses on the open dissemination of funded research. It is recommended that the code should include commitments as simply and explicitly as possible.

Again, there are several resources that can be very useful in developing these sections.



Examples for Open Access

Principles for Open Access to Research Outputs at the University of Melbourne

This is an interesting declaration since it includes the description of 1) commitment to open access 2) responsibilities of the researchers and 3) responsibilities of University of Melbourne.

Position of University of Melbourne

The University of Melbourne is committed to disseminating its research as widely as possible to improve the public good by accelerating the pace of discovery, encouraging innovation, enriching education, and stimulating the economy.

Research outputs from public funding should be shared in a timely and accessible manner to foster social, economic, cultural, and environmental benefits.

The University supports the deposit of research outputs to repositories as a means of openly disseminating research, reflecting the investment in repository infrastructure in Australia and worldwide.

The University recognises that the level of engagement with open access practices will vary according to disciplinary behaviours and norms and may be determined by a variety of factors.

The University recognises that open access will not be appropriate in all circumstances, for example where disclosure obligations or restrictions apply under Intellectual Property Policy MPF1320 or under a research contract with a collaborator or funder.

Responsibilities of researchers

Researchers are expected by the University to deposit the post-peer review and corrected version of their published research (the Author's Accepted Manuscript) in the Organisational Repository or an accredited subject repository within three months of publication. Deposited work can be embargoed to meet publisher requirements on making the work accessible. The University will provide guidance to determine any publisher policies related to access to the work.

The University expects the bibliographic details of data (metadata) underpinning published research to be shared in an accredited repository, as appropriate and where required by funding mandates.

The sharing of research data is supported by the University, while taking into consideration regulatory responsibilities, ethical, legal, cultural, and other guidelines.

While the University recognises there are challenges associated with making non-traditional research outputs accessible due to the variety of forms these can take and issues such as copyright, we both acknowledge and value the breadth in types of research outputs and remain committed to making non-traditional research outputs as open and discoverable as possible and practical. Those researchers interested in exploring options for making these types of outputs accessible will be supported by the University.

Researchers are encouraged by the University to share research outputs such as preprints, software, protocols, and others as appropriate through disciplinary infrastructure.

Researchers are encouraged by the University to share non-published research outputs (grey literature) through the Organisational Repository.

Responsibilities of University of Melbourne

The University will provide guidance and systems for researchers who are bound by the requirements of their funding agreements to make research outputs open access through the deposit of works to the Organisational Repository, including requirements to manage their research data.

The University will work with its research community to implement or provide the infrastructure and associated support that will be necessary to increase openness.

Public engagement

TO DO: the code can define commitments (or responsibilities) at both organisational and professional levels. It is important that the code clearly reflects the commitments the organisation have to this element of the RRI.

At the organisational level

Your organisation may choose to promote public engagement in areas such as:

- Encourage the use of public engagement methodologies through funding and innovation schemes.
- Prepare a networking policy with key stakeholders in the R&I activity to facilitate the researchers' public engagement.
- Create and update a map of the internal and external stakeholders in R&I activities, to be used by the R&I researchers to identify the stakeholders of their own projects.

At the professional level

a series of initiatives can also be promoted to foster public engagement such as:

- Design a research and innovation plan that includes the perspective of the stakeholders who will be users or beneficiaries of the research or innovation at all stages of the research cycle.
 - o "Vulnerable" groups should particularly be encouraged to voice their opinions
- Specify the methods to be used to promote stakeholder involvement in the different research or innovation processes.
- Generate an open dialogue with the different stakeholders to consider their perspectives.
- Explain the limitations of stakeholder engagement (e.g., openly communicate the outcome and impact of the stakeholders' input and be realistic about capacities).

Key resources and examples

NOTE: This is an area where less number of available documents and guides (compared to previous sections)

RRI Tools on public engagement

It offers clear recommendations on questions such as 1). How to foster multi-stakeholder engagement and 2) How to set up a participatory research agenda. It also has examples that have fostered public engagement.

Horizon 2020 Public Engagement and responsible research and innovation

This is useful source of information in the sense it introduces the concept and importance of the topic of public engagement. It includes as well some important links on the topic.



The University of Sheffield. Policy On Good Research and Innovation Practices

Researchers have a responsibility to communicate with and inform the public about their research, subject to any applicable conditions (for example set by a research funder, a research ethics committee, or a confidentiality agreement with a company); this includes informing the public about negative research results, where the R&I activity has been undertaken to accepted standards of practice. In some area of research (for example some types of health-care research) it is neces- sary to involve the public in, as well as inform the public about, the research.

Minimal acceptable practices in public engagement and demonstrating public benefit that the University expects to be followed:

- i. Before communicating with the public researchers should attempt to assess the implications of their research for the public (should there be any implications this should guide the timing of, and methods for, communicating research);
- ii. Where research is considered to have public benefit, before communicating research to the public researchers may need to, depending on the research, notify relevant regulatory bodies;
- iii. Researchers should pause before making their research openly available online or disseminating research in other ways before independent peer review has taken place, as damage could be done if the research results are found, post-peer review, to be unreliable (however the release of research data before peer review may be appropriate for public engagement);
- iv. Research results must be checked for their integrity before they are communicated (statistical limitations of results should be made clear);
- v. When communicating, researchers must do so honestly, accurately and without bias, distortion, exaggeration, or knowingly misleading the public;
- vi. Researchers should not allow others to mislead the public about their research and, should this happen, should correct the misleading information publicly;
- vii. Where relevant, researchers should be alert to how their research results may be used by other individuals and organisations;
- viii. Researchers are expected to be aware of the limits of their own professional expertise. When involved in public discussions, for example about the importance and potential application of research results, researchers are expected to communicate within areas of their professional expertise and, if necessary, to clarify when they are speaking as professionals from when they are speaking in a personal capacity as private individuals. If researchers clarify the limitations of their professional expertise, when communicating research to the public, the public is better able to judge the degree to which the research results have public benefit;
- ix. Researchers should aim to explain their research in ways that are clearly understood by non-specialists; this may include how the research was developed and explanations of different forms of research evidence, as this will further improve public understanding and enable the public to participate in meaningful communication;
- x. If feasible, the work of all contributors and collaborators should be properly acknowledged;
- xi. If applicable, potential or real conflicts of interest should be declared. Higher practices in public engagement and demonstrating public benefit, which the University's researchers should aspire to.
- xii. Researchers should seek to encourage, and participate in, debate about the issues that their research may raise for society, paying proper consideration to the aspirations and concerns of others. As members of the research profession, researchers need to be careful in what they say as professionals, as their contributions to public debate may influence public opinion.

