



D5.1 Report of the Selected Aspects That Can Be Tested and Accompany the Implementation Process

April 2022

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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 872360.

Project Information	
Project Number:	872360
Project Full Title:	ETHNA System. Ethics Governance System for RRI in Higher Education, Funding and Research Centres
Project Acronym:	ETHNA System
Funding Scheme:	SwafS
Call identifier:	H2020-SwafS-2019-1
Start Date of Project:	01/01/2020
Duration:	42 months
Project Website:	ETHNAsystem.eu

Deliverable Information	
Deliverable No:	D5.1
Deliverable Title:	Report of the selected aspects that can be tested and accompany the implementation process
WP Number:	5
Lead:	DBT
Contributing Partners:	UJI, NTNU, Harno, UNINOVA, Espatec, ARC Fund
Related Task(s):	T5.2, T5.3, T5.4, T5.5
Type:	Report
Author(s):	Simon Holstener, Sigrid Vedel Neuhaus, Maya Vestergaard Bidstrup (DBT), Laura Bernal, Ramón A. Feenstra, Elsa González Esteban (UJI), Giovanni De Grandis (NTNU), Ülle Must (Harno), Luis M. Camarinha-Matos, Filipa Ferrada, Ana Inês Oliveira (UNINOVA), Juan Antonio Bertolín, Eva Pardo Gil (Espatec), Marko Hajdinjak, Zoya Damianova, Adriana Dimova (ARC Fund).
Due Submission Date:	28 February 2022
Actual Submission:	9 May 2022

Dissemination Level	
PU	Public

ABSTRACT: This deliverable includes a short outline of the activities carried out by each of the six implementing organisations in the process of developing their Implementation Plan for implementing the ETHNA System, as well as the Implementation Plan itself. This Implementation Plan is the first step of adapting and implementing the ETHNA System within the six organisations and will function as the foundation for their further implementation process.

Versioning and contribution History			
Version	Date	Modified by	Reason for Modification
1.0	September 2022	Maya Vestergaard Bidstrup, Sigrid Neuhaus (DBT)	Development of Planning Step Reporting Template and the Implementation Plan Reporting Template with a point of departure in the ETHNA Lab
2.0	January 2022	Laura Bernal, Ramón A. Feenstra, Elsa González Esteban (UJI), Giovanni De Grandis (NTNU), Ülle Must (Harno), Luis M. Camarinha-Matos, Filipa Ferrada, Ana Inês Oliveira (UNINOVA), Juan Antonio Bertolín, Eva Pardo Gil (Espaitec), Marko Hajdinjak, Zoya Damianova, Adriana Dimova (ARC Fund)	Implementing partners filled in the Planning Step Reporting Template and the Implementation Plan Reporting Template
3.0	February 2022	Simon Holstener, Sigrid Neuhaus (DBT)	Collected reporting templates for the first draft of D5.1
4.0	February 2022	Marko Hajdinjak (ARC Fund), Elsa González Esteban (UJI), Gábor Szüdi (ZSI), Ülle Must (Harno), Giovanni De Grandis (NTNU), Eva Pardo Gil (Espaitec), Xavier Eekhout, Izaskun Lacunza (FECYT), Luis M. Camarinha-Matos, Filipa Ferrada and Ana	Peer review

		Inês Oliveira (UNINOVA)	
5.0	April 2022	Simon Holstener, Sigrid Neuhaus, Maya Vestergaard Bidstrup (DBT)	Implementing feedback from peer review for D5.1 final version
5.1	May 2022	Nicté Garcíá Soria (UJI)	Revision
5.2	May 2022	Sigrid Neuhaus (DBT)	Final changes

Abbreviation	
ARC Fund	Applied Research and Communications Fund
CTS	Centre of Technology and Systems
DCS	Department of Computer Science
DPRS	Department of Philosophy and Religious Studies
Espaitec	Parc Científic Tecnològic i Empresarial
ESRs	Early Stage Researchers
ETHNA	E thical Governance of RRI in Innovation and Research Performing Organisations and Research Funding Organisations
ETIS	Estonian Research Information System
FCT	Fundação para a Ciência e Tecnologia
Harno	Education and Youth Board of Estonia
ISSE	Information System and Software Engineering
NTNU	Norwegian University of Science and Technology
R&I	Research and Innovation
RFO	Research Funding Organisation
RRI	Responsible Research and Innovation
UJI	University Jaume I
UNINOVA	Instituto de Desenvolvimento de Novas Tecnologias
WP	Work Package

ACKNOWLEDGMENT & DISCLAIMER

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 872360.

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EXECUTIVE SUMMARY

The ethical governance system *The ETHNA System* is, through the ETHNA Lab process implemented and tested in six different organisations from four different research and innovation contexts. The purpose is to experiment with, co-create, and refine the ETHNA System itself.

The first step of the ETHNA Lab is the Planning step. Here, the implementing organisations will do an initial assessment within their organisation, decide on an RRI Office(r), determine their level of commitment to the ETHNA System, as well as create a plan for their further implementation process. The result is an Implementation Plan which will function as the foundation for the further implementation of the ETHNA System.

The ETHNA System and the ETHNA Lab process are both flexible in their construction and can both be adapted to the organisational realities, needs, and existing ethical governance procedures. This report exemplifies how this is done differently by each of the implementing organisations in the initial planning of their implementation process. It moreover provides an insight into the foundation of the further work that will be carried out in the implementation process.

The planning activities and Implementation Plan for each organisation demonstrate how the organisations each have to consider different aspects and challenges when implementing the ETHNA System. At the time of reporting, five out of six organisations have completed the initial planning activities and drafted an Implementation Plan.

One organisation has chosen commitment level 3, four organisations have chosen commitment level 2, and one organisation still needs to decide on a commitment level. Different factors influenced and motivated the commitment to the ETHNA System, including help to comply with contractual commitments and a need to formally embed RRI in organisational policies. Limited resources and existing ethical procedures have posed a challenge to the organisation still needing to commit to the ETHNA System.

An important part of the Planning step is a workshop with internal stakeholders from the implementing organisation. Three of the organisations have completed such a workshop. The workshops have been used to discuss and reach consensus on the drafts for the Implementation Plans. The different implementation contexts make the relevance of a workshop differ from context to context. While some of the organisations have used several workshops in their planning, others have not seen it as applicable at the current stage.

Five out of six organisations have made decisions for the implementation of the RRI Office(r), and different constellations have been proposed. Some organisations have appointed two or more people to the RRI Office, whereas other organisations have selected one RRI Officer. Some of the core tasks of the RRI Office(r) will be to develop and implement the ETHNA System procedures and monitor the progress. Even though most of the organisations have made plans for the implementation of the RRI Office(r), it has also been a challenging task, as it can entail a significant cost for the organisations.

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1 Introduction

The ETHNA System is a tool that aims at helping Research and Innovation (R&I) Organisations and Research Funding Organisations (RFO) to practically implement ethical governance procedures through the lens of Responsible Research and Innovation (RRI). As part of developing the ETHNA System, the system is implemented in six different organisations. Each organisation will go through the ETHNA Lab process to develop, test, and refine the ETHNA System within their own organisation, providing feedback and input for the further improvement of the ETHNA System itself.

The first step of the ETHNA Lab is the Planning step. Here, implementing organisations will initiate the implementation of the ETHNA System by mapping priorities, setting their level of commitment to the ETHNA System, and implement an RRI Office(r). Internal stakeholders are engaged to provide different perspectives, internal knowledge, and to come up with solutions that are useful and practically applicable for them. Hereby, the implementing organisations develop their own individual Implementation Plan that takes a point of departure in their organisational reality and needs. With the development of this Implementation Plan, the implementing organisations have formed a foundation for their further implementation of the ETHNA System. This step is therefore vital for their further process.

Both the ETHNA System and the ETHNA Lab process is flexible in its construction, and each of the six implementing organisations have had to adapt both to their organisational reality and needs. Each of the Implementation Plans presented in this report provides excellent insight into how this is done. The Implementation Plans hereby functions as an exercise for the implementing organisations to initiate and plan their implementation process as well as exemplifies how the ETHNA Lab process can be initiated and planned in different ways.

On the following pages, a short introduction to the ETHNA System and the ETHNA Lab process is provided, including a description of the first step of the ETHNA Lab, the Planning step, in which the Implementation Plans are developed. Afterwards, each of the implementing organisations' Implementation Plans are presented, including an overview of the planning activities that has led to the development of the Implementation Plan, as well as the Implementation Plan itself. The Implementation Plan includes an overview of the initial assessment carried out by the organisation, the decisions made on the RRI Office(r), as well as a general overview of the further implementation and actions planned. The report ends with a recapitulation of the Implementation Plans and an overview of the further process.

2 Implementing the ETHNA System

The **ETHNA System** is a practical tool for developing ethical governance procedures in R&I performing organisations and RFOs that takes a point of departure in RRI. The ETHNA System is built on a foundation of an RRI Office(r). On top of this foundation, three different columns can be built, namely the Code of Ethics and Good Practices, the Ethics Committee, and the Ethics Line. For each column, four building bricks can be chosen to implement different aspects of RRI, including Research Integrity, Gender Perspective, Public Engagement, and Open Access. When implementing the ETHNA System, the implementing organisation can choose three different levels of commitment. The level of commitment is determined by the number of columns implemented (Figure 1, Table 1) (González-Esteban et al., 2022).

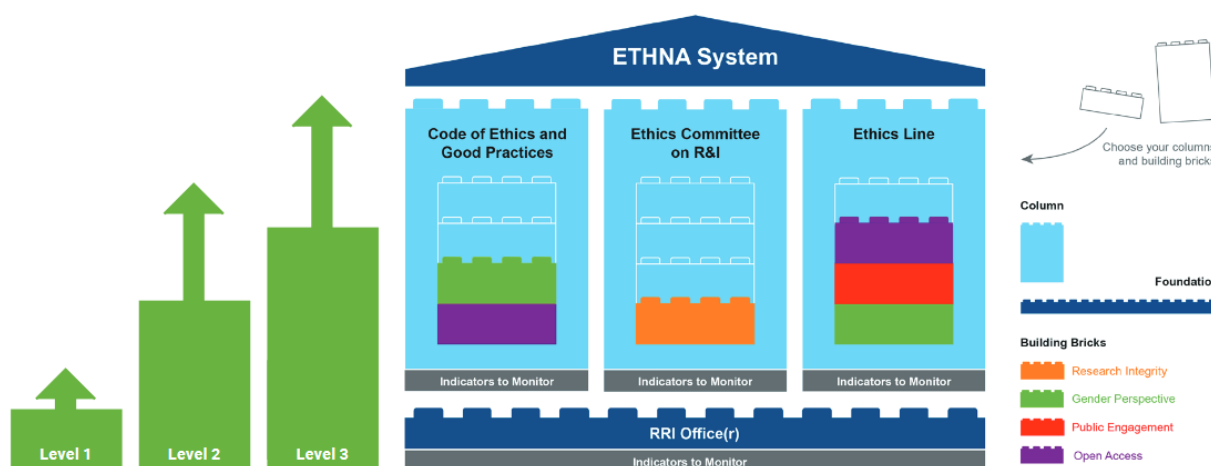


Figure 1: The ETHNA System

Levels of Organisational Commitment to the ETHNA System	
Level 1: The organisation appoints an RRI Office(r) and supports its activity (foundation block)	<p><i>The organisation implements the foundation block and appoints an RRI Office(r) who is in charge of:</i></p> <ul style="list-style-type: none"> - Disseminating the ETHNA System concepts - Promoting awareness of principles and values - Establishing activities and performance indicators for the three-year Action Plan for continuous improvement - Monitoring the progress of the ETHNA system in the organisation through progress indicators
Level 2: The organisation implements one or more columns	<p><i>The organisation implements the RRI Office(r) and one or more columns, focusing on at least one of the four building bricks.</i></p>
Level 3: The organisation fully develops the ETHNA System	<p><i>The organisation implements the RRI Office(r) and the three columns.</i></p> <p><i>The organisation applies a proactive attitude in all the RRI key areas: Research Integrity, Gender Perspective, Public Engagement, and Open Access.</i></p>

Table 1: Levels of Organisational Commitment to the ETHNA System

2.1 The ETHNA Lab

As part of the process of developing the draft concept of the ETHNA System, a review of the state of the art in ethical governance within R&I, a needs assessment, and a multi-stakeholder consultation have been conducted. The next step of the ETHNA System development process is testing the system by implementing it in different R&I performing organisations and RFOs. In the period from December 2021 to October 2022, the system has been implemented in six different organisations from four different R&I contexts, in five different countries. The implementation is supported by the ETHNA Lab process – an experimental and co-creative process that takes a point of departure in the Living Lab approach. The ETHNA Lab is a process of six consecutive steps that takes the implementing organisations through an iterative process of developing, experimenting with, and refining the ETHNA System within their organisations (Figure 2). By implementing the ETHNA System through the ETHNA Lab process, the aim is to develop a structure for ethical governance or to improve already existing procedures within the implementing organisations. Moreover, the aim is to test and provide input for the further development of the ETHNA System itself, based on practical experiences in different R&I contexts (Neuhaus et al., 2022). Different internal stakeholders within the implementing organisations as well as external Quadruple Helix stakeholders from Academia, Business/Industry, Policy, and Civil Society are engaged throughout the ETHNA Lab process in order to include different perspectives, exchange experiences, and come up with new solutions for an improved system (Neuhaus et al. 2022, Holstener 2022).

