

$$\int_V \operatorname{div} F \, dV = \int_{\partial V} F \cdot d\Sigma$$
$$F(x) = \int_a^x f(t) \, dt$$
$$f'(x) = \lim_{h \rightarrow 0} \frac{f(x+h) - f(x)}{h}$$

Manual for Coordinators of the ETHNA System

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Disclaimer:

This deliverable has not yet been reviewed by the European Commission. Its content might therefore change as a result of the review process.

Table of contents

Introduction	3
1. About the ETHNA System – a brief overview	4
1.1 ETHNA System: a continuous evolution system towards RRI.....	4
1.2 ETHNA System in brief.....	8
2. The role of the Implementation Coordinator	10
3. Stage 1 – Preparation (Year 1)	11
3.1 Establishment of the working group.....	11
3.2 Mapping of the internal organisational resources.....	11
3.3 A detailed review of the relevant internal organisational documents.....	12
3.4 Interviews with the employees.....	13
3.5 Focus group with 6-10 key members of staff.....	14
3.6 The RRI Review Report.....	15
3.7 Main challenges and possible solutions.....	16
4. Stage 2 – Planning (Year 2)	17
4.1 Development of the Implementation Plan.....	17
4.2 Main challenges and possible solutions.....	18
5. Stage 3 – Construction (Years 2 and 3)	19
5.1 The Implementation Coordinator or the RRI Officer? Or both?.....	19
5.2 Writing of the Code of Ethics and Good Practices in R&I.....	19
5.3 Establishment of the Ethics Committee on R&I.....	20
5.4 Set up the Ethics Line.....	21
5.5 Main challenges and possible solutions.....	21
6. Stage 4 – Consultation (Year 3)	23
6.1 Organisation of a deliberative workshop.....	23
6.2 Main challenges and possible solutions.....	24
7. Stage 5 – Promotion, and Stage 6 – Evaluation and review (Years 4 and 5)	25
8. ETHNA System dashboard tool	26
8.1 The indicators.....	26
8.2 The commitments.....	26
8.3 The dashboard results.....	27
8.3.1 Measuring progress.....	27
8.3.2 Measuring performance.....	28
9. Conclusion	37
10. References and further reading	38
11. Annex 1: Interview guide	39
12. Annex 2: Informed consent form	40
13. Annex 3: Focus group guide	41
14. Annex 4: Five-year ETHNA System implementation timeline	42

Introduction

This Manual is intended to help the persons who are responsible for the institutionalisation of ethics governance in the organisations that are either performing or funding research and/or innovation activities. It is further intended to support the implementation of the ethical governance structure (ETHNA System). The ETHNA System consists of several flexible blocks, which enable an easy adaptation to the needs and particular features of different organisations and their available resources.

This Manual is one of the three main documents needed for successful grounding of Responsible Research and Innovation (RRI) practices in research and innovation funding and performing organisations. The other two documents are **D6.2 Final ETHNA System Guide** and **D6.3 Five-year ETHNA System Sustainability Plan**. In particular, the current Manual is accompanying the Five-year ETHNA System Sustainability Plan in order to ensure the proper and efficient deployment of the system in the organisations.

D6.2 Final ETHNA System Guide is a comprehensive document that contains all relevant information concerning the nature of the ETHNA System, the instructions and recommendations for successful implementation of its tools (Ethics Committee, Code of Ethics and Best Practices, Ethics Line, and Progress and Performance Indicators), and a toolbox with 'ready-to-use' examples of how to develop, implement and maintain the ETHNA System during the different stages of the process. The draft version of the document was used by the six piloting organisations, which implemented the ETHNA System through a living lab experiment. Based on their experiences and a comprehensive evaluation of the process in these six organisations, the Guide was updated and finalised.

The Guide is intended to be used together with the D6.3 Five-year ETHNA System Sustainability Plan. The Plan is a practical and step-by-step implementation roadmap, containing a general guidance applicable to a variety of organisations, and four specific sections suggesting a possible implementation plan for universities, innovation ecosystem institutions, smaller research centres, and research funding organisations.

While the Five-year ETHNA System Sustainability Plan serves as a more general guiding document to be of use to a wide variety of organisation's stakeholders (from management to researchers), the current document (the Manual for Coordinators of the ETHNA System) is meant to be used by a very specific person (or a small team) in charge of the ETHNA System implementation. The Manual builds on the experience of the six Lab Managers, who were responsible for the ETHNA System implementation in the six piloting organisations. However, the Manual also considers the rich knowledge accumulated through extensive mapping, information-gathering and validation activities, which in some cases included also relevant experts outside of the six piloting organisations. As such, the Manual should be able to provide a relevant guidance to the RRI institutionalisation to a large variety of research performing and research funding organisations regardless of their different circumstances, needs and requirements.

It needs to be noted that this Manual was **not** written with the intention to be accessible and useful for a very diverse or general audience, but should be used only by persons responsible for the preparation, planning, implementation, monitoring and evaluation of the ethics governance system in their organisations. Before reading the Manual, these persons should have already familiarised themselves with the other two mentioned documents (D6.2 and D6.3) or at least have the intention to do so.

The Manual presents different stages of the process and lists the related tasks, potential challenges and possible solutions for overcoming the barriers based on the experience of the Lab Managers from the piloting organisations. The six organisations are representatives of four different research and innovation contexts: higher education, research funder, innovation ecosystem and research performing centre. The activities, methods and processes are presented in the Manual in a general way, making them applicable and relevant for different organisations from these four contexts.

1. About the ETHNA System – a brief overview

ETHNA System: a continuous evolution system towards RRI

The ETHNA System project was conceived as a way to support the research performing organisations (RPOs) and research funding organisations (RFOs) in their advancement and generation of good practices linked to RRI keys and dimensions, the MoRRI indicators and the Sustainable Development Goals (SDGs).

Specifically, the final design of the ETHNA System shows a positive impact on the following five RRI keys: Research Integrity, Governance, Public Engagement, Gender Perspective and Open Access.

1. RESEARCH INTEGRITY

Good Practice in the EU
Research integrity highlights that “in order to adequately respond to societal challenges, research and innovation must respect fundamental rights and the highest ethical standards”.
MoRRI
E1 – Ethics at the level of universities. E3 – Research Funding Organisations Index.
Sustainable Development Goals
The generation of structures that promote integrity behaviour around the world is at the basis of the SDGs.

2. GOVERNANCE

Good Practice in the EU
Governance is an umbrella key area, noting that policymakers “have a responsibility to prevent harmful or unethical developments in research and innovation”.
MoRRI
GOV2 – Existence of formal governance structures for RRI within research funding and performing organisations. GOV3 – Share of research funding and performing organisations promoting RRI.
Sustainable Development Goals
The generation of structures that promote ethical behaviours around the world are at the basis of the SDGs.

3. PUBLIC ENGAGEMENT

Good Practice in the EU

Public engagement refers to the “engagement of all societal actors – researchers, industry, policymakers, and civil society and their joint participation in the research and innovation process”. The engagement of the public is essential for research and innovation.

MoRRI

- PE1 – Models of public involvement in S&T decision-making.
- PE2 – Policy-oriented engagement with science.
- PE3 – Citizen preferences for active participation in S&T decision-making.
- PE4 – Active information search about controversial technology.
- PE6 – Dedicated resources for public engagement.
- PE7 – Embedment of public engagement activities in the funding structure of key public research funding agencies.
- PE8 – Public engagement elements as evaluative criteria in research proposal evaluations.

Sustainable Development Goals

SDG 9 industry innovation and infrastructure

9.1 Develop quality, reliable, sustainable and resilient infrastructure, including regional and transborder infrastructure, to support economic development and human well-being, with a focus on affordable and equitable access for all.

9.2 Promote inclusive and sustainable industrialisation and, by 2030, significantly raise industry’s share of employment and gross domestic product, in line with national circumstances, and double its share in the least developed countries.

9.5. Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending.

SDG 12 Ensure sustainable consumption and production patterns

Its targets will be recommendations for RFOs, so that they could encourage it in the processes of R&I.

SDG 16 peace, justice and strong institutions.

SDG 17 Revitalise the global partnership for sustainable development

The targets 17.6., 17.7. and 17.8. have been recommendations for RFOs and RPOs.

17.6. Enhance North-South, South-South and triangular regional and international cooperation on science and the access to science, technology and innovation as well as knowledge sharing on mutually agreed terms, even by improved coordination among existing mechanisms, in particular at the United Nations level, and by a global technology facilitation mechanism.

17.7. Promote the development, transfer, dissemination and diffusion of environmentally sound technologies to developing countries on favourable terms, including on concessional and preferential terms, as mutually agreed.

17.8. Fully operationalise the technology bank and science, technology and innovation capacity-building mechanism for the least developed countries by 2017 and enhance the use of enabling technology, in particular information and communication technology.

4. GENDER EQUALITY

Good Practice in the EU

Gender equality means that “all actors – women and men – are on board” in the public engagement activities.

MoRRI

- GE1 – Share of RPOs with gender equality plans.
- GE2 – Share of female researchers by sector.
- GE3 – Share of RPOs promoting gender content in research.
- GE4 – Dissimilarity index.
- GE5 – Share of RPOs with policies to promote gender in research content.
- GE6 – Glass ceiling index.
- GE7 – Gender wage gap.
- GE8 – Share of female heads of research performance organisations.
- GE9 – Share of gender-balanced recruitment committees at RPOs.
- GE10 – Number and share of female inventors and authors.

Sustainable Development Goals

- SDG 5. Achieve gender equality and empower all women and girls.
- 5.1. End all forms of discrimination against all women and girls everywhere:
- 5.A. Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws.
- 5.B. Enhance the use of enabling technology, in particular information and communications technology, to promote the empowerment of women.
- 5.C. Adopt and strengthen sound policies and enforceable legislation for the promotion of gender equality and the empowerment of all women and girls at all levels.

5. OPEN ACCESS

Good Practice in the EU

Open access means “giving free online access to the results of publicly-funded research (publication and data)”.

MoRRI

- OA1 – Open Access Literature.
- OA4 – Public perception of open access – PPOA.
- OA5 – Funder mandates.
- OA6 – RPO support structures for researchers as regards incentives and barriers for data sharing.

Sustainable Development Goals

SDG 4 Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

4.7. By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, the promotion of a culture of peace and non-violence, global citizenship and the appreciation of cultural diversity and of culture's contribution to sustainable development.

ETHNA System in brief

The **ETHNA System** is a **flexible ethical governance tool** 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. It consists of several building blocks that can be arranged and adapted according to the needs, resources and priorities of each organisation, and can be easily modified over time.

