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SUPER MoRRI – Scientific understanding and provision of an enhanced and robust monitoring system for RRI

D2.4 Annotated Methodological procedures report

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2.0	27/02/23	Response to review	Revision and replies to comments. Adding of references and general editing.	

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List of Acronyms and Abbreviations

Acronyms/Abbreviations	Definition
CC	Country Correspondent
CCN	Country Correspondent Network
EU	European Union
RFO	Research Funding Organisation
RPO	Research Performing Organisation
RRI	Responsible Research and Innovation
SwafS	Science with and for Society
RESU	SUPER MoRRI researcher Survey
CCN-RPO study	Country Correspondent Network Research Performing Organisations study
CCN-RFO study	Country Correspondent Network Research Funding Organisations study
OSF	Open Science Framework
SFCs	Strategic Focus Codes
PICs	Practical Implementation codes
ISP	International satellite Partner
ETER	European Tertiary Education Register

Executive Summary

Three large primary data collection efforts were undertaken as part of the WP2 contribution to the SUPER MoRRI Implementation Plan. These studies provide original data for use in monitoring open and responsible research and innovation. This report provides detailed information about the methodological procedures of the three central studies. The report contains information that is supplementary to the detailed study Protocol documents prepared for each of the three studies prior to their implementation. It also contains information on necessary deviations from those Protocols and comments relevant to the reproducibility of each study.

All three studies are connected through a selection strategy and data collection approach. The CCN-RPO study is connected to the CCN-RFO study in terms of approach to data collection. The CCN-RPO study is connected to the research survey as researchers working in the universities covered in the CCN-RPO study received the researcher survey, allowing for a combination of the two data sources in future analyses.

The CCN-RPO and CCN-RFO studies relied on a network of country correspondents (CCs) selected and trained by the SUPER MoRRI team to collect and report reliable data on RRI activities in selected European research performing and funding organisations.

The CCs collected publicly available data about RPO strategies and policies through RPO websites, which was reported in a standardised report template. Data on a total of 124 RPOs was coded by the SUPER MORRI team through a three-stage approach and provides streamlined data on a broad range of RRI practices in European RPOs.

In the RFO study, CCs collected funders' policy documents and examples of the funders' most important funding instruments. CCs also conducted an interview with at least one employee of the funder to ask about the involvement of societal stakeholders in the work of the funder. A total of 55 RFOs took part in the study. Analyses were undertaken using both these data types to look at how RFOs exert 'responsibility pressure' through the funding priorities, funding instruments and their assessment processes.

The SUPER MoRRI researcher survey (RESU) study targeted researchers working in the same universities that were the focus of the CCN-RPO study. Researchers were asked about their practices and perceptions related to key open and responsible research and innovation areas. Data from RESU is being combined with data from the CCN-RPO study for some analyses and to feed into two Work Package 5 case studies.

The final section notes the development of a SUPER MoRRI sustainability plan designed to support the continuation of the final online deliverable from the project. It also reflects on ongoing data management processes that will ensure all SUPER MoRRI materials and data that can be made open are findable, accessible, interoperable and re-usable (FAIR). This is in addition to the many process documents that have been made open in a timely manner across the life of the project.

1. INTRODUCTION

1.1. Scope and Objectives of the Deliverable

The objective of this report is to provide a document that describes the approach to data-collection in SUPER MoRRI and a description of the methodological approaches in the three primary data collection exercises: the CCN-RPO, CCN-RFO & Researcher survey (RESU) studies. Data collection methods have been described in Research Protocols previously (See appendices I, II & III for Study protocols). The descriptions in this report only include information on relevant new aspects not included in the individual research protocols. The report refers to all relevant documents needed to understand and interpret data collected, treated and presented in SUPER MoRRI. It also gathers together Protocols and other subsequent process documents needed to reproduce whole or parts of the three studies.

1.2. Relation to Other Tasks and Deliverables

The Annotated Methodological Procedures Report (D2.4) relates directly to Tasks 2.5 (data collection) and 2.6 (basic analyses, data presentation, and transmission) in Work Package (WP) 2. The data collections described in this report are part of the overall design of the SUPER MoRRI empirical research programme set out in D1.2 Strategic Plan and D2.2 Implementation Plan (Woolley et al., 2020; Mejlgaard et al., 2020). Data collected in the CCN-RPO and CCN-RFO studies described herein has also been presented as initial results in D2.3, the 2nd RRI Monitoring report and will be detailed more fully in D2.5 the 3rd RRI Monitoring report (M56). Ultimately, the data sets described will be transferred to the SUPER MoRRI dashboard developed in WP3 Task 3.4, technological platform development and deployment.

1.3. Deliverable structure

This Annotated Methodological Procedures report is structured as follows.

The Executive Summary briefly presents the purpose and contents of this report. Chapter 1 introduces the scope and objectives of the deliverable, its relation to other tasks within the project, and its structure.

Chapter 2 summarises the project approach to data collection. Chapter 3 is divided into three sub-sections with each containing the methodological description for one of the three data collections undertaken in WP2.

Chapter 4 finishes the report with description of plans being developed regarding the sustainability of key project outputs and the issues of data curation and storage.

The References section lists bibliographical references used in the report.

A number of substantial Appendices are attached, including the detail public research protocol prepared for each of the three data collections. In addition, a number of process documents relevant to the reproducibility of aspects of the data collections and analyses are also attached.

2. SUPER MoRRI approach to data collection

The SUPER MoRRI Implementation Plan (Feb. 2020, WP2 D2.1) sets out a number of planned primary data collection activities for SUPER MoRRI designed to populate quantification tools. These primary data collections form an important part of one of the three pillars of the project design (Figure 1). Other smaller scale case studies were conducted in WP5 as part of the Case Research Plan (May 2020, D5.1) and are the subject of other forthcoming deliverables (D5.2, D5.3, D5.4).

Figure 1: SUPER MoRRI project development: Three pillars

The Implementation Plan was built around a set of 'data vehicles' (Figure 2) that were used to produce information at the levels of researchers/groups, research performing organisations, research funding organisations and citizens. A mix of quantitative and qualitative social science data collection methods have been used. Secondary data sources have also been used to complement SUPER MoRRI data vehicles. Each data vehicle was designed to support monitoring for a range of purposes and to generate outputs that support the activities of different types of users. The objective of the SUPER MoRRI data vehicles is to establish information about the patterns and pathways of institutionalisation of responsibility in R&I that can be constructively communicated to interested stakeholders.

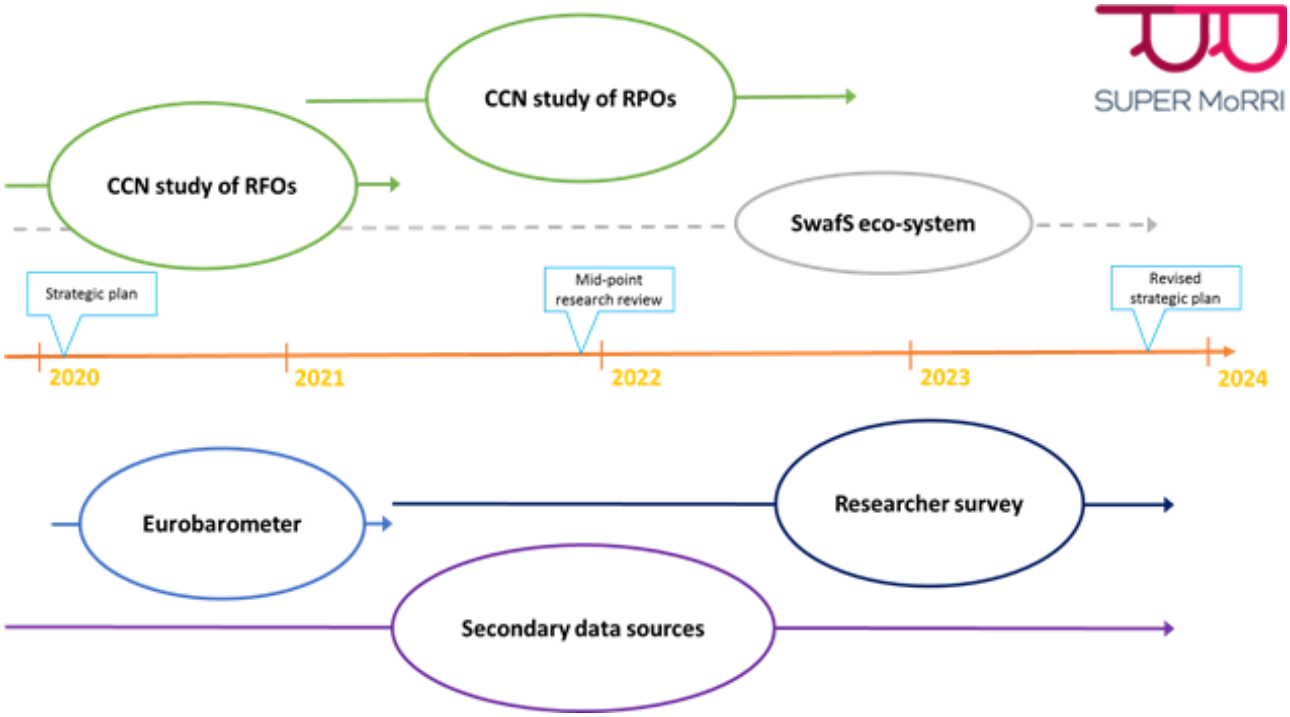

Figure 2: Data vehicles for SUPER MoRRI

This Methodological Procedures Report is concerned with the research studies conducted that were designed to collect data on research performing organisations (CCN-RPO study), research funding organisations (CCN-RFO study), and by surveying university researchers (RESU study).

A key feature of the CCN-RPO and CCN-RFO studies was the use of a country correspondents network (CCN). The SUPER MoRRI CCN consisted of one correspondent per European Union Member State (MS). A member of each SUPER MoRRI project team were correspondents for their respective country. The remaining members of the CCN were selected from applicants who responded to a call for correspondents conducted in late 2019 (Table 1).

The network of country experts contributed to SUPER MoRRI through three main activities:

1. providing background intelligence and information about policy and practice contexts in relation to RRI in their country;
2. conducting fieldwork, generating primary data and contributing where relevant to analyses for the study of responsibility in RPOs and RFOs in their country.

Country correspondents received online training regarding the conduct of these tasks at two online workshops to be held 29th November and 4th December, 2020. These workshops had been planned to be conducted together and in-person, however travel restrictions due to the Covid-19 pandemic forced these sessions to be held online. In addition to the CCN, three international satellite partners (ISPs) participated in the CCN-RFO study. The ISPs involved were: Peta Ashworth (Australia); Luisa Massarani (Brazil); and Michael Bernstein (USA).

Table 1 Country Correspondents

Correspondent	Country	Correspondent	Country
Magdalena Wicher* + Milena Wuketich*	Austria	Agrita Kiopa + Diāna Kiščenko	Latvia
Marzia Mazzonetto	Belgium	Reda Nausedaite	Lithuania
Teodora Georgieva	Bulgaria	Marzia Mazzonetto	Luxembourg
Ruzica Tokalic	Croatia	Edward Duca	Malta
Petros Pashiardis	Republic of Cyprus	Inge van der Weijden*	Netherlands
Ondrej Daniel	Czech Republic	Laura Drivdal*	Norway
Astrid Lykke Birkving*	Denmark	Anna Domaradzka	Poland
Arko Olesk	Estonia	Luis Junqueira + Ana Delicado	Portugal
Mika Nieminen	Finland	Ana Godonoga	Romania
Suzanne de Cheveigne	France	Tomas Michalek	Slovakia
Hendrik Berghäuser*	Germany	Jadranka Turnes	Slovenia
Panagiotis Kavouras	Greece	Paula Otero-Hermida* & Anestis Amanatidis	Spain
Peter Kakuk	Hungary	Gustav Bohlin	Sweden
Padraig Murphy	Ireland	Bernd Stahl	United Kingdom
Anna Pellizzone	Italy		

* SUPER MoRRI team member

In addition to their value as standalone sources for monitoring elements for SUPER MoRRI, these primary data collections discussed in this document were also designed to provide inputs to some of the specific case studies planned for WP5. The Public Value Research Careers study from WP5 utilised primary data from the Researcher Survey and the CCN-RPO study. The organizational policies and

support structures and researchers' public engagement practices"case used primary data from the Researcher Survey combined with data from the CCN RPO study.

All activities in SUPER MoRRI have been conducted with attention to open science practices. A dedicated project was established on Open Science Framework (OSF) for SUPER MoRRI, with all process and methods documents uploaded as publicly discoverable objects. For each of the CCN-RPO, CCN-RFO and RESU studies a detailed project Protocol was produced and uploaded to OSF. These Protocols contained full explanations of the research approach, methodology and process. Data generated by all SUPER MoRRI studies is stored securely on Fraunhofer OwnCloud as per the project Data Management Plan.

3. Methodological procedures for data exercises in SM

This section provides details on methodological procedures for three large data collection exercises conducted in Work Package 2 of SUPER MoRRI. These three data collection exercises were the Country Correspondent Network Research Performing Organisations (CCN-RPO) Study, the Country Correspondent Network Research Funding Organisations (CCN-RFO) Study, and the Research Survey (RESU). The information provided in this Deliverable endeavours to not duplicate information already publicly available in the individual studies' Protocols, which are stored at Open Science Framework (https://osf.io/) and will be deposited at Zenodo.

Each of the three sub-sections that follow contains:

- A short description of the purpose of the data collection
- A short summary of the methodology of data collection referring to protocol
- A short description of any deviations from the protocol
- Description of the coding process (not defined in the protocol)
- Description of future uses
- Information about indicators and other output development.

3.1. CCN-RPO Study

Purpose of data collection

The aim of the CCN-RPO study was to examine a limited range of mechanisms through which research performing organizations (RPOs) enhance responsibility in research. Mechanisms in central focus in the study included. 1) the overall strategic priorities of the RPO; and 2) concrete organisational policies, supporting structures and actions related to RRI, Open Science, Research Ethics and Integrity, Gender Equality, Public Engagement and the Third Mission.

Methodology of data collection

A study protocol was developed collaboratively over several months and posted to the SUPER MoRRI project on Open Science Framework as a public document on 22st December 2021 ahead of the data collection process. The study protocol served as a guide for the project team as well as for country correspondents.

For each of the countries included in the CCN-RPO study, a selection of RPOs were selected for inclusion. Depending on the size of the country, either 2, 4 or 6 RPOs were selected. Details of the selection process can be found in the study protocol (see Appendix I). In each country, the local country correspondent (CC) carried out desk research on each of the assigned RPOs. The country correspondent performed three major tasks:

1) Study publicly available documents and websites relating to the strategic priorities, policies, and supporting documents and actions of the organization;

2) Perform a limited number of e-mail inquiries to validate and complement the information collected through publicly available documents and websites; and

3) Produce a written case report for each RPO in a template provided to the Country correspondent

Deviations from the Protocol

The protocol describes the process of collecting and storing the data. However, during the data-collection a number of processes where altered due to the pandemic. The planned in-person workshops for CCs were replaced by a series of online workshops.

A large number of RPOs did not reply to the validation e-mail described in pt. 2 above. However, we found that those that did respond validated the data collected and generally did not offer any additional publicly available information. Some RPOs did reply that they had forthcoming activities and policies under development, but these were not yet ready for release as publicly available documents.