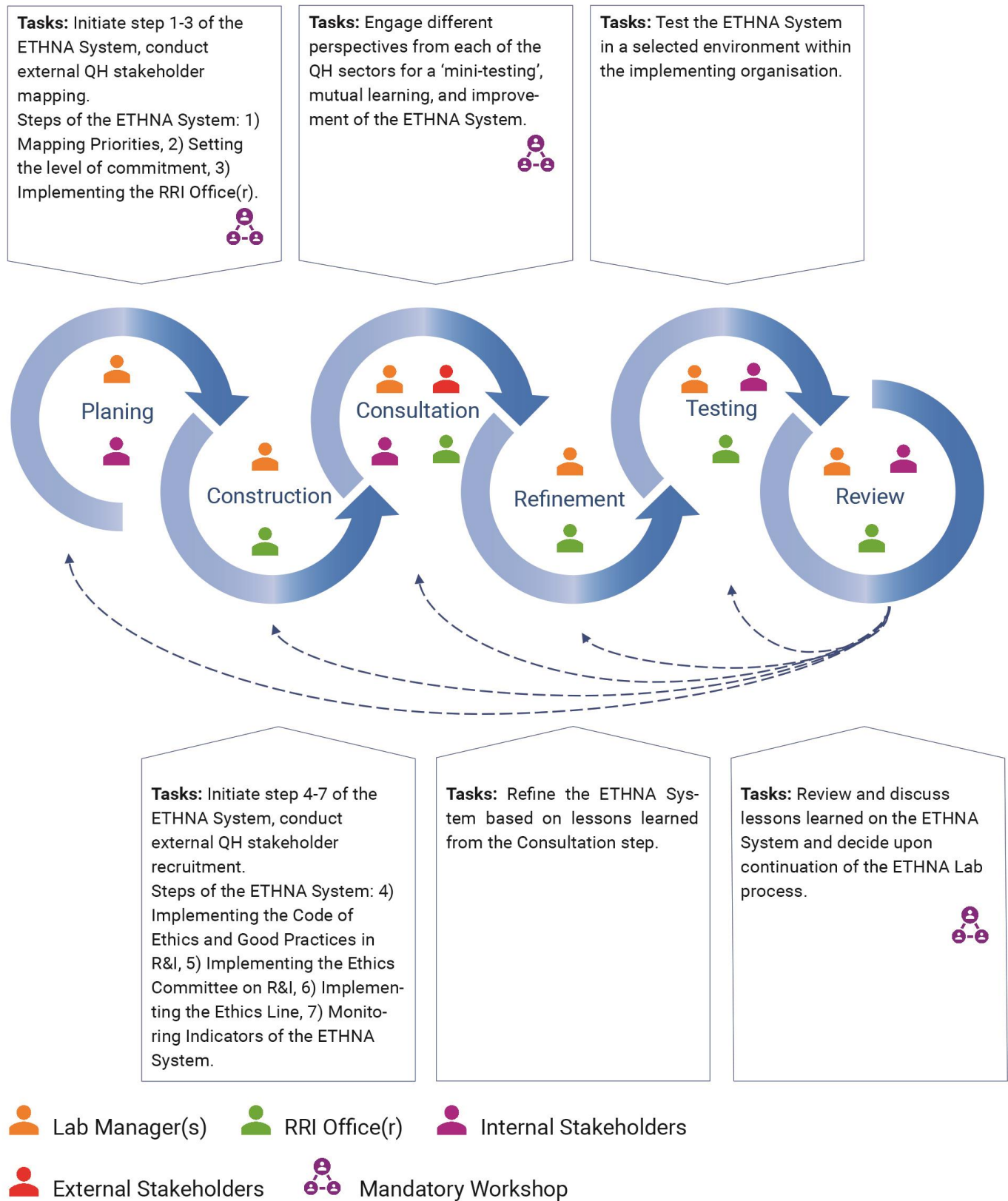


Figure 2: ETHNA Lab Infographic

2.2 Planning Step

The Planning step is the first step of the ETHNA Lab. The aim of this step is to initiate the implementation process by going through stage 1-3 of the ETHNA System:

- Stage 1: Mapping priorities
- Stage 2: Set the level of commitment to the ETHNA System
- Stage 3: Implement the RRI Office(r)

As part of the Planning step, the implementing organisations have also conducted at least one workshop with internal stakeholders to get input for their plans on how to implement the ETHNA System in their organisation. In this Implementation Plan, the implementing organisations have decided upon their level of commitment to the ETHNA System, including which columns and building bricks they will make use of. The Planning step will hereby function as a foundation for their further ETHNA Lab process.

Table 2 provides an overview of the six implementing organisations, the R&I context they belong to, as well as the level of commitment to the ETHNA System. Four of the implementing organisations have decided upon commitment level 2, one organisation has chosen level 3, and one organisation is still undecided.

Organisation	Context	Commitment
University Jaume I (UJI)	Higher Education	Level 3
Norwegian University of Science and Technology (NTNU)	Higher Education	To be confirmed
Education and Youth Board of Estonia (Harno)	Higher Education Agency ¹	Level 2
Instituto de Desenvolvimento de Novas Tecnologias (UNINOVA)	Innovation Ecosystem	Level 2
Parc Científic Tecnològic i Empresarial (Espaitec)	Innovation Ecosystem	Level 2
Applied Research and Communications Fund (ARC Fund)	Research Centres	Level 2

Table 2: Implementing Organisations: Context and Level of Commitment to the ETHNA System

The following section, *3 Implementation Plans*, provides further insight into the ETHNA Lab Planning step carried out by each of the implementing organisations and an overview of the outcome of the lab step – namely the Implementation Plans. Section 3 hereby provides insights into how the implementing organisations have different approaches and outcome as they are adapting the ETHNA System and the ETHNA Lab process to their organisational reality and existing ethical governance procedures.

¹ This context falls under a broader context of R&I funding organisations.

3 Implementation Plans

The implementing organisations have through the initial step of the ETHNA Lab – the Planning step, developed an Implementation Plan for their implementation of the ETHNA System within their organisation. This Implementation Plan has been developed with a point of departure in the ETHNA System stages 1-3:

- 1) mapping of priorities,
- 2) setting the level of commitment, choosing whether to implement The Code of Ethics and Good Practices in R&I, The Ethics Committee on R&I, and/or The Ethics Line, and
- 3) implementing the RRI Office(r). Also, mandatory workshops with internal stakeholders have been carried out at the implementing organisations.

In the following pages each of the six implementation organisations' Implementation Plans are presented, in the order of the four R&I contexts. Each section provides an overview of the implementing organisation's level of commitment to the ETHNA System, including the columns and building brick they have decided upon. An overview of the Planning step activities is then given to give insight into which activities that underlies the Implementation Plan and the decisions made in the organisation. The Implementation Plan is then presented, including an overview of the initial assessment carried out, the decisions made on the RRI Office(r), and finally a general overview of the expected implementation process and actions.

At the time of reporting, January 2022, most of the implementing organisations have completed the Planning step and are working on the next steps of the ETHNA Lab.

3.1 Higher Education Context

3.1.1 University Jaume I de Castelló (UJI)

Jaume I University has chosen the highest level of commitment and will therefore implement both the Code of Ethics and Good Practices in R&I, the Ethics Committee on R&I, and the Ethics Line:

LEVEL OF COMMITMENT		
<input type="checkbox"/> Level 1 <input type="checkbox"/> Level 2 <input checked="" type="checkbox"/> Level 3		
GUIDANCE TOOLS (COLUMN BLOCKS)		
<input checked="" type="checkbox"/> The Code of Ethics and Good Practices in R&I	<input checked="" type="checkbox"/> The Ethics Committee on R&I	<input checked="" type="checkbox"/> The Ethics Line
RRI KEYS (BUILDING BRICKS)		
<input checked="" type="checkbox"/> Research Integrity <input checked="" type="checkbox"/> Gender Perspective <input checked="" type="checkbox"/> Public Engagement <input checked="" type="checkbox"/> Open Access	<input checked="" type="checkbox"/> Research Integrity <input checked="" type="checkbox"/> Gender Perspective <input checked="" type="checkbox"/> Public Engagement <input checked="" type="checkbox"/> Open Access	<input checked="" type="checkbox"/> Research Integrity <input type="checkbox"/> Gender Perspective <input type="checkbox"/> Public Engagement <input type="checkbox"/> Open Access

3.1.1.1 Planning

As part of the planning activities, four different tasks were conducted. First, a detailed review of the research ethics management tools at the Jaume I was carried out. Then, a consultative process based on asking the community about RRI and research ethics was conducted. This involved a survey (May-June 2021) with 539 responses out of 1030 invited professors. Afterwards, specialists in the four key areas of RRI (Research Integrity, Gender Perspective, Public Engagement, and Open Access) were divided into four working groups, corresponding with their expertise. The groups were responsible for preparing initial drafts of codes of good research practices. And finally, several workshops were held to discuss and reach consensus on the contents of the code of good practices and the ethical governance structure. In total, 37 people participated in the workshops.

The agenda of the internal workshops included a brief explanation of the implementation project underway and a discussion of the new regulations affecting different committees, including the ethics committee, the subcommittee on human research, the subcommittee on animal research, and the subcommittee on genetically modified organism (GMO) research. Furthermore, an initial review of the interrelation between the different instruments of ethical management of research at the UJI was initiated. In the first workshop, this point was raised as an introduction and first reflection on possible improvements. In the second workshop, the issue was discussed again with the aim of redefining the general structure of ethical governance.

For a detailed overview of planning activities, please see appendix p. 34.

3.1.1.2 Implementation Plan

Initial Assessment: Stage 1-2 of the ETHNA System

Several goals and priorities have been decided upon. The following goals of the implementation process were established:

- Create a competent and efficient ethical governance system.
- Raise awareness and communicate the definition of responsible R&I and research ethics.
- Increase the participation of stakeholders in the creation of the ethical system.
- Generate knowledge in research ethics in all its dimensions.
- Minimise cases of bad practice.

The implementation seeks to generate an ethical governance structure as a whole, taking into account the structures already in place at the Jaume I University. Bearing in mind that there is already a code of ethics and a committee, the decided priorities are as follows:

1. Create a new code of good research practices that encompasses the four dimensions of RRI.
2. Redefine the existing ethics committee and transform it into an ethics committee (itself subdivided into three subcommittees on human, animal, and genetically modified organisms research). Linked to the committee, a series of parallel actions are required:
 - a. to develop operating regulations for the committee and its subcommittees,
 - b. to offer new application templates to researchers,
 - c. to modify the information and structure of the university's web page,
 - d. to develop a FAQ section with the most common doubts of the researchers,
 - e. to establish a participation channel from which to channel researchers' requests.
3. Try to develop an RRI office where at least one person from the university's administrative staff manages the ethics committee and the university's RRI issues.
4. Redefine the role of the University's ethics line and its relationship with other ethical management instruments of the university.

RRI Office(r): Stage 3 of the ETHNA System

It is still too early to indicate specifically what has been decided on the RRI Officer. It should be noted that this decision entails a significant cost for the organisation, as it requires a full-time contract to designate a permanent position to the RRI Officer. The temporary decision taken by the university was

to generate a temporary contract for the period April 2020 – August 2021. This contract allowed one person to participate in the implementation project. The objective is to consolidate this position since it is necessary for the functioning of the ethics committee.

General overview of the Expected Implementation Process of the Action Plan

The objective of the Action Plan is to generate ethical governance through a collaborative process involving a significant number of people. The implementation process of the action plan is subdivided into several phases, reflecting the activities conducted during the planning activities. Firstly, the university has proceeded to examine in detail the tools for ethical management of research at the Jaume I University. Secondly, the consultative process of asking the community about RRI and research ethics was initiated. Thirdly, the four working groups were established. Fourthly, several workshops were held. Fifthly, the documents and regulations will be approved by the university's governing team and its representative bodies.

To ensure the implementation of the proposed actions, Jaume I University has incorporated within its lines of government the adaptation and revision of its ethical governance model. Furthermore, the temporary technical support contract has been generated in which a person develops the work of the RRI Officer.

For a detailed overview of the Action Plan, please see appendix p. 35.

3.1.2 Norwegian University of Science and Technology (NTNU)

3.1.2.1 Planning

The initial planning steps are still being taken at NTNU. Therefore, no decisions have been made on the commitment to the ETHNA System.

NTNU is now identifying which department within the university will implement the ETHNA System. Several meetings with representatives from different departments have been conducted, including the Department of Computer Science (DCS), Department of Philosophy and Religious Studies (DPRS), and the HUNT research centre (a research centre attached to a biobank that is jointly owned by the regional public health authority and NTNU).

All departments have been reluctant to participate in the ETHNA Lab. However, some interest was shown at the DPRS and therefore a questionnaire was distributed to the staff. The idea was that the questionnaire should work on several fronts: 1) To make people aware of the possibility of running the lab, 2) to collect the staff view about how the department is doing in the four RRI keys and where more initiative is needed, 3) to test staff willingness to engage in the lab, 4) and in case the response was positive, to leverage a decision from the leadership. The response rate to the questionnaire was rather low (13 answers out of 63 staff members). The interest in the ETHNA lab displayed by participants was moderate.

An attempt to revive the interest of HUNT and the DCS has led to a renewed interest from the latter. A large research group, the Information System and Software Engineering (ISSE) Unit, has been chosen as a potential implementing unit. A questionnaire has been sent to the unit with the aim of gaining insights about the level of interest of the staff and about the keys where action is most needed. At the time of writing, results from the questionnaire are still pending.

As a result of the lack of organisational commitment, the mandatory workshop with internal stakeholders has not yet been conducted.

For a detailed overview of planning activities, please see appendix p. 43.

3.1.2.2 Implementation Plan

Since a department has not agreed to run the ETHNA Lab, no Implementation Plan has been developed. Below, some of the information collected in the process of identifying a department for the lab process is outlined. This might be relevant if one of the departments mentioned above agree to run the lab.

DPRS: The information collected is based on one-to-one interviews, informal talks, and through circulating a questionnaire. In the interviews, the two keys that came up as more relevant for the department were Gender Perspective and Public Engagement. The questionnaires confirmed this. In evaluating how well the department is doing on the four keys, Open Access came first (average score 6.8 out of 10), followed by Research Integrity (6.4), Public Engagement (4.6), and Gender Perspective (4.5). In evaluating the importance of doing better on each of the keys, Gender Perspective came up clearly first (7), followed by Public Engagement (5.6), Research Integrity (5.1), and Open Access (4.7). From the interviews it emerged that given the limited resources at the department, it seems that the only feasible level of commitment would be level 1. The questionnaire seems to confirm this, since the willingness to engage in the living lab is moderate. Furthermore, codes of ethics and an ethics committee are already existing at university level (and department staff have significantly contributed to them), which makes it unlikely that this would be seen as resources needed at the department level. In some interviews, the issue of the RRI officer was discussed. It does not seem easy to identify one person who could have the time to take on that responsibility. Perhaps the task could be given to the Programme for Applied Ethics, but when exploring people's time availability, it did not look easy.

ISSE Unit: Most of the information collected comes from a meeting with a member of the unit and from the preliminary results of the questionnaires circulated. Thus, the questionnaire has only had few answers at the time of writing. In evaluating how well ISSE is doing on the four keys, Gender Perspective came out first (average 8.4 out of 10), followed by Research Integrity (8.1), Open Access [note that given the unit field of activity, open codes have been included, not only open publications] (6.7), and Public Engagement (5.3). In evaluating the importance of doing better on each of the keys, Open Access came first (8.1), followed by Research Integrity (7.6), and by Gender Perspective and Public Engagement both scoring 7. The questionnaire shows remarkable awareness of the impact of the department work on society and of the responsibility of researchers towards society. There also seems to be much more openness to the idea of participating in a lab process. However, given the small number of answers received, this may also be the result of a "selection bias", namely it is possible that only the people who are more interested in the possibility of running a lab have answered the questionnaire. There were some talks about the level of commitment during the meeting with a unit representative and it was estimated that level 1 or possibly 2 were the only realistic options, with the ethics line potentially being the most interesting and feasible tool.