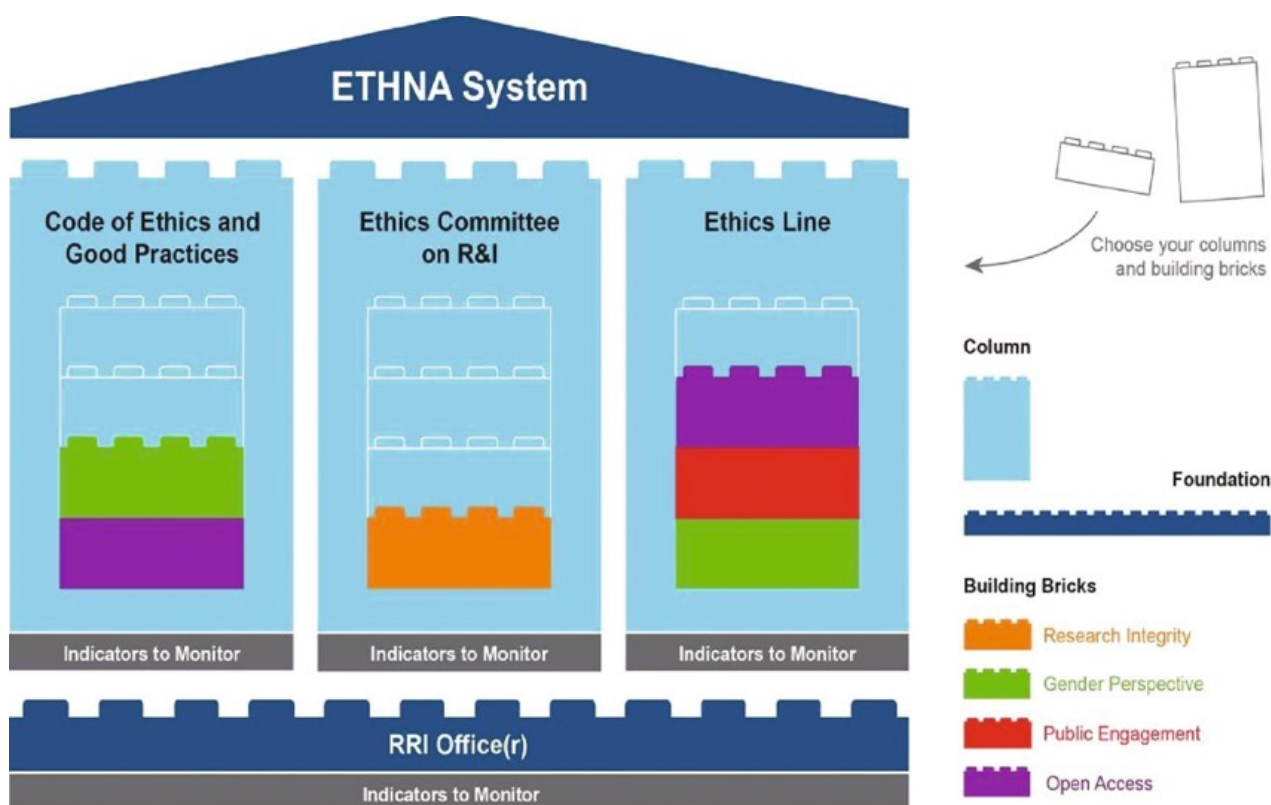


Figure 1: Blocks for constructing the ETHNA System

The **Foundation Block**, or the central element supporting the entire ETHNA System structure, is **the RRI Office (for large organisations) or RRI Officer (for smaller organisations)**. Both RRI Office and RRI Officer are responsible for similar tasks.¹ The terms RRI Office / RRI Officer are used in this Manual for the purpose of consistency with the ETHNA System terminology (see the figure above). If deemed more appropriate, the organisations which would like to implement the ethics governance system proposed by this Manual can use other terms for such a person/unit, for example Ethics Manager or Ethics Officer.

Ideally, the organisations should designate a permanent position of the RRI Officer, based either on a full-time or part-time contract (depending on the size of the organisation), for a limited period of time (a two-year term is recommended). In smaller organisations, the RRI Officer might also perform her/his tasks alongside their regular obligations, but this is not the optimal solution, as it carries a considerable risk of putting the person under undue stress because of the need to balance between the two roles.

¹ The main tasks of the RRI Office(r) include the preparation of the ETHNA System Implementation Plan, coordination and monitoring of the timely and effective execution of the Plan, facilitation of the continuous revision and improvement of the ETHNA System, regular communication with the internal and external stakeholders, promotion of principles and values of ethical management, and awareness raising about the ETHNA System and RRI issues within and outside the organisation. See also section '5. Stage 3 – Construction' for additional information.

After appointing the RRI Officer, the organisation can proceed with selecting the appropriate Implementation Level and deciding which Column Blocks should be added to the structure.

The organisations can opt for **three different levels of implementation**:

- **Level 1:** The organisation appoints the RRI Office or the RRI Officer and supports its activity. The RRI Office(r) will be in charge of disseminating the ETHNA System concepts, promoting awareness of principles and values, establishing activities and performance indicators for the Implementation Plan, and monitoring the progress of the ETHNA System in the organisation through progress indicators.
- **Level 2:** The organisation appoints the RRI Office or the RRI Officer and implements some of the Column Blocks (the Code of Ethics and Good Practices in R&I, the Ethics Committee on R&I, the Ethics Line). The Implementation Plan should incorporate at least one of the four major RRI keys: Research Integrity, Gender Perspective, Open Access, and Public Engagement.
- **Level 3:** The organisation fully develops the ETHNA System. It designates the RRI Office(r), implements all three Column Blocks and applies a proactive attitude in all RRI key areas: Research Integrity, Gender Perspective, Open Access, and Public Engagement.

For more detailed description of the ETHNA System structure, please read the **D6.2 Final ETHNA System Guide**.

The role of the Implementation Coordinator

The Implementation Coordinator is the most important person involved in the process of ETHNA System institutionalisation. She or he is responsible for the planning, coordination and facilitation of the entire process. The Implementation Coordinator should preferably have previous experience with the RRI framework (or at least some of the RRI key areas), given the central place of the RRI principles in the structure of the ETHNA System. She or he should have an appropriate position within the organisation, with easy access to the management, ability to act with considerable autonomy, and enjoy a good degree of authority and respect among colleagues and other internal and external stakeholders of the organisation. The Implementation Coordinator supports and supervises the activities of all other participants in the process, which means that good organisational, communication and leadership skills are essential for this task.

During the implementation process, the Implementation Coordinator can be appointed as the RRI Officer (or member of the RRI Office team) and continue the work in this capacity. This is a recommended, but not a necessary step. Especially in larger organisations, it would be prudent to keep these two roles separated.

The main tasks of the Implementation Coordinator are to:

- prepare the ETHNA System Implementation Plan;
- present the Plan to the management of the organisation and obtain its endorsement;
- monitor the execution of the Plan;
- participate in, coordinate and/or supervise all activities foreseen in the Plan;
- facilitate the continuous revision and improvement of the ETHNA System;
- maintain the regular communication with the internal and external stakeholders;
- promote the principles and values of ethical management and disseminate information pertaining to the ETHNA System and the RRI issues within and outside the organisation.

Stage 1 – Preparation (Year 1)

The first task of the Implementation Coordinator is to conduct **a detailed mapping and review of internal organisational resources, practices and policies** pertaining to the research and/or innovation activities, and to **identify the areas for improvement by integrating into them the ethics governance system (ETHNA System)**.

Establishment of the working group

Such review can be a very demanding and extensive task, and includes the collection and analysis of relevant documents, as well as interviews, meetings, focus groups and other forms of interactions with different internal stakeholders. Especially in large organisations, this task would require the involvement of several people, which means that before starting the review, the Implementation Coordinator will need to select several assistants and form a **working group**.

Recommendations for the set-up of the working group:

- The size of the working group depends on the size and complexity of each organisation.
- It is recommended that it includes at least 2, but no more than 5 members.
- It needs to be taken into consideration that the review process can demand substantial engagement in terms of effort and time.
- Junior or less experienced researchers can be involved in the desk research (collection and analysis of the documents, mapping of organisational resources such as departments, units, commissions or committees related to different aspects of RRI).
- Senior researchers with previous fieldwork experience should be engaged with interviews, meetings and focus groups.
- The Implementation Coordinator should choose the most suitable way for the selection of the working group members.

Mapping of the internal organisational resources

The first task of the Implementation Coordinator is to do the inventory of what the organisation already has in terms of the ethics governance of research and innovation. A good way to start is to **make a directory of all existing internal resources**:

- List the departments, units, programmes, committees or other structures, which explicitly deal with or focus on RRI-related aspects, and indicate the specific RRI key area related to the work of this unit.
- Examples: Deontological Committee; Wellness and Animal Testing Committee; Ethics Line; Research Ethics Board; Unit for Strategic Development; Data Protection Officer; Ethics and Integrity Committee; Ethics Portal; team experienced in public and stakeholder engagement.

Departments / units / programmes / committees	Short description (5-6 lines)	Related RRI key areas	Relevant persons to be interviewed

During the mapping exercise, most of the relevant internal documents will be also identified. If this is not the case, ask the identified unit representatives for guidance and tips on which documents to examine and where to find them.

A detailed review of the relevant internal organisational documents

The Implementation Coordinator should not attempt to conduct the review of internal documents alone. Especially in large organisations, this can be a quite demanding and time-consuming task, as it includes an extensive desk research through files and archives, followed by the content analysis. **Help from the working group is essential at this point.** This task is especially appropriate for the junior researchers. They will not only contribute to the task but will also learn more about their organisation and obtain valuable research experience.

- In general, all documents which address any of the RRI key areas (Research Integrity, Gender Perspective, Public Engagement, and Open Access) can be considered relevant.
- Examples of such documents include: Statute of the organisation; Ethics Code; Code of Conduct; Code of Good Practices and Governance; Data Management Plan; Gender Equality Plan; Policy for Gender Equality and Diversity; Annual reports; Social Responsibility Report; Open Access Guidelines; Guidelines for Policy on Open Science; Guidelines for communication and engagement of stakeholders; Internal codes for work with social groups with specific needs; Strategic research agenda etc.

After selecting and analysing the documents, each researcher should **write a summary of the document review.** The following template can be used:

Title of the document	
Year of publication	
Brief summary of the document	
Main purpose of the document	
Which are the RRI key areas the document is focused on and how?	
Can the document be updated, revised or substituted by a new document based on the ETHNA System guide? If yes, how?	

Interviews with the employees

The goal of the interviews is to **obtain information about the current ethics governance practices** in the organisation and to identify the relevant areas where ETHNA System could enhance the existing organisational policy and practice.

The interviewees shall be asked questions that will help the Implementation Coordinator to:

- evaluate and describe organisational initiatives, practices or processes related to the ethics governance or research and/or innovation activities;
- identify the areas where there is the greatest need for improvement;
- obtain information and suggestions for possible solutions.

The experience of the piloting organisations shows that the staff are in general interested and willing to participate, and consider the interviews as an opportunity for deliberation and critical self-reflection. The interviewer (the Implementation Coordinator or a senior member of the working group) needs to take **special care that the interviewees feel free, comfortable and safe to speak their mind and voice criticism**. Their anonymity has to be guaranteed, although this might be a challenge in very small organisations. A diversity of interviewees is highly recommended. In general, the interviews should be made with several representatives of the senior management, several representatives of the senior staff and several junior staff members. Another recommendation is to include at least one representative from each of the mapped departments or units.

The interviews are also **a great way to raise the awareness about and the interest in the ethics governance**.

It is recommended that the **interviews are conducted by the Implementation Coordinator and/or senior member(s) of the working group** with previous interviewing experience.

Before proceeding with the interviews, the interviewer should inform the interviewees about the purpose of the study. This can be done in writing or through a brief conversation, clearly explaining how the obtained information will be used, how it will be stored and secured, and what will be the expected outcome. The interviewees need to be clearly explained their role and be told the expected duration of the interview. Depending on the internal policies of the organisation, the interviewees might be asked to sign an informed

consent form. Finally, the interviewees should be provided with the contact information of the researcher/interviewer so that they may approach them for further information, feedback or to ask for amendment or deletion of the information they have provided.

Structure of the interview can be freely adapted to the circumstances of each organisation and the content, type and number of questions can be further adjusted for each interviewee.

The most important information to be obtained through the interview includes:

- Who are the main actors involved with the ethics related issues in the organisation?
- What are the main concerns and the main messages related to the question of responsibility in research and innovation in the organisation?
- In which way, if at all, are ethics and the RRI key areas embedded in the organisation?
- Which are the main drivers, barriers and good practices related to ethics governance and the RRI key areas in the organisation?
- Does the interviewee have any recommendations for strengthening the organisation's work on different aspects of RRI?

Please note:

- The document review will most likely reveal important information, which concerns some potential interviewees, but is irrelevant for others. Carefully consider which information to discuss with which interviewees.
- Additional interesting information could emerge from the early interviews – when appropriate, investigate this information further with the subsequent respondents.