How to monitor and enforce compliance with the Code

The final section of the code contains information about the drafting process, the methodology, the initiatives for its publicising, the compliance and monitoring processes, and the national and international framework.

The process of the code redaction

TO DO: Briefly explain the process and methodologies used to define the Code of Ethics and Good Practices in R&I.

NOTE: Do mention the ETHNA guide as well as other international guidelines and recommendations in the case that they have been helpful to the drafting of the Code of Ethics and Good Practices in R&I in the organisation.

Example

"...This Code of Ethics and Good Practices in R&I has been developed based on a proposal made by the ETHNA System Project [URL]. Other international reference guides have also provided essential inspiration for this document. The following are worth mentioning. It has also been useful to consult the structure developed in other organisations such as (give examples))."

Dissemination, training, and updating processes

TO DO: Describe the process of dissemination, training, and updating the Code of Ethics and Good Practices in R&I.

Example

Example: "...This code will be posted on the website so all stakeholders are aware of it and can access it easily. In addition, a publicity and training campaign will be carried out for all personnel and it will be incorporated into the training plans for new personnel. Code of Ethics and Good Practices in R&I will be subject to review under a procedure initiated by the RRI Office whenever necessary".

Notifications for improvements or alerts

TO DO: Describe the notification process for any improvement or alert (complaint, grievance) related to the content of this code.

Example

"The principles, values, and good practices require a monitoring process to ensure that good practices are followed and disseminated and that research misconduct are avoided. The procedure for this monitoring will be carried out by (the organisation will have to choose an option depending on the tools they implement):

- communication to the RRI Office(r) using the following e-mail address (xxxx) and/or telephone number (xxxx);
- communication via the Ethics Line for complaints, suggestions and grievances to be processed by the RRI Office(r)."

Monitoring system: Checking compliance

TO DO: Describe the compliance checking process.

Example

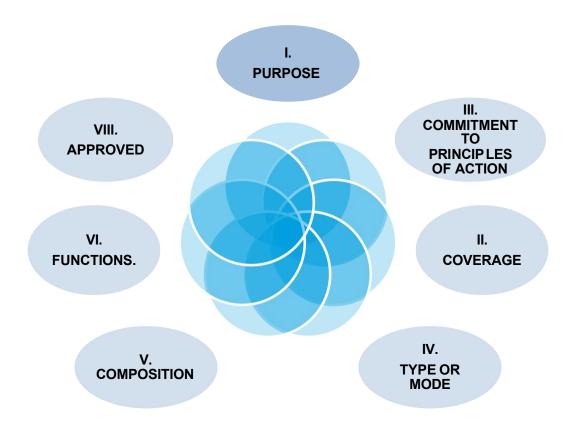
"Use the progress and performance monitoring indicators provided in the ETHNA System Guide."

Reference to national and international frameworks

TO DO: Report the national and international regulations that have been used in the drafting of the CEGP.

ANNEX 4. GUIDANCE TO CREATE THE ETHICS COMMITTEE ON R&I

OBJECTIVE	SCOPE
It is to help the Research Performance Organisation (RPO) and Research Funding Organisation (RFO) in the process of adapting or creating an Ethics Committee on R&I to cover RRI aspects.	This guide is aimed at the people responsible for the design and implementation of the Ethics Committee on R&I. Generally speaking, there are two types of Ethics Committees, permanent and ad hoc.
	In RFO's or small RPO's an Ad Hoc Ethics Committee is recommended in order to not create bureaucratic struc- tures.



Purpose

TO DO: Describe the purpose of the Ethics Committee on Research and Innovation (R&I) and its relationship with the RRI Office(r).

Example. (Case I: The Research Performance Organisations (RPO) and Research Funding Organisations (RFO) have made a first-level commitment to the Case I ETHNA System): "...The Ethics Committee on R&I is a space for participation to allow dialogue on the values, behaviours, procedures, and commitments for the Code of Ethics and Good Practices in R&I of the ETHNA System and the development and practical implementation of the four key points (Research Integrity, Gender Perspective, Open Access, and Public Engagement) of Responsible Research and Innovation (RRI), as well as deliberation on notifications of proposals, suggestions, consultations, alerts, complaints, or grievances received by the RRI Office(r) via the Ethics Line..." (Case II: The RPO and RFO have made a second-level commitment to the Example. ETHNA System): Case II Text example. "... The Ethics Committee on R&I is a space for participation in dialogue on the RPO and RFO values, behaviours, procedures, and commitments with respect to international references on ethical and responsible R&I in the four key points (Research Integrity, Gender Perspective, Open Access, and Public Engagement) of RRI, as well as deliberation on notifications of proposals, suggestions, consultations, alerts, complaints, or grievances received by the RRI Office(r)..."

2. SCOPE

TO DO: Indicate the organisations, people, and/or groups the Ethics Committee on R&I is aimed at.

Example

The Ethics Committee on R&I of the ETHNA System carries out its activities in association with the RRI Office(r) and generates spaces within (RPO and RFO) for dialogue and deliberation involving internal and external stakeholders from different fields and roles (the academic world, business, industry, policymakers, and social organisations) to deliberate on the ethical governance of their funding, research, and innovation activity, as well as on socially controversial aspects.

3. COMMITMENT TO PRINCIPLES OF ACTION

TO DO: Establish principles of action in the Ethics Committee on R&I.

Example. Case I

- "...Members and participants in the activities of the Ethics Committee on R&I commit themselves to the following principles of action with the purpose of promoting: Research Integrity, Gender Perspective, Open Access, and Public Engagement:
 - Encouraging fair, respectful, mediated agreements: the committee strives to establish communication between the parties involved in conflict situations by encouraging mutually agreed solutions.
 - Confidentiality: the deliberations and voting results (if any) of the committee will be kept secret. The commitment to confidentiality will be stated and written down when the committee's work begins. This is also intended to protect people from any wrong or unfair accusations. An appropriate balance between transparency and confidentiality must be sought at all times.
 - Impartiality: any events or projects involving conflict of interest will be avoided. Members will refrain from participating when issues affect them personally or their research/working group.
 - Fairness: ensuring that all those involved in a case have the opportunity to be heard or to participate in an appropriate way in the handling of the issues raised.
 - Anonymity: personal data used by the committee, by people who contact
 the committee, and by those who are affected by the action should remain
 anonymous. This information will be safeguarded by the organisation's
 Ethics Officer or Data Management Officer.
 - Accuracy of information: the committee must ensure the information used to learn about cases is complete and reliable. The Ethics Committee on R&I of the ETHNA System carries out its activities in association with the RRI Office(r) and generates spaces within (RPO and RFO) for dialogue and deliberation involving internal and external stakeholders from different fields and roles (the academic world, business, industry, policymakers, and social organisations) to deliberate on the ethical governance of their funding, research, and innovation activity, as well as on socially controversial aspects.