Finally, the degree of accessibility to strategy documents via websites varied, as did the degree to which RPOs shared strategies in large documents or as smaller memos on their institutional website. Therefore, it is important in the interpretation of results to remember that RPOs with few or no recorded RRI activities includes both those that do have such policies and those that choose not to make all such policies available to the public through their websites. This was however, a caveat that was expected and is taken into account in the use of the data.

Description of the coding process

A total of 124 case reports (including nine non-European RPOs) were coded by members of the SUPER MoRRI team. Four team members were continually part of the coding process. The coding process was conducted in three rounds. All case reports were coded inductively by one of the team members. Hereafter the coding was reviewed by the team and divided along RRI topics between the team members. Each team member then did a small literature review and used this and the inductive coding to develop a closed coding scheme. This coding scheme was test-coded using eight case reports, and cross-coded by two team members. Based on this coding, a third and final coding scheme was developed (as presented below). One team member coded two topics, three team members coded one topic each, with each coder responsible for coding all material within this topic. To ensure coding reliability, team members then swapped coded material and an ex-ante coding check was conducted.

Below are the coding schemes for each RRI area. The schemes reads left to right, which the left pane is coded as the strategic focus of the coded text bit. Some Strategic Focus Codes (SFCs) have been sub-divided into different specified sub-codes (see Table 3-7). The logic is illustrated in the figures below for each of the areas. The Practical Implementation Codes (PICs) (Table 2.) were developed jointly and utilised for all RRI areas and strategic focus sub-codes. The practical implementation codes were used throughout the coding of all areas by all coders. By discussing these extensively beforehand, coding reliability proved to be high in the ex-ante coding check.

To exemplify the final coding process and use of the coding scheme, three examples are used to illustrate this, using the Gender Equality part of the case reports:

> *Requirements for recruitments are in place, such as, for example, for job interviews, all formally qualified female applicants need to be invited.*
>
> *(*Austrian university)

This text bit was coded under the strategic focus *Career advancement* and under the specified code *Reduce structural obstacles for career advancement*, as it concerns a practical implementation dealing with reducing structural obstacles for career advancement for women. It was coded using the *Rules and requirements* practical implementation code, as it details a requirement for the recruitment process at the RPO.

> *Allocate gender equality and diversity funds that can be used for central and local initiatives.*
>
> *(*Norwegian Oslo)

This text bit was coded under the strategic focus *Culture and behaviour* and under the specified code *Gender discrimination*, as it concerns gender equality and diversity more broadly. It was coded using the *Funds/funding* practical implementation code, as it specifies that the RPO allocates funds in the strategic focus area.

> *40% of the assessment and hiring committees during the 3 year period of the "Academic career development, equal treatment" project must have an equal gender distribution.*
>
> (Danish University)

This text bit was coded under the strategic focus *Women in leadership,* and under the specified focus code *Women in leading positions*. It concerns assessment and hiring procedures at the general level,

but with a focus on promoting equal gender distribution. It was coded as a *Policy target* practical implementation, as a clear target (40%) is included in the text bit.

Table 2: Practical implementation codes

Practical Implementation Codes (PICs)
Awareness campaigns
Dedicated unit
Events
Expressed aims
Funds/funding
Infrastructure
Networks
Policy targets
Recommendations and suggestions
Reference to networks, alliances, etc.
Reporting of progress
Rewards and recognition
Rules and requirements
Training

Table 3: Research Ethics and Research integrity coding scheme

Strategic Focus Codes	Strategic focus – specified subcodes	Practical implementation
Research Ethics	Research Ethics, general code	Awareness campaigns
		Dedicated unit
		Events
		Expressed aims
		Funds/funding
		Infrastructure
		Networks
		Policy targets
		Recommendations and suggestions
		Reference to networks, alliances, etc.
		Reporting of progress
		Rewards and recognition
		Rules and requirements
		Training
	Protection of human subjects	*PICs (Table 2)*
	Safety of trials	*PICs (Table 2)*
	Informed consent	*PICs (Table 2)*
	Confidentiality and privacy	*PICs (Table 2)*
	Protection of animals	*PICs (Table 2)*
Research Integrity	Research Integrity, general code	*PICs (Table 2)*
	Research misconduct	*PICs (Table 2)*
	Questionable research practices	*PICs (Table 2)*
	Authorship and publication	*PICs (Table 2)*
	Peer review	*PICs (Table 2)*
General RE&RI code		*PICs (Table 2)*
GDPR and data management		*PICs (Table 2)*

Note: Codes developed by SUPER MoRRI team members in an iterative process including an inductive pre-coding and informed by the studies and reports within the field including Steneck, N. (2006).

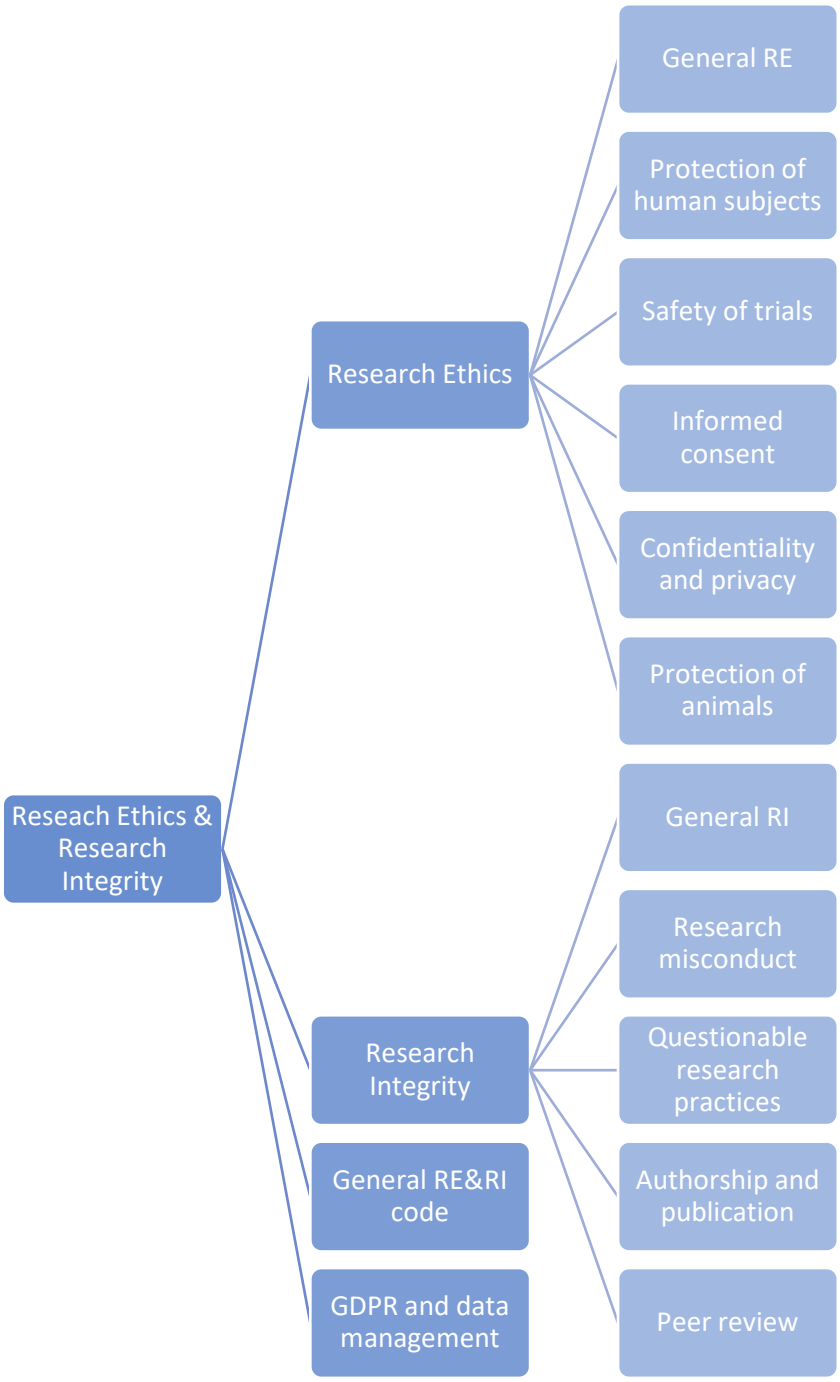

Figure 3: Research Ethics and Research Integrity coding scheme [Presentation version]

Table 4: Gender Equality coding scheme

Strategic Focus Codes	Strategic focus – specified subcodes	Practical implementation
Culture and behaviour	Gender discrimination	Awareness campaigns
		Dedicated unit
		Events
		Expressed aims
		Funds/funding
		Infrastructure
		Networks
		Policy targets
		Recommendations and suggestions
		Reference to networks, alliances, etc.
		Reporting of progress
		Rewards and recognition
		Rules and requirements
		Training
	Sexual abuse, sexual violence, and sexual harassment	*PICs (Table 2)*
	Harassment and antibullying	*PICs (Table 2)*
Work-life balance	Childcare, working hours, reconcilability of family and profession	*PICs (Table 2)*
Career advancement	Reduce structural obstacles for career advancement	*PICs (Table 2)*
	Specific measures to support women's early career development	*PICs (Table 2)*
Women in leadership	Women in leading positions	*PICs (Table 2)*
	Women in STEM	*PICs (Table 2)*
Gender aware science	Incorporation of gender awareness into scientific methods and content	*PICs (Table 2)*
	Support gender studies as a separate field	*PICs (Table 2)*
Policy seemingly unrelated to gender equality, but in GE section of RPO reports		*PICs (Table 2)*

Note: Codes developed by SUPER MoRRI team members in an iterative process including an inductive pre-coding and informed by the studies and reports within the field including Schmidt, E & Faber (2009), Schmidt, E et al. (2017), Schmidt, E & Cacace, M (2019) and Schmidt, E & Graversen, EK (2020)

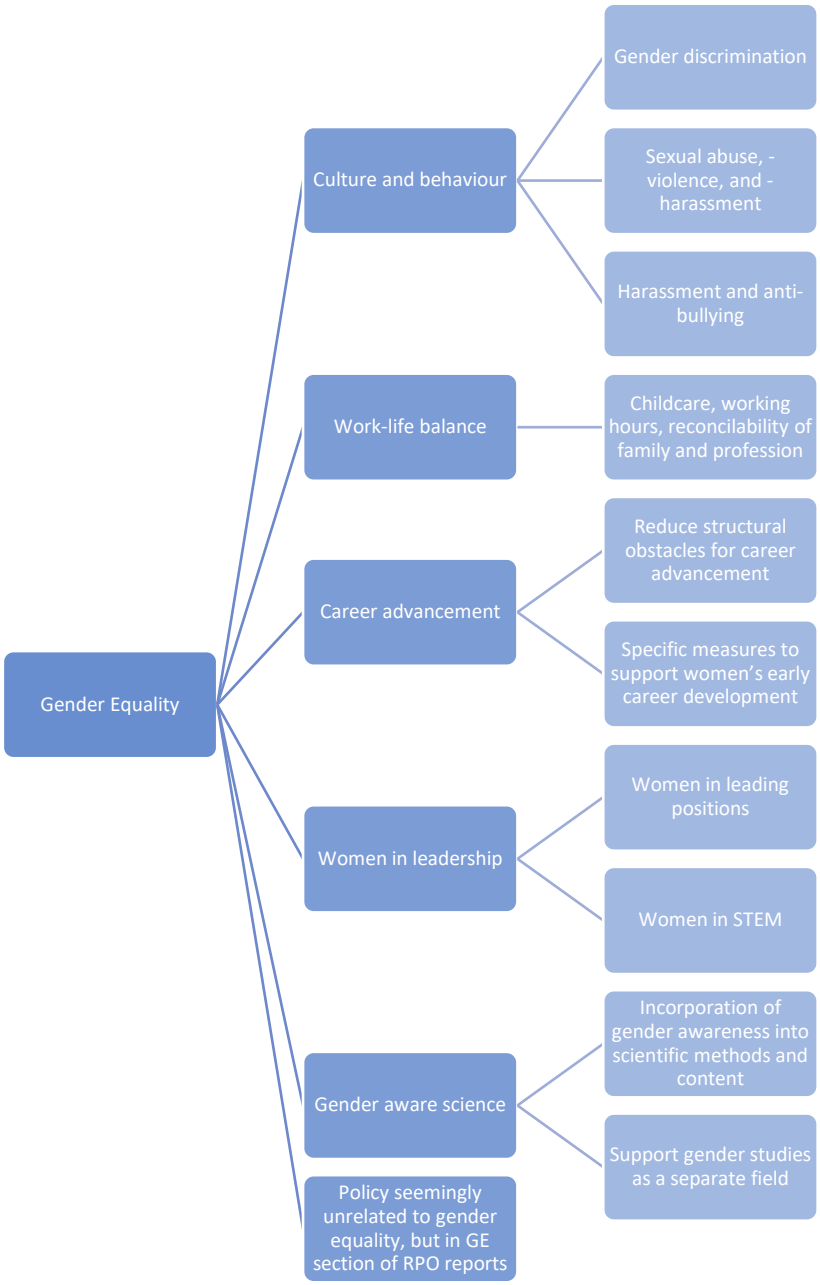

Figure 4: Gender Equality coding scheme [Presentation version]

Table 5: Open science coding scheme

Strategic focus	Strategic focus – specified subcodes	Practical implementation
Open Science taxonomy	Open Access	Awareness campaigns
		Dedicated unit
		Events
		Expressed aims
		Funds/funding
		Infrastructure
		Networks
		Policy targets
		Recommendations and suggestions
		Reference to networks, alliances, etc.
		Reporting of progress
		Rewards and recognition
		Rules and requirements
		Training
	Open Data	*PICs (Table 2)*
	Open Science	*PICs (Table 2)*

Note: Codes developed by SUPER MoRRI team members in an iterative process including an inductive pre-coding and informed by the studies and reports within the field including Open Science and Research Initiative (2014)

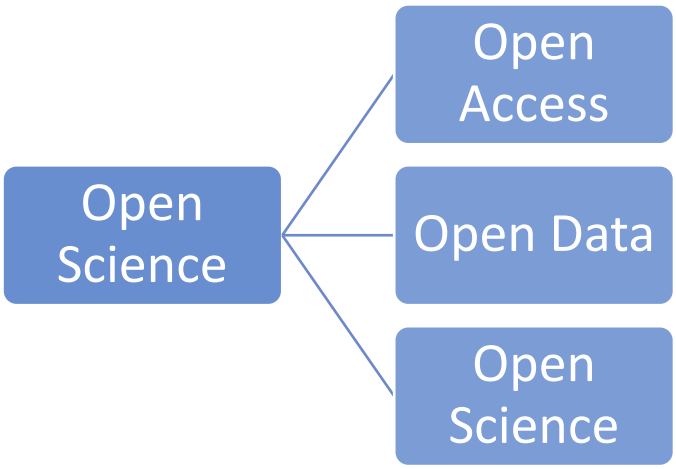

Figure 5: Open Science coding scheme [Presentation version]

Table 6: Public Engagement coding scheme

Strategic focus	Strategic focus – specified subcodes	Practical implementation
Public Engagement	Public Communication	Awareness campaigns
		Dedicated unit
		Events
		Expressed aims
		Funds/funding
		Infrastructure
		Networks
		Policy targets
		Recommendations and suggestions
		Reference to networks, alliances, etc.
		Reporting of progress
		Rewards and recognition
		Rules and requirements
		Training
	Public Consultation and Advice	*PICs (Table 2)*
	Public Participation	*PICs (Table 2)*
	General Public Engagement	*PICs (Table 2)*
	General Engagement	*PICs (Table 2)*