In large organisations such as universities, an **online survey** can be conducted in addition to the interviews. The survey serves the same purpose as the interviews, but usually does not provide a very detailed and nuanced information. However, it is an excellent tool to verify certain information or obtain opinions from a large number of employees. For example, at one of the piloting organisations, an online survey was used to gather important feedback about the content of the first draft of the Code of Ethics and Good Research Practices. Slightly more than half of about 1,000 employees participated.

The Implementation Coordinator will need to prepare interview questionnaires, informed consent form and a brief information about the purpose of the study before the interviews. A model interview guide and a model informed consent form are attached to this document as Annex 1 and Annex 2.

Focus group with 6-10 key members of staff

The aim of the focus group is to **explore issues not sufficiently addressed during the desk research and the interviews**. It is also an excellent opportunity to obtain constructive suggestions and recommendations. It is suggested that the focus group includes the following stakeholders: at least two participants from each of the three indicated hierarchy levels (low, middle and high).

Ideally, the focus group participants should be different from those involved in the interviews. However, this very much depends on the size of the organisation and the number of relevant people. In case of smaller organisations, some overlap is inevitable, but a focus group consisting only of people who have already been interviewed is not recommended. Nevertheless, even a focus group consisting of participants who have already been interviewed can produce interesting new knowledge, as the group dynamic often brings forward different angles and approaches.

The focus group should be **moderated by the Implementation Coordinator or senior member of the working group** with previous experience in conducting focus groups.

A model focus group guide is attached to this document as Annex 3.

The RRI Review Report

After the completion of all data collecting activities, **the Implementation Coordinator shall prepare the RRI Review Report**. There is no particular form the report should follow, as its main intention is to capture the main findings and messages from the document review, interviews and focus group, but a possible structure is presented below.

- a) Review of the relevant internal organisational documents:
 - Title of the document:
 - Year of publication:
 - Brief summary of the document:
 - Main purpose of the document:
 - Which are the RRI key areas the document is focused on and how?
 - Can the document be updated, revised or substituted by a new document based on the ETHNA System guide? If yes, how?

- b) Summary of the interviews:
 - How the interviewees perceive/conceptualise the RRI concept?
 - What is the role of RRI in the organisation (main concerns and messages related to the question of responsibility in research and innovation in the organisation)?
 - Who are the main RRI actors in the organisation?
 - In which way, if at all, are ethics and the RRI key areas embedded in the organisation?
 - Which are the main barriers related to ethics governance and the RRI key areas in the organisation?
 - Which are the main drivers related to ethics governance and the RRI key areas in the organisation?
 - Which are the existing good RRI practices in the organisation?
 - How is the work related to RRI key areas being monitored and evaluated?
 - Recommendations of the interviewees for strengthening the organisation's work on different aspects of RRI.

- c) Summary of the focus group:
 - Short overview of the opinions of the focus group participants about the relevance of the RRI key areas for the organisation, how they are being implemented and the recommendations for improvement or further development of the existing practices.

- d) Conclusion
 - Describe the overall relevance of RRI and ethics governance of research and innovation for the organisation.
 - Explain which RRI keys are embedded in the core documents of the organisation and which are part of the established practices.
 - Propose how the implementation of the ethics governance and integration of RRI key areas into the organisation could be additionally improved.

The working group will use the findings and conclusions of the RRI Review Report to identify and list the main priorities and goals of the ETHNA System implementation for the organisation.

Main challenges and possible solutions

Based on the experiences of the piloting implementers, you may encounter the following challenges during the preparation stage:

Challenges and barriers	Possible measures to overcome the barriers
Internal stakeholders (from researchers to management) are usually very busy and it might be hard to arrange their participation in interviews, focus groups and other activities.	Maintain regular but unobtrusive communication with the stakeholders underlining the benefits of their involvement for the organisation and themselves.
In large organisation (for example universities) it may be an overwhelming task to study all relevant documents, map all existing resources and involve internal stakeholders from all levels.	Identify and select an institute, faculty, department or other unit that is well suited to implement the ETHNA System and focus on the resources of this unit, not the entire organisation.
The number of relevant documents can be quite high, especially in larger organisations, which may make the documentary review unnecessary long and complicated.	Focus on the most important documents, especially the ones recommended by the internal stakeholders and people working in the offices/departments listed during the mapping of internal resources.
Staff of the organisation might be unaware, unfamiliar with or not interested in the RRI concept and the specific RRI key areas.	Identify those areas that are most relevant for the organisation and focus on them; try to present the advantages and benefits of other RRI keys.
If the organisation consists of different units (faculties, departments, programmes, offices, etc.) with very different foci and different goals, it can be a challenge to design an Implementation Plan that will be applicable for all units.	RRI and ETHNA System are very broad and generally applicable concepts that can, if applied properly, provide a common frame for very different units within the same organisation.
The researchers are often subject to numerous demands and requirements (often perceived as imposed from the higher administrative levels) and may react negatively to another demand to take part in additional activities. This may be especially pronounced among the senior research staff.	Try to learn about and understand the needs, awareness and experience of the staff about the existing RRI structures in the organisation, their attitudes towards the RRI key areas and their views about their organisation's action in relation to ethical behaviour and standards, and then make them aware that through involvement they will have the opportunity to have an impact on these processes.

Stage 2 – Planning (Year 2)

Development of the Implementation Plan

Based on the findings from the RRI Review Report and the list of the main priorities and goals of the ETHNA System implementation process, the Implementation Coordinator and the working group can proceed with **the development of the Implementation Plan (or Action Plan).**²

- The Plan should list all necessary activities and actions, along with deadlines and responsible person/unit.
- The Plan should also list the appropriate monitoring indicators³ to enable the regular evaluation of progress and performance (best done on an annual basis).
- When finalised and approved by the management, the Plan should be made easily accessible to all members of the staff (for example, by being published on the website of the organisation).

ACTION	OBJECTIVE	RESPONSIBLE PERSON / UNIT	DEADLINE	PROGRESS INDICATOR	PERFORMANCE INDICATOR

The Implementation Coordinator and the working group are advised to **consider the following aspects** when designing the Implementation Plan:

- A common understanding of the Implementation Plan should be established within the organisation. Actions, objectives and responsibilities should be clear and understandable to all involved stakeholders.
- The implementation process should be flexible. It is highly unlikely that everything will proceed according to the original plan, therefore space for the necessary changes and adjustments has to be anticipated. It is recommended to develop a risk assessment plan alongside the implementation plan.
- It is crucial to be modest and realistic about the objectives to be achieved and the time needed to accomplish them. The experience of the piloting organisations has shown that the process is much slower than initially foreseen.
- Always keep in mind the availability of human, financial and time resources.
- Internal stakeholders must endorse the plan, and if possible, contribute to it, otherwise they may reject it as something imposed on them externally or “from the top.”

² For more information about how to prepare the Implementation Plan (or Action Plan), see **D6.2 Final Guide of the ETHNA System** – Toolbox to Implement the ETHNA System, pp. 5-11.

³ For more information about the indicators, see **D6.2 Final Guide of the ETHNA System** – Toolbox to Implement the ETHNA System, pp. 12-23.

Main challenges and possible solutions

The planning stage is in many ways the most straightforward part of the process and the one where the piloting organisations experienced the least challenges. Some of the potential obstacles include:

Challenges and barriers	Possible measures to overcome the barriers
It may be difficult to adapt the ETHNA System to the existing structures.	Careful analysis of the RRI Review can help to identify the most suitable way to use the ETHNA System to reform or update the existing resources.
It is not always easy to find the complementary elements between the Implementation Plan and the existing organisational documents and resources, and establish how the ETHNA System could bring the added value to the organisation.	Focus on the findings from the RRI Review and underline the aspects that can help the organisation overcome the identified gaps or deficiencies.
The monitoring process requires a long period (at least three years) to get the suitable feedback and analyse it.	The Implementation Plan should allow enough time for the results and impacts to occur and be noted.
Organisations operate at their own pace. It may be difficult to accommodate the timing proposed in the Five-year ETHNA System Sustainability Plan to the pace of the organisation.	The Plan has to be tailored to the needs and the rhythm of the organisation, and not attempt to interfere with it or to change it.

Stage 3 – Construction (Years 2 and 3)

The Implementation Coordinator or the RRI Officer? Or both?

The actual start of the active ETHNA System implementation process is the time when **the organisation has to designate the RRI Officer or establish the RRI Office**, if this has not already occurred. In smaller organisations, it would be advisable if the Implementation Coordinator is appointed as the RRI Officer (or member of the RRI Office team) and continues the work started one year ago. However, in larger organisations, it would make sense to keep these two roles separated. In the latter case, the responsibilities of the RRI Officer and the Implementation Coordinator would be divided in the following way:

Implementation Coordinator	RRI Officer
coordinates the writing of the Code of Ethics and Good Practices in R&I;	contributes to the writing of the Code of Ethics and Good Practices in R&I;
consults the management in the process of the establishment of the Ethics Committee on R&I;	regularly communicates and collaborates with the Ethics Committee on R&I;
coordinates the set-up of the Ethics Line;	has responsibility for the Ethics Line and responds to signals, suggestions and complaints received through the Line;
monitors the progress of the ETHNA System;	promotes awareness of ethics principles and values;
evaluates the progress using the indicators;	periodically reviews the indicators and proposes updates and changes when needed;
proposes actions for continuous improvement of the ethics governance in the organisation;	disseminates the ETHNA System concepts;
periodically updates the list of internal and external stakeholders.	maintains communication with internal and external stakeholders and involves them in different activities.

Writing of the Code of Ethics and Good Practices in R&I

The ETHNA System's **Code of Ethics and Good Practices in R&I (CEGP)** is a formal and public document that identifies, outlines, and justifies values, principles, and good practices of the organisation in relation to its research and/or innovation activities.

The Implementation Coordinator contributes to the writing process and is responsible for the coordination of the working group that is writing the CEGP. The RRI Officer (if she/he is a different person) also contributes to the writing of the document. The Implementation Coordinator and the RRI Officer jointly edit the final version of the document.⁴

⁴ As noted in section 5.1., the Implementation Coordinator and the RRI Officer can be one and the same person, especially in smaller organisations.

The process starts with the selection of the working group. In smaller and medium organisations, the working group might consist of 4-5 people, whereas each would be responsible for writing one chapter or section focused on one of the four key RRI areas. In larger organisation, it may be prudent to have a small (or even large) team of several people working on each chapter/section.

The Implementation Coordinator and the RRI Officer jointly discuss and nominate the members of the working group. If organisation already has employees involved with or knowledgeable about different aspects of ethical management such as Open Access, Gender Equality, Integrity or Public Engagement, they would be the logical choice for participation in the working group.

After the Implementation Coordinator and the RRI Officer agree on the list of candidates, they should meet with them to recruit them. This step needs to be discussed also with the management of the organisation, as it is highly recommended that a certain compensation is envisaged for the members of the working group. This can be either of financial nature or other work-related benefits.

When the working group is appointed, it can hold its first meeting to plan and organise its work, specify goals and actions, and distribute the responsibilities among the members. The meetings of the working group should follow at regular intervals (e.g. every two weeks) to discuss the writing process and any other issues that may arise.

After the **first draft of the CEGP** has been written, it **needs to be discussed with the internal stakeholders**. This can happen in a variety of ways, again depending on the size and type of the organisation. Suitable approaches are presentations, workshops and focus groups. Based on the obtained feedback, the working group members discuss how to revise the first draft. **The second draft can then be presented to the management for approval and endorsement**. If deemed necessary, another revision can be done before the CEGP is finally approved. The role of the Implementation Coordinator is crucial in the interactions and communication with the management.

For detailed instructions on how to develop the Code of Ethics and Good Practices in R&I (CEGP), see pages 34-37 of the **D6.2 Final ETHNA System Guide**.