4. MODEL SELECTION

TO DO: Describe the Ethics Committee on R&I in the ETHNA System for the RPO and RFO.

Several aspects must be considered, such as:

- The RPO and RFO size, needs, available resources, and level of commitment to the development and implementation of the ETHNA System.
- The **capacity and relevance of the RRI Office(r)** organised by the RPO and RFO, which is the fundamental pillar and basis of the ETHNA System.

For this reason, the **adoption of one out of two models** for the ETHNA Committee on R&I is suggested:

- ❖ MODEL 1. STANDING COMMITTEE
- ❖ MODEL 2. AD HOC COMMITTEE

MODEL 1.

Standing Committee

Group of experts and/or stakeholders are established for a specific, but renewable period of time.

They meet on a regular basis to discuss and deliberate over how to raise awareness, improve, and update the ETHNA System's Code of Ethics and Good Practices in R&I and the management and resolution of the notifications received by the Ethics Line, if there is one.

MODEL 2.

Ad Hoc Committee

Group of experts and/or stakeholders established temporarily to discuss or deliberate over any aspect, proposal, or emerging conflict related to the proper operation of the ETHNA System and the implementation of the values, behaviours, and procedures of its Code of Ethics and Good Practices, such as the management of alert notifications received by the Ethics Line, if there is one.

Advantages

Allows continuous work overtime on different aspects where they have competences.

Provides more training for those involved in resolving conflicts concerning ethics and responsibilities linked to the RPO and RFO funding, research, and innovation.

Offers the possibility for any type of RPO and RFO, regardless of their capacity, size, and importance, to have an Ethics Committee on R&I for at least conflict resolution.

Recommendation for Implementation

- Establish a physical and/or virtual space equipped with the necessary tools for dialogue and deliberation among committee members.
- Generate networking with experts in matters related to RRI dimensions and key issues, as well as with existing committees within the organisation (e.g., Equality Units, Data Management Officer, Biosafety Committee, Ethics Committees, etc.).
- Diversify networking with other Research Ethics and Innovation Committees at different RPOs and RFOs.
- Generate a database of experts in different research and innovation subjects (moral philosophy, law, economics, engineering, physics, medicine, communication, artificial intelligence, etc.) and representatives of the main stakeholder groups (society, the environment, the media, business, etc.).

NOTE: In this Ad Hoc Committee Model, it would be difficult to have a permanent committee when the volume and relevance of the available resources are scarce or limited as well as when the commitment of the RPO and RFO are limited.

5. COMPOSITION

TO DO: Describe the functions of the members (president, secretary, chairperson, and stakeholders) of the Ethics Committee on R&I depending on the RPO and RFO.

MODEL 1. Standing Committee		MODEL 2. Ad Hoc Committee	
These two	These two first steps can be implemented in the same way in both types of committee.		
Step 1	Describe the functions of the members (presidency, secretary, chairperson and stake-holders) of the Ethics Committee on R&I depending on the RPO and RFO.		
Step 2	Describe the process of election, process of nomination, the duration, renewal, replacement, and dismissal for the president, secretary, chairperson, and stakeholders of the Ethics Committee on R&I depending on the RPO and RFO.		
Example	 Role: The chairperson. Nomination: Can be suggested by the president and accepted by the members of the committee Duration: 4 years Renewal: Every 4 years a revision by the committee should be held Replacement: When the person is going to be absent for a considerable amount of time Dismissal: Due to failure to fulfil the role or a personal petition from the member, etc. 		
Example	 Role: The chairperson. Should attend, vote, and parti Can evaluate the projects; and Establish relevant contacts wife for the committee. 		

MODEL 1. Standing Committee

Step 3 - Confirm what kind of profiles are expected to be at the Ethics Committee, according to the present regulation.

It is advisable to choose the profiles of the people who make up your Ethics Committee depending on the type of research or teaching you are going to carry out.

NOTE:

- The composition of the Ethics Committee should be equal and multidisciplinary.
- The people can be staff from the organisation with an expertise on the issue.
- The examples given below are non-binding suggestions for consideration, except for the RRI Office(r) who is essential.

If an organisation is going to conduct research in specific areas such as a research centre or funder.

- It is essential to consult current legislation at all levels (international, national, regional, and local) about research on humans, animals, Genetically Modified Organisms (GMOs), and Biological Agents (BAs) Regulations.
- It is advisable to choose profiles of people who compose the Ethics Committee of the organisation depending on the type of research or teaching to be conducted.

See below different EXAMPLES IN LINE WITH SPECIFIC AREAS, such as:

Human research ethics committee

If the organisation is going to perform research on humans in, at least, one of the following cases:

- i. Health procedures
- ii. The collection of biological samples
- iii. Personal data

Examples

- An expert in human investigation. (At least in one field in the previously selected case)
- An expert in ethics
- An expert in law
- An expert in data protection
- An expert in methodology
- A representative from the RPO and RFO Ethics Committee if applicable

RRI Office(r) or a representative from the ETHNA Office (whenever possible, this function will be given to the Ethics Manager in the RPO and RFO).

Animal research ethics committee

If the organisation is going to experiment with or teach animals.

Examples

- An expert in animal welfare
- An expert in animal investigation and/or the use of animals in education
- An expert in ethics
- An expert in law
- An expert methodology
- A person not affiliated to the institution, nor linked to the research undertaken
- A representative from the RPO and RFO Ethics Committee if applicable

RRI Office(r) or a representative from the ETHNA Office (whenever possible, this function will be given to the Ethics Manager in the RPO and RFO).

Ethics committee for research on Genetically Modified Organisms and Biological Agents

If the organisation is going to investigate Genetically Modified Organisms and/or Biological Agents.

Examples

- An expert in preventative measures
- An expert in Genetically Modified Organisms and/or an expert in Biological Agents
- An expert in ethics
- An expert in law
- A representative from the RPO and RFO Ethics Committee, if applicable
- RRI Office(r) or a representative from the ETHNA Office (whenever possible, this function will be given to the Ethics Manager in the RPO and RFO).

MODEL 2. Ad Hoc Committee

TO DO:

Step 3 Confirm what kind of profiles are expected to be at the Ethics Committee, according to the present regulation.