Future Actions:

A meeting with the department leader at the DPRS is scheduled to discuss whether there is any feedback from the leadership group and whether there is any chance to commit to running the lab.

Representatives at the ISSE Unit have been contacted to help get more responses to the questionnaire and to give insights about the reactions to the presentation of the ETHNA lab and how to proceed.

Notice, that currently in Trondheim there is a large Covid-19 outbreak and that severe restrictions are in place, requiring staff to work from home.

3.2 Research Funding Context

3.2.1 Education and Youth Board of Estonia (Harno)

Harno has committed to level 2 of the ETHNA System and has chosen to implement The Code of Ethics and Good Practices in R&I, including all four RRI keys:

LEVEL OF COMMITMENT
<input type="checkbox"/> Level 1
<input checked="" type="checkbox"/> Level 2
<input type="checkbox"/> Level 3

GUIDANCE TOOLS (COLUMN BLOCKS)		
<input checked="" type="checkbox"/> The Code of Ethics and Good Practices in R&I	<input type="checkbox"/> The Ethics Committee on R&I	<input type="checkbox"/> The Ethics Line
RRI KEYS (BUILDING BRICKS)		
<input checked="" type="checkbox"/> Research Integrity	<input type="checkbox"/> Research Integrity	<input type="checkbox"/> Research Integrity
<input checked="" type="checkbox"/> Gender Perspective	<input type="checkbox"/> Gender Perspective	<input type="checkbox"/> Gender Perspective
<input checked="" type="checkbox"/> Public Engagement	<input type="checkbox"/> Public Engagement	<input type="checkbox"/> Public Engagement
<input checked="" type="checkbox"/> Open Access	<input type="checkbox"/> Open Access	<input type="checkbox"/> Open Access

3.2.1.1 Planning

The aim of the planning activities was to involve all key stakeholders. During the first round of discussions (period October-November 2021), several activities were held with different types of stakeholders, including consultations, meetings, and workshops. Both internal and external stakeholders participated in the discussions. Internal stakeholders were representatives from different departments at Harno, and external stakeholders were representatives from ministries, universities, and partner organisations.

In the second round of discussions, Harno plan to expand the circle of stakeholders and involve non-profit associations related to Harno (Universities Estonia, Estonian Rectors Conference of Universities of Applied Sciences, Estonian Association of Academic Women, Estonian Students' Union, Estonian Teachers' Union, Estonian Society of Scientific Journalists, Science Centre AHAA).

Three online workshops with stakeholders were conducted during the planning. The topic of the first workshop was good practices in ethics. In the first half of the workshop, two keynote speakers gave an overview of the current state of research practice and its implementation (establishment of an advisory system, various guidelines, approval of infringement procedures, etc.). The other half of the workshop was covered by discussions. Some of the main points discussed at the workshop were:

- To create the necessary environment. There was a strong support for defining the principles of good practice within the organisation, including an explanation of the term; types of breaches, clear procedures for dealing with allegations of breaches of ethics; a description of the possible sanctions to be applied in the event of proven infringements, and measures to protect those who are concerned about the alleged breach of scientific ethics from being penalised.
- It was also agreed that the ethical principles would be published on a website where the relevant documents could also be downloaded and the contact person responsible for the area would be provided.
- It was considered necessary for RFO to provide information and guidance on good research practice in all terms and conditions of grants and contracts. Each call for proposals explains how ethical issues are addressed in the evaluation process, including what is expected of reviewers and members of the panel(s).
- When conducting the peer review and evaluation, it was considered necessary to develop principles for the selection of reviewers based on the competency of each reviewer as closely as possible to the subject of the application and to avoid selecting reviewers from the same institution or unit as the applicant.
- The self-esteem of the reviewers and the honesty to refuse to review were considered important. This could be the case if reviewers consider that there is a potential conflict of interest, if they do not feel sufficiently qualified, or if they are not able to submit a review by the given deadline.

- Funders, for their part, draw up and make available to reviewers written instructions explaining the purpose of the review and their expectations for the focus, volume, content, and quality of the review.
- Funders will also explicitly inform applicants and reviewers which review system will be used and guarantee the anonymity of the parties according to the review system used. At the same time, the participants in the seminar were in favour of the European Commission's practice of publishing the list of evaluators of last year's competitions, not of course at the application level.

The topic of the second workshop was gender mainstreaming and a Gender Equality Plan. First, an introduction to the topic was provided, followed by a statistical overview of the current state of gender mainstreaming at Harno. Afterwards, a discussion followed on what the Harno Gender Equality Plan should consist of. There were three topics for further discussion:

- *Raising gender awareness among Harno staff, expert groups, and commissions.* The position was fully supported; that there is a need to improve competencies in the field of gender mainstreaming, which also means to work out the training plan.
- *Compliance with the principles of equal treatment.* It was fully agreed that there is a need to review rules and regulations at Harno to ensure equal opportunities for all.
- *Increasing gender balance in expert panels, commissions, and reviewer groups.* It was agreed to consciously pay more attention to gender balance in the future when looking for experts. In the case of equal candidates, a candidate of the under-represented gender is preferred.

The topic of the third workshop was open access, data management, and funders' requirements for data management plans. First, an introduction to the topic was given, followed by a discussion. Two themes were discussed: 1) The extent to which the data and written analyses created by Harno employees could be available, 2) and the behaviour expected by Harno from recipients of grants, funding, and recognition. Some of the main points were:

- The position was supported that publications and data created as a result of public sector-funded activities are made available to the public (exceptions are interests arising from the protection of intellectual property and reasons arising from the protection of sensitive personal data).
- Surveys published by Harno employees must be provided with an identification number (ISSN, ISBN, DOI).
- Research funded by Harno must be provided with an identification number (ISSN, ISBN, DOI), and information on output should be entered and be visible in the Estonian Research Information System (ETIS).

For a detailed overview of planning activities, please see appendix p. 49.

3.2.1.2 Implementation Plan

Initial Assessment: Stage 1-2 of the ETHNA System

The overall goal of implementing the ETHNA system in Harno is:

- To map and systematise existing practices in the organisation and supplement them with those offered by the ETHNA System.
- To raise awareness in the organisation to all four RRI keys.
- To adapt funding/support measures and evaluation criteria to RRI requirements.
- To embed Harno as a reliable and trusted contributor among partners in quadruple helix framework.

Furthermore, the priorities of Harno are defined as the following:

- Choose and nominate an RRI officer to implement the ETHNA System in Harno.
- Create and implement a Code of Ethics and Good Practices, taking into account all four RRI keys.

RRI Office(r): Stage 3 of the ETHNA System

Following the rounds of consultations, meetings, and workshops with stakeholders, a candidate for the position of RRI Officer was chosen. The new employment contract has been approved by the Director General as of December 20, 2021. The activities of the RRI Officer will be supported by a Data Protection Specialist, Communication Managers, and a Personnel Manager.

The core tasks of the RRI Officer are:

- The development of the Harno's good practice guidelines (Research Integrity, Gender Perspective, Open Access, and Public Engagement).
- The development of the training plan in accordance with the interests of the target groups in cooperation with Personnel Manager.
- The development and implementation of the procedure for answering inquiries, complaints, and questions.
- Ensuring that Harno's target groups are informed about RRI-related activities through various information channels, and that information is available on Harno's website.
- The development of the three years action plan with performance indicators.
- To carry out periodic monitoring.
- Presentation of the monitoring report to Harno's senior management (at least twice a year).

General overview of the Expected Implementation Process of the Action Plan

The main actions to be carried out are the designation of the RRI Officer and the development of a Code of Ethics and Good Practices focused on four keys (Research Integrity, Open Access, Gender Perspective, Public Engagement). Other actions include awareness raising of the Code, developing monitoring indicators, and developing a communication plan. Furthermore, Harno plan to consult stakeholders on the drafts developed for the Code throughout the implementation process.

Harno believes the developed and implemented Code of Ethics and Good Practices to be a living document that is being adapted to the new needs of society and the organisation. On that background, great importance is attached to continuous awareness-raising, dissemination, and monitoring. Among the tasks of the RRI Officer is the continuous monitoring of the implementation of the Code and the presentation of the obtained results to the senior management at least twice a year.

For a detailed overview of the Action Plan, please see appendix p. 51.

3.3 Innovation Ecosystem Context

3.3.1 Instituto de Desenvolvimento de Novas Tecnologias (UNINOVA)

The Centre of Technology and Systems (CTS) at UNINOVA has committed to level two of the ETHNA System, and will implement the Code of Ethics and Good Practices in R&I and the Ethics Committee on R&I:

LEVEL OF COMMITMENT		
<input type="checkbox"/> Level 1 <input checked="" type="checkbox"/> Level 2 <input type="checkbox"/> Level 3		
GUIDANCE TOOLS (COLUMN BLOCKS)		
<input checked="" type="checkbox"/> The Code of Ethics and Good Practices in R&I	<input checked="" type="checkbox"/> The Ethics Committee on R&I	<input type="checkbox"/> The Ethics Line

RRI KEYS (BUILDING BRICKS)		
<input checked="" type="checkbox"/> Research Integrity	<input checked="" type="checkbox"/> Research Integrity	<input type="checkbox"/> Research Integrity
<input checked="" type="checkbox"/> Gender Perspective	<input type="checkbox"/> Gender Perspective	<input type="checkbox"/> Gender Perspective
<input checked="" type="checkbox"/> Public Engagement	<input type="checkbox"/> Public Engagement	<input type="checkbox"/> Public Engagement
<input checked="" type="checkbox"/> Open Access	<input type="checkbox"/> Open Access	<input type="checkbox"/> Open Access

3.3.1.1 Planning

One of the initial steps during the planning was to find the right “political approach” for engaging people. Considering that members of CTS are busy with their own research activities, it was important to find an effective approach to engage them in the ETHNA System implementation. Also, it was found necessary to adapt the terminology used in the ETHNA System to a more neutral and general discourse to motivate participants. Following the initial steps, preparatory work was conducted, and initial information collected. Here, an internal working group was organised, and initial brainstorm activity was used to collect information on current RRI status at CTS in order to establish the priorities considering the available resources, the capabilities, and identified objectives. Furthermore, other relevant stakeholders were identified and invited. After completing the preparatory work, the first workshop was organised. And finally, after running the workshop and organising the findings, an RRI task force was established.

Seven participants from the department participated in the workshop. The objectives of the workshop were to:

- Introduce RRI and its importance to CTS.
- Check and complement preliminary findings on RRI status.
- Identify and discuss goals and priorities.
- Identify next steps.

The workshop started with an overview of the commitments of CTS with the Portuguese Research Funding Agency (“FCT - Fundação para a Ciência e Tecnologia”) regarding RRI. Since Portuguese research centres are evaluated by this governmental agency every 4 years, this was used as a motivating factor to engage participants in this initiative. Thus, implementing the ETHNA System was introduced as an important contribution to help CTS comply with its contractual commitments and get better prepared for the next evaluation by the funding agency.

After the initial discussion, the ETHNA System and proposals were briefly introduced and discussed, always trying to map them into the internal CTS needs and context. The workshop proceeded then with a first working session to discuss and complement the preliminary information gathered by the internal working group on current RRI status at CTS. For this analysis it was necessary to take into account that CTS is a kind of “research and innovation ecosystem”, accredited by the Portuguese FCT agency, and whose members are employed by diverse academic institutions (e.g. NOVA School of Science and Technology from NOVA University of Lisbon, Polytechnique Institutes of Lisbon, Setubal, and Beja), being UNINOVA the management institution. Therefore, each researcher of UNINOVA-CTS is subject to various “RRI spaces”, and thus the current status was analysed according to those multiple “spaces” namely:

- **Employer’s RRI space:** He/she must comply with the ethical code and other RRI principles of the employer.
- **CTS RRI space:** He/she needs to comply with RRI principles of the CTS research ecosystem.
- **Projects’ RRI space:** Each time a researcher is involved in a project, he/she needs to comply, during the project duration, with the RRI principles defined by the funding agency for that specific project.

- **Scientific society code of ethics:** Most researchers are members of international and national scientific and technical societies and, as such, need to comply with the code of ethics of such associations.

The next session of the workshop was devoted to identifying and discussing CTS goals regarding RRI, taking into account the current status and identified gaps. These goals were categorised according to the dimensions of “Research Integrity”, “Gender Perspective”, “Public Engagement”, and “Open Access”. For each goal, a level of priority (in a scale of 1 to 3) was assigned and a tentative implementation schedule (in the time frame of “short”, “medium”, “long” term) was defined.

Finally, next steps were briefly discussed.

For a detailed overview of planning activities please see appendix p. 58.

3.3.1.2 Implementation Plan

Initial Assessment: Stage 1-2 of the ETHNA System

Considering that each researcher of CTS is subject to various “RRI spaces”, the analysis of the existing situation was done according to those “spaces”.

After mapping the existing structures and policies, goals and priorities were identified. For this identification, CTS followed a subsidiarity perspective, i.e., identifying the weaknesses that can be overcome by CTS in addition to what is already established in the various RRI spaces affecting CTS researchers. Goals, priorities, and time frames are listed below for the different RRI keys. Time frames are divided into short (1-2 years), medium (1.5-3 years), and long (2-5 years) term.

Research Integrity:

- Definition of code of ethics considering the specific characteristics of the research ecosystem (priority 1, medium term).
- Creation of an RRI taskforce (priority 1, short term).
- Planning specific training programme for Early Stage Researchers (ESRs) (priority 1/2, short/medium term).
- Formalisation of good research practices model aligned with the European Charter for Researchers (priority 2, medium/long term).
- Organise RRI information repository (priority 2, short term).
- Organise RRI awareness events (priority 2/3, short/long term).

Gender Perspective:

- Monitor progress in gender balance and inclusion (priority 1, medium/long term).
- Program to engage young women in science and technology (WOSTEM) (priority 1/2, short term).
- Promote balanced participation in internal governance bodies and activities (priority 2, medium/long term).

Public Engagement:

- Definition of a code of “conflicts of interest” that carefully clarifies and balances the relationships between the involved academic and research environment and the private initiatives (priority 1, long term).
- Organise events for public dissemination & engagement (priority 2, short/medium term).