Establishment of the Ethics Committee on R&I

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 the **body responsible for discussing notifications, proposals, suggestions, consultations, warnings, complaints, and reports** related to the CEGP and other issues concerning the ethical conduct of research and innovation activities. These notifications may be received directly by the Ethics Committee or via the RRI Office(r), and may be communicated through the Ethics Line or other appropriate communication channels in the organisation.

For detailed instructions on how to establish the Ethics Committee on R&I, see pages 38-41 of the **D6.2 Final ETHNA System Guide**.

Establishment of the Ethics Committee can be a lengthy process and therefore needs to be carefully managed by the Implementation Coordinator. **The nomination and selection procedure should be based on the consultations with the internal stakeholders.** If deemed appropriate, external stakeholders can also be consulted, as this would give additional weight to the Committee. The members of the Committee will also need to receive the approval of the senior leadership of the organisation. It is advisable that the Ethics Committee on R&I has **at least three, but no more than five members**. The committee should at least have a chairperson, a secretary, and an ordinary member.

Certain types of Ethics Committees have to **observe strict national regulations** (e.g. animal committees or medical research committees). In such cases, the implementers should consult the existing national regulations in this respect.

The preliminary list of the objectives and duties of the Ethics Committee on R&I can be drafted during the preparation of the Implementation Plan and ideally included in the CEGP. After the appointment of the Committee, the Implementation Coordinator may discuss this list with the Committee members and if necessary, update and revise the objectives, responsibilities and tasks. Additionally, specific duties and responsibilities can be assigned to individual Committee members, considering their experience, capabilities, expertise, and objectives.

Set up the Ethics Line

The Ethics Line is an open, secure and anonymous channel of communication within the organisation that can be used primarily by internal, but under specified conditions also external stakeholders, to submit:

- suggestions to improve the ETHNA System and its different elements: Code of Ethics and Good Practices, Ethics Line and Ethics Committee;
- proposals for best practices in research and innovation;
- questions on the ETHNA System and its implementation;
- complaints and grievances about inappropriate or unethical behaviour;
- warnings about possible bad practice and misconduct;
- reports about breaches of the Code of Ethics or noncompliance with it.

The Ethics Line is an important tool that will help the organisation to enhance the level of responsibility in its research and innovation activities, thereby supporting it to live up to the expectations of the society.

For detailed instructions on how to set up the Ethics Line, see pages 42-44 of the **D6.2 Final ETHNA System Guide**.

Only one of the six piloting organisations has established the Ethics Line and therefore it is difficult to propose recommendations for the Implementation Coordinators based on the experiences from the testing implementation. In general, the Implementation Coordinator would have to do the following:

- promote the Ethics Line and ensure that it is well known among the staff of the organisation;
- set up a periodical survey to obtain information about familiarity with and use of the Ethics Line;
- design a protocol clearly establishing who is responsible for maintaining the Ethics Line, who is responsible for receiving and documenting the notifications, who is responsible for taking action, and who is responsible for providing feedback.

Main challenges and possible solutions

The piloting organisations have reported the following challenges related to the construction stage and proposed some actions to resolve them:

Challenges and barriers	Possible measures to overcome the barriers
The organisation already has suitable documents covering all or most of the RRI key areas.	These documents can serve as the basis and inspiration for the writing of the CEGP. CEGP can either complement them or substitute them if the existing documents are out of date.
Several drafts of the CEGP may be produced, but none of them receives the approval of the management.	Repeated meetings with the management are needed to overcome the differences and revise the document in a way that is acceptable to all sides.

<p>Terminology of the CEGP may be unfamiliar or hard to understand for some internal stakeholders.</p>	<p>Add a glossary of complex RRI concepts to the Code, making it useful and relevant for the entire community of the organisation.</p>
<p>A body similar to the Ethics Committee on R&I already exists at the organisation.</p>	<p>It makes no sense to duplicate the work of already existing structures. ETHNA System can be used to rethink and if necessary to revise or upgrade the role of these structures.</p>

Stage 4 – Consultation (Year 3)

After the successful completion of the construction stage, the **Implementation Coordinator should verify the viability of the ethics governance system** and its elements by consulting the internal and external stakeholders. There are variety of approaches for consulting stakeholders, but we recommend the organisation of deliberative workshops. **A deliberative workshop is a targeted participatory event at which information is shared, and knowledge, opinions and experience exchanged.** The workshop will enable the Implementation Coordinator to promote the ETHNA System and raise awareness about its benefits, but even more importantly it will serve to obtain valuable feedback that can be used to revise and further improve the ETHNA System and its components.

Organisation of a deliberative workshop

Typically, a workshop starts with an input presentation, followed by a discussion. Depending on the number of participants, discussions can take place either in a plenary session or in small groups. In case of the plenary session, one moderator is sufficient, but if discussions are organised in small groups, each needs a group/table moderator. Moderators ensure that all participants are able to share their opinions, thoughts, expectations and concerns. The discussions are carefully recorded, either electronically or manually (notetaking). The participants have to be aware that the workshop will be recorded and informed how the information will be used. To this end, they need to sign an informed consent document before the start of the workshop.

The recommended number of participants per workshop is not more than 10-12 for a plenary session format and not more than 20-25 for the work in small groups. Larger number of participants would make it very difficult, if not impossible, to give all participants a chance to have their say. Based on our experience, two to three hours would be sufficient time to properly present and discuss the ETHNA System and its tools.

To-do list for the Implementation Coordinator:

- use the ETHNA System guide **“Mapping stakeholders and scoping involvement – a guide for HEFRCS”** to identify stakeholders you would like to invite to the workshop;
- define the objectives and desired outcomes of the workshop. Consider why the participation of relevant stakeholders is necessary and what contribution they should make;
- select the appropriate format of the workshop and methods to be applied;
- prepare the workshop agenda, invitation, informed consent form and guiding questions for the discussion;
- send out the invitation message;
- prepare the venue and all the necessary materials (microphones, tables, chairs, podium, flipchart, paper, pens and refreshments);
- moderate the event, ensure that the programme runs smoothly and be prepared as much as possible to deal with unexpected events, including possible technical difficulties;
- explain the purpose of the workshop and how the results will be used;
- in case you plan to record, share the names, photos and other personal information about the participants, it is obligatory to obtain the informed consent and explain how the information about and provided by the participants will be used, kept and deleted;
- guide participants through the methods and techniques used in the workshop and provide assistance;
- record the presentations and discussions as this will be needed to write the workshop report and analyse the outcomes of the discussions;

- conclude the workshop with final remarks and by thanking the participants. Inform them about the upcoming activities and further opportunities for engagement;
- after the workshop, prepare a report and share it through available internal channels of communication in the organisation. Invite the workshop participants to give feedback and additional opinions. Provide access to all materials (such as slides or videos) presented during the workshop;
- based on the report, formulate conclusions and recommendations for revision and refinement of the ETHNA System and its elements. This can include minor changes and updates to the Code of Ethics and Good Practices in R&I, revision of the procedures and practices of the RRI Office(r) and Ethics Committee, and the operation of the Ethics Line. If more substantial changes are necessary, help can be sought from the members of the working group involved in the earlier stages of the process;
- update your stakeholder map, as the workshop may have changed the way you want to engage relevant stakeholders in your future RRI activities.

Main challenges and possible solutions

The piloting organisations have experienced the following challenges with the organisation of a consultation workshop:

Challenges and barriers	Possible measures to overcome the barriers
<ul style="list-style-type: none"> ➤ Lack of time and intensive work schedule of stakeholders may make it difficult for them to attend a workshop. 	<ul style="list-style-type: none"> ➤ Although it is highly recommended to organise at least one consultation workshop with internal stakeholders, stakeholders can also be consulted in other ways, including interviews and online surveys. ➤ Instead of discussing the ETHNA System and its tools on a large workshop, several small deliberation panels can be created to discuss and propose refinements to different elements of the System.

Stage 5 – Promotion, and Stage 6 – Evaluation and review (Years 4 and 5)

To a very large extent, the obligations and tasks of the Implementation Coordinator end with the successful completion of the consultation stage. The last two stages of the ETHNA System implementation process – promotion and evaluation – fall into the responsibilities of the RRI Officer or RRI Office, which should have, hopefully, at this stage be already well established and comfortable in their new role. As these final two stages of the process have not been tested by the piloting organisations, there are no challenges and measures to overcome them to be reported.

Nevertheless, the Implementation Coordinator can assist the RRI Office(r) to:

- develop a detailed **Internal and External Communication Plan** (see the guidance to create the Internal Communication Plan on pages 138-143 and guidance to create the External Communication Plan on pages 132-137 of **D6.2 Final ETHNA System Guide**);
- plan and organise the trainings for all members of the staff;
- set up awareness-raising and information campaigns and promotion events;
- regularly monitor and evaluate what has been achieved during the year against the set of progress and performance indicators defined in the Implementation Plan;
- propose recommendations for changes and updates to the ETHNA System and its elements.

ETHNA System dashboard tool

The ETHNA System dashboard tool is an example of the use of the dashboard to monitor the progress of the ETHNA System implementation. It was created as a means to validate and add value to the ETHNA System project. Its aim was to test an example of a tool that could be used by potential future implementers to measure and monitor their progress and have some data about their performance. The dashboard was tested by five of the implementers of the ETHNA System. Their answers reflect the different progress achieved within the different levels of commitment during the one calendar year.

Following the open science and open-source approach, the ETHNA System consortium decided that the most suitable solution to be used for our project would be two no-code solutions – Airtable (used as a database for the entered information) and Landbot (used to build and host the chatbot).

The use of such a dashboard is advisable in order to obtain some internal insight on the progress and depth of the ongoing implementation. The tool enables the implementing organisations to monitor their annual progress in the implementation of their respective commitments for the year. This makes it possible to identify the areas where insufficient progress has been made and amend the next annual plan accordingly. The tool can be also used to inform interest groups on the advancement of the implementation. The exercise needs to be repeated annually in order to be truly useful.

The indicators

Progress and performance indicators are used at all three levels of commitment to monitor the progress of the ETHNA System.⁵

Progress indicators are useful to verify the level of consolidation of the system in all phases of the process. In order to be able to compare among organisations, they are common for all organisations aiming to implement the system.⁶ Progress is measured through “yes” or “no” questions regarding the specific steps needed to be taken in order to achieve the full implementation of the tool. For example, in the case of the RRI Office(r), an Action Plan needs to be put into place.

Performance indicators account for the number of actions conducted towards the achievement of a specific objective, e.g. internal awareness. It is advisable that performance indicators are always tailored to each organisation’s Action Plan.⁷ Performance is measured through the number of actions conducted that contribute to the final grounding of ETHNA System at the RPO or RFO.

The commitments

ARC Fund

ARC Fund had committed to a level 2 implementation that included the creation of an RRI Officer position, a Code of Ethics and Good Practices in R&I and a Research Ethics Board.⁸

Espaitec

UJI’s technological park selected a level 2 commitment. This implied the implementation of the RRI Office(r) as well as the development of a Code of Ethics and Good Practices. After some analysis, they decided to focus on Gender, as they deemed for it to be a transversal topic of interest to their stakeholders in the park.⁹

Harno

⁵ D6.2 Final Guide of the ETHNA System, p. 12.

⁶ Toolbox to Implement the ETHNA System, p. 12.

⁷ Toolbox to Implement the ETHNA System, p. 13.

⁸ D6.1 Evaluation Report About the Implementation of the ETHNA System, p. 15.

⁹ D6.1 Evaluation Report About the Implementation of the ETHNA System, p. 15.