The organisation should consider three standards: international, national, and local (city, university, and research centre).

When confirming what kind of profiles are expected to be at the Ethics Committee, according to the present regulation. You should consider three standards: international, national and local (city, university and research centre)

NOTE:

- The composition of the Ethics Committee should be equal and multidisciplinary.
- The people can be staff from the organisation with an expertise on the issue.
- The examples given below are non-binding suggestions for consideration, except for the RRI Office(r) who is essential.

EXAMPLE of General / Basic Structure

- An expert in ethics
- An expert in law
- A representative from the RPO and RFO Ethics Committee, if applicable
- RRI Office(r) or a representative from the ETHNA Office (whenever possible, this function will be given to the Ethics Manager in the RPO and RFO).

EXAMPLES IN LINE WITH SPECIFIC AREAS, such as:

If the organisation is going to perform research on humans in, at least one, of those cases:

- Health procedures
- The collection of biological samples
- Personal data

EXAMPLES

- An expert in human investigation. (At least in one field in the previously selected case)
- > An expert in data protection
- An expert in methodology

If the organisation is going to experiment with or teach animals

- An expert in animal welfare
- An expert with expertise in animal investigation and/or the use of animals in education

If the organisation is going to investigate Genetically Modified Organisms and/or Biological Agents

- An expert in preventative measures
- An expert in biosecurity
- An expert in Genetically Modified Organisms and/or an expert in Biological Agents

If the organisation is going to set up an Ethics committee for research on Genetically Modified Organisms and Biological Agents.

- An expert in preventative measures
- An expert in biosecurity
- An expert in Genetically Modified Organisms and/or an expert in Biological Agents

6. OBJECTIVES

TO DO:

Step 4 Describe the objectives to be assigned to the Ethics Committee on R&I in the organisation.

Step 5 Describe the specific aims.

Example of General Objective	The Ethics Committee on R&I is particularly concerned with raising awareness, improving, and updating the ETHNA System's Code of Ethics and Good Practices in R&I and addressing conflict resolution through dialogue and deliberation. The specific functions of the Ethics Committee on R&I include the following:
Example of Aims	In all aspects of developing and applying the objectives, the four key points of the ETHNA System – research integrity, gender perspective, Open Access and public engagement – are taken into account.

The Committee is encouraged to cover the following four objectives:

Objective 1

To promote the Code of Ethics and Good Practices: (a) to promote internal (junior and senior researchers and other staff connected to R&I) and external training on the CEGP; and (b) encourage reflection on aspects that might be controversial or include reflection for situations that may arise.

Objective 2

To assess and advise research staff, and others interested, in the committee's assessment on Research Ethics issues.

Objective 3

To reflect, issue reports, and make recommendations on ethical and deontological principles relating to R&I activity: (a) to advise on the interpretation of the code, international guidelines, as well as controversial issues; (b) to issue reports in the event of legal reports or allegations of research misconduct; (c) to promote and publicise the laws, regulations, and reports published on ethics in R&I; and/or (d) to encourage the revision of the CEGP when there is new evidence or advances in thought about controversial topics.

Objective 4

To monitor and control the guarantees required to perform scientific R&I: (a) to resolve notifications regarding suggestions, warnings, and complaints made via the ethics hotline or other channels established by the RPO and RFO; (b) to implement a procedure for action in the event of scientific or R&I research misconduct; and (c) to act as an arbitration body in conflicts linked to good R&I practices.

NOTE:

- In every aspect of the development and application of the objectives it is important to consider the four key points of the ETHNA System: Research Integrity, Gender Perspective, Open Access, and Public Engagement.
- The RPO and RFO size, needs, available resources, and level of commitment to the development and implementation of the ETHNA System.
- The capacity and importance of the RRI Office(r) organised by the RPO and RFO, which is the foundation for the columns of the ETHNA System.

7. METHODOLOGY

TO DO: Establish the methodology for action in the Ethics Committee on R&I.

It is advisable to include the four key points of the ETHNA System throughout the design and implementation of the methodology.

Meetings

TO DO: Choose the type of meeting that would be more convenient for the organisation.

Consider: the schedule, convene, quorum for celebrations, and meeting minutes.

Elements to Consider

Elements to Consider	Ordinary	Extraordinary	
Type of Committee [Select the type of committee that the organisation is going to create]	Standing	Standing	Ad Hoc
Regularity [Choose the regularity of the Ethics Committee in the organisation]	Once a month.	Whenever necessary.	Once a month.
Schedule [Establish the Schedule of the meetings]	The secretary will present a proposal for the academic year, and it should be approved by the Ethics Committee.	Whenever neces	sary.
Quorum for celebrations [Define the number of members that must be at the meetings]	All members of the Ethics Committee should attend. Exceptions: i. The president can delegate their functions occasionally. ii. The secretary can delegate the elaboration of the meeting minutes. iii. The members who have a conflict of interests. iv. The external experts would participate without a vote.	At least half of the committee.	All members of the Ethics Com- mittee should attend. [See ex- ceptions pro- vided under the ordinary stand- ing committee]
Convene [Decide how the organisation is going to call for the meetings.]	The meeting will be addressed by e cating time, date, place, participants	_	agenda and indi-

Meeting minutes	The president and secretary can sign the meeting minutes.
[Select how to record the meetings.]	It would then be approved by the Committee in the following session.

Decision making

TO DO: Elaborate a process of decision making. It is suggested that the organisation consider the process to apply, process of decision making, and quorum for decisions.

Equally applicable for the Standing Committee and Ad Hoc Committee.

Applying for an evaluation or suggestion.	Standing Committee. Can apply once a month using the form online.	
[Choose the channels that would be used to receive the applications.]	Ad Hoc Committee. It will meet when necessary.	
Aspects to evaluate [Agree with the committee on the ethical aspects to be considered for an evaluation. Compliance with Research Integrity, Gender Perspective, Open Access, and Public Engagement should be considered throughout.]	The committee will assess the suitability of the projects regarding the: Social value and justification of the project Methodological and scientific suitability Contribution to the promotion of RRI Completion of sufficient and necessary documentation	
Process of decision making [Describe how the committee is going to make decisions.]	The decisions should be taken with a consensus through a deliberation process. If voting is needed: i. A simple majority could be used (1/3) ii. The chair's casting vote will only be used in the case of a tie	
Quorum for decisions [Define who must be present to do an evaluation.]		

Reports

TO DO: Decide the process and tools that the Ethics Committee in the organisation is going to announce. There is no difference between the Standing Committee and Ad Hoc Committee.