Note: Codes developed by SUPER MoRRI team members in an iterative process including an inductive pre-coding and informed by the studies and reports within the field including Ravn, Mejlgaard and Rask (2014), Arnstein, S. R. (1969), Glass, J. J. (1979) and Rowe, G., & Frewer, L. J. (2005)

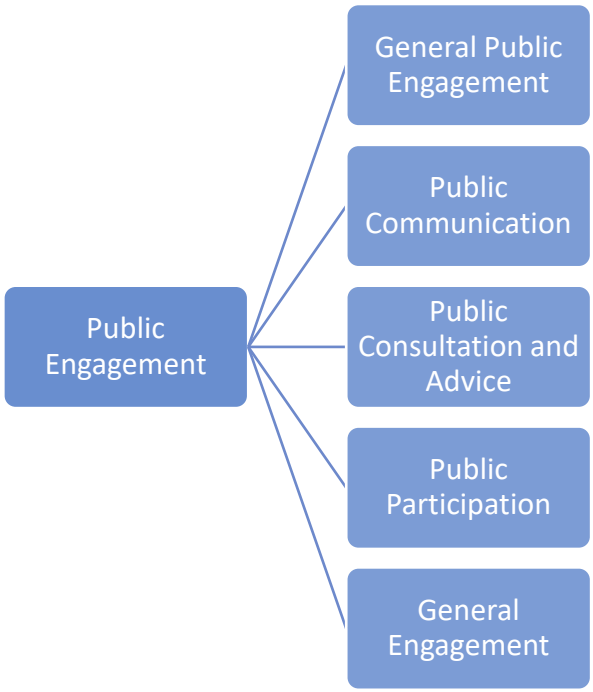

Figure 6: Public Engagement coding scheme [Presentation version]

Table 7: Third Mission coding scheme

Strategic focus	Strategic focus – specified subcodes	Practical implementation
Entrepreneurship and Technology transfer	Academic entrepreneurship	Awareness campaigns
		Dedicated unit
		Events
		Expressed aims
		Funds/funding
		Infrastructure
		Networks
		Policy targets
		Recommendations and suggestions
		Reference to networks, alliances, etc.
		Reporting of progress
		Rewards and recognition
		Rules and requirements
		Training
	Innovation and Technology transfer	*PICs (Table 2)*
	Student entrepreneurship	*PICs (Table 2)*
	Open innovation	*PICs (Table 2)*
Job market readiness and relevance of student education	Relevant student education, student employability, student projects	*PICs (Table 2)*
	Industrial Ph.D. and Post Doc	*PICs (Table 2)*
Societal relevance, Regional responsibility and Community engagement	Aims and measures focused on Promoting societally relevant impactful research	*PICs (Table 2)*
	Aims and measures focused on Regional responsibility development Community engagement	*PICs (Table 2)*
	Aims and measures focused on Policy work and policy relevance of research	*PICs (Table 2)*
	Education of professionals	*PICs (Table 2)*
Industry, Government and NGO collaboration and knowledge transfer	Government collaboration	*PICs (Table 2)*
	Industry Research collaboration	*PICs (Table 2)*
	Consultancy	*PICs (Table 2)*
Third Mission, general code		*PICs (Table 2)*

Note: Codes developed by SUPER MoRRI team members in an iterative process including an inductive pre-coding and informed by the studies and reports within the field including Compagnucci, L & Spigarelli F (2020) and Laredoa B, (2007)

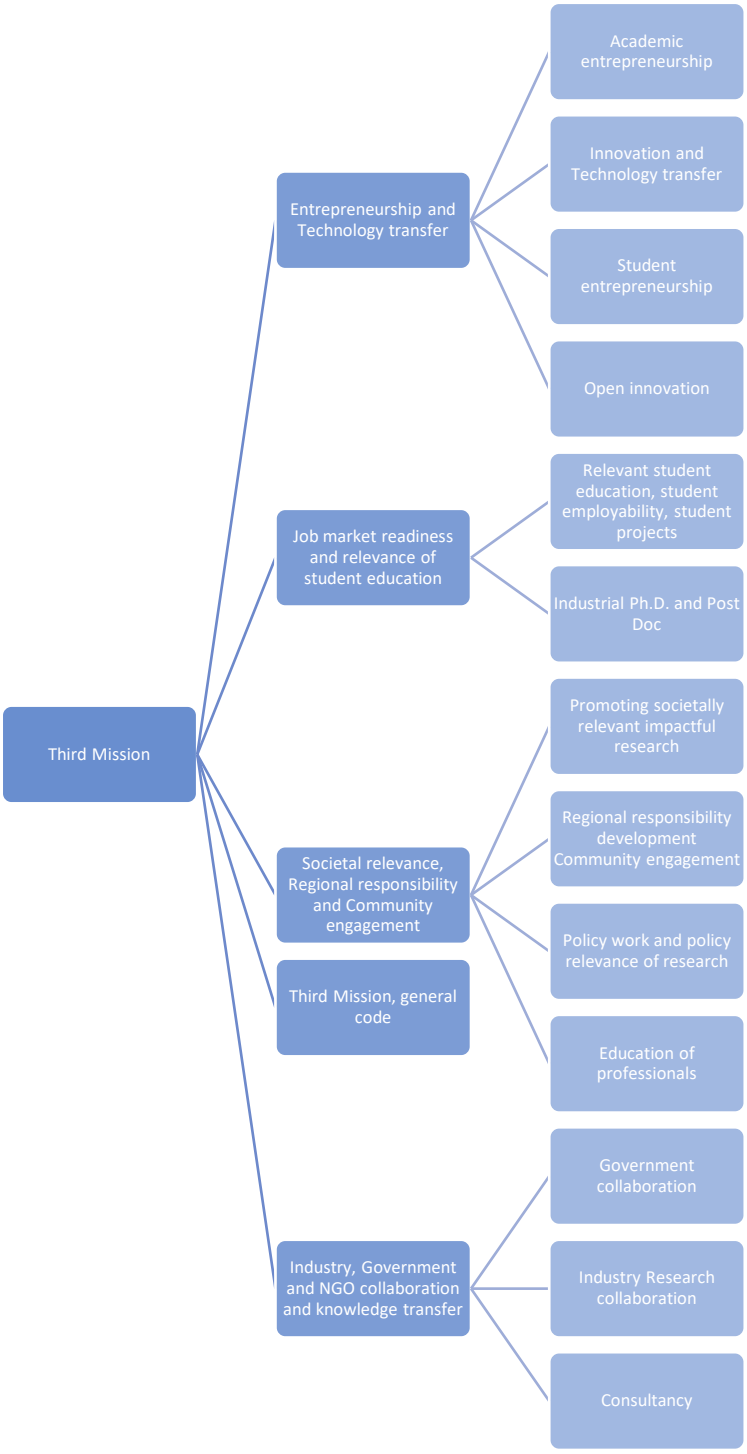

Figure 7: Third Mission coding scheme [Presentation version]

Description of future uses

The approach to data collection in this study offers a method for collecting rich data on organisational practices on responsible research and innovation. The study protocol and methodology can be repeated on a similar set of RPOs in the future. However, the method requires significant resources as well as the coordination of a large corps of researchers distributed throughout Europe. The benefit of this approach is that is does not require self-reported information from RPOs that can for many reasons be biased and has a low rate of non-responses as the only non-responses occur when RPOs do not have a well-functioning website or do not share information such as strategy documents publicly. Finally, the selection of RPOs based on available metrics provides a relatively representative sample of European RPOs. Which means that the RPOs are not the "usual suspects" but represent the very varied population of RPOs that exist in Europe. Studies therefore can inform on how to approach policy for the entire population and not only a subset of RPOs, which would often be multi-faculty universities.

The study has compiled a significant archive of policy documents and instruments, which could be analysed in more depth. The SUPER MoRRI project has already parsed and coded the country correspondents' detailed reports in-depth, however the wealth of information stored in policy documents offer huge potential for both in-depth case studies as well as comparative studies of RPOs. The study was a snapshot of the policy situation in the RPOs at the time of data collection. As the policy landscape can evolve rapidly, the study should be interpreted within the time it was collected.

This document as well as all supporting and technical documents which have been made available on OSF mean that any researcher or research group would with relative ease be able to reproduce both data collection methodology in the future as well as the analysis of the current data.

Monitoring outputs from the CCN-RPO

The first results from the CCN-RPO study appeared in the Second Monitoring report of the SUPER MoRRI Project. A more extensive presentation of the results will be included in the Third Monitoring report of the SUPER MoRRI project. Finally, data collected on Public Engagement practices in RPOs will be included in a case study included in Work Package 5 of SUPER MoRRI.

Indicator development is ongoing within SUPER MoRRI. In the Second Monitoring report, metrics were presented based on Country Correspondents analytical evaluations, made while completing each Case Report. In both the Third Monitoring Report and the "organizational policies and support structures and researchers' public engagement practices" study for work package 5, new categorical indicators will be based on the qualitative coding described above. It is anticipated that some indicators will represent the strategic focus level and others at the sub-focus level of coding. Moreover, some indicators may be based on a combination of strategic focus codes and practical implementation codes.

New indicators will describe which of the areas of responsibility RPOs emphasize in publicly available strategy and policy documents. Additionally they will include indicators of the type of policy mechanisms RPOs use to support and incentivize activity within and across different RRI key areas, including Open Science, Research Ethics and Integrity, Gender Equality, Public Engagement, and the Third Mission.

3.2. CCN-RFO Study

Purpose of data collection

The overall aim of this project was to examine the mechanisms through which research funding organisations (RFOs) enhance responsibility in research and innovation. Mechanisms that were the focus of CCN-RFO included:

1. setting priorities for research funding;
2. designing funding instruments; and
3. conducting assessments of grant proposals.

The CCN-RFO study was designed to address the general objective of understanding how research funding organisations devise and operationalise processes and instruments for allocating scarce resources to research and innovation activities, such that these processes and instruments (or aspects of them) support the institutionalisation of responsible research practices and the building of responsible professional competences, careers and cultures. This includes any elements that are designated as 'RRI', but is not limited to these.

This overall objective can be broken down into two project objectives.

- RFO-Obj1: Identify relevant RFO policies, programmes, and practices and specify how they support and advance responsibility in research; and
- RFO-Obj2: Identify how RFOs define the anticipated benefits of these policies, programmes, and practices and specify how they monitor their effectiveness.

These objectives can be applied to each and all of the roles and functions of an individual RFO. Obviously, any policies, programmes and practices that are designed explicitly to enhance responsibility fall within the scope of these objectives, including both those that use the designation 'RRI' and those that do not.

The CCN-RFO study was not designed to assess or evaluate RFOs either individually or comparatively. The study sought to understand how RFOs work to improve responsibility in research practices and cultures. Of central interest is how RFO stakeholders, both scientific and societal, are able to contribute to RFOs' setting of priorities, development of funding instruments, and research assessment processes.

Methodology of data collection

For each of the countries included in the CCN-RFO study, a selection of RFOs were invited to participate. Detailed selection criteria for RFOs are contained in the CCN-RFO study Protocol. The Protocol was developed collaboratively over several months and posted to the SUPER MoRRI project on Open Science Framework as a public document on 21st December 2020 ahead of the data collection process.

The CCN-RFO study utilized the SUPER MoRRI Country Correspondent Network and involved three major tasks for the correspondent within each country. The country correspondent (CC) was required to:

1. study publicly available strategic documents relating to the policies and priorities of the organisation;

2. perform a limited number of interviews regarding the mechanisms of priority setting, design of funding instruments, and assessment procedures; and

3. produce written summaries of their desk and field research activities.

These were designed to answer the general research questions: How do research funding organisations support responsible practices and cultures in science? Which mechanism(s) do research funding organisations use to exert 'responsibility pressure' on scientific practices and cultures? What are the strategic priorities of the RFO for improving the alignment between scientific research and societal outcomes in the future?

The CCs compiled archives of relevant documents including RFO policies and major funding instruments. These documents were relied on alongside the structured interview in completing the Case Reports.

Interviews were used to pursue three specific research questions:

> CCN-RQ1: How do research funding organisations support the development of responsible research practices and cultures through the design and implementation of priority settings?
>
> CCN-RQ2: How do research funding organisations support the development of responsible research practices and cultures through the design and implementation of funding instruments?
>
> CCN-RQ3: How do research funding organisations support the development of responsible research practices and cultures through the design and implementation of research funding assessments?

A detailed description of how to pursue each empirical research question is contained in the Protocol. A training session was held online to discuss conduct of the interviews with the CCs to ensure a consistent approach to acquiring critical information.

CCs wrote individual Case Reports for each RFO included in the study. A template was provided and detailed instructions included in the Protocol.

A Quality Assurance process was followed in which CCs were grouped together by regions and met regularly with a Team Leader from the SUPER MoRRI team. Prior to submitting finalized Case Reports, cross-reading of the reports was done within these groups, as described in the Protocol.

A range of supporting resources were required for the conduct of the study which were all pre-prepared and attached as appendices to the Protocol when it was circulated to the Country Correspondents. These resources included sample invitation emails, informed consent, ethics approval, project information sheet and the interview instrument. All these resources were also made available in individual printable files from the Fraunhofer OwnCloud platform and the Open Science Framework project site.

Deviations from the Protocol

There were three deviations from the plan for the study. Two related to the lack of availability of a suitable second RFO in two small national systems, one in Southern Europe and one in Eastern Europe. One planned interview with a national funder in northern Europe could not be successfully organised with the timeframe for the completion of the case reports and was eventually abandoned.

Additional case reports were received from international satellite partners (ISPs) in Australia, the US and Brazil. It was not deemed practicable that these case reports adhere strictly to the template used in the European cases, due to differences in the conceptualisation of responsible research and innovation in those countries. This was anticipated in the study planning and the ISP cases were used to provide international benchmarking rather included as additional cases.

Description of the coding process

Case reports (n=55) were coded by members of the SUPER MoRRI team using a pre-defined coding scheme (see Appendix IV CCN-RFO Case Report codes_final). A preliminary coding scheme was included in the Protocol with revisions made following an initial coding experiment using two coders and two case reports. Team leaders of the regional groupings were then responsible for coding the reports of their team. This plan was subsequently changed when two Team Leaders left the project after completing the coding of half and none of their assigned reports respectively. These reports were distributed among the other four coders.

Alongside the coding of case report text, coders were asked to complete some simple analytics. For example, coders were asked to select the type of RFO, what standalone or mixed policies the RFO had in place, for example (see Appendix V CCN-RFO coder analytics). In a small number of cases the coder was unable to answer the analytic question using information in the case report. In these cases the study leader completed the question using a combination of searches of the RFO website or by asking the relevant CC to follow up when information was in a local language. Following completion of the analytics and the coding the study leader subsequently conducted a further quality assurance exercise in which the text coding of a selection of eight case reports was reviewed and cross-validated.

Description of future uses

The CCN-RFO study utilised a highly labour-intensive qualitative methodology. In this regard the study was not intended as a model that could be easily or regularly replicated. Rather the study was exploratory and designed to provide an initial overview of how RFOs are exerting 'responsibility pressure' on the culture and practices of research. The study was also not a census, meaning that particularly in larger countries with a large number of important RFOs, many were not invited to participate. Instead the study focused on gaining insights across as wide a range of countries as possible.