Open Access:

- Organise a set of recommendations/guidelines that in line with open access publications interest considers the economic and financial issues, being at the same time compliant with the scientific requirements (priority 1, medium term).
- Organise a set of recommendations/guidelines for sharing code and data (priority 2, short/medium term).

RRI Office(r): Stage 3 of the ETHNA System

For the current stage, CTS – UNINOVA decided to create an RRI task force with five researchers, including the Director of CTS.

General overview of the Expected Implementation Process of the Action Plan

For most actions of the Action Plan, the general strategy is to elaborate a first draft by the Internal RRI working group and then proceed with the consultation and refinement steps of the ETHNA Lab, involving all relevant stakeholders of the organisation. Some of the actions in the Action Plan include elaboration of the Code of Ethics and Good Practices, raising awareness, improving training programmes, creation of an RRI task force, and elaboration of open access guidelines.

Since the Director of CTS is directly involved in the whole process, the implementation will be facilitated by this person. It should also be noted that the Director of CTS was recently re-elected for a 2nd mandate for the period of 2022-2025 which will ensure a smooth continuation of the process.

Furthermore, since the identified actions will contribute to fulfil CTS commitments towards the Portuguese Research Funding Agency and such commitments have to be demonstrated during the coming evaluation of all national centres by that agency, this will be an extra motivating factor.

For a detailed overview of the Action Plan, please see appendix p. 58.

3.3.2 Parc Científic Tecnològic i Empresarial (Espaitec)

Espaitec has chosen the commitment level 2 of the ETHNA System and will implement the Code of Ethics and Good Practices in R&I, focusing on Gender Perspective:

LEVEL OF COMMITMENT		
<input type="checkbox"/> Level 1 <input checked="" type="checkbox"/> Level 2 <input type="checkbox"/> Level 3		
GUIDANCE TOOLS (COLUMN BLOCKS)		
<input checked="" type="checkbox"/> The Code of Ethics and Good Practices in R&I	<input type="checkbox"/> The Ethics Committee on R&I	<input type="checkbox"/> The Ethics Line
RRI KEYS (BUILDING BRICKS)		
<input type="checkbox"/> Research Integrity <input checked="" type="checkbox"/> Gender Perspective <input type="checkbox"/> Public Engagement <input type="checkbox"/> Open Access	<input type="checkbox"/> Research Integrity <input type="checkbox"/> Gender Perspective <input type="checkbox"/> Public Engagement <input type="checkbox"/> Open Access	<input type="checkbox"/> Research Integrity <input type="checkbox"/> Gender Perspective <input type="checkbox"/> Public Engagement <input type="checkbox"/> Open Access

3.3.2.1 Planning

During the planning, Espaitec has carried out the following tasks:

- Determine priorities through resource, capacity, and goal mapping.
- Set the level of commitment with the ETHNA System through the selection of Progress Indicators, the definition of the RRI Office, and setting the priorities related to the column blocks

in order to design an Action Plan that contemplates the activities foreseen during the next three years.

- Implement the RRI Office.

The first step of the planning was to determine Espaitec's priorities when implementing the ETHNA System. To do so, the available resources were analysed, both human and material, as well as the capacities to implement the RRI Office. It was then established that Espaitec's main objectives were the following:

- To develop and implement an ethical governance system in the organisation.
- To raise awareness of the definition of responsible innovation among Espaitec companies.
- To minimise cases of malpractice within the organisation.
- To improve society's trust in the organisation.
- To maintain a proactive attitude towards the current challenges of responsible innovation.

Therefore, to achieve these objectives it was established that the main priority of Espaitec through its participation in the project was to develop awareness actions aimed at the companies of the park and the Fundació General UJI to raise awareness of R&I and the four areas of activity in which it works (Public Engagement, Open Access, Research Integrity and Gender Perspective).

The second step was to set what level of commitment Espaitec would adopt. Once the capabilities were analysed, it was determined that Espaitec would implement the ETHNA System in the organisation, adopting level 2 of commitment through the implementation of the RRI Office and the elaboration of a Code of Ethics and Good Practices focused on Gender Perspective. In order to effectively elaborate the Code, a number of experts related to the areas of ethics and gender were chosen.

The proposed level of commitment was consulted with the internal stakeholders previously established.

The last step carried out during the planning was to implement the RRI Office, determining its physical space in the offices of the Fundació General UJI, Espaitec's managing entity, and assigning the corresponding tasks to its members. Some of the tasks include the development and drafting of the Action Plan as well as a draft communication plan for stakeholders to know the RRI Office.

The mandatory workshop has not been conducted at the time of reporting but is scheduled to January 2022. The agenda is to introduce the ETHNA System and Living Lab methodology, to discuss stage 1, 2, and 3 of the ETHNA System, to explain to stakeholders what is needed from them, and to briefly explain the implementation project being carried out. A number of seven participants are invited for the workshop.

For a detailed overview of planning activities, please see appendix p. 61.

3.3.2.2 Implementation Plan

Initial Assessment: Stage 1-2 of the ETHNA System

Espaitec's priority through the implementation of the ETHNA system is to define a basis for ethical governance within the organisation and to raise awareness among the park's companies of the importance of the same because previously no action had ever been taken to promote RRI in the organisation. Therefore, the priorities are:

- Implement an RRI office to disseminate the concepts of the ETHNA System and to ensure compliance.
- Create a Code of Ethics and Good Practices in terms of Gender Perspective.
- Raise awareness among the park's companies about responsible innovation and the four areas of activity in which the system is developed.

RRI Office(r): Stage 3 of the ETHNA System

The RRI office will be composed by the director of Espaitec and Espaitec's project technician, as they are the people who have been in charge of the implementation of ETHNA System in Espaitec since the incorporation of the entity as a third party in the project in November 2021.

In this sense, it is foreseen that during 2022 the office will be composed of the same members. However, since the Action Plan should set activities and Performance Indicators during a three-year period, it is difficult to foresee what the composition of the office will be in the future. In case some of the team members leave Espaitec, a replacement person would take their place.

In addition to this, due to the small working group that makes up the Espaitec team, external expert staff will be required, especially to provide support in the elaboration of the code of ethics. A physical location for the RRI office has also been established.

General overview of the Expected Implementation Process of the Action Plan

The following section includes a general description of the process to be followed to implement the ETHNA System in Espaitec. Broadly speaking, the level of commitment assumed by Espaitec is 2, so the main actions to be carried out are the implementation of the RRI Office and the development of a Code of Ethics and Good Practices focused on Gender Perspective.

The aim of the RRI Office, whose members have been previously mentioned, will be to disseminate the concepts of the ETHNA System among its organisation and stakeholders, promote awareness of its principles and values, establish activities for the three-year Action Plan and monitor the progress of the implementation of the system through performance indicators, and ensure that the established Action Plan is being followed through the development of progress indicators.

Some examples of actions to be developed will be to carry out workshops aimed at the companies that make up Espaitec to disseminate the key areas on which the ETHNA System is based or to disseminate articles published in the ETHNA newsletter through social networks.

The RRI Office will also be in charge of drafting the Code of Ethics and Good Practices focused on the Gender Perspective. In this sense, the Code will be elaborated from scratch as no similar action has been carried out previously. Furthermore, it should be noted that Espaitec will focus on the Gender Perspective since, due to the homogeneity of the areas of work developed by Espaitec companies, it is considered that it is an action that can influence the majority of these areas.

Moreover, meetings with stakeholders will be organised to determine what basic aspects the Code should contain. In addition, Espaitec will share with stakeholders the progress of the Code to jointly discuss its development.

At the same time, Espaitec will carry out actions to generate external and internal awareness about the contents of the Code such as, for example, a workshop with the members of the Fundació General UJI. In addition, the Code will be published on the Espaitec website to make it available to all companies in the park. Also, communication actions will be developed in the next three years for social networks and the Espaitec website to promote the concept of Ethical Governance, Open Access, Public Engagement, Research Integrity, and Gender Perspective.

To ensure the implementation of the proposed actions, Espaitec will monitor the progress and performance indicators in relation to the RRI Office and the Code of Ethics and Good Practices. In addition, annual reviews of the Code of Ethics and Good Practices developed by Espaitec will also be carried out.

For a detailed overview of the Action Plan, please see appendix p. 62.

3.4 Research Centre Context

3.4.1 Applied Research and Communications Fund (ARC Fund)

ARC Fund has chosen commitment level 2 and will implement the Code of Ethics and Good Practices in R&I, and the Ethics Committee on R&I. All four RRI keys will be considered.

LEVEL OF COMMITMENT

☐ Level 1

<input checked="" type="checkbox"/> Level 2 <input type="checkbox"/> Level 3		
GUIDANCE TOOLS (COLUMN BLOCKS)		
<input checked="" type="checkbox"/> The Code of Ethics and Good Practices in R&I	<input checked="" type="checkbox"/> The Ethics Committee on R&I	<input type="checkbox"/> The Ethics Line
RRI KEYS (BUILDING BRICKS)		
<input checked="" type="checkbox"/> Research Integrity <input checked="" type="checkbox"/> Gender Perspective <input checked="" type="checkbox"/> Public Engagement <input checked="" type="checkbox"/> Open Access	<input checked="" type="checkbox"/> Research Integrity <input checked="" type="checkbox"/> Gender Perspective <input checked="" type="checkbox"/> Public Engagement <input checked="" type="checkbox"/> Open Access	<input type="checkbox"/> Research Integrity <input type="checkbox"/> Gender Perspective <input type="checkbox"/> Public Engagement <input type="checkbox"/> Open Access

3.4.1.1 Planning

In the case of ARC Fund, a brief overview of relevant developments preceding the actual planning activities has been considered relevant and will first be presented. Over the past five years, the organisation has participated in several H2020-funded projects focused on RRI, namely RRI-Practice, TeRRItoria, SUPER MoRRI, ETHNA System, and is a coordinator of another such project (RRI-LEADERS). As a result, RRI has become an increasingly important topic in the organisation, necessitating a more formal uptake of the RRI concept on all levels of management and among the research staff.

Certain RRI keys, such as Public Engagement, Open Access, Ethics, and Gender Equality (included in the larger frame of non-discrimination) have been ingrained into ARC Fund's practices and objectives from the earliest years of its activity. The AIRR dimensions (Anticipation, Inclusiveness, Reflexivity, and Responsiveness) also largely coincide with ARC Fund's overall approach to research process and knowledge governance. However, the RRI concept has not been formally embedded in ARC Fund's organisational policy. Likewise, due to its small size, ARC Fund has no specific department, team or position dedicated to any of the RRI keys, nor the RRI framework as such.

During the work on the RRI-Practice project, the idea emerged that it would be highly beneficial for ARC Fund to change this and formalise its commitment to the RRI principles in documents such as the Code of Ethics and Gender Equality and Non-Discrimination Policy. Establishment of the Ethics Board was also suggested, and the regular monitoring and evaluation of the organisation's performance in this area was considered. However, due to workload and commitments of relevant internal stakeholders, these plans never came to fruition.

The ETHNA System project provided an excellent opportunity not just to realise the original idea, but to upgrade it and implement it as a comprehensive ethical governance structure for conducting socially responsible and relevant research.

The planning at ARC Fund commenced with a detailed review of internal management and procedural systems of RRI. The review examined the importance and relevance of RRI for ARC Fund; explored which RRI dimensions are most important for the organisation and summarised the organisation's practices related to these dimensions; conducted an overview of departments, teams and experts involved with different aspects of RRI; and proposed potential steps to overcome the existing gaps and implement an RRI governance system at ARC Fund.

The next step was the mapping of staff (managers, researchers, and experts with RRI expertise or knowledge), structures (individual and collective), and documents.

When the mapping was completed, informal discussions were held with several of the identified staff members to define the broad outline of the Implementation Plan, including relevant goals, objectives, measures, and outcomes.

After the consultations, the Lab Manager developed a detailed Implementation Plan, which was presented to the senior management of ARC Fund at a meeting held in December 2021. At this meeting, the Implementation Plan was approved and the level of commitment to the ETHNA System selected. At the meeting, the RRI Officer and the members of the Working Group that will draft the Code of Ethics and Good Practices in R&I and other supplementary documents were also selected.

After the appointment, the RRI Officer and the Working Group started to draft the Code. The RRI Officer also began with the mapping of external stakeholders.

A workshop with internal stakeholders has not been organised yet. Due to the small size of the organisation, it was decided that at this stage, a workshop would not be appropriate. Rather, a workshop will be held once the first draft of the Code of Ethics and Good Practices in R&I has been completed. At the workshop, the draft will be discussed with internal stakeholders, and their suggestions and recommendations will be used to develop the second draft.

For a detailed overview of planning activities, please see appendix p. 71.

3.4.1.2 Implementation Plan

Initial Assessment: Stage 1-2 of the ETHNA System

ARC Fund is one of the leading not-for-profit research organisations in Bulgaria in the field of research and innovation and an active promoter of the RRI framework in the country. This necessitates a more formal uptake of the RRI concept (in the form of an ethical governance system) on all levels of the organisation's management (senior management, executive management, and operational management) and among the research staff. The adoption and implementation of the ETHNA System will significantly enhance the current legitimacy of the organisation vis-à-vis the key stakeholders in society.

The goals of the implementation process are:

- Appoint the RRI Officer who will be responsible for ETHNA System implementation at ARC Fund.
- Set up the Working Group that will draft the Code of Ethics and Good Practices in R&I, a Guide on Public Engagement, Gender Equality and Diversity Plan, and Open Access Policy.
- Have the documents developed by the Working Group endorsed by the senior management.
- Appoint the Advisory Group that will support the process of the ETHNA system implementation.
- Establish a Research Ethics Board, consisting of 3-5 members of ARC Fund's staff and at least one external stakeholder.
- Conduct a series of training sessions for all members of ARC Fund's staff (research and administration): Training on research ethics; training on public engagement methods; training on gender equality and diversity issues in research; and training on open access issues.
- Raise awareness and popularise the ethical governance system among the external stakeholders.

Despite being among the priority areas of ARC Fund's work over the past 5 years, the RRI framework has not yet been formally embedded in organisational policy and practice. While strictly adhering to high ethical principles for conducting research, the organisation has no formal procedures in place for governing different RRI dimensions. Likewise, ARC Fund has no specific department, team, or position dedicated to any of the RRI keys, nor the RRI concept as such.

ARC Fund has decided on the following priorities:

- Designate the RRI Officer.
- Set up a Working Group to write the ethical governance related documents.