Types of report	Favourable: the activity meets the assessed parameters; and	
[Conceptualise the type of reports the organisation's committee would deliver. All re-	Favourable pending slight improvements: procedural corrections or inclusion of documentation is required.	
ports should provide reasons and be substantiated.]	 i. A period of 6 months (standing committee) or 15 days (ad hoc committee) is required for the correction. After this time, it will be understood that the process has expired. i. Approval depends on the changes mentioned above. ii. Reassessment by the committee is not required. The secretary can check that the report complies with the stipulations. Pending corrections: the content needs to be improved. 	
	·	
	 i. A period of 6 months (standing committee) or 15 days (ad hoc committee) is required for the correction. After this time, it will be understood that the process has expired. ii. Approval depends on the changes mentioned above. iii. Reassessment by the committee is required. 	
	Unfavourable: issued when there is failure to comply with the established minimum standards at any stage of the research and/or teaching process.	
Communicating the decisions	The final decision and report would be submitted at the platform.	
[Describe how the Ethics Committee in the organisation is going to communicate their decisions.]		
Process to make an allegation	All applicants can demand a hearing with the Ethics Committee in order to make their case.	
[Specify how the Ethics Committee in the organisation is going manage allegations from the applicants.]		

Monitoring projects

TO DO: Describe how the Ethics Committee is monitoring the projects depending on the timing.

During the implementation of the project [Establish how the projects are going to be monitored.]	The aim of this activity is to provide the possibility of exposing: Considerable changes from the original research or teaching practice; and The outcomes, in a very long-term activity.	
	Requirements:	
	 i. This is a volunteer activity. ii. It could be mandatory when there is a specific need. This aspect will be indicated in the issuance of the Ethics Committee. iii. Could be presented with a report or with an audience. 	
After the implementation of the project [Determine how the investigations should be assessed when the project will be finished.]	 The purpose of this activity is to offer the possibility of exposing: Final conclusions; Considerable changes in the expected results; and If the research has generated any publication(s), the same requirements will be followed. 	
Retrospective evaluation Only if the Ethics Committee in the organisation is focused on animals. [Suggest the main aspects in order to do a retrospective evaluation]	 The retrospective evaluation will be carried out based on the mandatory documentation submitted by the user, and will assess the following: whether the objectives of the project have been achieved; the harm inflicted on the animals, including the number and species of animals used, and the severity of the procedures; and any of the elements that may contribute to a better implementation of the replacement, reduction, and refinement requirement. This assessment would occur when the research or the teaching practice involves animals, and was completed under less restrictive legislation. 	

Accountability

TO DO: To ensure the transparency and the path to excellence of the Ethics Committee, the organisation can create mechanisms to favour this task.

Example: To ensure knowledge transfer and transparency, the ethics committee shall communicate the results of their work in the following way:

Reports [Decide how often the committee in the organisation will carry out an evaluation and what it will consider.]	The committee can make annual reports considering: evaluated applications; issued reports; recommendations; and changes in membership.
Feedback from the research and teaching community [Reflect on how the research community in the organisation can provide feedback and suggestions on the committee's activity.]	Standing Committee. Surveys on the committee's activities can be performed throughout the year. Ad Hoc Committee. After an assessment has been performed, a survey can be distributed to assess the committee's activity and make suggestions.
Changes in methodology [Agreement on how the Ethics Committee will introduce possible changes to the Standard Operating Procedure.]	 Suggestions for changes to improve performance can be made at any meeting. The suggestion will be considered and discussed at an extraordinary meeting concentrating on resolving that particular aspect. The result will be obtained through deliberation. If consensus is not possible, it will be approved by a vote. A qualified majority (2/3) will apply.

9. APPROVED

TO DO: Specify the RPO or RFO's organisations 's organisation body in charge of approving the Ethics Committee on R&I, its composition, roles, and renewals.

NOTE:

It is recommended that this function be performed by the highest authority for research and innovation in the RPO or RAFO.

Example

The approval of the creation of the Ethics Committee on R&I and its composition, role assignment, and renewal will be the responsibility of the University Vice Rector for Research and Transfer.

10. APPLICABLE RULES

TO DO: Specify the regulatory and prescriptive framework that the Ethics Committee on R&I follows.

NOTE:

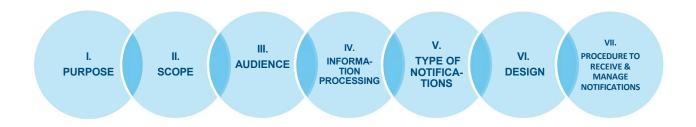
It is recommended that this function be performed by the highest authority for research and innovation in the RPO or RAFO.

Example

The Ethics Committee on R&I follows various standards, guidelines, and codes, such as the Research Centre Code of Ethics and Good Practices in R&I, the Organic Law 3/2018 of 5 December on Personal Data Protection and Guarantee of Digital Rights, the Directive (EU) 2019/1937 of the European Parliament and of the Council of 23 October 2019 on the protection of persons reporting breaches of Union law, etc.

ANNEX 5. GUIDANCE TO CREATE THE ETHICS LINE

ОВ	JECTIVE	SCOPE
•	To help in the design of an Ethics Line for the Research Performance Organisation (RPO) and Research Funding Organisation (RFO). To guide the process of receiving, manag- ing, and resolving notifications.	This guide is aimed at those responsible for the definition and development of the ETHNA System Ethics Line at the RPO and RFO.



1. Purpose

TO DO: Describe the purpose of the Ethics Line.

Example of Purpose

"This Ethics Line is intended to collect and manage relevant information on the ethical and responsible operation of the research processes of [RPO / RFO NAME], to promote and disseminate good practices in research and to warn of possible risk situations resulting in research misconduct or detected research misconduct.

2. SCOPE

TO DO: Establish the framework for the application of the Ethics Line.

If the area(s) for the application of the Ethics Line of the RPO / RFO has chosen to develop the Code of Ethics and Good Practices in R&I.

If they have not, it will use the RRI Reference Documents.

Example of Scope "The Ethics Line has been designed to serve as a communication and participation channel on the procedures and behaviours involved in the research activity of [RPO / RFO NAME] referred to in Code of Ethics and Good Practices in R&I."

3. AUDIENCE

TO DO: Identify the people intended for the Ethics Line.

Example of Audience

"This Ethics Line is aimed at all those involved in and/or affected by the research activity of [RPO / RFO NAME]"

4. Information Processing

TO DO: Determine whether the treatment of the information collected by the Ethics Line is confidential, anonymous, or public.