The study has compiled a significant archive of policy documents and instruments, which could be analysed in more depth. In future, this aspect of the study would be the simplest and cost effective part of the study to repeat. Such a study could expand the number of RFOs included. Cooperation from RFOs was excellent. RFOs were very carefully approached by a local correspondent, who in many cases had some contacts to open up a pathway to finding an interviewee. Our need for a relatively high-level interviewee, with a considerable number of years in the organisation, makes this step in the process crucial. Even in the case of a repeat study that only sought to compile a set of policy documents and examples of key funding instruments, establishing a contact within the organisation

to validate the set of documents collected would remain important. The issue of local languages and the absence of English language versions of many policy documents and funding instruments also increases the importance of a local correspondent. That said, the continuous improvement of AI language translation tools, including Google Translate and Deepl, is reducing the need for a local language person to analyse the documents collected.

Interviews for the CCN-RFO study were conducted on a condition of interviewee anonymity and with a guarantee of data confidentiality in all subsequent processing. In processing these data therefore, the specific organisation and country ID will thus be removed to ensure that unreliable and inappropriate inter-organisational or national comparisons cannot be made. All data outputs constructed for the monitoring exercise will therefore reflect the principle of responsible use of the available information.

Monitoring outputs from the CCN-RFO

The design of monitoring results will allow for combinations of three dimensions in real-time visualisations and data outputs. This planned approach was demonstrated at the second review meeting of the SUPER MoRRI project, using a subset of the overall data that was available at the time.

Data and visualisations will be based on five categories of information:

- about the RFO;
- about the RFO's policies;
- about the RFO's funding priority settings;
- about the RFO's funding instruments;
- about the RFO's research assessments.

The remainder of this section tabulates the available information in these five categories that will underpin the monitoring elements for RFOs in SUPER MoRRI.

Table 8: Information about participant RFOs

ID	Description	Dimensions (codes)	Comment / sub-dimension
RFO1	Organisation type	Research Council Departmental RFO Delegated State Agency Independent Delegated State Agency Innovation Agency Public Foundation Private Foundation State Sector RFO	See Coder Analytics v1.0 for descriptors
RFO2	Membership of RFO peer organisation	Science Europe European Foundation Centre Other	
RFO3	Regional location	To be defined (possible north, east, south west; lower level groupings e.g. Benelux, Visegrad, Scandinavia, etc. possible)	Experimentation required to find a suitable level of grouping that will not lead to an unsuitably

			small number of RFOs being isolated in data outputs using three data dimensions
RFO4	Source of formal advice	STEM Scientific board Multidisciplinary Scientific board Scientific Expert Board Science-Society Expert Board None of these	See Monitoring Report 2 for descriptors

Table 9: Information about RFO policies

ID	Description	Dimensions (codes)	Comment/sub-dimension
POL1	Does the RFO have a publicly available policy or strategy about open and responsible research and/or related areas	RRI or responsibility Open Science (comprehensive) Open Access Research Integrity Gender Ethics Science Education / Communication Public Engagement Societal Impact Innovation Pathways Output Dissemination Other: specify	Standalone General/mixed Planned/aspirational None

Table 10: Information about RFO's research funding priority setting

ID	Description	Dimensions (codes)	Comment/sub-dimension
PRI1	Responsibility for the setting of research funding priorities	Strong Political Political Scientific Scientific-Societal Societal None of these	See Coder Analytics v1.0 for descriptors
PRI2	Linkage with other national policies	Education Economic Growth Health Smart Specialisation Sustainability/SDGs Welfare	
PRI3	Scientific stakeholders involved in priority setting	Learned Academies Peer RFOs RPOs Scientific Communities	

		Scientific expert panel or advisory group	
PRI4	Societal stakeholders involved in priority setting	Citizens CSOs Industry Assoc./Companies International organisations Patient organisations Policymakers	

Table 11: Information about RFO's funding instruments

ID	Description	Dimensions (codes)	Comment/sub-dimension
PRI3	Scientific stakeholders involved in designing funding instruments	Learned Academies Peer RFOs RPOs Scientific Communities Scientific expert panel or advisory group	
PRI4	Societal stakeholders involved in designing funding instruments	Citizens CSOs Industry Assoc./Companies International organisations Patient organisations Policymakers	
PRI5	Procedures for involving stakeholders in designing funding instruments	Committee or Workshop Formal Consultation Informal Consultation Invited or public submissions	
PRI6	Inclusion of ORRI or related aspects in funding instruments	AIRR Citizen Science Public engagement or participatory methods Gender Innovation Pathways Open Science Research Integrity/Ethics Societal Impact	Required Expected/Preferred

Table 12: Information about RFO's research assessment practices

ID	Description	Dimensions (codes)	Comment/sub-dimension
RAS1	Composition of research assessment panels	Gender Geography Societal stakeholders Fields	Balance/inclusion National/international Industry; CSOs; POs; other Interdisciplinarity
RAS2	Criteria for selection of reviewers	Scientific Gender	Pubs; H-Index Balance/inclusion

		Geography Societal stakeholders	National/international Industry; CSOs; POs; other
RAS3	Training or guidance provided for assessors	Unconscious bias Gender Interdisciplinarity Ethics RRI Other	
RAS4	Scientific assessment of researchers	Publications Data sets Policy reports Science communication Medical guidelines Other	
RAS4	Assessment of societal contribution/ impact of researchers	Statements or narratives of career societal contribution Impact cases / statements Stakeholder testimonials Letters of support Other	
RAS5	Assessment of societal contribution/ impact of research proposals	Problem orientation Engaged / participatory research design Stakeholder involvement Consideration of innovation / impact pathways Citizen science Outputs/ Communication strategy Other	
RAS6	Consideration of RRI and related elements in research proposals	RRI Gender analysis Gender-balanced research team Open science AIRR Ethics Research integrity Other	

Summary descriptive information on participating RFOs and initial examples of using CCN-RFO study data for constructing categorial assessments for monitoring can be found in SUPER MoRRI Monitoring Report 2, Chapter 7. New indicators will provide categorical information about how RFO practices related to funding priorities, instruments, and assessments exert responsibility pressure. Indicators will also provide categorical information about the inclusion of societal stakeholders in these three practice domains.

3.3. SUPER MoRRI Researcher Survey (RESU)

Purpose of data collection

As outlined in the protocol for the SuperMoRRI Researcher Survey (RESU) (see Appendix III), the overall aim of this empirical study was to examine European researchers' responsible research practices and their perceptions of, and attitudes towards, responsibility in research and innovation. The data collection from the survey was linked to the CCN-RPO Study in the SUPER MoRRI monitoring framework design. The sample of survey participants was based on the identification of (active) researchers from the RPOs included in the CCN study.

The CCN-RPO and RESU studies were based on a stratified sample of 122 RPOs in 29 European countries. All of the RPOs included were universities. Details of the RPO selection process are contained in the Protocol for the CCN-RPO study (Appendix I). The target was to obtain a full census of all active researchers from these 122 RPOs. In this design, alignment between the meso-level institutional policy context and the micro-level of individual research practices and perceptions allows for combined multi-level analysis. In order to ensure control of the sample and to be able to verify participation only by researchers in the 122 universities included, RESU was designed as a personalised survey with individual access links rather than an anonymized survey with a uniform link.

Methodology of data collection

First analyses using the European Tertiary Education Register (ETER) database coupled with internet research on the websites of the 122 RPOs, suggested that a total sample of between 150.000 to 200.000 persons could be expected. However, for some universities an exact number of employed academics could not be determined. It was initially planned that construction of the RESU sample would be primarily based on web scraping techniques using public domain information from RPO websites to collect contact details. In this way, all necessary individual information for a personal survey invitation - title, first name, last name, gender and e-mail address of the researcher - could be collected.

Verification of data availability via the universities' websites necessitated a deviation from the originally planned approach. In a first step, the 122 RPOs in the sample were divided into three groups according to their online public data availability: (1) RPOs with good data availability; (2) RPOs with incomplete data availability and/or inconsistent presentation of contact information; and (3) RPOs with nil or insufficient presentation of researchers' contact information. The data availability of these three RPO groups was specified as follows:

- **(1) RPOs with good data availability**: existing list or public available registry of all the RPO's researchers with all contact information; correct display of contact information, in particular e-mail addresses (no substitute symbol for "@" in the e-mail addresses or e-mail addresses hidden behind a letter symbol), function of the RPO staff displayed correctly on the websites in order to differentiate between scientific and administrative, technical or management staff;
- **(2) RPOs with incomplete data availability and/or inconsistent presentation of contact information:** no existing list of all researchers with contact information, different displays of research staff on the individual websites of institutes, faculties and departments, display of

contact information not correct or hidden for example behind contact masks or @-sign substitutes;

- **(3) RPOs with no or insufficient presentation of researcher's contact information:** no list or public registry of researchers on the websites of the RPOs, no presentation of scientific staff on the individual websites, no function and/or contact information of the staff mentioned on the websites

Through the process of data availability analysis, 33 RPOs were assigned to the first group, 47 to the second group and 42 to the third group. For the RPOs in the first group, the web-scraping approach turned out to be effective. With the help of various scraping tools, researcher details were extracted (title, first name, last name, e-mail address). The scraping tools were complemented by research tools to identify the gender of individuals on the basis of first names. The gender of the researchers was collected in order to ensure an individual address in the e-mail invitation (Dear Mr. / Dear Ms.). This way, some 28.000 researchers were able to be added to the final survey sample.

For the second and third group of RPOs, the web-scraping approach was not effective or could only be carried out with disproportionate effort as it would have had to be supplemented by extensive manual research. For these groups, web-scraping was supplemented with other approaches or another approach approached was relied on entirely. This approach was to use the Open Researcher and Contributor ID (ORCID) as a useful additional source of information. ORCID is a non-proprietary alphanumeric code that enables to identify and associate authors with their scholarly communication contributions. By using the search function, eligible scientists and their contact information could be identified based on their primary affiliation. A complete sample could then no longer be guaranteed for the corresponding RPOs as voluntary ORCID identifiers are not universal in the research community. Using this method, an additional 103.000 scientists were identified as having their primary affiliation at one of the RPOs in the study sample.

All contact information collected using the different approaches was merged in one data file. Duplicates and cases with incorrect values (e.g. missing names or missing e-mail addresses) were removed. In the end, a data set with 127.395 persons (gross sample) at 112 RPOs was obtained. For ten RPOs no contact information could be collected via the described approaches. For these RPOs, therefore, no survey data can be collected for further inquiries in the context of the multi-level analysis.

The data file of the gross sample was then uniformly formatted and uploaded into the EFS survey tool provided by Tivian XI GmbH.

Survey management and survey statistics

On Monday, November 7th 2022 an initial e-mail invitation was sent out to the 127.395 researchers (gross sample). The survey tool identified 21.633 invalid e-mail addresses (17% of the gross sample). In particular, these were researchers who had, for example, changed institutions or left science for good. Due to the generally high fluctuation in the science system, a significant loss of potential participants was expected. Consequently, the survey invitation was received by 105.224 researchers (adjusted gross sample). Since the survey tool used in this study can only send out a maximum of 300 messages in 10 minutes, the participants were invited in cohorts. With regard to the large sample, the invitation process took almost four days to be sent. On Thursday, November 10 2022, all 105.224 invitations had been sent out. A corresponding e-mail box was set up for the survey (SuperMORRI@isi.fraunhofer.de) in order to collect and process messages, queries or complaints.

Within 14 days, a total of 1.666 scientists had participated in the survey, representing a participation rate of 1,6%. Due to the modest participation rate, a reminder campaign was sent on Monday, November 21, 2022. A revised invitation letter was sent to those researchers who had not yet participated in the survey or who had dropped out during participation. This reminder action helped to further boost participation. As of December 6, 2022, 3.924 researchers had participated (3,7%). Due to the successful reminder campaign - after the first reminder, in total more people participated in the survey than after the initial invitation - it was decided to launch another second and final reminder action. On December 6, 2022, another invitation was sent to the remaining 101.366 persons who had yet not participated. This second reminder action also helped to further stimulate participation in the survey. When the survey was finally closed, on Tuesday, January 10, 2023, 1.496 researchers additional had participated. In the end, a total of 5.420 researchers participated in the survey, which corresponds to on overall participation rate of 5,2% with regard to the adjusted total gross sample. Of these 5.420 participants, 3.382 completed the survey, resulting in a completion rate of 3,2% (with regard to the gross sample) and a dropout rate of 38% (with regard to the net participation).

A significant dropout rate was expected due to the special topic of RRI, and the length and complexity of the survey. The mean processing time of the survey was 25 minutes and 12 seconds. Two observations can be made regarding the dropouts from the survey: In fact, most of the dropouts left the survey at the very first page of the survey (738 of 5.420 participants = 13,6%). This suggests that many participants were not that interested in the subject matter of the survey. Furthermore, it is noticeable that there were numerous dropouts during or after the first RRI question block on Public Engagement. One explanation for this could be that many participants became fully aware of the structure of the questionnaire after the question block on public engagement. The questions were basically substantially repeated for each RRI area. Therefore, many participants were apparently either more interested in Public Engagement than in other areas of RRI and/or were no longer willing to answer repetitively structured question blocks about the other RRI key areas. As the questionnaire progressed, there were only relatively minor numbers of dropouts. It is quite possible that those participants who continued through to complete the entire survey had a general interest in the topic of RRI with all its components.

A Overview of participation (and dropouts up to this point) by RRI survey block:

- Questions on Public Engagement completed: 4.107 (1313 dropouts => 24,7%)
- Questions on Open Science completed: 3.672 (1748 dropouts => 32,2%)
- Questions on Gender Equality completed: 3.504 (1916 dropouts => 35,3%)
- Questions on Ethics completed: 3.397 (2023 dropouts => 37,3%)

Coding process

The questionnaire for the RESU was developed in an iterative process. From the first outline of the Research Protocol for the RESU in fall 2021, the questionnaire was further developed in a team of various consortium partners in order to allow interlinkages with the RPO study (WP2), with case studies (WP5), and with the former survey conducted in the previous MoRRI project. As of June 2022, there were weekly meetings of the RESU working group on questionnaire development and in August and September 2022, the first survey draft was implemented in the EFS survey tool. Subsequently, there were several pre-test rounds in which the online survey was tested within and outside the Super MoRRI consortium. A print version of the questionnaire can be found in the Appendix VI of this methodological report.

The assignment of variables and labels was executed automatically by the survey tool based on the selected type of questions. For example, in the case of a single-choice question, a single variable is assigned to the question. The various expressions of the answer are the values of the variable (e.g. 1 = “not satisfied at all”, 2 = “rather not satisfied”, 3 = “rather satisfied” etc.). In the case of a multiple choice question, on the other hand, the survey tool assigns a variable for each answer option, since the various answer options have no statistical relationship and are independent of each other. The different answer options are then output in binary form (e.g. 1 = “quoted”, 0 = “not quoted”). For a matrix question, one variable is also assigned for each answer option. The different answer options are then ordinal scaled output according to their assigned values (e.g. 1 = “not satisfied at all”, 2 = “rather not satisfied”, 3 = “rather satisfied” etc.). Also, attached to this report is a list of variables and their labels and values.

Data validation and cleaning

The RESU was closed on Tuesday, January 10 2023 at 6pm. The raw dataset was then downloaded, along with the survey labels and macros for syntax jobs. In the survey tool, the survey and the survey results will be deleted at the end of the Super MoRRI project. Further data exports are therefore no longer possible beyond the duration of the project. Furthermore, only the survey results were downloaded and not participants’ personal identifying information. The latter are separated from the survey results data by the survey tool during the export process in order to guarantee participant anonymity.