- Writing and endorsement of the Code of Ethics and Good Practices in R&I, Gender Equality and Diversity Plan, internal Guide on Public Engagement, and Policy on Open Access.
- Set up the Advisory Group to support the implementation process.
- Establish Research Ethics Board.
- Mapping and recruitment of external stakeholders.
- Workshop with external stakeholders to present/promote the ETHNA System.
- Training on research ethics for all members of staff (research and administration).
- Training of research staff on public engagement methods.
- Training of research staff on gender equality and diversity issues in research.
- Training of research staff on open access issues.
- Revision of ETHNA System and its blocks.
- Evaluation of the ETHNA System implementation.
- Regular reporting on RRI performance in ARC Fund's annual report.

RRI Office(r): Stage 3 of the ETHNA System

The RRI Officer will be the main champion of the ETHNA System implementation at ARC Fund and will be responsible for the successful realisation of all activities from planning to evaluation. In the meeting with the senior management, a staff member with sufficient knowledge of the RRI concept and rich experience with RRI-related issues was selected for this position.

The core responsibility of the RRI Officer will be the development and operation of the ETHNA System at ARC Fund. More specifically, the RRI Officer will be responsible for:

- Dissemination and promotion of the ETHNA System concepts, principles, and values both within ARC Fund and among the external stakeholders.
- Smooth and timely implementation of all activities foreseen in the Action Plan.
- Coordination of the Working Group that will write the Code of Ethics and Good Practices in R&I and other related documents.
- Communication with the Advisory Group.
- Communication and cooperation with the Research Ethics Board.
- Interactions with the external stakeholders.
- Planning and implementation of training activities.
- Monitoring and evaluation of progress by using the established progress and performance indicators.

To ensure the timely and efficient implementation of all actions envisaged in the Action Plan, the RRI Officer will closely cooperate with the Working Group, the Advisory Group, the Research Ethics Board, senior management, and all relevant internal and external stakeholders. This cooperation will be enacted through events such as trainings and workshops, and maintained through regular communication and promotion activities both online and offline.

General overview of the Expected Implementation Process of the Action Plan

The Action Plan covers six steps of the ETHNA Lab (Planning, Construction, Consultation, Refinement, Testing, and Review) – and form the process for implementing the ETHNA System at ARC Fund. Each step consists of several actions.

Planning step: During this step, the Lab Manager (ARC Fund's principal researcher in the ETHNA System project) has developed a draft Implementation Plan and presented it to the senior management of ARC Fund. At the meeting, the main three tasks of the planning step were discussed: Mapping of the Priorities, Setting the level of commitment, and Implementing the RRI Officer.

The Lab Manager and the senior management decided that the second level of commitment to the ETHNA System best matches the needs, objectives, and priorities of ARC Fund. At the meeting, the RRI Officer and the members of the Working Group that will draft the Code of Ethics and Good Practices in R&I and other supplementary documents were also selected.

After the appointment, the RRI Officer and the Working Group started to draft the Code. The RRI Officer also began with the mapping of external stakeholders.

Construction step: When completed, the first draft of the Code will be discussed at the workshop with internal stakeholders. Based on their suggestions and recommendation, the second draft of the Code will be finalised.

The Advisory Group will be formed to discuss the second draft of the Code and provide its feedback. Based on the recommendations from the Advisory Group, the RRI Officer will produce the final version of ARC Fund's Code of Ethics and Good Practices in R&I.

After the finalisation of the Code of Ethics and Good Practices in R&I, several supplementary documents will be produced as well: a Guide on Public Engagement, Gender Equality and Diversity Plan, and Open Access Policy. All documents will be endorsed by the senior management of ARC Fund.

The next step will be the formation of a Research Ethics Board, consisting of 3-5 members of ARC Fund's staff and at least one external stakeholder. The board members will have the experience, authority, and knowledge to receive, evaluate, and reply to notifications, signals, and suggestions about issues dealing with research ethics. Also, the board members will have expertise to resolve ethical conflicts related to research and innovation in the organisations, and, if needed, update and improve the Code of Ethics and Good Practices in R&I.

In addition to these activities, the RRI Officer will recruit and engage the relevant external stakeholders for participation in different activities, such as workshops, presentations, and other forms of mutually beneficial exchanges, taking place in the further process.

Consultation step: The aim of the consultation activities is to share ARC Fund's experiences with the implementation of the ETHNA System with a variety of external stakeholders from different areas (research and academia, policymakers, businesses, and civil society), receive valuable feedback, and learn from stakeholders' experience with similar or different arrangements for ensuring the high ethical standards of research and innovation practices. These consultations will not only be used to test and improve the ETHNA System and its implementation in ARC Fund but should also serve as an inspiration to involved stakeholders to introduce a similar system for ethical governance of R&I in their own organisations.

Refinement step: Based on the input from external stakeholders, as well as opinions and suggestions received from ARC Fund's own staff, and especially the Working Group and Advisory Group, the RRI Officer will revise and if necessary, adapt the components of the ETHNA System, including own responsibilities and tasks, the developed documents, and the other relevant building blocks of the ETHNA System.

Testing step: Following the completion of all documents and their approval by the Research Ethics Board and the management of ARC Fund, a series of trainings will be organised for all members of ARC Fund's staff (research and administration): Training on research ethics; training on public engagement methods; training on gender equality and diversity issues in research; and training on open access issues. All staff members will participate in the testing, using the tools of the ETHNA System to further enhance the quality of the research conducted at the organisation, while strictly applying the rules and procedures prescribed in the Code of Ethics and Good Practices in R&I. The testing phase will last for three months.

Review step: This step will begin with the review and evaluation of the testing step. The implementation of the ETHNA System will be evaluated against the set of progress and performance indicators. This evaluation will be conducted jointly by the RRI Officer and the Advisory Group. After the evaluation, a workshop with internal stakeholders will be organised. At the workshop, the evaluation results will be presented and discussed. The decisions made throughout the implementation process will also be reviewed. The workshop will deliver a set of recommendations regarding the future status and implementation of the ETHNA System at ARC Fund.

The Review step will conclude with a brief report about the experiences, benefits, challenges, and lessons regarding the ETHNA System implementation, along with recommendations for adapting the tool in similar research-performing centres.

Endorsement: The Action Plan will be approved by the senior management of ARC Fund. The RRI Officer, the Working Group, the Advisory Group, and the Research Ethics Board will be selected through consultations with the senior management and will be formally appointed by it. The management will also approve and endorse the Code of Ethics and Good Practices in R&I, the Guide on Public Engagement, the Gender Equality and Diversity Plan, and the Open Access Policy.

While the RRI Officer will be the main responsible person for timely and efficient implementation of all proposed actions, the RRI Officer will not be alone in this undertaking. Implementation of ETHNA System at ARC Fund will be conducted as a shared and horizontal responsibility, involving relevant staff from all the organisation's programmes. Periodic internal discussions will be held in order to foster RRI integration within the organisational culture and practice, and ensure it is properly understood and accepted into the working ethos as an asset that brings added value to the organisation's research work.

The most important guarantor for the implementation of proposed actions and above all for the adherence to the Code of Ethics and Good Practices will be the Research Ethics Board, which will involve some of the senior management staff of ARC Fund, as well as external stakeholders. Performance on research ethics will be reported on a yearly basis in ARC Fund's Annual Reports on activities.

As an application-oriented research organisation (whose mission statement points to its wider societal responsibility), ARC Fund is already explicitly focused on engagement with different stakeholders and society as a way to gauge broader needs and make research results more socially effective. The organisation is committed to forging an active dialogue with various interested parties, citizens, businesses, and science policy actors. Given ARC Fund's long-standing experience and diverse professional culture of participation, the organisation will apply the ETHNA System to further strengthen the capacity of its staff to engage with stakeholders and the general public.

In the area of gender equality and diversity, ARC Fund will consider some long-term goals related to these aspects, mainly in terms of updating its organisational policy on gender and diversity.

Driven by the conviction that Open Access is fundamental for transparency, openness and accessibility, ARC Fund will develop and implement a clear organisational policy on Open Access. Open Access policy shall help researchers to comply with funding bodies' evolving requirements on Open Access to research papers and on research data management. A formal Open Access policy is expected to advance strategic organisational goals by enabling third parties to access, mine, reuse, and disseminate any research findings generated at the level of the institution, while increasing their overall utility and citability.

For a detailed overview of the Action Plan, please see appendix p. 72.

4 Recapitulation

The six implementing organisations are each working to adapt the ETHNA System to their implementing context. The planning activities and Implementation Plan for each organisation demonstrate how the organisations each have to consider different aspects and challenges when implementing the ETHNA System. At the time of reporting, five out of six organisations have completed the initial planning activities and drafted an Implementation Plan. In this chapter, some of the experiences, decisions, and challenges from the first implementation phase will be highlighted.

UJI is the only organisation choosing commitment level 3, whereas Harno, UNINOVA, Espaitec, and ARC Fund have chosen commitment level 2. NTNU has not yet decided on a level of commitment. Different factors influenced and motivated the commitment to the ETHNA System. At UNINOVA-CTS, commitment to the ETHNA System was an important contribution to help CTS comply with its contractual commitments and get better prepared for the next evaluation by the funding agency. At ARC Fund, RRI has become an increasingly important topic in the organisation, prompting a need to formally embed the RRI concept in ARC Fund's organisational policy. At NTNU, it has been a challenge to find a department that would commit to run the ETHNA Lab. Limited resources is one of the reasons and the fact that a codes of ethics and an ethics committee already exists at university level makes it unlikely that this would be seen as resources needed at the department level.

Three of the organisations have completed the mandatory workshop of the Planning step. At UJI, several workshops with internal stakeholders were held to discuss and reach consensus on the contents of the code of good practices and the ethical governance structure. At Harno, three workshops with both internal and external stakeholders were held to discuss good practices in ethics; gender mainstreaming and a Gender Equality Plan; and issues related to open access and data management. At UNINOVA, one workshop with internal stakeholders was held with the objective to introduce RRI and its importance to CTS, check and complement preliminary findings on RRI status, identify and discuss goals and priorities, and identify next steps.

The different implementation contexts make the relevance of a workshop differ from context to context. Whereas some of the organisations have used several workshops in their planning, others have not seen it as applicable at the current stage. For instance, ARC Fund prefers to conduct the workshop with internal stakeholders after the first draft of the Code of Ethics and Good Practices has been completed to discuss a second draft.

Five out of six organisations have made decisions for the implementation of the RRI Office(r), and different constellations have been proposed. Two of the five organisations propose to implement an RRI Office or an RRI task force, comprised of two or more people. At Espaitec, some of the tasks of the RRI Office will be to draft the Code of Ethics and Good Practices, disseminate the concepts of the ETHNA System among its organisation and stakeholders, establish activities for the three-year Action Plan, and monitor the progress of the implementation through performance indicators. A physical location for the RRI office has also been established.

Three organisations propose to appoint one person as the RRI Officer. At Harno, the activities of the RRI Officer will be supported by a Data Protection Specialist, Communication Managers, and a Personnel Manager. Some of the core tasks of the RRI Officer will be to develop a Code of Ethics and Good Practices and to develop a training plan; to implement the procedure for answering inquiries, complaints, and questions; to inform target groups of RRI-related activities; and to carry out periodic monitoring. At ARC Fund, some of the responsibilities of the RRI Officer will be dissemination and promotion of the ETHNA System concepts, principles, and values both within ARC Fund and among the external stakeholders; coordination of the Working Group that will write the Code of Ethics and Good Practices and other related documents; planning and implementation of training activities; and monitoring and evaluation of progress by using the established progress and performance indicators.

Even though most of the organisations have made plans for the implementation of the RRI Office(r), it has also been a challenging task for some of the organisations. The implementation of an RRI Office(r) can entail a significant cost for the organisations, as it can require a full-time contract to designate a permanent position to the RRI Office(r). Therefore, some of the organisations have found it difficult to find the resources to consolidate this position.

With the implementing organisations completing the planning activities and Implementation Plans, the ETHNA Lab will continue with the next steps: Construction, Consultation, Refinement, Testing, and Review.

5 References

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6 Appendix

6.1 Higher University Context

6.1.1 Detailed Overview of Planning step activities - Universitat Jaume I de Castelló (UJI)

DATE	ACTIVITY	OUTPUT
December 2020 - January 2021	Internal analysis of the ethical governance structure	Report
June and July 2021	(internal and external) Stakeholders mapping and discussion with UJI management (UJI Vice rector of Research).	Report
May 5, 2021 to June 13, 2021	Survey	Collecting data
June 14 to July 31	Data analysis of the data collected in the survey	Final report
Frequently from April 2021 until today	Internal meetings for developing operating rules for the committee and its subcommittees	Draft
May 2021 - still in process	New templates for requesting ethical advice	New templates
May 2021 - still in process	Modifying the information and structure of the university's web page	Web site
May 2021 - still in process	Establish a new channel of participation from which to channel requests from researchers	
May 2021 - June 2021	FAQ section with the most common questions from researchers	FAQ document
15, 22 and 29 December 2021	Working meetings of the ETHNA system team to develop first drafts of the code of good research practices on open	Drafts

	access, public engagement and gender.	
December 3	Working meeting between ETHNA members and university management team to launch the collaborative process	Coordination process
December 20	First workshop to discuss ethical governance structure and approve new rules of procedure for the ethics commission and subcommittees.	
December 2020 - January 2021	Internal analysis of the ethical governance structure	Report
May 5, 2021 to June 13, 2021	Survey	Collecting data
June 14 to July 31	Data analysis of the data collected in the survey	Final report

6.1.2 Detailed Action Plan - Universitat Jaume I de Castelló (UJI)

ACTION PLAN					
Proposed ACTIONS					
	GAP with ETHNA System	Timing (at least by year(s)/ quarter(s)/ semester(s))	Responsible Unit	Progress Indicator	Performance Indicator
ACTION 1	Performed a self-assessment of the preconditions necessary for the implementation of the ETHNA System	First semester 2021	ETHNA members (in conversation with UJI management staff)	Has UJI performed a self-assessment of the preconditions necessary for the implementation of the ETHNA System?	Report on the self-assessment

				Yes	
ACTION 2	Take actions to ensure that all necessary preconditions for the implementation of the ETHNA System are met.	Initiated: First semestre 2021 - Currently: still in process	ETHNA members (specially Elsa González and Ramón Feenstra)	Has UJI taken actions to ensure that all necessary preconditions for the implementation of the ETHNA System are met? Different meetings among Vice-Rector, Elsa González-Esteban and Ramón Feenstra took place from January 2021.	Meetings and commitments.
ACTION 3	Designate an RRI Office(r)	Period June 2021 to June 2022	Vice-rector of research (Jesús Lancis)	Has the organisation designated an RRI Office(r)? There isn't a formal designation. But resources have been aligned: Laura Bernal (temporary contract - OCIT) and Ramón Feenstra (responsible project of Research Ethics at UJI)	Laura Bernal (temporary contract - OCIT) and Ramón Feenstra (responsible project of Research Ethics at UJI)
ACTION 4	Establish the core duties of RRI Office(r)	Second semester 2021	RRI officer Laura Bernal Lab Manager Ramón Feenstra and Vice-rector of research	Has UJI established the core duties of RRI Office(r)? There are some duties that have been raised in	Contract and project on Research Ethics at UJI

			Jesús Lancis	the contract and project.	
ACTION 5	Design an Action Plan for the implementation of the RRI Office(r)	Second semester 2021 and still in process	RRI officer Laura Bernal Lab Manager Ramón Feenstra and Vice-rector of research Jesús Lancis	Has UJI designed an Action Plan for the Implementation of the RRI Office (r)? Yes, but at the moment, only temporary.	Laura Bernal contracted at OCIT.
ACTION 6	Appoint a working group to adapt the ETHNA System's proposed CEGP	Second semester 2021 and still in process	ETHNA members (specially by Ramón Feenstra)	Has the organization appointed a working group to adapt the proposed CEGP of the ETHNA System? Yes	UJI has requested at the EPyD Research Group of UJI a project to develop a CEGP on R&I. Ramón Feenstra was designated by UJI's competent bodies to lead this process working together with the ETHNA System Project.
ACTION 7	Establish the goals, tasks, and responsibilities of members of the working group	Second semester 2021 and still in process	ETHNA members (specially by Ramón Feenstra)	Has the organisation established the goals, actions, and responsibilities of members of the working group to adapt the ETHNA System's proposed CEGP? Yes	Ramón Feenstra has written a planification of tasks and responsibilities among the working group designated by the UJI team at the ETHNA System and Laura Bernal (OCIT) , always coordinated by Ramón.