Example of Information Processing

"This Ethics Line uses confidential communication channels. The person in charge of the Ethics Line is responsible for ensuring the confidentiality of the process of receiving, managing, and resolving notifications."

5. Type of Notifications

TO DO: Describe the type(s) of notifications (at least one) that those affected by the organisation's research activity will be able to make via the Ethics Line.

It should be explicitly stated in the type of notifications if there is a Code of Ethics, Code of Practice on R&I, and an Ethics Committee in R&I, otherwise the RRI Reference Documents will be mentioned.

Example of Type of Notifications

"This Ethics Line will receive notifications about suggestions for improvement; proposals for good practices; queries and requests for clarification; complaints of disagreement, grievance, or dissatisfaction; and alerts about ethical non-compliance and/or reports about cases of research misconduct with relation to the research activity of [RPO / RFO NAME]."

Suggestions: Parties involved may use the Ethics Line to make suggestions for improvements concerning the RRI Office(r), the Ethics Line, research policy, or the content of the Code of Ethics and Good Practices.

Proposals: Parties involved may use the Ethics Line to make proposals for good research practices that serve as an example for everyone involved in research.

Consultations: Parties involved may use the Ethics Line to request clarification or guidance on the Code of Ethics and Good Practices or the practical application of its contents.

Complaints: Parties involved may use the Ethics Line to express their disagreement or dissatisfaction with any procedure or behaviour related to the research of a colleague or the organisation.

Alerts: Parties involved may use the Ethics Line to report any possible present or future breaches of the Code of Ethics and Good Practices or, if there is no such code, any possible research-related behaviour that could jeopardise the proper operation of the organisation or the integrity of their stakeholders.

Complaints: Parties involved can use the Ethics Line to report cases of malpractice or incorrect behaviour in ethical and responsible research, both those specified in the Code of Ethics and Good Practices and any other practice considered to be contrary to the international reference guidelines on the subject.

6. DESIGN

TO DO: Describe the Ethics Line as well as their relationship and operation.

Channel type

TO DO: Describe whether the communication channel of the Ethics Line is confidential, anonymous, or public.

Example of Channel Type

"This Ethics Line uses confidential and secure communication channels."

Notification tools

TO DO: Describe the reporting and communication tools used by the Ethics Line.

Example of Type of Notifications

Example: "This Ethics Line uses different tools to create, receive, and communicate notifications such as web forms, telephone numbers, and e-mail addresses."

E-mail: The Ethics Line has an e-mail address [xxxxx@RPO/RFO.es] to send notifications with suggestions, proposals, queries, complaints, alerts, or grievances. This e-mail and its notifications are managed by the RRI Office(r).

Telephone number: The Ethics Line has a telephone number [+34 626XXXXX] to send notifications with suggestions, proposals, queries, complaints, alerts, or grievances. This telephone number and its notifications are managed by the RRI Office(r).

Form: The Ethics Line has a form [available on the RPO / RFO website] to send notifications with suggestions, proposals, queries, complaints, alerts, or grievances. This form and the information contained are managed by the RRI Office(r).

Mechanisms to receive and manage notifications

TO DO: Describe the notification management tools used by the Ethics Line.

NOTE:

If the RPO / RFO opted for the second level of implementation and does not have an Ethics Committee on R&I, the receipt and management mechanism will be the responsibility of the RRI Office(r).

If the RPO / RFO opted for the third level of implementation, there are two interrelated mechanisms to receive and manage notifications.

Example of Mechanisms to receive and manage notifications

"Notifications collected via the Ethics Line are received at the RRI Office(r) and managed via the Ethics Committee on R&I"

- RRI Office(r) (See Annex 2): [describe the person in charge of the line and their duties]
- Ethics Committee on R&I (See Annex 4) [describe its composition and functions]

7. PROCEDURE TO RECEIVE & MANAGE NOTIFICATIONS

TO DO: Describe the process to manage the notifications collected by the Ethics Line.

NOTE:

If the RPO / RFO opted for the second level of implementation and does not have an Ethics Committee on R&I, the receipt and management mechanism will be the responsibility of the RRI Office(r).

If the RPO / RFO opted for the third level of implementation, there are two interrelated mechanisms to receive and manage notifications.

Example

"Notifications from the Ethics Line are first received and managed by the Line Manager in the RRI Office(r), who receives the full information and is responsible for safeguarding the data and ensuring its confidentiality. Then, the members of the Ethics Committee on R&I receive the notification in anonymised form (without the personal data of the person making the notification) and are responsible for dialogue and/or deliberation, as appropriate, with the aim to offer guidance, resolve doubts and conflicts, and/or promote conduct and procedures."

Stages

TO DO: Describe the different stages of the management and resolution procedure for notifications.

Example

Phase I: Confidentiality

Notifications are managed by the Ethics Line Manager (RRI Office(r)), who received the notification with the personal data of the person who made the notification. The RRI Office(r) is responsible to send an acknowledgement of receipt, register the entry, safeguard the personal data, ensure its confidentiality, control the management process, and file the resolution. If the Ethics Line Manager believes the notification is urgent, they may convene the Ethics Committee on an ad hoc basis.

Phase II: Transparency

The members of the Ethics Committee and the person responsible for the Ethics Line are notified at the same time. However, they receive an anonymised form, i.e., without the personal data of the informant, of the notification.

Phase III: Deliberation and Dialogue

The notifications received via the Ethics Line are presented and discussed at committee meetings (ordinary meetings or those convened ad hoc by the person responsible for the Ethics Line). For notifications such as those related to alerts, complaints and grievances, a process of deliberation and dialogue will begin to seek guidelines for the prevention or resolution of the conflict or grievance. If necessary, the Ethics Committee may open an investigation process to gather information, clarify the facts, and decide on the required action.

Phase IV: Resolution

All received notifications should be resolved within the maximum period of the established time in the action protocol (normally one month) and their resolution should be communicated to the person in charge of the Ethics Line (RRI Office(r)) in a report. This resolution report will be filed by the RRI Office(r) and sent to the informant.

Times

TO DO: Establish times to acknowledge receipt, investigate research misconduct, and present notification resolution reports.

Example

"The time to officially acknowledge the receipt of notifications should not exceed one week. The maximum time for resolutions will be one month from the receipt of the notification, except in those cases where an investigation should be opened. In that case, the maximum time will be three months."

Prevention, correction, promotion, and dissemination of actions

TO DO: Write the possible prevention, correction, promotion, and dissemination actions to be conducted dependent on the type and degree of ethical non-compliance.