For data cleaning and data validation, the raw data set was first stored in a secure folder, to which only selected Fraunhofer ISI project team members have access.

In order to obtain reliable and high quality survey data, a thorough data cleaning and validation process was implemented. This process is also necessary because the survey tool counts anyone who clicks on the access link in the invitation mail as a participant and starts the survey, no matter if the participant completed the survey or if they dropped out. In order to increase the validity of the survey data, the data set was adjusted for those records which did not meet certain quality criteria. This process included four steps of data cleaning and validation:

1. Cleaning of participants who only answer a portion of the survey
2. Cleaning of participants speeding through the survey
3. Cleaning of participants who “straight-line”
4. Cleaning of participants who provide unrealistic and inconsistent responses or who offer nonsensical feedback in open questions

Regarding step 1: The survey tool counted 5.420 participants, i.e. respondents who clicked on the survey access link in the invitation mail. As described above, it was already possible to identify and document dropouts in the survey monitoring during the field phase. In the raw data set, which is made available in SPSS format, dropouts could be identified in particular on the basis of the variable “page history”. This variable lists all page numbers of the survey that each participant had accessed. Few page numbers in a cell were a first indication of an early dropout. Due to the length of the questionnaire, not all participants who dropped out were excluded from the sample. A participant was included in the dataset if he or she had not only provided introductory information on the starting page of the survey (e.g. on RPO affiliation or on general understanding of RRI), but had also answered at least some questions on the first RRI block on public engagement. This criterion alone excluded several hundred records from the gross participation sample.

Regarding step 2: Other participants who do not provide reliable responses in a survey are so-called speeders, i.e. participants who complete a survey in a very short time. Such speeders can be identified in particular via the variable “duration”, which the EFS survey tool outputs in the SPSS result dataset. This variable specifies the time in seconds that the participant needed to answer the questionnaire. By sorting this variable in descending (or ascending) order, it is possible to identify those participants who answered the questionnaire particularly quickly. Early dropouts often stand out here as well. Above all, however, one can identify those participants who clicked through the survey without responding to any questions. In this step many further records were eliminated.

Regarding step 3: Other participants who cause problems in empirical surveys are participants who click through the questionnaire and always give the same answer (e.g. always click on the very first answer option). This behaviour is called straight-lining. These answers cannot be analysed and must therefore be excluded in the sample. These particularly problematic participants can be identified by sorting several variables in parallel (descending or ascending). This makes those cases stand out that always have the same values across multiple variables. This allowed a few more records to be deleted.

Regarding step 4: Since the online survey contained several filters that had been controlled by plausibility checks, the risk of contradictory and inconsistent answers was relatively low. Nevertheless, it is possible to identify nonsensical responses especially in open questions (e.g. “xyz” or “aslfjkh”). The open questions or string variables were checked for such responses. However, hardly any nonsensical responses were found.

Through the described process of data validation and cleaning, a total of 1.240 participants with insufficient quality characteristics were identified and deleted from the survey sample. Consequently, this results in a new, cleaned net sample of 4.180 participants to be included in the analysis of the survey (=> 5.420 - 1.240 = 4.180 participants).

Data storage and further use of the data

Fraunhofer ISI will upload the relevant survey data (raw data set, cleaned data set and list of survey variables, labels and values) to Fraunhofer OwnCloud for the duration of the project and thus make them available to the other partners of the project consortium. In addition, this methods report will also be uploaded to the platform to ensure transparency about the process of survey data cleaning and validation.

4. Data storage and sustainability

SUPER MoRRI data will be prepared for transmission to WP3 (Dashboard and visualisation) as part of Task 2.6. These data will be prepared in a variety of formats tailored to the monitoring portal, including the indicator dashboard, and to the specific types of data visualisations being used.

Raw data is currently stored at the Fraunhofer OwnCloud platform. The SUPER MoRRI Data Management Plan (DMP, D8.2) plans for all data sets to be preserved in the research data infrastructure "Fordatis" of the Fraunhofer- Gesellschaft (see https://www.openaccess.fraunhofer.de/en/open-access-strategy.html). The data will be enriched with significant, standardised metadata and identifiers (DOI). DOIs will also serve to link the data to the corresponding publication data in the Fraunhofer Publica (http://publica.fraunhofer.de). A consistent naming protocol for all data files and folders is specified in the DMP and will be adhered to rigorously.

SUPER MoRRI is part of the European Commission's Open Data Pilot. As such, Section 2 of the SUPER MoRRI DMP describes plans for making data findable, accessible, interoperable and reusable (FAIR).

The volume of data to store is unlikely to exceed 20 gigabytes. It will definitely not reach a threshold of 2 terabytes at which consideration of additional costs and space for storage would be needed.

In the second review meeting for the SUPER MoRRI project advice was received that a plan for the sustainability of the major project outputs should be developed. This development process is currently underway, and will be carried out as part of WP7. A Sustainability Plan D7.5 will be ready at M60, and include reference to maintaining and opening up the results of the data vehicles to other users. As part of this process, liaison has been commenced with the Horizon Europe funded project REINFORCING, as a potential interested curator and re-user of SUPER MoRRI data assets. Other relevant Horizon Europe projects that focus on open and responsible R&I practices are GraspOS and OPUS. Further suggestions regarding the future use of the SUPER MoRRI data and indicators include liaising with the ERA monitoring framework as part of ERA Action 19, the UNESCO Open Science Working Group (see https://www.unesco.org/en/open-science/implementation), EOSC future and their monitoring of open science at macro (member state) level (see https://zenodo.org/communities/eoscobservatory?page=1&size=20). Finally, the EC open science unit of DGRTD recommended liaising with the Coalition for Advancing Research Assessment (COARA), which was recently launched.

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Appendices

Appendix I Study Protocol RPO

Grant Agreement Number: 824671

SUPER MoRRI – Scientific understanding and provision of an enhanced and robust monitoring system for RRI

Protocol for the Country Correspondent Network Study of Research Performing Organisations (CCN-RPO study)

Authors: Niels Mejlgaard, Massimo Graae Losinno, Richard Woolley

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Type: Study protocol – finalised following pilot test and feedback from CNN

Dissemination Level: To be registered at Open Science Framework upon finalisation

Project website: www.super-morri.eu

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1. INTRODUCTION[1]

The development of a framework for monitoring responsible research and innovation (RRI) is a measure designed to support transformation in research and innovation (R&I) to better address future challenges and meet societal expectations. The SUPER MoRRI project Strategic Plan describes some broad principles for the development of a monitoring framework during the period 2020-24. The accompanying SUPER MoRRI Implementation Plan sets out a number of planned data collection activities for SUPER MoRRI designed to populate quantification tools, while the Case Research Plan describes a series of research projects designed to increase our understanding of responsible transformation pathways and explore opportunities to monitor these pathways.

Together the strategic, implementation and case research plans are designed to orient the SUPER MoRRI approach to the formulation of general research questions, and to the specification of empirical research questions for operationalisation in empirical work (see Figure 1).

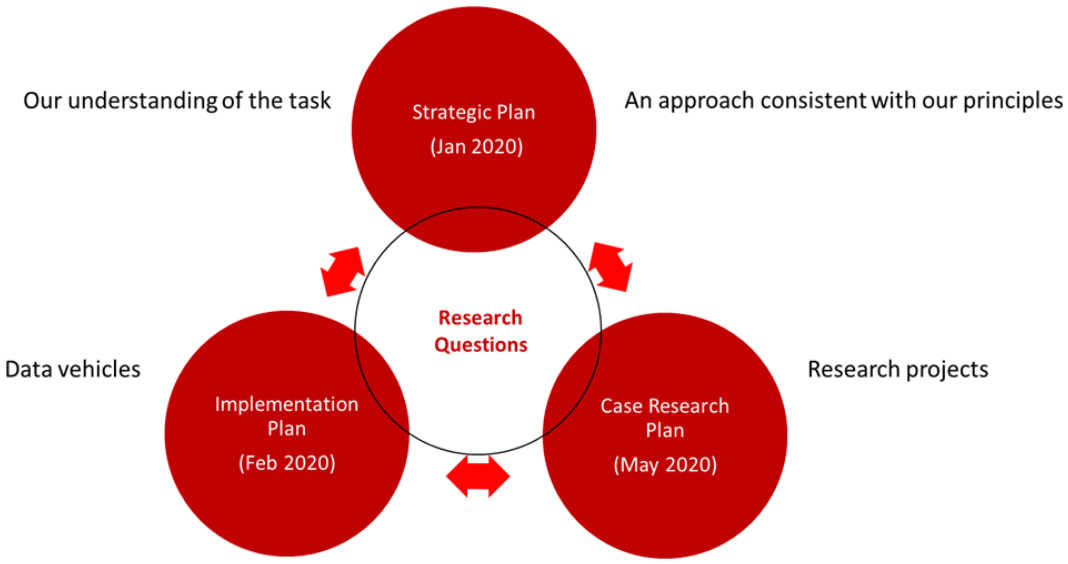


Figure 1: SUPER MoRRI project development: three pillars

The data collection activities carried out will generate new primary data from original research studies and the reuse of secondary data from a wide variety of different sources. Multiple data sources generated in different research activities will be used to address research questions, for example to triangulate around a particular question, to explore an exemplar case to deepen understanding, or to use a selection of cases to develop comparative dimensions.

While some of the research activities of SUPER MoRRI will therefore be designed to monitor 'patterns' that can be analysed at regional or national level with broad coverage, other studies will be designed to identify and describe a relevant phenomenon. Still others will seek to explore paradigmatic cases to establish the potential utility of a monitoring tool (for example an indicator) and assess whether it

[1] This protocol is modelled on the protocol for the previous study of research funding organisations, also conducted by the SUPER MoRRI country correspondent network (see https://osf.io/84dta/). Some parts are identical.

would add sufficient value to the monitoring framework to expend resources to develop broader 'coverage' using this tool.

The Implementation Plan is built around a set of 'data vehicles' (see Figure 2) that will produce information at the levels of researchers/groups, research performing organisations, research funding organisations and citizens. A mix of quantitative and qualitative social science data collection methods will be used. Secondary data sources will be used to complement SUPER MoRRI data vehicles. Each data vehicle will be designed to support monitoring for a range of purposes and to generate outputs that support the activities of different types of users. The objective of the SUPER MoRRI data vehicles is to establish information about the patterns and pathways of institutionalisation of responsibility in R&I that can be constructively communicated to interested stakeholders.

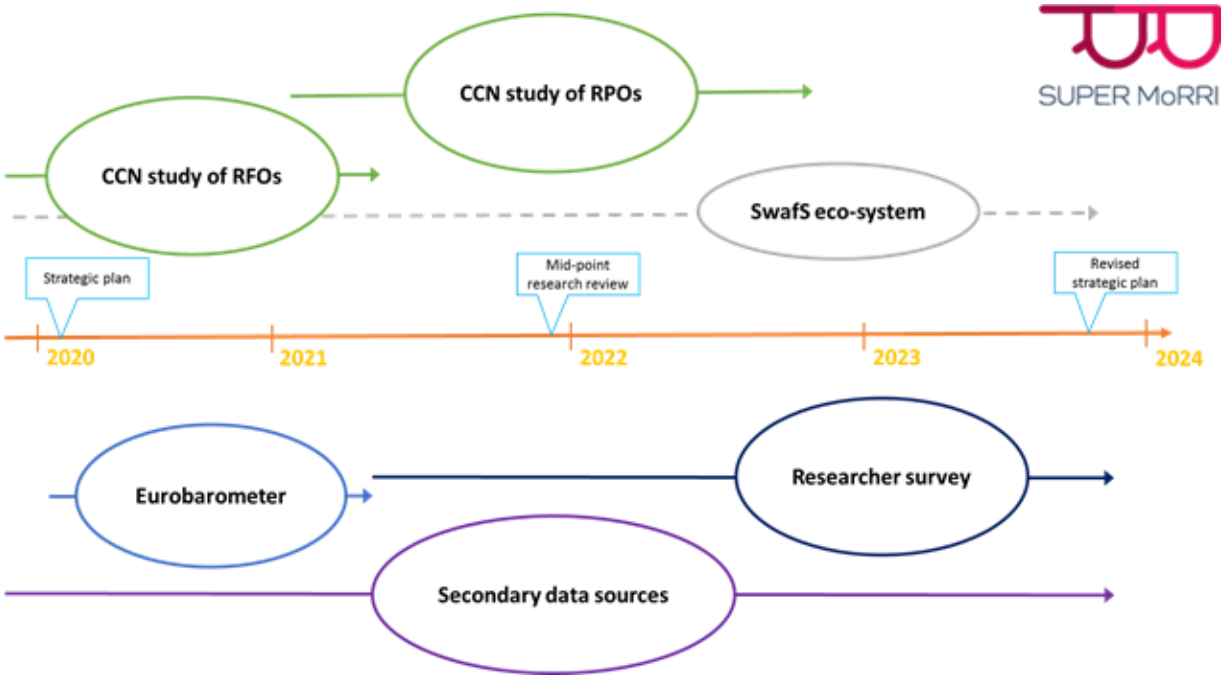


Figure 2: Data vehicles for SUPER MoRRI

This document sets out a protocol for the conduct of one of the studies set out in the SUPER MoRRI Implementation Plan, the Country Correspondent Network (CCN) study of research performing organisations (CCN-RPO study). The remainder of this document contains the following elements:

- an overview of the Country Correspondent Network;
- an overview of the CCN-RPO study, including an implementation timetable;
- a description of the study objectives;
- study definitions;
- a summary of the process for selecting RPOs for inclusion in the study;
- description of the methodology for desk research;
- a reporting template;

- data handling and management procedures;
- a note on ethics approval;
- a description of the study quality assurance procedure; and
- a standard email for validation inquiries (appended)

Updated versions of this document will be available at Open Science Framework (OSF).

2. COUNTRY CORRESPONDENT NETWORK

A key component of both the Implementation and Case Research plans is the country correspondent network. The SUPER MoRRI CCN consists of one correspondent per European Union Member State (MS), one for Norway, and one for the United Kingdom. A member of each SUPER MoRRI project team will be the correspondent for their respective country. The remaining members of the CCN were selected from applicants who responded to a call for correspondents conducted in late 2019 (see Table 1).

The network of country correspondents is envisaged to contribute to SUPER MoRRI through three main activities:

1. provide background intelligence and information about policy and practice contexts in relation to RRI in their country;
2. conduct fieldwork, generate primary data and contribute where relevant to analyses for the study of responsibility in research funding organisations (RFOs) in their country (CCN-RFO study); and
3. conduct fieldwork, generate primary data and contribute where relevant to analyses for the study of responsibility in research performing organisations (RPOs) in their country (CCN-RPO study).

Country correspondents will receive instructions and online training regarding the conduct of the RPO study during June 2021. In early June, a video presentation about the objectives and methodology of the CCN-RPO study will be circulated to all country correspondents. During June, a Questions & Answers session will be arranged in small teams (see Table 1 for team composition), and finally on June 28 a web-workshop will be arranged to address any remaining issues and needs for clarification. The web-workshop will be recorded and made available at OwnCloud, the shared workspace for the CCN.

In addition to the CCN, four international satellite partners (ISPs) will also participate in the online training activities, similarly to the CCN. The ISPs are:

- Peta Ashworth (Australia);
- Luisa Massarani (Brazil);
- Mu Rongping (PR China); and
- Michael Bernstein (USA).