ACTION 8	Establish the relevant aspects to be included in the adapted CEGP considering the research, innovation, and/or funding activity of your organisation	Second semester 2021 and still in process	ETHNA members (specially by Elsa González Esteban)	Has the organisation established the relevant aspects to be included in the adapted CEGP considering the UJI research, innovation and funding activity? Yes	Self-assessment n the aspects that could be included considering the ETHNA System material provided. Meetings with strategic internal stakeholders to discuss the content to be covered in each key and in the draft.
ACTION 9	Decide which RRI aspects the CEGP should cover [cover at least one of the four RRI keys: integrity, gender, open access, and public engagement]	Second semester 2021	ETHNA members	Has the organisation decided if the CEGP will cover integrity, gender, open access and / or Public Engagement? Yes	Self-assessment on the aspects that could be included considering the ETHNA System material provided. Meetings with strategic internal stakeholders to discuss the content to be covered in each key and in the draft.
ACTION 10	Develop a first draft of CEGP for your organisation	Second semester 2021 and still in process	ETHNA members Gender by Santiago García-Campa Public Engagement by Rosana Sanahuja, open access and integrity by	Has the working group elaborated a first draft of CEGP? Yes, in progress with the participatory process	The first draft of the keys to be covered is developed and it will be discussed in the livingLabs that will take place in January.

			Ramón Feenstra. Ethical Governance by Laura Bernal		
ACTION 11	Launch a participatory process with stakeholders from your organisation to discuss the first draft of the CEGP	First semester 2022	37 different experts from the University Jaume I	Has UJI launched a participatory process with UJI stakeholders to discuss the first draft of UJI CEGP? Yes, under development.	Is there a road-map and identification of internal and external stakeholders to be involved and the communication has been started? Yes, and on 3th December there was an open communication to all the UJI community and externally
ACTION 12	Obtain the approval of the senior management	First semester 2022	ETHNA members and vice-rector of research	Has the UJI latest CEGP version been commented on and approved by senior management? The preliminary drafts have the support but the latest version is expected to be achieved in May.	
ACTION 13	Take actions to raise internal awareness concerning the Code of Ethics and Good Practices	Second semester 2022	ETHNA members, vice-rector of research and PhD general office	Has the organisation encouraged actions to raise internal awareness concerning the Code of Ethics and	

				Good Practices?	
ACTION 14	Take an explicit decision that the Ethics Committee on R&I will be permanent	Second semester 2021	Vice-rector of research	Has the organisation taken and explicit decision that the Ethics Committee on R&I will be permanent? Yes	Meetings of the actual Deontological Committee and bilaterally among the Research and Innovation Vice-rector and the Lab Manager of UJI
ACTION 15	Establish the composition of the Permanent Ethics Committee on R&I	Still in process	Vice-rector of research	Has the organisation established the composition of the Permanent Ethics Committee on R&I? The proposal has been worked and launched to a Living Lab that will take place in January 2022	
ACTION 16	Clearly set out the basic functions of the Permanent Ethics Committee on R&I	First semester 2022	Vice-rector of research	Has the organisation clearly set out the basic functions of the Permanent Ethics Committee on R&I? The proposal has been worked and launched to a Living Lab that will take place in January	
ACTION 17	Elaborate an Action Protocol as a guide for the operation of the Permanent Ethics Committee on R&I	Second semester 2021 and still in process	Elaboration of the draft by Laura Bernal (OCIT) and	Has an Action Protocol been developed as a guide for the operation of	Meetings among the Lab Manager of UJI, the Vice-Rector

			Ramón Feenstra (Lab Manager) Reviewed by Vice-rector.	the Permanent Ethics Committee on R&I? The proposal has been worked and launched to a Living Lab that will take place in January 2022	on R&I who is the President of the actual Deontological Committee. Elaboration of the draft by Laura Bernal (OCIT) and Ramón Feenstra (Lab Manager)
ACTION 18	Elaborate an Action Plan to implement the Permanent Ethics Committee on R&I			Has the organisation elaborated an Action Plan to implement the Permanent Ethics Committee on R&I?	
ACTION 19	Organise the first meeting to constitute the Permanent Ethics Committee on R&I	First semester 2022	ETHNA members	Has the organisation held a first meeting to constitute the Permanent Ethics Committee on R&I?	
ACTION 20	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.	First and second semester 2022	UJI management	Has the organisation established the link between the Ethics Committee and the governing body of UJI?	
ACTION 21	Designate a person responsible for the Ethics Line	First and second semester 2022	UJI management	Has the organisation designated a person responsible for the Ethics Line? The proposal has been worked and launched to a Living Lab that will	Draft on the Ethics Line

				take place in January 2022	
ACTION 22	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.)	First and second semester 2022	UJI management	Has the organisation designated and made explicit the group of experts or body/bodies responsible for managing and resolving notifications received via the Ethics Line? The proposal has been worked and launched to a Living Lab that will take place in January 2022	Draft on the Ethics Line
ACTION 23	Define and make explicit the way in which the information collected and managed through the Ethics Line is archived	First and second semester 2022	UJI management	Has the organisation defined and made explicit the way in which the information collected and managed through the Ethics Line is archived? The proposal has been worked and launched to a Living Lab that will take place in January 2022	
ACTION 24	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,	First and second semester 2022	UJI management	Has the organisation drawn up an action protocol as an operating guide to receive and manage notifications	

	or complaint notifications, etc.)			via the Ethics Line? The proposal has been worked and launched to a Living Lab that will take place in January 2022	
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6.1.3 Detailed Overview of Planning step activities – Norwegian University of Science and Technology (NTNU)

DATE	ACTIVITY	OUTPUT
	Activities carried out at NTNU Department of Philosophy and Religious Studies	
September 2021	Various informal talks with department leader at DPRS	First illustration of the ETHNA project and the living lab and preliminary discussion of the possible benefits and commitment for the department
22-10-2021	Meeting with Lars Ursin to map the RRI initiatives at NTNU, the level of involvement of DPRS and the possible focus of a living lab at DPRS	<p>The following initiatives were identified at university level:</p> <ol style="list-style-type: none"> 1) Research ethics committee, 2) Research integrity committee, 3) Gender equality officer, 4) Ethics portal, 5) Hotline for abuses and misbehaviour. <p>We noted the involvement of the Programme for Applied Ethics (PAE) at DPRS in (1), (2) and (4).</p> <p>We considered that a living lab at the DPRS could have in part focused on the implementation of the above-mentioned initiatives at departmental level.</p>
15-11-2021	Meeting with DPRS department leader about living lab at DPRS.	The department leader expressed an ambivalent attitude towards the possibility

		<p>of hosting the living lab at DPRS. His impression after having met with most of the staff was that there was a widespread desire of focusing on their teaching and research activity and keeping other activities/requirements to a minimum. some staff members see the task as sheltering them from demands that distract them from their core tasks and responsibilities. Furthermore, it was expressed that the initiative of committing to the living lab should be endorsed by the leadership group and by the majority of the staff. So, it will be brought up the issue at the next meeting of the leadership group. The management expressed being intrigued by the idea of the living lab if the initiative proved widely supported.</p>
16-11-2021	<p>Discussion on the feasibility and benefits of running the living lab at DPRS with identified internal stakeholder, who is chair of the Research Integrity Committee and has extensive experience leading the ELSA/RRI components of research projects.</p>	<p>Scepticism regarding the ETHNA System project, it's purpose and the living labs were expressed on various points. Particularly the point of applying the ideals of RRI to DPRS was questioned. Doubts about the concept of RRI itself and on the focus on the keys was also expressed. RRI was moreover considered better suited for natural science and technology research, rather than for the activity of a humanities department.</p>
18-10-2021	<p>Meeting with important internal stakeholder.</p>	<p>Scepticism about the usefulness of running a living lab at DPRS was expressed. The department was thought to already be fulfilling its responsibilities towards society and that the RRI keys did not seemed the most suited to be applied there. Applied ethics has something to contribute to society (and it is doing so, also within the department) and that RRI</p>

		<p>does not add anything significant to it.</p> <p>The issues of public engagement and gender equality was discussed. The department was already considered to be doing enough and it was doubted that the living lab would have improved things. The importance of public engagement was thought to be overestimated and underestimates the challenge of understanding the extremely technical nature of so much research. Despite these reservations, a personal good will to support the process was expressed. It was more suggested that distributing a short questionnaire would have been a time and resource effective way of collecting useful information and checking people's willingness to be involved in the living lab. I later took up this suggestion.</p>
18-10-2021	Meeting with important internal stakeholder.	<p>Interest in the living lab was expressed and the process was considered something that needs to be done at DPRS to improve the gender imbalance issue. Support for the idea of the living lab as a way of promoting internal reflection on the mission of the department was also expressed.</p>
18-10-2021	Meeting with an important internal stakeholder.	<p>A concern about the gender imbalance issue at the department was expressed. It was believed that it is not improving and that the living lab could be a useful push to do more. It was also thought that there is a potential for doing more in terms of reaching out and influencing public debate. For instance, the respondent noted that philosophers have become less present in public debates and that they could contribute</p>

		more to the debate around science and society. So, expressed support for the idea of a living lab was expressed because it could be promoted as a useful exercise of reflexivity and of looking at the department activity from an external perspective. On the other hand, some concern were voiced that the living lab could imply additional administrative burdens which are already quite heavy for the department staff.
25-11-2021	Meeting with an important internal stakeholder.	<p>An interest in understanding what were the objectives and the requirements of the living lab was expressed. Support for the goals was expressed as well as the belief that it could have been a positive initiative for the department.</p> <p>The respondent inquired very thoroughly about the requirements of the lab in terms of staff engagement and person working hours. The respondent suggested some staff members that I should contact to check their availability to contribute some work to the living labs. Finally, there was a belief that PAE could support the living lab within the limits of available capacity.</p>
7-12-2021	Questionnaire circulated to the DPRS staff (reminders sent on 10-12 and 20-12).	To date 13 (out of 63) people have returned the questionnaire. In terms of which key needs more attention at DPRS, the questionnaire shows that the gender balance issue is perceived as the one more in need of attention. In terms of people interest and willingness to commit to the living lab, the results show a lot of caution.
	Activities carried out at NTNU, Department of Computer Science	
19-11-2021	Meeting with internal stakeholder.	After explaining more in detail the living lab features, we discussed whether to try to

		involve the whole department, a small research unit or a large research unit and we agreed that a large research unit was the best choice. In particular, we identified the Information Systems and Software Engineering (ISSE) unit as the most suitable in virtue of its many collaborations with external partners and for the social relevance of its work. Relevant contacts were shared.
6-12-2021	Meeting with internal stakeholder	We discussed the kind existing initiatives at ISSE that could be relevant for the living lab and the kind of initiatives that the living lab may promote or encourage. We also identified some external stakeholders and discussed whether, in case of commitment to run the living lab, it would have been possible to speed up things to have some results within the expected timeline. We thought it may be possible although there would be little margin for making up for problems or delays. We agreed that I would have been invited to the next ISSE meeting to present the idea of the living lab to the group.
14-12-2021	Presentation of ETHNA and Living Lab at ISSE meeting. Questionnaire circulated to ISSE staff	Those attending the meeting have been introduced to the ETHNA project and to the goals, requirements and benefits of hosting a living lab. A questionnaire was circulated among the group members. To date 7 questionnaires have been returned and while the number is low (we were close to Christmas holiday), the results are encouraging. It seems that respondents are very aware of the social impact of their work and of the responsibility that comes from this. There is openness towards the living lab and

		most respondents believe it could benefit the unit.
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6.2 Research Funding Context

6.2.1 Detailed Overview of Planning step activities – Education and Youth Board of Estonia (Harno)

DATE	ACTIVITY	OUTPUT
07.10.2021	Consultation with Head of Estonian Quality Agency for Higher and Vocational Education	an overview of the existing RRI elements in the documents and the possibility to add new ones
07.10.2021	Consultation with Director of the Erasmus Plus Agency	an overview of the existing RRI elements in the documents and the possibility to add new ones
08.10.2021	Consultation with the Head of the Scholarships and Grants Office	an overview of the existing RRI elements in the documents and the possibility to add new ones
13.10.2021	Consultation with the Analyst from the Estonian Research Council	GEP topics
14.10.2021	Meeting with Director General, Harno	Got an overview of ETHNA's activities and promised to support
18.10.2021	Meeting with Data Management Specialist, Harno	Agreeing on the division of tasks, planning further activities
18.10.2021	Consultation with Head of the Education Marketing Office	Communication issues
19.10.2021	Consultation with Senior Specialist for Electronic Databases/administrator of the Estonian Research Information System/member of Open Science Task Force.	Open Access issues
21.10.2021	Meeting with manager of the IT Academy Programme	an overview of the existing RRI elements in the documents and the possibility to add new ones
25.10.2021	ETHNA System goals and Harno - presentation at a meeting of Harno's senior management	Awareness raising, receiving support for future activities