Example

"Both the RRI Office(r) and the Ethics Committee on R&I will, as necessary, propose actions to prevent or correct inappropriate conduct or promote and disseminate good practices in ethical and responsible research, such as specific or transversal trainings to prevent, eradicate, or promote behaviours; redesign spaces to promote an appropriate work environment; record good practices or letters of gratitude; and provide recognition for good behaviour or procedure."

Prevention: Provide specific or cross-departmental trainings, design spaces to promote values and good practices, and implement specific guidelines, etc.

Correction: Provide specific or cross-departmental trainings, redesign spaces to promote values and good practices, create codes of conduct, review employment records, implement disciplinary penalties, etc.

Promotion: Establish awareness-raising activities and encouragement actions, etc.

Dissemination of information on: records, media communication actions, corporate websites, and shared spaces, etc.

Commitment to confidentiality and integrity

TO DO: Describe the commitment to confidentiality and integrity of those involved in receiving notifications and managing the Ethics Line.

Example

"Those involved in receiving, managing, and resolving Ethics Line notifications pledge to maintain data confidentiality and to alert the Ethics Line Manager if they have any kind of personal connection to the people involved and/or if they are affected by the notification in a way that might influence their sound judgement."

Security of informants

TO DO: Specify the regulatory framework to ensure the protection of those making notifications and the confidentiality of the data collected via the Ethics Line.

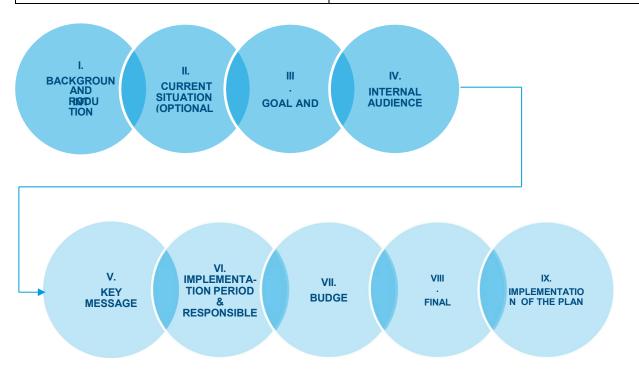
It's encouraged to be on the forms and other mechanisms used to make notifications and resolution reports.

Example

"The protection of those who make notifications and the confidentiality of the data collected via the Ethics Line are covered by the Spanish Personal Data Protection and Guarantee of Digital Rights Act 3/2018 of 5 December, 2018, and Directive (EU) 2019/1937 of the European Parliament and of the Council of 23 October 2019 on the protection of persons who report breaches of Union law."

ANNEX 6. GUIDANCE TO CREATE THE EXTERNAL COMMUNICATION PLAN

OBJECTIVE	SCOPE
To guide the design of an External Communication Plan for the Research Performance Organisation (RPO) or Research Funding Organisation (RFO) interested in the implementation of the ETHNA System, as well as mentor its implementation, execution, and evaluation process.	



1. BACKGROUND & INTRODUCTION

TO DO: Describe the introduction of the implementation of the ETHNA System at the RPO or RFO's organisations, as well as the background to external communication in the organisation and the preliminary work that has been performed to develop the External Communication Plan.

"...[RPO / RFO NAME] agreed to adopt the ETHNA system at the [RPO / RFO GOVERNING BODY] meeting held on [DATE]. The objective of the ETHNA system is to implement a procedure to manage Responsible Research and Innovation (RRI) in our organisation, so it is essential that all stakeholders are aware of the incorporation of this working methodology. This External Communication Plan forms part of the communication strategy of [RPO / RFO NAME], contained in [RPO / RFO'S STRATEGIC COMMUNICATION DOC] and, as such, should be understood as a specific development to publicise the ETHNA system among our external audiences."

2. CURRENT SITUATION (OPTIONAL)

TO DO: Conduct a situation analysis to describe the strengths, weaknesses, opportunities, and threats associated with the new External Communication Plan.

NOTE: Internal Factors of an organisation are generally classed as strengths and weaknesses, whereas external factors are classified as opportunities and threats.

Strengths:	Weaknesses:
Opportunities:	Threats:

3. GOAL & OBJECTIVES

TO DO: Describe the goal of the External Communication Plan, which is understood as the main purpose of the plan, and to also include a description of the partial objectives to be achieved to facilitate the final goal.

It is encouraged to publicise the organisation's adoption of the ETHNA system to all the organisation's external audiences to guarantee that all external audiences of [RPO / RFO. NAME] are informed.

It is encouraged to promote the participation of the RPO or RFO's organisation and the organisation's stakeholders in the RRI processes, in accordance with ETHNA system methodology.

"This External Communication Plan is intended to ensure that all stakeholders of [RPO / RFO. NAME] are informed about our organisations adoption of the ETHNA system and that the staff conduct their research and innovation in a responsible manner. To this end, the External Communication Plan has the following objectives."

4. EXTERNAL AUDIENCES

TO DO: Segment the external audiences of the organisation into different groups based on common features.

Examples of external audiences

- Public authorities
- Trade unions
- User and consumer organisations
- Educational environment
- Business and industry
- Other research centres

5. KEY MESSAGES

TO DO: List the key messages that the organisation needs to consistently apply throughout the communications activity.

The organisation is encouraged to adhere to no more than five "umbrella" messages that span the entire partnership, which can then be supplemented with different versions tailored to audiences if necessary.

Examples of key messages

[RPO / RFO. NAME] assumes the principles and values of the ETHNA system as an integral part of their own principles to ensure that RRI is conducted.

As part of the affected audience in the research of [RPO / RFO. NAME] I know that I have mechanisms to learn the results of these investigations.

As part of the affected audience in the research of [RPO / RFO. NAME], I have mechanisms to participate in the design of this research and to have my expectations considered.

6. IMPLEMENTATION PERIOD & RESPONSIBLE BODY

TO DO: Explain the designed period of time for the communication plan and the body responsible for its implementation.

7. BUDGET

TO DO: Detail the allocated budget to communications. Also explain the budget rules and conditions.

8. FINAL REFERENCES

TO DO: Include information on the date of approval for the document and the body responsible for its implementation.

9. IMPLEMENTATION

Strategy & work plan

TO DO: Establish communication actions to reach different audiences.

Indicate messages, the media and channels, deadlines, budgets, and the person or people responsible

The organisation should group their communication actions in line with an analysis of the following questions:

- What messages are to be communicated, in accordance with section 5 from the previous group?
- Who is the target audience?
- · What media and channels of communication should be used?
- When will the communication of each action occur?