The participation of the ISPs will provide a global comparative dimension. A number of important dimensions of the global context of understanding and implementing RRI were identified by the ISPs in the *Global Response to RRI Monitoring* report (deliverable D4.1, April 2020). The ISPs form a separate team, which is led by Carolina Llorente, who is part of the SUPER MoRRI consortium.

Table 1: Country correspondents

Team	Correspondent	Country	Team	Correspondent	Country
1	Ana Godonoga	Romania	4	Bernd Stahl	United Kingdom
1	Anna Domaradzka & Lukasz Widla	Poland	4	Gustav Bohlin	Sweden
1	Hendrik Berghäuser*	Germany	4	Christine Friis Baker* & Massimo Graae Losinno	Denmark
1	Ondrej Daniel	Czech Republic	4	Padraig Murphy	Ireland
1	Peter Kakuk	Hungary	5	Magdalena Wicher* & Milena Wuketich*	Austria
2	Inge van der Weijden*	The Netherlands	5	Ruzica Tokalic	Croatia
2	Marzia Mazzonetto	Belgium	5	Teodora Georgieva	Bulgaria
2	Marzia Mazzonetto	Luxembourg	5	Tomas Michalek	Slovakia
2	Suzanne de Cheveigne	France	5	Jadranka Turnes	Slovenia
3	Anna Pellizzone	Italy	6	Agrita Kiopa	Latvia
3	Luis Junqueira & Ana Delicado	Portugal	6	Arko Olesk	Estonia
3	Panagiotis Kavouras	Greece	6	Laura Drivdal*	Norway
3	Paula Otero-Hermida*	Spain	6	Mika Nieminen	Finland
3	Petros Pashiardis	Republic of Cyprus	6	Reda Nausedaite	Lithuania
3	Simone Cutajar & Edward Duca	Malta			

* SUPER MoRRI partner and team leader

3. OVERVIEW OF THE CCN-RPO STUDY

The overall aim of this study is to examine a limited range of mechanisms through which research performing organisations (RPOs) enhance responsibility in research. Mechanisms that will be the focus of the CCN-RPO study include:

1. The overall strategic priorities of the RPO
2. Concrete organisational policies and supporting structures and actions related to RRI, Open Science, Research Ethics and Integrity, Gender Equality, Public Engagement, and the Third Mission

For each of the countries included in the CCN-RPO study, a selection of RPOs will be covered by the study. Depending on the size of the country, either 2, 4, or 6 RPOs will be selected (see RPO Selection, below).

The CCN-RPO study will involve three major tasks for the correspondent within each country. The country correspondent will:

1. study publicly available documents and websites relating to the strategic priorities, policies, and supporting structures and actions of the organisation;
2. perform a limited number of email inquiries to validate and complement the information collected through publicly available documents and websites; and
3. produce a written Case Report for each RPO covered following the template provided (see Table 6 below)

The CCN will work from this shared study protocol document, which specifies the research process for the study and details the quality assurance procedure. To the extent that the SUPER MoRRI international satellite partners are able to contribute to this study, additional RPOs in their respective countries may be added to the overall sample of RPOs to provide a global comparative perspective.

Results from the CCN study of RPOs will appear in the Second Monitoring Report (due April 2022) of the SUPER MoRRI project. Subsequently, a co-creation user-group will be invited to discuss the relevance and quality of the results and potential provisional indicators identified, in order to prioritise the selection of indicators and other elements to be transferred to the SUPER MoRRI dashboard. Table 2 specifies the implementation activities for the CCN-RPO study, their provisional timing and the division of leadership responsibilities among SUPER MoRRI partners.

Table 2: Implementation timetable, CCN-RPO study

Period	Activity	Responsible
April – May 2021	Drafting of CCN-RPO study protocol	AU, CSIC
May 2021	Pilot RPO case study and completion of protocol	AU
June 2021	Training: June 10: Protocol and training video circulated to CCN June 14-18: Team meetings Q&A session June 22: Team leaders report questions and concerns to Study leader June 28, 09:00 – 10:30 CEST: (Voluntary) web-workshop for CCN, to be recorded and made available at OwnCloud	AU, Team leaders
End-June 2021	Final study protocol and supporting documents made available to CCN on OwnCloud	AU
July – September 2021	CCN conducts field work; Team meetings	AU, Team leaders
September 30, 2021	Deadline for submission of draft CCN case reports; transferring of study material from CCN to OwnCloud	AU, Team leaders
October 2021	QA procedure for case reports	AU, CSIC
October 2021	Coding protocol developed	AU
October 31, 2021	Final submission of RPO Case Reports	AU, Team leaders
November – December 2021	Coding of case reports	AU, Team leaders
January - February 2022	Analyses and preparation of descriptions, potential indicators and visualisations for inclusion in Second Monitoring Report	AU, CSIC
April 2022	Presentation of preliminary results in Second Monitoring Report	AU
June 2022	User-group review and deliberation	CSIC, AU
July – October 2022	Final identification of ‘exemplary cases’, indicators and material to be transferred to WP3 and WP6	CSIC, AU

4. STUDY OBJECTIVES

The CCN-RPO study is designed to address the general objective of understanding how RPOs enhance responsibility in research through strategic priorities, policies, and supporting organisational structures and concrete actions. The core aim is to examine and map the strategic priorities, and the repertoires of policies and supporting structures and actions that RPOs employ to promote responsibility, concretely in the areas of Open Science, Research Ethics and Integrity, Gender Equality, Public Engagement, and the Third Mission.

The study starts from the assumption that organisational priorities, policies, and supporting structures and actions contribute to shaping research culture and research practices. The study also assumes that basic organisational properties may condition the repertoires that RPOs make use of to promote responsibility. The size of the organisation, the research intensity (i.e. the relative weight of research compared to other tasks such as teaching activities), the research orientation (i.e. the diversity of disciplines or research areas within the organisation), and the funding base (i.e. specifically the extent to which the organisation receives funding from the EU Framework Programmes) may affect the nature and range of the organisational priorities, policies, and structures to promote responsible research.

Figure 3 outlines the main elements of the study. We use the European Tertiary Education Register (ETER) and the Community Research and Development Information Service (CORDIS) to build a sample frame and to draw a stratified sample ensuring variation in basic organisational properties. The selected RPOs will be examined by the CCN to determine the priorities, policies, and supporting structures and actions that the organisations use to promote responsible research practices. In turn, a dedicated survey will be administered to researchers within the selected organisations to examine their research practices. A separate protocol will, in due course, be developed for the researcher survey.

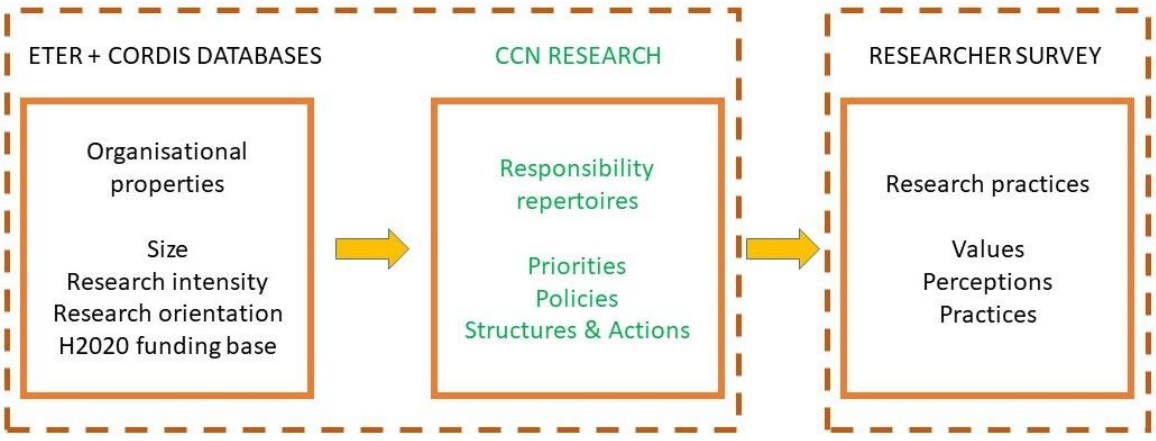


Figure 3: Main elements and overall design for the CCN-RPO study

The specific objective for the CCN-RPO study, then, is to identify the strategic priorities and the repertories of policies and supporting structures and actions that the selected RPOs make use of to promote responsibility in research.

5. STUDY DEFINITIONS

RPOs may contribute to cultivating responsible research environments that are conducive to responsible research practices in numerous ways. The way that the RPO engages with its external environments, stakeholders, and citizens; the organisational governance arrangements it employs to shape research practices; the resources that are allocated to different tasks and commitments within the organisation; and the dynamics of collegial interaction and inclusion may all have important impact on achieving responsible research.

The CCN-RPO study seeks to understand how RPOs enhance responsibility in research, but it is not designed to capture the full complexity of the issue. Instead, it examines a small set of concrete markers of organisational efforts to foster responsible research. Specifically, the study intends to identify:

1. Elements promoting responsible research among the overall strategic priorities of the RPO

The overall strategic priorities signal the direction of the RPO and its attribution of importance across different areas. The CCN-RPO study will determine, whether the notion of RRI is applied in the context of the RPO's strategic priorities. It will then examine whether Open Science, Research Ethics and Integrity, Gender Equality, Public Engagement, and the Third Mission are addressed among the priority areas of the RPO. The country correspondents will consult the RPO's core strategic document(s), e.g. the RPO's official strategy paper or development plan, to examine the aspirations, concrete goals, and operational elements relating to Open Science, Research Ethics and Integrity, Gender Equality, Public Engagement, and the Third Mission, or other priority areas promoting responsible research.

2. Specific policies and supporting structures and actions related to RRI, Open Science, Research Ethics and Integrity, Gender Equality, Public Engagement, and the Third Mission

To understand the concrete details of the guiding principles and the main procedures and organisational arrangements that the RPO makes use of to promote responsible research, specific policies and supporting structures and actions related directly to Open Science, Research Ethics and Integrity, Gender Equality, Public Engagement, and the Third Mission will be examined. The country correspondent will identify the relevant policy documents across these areas and will examine their contents. The country correspondents will also identify policies specifically using the notion of RRI, if any. Table 3 provides examples of policy elements and supportive structures and actions that could potentially be encountered across the different areas of attention.

Table 3: Definitions and examples of policies and supporting structures and actions

Open Science	Open Science refers to efforts "to make the primary outputs of publicly funded research results – publications and the research data – publicly accessible in digital format with no or minimal restriction" (OECD 2015: 7). In a broader sense, Open Science is about promoting openness across all parts of the research cycle, from design through data collection, processing, and storage, to scholarly communication (Open Science and Research Initiative 2014).

	Examples of Open Science policy elements may include open access publishing policies, open data policies, policies concerning pre-registration and the use of publicly accessible data and publication repositories, policies concerning recognition of data communication in relation to promotion, policies on the use of open source software, etc. It may also include endorsement of external policies or principles, such as FAIR data principles. Examples of supporting structures for Open Science may include institutional repositories for data and publications or a dedicated office for Open Science. Examples of supporting actions may include training in open science practices, appointment of open data champions or advisors, awards for data sharing, etc.
Research Ethics and Integrity	Research Integrity is recognised as the attitude and habit of the researchers to conduct their research according to appropriate ethical, legal and professional frameworks, obligations and standards. Research Ethics addresses the application of ethical principles or values to various issues and fields of research, including ethical aspects of the design and conduct of research, the way human participants or animals within research projects are treated, whether research results may be misused for criminal purposes, and aspects of scientific misconduct (ENERI 2019a; ENERI 2019b). Examples of Research Ethics and Integrity policy elements may include endorsement of international or national codes (e.g. the European Code of Conduct for Research Integrity), declarations (e.g. the Helsinki Declaration on ethical principles for medical research involving human subjects or declarations on responsible assessment practices such as the Hong Kong Principles or the DORA), or recommendations (e.g. the Vancouver recommendations on authorship). It may also include policies on supervision and mentoring of researchers, data management policies including GDPR compliance, policies on research collaboration across sectors, policies on authorship, or policies on fairness and transparency in assessment, recruitment, and promotion, etc. Examples of supporting structures for Research Ethics and Integrity may include established ethical review procedures or bodies, research integrity advisors, a university ombudsperson or -office, bodies and procedures to deal with misconduct and questionable research practices, whistle blower arrangements, data privacy officers, etc. Supporting actions may include research ethics and integrity training.
Gender Equality	Gender Equality is concerned with the measures that the RPOs take to deal with the persistent problem of unequal opportunities for men and women in academia. It is about developing enabling environments for the integration of women in all fields and all levels of research (reduction of horizontal and vertical segregation), breaking down structural barriers, and integrating gender in the content of research to ensure that women's needs and interests are adequately addressed (Wroblewski et al. 2015). Examples of Gender Equality policy elements may include gender equality policies, gender equality actions plans, or endorsement of external policy principles or frameworks such as the Athena Swan Charter.

	Examples of supporting structures for Gender Equality may include advisory bodies, networks, committees or a dedicated office dealing with issues of gender equality. Examples of gender equality actions may relate to recruitment, career development, leadership, workplace culture, mentoring programmes, affirmative actions, or mainstreaming of gender in research analyses, etc.
Public Engagement	Public Engagement covers "… the diversified set of situations and activities, more or less spontaneous, organised and structured, whereby non-experts become involved, and provide their own input to agenda setting, decision-making, policy-forming, and knowledge production processes" (Bucchi and Neresini 2007: 449). In the context of this study, Public Engagement is concerned with the inclusion of citizens and civil society organisations in these processes. Examples of Public Engagement policy elements may include policies on public communication of science or policies on stakeholder involvement in research activities. Examples of supporting structures for Public Engagement may include a dedicated office for public communication of science, a 'science shop' or similar bodies for dealing with citizen and stakeholder knowledge demands, dedicated resources for citizen science, or a formalised citizen and stakeholder advisory board. Examples of supporting actions may include training activities related to science communication, rewards for citizen science initiatives, public communication awards, cross-organisational events or initiatives like an annual science festival or open university day, open university courses for citizens, ad hoc representation of stakeholders and citizens in decision making bodies of the organisation, etc.
Third Mission	The Third Mission of universities may broadly be defined as "all activities concerned with the generation, use, application and exploitation of knowledge and other university capabilities outside academic environments" (Molas-Gallart et al. 2002). In the context of this study, the Third Mission is primarily understood as the activities concerned with addressing societal challenges or contributing to regional development by informing political decision making and engaging with industrial and commercial actors – since activities related to interaction with citizens are already captured under 'Public Engagement'. Examples of Third Mission policies elements may include policies on collaboration with industrial partners, policies on collaboration with political decision makers, policies on academic freedom, or policies concerned with societal obligations. Third Mission policy elements may also relate to the adoption or endorsement of external agendas or priorities, such as the UN's Sustainable Development Goals. Examples of supporting structures for the Third Mission may include an office for technology transfer or organisational units dedicated to supporting interaction with policy makers. Examples of supporting actions for Third Mission may include training activities, awards for policy relevance, awareness raising initiatives concerning SDGs or other societal goals, recognition of policy-oriented activities in relation to recruitment and promotion, etc.

3. Inspirational or innovative examples of supporting structures and actions related to RRI, Open Science, Research Ethics and Integrity, Gender Equality, Public Engagement, and the Third Mission.