Harno decided to implement level 2 in order to appoint an RRI Officer, develop the Code of Ethics and Good Practices in R&I (covering all four RRI keys) and use an Ethics Committee to be established at the Estonian Research Council (ETAG) to deal with more complex cases.¹⁰

UJI

UJI was the only implementer to choose a level 3 commitment to the ETHNA System, using it as an opportunity to review and revise the Code of Ethics and Good Practices in R&I, upgrade the Ethics Committee on R&I and the Ethics Line, and appoint an RRI officer.¹¹

Uninova

UNINOVA took the decision to implement level 2 of the ETHNA System that includes the Code of Ethics and Good Practices in R&I, the Ethics Committee on R&I, and a small informal ad hoc committee to play the role of the RRI Officer.¹²

The dashboard results

The overall results show a significant implementation of the different tools designed for the implementation of the ETHNA System that the organisations had committed to. Although their respective percentages of achievement decrease slightly as the level of commitment increases.

Measuring progress

RRI Officer – Level 1

The answers to the question about the progress of the implementation of the RRI Office(r) (level 1 per organisation) indicate a high level of advancement in the implementation of the RRI Officer position in all five organisations, ranging from 84.62% at UJI (the lowest percentage of achievement) to 100% at Harno and Uninova.

ARC Fund	Espaitec	Harno	UJI	Uninova
92.31%	92.31%	100%	84.62%	100%

Code of Ethics – level 2

The progress in the implementation of the Code of Ethics looks very advanced all across the board; the lowest percentage of implementation at Espaitec being 77.78% and the highest at Harno and Uninova at 98.44%.

ARC Fund	Espaitec	Harno	UJI	Uninova
83.33%	77.78%	94.44%	88.89%	94.44%

Permanent Ethics Committee in R&D – level 2

Only 3 organisations committed to the implementation of a Permanent Ethics Committee in R&D. UJI has made good progress, achieving 87.50% of its implementation, while the other two organisations have only managed to implement it to a certain extent (62.50%).

¹⁰ D6.1 Evaluation Report About the Implementation of the ETHNA System, p. 14.

¹¹ D6.1 Evaluation Report About the Implementation of the ETHNA System, p.13-14.

¹² D6.1 Evaluation Report About the Implementation of the ETHNA System, p. 15.

ARC Fund	Españtec	Harno	UJI	Uninova
62.50%	-	-	87.50%	62.50%

Ethics Line – level 3

UJI is the only implementer, which has committed to develop or to continue developing their ethics line tools. So far, it has managed to advance that objective to a 64.71%.

Measuring performance

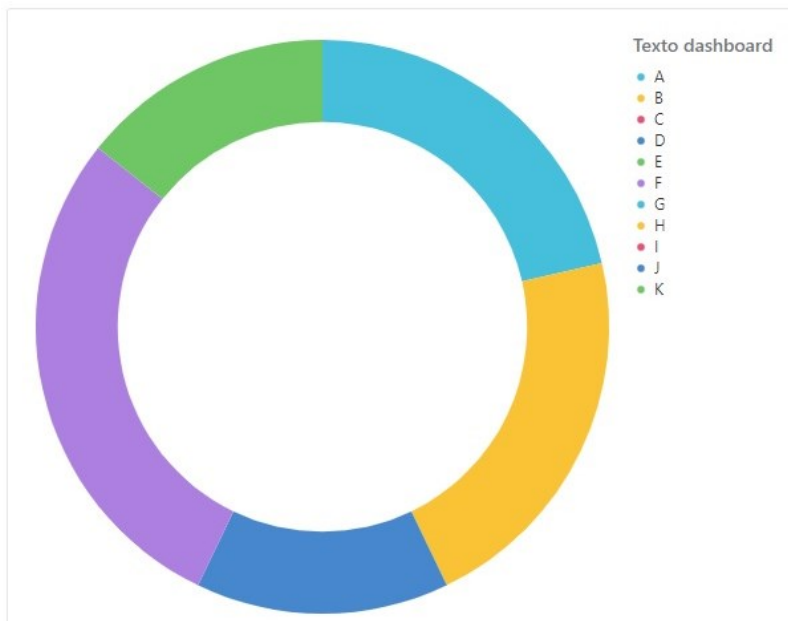
ARC Fund

RRI Office(r) – level 1

Regarding ARC’s Fund performance, their highest incidence revolves around the number of actions to tackle the RRI keys (4).

Some further effort could be done regarding actions to meet the preconditions required for implementing, as none have been conducted by ARC Fund. Also, a lack of response from the stakeholders can be noted, as no notifications have been received. There are no governing bodies linked to the RRI Office(r) and also no committees, departments and/or services that cooperate with the RRI Office(r).

Actions



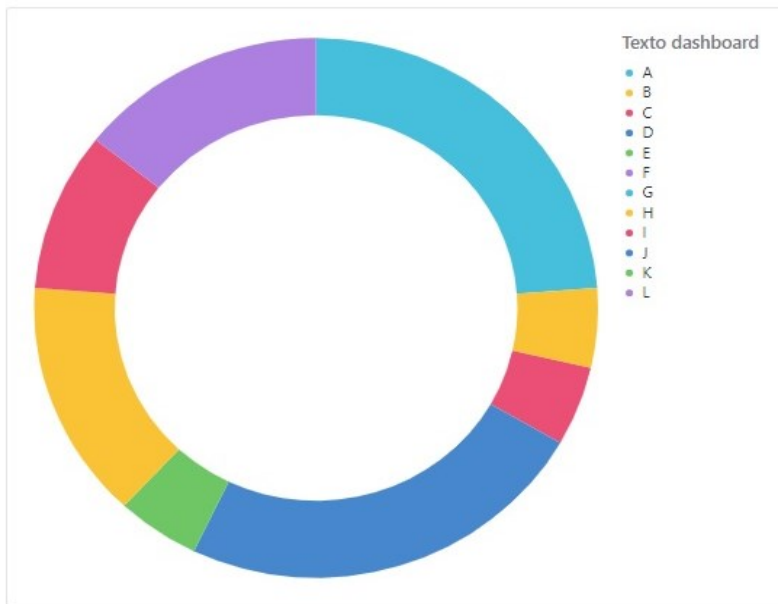
- A-Actions to generate internal awareness
- B-Actions to self-assessment of preconditions for implementation
- C-Actions to meet the preconditions required for implementing
- D-Activities to extend the idea of ethical governance of R&I
- E-Notifications received
- F-Actions to tackle the RRI keys
- G-RPO/RFO governing bodies linked to the RRI Office(r)
- H- Requests for collaboration from RPO/FRR Governing Bodies
- I-RPO/FRR committees, departments and/or services that cooperate with the RRI Office(r)
- J-Requests for collaboration from RPO/FRR committees, departments and/or services
- K-Communication actions to account to stakeholders on the progress and impact

Code of Ethics – level 2

The largest number of actions pertaining to the Code of Ethics focused on internal awareness generation (5) and improving and/or updating the contents of the Code (5). Other areas of actions comprised actions to tackle the RRI keys (3) and communication actions to account to stakeholders on the progress performance of the Code (3). Finally, some effort was invested into actions for the continuous improvement of the Code (2). Only one action was conducted in the following areas: actions to generate external

awareness, actions to train RPO/RFO professionals in the contents of the Code and actions to monitor the level of compliance with the Code's values and behaviours.

Code of ethics

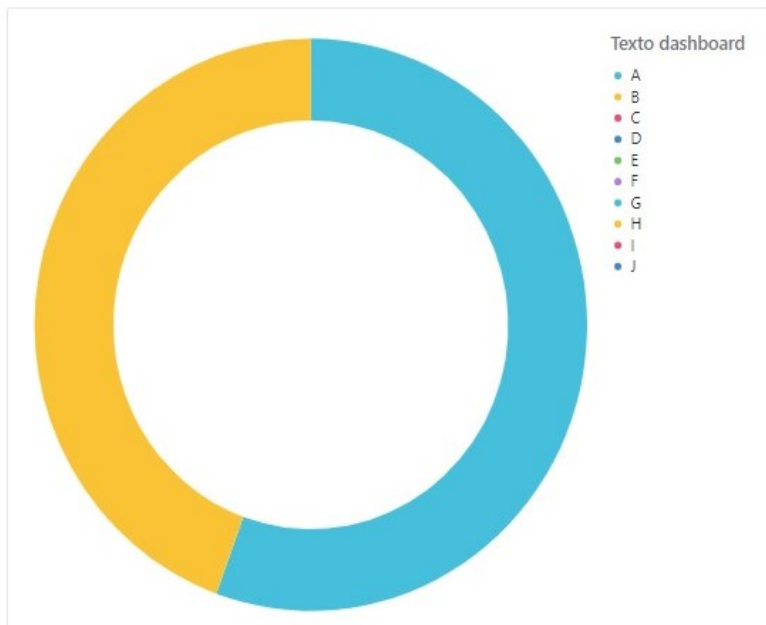


- A-generate internal awareness
- B-Actions to generate external awareness
- C-Actions to train RPO/RFO professionals in the contents of the CEGP
- D-Actions to improve and/or update the contents of the CEGP.
- E-Actions to monitor the level of compliance with the CEGP values and behaviours
- F-Notifications of possible non-compliance with the CEGP received
- G-Notifications of improvement and/or proposed good practices concerning with the CEGP received
- H-Actions to tackle the RRI keys
- I-Actions to CEGP continuous improvement
- J-Internal and/or external committees and/or services with which the CEGP is linked
- K-Requests for collaboration from Internal and/or external committees and/or services
- L-Communication actions to account to stakeholders on the progress performance of the CEGP

Permanent Ethics Committee – level 2

Regarding the actions performed in relation to the establishment of the Permanent Ethics Committee, they have focused on only two types of actions: to promote the Code (5) and to tackle the RRI keys (4).

Permanent Ethics committee on R&I



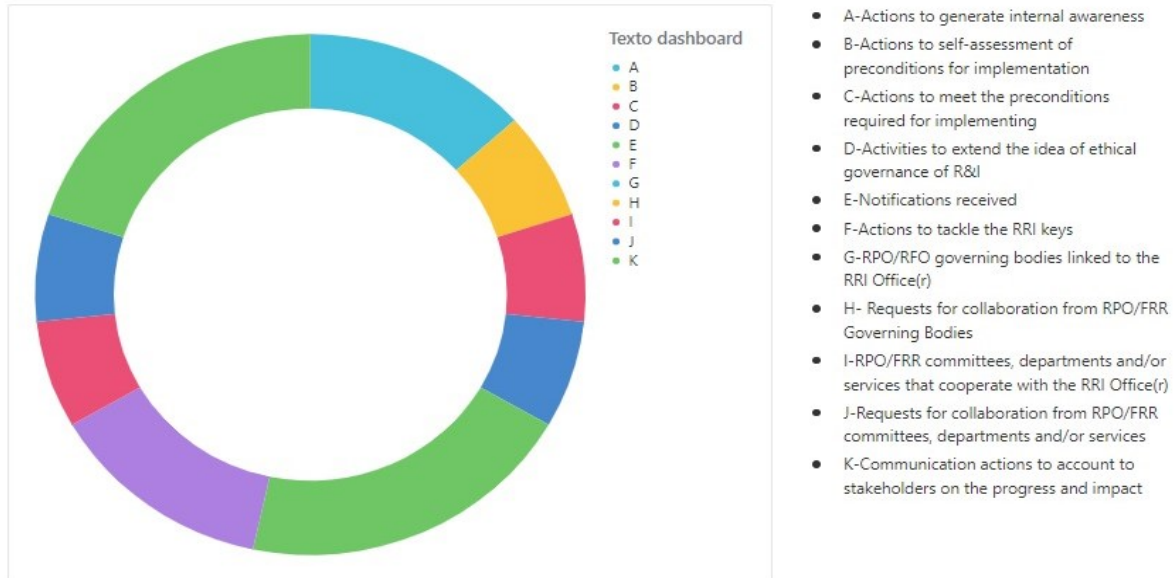
- A-Actions to promote the CEBP
- B-Actions to tackle the RRI keys
- C-Meetings held by the ECR&I
- D-Actions to reflect, report and make recommendation on R&I ethics and professional ethics
- E-Issues addressed at meetings of the Standing ECR&I
- F-Decision reports issued by the ECR&I
- G-RPO/RFO governing bodies linked to the Permanent ECR&I
- H-Requests for collaboration from RPO/FRR Governing Bodies
- I-RPO/RFO committees or departments with which the Permanent ECR&I interacts or cooperates
- J-Communication actions to account to stakeholders on the progress and performance of the Permanent ECR&I