28.10.2021	Consultation with Adviser at Estonian Research Council (EURAXESS; Reforming and Enhancing the EU R&I System)	RRI activities in HEs
29.10.2021	Consultation with Research Data Senior Specialist at University of Tartu	Open Access, Open Data, Data Management Plan
29.10.2021	Meeting with Adviser, Ministry of Education and Research, Head of the Ethics Working Group of the Research and Development Management Act	New indicators in the Act, future cooperation and support from Ministry
02.11.2021	Consultation with Researcher, University of Tartu Ethics Centre	Application of good research practice at the University of Tartu, created documents
03.11.2021	Meeting with Researcher, University of Tartu Ethics Centre	Signing of the Estonian Code of Conduct for Research Integrity by Harno
04.11.2021	Meeting with Researcher, University of Tartu Ethics Centre	Workshop on ethics in Harno
05.11.2021	Meeting with colleague from Finland, VTT	Discussion on the duties of an Ethics Officer
10.11.2021	Meeting with Harno communication and marketing specialists	Public engagement tools, channels
16.11.2021	Meeting with the Academic Ethics Committee of Tallinn University of Technology	Use of ETHNA resources in the development of the principles of the University Ethics Council. Recommendations for Harno to implement an ethics system.
17.11.2021	Workshop "Good practice in ethics" for Harno target group	Testing recommendations used in international documents in the Harno context
18.11.2021	Consultation with Human Resources Development Manager	Availability of statistics for the GEP
18.11.2021	Meeting with new Director General	Got an overview of ETHNA's activities and promised to support

19.11.2021	Workshop “Gender equality and GEP” for Harno target group	Testing recommendations used in international documents in the Harno context
23.11.2021	Consultation with the Analyst from the Estonian Research Council	Recommendations for the development and implementation of the GEP
24.11.2021	Consultation with Head of Department of the Estonian Research Information System	open access to publications, proposal of the National Reform Coordination Council on the deposit of open data created in state institutions
25.11.2021	Workshop “Open Access, Open Data, Data Management Plan” for Harno target group	Testing recommendations used in international documents in the Harno context

6.2.2 Detailed Action Plan – Education and Youth Board of Estonia (Harno)

ACTION PLAN					
Proposed ACTIONS					
	GAP with ETHNA System	Timing (at least by year(s)/ quarter(s)/ semester(s))	Responsible Unit	Progress Indicator	Performance Indicator
ACTION 1	Self-assessment and mapping of resources	October 2021	Ülle Must	Has the organisation performed a self-assessment of the preconditions necessary for the implementation of the ETHNA System?	Indicate the number, type and frequency of actions you have taken to self-assess the preconditions required for implementing the ETHNA System.
ACTION 2	Consultations with different stakeholders	October, November 2021	Ülle Must	Has the organisation taken actions to ensure that all necessary preconditions for the implementation	Indicate the number, type and frequency of activities you have carried out to extend the idea of ethical governance of R&I in line with

				n the ETHNA System are met?	the ETHNA System.
ACTIO N 3	Consultations on RRI office / officer issues	October, November 2021	Ülle Must	Has the organisation taken actions to ensure that all necessary preconditions for the implementation of the ETHNA System are met?	Indicate the number, type and frequency of activities you have carried out to extend the idea of ethical governance of R&I in line with the ETHNA System.
ACTIO N 4	Workshops for Harjo staff (4)	November, 2021	Ülle Must	Has the organisation performed a self-assessment of the preconditions necessary for the implementation of the ETHNA System?	Indicate the number, type and frequency of activities you have carried out to extend the idea of ethical governance of R&I in line with the ETHNA System.
ACTIO N 5	Internal and external awareness raising concerning the Code of Ethics and Good Practices	Continuous activity	RRI Officer	Has the organisation encouraged actions to raise internal and external awareness concerning the ETHNA System?	Indicate the number, type and frequency of actions you have implemented to generate <i>internal and external awareness</i> of the ETHNA System.
ACTIO N 6	Designation of an RRI Officer	December, 2021	Ülle Must	Has the organisation established the core duties of RRI Office(r)?	Indicate the number and type of RFO services related to RRI with which the RRI Officer currently interacts or cooperates (e.g., Data Management Officer, etc.), as well as the number

					of times it has requested their collaboration during the last year.
ACTIO N 7	First draft of the CEGP	January, 2022	RRI Officer	<p>Has the organisation launched a participatory process with RFO stakeholders to discuss the first draft of their CEGP?</p> <p>Has the organisation generated actions to promote RRI keys (ethic, gender, open access, public engagement)?</p>	Indicate the number, type and frequency of activities you have carried out to extend the idea of ethical governance of R&I in line with the ETHNA System.
ACTIO N 8	Develop monitoring indicators for the CEGP and RRI Office	January, 2022	RRI Officer	<p>Has the organisation established an updating process?</p> <p>Has the organisation established a professional and/or organisational compliance monitoring process?</p>	Realistic, comparable indicators have been developed
ACTIO N 9	Consultations with stakeholders on CEGP	January-March, 2022	RRI Officer	Has the organisation launched a participatory process with RFO stakeholders to discuss the	Indicate the number, type and frequency of proposals, suggestions, queries, complaints, alerts or report received (notifications)

				<p>first draft of their CEGP?</p> <p>Has the organisation generated actions to promote RRI keys (ethic, gender, open access, public engagement)</p>	
ACTIO N 10	Develop a communication plan	January, 2022	RRI Officer	<p>Has the organisation offered accountability to its stakeholders for the progress and performance of the ETHNA System (e.g., monitoring report, impact report, web dashboard, newsletter, etc.)?</p>	<p>Indicate the number and type of communication by media types.</p> <p>Indicate the number of audiences reached.</p>
ACTIO N 11	Second draft of the CEGP	April, 2022	RRI Officer	<p>Has the organisation launched a participatory process with RFO stakeholders to discuss the second draft of their CEGP?</p> <p>Has the organisation generated actions to promote RRI keys (ethic,</p>	Indicate the number and type of changes in CEGP, compared to the first version

				gender, open access, public engagement)	
ACTIO N 12	Consultations with stakeholders on CEGP	April-June, 2022	RRI Officer	<p>Has the organisation launched a participatory process with RFO stakeholders to discuss the second draft of their CEGP?</p> <p>Has the organisation generated actions to promote RRI keys (ethic, gender, open access, public engagement)</p>	Indicate the number, type and frequency of proposals, suggestions, queries, complaints, alerts or report received (notifications)
ACTIO N 13	Final version of the CEGP	July, 2022	RRI Officer	<p>Has the organisation taken actions to ensure that all necessary preconditions for the implementation the ETHNA System are met?</p> <p>Has the organisation generated actions to promote RRI keys (ethic, gender, open</p>	Indicate the number and type of changes in CEGP, compared to the first version

				access, public engagement)	
ACTIO N 14	Obtain the approval of the senior management	August, 2022	RRI Officer	Has the latest CEGP based on the ETHNA System been commented on and approved by senior management?	Indicate the type of questions/comments made by senior management
ACTIO N 15	Implement and publish the CEGP	September, 2022	RRI Officer	Has the latest CEGP based on the ETHNA System been commented on and approved by senior management?	Indicate the number, type, and frequency of actions implemented during the last year to improve and/or update the contents of the CEGP.
ACTIO N 16	Monitoring the implementation of the CEGP	2023, 2024	RRI Officer	Has the organisation offered accountability to its stakeholders for the progress and performance of the ETHNA System (e.g., monitoring report, impact report, web dashboard, newsletter, etc.)?	<p>Indicate the number, type, and frequency of actions implemented during the last year to train RFO professionals in the contents of the CEGP.</p> <p>Indicate the number, type, and frequency of actions implemented during the last year to improve and/or update the contents of the CEGP.</p> <p>Indicate the number, type, and frequency of actions implemented to tackle the RRI keys: Integrity, Gender, Open Access, and</p>

					Public Engagement.
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6.3 Innovation Ecosystem Context

6.3.1 Detailed Overview of Planning step activities – Instituto de Desenvolvimento de Novas Tecnologias (UNINOVA)

DATE	ACTIVITY	OUTPUT
7 Oct 2021	Internal working group meeting / brainstorming	Approach and “language” to be used.
21 Oct 2021	Internal working group meeting / status assessment	Preliminary assessment of RRI status at CTS
28 Oct 2021	Preparation of materials for workshop & invitation to participants	Set of slides List of workshop participants
10 Nov 2021	First workshop	Refined assessment of RRI status at CTS List of goals and priorities
18 Nov 2021	Refinement of workshop results	Refined list of findings Preparation of slides for ETHNA WP5 meeting Establishment of RRI Task Force
26 Nov 2021	ETHNA WP5 meeting (2 nd WP5 workshop)	Presentation of initial findings and results
2 Dec 2021	Organization of website	Extension to CTS website devoted to RRI
17 Dec 2021	Mapping CTS goals into ETHNA blocks.	Refined goals.

6.3.2 Detailed Action Plan – Instituto de Desenvolvimento de Novas Tecnologias (UNINOVA)

ACTION PLAN					
At this stage of the process, the next actions towards our goals are:					
Proposed ACTIONS					
	GAP with ETHNA System	Timing (at least by year(s)/ quarter(s)/ semester(s))	Responsible Unit	Progress Indicator	Performance Indicator

ACTION 1 Elaborate Code of Ethics and Good Practices (CEGP)	Only fragments exist. An “integrated” code is needed.	1 st draft: Mar 2022 Revision: May 2022	Internal RRI working group	<ul style="list-style-type: none"> ▪ Has the internal working group begin its duties? ▪ Has CTS decided if the CEGP will cover: <ul style="list-style-type: none"> - Integrity aspects? - Gender aspects? - Open Access aspects? - Public Engagement aspects? ▪ - Has CTS launched a participatory process with stakeholders to discuss the first draft of the CEGP? ▪ Has CTS compiled and composed a 2nd draft of the CEGP reflecting the relevant aspects from the participatory process with stakeholders? ▪ Has CTS generated actions to promote RRI key Integrity? 	<ul style="list-style-type: none"> - Number, type and frequency of actions implemented to tackle the RRI keys: Integrity, Gender, Open Access and Public engagement - Number and type of actions aimed at reflecting, reporting, and making recommendations on principles related to R&I ethics and professional ethics. - Number, type, and frequency of actions implemented during the last year to monitor the level of compliance by professionals and by the organisation with the CEGP values, principles, and behaviours.
ACTION 2 Raise awareness	Disperse information that needs to be organized and communicated	Start repository: Dec 2021 Organize events: 2022	Internal RRI working group	- Has CTS designed and implemented actions to publicise the idea of ethical governance of R&I in line with the ETHNA System?	<ul style="list-style-type: none"> - Number, type and frequency of actions implemented to generate internal awareness of the ETHNA System. - Number, type, and frequency of

				<ul style="list-style-type: none"> - Has CTS encouraged actions to raise internal awareness concerning the Code of Ethics and Good Practices? 	<p>actions implemented to generate internal awareness of the contents of the CEGP and its benefits.</p> <ul style="list-style-type: none"> - Number, type, and frequency of actions CTS has taken to promote the CEGP.
ACTION 3 Training programme for ESRs	Improvement and refinement of previous training	<p>First sessions: Jan 2022</p> <p>Further actions: Jun/Jul 2022</p>	Coordination of PhD program	<ul style="list-style-type: none"> - Has CTS generated actions to promote RRI Training for ESR? 	<ul style="list-style-type: none"> - Number, type, and frequency of actions the organisation has taken to promote RRI Training
ACTION 4 Creation of RRI task force	Such “body” didn’t exist before	Launch: Dec 2021	CTS Director	<ul style="list-style-type: none"> - Has CTS designated an RRI Office? - Has CTS established the core duties of RRI Office? - Has CTS designed an Action Plan for the implementation of the RRI Office? 	<ul style="list-style-type: none"> - Number and type of meetings for the creation of RRI task force. - Number and type of meetings for the establishment of the RRI core duties and Action Plan.
ACTION 5 Promotion of gender balance & inclusion	Take actions to promote gender balance according to CTS ecosystem context	<p>Start: Feb 2022</p> <p>Organize events: 2022</p>	Internal RRI working group	<ul style="list-style-type: none"> - Has CTS generated actions to promote RRI key Gender? 	<ul style="list-style-type: none"> - Number, type, and frequency of actions the organisation has taken to promote gender balance.
ACTION 6 Define “code of	Such code does not exist	1 st draft: Apr 2022	Internal RRI working group	<ul style="list-style-type: none"> - Has CTS established and implemented actions to issue 	<ul style="list-style-type: none"> - Number and type of meetings for the creation of

conflicts of interest” (CCol)		Revision: Jul 2022		reports and make recommendations on principles related to conflicts of interest?	the code of conflicts of interest.
ACTION 7 Elaborate open access guidelines	Only fragments exist. “Integrated” guidelines are needed.	1 st draft: Mar 2022 Revision: May 2022	Internal RRI working group	- Has CTS generated actions to promote RRI key Open Access?	- Number, type, and frequency of actions the organisation has taken to promote RRI key Open Access.