As an additional component of the study, particularly inspirational or innovative examples of supporting structures and actions related to the topical areas will be described. The study does not intend to systematically examine all corners of the organisation or the full range of mechanisms employed to promote responsible research. It focuses instead on the explicit strategic priorities, policies, and supporting structures and actions as captured in the core strategic documents and specific policies across the areas of Open Science, Research Ethics and Integrity, Gender Equality, Public Engagement, and the Third Mission. However, if the country correspondent comes across particularly useful examples of concrete supporting structures or actions, these can be described in more details. The intention is to compile – across the full set of RPOs covered in the study – a small selection of examples of such structures and actions that might evoke interest and attention among users of the SUPER MoRRI output. These exemplary mechanisms could be presented for inspiration at the project's website.

6. RPO SELECTION

The CCN-RPO study is interested in examining how basic organisational properties may condition the repertoires that RPOs make use of to promote responsibility. The size of the organisation, its research intensity, its research orientation, and its funding base are expected to have an impact on the nature and range of the organisational priorities, policies, and structures to promote responsible research.

To ensure a reasonable coverage across all countries covered by the study, either 2, 4, or 6 RPOs are selected for inclusion depending on the size of the country. For the Republic of Cyprus, Luxembourg, and Malta, 2 RPOs are selected. For Austria, Belgium, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, Greece, Hungary, Ireland, Latvia, Lithuania, Netherlands, Norway, Portugal, Romania, Slovakia, Slovenia, and Sweden, 4 RPOs are selected. For Germany, France, Italy, Poland, Spain, and the UK, 6 RPOs are selected. For the ISPs, a convenience sample of RPOs within their respective countries will be selected.

To capture diversity in basic organisational properties across the RPOs selected for inclusion in the study, a sampling frame has been built from the publicly available European Tertiary Education Register (ETER) database. The database covers Higher Education Institutions (HEIs) in Europe across three categories: 1) University; 2) University of applied science/college, which are organisations that can typically not offer doctoral programmes and are often heavily oriented towards (professional) education; and 3) Other, which cover e.g. military schools and some art academies. As this study is focused on organisations performing research as a main component of their mission, only organisations in category 1 (universities) were included, with Malta as the only exception, since only one Maltese HEI was classified as university. It should further be observed that only two HEIs were classified as a 'university' in Luxembourg and four in Slovenia (equivalent to the number of organisations to be included in the study), thus sampling was not possible in these countries.

The established sampling frame for the countries included in the study is 1.038, including the HEIs from Luxembourg, Malta and Slovenia. The data in the ETER database stems from information that has been collected at different times. The year of collection thus differ among the HEIs, but for 923 out of 1.038 HEIs that year is 2016. Most often the information has been collected nationally at the same time, and difference in time should therefore not affect the sampling on a national level. Overall, of the 1.038 HEIs included for the sampling, the year of data collection is distributed as follows: 75 in 2017, 923 in 2016, 4 in 2015, 6 in 2014, 9 in 2013, 17 in 2012, and 4 in 2011.

Information about Horizon 2020 funding was acquired through the publicly available Community Research and Development Information Service (CORDIS) of the European Commission. Funding data was obtained for 647 out of the 1.038 HEIs. The remaining institutions have either not received any funding through Horizon 2020 or could not be located in the CORDIS database even following extensive manual searches. CORDIS contains records of projects that have received funding rather than systematic coverage of organisations. Due to the number of HEIs with missing information about Horizon 2020 funding, this variable was not included in the sampling of RPOs in all countries (see details in Table 4)Table .

Four variables were used for sampling, three of which are available in the ETER database of HEIs: 1) Size of the organisation, measured by total number of staff plus total number of students; 2) Research intensity, measured by the ratio of students to academic staff; 3) Research orientation, understood as

the degree of plurality (as opposed to concentration) within the organisations' research activities[2], measured based on the relative allocation of students across different academic fields; and 4) the total amount of funding received from Horizon 2020.

In some countries, not all variables can be populated with information, resulting in the sampling being conducted somewhat differently across countries. For some countries, e.g., Size is instead measured as total number of students, as this was the only data available related to the size of the organisations. Table 4 presents each country included in the study, together with the number of organisations chosen for each country and comments on the variables used for the sampling.

Table 4: Comments related to sampling

	Variable Comments	**Number of RPOs**
Austria	n/a	4
Belgium	n/a	4
Bulgaria	Horizon 2020 funding not included for the sampling	4
Croatia	n/a	4
Republic of Cyprus	Horizon 2020 funding not included for the sampling	2
Czech Republic	Horizon 2020 funding not included for the sampling	4
Denmark	Variables available for sampling: *Total number of students* and *H2020 Funding*	4
Estonia	Variables available for sampling: *Total number of students, Academic Plurality and H2020 Funding*	4
Finland	*Size* is calculated by total number of academic staff + total number of students	4
France	Variables available for sampling: *Total number of students* and *Academic Plurality*	6
Germany	n/a	6
Greece	Horizon 2020 funding not included for the sampling	4
Hungary	n/a	4
Ireland	Horizon 2020 funding not included for the sampling	4
Italy	*Ratio of Students to Staff* is calculated by total number of staff	6
Latvia	*Ratio of Students to Staff* is calculated by total number of staff	4

[2] Specifically, plurality is measured by the standardised square root of the squared sum of differences between theoretical mean of each academic subject, assuming an equal distribution, and the empirical number of students in each academic field. This variable is thus standardised across all available universities in the ETER database from European countries included in the study. The other variables used for the sampling process are also standardised, however these are standardised within each of the countries. This makes sure that the differences between the universities of each country are proportional, ensuring a representative national sampling.

Lithuania	*Ratio of Students to Staff* is calculated by total number of staff. Horizon 2020 funding not included for the sampling	4
Luxembourg	Sampling not possible, only two Universities found in the ETER database	2
Malta	Sampling not possible, only one University and one University College found in the ETER database	2
Netherlands	n/a	4
Norway	n/a	4
Poland	*Size* is calculated by total number of academic staff + total number of students. Horizon 2020 funding not included for the sampling	6
Portugal	Horizon 2020 funding not included for the sampling	4
Romania	No variables available for sampling, sampling is thus completely random	4
Slovakia	n/a	4
Slovenia	Sampling not possible, only four Universities found in the ETER database	4
Spain	n/a	6
Sweden	n/a	4
United Kingdom	Horizon 2020 funding not included for the sampling	6

Due to the limited number of organisations needed from each country, stratified sampling in the conventional sense is not possible for the selection of organisations in this study. Instead the sampling is conducted by clustering all available organisations within each country, based on the variables available in the country. The clustering algorithm is then tasked with finding a number of clusters for each country, corresponding to the number of organisations needed from the country. One organisation from each cluster is consequently chosen at random. This gives a representative sample of RPOs from each country, based on the available variables, and therefore also a fairly representative sample of all RPOs in the EU (see also Figure 4 further below). The organisations selected for inclusion in the study appear in Table 5.

Table 5: RPOs to be included in the study

Country	**Institution Names**	**English Names**
Austria	Medizinische Universität Wien, Universität für Musik und darstellende Kunst Wien, Universität für Weiterbildung Krems, Universität Wien	Medical University of Vienna, University of Music and Performing Arts in Vienna, Danube University Krems, University of Vienna
Belgium	Universiteit Antwerpen, Universiteit Hasselt, Transnationale Universiteit Limburg, Universiteit Gent	University of Antwerp, Hasselt University, Transnational University Limburg, Ghent University
Bulgaria	Пловдивски университет "Паисий Хилендарски", Национална художествена академия, Русенски университет "Ангел Кънчев", Международно висше бизнес училище	Paisii Hilendarski University of Plovdiv, National Academy of Art, Angel Kanchev University of Ruse, International Business School

Croatia	Sveučilište Sjever, Koprivnica, Sveučilište u Zadru, Sveučilište u Dubrovniku, Sveučilište u Zagrebu	University North, Koprivnica, University of Zadar, University of Dubrovnik, University of Zagreb
Cyprus	Πανεπιστήμιο Frederick, Ανοικτό Πανεπιστήμιο Κύπρου, Πανεπιστήμιο Frederick, Πανεπιστήμιο Λευκωσίας, Τεχνολογικό Πανεπιστήμιο Κύπρου	Frederick University, Open University of Cyprus, Frederick University, University of Nicosia, Cyprus University of Technology
Czech Republic	Veterinární a farmaceutická univerzita Brno, Vysoké učení technické v Brně, Vysoká škola finanční a správní, o.p.s., Masarykova univerzita	University of Veterinary and Pharmaceutical Sciences, Brno, Brno University of Technology, University of Finance and Administration, Masaryk University
Denmark	Københavns Universitet, Aarhus Universitet, Handelshøjskolen i Kobenhavn, Danmarks Tekniske Universitet	University of Copenhagen, Aarhus University, Copenhagen Business School, Technical University of Denmark
Estonia	Tallinna Ülikool, Tallinna Tehnikaülikool, Eesti Maaülikool, Estonian Business School	Tallinn University, Tallinn University of Technology, Estonian University of Life Sciences, Estonian Business School
Finland	Helsingin yliopisto, Kuvataideakatemia, Lapin yliopisto, Turun yliopisto	University of Helsinki, Finnish Academy of Fine Arts, University of Lapland, University of Turku
France	Comue Université Paris-Saclay, Université de Montpellier, Université d'Angers, Université Paris Descartes, Université de Lille, Université de la Nouvelle-Calédonie	NA, University of Montpellier, University of Angers, Paris Descartes University, Lille University, University of New Caledonia
Germany	Universität Duisburg-Essen, Bauhaus-Universität Weimar, Technische Universität München, DIU-Dresden Intern. University GmbH Dresden (Priv. H), Universität Bayreuth, Universität Bremen	University of Duisburg-Essen, Bauhaus-Universität Weimar, Technical University of Munich, Dresden International University GmbH, University of Bayreuth, University of Bremen
Greece	Χαροκόπειο Πανεπιστήμιο, Πανεπιστήμιο Θεσσαλίας, Οικονομικό Πανεπιστήμιο Αθηνών, Αριστοτέλειο Πανεπιστήμιο Θεσσαλονίκης	Harokopio University, University Of Thessaly, Athens University of Economics and Business, Aristotle University of Thessaloniki
Hungary	Pázmány Péter Katolikus Egyetem (PPKE), Pécsi Tudományegyetem (PTE), Budapesti Corvinus Egyetem (BCE), Andrássy Gyula Budapesti Német Nyelvű Egyetem	Pázmány Péter Catholic University, University of Pécs, Corvinus University of Budapest, Andrássy Gyula University, Budapest
Ireland	University of Limerick, National University of Ireland, Galway, University College Dublin, Maynooth University	University of Limerick, National University of Ireland, Galway, University College Dublin, Maynooth University
Italy	Università della CALABRIA, Università degli Studi di MACERATA, Università Telematica PEGASO, Università degli Studi di ROMA "La Sapienza", Università degli Studi di FIRENZE, Università degli Studi di NAPOLI "Parthenope"	University of Calabria, University of Macerata, Online University "Pegaso", Sapienza University of Rome, University of Florence, University of Naples "Parthenope"
Latvia	Latvijas Lauksaimniecibas universitate, Rigas Stradina universitate, Latvijas Universitate, Rigas Tehniska universitate	Latvia University of Agriculture, Riga Stradinš University, University of Latvia, Riga Technical University
Lithuania	Mykolo Romerio universitetas, Viešoji istaiga LCC Tarptautinis universitetas, Aleksandro Stulginskio universitetas, ISM Vadybos ir ekonomikos universitetas, UAB	Mykolas Romeris University, LCC International university, Aleksandras Stulginskis University, ISM University of Management and Economics, JSC

Luxembourg	Université du Luxembourg, LUNEX University	University of Luxembourg, LUNEX University
Malta	University of Malta (L'Universita` ta` Malta), Malta College of Arts, Science & Technology	University of Malta, Malta College of Arts, Science & Technology
Netherlands	Vrije Universiteit Amsterdam, Universiteit voor Humanistiek, Universiteit Leiden, Technische Universiteit Eindhoven	VU University Amsterdam, University of Humanistic Studies, Leiden University, Eindhoven University of Technology
Norway	Universitetet i Oslo, Universitetet i Agder, Norges teknisk-naturvitenskapelige universitet, Universitetet i Tromsø - Norges arktiske universitet	University of Oslo, University of Agder, The Norwegian University of Science and Technology, University of Tromso - Norway's Arctic University
Poland	Uniwersytet Rolniczy im. Hugona Kołłątaja w Krakowie, Krakowska Akademia im. Andrzeja Frycza Modrzewskiego, Uniwersytet Medyczny im. Piastów Śląskich we Wrocławiu, Akademia Wychowania Fizycznego we Wrocławiu, Uniwersytet Pedagogiczny im. Komisji Edukacji Narodowej w Krakowie, Uniwersytet Jagielloński w Krakowie	Hugo Kołłątaj Agricultural University of Cracow, Andrzej Frycz Modrzewski Cracow College, Wrocław Medical University, University School of Physical Education in Wrocław, Pedagogical University in Cracow, Jagiellonian University in Cracow
Portugal	Universidade do Minho, ISCTE - Instituto Universitário de Lisboa, Universidade Aberta, Instituto Superior de Ciências da Saúde Egas Moniz	University of Minho, ISCTE - University Institute of Lisbon, Open University of Portugal, Egas Moniz Higher Institute of Health Sciences
Romania	Universitatea de Medicină și Farmacie „Grigore T. Popa” din Iași, Universitatea "Vasile Alecsandri" din Bacău, Universitatea de Arhitectură şi Urbanism "Ion Mincu" din Bucuresti, Universitatea "Ovidius" din Constanța	"Grigore T. Popa" University of Medicine and Pharmacy Iasi, "Vasile Alecsandri" University of Bacau, "Ion Mincu" University of Architecture and Urbanism, "Ovidius" University of Constanta
Slovakia	Univerzita Pavla Jozefa Šafárika V Košiciach, Trenčianska Univerzita Alexandra Dubčeka V Trenčíne, Univerzita Sv. Cyrila A Metoda V Trnave, Slovenská Zdravotnícka Univerzita V Bratislave	Pavol Jozef Šafárik University in Košice, Alexander Dubček University of Trenčín in Trenčín, University of Ss. Cyril and Methodius in Trnava, Slovak Medical University in Bratislava
Slovenia	Univerza v Ljubljani, Univerza v Mariboru, Univerza na Primorskem, Univerza v Novi Gorici	University of Ljubljana, University of Maribor, University of Primorska, University of Nova Gorica
Spain	Universidad Carlos III de Madrid, Universidad Miguel Hernández de Elche, Universidad de Sevilla, Universidad Nacional de Educación a Distancia, Universitat Autònoma de Barcelona, Universidad Católica San Antonio de Murcia	Carlos III University of Madrid, Miguel Hernández University of Elche, University of Seville, National University of Distance Education, Autonomous University of Barcelona, San Antonio Catholic University of Murcia
Sweden	Högskolan Dalarna, Sveriges lantbruksuniversitet, Uppsala universitet, Linköpings universitet	Dalarna University, Swedish University of Agricultural Sciences, Uppsala University, Linköping University
UK	London School of Hygiene and Tropical Medicine, Queen Margaret University, The University of Sheffield, The University of Greenwich, Staffordshire University, The Open University	London School of Hygiene and Tropical Medicine, Queen Margaret University, The University of Sheffield, The University of Greenwich, Staffordshire University, The Open University