Espaitec

RRI Office(r) – level 1

In terms of performance, Espaitec was the least active implementer. They have mainly focused on conducting communication actions to account to stakeholders on the progress and impact of the implementation of the ETHNA System (3). They have also conducted actions to generate internal awareness of the implementation process (2), as well as actions to tackle the RRI keys (2). In terms of quantifying their activity, they have also registered the number of notifications received (3)

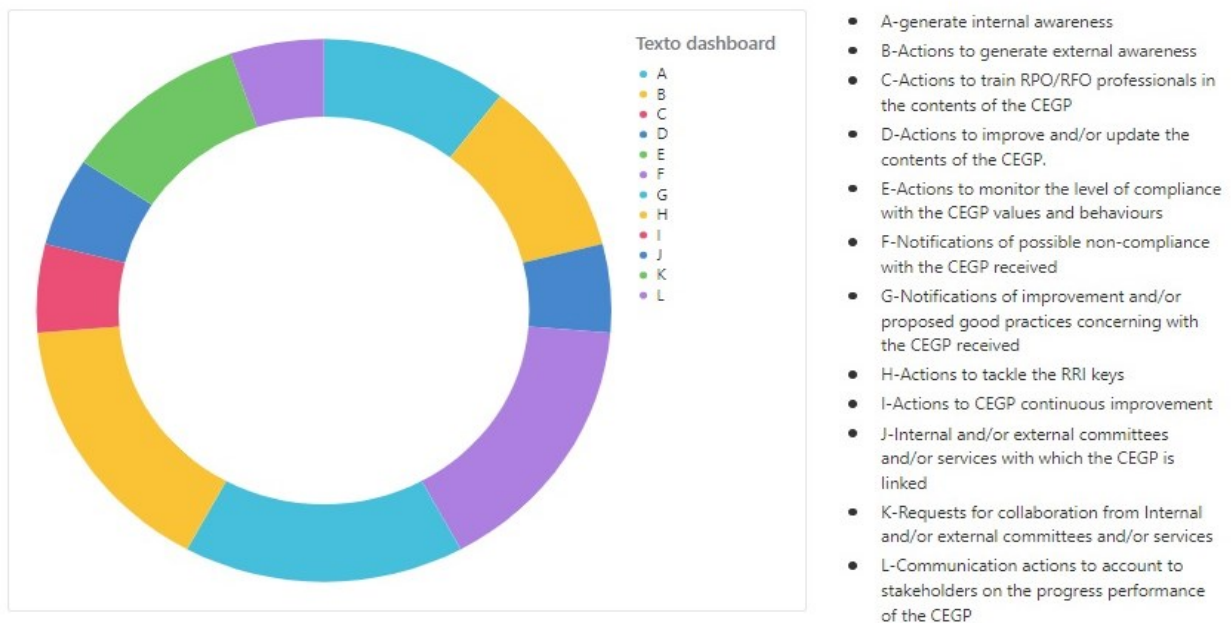
Actions



Code of Ethics – level 2

Analysing Espaitec's performance linked to the development of the Code of Ethics, it can be clearly seen on the graph that they focused on actions to tackle the RRI keys (3). But they also registered some activity to generate internal (2) and external awareness (2).

Code of ethics



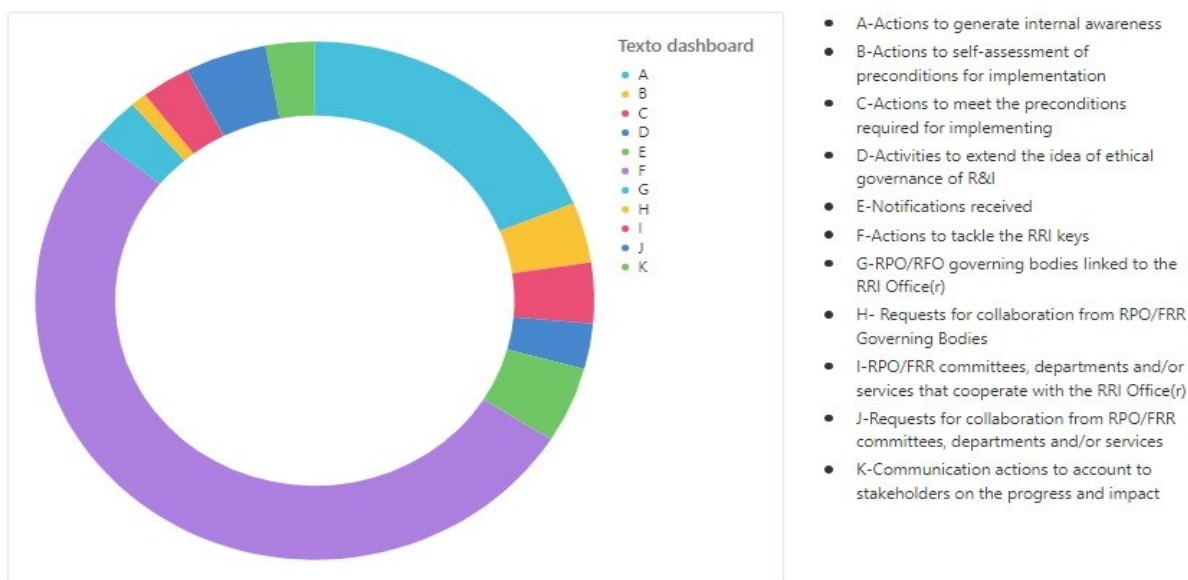
They have also reported the number of received notifications of possible non-compliance with the CEGP (3), notifications regarding the improvement and/or proposed good practices concerning the CEGP (3) and the number of requests for collaboration from internal and/or external committees and/or services (2).

Harno

RRI Office(r) - level 1

Harno focused their performance on actions to tackle the RRI keys (55), as well as actions to generate internal awareness (20). The quantification of the remaining actions, collaborations and activities is significantly lower. Among these, requests for collaboration from RPO/FRR committees, departments and/or services occurred most frequently (5).

Actions



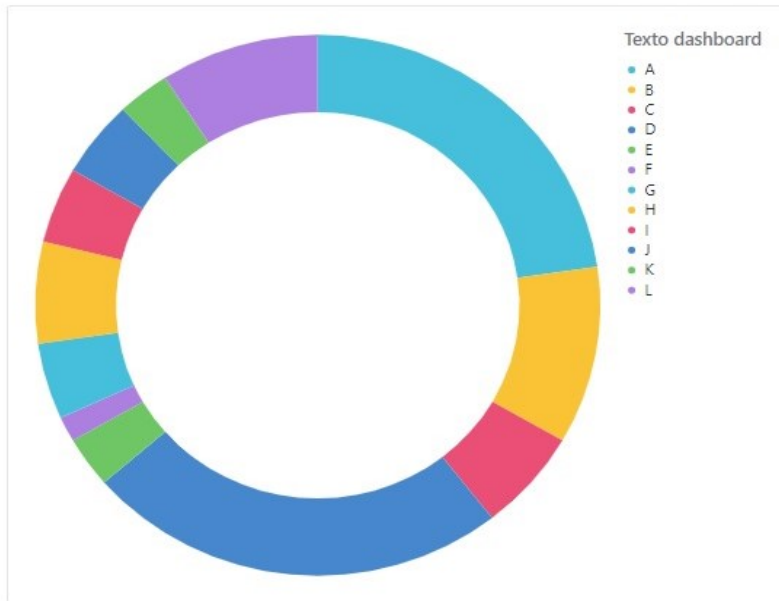
Permanent Ethics Committee – level 2

Harno decided to use an Ethics Committee to be established at the Estonian Research Council (ETAG) to deal with more complex cases. No activities has been registered yet.

Code of Ethics – level 2

The majority of actions conducted at Harno had the goal to improve and/or update the contents of the CEGP (16) or to generate internal awareness (15). Harno also pursued actions to generate external awareness (7) and communication actions to account to stakeholders on the progress performance of the CEGP (6).

Code of ethics



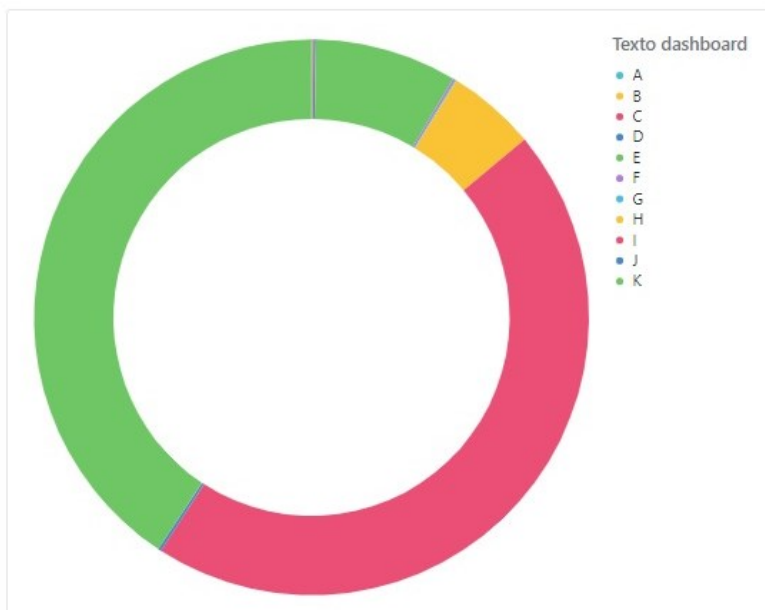
- A-generate internal awareness
- B-Actions to generate external awareness
- C-Actions to train RPO/RFO professionals in the contents of the CEGP
- D-Actions to improve and/or update the contents of the CEGP.
- E-Actions to monitor the level of compliance with the CEGP values and behaviours
- F-Notifications of possible non-compliance with the CEGP received
- G-Notifications of improvement and/or proposed good practices concerning with the CEGP received
- H-Actions to tackle the RRI keys
- I-Actions to CEGP continuous improvement
- J-Internal and/or external committees and/or services with which the CEGP is linked
- K-Requests for collaboration from Internal and/or external committees and/or services
- L-Communication actions to account to stakeholders on the progress performance of the CEGP

UJI

RRI Office(r) – level 1

The results gathered by the dashboard regarding the actions, collaboration links among departments and/or organisations and general levels of activity provide a clear indication of the size of the organisation as well. For that reason, the number of times the collaboration of the RPO/RFO governing bodies has been requested at UJI during the last year adds up to a total of 2,180 and the number of communication actions carried out by the RRI officer reaches 1,962. The number of notifications received by the RRI Officer is also significant (400), as is the number of requests for collaboration from RPO/FRR Governing bodies that reach a total of 250.