6.3.3 Detailed Overview of Planning step activities – Parc Científic Tecnològic i Empresarial (Espaitec)

DATE	ACTIVITY	OUTPUT
November 8, 2021	Internal meeting RRI Office	List of Espaitec's resources
November 16, 2021	Internal meeting RRI Office	List of Espaitec's goals
November 22, 2021	Internal meeting RRI Office	List of potential internal and external stakeholders
November 29, 2021	Internal meeting RRI Office	Set the level of commitment and list of experts to be invited to participate
December 13, 2021	Internal meeting RRI Office To work on the templates to be submitted	Report templates draft
December 20, 2021	Internal meeting RRI Office To work on the templates to be submitted	Report templates draft
December 2021	Meeting with potential stakeholders for proposed participation in the project and feedback on the decisions proposed by the RRI Office	Stakeholders map
December 2021	Meeting with expert groups for proposed participation in the project and feedback on the decisions proposed by the RRI Office	Expert groups map

January 2022	Internal meeting RRI Office	Report templates
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6.3.4 Detailed Action Plan – Parc Científic Tecnològic i Empresarial (Espaitec)

ACTION PLAN					
Proposed ACTIONS					
	GAP with ETHNA System	Timing (at least by year(s)/ quarter(s)/ semester(s))	Responsible Unit	Progress Indicator	Performance Indicator
ACTION 1	Mapping priorities	November 2021	Working group 1	<ul style="list-style-type: none"> - Has the organisation performed a self-assessment of the preconditions necessary for the implementation of the ETHNA System? - Has the organisation taken actions to ensure that all necessary preconditions for the implementation of the ETHNA System are met? 	<ul style="list-style-type: none"> - Weekly meetings of the RRI Office members to analyze the preconditions necessary to implement the ETHNA System at Espaitec
ACTION 2	Mapping stakeholders	November and December 2021	Working group 1	<ul style="list-style-type: none"> - Has the organisation designed an Action Plan for the implementation of the RRI Office(r)? - Has the organisation generated actions 	<ul style="list-style-type: none"> - Drafting of the Action Plan for its implementation - Drafting of the stakeholder map

				to promote RRI key Public Engagement?	
ACTION 3	First contact with stakeholders	December 2021	Working group 1	- Has the organisation generated actions to promote RRI key Public Engagement?	- Contact with internal and external stakeholders to propose participation in the project. The aim is to foster a stable relationship with our stakeholders so that they participate in the project and their interests are taken into account to improve the quality of the results.
ACTION 4	Select the working group that will form the RRI Office and develop the CEGP	December 2021	Working group 1	<p>- Has the organisation designated an RRI Office(r)?</p> <p>- Has the organisation appointed a working group to adapt the proposed CEGP of the ETHNA System?</p>	<p>- Meeting between Juan Antonio Bertolín and Eva Pardo to assign RRI Office</p> <p>- Meeting between Juan Antonio Bertolín and Eva Pardo to assign the CEGP working group</p> <p>- Contact with groups of experts to help</p>

					us develop the CEGP
ACTION 5	Establish the tasks of each member of the RRI Office and of the group in charge of developing the CEGP	December 2021	Working group 1 + expert groups	<p>-Has the organisation established the core duties of RRI Office(r)?</p> <p>-Has the organisation established the goals, actions, and responsibilities of members of the working group to adapt the ETHNA System's proposed CEGP?</p>	<p>-Meeting between Juan Antonio Bertolín and Eva Pardo to assign the tasks of each as members of the RRI Office in November 2021</p> <p>-Workshop in January 2022 involving the RRI Office and the expert groups to set CEGP objectives and responsibilities of each member</p>
ACTION 6	Set the level of commitment with the ETHNA System	November 2021	Working group 1	-Has the organisation designed an Action Plan for the implementation of the RRI Office(r)?	-RRI Office meeting to determine Espaitec's level of commitment in November 2021
ACTION 7	Choose the location of the RRI Office	December 2021	Working group 1	-Has the organisation designated an RRI Office(r)?	-Meeting of the RRI Office to determine the location of the RRI Office in November 2021
ACTION 8	Develop monitoring	December 2021	Working group 1	-Has the organisation designed an Action	-Elaboration of the Action Plan where the

	indicator for the RRI Office			Plan for the implementation of the RRI Office(r)?	monitoring indicators for the implementation of the RRI Office have been assigned
ACTION 9	Decide which RRI aspects the CEGP should cover	November 2021	Working group 1	<p>-Has the working group, to adapt the ETHNA System's proposed CEGP, begin its duties?</p> <p>-Has the organisation decided if the CEGP will cover Gender?</p>	-RRI Office meeting to determine the area of activity to be covered by the CEGP
ACTION 10	Establish the relevant aspects to be included in the adapted CEGP	First quarter 2022	Working group 1 + expert groups	-Has the organisation established the relevant aspects to be included in the adapted CEGP considering the RPO's/RFO's research, innovation, and/or funding activity?	-Meeting between RRI Office and expert groups in January 2022 to set items to be included in the CEGP
ACTION 11	Develop a first draft of CEGP for our organisation	First quarter 2022	Working group 1	-Has the organisation established the relevant aspects to be included in the adapted CEGP considering the RPO's/RFO's research, innovation, and/or funding activity?	-First draft to be prepared between February and March 2022

				-Has the organisation generated actions to promote RRI key Gender?	-Our CEGP will be focused on the gender perspective, so through this action we will be promoting RRI in a gender perspective
ACTION 12	Launch a participatory process with stakeholders from our organisation to discuss the first draft of the CEGP	First quarter 2022	Working group 1	-Has the organisation launched a participatory process with RPO/RFO stakeholders to discuss the first draft of their CEGP?	-Workshop with internal and external stakeholders to present the first draft of the CEGP and receive feedback
ACTION 13	Develop a communication plan	December 2021		-Has the organisation designed an Action Plan for the implementation of the RRI Office(r)?	-Elaboration of a communication plan and list of actions included in the action plan

ACTION 14	Develop a second draft of the CEGP reflecting the relevant aspects drawn from the participatory process with stakeholders	Second quarter 2022	Working group 1	<p>-Has the organisation compiled and composed a second draft of the CEGP reflecting the relevant aspects from the participatory process with stakeholders?</p> <p>-Has the organisation generated actions to promote RRI key Gender?</p>	-Workshop with internal and external stakeholders to present the second draft of the CEGP (focused on gender perspective)
ACTION 15	Obtain the approval of the senior management	Second quarter 2022	Working group 1	-Has the latest CEGP based on the ETHNA System been commented on and approved by senior management?	-CEGP presentation
ACTION 16	Implement and publish the CEGP	Third quarter 2022	Working group 1	<p>-Has the organisation encouraged actions to raise external awareness concerning the Code of Ethics and Good Practices?</p> <p>-Has the organisation generated actions to promote RRI key Open Access?</p> <p>-Has the organisation</p>	-Obtained senior management approval, the CEGP will be implemented and published on the Espaitec website to make it available to members of the Fundació General UJI and companies in the park, which will be an action to promote open access and gender perspective

				generated actions to promote RRI key Gender?	
ACTION 17	Develop monitoring indicators for the CEGP and RRI Office	Fourth quarter 2021	Working group 1	<p>-Has the organisation designed an Action Plan for the implementation of the RRI Office(r)?</p> <p>-Has the organisation established an updating process?</p>	-Elaboration of the Action Plan where progress indicators to be followed have been established
ACTION 18	Take actions to raise internal awareness concerning the Code of Ethic and Good Practices	2022, 2023, 2024	Working group 1	-Has the organisation encouraged actions to raise internal awareness concerning the Code of Ethics and Good Practices?	-Workshop with internal stakeholders to present CEGP
ACTION 19	Take actions to raise external awareness concerning the Code of Ethics and Good Practices	2022, 2023, 2024	Working group 1	<p>-Has the organisation encouraged actions to raise internal awareness concerning the ETHNA System?</p> <p>-Has the organisation designed and implemented actions to publicise the idea of ethical governance of R&I in line with the ETHNA System?</p>	-To promote awareness actions addressed to the companies of the park and communication actions in Espaitec's networks with articles related to the ETHNA System to spread the concept of ethical governance

ACTION 20	Take actions to disseminate the concept of integrity	2022, 2023, 2024	Working group 1	-Has the organisation generated actions to promote RRI key Integrity?	-To promote awareness actions addressed to the companies of the park and communication actions in Espaitec's networks with articles related to the ETHNA System to spread the concept of integrity
ACTION 21	Take actions to disseminate the concept of gender perspective	2022, 2023, 2024	Working group 1	-Has the organisation generated actions to promote RRI key Gender?	-To promote awareness actions addressed to the companies of the park and communication actions in Espaitec's networks with articles related to the ETHNA System to spread the concept of gender perspective -CEGP publication focused on gender perspective
ACTION 22	Take actions to disseminate the concept public engagement	2022, 2023, 2024	Working group 1	-Has the organisation generated actions to promote RRI key Public Engagement?	-To promote awareness actions addressed to the companies of the park and

					<p>communication actions in Espaitec's networks with articles related to the ETHNA System to spread the concept of public engagement</p> <p>-Establish stable relationships with stakeholders</p>
ACTION 23	Take actions to disseminate the concept of open access	2022, 2023, 2024	Working group 1	-Has the organisation generated actions to promote RRI key Open Access?	<p>-To promote awareness actions addressed to the companies of the park and communication actions in Espaitec's networks with articles related to the ETHNA System to spread the concept of open access</p> <p>-Publish the Action Plan on the Espaitec website and in July 2022 the CEGP</p>
ACTION 24	Review the CEGP	2023 and 2024	Working group 1	-Has the organisation established an updating process?	-Workshop with internal and external stakeholders to

					review the CEGP
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6.4 Research Centre Context

6.4.1 Detailed Overview of Planning step activities – Applied Research and Communications Fund (ARC Fund)

DATE	ACTIVITY	OUTPUT
December 2020 - January 2021	Analysis of internal management and procedural systems of RRI at ARC Fund	Report
May-June 2021	Informal discussions with relevant internal stakeholders regarding the ETHNA System and its relevance for ARC Fund	Comments to the revised concept of ETHNA System (guide and toolbox)
September – October 2021	Mapping of ARC Fund's human and organisational resources with RRI expertise or knowledge	Report
November 2021	Informal discussions with several of the identified staff members to define the broad outline of the Implementation Plan.	Implementation Plan
December 2021	Meeting with the senior management of ARC Fund	Approval of Implementation Plan, appointment of the RRI Officer and the Working Group
Forthcoming in January-February 2022	Workshop with internal stakeholders	

6.4.2 Detailed Action Plan – Applied Research and Communications Fund (ARC Fund)

ACTION PLAN

Proposed ACTIONS

The ARC Fund's unit responsible for implementation of all the actions is the Science, Technology and Innovation Policy Programme (STIPP).

Action	Gap with ETHNA System	Timing	Progress Indicator	Performance Indicator
Develop a draft Implementation Plan		November 2021 (planning stage)	Implementation Plan developed.	Number of planned actions implemented successfully.
Meeting with senior management		November 2021 (planning stage)	Meeting held.	The level of commitment to the ETHNA System determined. RRI Officer nominated. Working Group to draft the Code of Ethics and Good Practices selected.
Designate RRI Officer	No formal organisational structures and managerial responsibilities for ethical reflection	November 2021 (planning stage)	Designation of RRI Officer. List of the core duties of an RRI Officer.	Number and type of actions of an RRI Officer. Number and type of proposals, suggestions, complaints or reports received by RRI Officer. Number and type of interactions of RRI Officer with staff and management.
Set up a Working Group to write the Code of Ethics and Good Practices in R&I.	No formal structures for ethical reflection	November 2021 (planning stage)	The Working Group to write the Code formed and started its work. Goals, actions, and responsibilities of the Working Group established and defined.	Number of Working Group's meetings. Number and type of actions of the Working Group.

Mapping of external stakeholders		December 2021 (planning stage)	List of external stakeholders	
Development of the first draft of the Code of Ethics and Good Practices in R&I	No Ethics Code - both on the level of entire organisation and the three programmes	December 2021 – January 2022 (construction stage)	First draft of the Code of Ethics and Good Practices in R&I written.	
Workshop with internal stakeholders		January 2022 (construction stage)	Minutes of the meeting.	Recommendations to improve the draft of the Code.
Second draft of Code of Ethics and Good Practices in R&I		February 2022 (construction stage)	Second draft of the Code of Ethics and Good Practices in R&I written.	
Set up the Advisory Group to discuss the second draft of the Code		February 2022 (construction stage)	Advisory Group formed. Advisory Group reviewed the second draft of the Code.	Number of Advisory Group's meetings. Number and type of actions of the Advisory Group.
Final version of ARC Fund's Code of Ethics and Good Practices in R&I		March 2022 (construction stage)	Code of Ethics and Good Practices in R&I finalised. Endorsement of the Code by the management.	Number and type of actions to monitor the compliance of personnel with the Code. Number and type of suggestions for improving or updating the Code.
Development of Gender	No Gender Equality Plan. No Diversity	March 2022 (construction stage)	Gender Equality and Diversity Plan elaborated and	

Equality and Diversity Plan	Plan.		made available to the staff.	
Development of internal Guide on Public Engagement (stakeholders and lay people)	No formal document reflecting the public engagement commitments of the organisation	March 2022 (construction stage)	Guide on Public Engagement elaborated and made available to the staff.	
Elaborating ARC Fund's Policy on Open Access	Open access policies of the organisation not defined	March 2022 (construction stage)	Open Access Policy elaborated and made available to the staff.	
Establish Research Ethics Board	Lack of mechanisms that could strengthen coordination among the different programmes	March 2022 (construction stage)	Research Ethics Board formed and started its work. Responsibilities and tasks of the Board defined. Members of the Board trained to uphold the Code.	Number and type of meetings of the Board. Number and type of decisions and actions taken by the Board. Number and type of reports published by the Board.
Recruitment of external stakeholders		April 2022 (construction stage)	External stakeholders recruited for forthcoming workshop	Number of recruited stakeholders.
Workshop With External Stakeholders To Promote ETHNA System		May 2022 (consultation stage)	Minutes of the meeting.	Number of workshop participants. Recommendations regarding the implementation of ETHNA System.
Revision of ETHNA System and its		May 2022 (refinement stage)	Updated and revised ETHNA System	

blocks				
Training on research ethics for all members of staff (research and administration)	No such training conducted	June 2022 (testing stage)	Organisation and implementation of the training.	Number of training participants. Improved understanding of research ethics as a method, process and perspective
Training of research staff on public engagement methods	No such training conducted	June 2022 (testing stage)	Organisation and implementation of the training.	Number of training participants. Improved public engagement skills.
Training of research staff on gender equality and diversity issues in research	No such training conducted	July 2022 (testing stage)	Organisation and implementation of the training.	Number of training participants. Improved understanding of gender and diversity issues.
Training of research staff on open access issues	No such training conducted	August 2022 (testing stage)	Organisation and implementation of the training.	Number of training participants. Improved understanding of open access issues.
Evaluation of the ETHNA System implementation	No systematic monitoring and evaluation in place	September 2020 (review stage)	Testing stage evaluated against the indicators.	Monitoring and evaluation regularly conducted.
Review workshop with internal stakehold		September 2022 (review stage)	Evaluation results discussed.	Recommendations regarding the future status of ETHNA System at ARC Fund.

ers				
'RRI' dialogues with relevant external stakeholders	Communication with external stakeholders is sporadic and project-related	October 2022 (review stage)	Actions to promote the ethical governance of R&I in line with the ETHNA System.	Number of interactions with external stakeholders on ethical issues in R&I.
Report about the ETHNA System implementation		November 2022 (review stage)	Report published and distributed to internal and external stakeholders.	
Annual reporting on RRI performance in ARC Fund's annual report	No such reporting conducted	December of every year		Regular annual reporting on progress and performance.