Action	Message	Tools to provide support	Audience	Timing	Cost	People responsible
		External newsletter				
		Website				
		Meetings with stakeholders				
		Posters and graphic communica-tion				
		Letters to affected groups				
		External training programmes				
		Outreach programmes				
		Merchandising				
		Advertising				
		Media relations				
		Events				
		Sponsorship				

Key indicators

TO DO: Ensure that the objectives are linked with Key Performance Indicators (KPIs).

Objectives should be **SMART** (Specific, Measurable, Achievable, Realistic, and Time-bound).

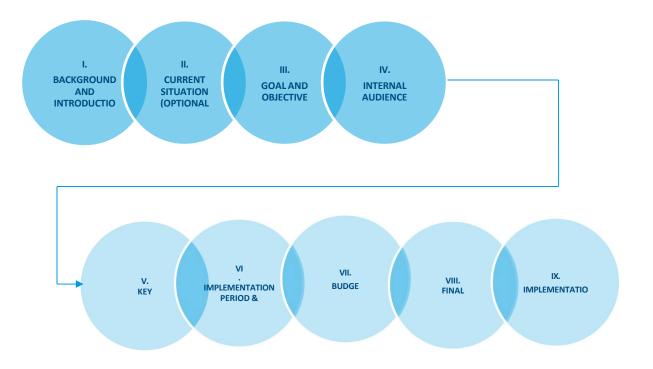
Evaluation & improvement system

TO DO: At the end of the implementation period of the plan, the organisation should explain how they will evaluate the results from the communication strategy.

Information should **be in accordance with the key indicators** listed in the previous section and the objectives and goals described in this document.

ANNEX 7. GUIDANCE TO CREATE THE INTERNAL COMMUNICATION PLAN

OBJECTIVE	SCOPE
To guide the design of an Internal Communication Plan for the Research Performance Organisation (RPO) and Research Funding Organisation (RFO) interested in the implementation of the ETHNA System, as well as mentor its implementation, execution, and evaluation process.	This protocol is aimed at RPO or RFO's organisation communication managers



1. BACKGROUND & INTRODUCTION

TO DO: Describe the introduction of the implementation of the ETHNA System at the RPO or RFO's organisation, as well as the background to internal communication in the organisation and the preliminary work that has been performed to develop this Internal Communication Plan.

Example

"[RPO / RFO NAME] agreed to adopt the ETHNA system at the [RPO / RFO GOVERNING BODY] meeting held on [DATE]. The objective of the ETHNA system is to implement a procedure to manage Responsible Research and Innovation (RRI) in our organisation, so it is essential that all its members are aware of it and incorporate it into their respective working areas. This Internal Communication Plan forms part of the communication strategy of [RPO / RFO NAME], contained in [RPO / RFO'S STRATEGIC COMMUNICATION DOC] and, as such, should be understood as a specific development to publicise the ETHNA system in our organisation."

2. CURRENT SITUATION (OPTIONAL)

TO DO: Conduct a situation analysis to describe the strengths, weaknesses, opportunities, and threats associated with the new Internal Communication Plan. Factors internal to an organisation are generally classed as strengths and weaknesses, whereas external factors are classified as opportunities and threats.

Strengths:	Weaknesses:
Opportunities:	Threats:

3. GOAL & OBJECTIVES

TO DO: Describe the goal of the Internal Communication Plan, which is understood as the main purpose of the plan, and to also include a description of the partial objectives to be achieved to facilitate the final goal.

Example

"The goal of the Internal Communication Plan is to ensure that all [RPO / RFO. NAME] staff are fully aware of the ETHNA system and incorporate its principles and values as their own in their respective fields of work. To this end, the Internal Communication Plan has the following objectives:

To see that all workers at [RPO / RFO. NAME] are aware of the ETHNA system and integrate it into their respective fields of work. Knowledge and adoption of the ETHNA system's operating standards should be promoted by members of our organisation.

To see that all new workers at [RPO / RFO. NAME] are aware of the ETHNA system as an essential element of the operation of our organisation. Our organisation should promote knowledge of the ETHNA system as an essential part of our operation from the very moment they join.

4. INTERNAL AUDIENCES

TO DO: Segment the internal audiences of the organisation into different groups based on common features.

Examples of RPO Internal Audiences	 Principal researchers Researchers in training New researchers Administrative and service staff Students (if applicable) Related units or services
Examples of RFO Internal Audiences	 Administrative and service staff Project officers Assessment teams

5. KEY MESSAGES

TO DO: List the key messages that the organisation needs to consistently apply throughout the communications activity.

The organisation is encourage to adhere to no more than five "umbrella" messages that span the entire partnership, which can then be supplemented with different versions tailored to audiences if necessary.

Examples of key messages	[RPO/RFO. NAME] assumes the principles and values of the ETHNA System as an integral part of their own principles to ensure that RRI is promoted.
	As a researcher at [RPO/RFO. NAME] I should integrate the principles and values of the ETHNA System into my regular working methodology.
	As a new member of [RPO/RFO. NAME] I should know the principles and values of the ETHNA System, which is an essential part of the organisation's ethics.

6. IMPLEMENTATION PERIOD & RESPONSIBLE

TO DO: Explain the designed period of time for the communication plan and the body responsible for its implementation

7. BUDGET

TO DO: Detail the allocated budget to communications. Also explain the budget rules and conditions.

8. FINAL REFERENCES

TO DO: Include information on the date of approval for the document and the body responsible for its implementation.

9. IMPLEMENTATION

Strategy & work plan

TO DO: Establish communication actions to reach different audiences.

Indicate:

- messages
- the media and channels
- deadlines
- budgets
- · person or people responsible.

The organisation should group their communication actions in line with an analysis of the following questions:

- What messages are to be communicated, in accordance with section 5 from the previous group?
- Who is the target audience?
- · What media and channels of communication should be used?
- When will the communication of each action occur?

Action	Message	Tools to provide support	Audience	Timing	Cost	People responsible
		Internal newsletter				
		Website				
		Meetings with sta- keholders				
		Posters and gra- phic communica- tion				
		Letters to affected groups				
		Internal training programmes				
		Outreach program- mes				
		Merchandising				
		Advertising				
		Media relations				
		Events				
		Sponsorship				

Key indicators

TO DO: Ensure that the objectives are linked with KPIs.

Objectives should be **SMART** (Specific, Measurable, Achievable, Realistic, and Time-bound).

Evaluation & improvement system

TO DO: At the end of the implementation period of the plan, the organisation should explain how they will evaluate the results from the communication strategy.

Information should **be in accordance with the key indicators** listed in the previous section and the objectives and goals described in this document.