Actions

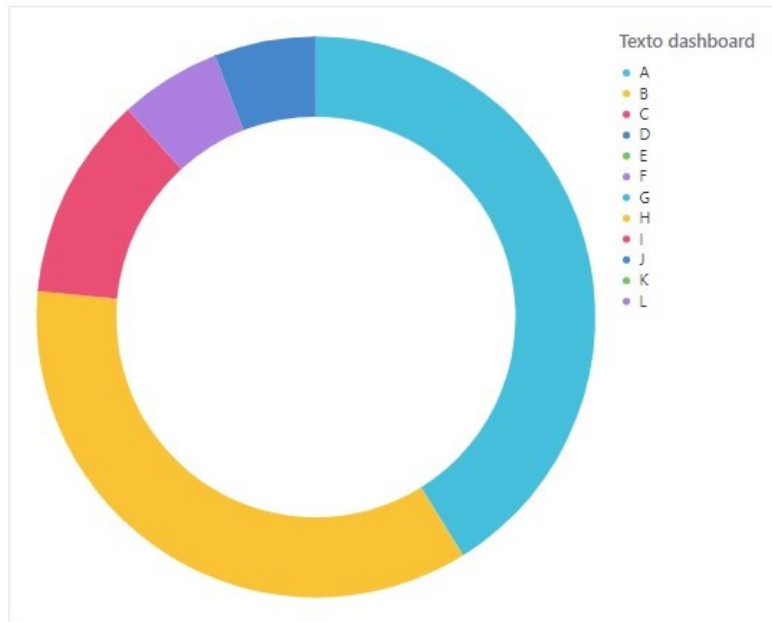


- A-Actions to generate internal awareness
- B-Actions to self-assessment of preconditions for implementation
- C-Actions to meet the preconditions required for implementing
- D-Activities to extend the idea of ethical governance of R&I
- E-Notifications received
- F-Actions to tackle the RRI keys
- G-RPO/RFO governing bodies linked to the RRI Office(r)
- H- Requests for collaboration from RPO/FRR Governing Bodies
- I-RPO/FRR committees, departments and/or services that cooperate with the RRI Office(r)
- J-Requests for collaboration from RPO/FRR committees, departments and/or services
- K-Communication actions to account to stakeholders on the progress and impact

Code of Ethics – level 2

UJI mainly focused on two types of actions: to generate internal awareness (7) and to generate external awareness (6). Actions to train RPO/RFO professionals in the contents of the CEGP were also conducted (2).

Code of ethics

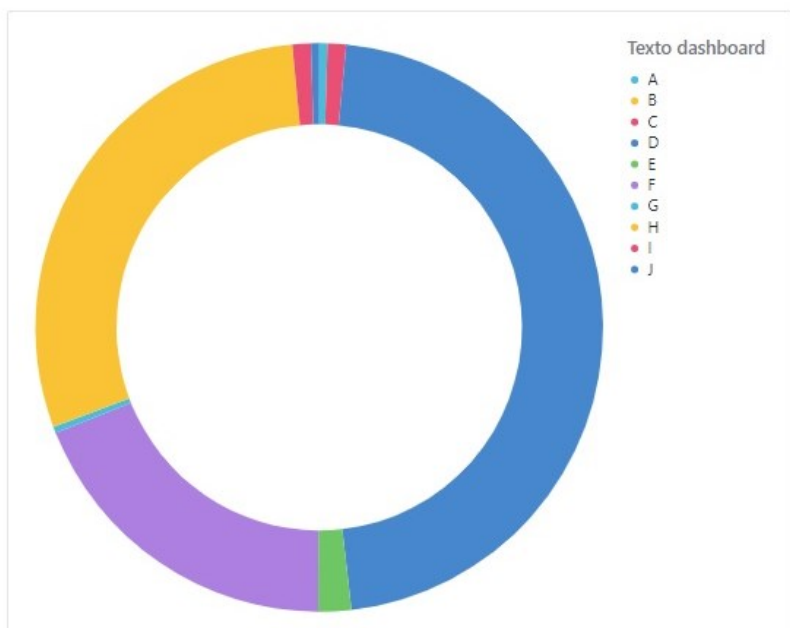


- A-generate internal awareness
- B-Actions to generate external awareness
- C-Actions to train RPO/RFO professionals in the contents of the CEGP
- D-Actions to improve and/or update the contents of the CEGP.
- E-Actions to monitor the level of compliance with the CEGP values and behaviours
- F-Notifications of possible non-compliance with the CEGP received
- G-Notifications of improvement and/or proposed good practices concerning with the CEGP received
- H-Actions to tackle the RRI keys
- I-Actions to CEGP continuous improvement
- J-Internal and/or external committees and/or services with which the CEGP is linked
- K-Requests for collaboration from Internal and/or external committees and/or services
- L-Communication actions to account to stakeholders on the progress performance of the CEGP

Permanent Ethics Committee – level 2

To measure the performance levels of UJI, the dashboard has gathered significant information regarding the actions conducted to reflect, report and make recommendations on R&I ethics and professional ethics (400), the number of requests for collaboration from RPO/FRR Governing Bodies (250) and decision reports issued by the Ethics Committee (162).

Permanent Ethics committee on R&I

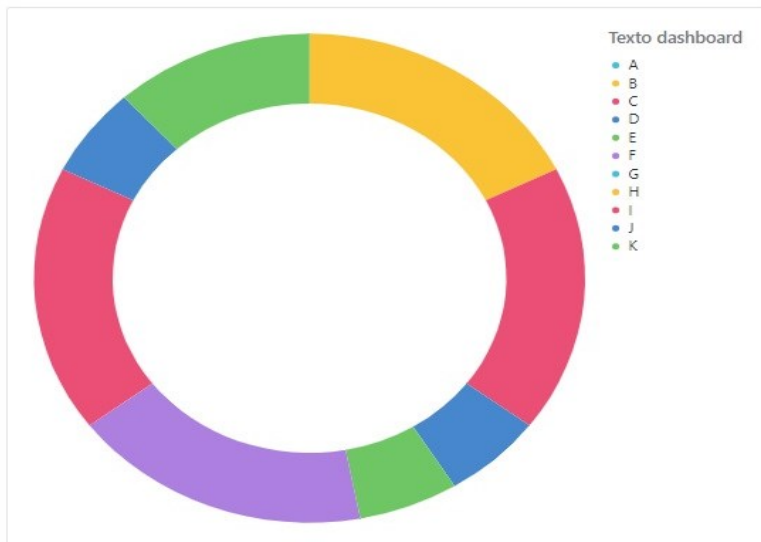


- A-Actions to promote the CEBP
- B-Actions to tackle the RRI keys
- C-Meetings held by the ECR&I
- D-Actions to reflect, report and make recommendation on R&I ethics and professional ethics
- E-Issues addressed at meetings of the Standing ECR&I
- F-Decision reports issued by the ECR&I
- G-RPO/RFO governing bodies linked to the Permanent ECR&I
- H-Requests for collaboration from RPO/FRR Governing Bodies
- I-RPO/RFO committees or departments with which the Permanent ECR&I interacts or cooperates
- J-Communication actions to account to stakeholders on the progress and performance of the Permanent ECR&I

Ethics Line – level 3

When checking the quantification of the performance at UJI regarding the Ethics Line, it can be clearly seen that the activity levels are much lower than compared with those of the Permanent Ethics Committee. The following actions were conducted: actions to tackle the RRI keys (3), investigation procedures carried out (3) and communication actions to account to RPO/FRR stakeholders on the progress and performance of the Ethics Line (2). Regarding the levels of activity, three complaints and reports concerning reprisals to use the Ethics Line were received, as well as two notifications.

Ethics line



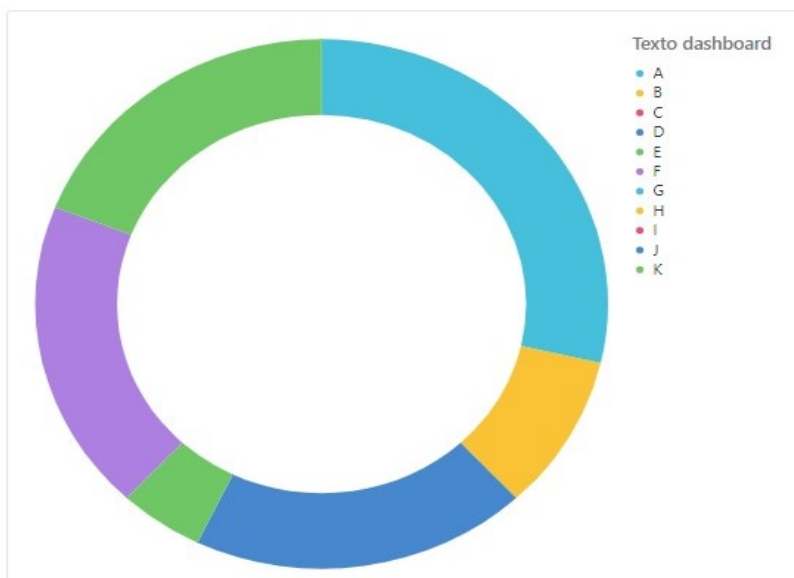
- A-Ethics Line communication channels
- B-Actions to tackle the RRI keys
- C-Notifications received
- D-Acknowledgements of receipt sent
- E-Reports made
- F-Investigation procedures carried out
- G-Notifications resolved
- H-Notifications unresolved
- I-complaints and reports received concerning reprisals to use the Ethics Line
- J-RPO/RFO committees or departments with which the Ethics Line has cooperated
- K-Requests for collaboration from RPO/FRR committees, departments and/or services
- L-Communication actions to account to RPO/FRR stakeholders on the progress and performance of the Ethics Line"

Uninova

RRI Office(r) – level 1

The results gathered in the dashboard by Uninova reflect that the highest number of actions aimed to generate internal awareness (6), followed by activities to extend the idea of ethical governance of R&I (4), actions to tackle the RRI keys (4) and communication actions to account to stakeholders on the progress and impact of the ETHNA System (4).

Actions

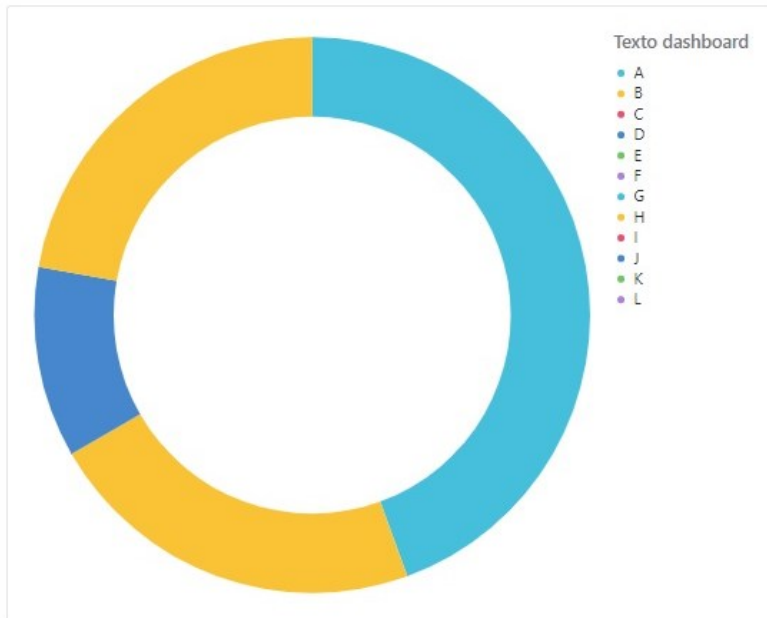


- A-Actions to generate internal awareness
- B-Actions to self-assessment of preconditions for implementation
- C-Actions to meet the preconditions required for implementing
- D-Activities to extend the idea of ethical governance of R&I
- E-Notifications received
- F-Actions to tackle the RRI keys
- G-RPO/RFO governing bodies linked to the RRI Office(r)
- H- Requests for collaboration from RPO/FRR Governing Bodies
- I-RPO/FRR committees, departments and/or services that cooperate with the RRI Office(r)
- J-Requests for collaboration from RPO/FRR committees, departments and/or services
- K-Communication actions to account to stakeholders on the progress and impact

Code of Ethics – level 2

The actions performed by Uninova regarding the implementation of their Code of Ethics revolves around generating internal awareness (3), followed by actions to generate external awareness (2) and actions to tackle the RRI keys (2).

Code of ethics

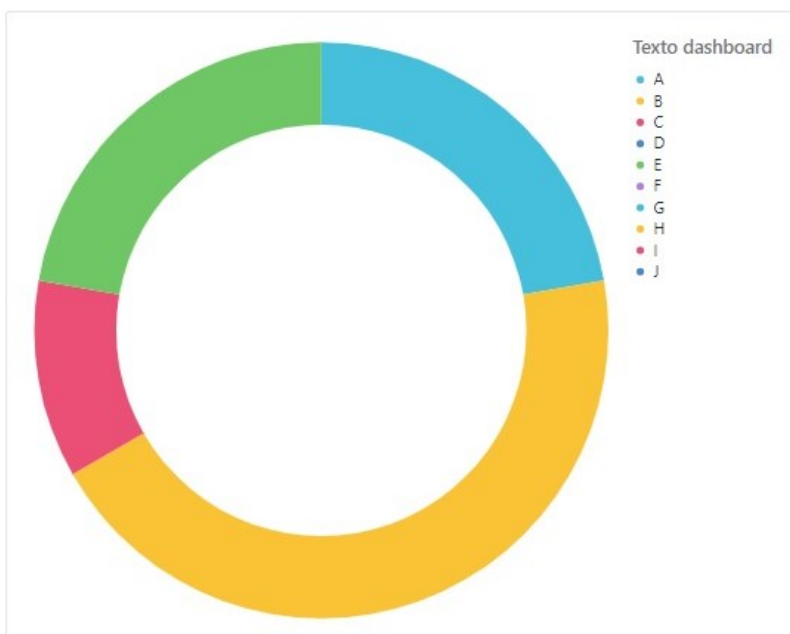


- A-generate internal awareness
- B-Actions to generate external awareness
- C-Actions to train RPO/RFO professionals in the contents of the CEGP
- D-Actions to improve and/or update the contents of the CEGP.
- E-Actions to monitor the level of compliance with the CEGP values and behaviours
- F-Notifications of possible non-compliance with the CEGP received
- G-Notifications of improvement and/or proposed good practices concerning with the CEGP received
- H-Actions to tackle the RRI keys
- I-Actions to CEGP continuous improvement
- J-Internal and/or external committees and/or services with which the CEGP is linked
- K-Requests for collaboration from Internal and/or external committees and/or services
- L-Communication actions to account to stakeholders on the progress performance of the CEGP

Permanent Ethics Committee – level 2

Regarding the actions to implement their Permanent Ethics Committee, Uninova has deemed it important to focus on conducting actions to tackle the four RRI keys (4). They have also carried out actions to promote the Committee (2) and have addressed issues at meetings of the Standing ECR&I (2).

Permanent Ethics committee on R&I



- A-Actions to promote the CEBP
- B-Actions to tackle the RRI keys
- C-Meetings held by the ECR&I
- D-Actions to reflect, report and make recommendation on R&I ethics and professional ethics
- E-Issues addressed at meetings of the Standing ECR&I
- F-Decision reports issued by the ECR&I
- G-RPO/RFO governing bodies linked to the Permanent ECR&I
- H-Requests for collaboration from RPO/FRR Governing Bodies
- I-RPO/RFO committees or departments with which the Permanent ECR&I interacts or cooperates
- J-Communication actions to account to stakeholders on the progress and performance of the Permanent ECR&I

Concluding remarks

The data collected through the dashboard has allowed us to learn not only the percentage of implementation progress within each organisation, but also to be aware of the intensity of the use of the tool or body in each organisation (a potential indicator to further measure success), the levels of interconnection among departments and/or other organisations, as well as the levels of activity (a potential indicator to further measure engagement) conducted by each organisation.

All in all, if the dashboard indicators are applied and adjusted to each organisation's annual plan objectives, it can be a very informative business intelligence tool that helps organisations to take better ethical governance decisions.

Conclusion

The ETHNA System project had a very clear and straightforward objective – to develop, test and propose a practical and effective tool that can be used by a large variety of institutions that try to navigate the maze of requirements and obligations related to the policies and practices of research integrity, public engagement, open access, and gender equality in research processes. The current document – the Manual for Coordinators of the ETHNA System – is one of the three main documents designed to assist research performing and research funding organisation to implement an ethics governance framework in order to more effectively promote and generate responsible research and innovation. The Manual is based on the experience gained from the ETHNA System application in six different institutions from five countries and belonging to four different research and innovation contexts. During the one-year implementation process, these six organisations have experienced different challenges and tested different ways to overcome them. The intention of this Manual is to use these experiences and thus help the future implementers of the ETHNA System to have a smoother and more effective introduction of research ethics governance in their organisations.

The ETHNA System project has developed a large number of guidance documents to promote and assist the implementation of ethics governance in the research and innovation performing and funding organisations. Some of them have been cited in this Manual and are listed in the References section in the end. Most of these documents can be used by a wider pool of stakeholders from the target organisations.

In contrast, the current Manual is intended to be used **only** by persons at the centre of the ETHNA System implementation process – the Implementation Coordinators. The experience from the piloting process has shown that the importance of such Coordinators is pivotal – they are responsible for the preparation, planning, implementation, monitoring and evaluation of the ethics governance system in their organisations. While they should certainly not be alone in the execution of these tasks, they will most likely carry the main burden and be responsible for the smooth and successful completion of the process. The main goal of the current Manual is to help them on this journey. Learning both from the successes and limitations of the implementation test, this document hopes to provide a clear and easy-to-follow guidance for the integration of the ethics governance structure in research and innovation conducting and funding organisations.

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Annex 1: Interview guide

Note to the interviewers: The questionnaire below is only a GUIDE. It should be accommodated to the context of the organisation and further adapted to the profiles of the respondents. When relevant, interviewers can also consider the information obtained from the document analysis or from the earlier interviews to additionally modify the questionnaire. It is assumed that the interviewer and interviewee are employees of the same organisation.

Start the interview with a brief explanation about its purpose and what the obtained information will be used for. Before beginning, make sure that the respondent has read the information materials and has signed the informed consent form.

1. What is your professional position and responsibilities?
2. Are you familiar with the concept of Responsible Research and Innovation (RRI)?
If YES: What is your understanding of Responsible Research and Innovation (RRI)?
If NO: *The interviewer briefly presents the RRI concept.*
3. The ETHNA System, an ethics governance structure, is based on four RRI keys or components: research integrity, public engagement, gender dimension and open access. Do you see any of these components as part of your professional responsibilities? If yes – which one(s) and how?
4. Does the RRI concept has any significance in our organisation? If YES:
 - What is the role of RRI in the organisation?
 - Who are the main actors?
 - How did the concept obtain this position? Did it replace something else or was it added to an existing organisational policy?
5. For each RRI key¹³ (research integrity, public engagement, gender dimension and open access) ask the following questions:
 - Would you say that [the key] is well embedded into our organisation? Please elaborate.
 - Which are the main barriers related to ethics governance and the RRI key areas in the organisation?
 - Are there any legal, cultural or political developments that have an impact on the focus and practice of [the key] in the organisation?
 - Can you mention any good practices related to [the key]?
 - Has the work on [the key] been evaluated or otherwise monitored?
6. Do you have any additional suggestions where and how the RRI framework or individual keys could be better embedded in policies and practices in our organisation?

¹³ It is very unlikely that the respondent will be knowledgeable or competent on **all** RRI keys. Focus the discussion on those keys, which are closest to respondent's expertise and only briefly talk about the others.

Annex 2: Informed consent form

I, _____ (name and surname), agree to participate in the interview voluntarily after I was informed about the objective of the interview and my role in it.

I understand that:

- I can decide to withdraw from the interview at any moment without giving any reason about my decision;
- the goal of the interview is to obtain information about my understanding of responsibility in research and innovation in our organisation; about the awareness, the embeddedness and the relevance of the RRI concept and different RRI keys in the organisation; and the relevant areas where further actions are needed to enhance the ethical governance of research into organisational policy and practice;
- I can ask for additional information;
- all information I provide will be used confidentially;
- my identity will be kept anonymous, unless I choose otherwise;
- I am free to contact the (*name and contact details of interviewer*) for further clarification, if needed.

Participant:

(Name & Signature)

Interviewer:

(Name & Signature)

Annex 3: Focus group guide

The aim of the focus group is to explore issues not sufficiently addressed during the interviews, and clarify the divergent opinions regarding the potential role of the ETHNA System in the organisation.

Note to the focus group moderators: The questionnaire below is only a GUIDE and there is no obligation to strictly follow the order of the questions or the way they are formed. Each moderator should adapt the questionnaire to the situation in their organisation and the profile of the respondents, and when relevant, consider also the information obtained from the document analysis and from the interviews.

Start the discussion with a brief presentation of the ETHNA System and the goal of the focus group, and obtain informed consent from the participants.

1. What are your professional position and responsibilities?

2. Are you familiar with the concept of Responsible Research and Innovation (RRI)?

NOTE: *If any of the participants answers NO, the moderator should briefly present the RRI concept.*

For each RRI key (research integrity, public engagement, gender dimension and open access), ask the following questions:

3. Would you say that [the key] is embedded into the organisation?

If YES:

- Are there any formal/informal reward systems and benefits (*promotion points, prizes, financial incentives, etc.*) that support [the key] in the organisation?
- Are there any other specific drivers related to implementing [the key] in practice in the organisation (*management's support, requirements of funders and donors, national legislation, EU legislation, good practices of other organisations, etc.*)?

If NO:

- Are there specific barriers related to implementing [the key] in the organisation?

4. Do quality criteria or indicators exist? How do you monitor and evaluate the organisation's performance related to [the key]? If there are no such criteria or indicators, how could performance be measured?

5. Can you give examples of good practices related to [the key] within the organisation?

6. Which actions related to [the key] would be most important at this point to further improve or develop the ethical governance of research and/or innovation in the organisation?

Annex 4: Five-year ETHNA System implementation timeline

Activity	Month																														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Appointment of a working group	■	■	■																												
Review of the documents				■	■																										
Interviews and/or survey						■	■																								
Analysis of the interviews and survey								■																							
Focus group									■																						
Analysis of the focus group										■																					
Writing of the report											■																				
Identification of internal and external stakeholders											■	■	■																		
Identification of priorities and goals of implementation												■																			
Preparation of the Implementation Plan												■	■	■	■																
Approval of the Implementation Plan by the senior management																■															
Designation of RRI Officer / RRI Office																	■	■													
Writing of the Code of Ethics and Good Practices in R&I																	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
Establishment of the Ethics Committee on R&I																		■	■	■	■										
Analysis of data about and external stakeholders																						■									
Mapping of internal and external stakeholders																							■								
Prioritisation of internal and external stakeholders																								■							
Selection of internal and external stakeholders																									■						
Set up of the Ethics Line																										■	■	■			
Recruitment of internal and external stakeholders																											■	■	■	■	
Workshop with internal stakeholders																													■	■	

Activity	Month																														
	3 1	3 2	3 3	3 4	3 5	3 6	3 7	3 8	3 9	4 0	4 1	4 2	4 3	4 4	4 5	4 6	4 7	4 8	4 9	5 0	5 1	5 2	5 3	5 4	5 5	5 6	5 7	5 8	5 9	6 0	
Workshop with external stakeholders																															
Revision of ETHNA System and its blocks																															
Training no. 1 on research integrity																															
Training no. 1 on the gender, inclusion and diversity issues																															
Training no. 1 on public engagement methods																															
Training no. 1 on open access																															
Training no. 2 on research integrity																															
Training no. 2 on the gender, inclusion and diversity issues																															
Training no. 2 on public engagement methods																															
Training no. 2 on open access																															
Information campaigns and promotion events																															
The first annual assessment of ETHNA System performance																															
The first evaluation report with recommendations																															
The second annual assessment of ETHNA System performance																															
The second evaluation report with recommendations																															