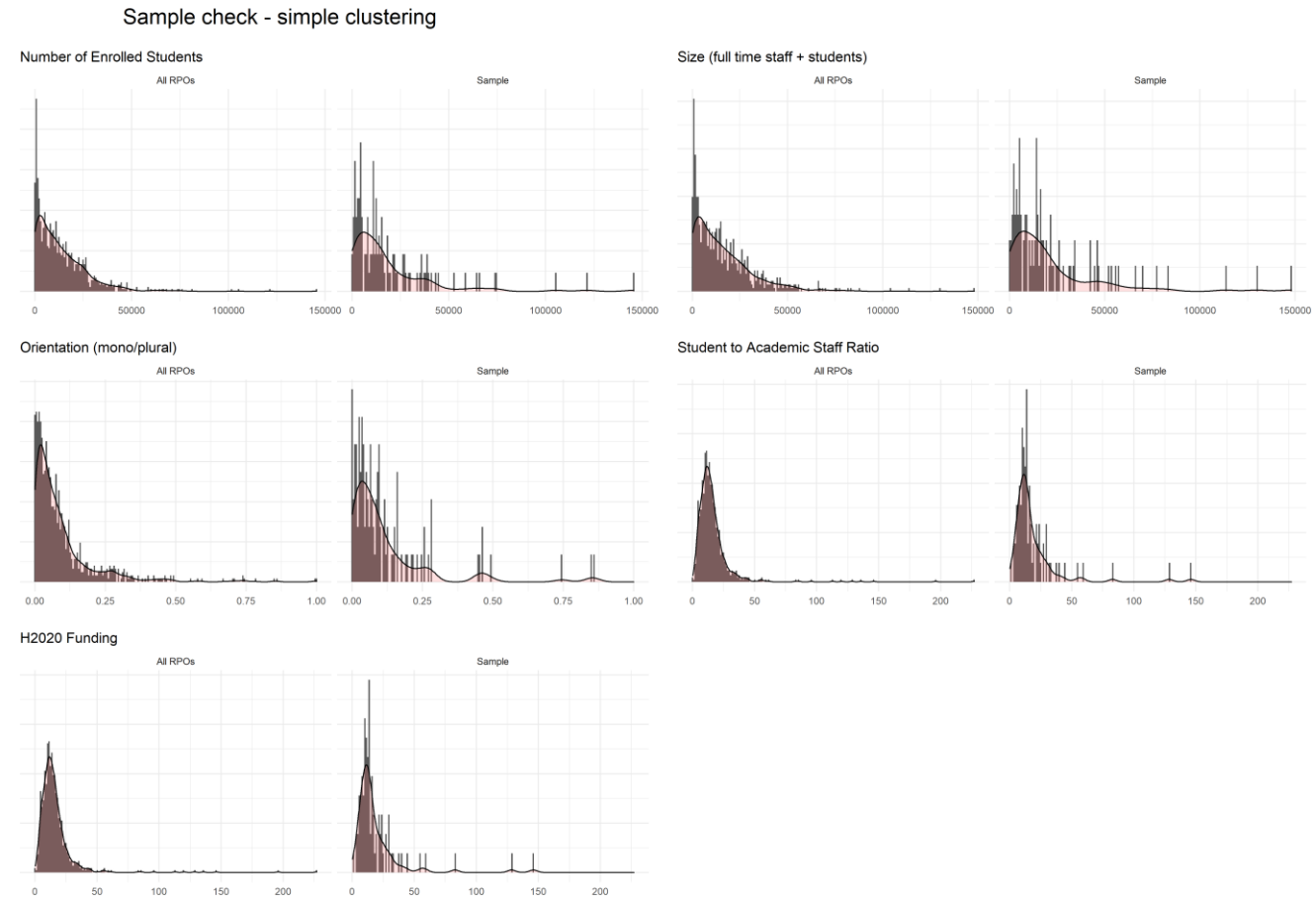


Figure 4: Comparison of the distributions of the full dataset and the final sample

If, based on the country correspondent's knowledge of the RPOs in the national arena, there are severe feasibility issues related to the RPOs selected for inclusion in the study, these can be discussed with the study leader, and replacement of the selected RPOs can be considered.

7. METHODOLOGY FOR DESK RESEARCH

Each country correspondent will produce a concise **RPO Case Report** for each of the RPOs covered in the country. The Case Report will follow closely the structure outlined below in in the case report template (Table 6).

To enable the country correspondent to produce the report, the following steps should be taken by the country correspondent:

1. Familiarize yourself with the structure of the website of the RPO.
2. Identify the core strategic documents of the RPO. These could, e.g., be the current University Strategy or University Development Plan or similar high-level documents that capture the main cross-cutting priorities of the RPO.
3. Read and digest the core strategic documents of the RPO. Based on the core strategic documents, describe the aspirations, concrete goals, targets, or performance indicators as well as practical / operational implementation elements related directly to RRI or to Open Science, Research Ethics and Integrity, Gender Equality, Public Engagement, and the Third Mission following the reporting template (Section 1 of the template).
4. Note down the core strategic documents using the document reporting cell in the template and upload the core strategic documents to OwnCloud. Provide, if possible, both the national language and English version of the document.
5. Identify specific policy documents or dedicated websites related to RRI, Open Science, Research Ethics and Integrity, Gender Equality, Public Engagement, and the Third Mission of the RPO. These may sometimes follow directly in a trail from the core strategic documents, but might equally well be identified through broader searches at the RPO website. Note that the search is targeting policies and supporting structures and actions at the level of the organisation; however, in some cases, the important policies and supporting structures and actions may be located at lower levels of the organisation (e.g. at the level of faculties / schools, rather than the overall university). In such cases, please pursue also information about the important policies, structures and actions at decentral levels, and make a note about it under 'additional comments' in the reporting template.
6. Read and digest the specific policy documents / dedicated websites of the RPO related to RRI, Open Science, Research Ethics and Integrity, Gender Equality, Public Engagement, and the Third Mission. For each topical area, describe aspirations as well as concrete goals, targets, or performance indicators used for monitoring progress. Also, outline concrete supporting structures and actions specified in the policy documents / dedicated websites. Follow the reporting template (Section 2 of the template).
7. For each topical area, note down the specific policy documents or dedicated websites using the document reporting cells in the template and upload the specific policy documents to OwnCloud. Provide, if possible, both the national language and English version of the document.
8. Prepare an email inquiry to validate and complement the list of documents (standard email appended). Identify a relevant recipient of the email, e.g. head of secretariat at the rector's

office, head of policy unit at the rector's office or similar, and acquire contact details on publicly available sites. Send email inquiry.

9. Add potential additional documents resulting from the email inquiry to the initial list, and supplement your Case Report with information acquired from the email correspondence.
10. If, during the web-searches and email correspondence, you encounter any – in your own assessment – particularly innovative or inspirational supporting structures or actions that might constitute a case for cross-organisational learning or inspiration, please describe and provide links / documentation using the designated cell (under Section 3 of the reporting template). If you come across several of such inspirational structures or actions, you may add extra cells.
11. Finalise the Case Report template; engage in the Quality Assurance procedure in the teams; and submit report.

8. REPORTING

The country correspondent will provide the information for each RPO Case Report through a simple template. The template can be completed as a word document or a google doc. Table 6 shows the reporting template. When filling the template, please keep the instruction text in.

Table 6: CCN-RPO Case Report template*

Name of RPO:	
SECTION 1: OVERALL STRATEGIC PRIORITIES	
Which of the following priority areas (below) are addressed in the RPO's core strategic document(s), e.g. the RPO's official strategy paper or development plan? If mentioned in the core strategic document(s), what does the RPO aspire to achieve in this area? Are there any concrete goals, targets, or performance indicators outlined? Which (if any) practical / operational implementation elements are outlined to meet the goals? Based on your reading of the RPO's core strategic document(s), does this area appear to have high, medium, or low priority compared to other areas mentioned in the core strategic document(s)? Also, does the description of this area appear to be mainly aspirational or practical?	
RRI	Is the term RRI explicitly used in the core strategic document(s)? Yes_____ or No_____ If yes, please describe in a few sentences the context in which the term RRI is used and what the RPO aspires to achieve in relation to RRI:
Open Science	Please note if this area is addressed in the overall strategy: Yes_____ or No_____ If yes, please describe in a few sentences, what the RPO aspires to achieve in this area: please describe in bullet points any concrete goals, targets, or performance indicators outlined in relation to this area (if any): please describe in bullet points any practical / operational implementation elements outlined to meet the goals (if any): Also (if yes), please assess whether this area appears to have high, medium, or low priority compared to other areas mentioned in the core strategic document(s): High priority_____, medium priority_____, or low priority_____

	please assess on a 1-5 scale whether the description of this area in the core strategic document(s) appears to be mainly aspirational or practical: Aspirational 1_____ 2_____ 3_____ 4_____ 5_____ Practical Additional comments (if any):
Research Ethics and Integrity	Please note if this area is addressed in the overall strategy: Yes_____ or No_____ If yes, please describe in a few sentences, what the RPO aspires to achieve in this area: please describe in bullet points any concrete goals, targets, or performance indicators outlined in relation to this area (if any): please describe in bullet points any practical / operational implementation elements outlined to meet the goals (if any): Also (if yes), please assess whether this area appears to have high, medium, or low priority compared to other areas mentioned in the core strategic document(s): High priority_____, medium priority_____, or low priority_____ please assess on a 1-5 scale whether the description of this area in the core strategic document(s) appears to be mainly aspirational or practical: Aspirational 1_____ 2_____ 3_____ 4_____ 5_____ Practical Additional comments (if any):
Gender Equality	Please note if this area is addressed in the overall strategy: Yes_____ or No_____ If yes, please describe in a few sentences, what the RPO aspires to achieve in this area: please describe in bullet points any concrete goals, targets, or performance indicators outlined in relation to this area (if any): please describe in bullet points any practical / operational implementation elements outlined to meet the goals (if any): Also (if yes), please assess whether this area appears to have high, medium, or low priority compared to other areas mentioned in the core strategic document(s): High priority_____, medium priority_____, or low priority_____

	please assess on a 1-5 scale whether the description of this area in the core strategic document(s) appears to be mainly aspirational or practical: Aspirational 1_____ 2_____ 3_____ 4_____ 5_____ Practical Additional comments (if any):
Public Engagement	Please note if this area is addressed in the overall strategy: Yes_____ or No_____ If yes, please describe in a few sentences, what the RPO aspires to achieve in this area: please describe in bullet points any concrete goals, targets, or performance indicators outlined in relation to this area (if any): please describe in bullet points any practical / operational implementation elements outlined to meet the goals (if any): Also (if yes), please assess whether this area appears to have high, medium, or low priority compared to other areas mentioned in the core strategic document(s): High priority_____, medium priority_____, or low priority_____ please assess on a 1-5 scale whether the description of this area in the core strategic document(s) appears to be mainly aspirational or practical: Aspirational 1_____ 2_____ 3_____ 4_____ 5_____ Practical Additional comments (if any):
Third Mission	Please note if this area is addressed in the overall strategy: Yes_____ or No_____ If yes, please describe in a few sentences, what the RPO aspires to achieve in this area: please describe in bullet points any concrete goals, targets, or performance indicators outlined in relation to this area (if any): please describe in bullet points any practical / operational implementation elements outlined to meet the goals (if any): Also (if yes), please assess whether this area appears to have high, medium, or low priority compared to other areas mentioned in the core strategic document(s): High priority_____, medium priority_____, or low priority_____

	please assess on a 1-5 scale whether the description of this area in the core strategic document(s) appears to be mainly aspirational or practical: Aspirational 1_____ 2_____ 3_____ 4_____ 5_____ Practical Additional comments (if any):
Other areas for promoting responsible research covered in core strategic documents (feel free to insert additional rows, if more than one area for promoting responsible research – not captured above – are identified in core strategic document(s))	Please note the area addressed: _____ please describe in a few sentences, what the RPO aspires to achieve in this area: please describe in bullet points any concrete goals, targets, or performance indicators outlined in relation to this area (if any): please describe in bullet points any practical / operational implementation elements outlined to meet the goals (if any): Also, please assess whether this area appears to have high, medium, or low priority compared to other areas mentioned in the core strategic document(s): High priority_____, medium priority_____, or low priority_____ please assess on a 1-5 scale whether the description of this area in the core strategic document(s) appears to be mainly aspirational or practical: Aspirational 1_____ 2_____ 3_____ 4_____ 5_____ Practical Additional comments (if any):
Please note below the core strategic documents examined: [Country_RPOnumber_Snumber_Title_Language; weblink e.g. UK_RPO1_S1_Connected University Strategy_en; https://www.staffs.ac.uk/about/pdf/connected-university-strategy.pdf]	
SECTION 2: SPECIFIC POLICIES AND SUPPORTING STRUCTURES AND ACTIONS	
Policies and supporting structures and actions for RRI	Please note, if the RPO has specific policies about 'RRI' (explicitly using the term RRI): Yes_____ or No_____ If yes, please describe in a few sentences, what the RPO aspires to achieve in this area: please describe in bullet points any concrete goals, targets, or performance indicators outlined in relation to this area (if any):

	please describe in bullet points supporting structures outlined in relation to policies about RRI (if any): please describe in bullet points supporting actions outlined in relation to policies about RRI (if any): Additional comments (if any):
Please note below the specific policy documents or dedicated websites examined: [Country_RPOnumber_RRInumber_Title_Language; weblink]	
Policies and supporting structures and actions for Open Science	Please note, if the RPO has specific policies about Open Science: Yes_____ or No_____ If yes, please describe in a few sentences, what the RPO aspires to achieve in this area: please describe in bullet points any concrete goals, targets, or performance indicators outlined in relation to this area (if any): please describe in bullet points supporting structures outlined in relation to policies about Open Science (if any): please describe in bullet points supporting actions outlined in relation to policies about Open Science (if any): Additional comments (if any):
Please note below the specific policy documents or dedicated websites examined: [Country_RPOnumber_OSnumber_Title_Language; weblink]	
Policies and supporting structures and actions for Research Ethics and Integrity	Please note, if the RPO has specific policies about Research Ethics and Integrity: Yes_____ or No_____ If yes, please describe in a few sentences, what the RPO aspires to achieve in this area: please describe in bullet points any concrete goals, targets, or performance indicators outlined in relation to this area (if any): please describe in bullet points supporting structures outlined in relation to policies about Research Ethics and Integrity (if any):

	please describe in bullet points supporting actions outlined in relation to policies about Research Ethics and Integrity (if any): Additional comments (if any):
Please note below the specific policy documents or dedicated websites examined: [Country_RPOnumber_REInumber_Title_Language; weblink]	
Policies and supporting structures and actions for Gender Equality	Please note, if the RPO has specific policies about Gender Equality: Yes_____ or No_____ If yes, please describe in a few sentences, what the RPO aspires to achieve in this area: please describe in bullet points any concrete goals, targets, or performance indicators outlined in relation to this area (if any): please describe in bullet points supporting structures outlined in relation to policies about Gender Equality (if any): please describe in bullet points supporting actions outlined in relation to policies about Gender Equality (if any): Additional comments (if any):
Please note below the specific policy documents or dedicated websites examined: [Country_RPOnumber_GEnumber_Title_Language; weblink]	
Policies and supporting structures and actions for Public Engagement	Please note, if the RPO has specific policies about Public Engagement: Yes_____ or No_____ If yes, please describe in a few sentences, what the RPO aspires to achieve in this area: please describe in bullet points any concrete goals, targets, or performance indicators outlined in relation to this area (if any): please describe in bullet points supporting structures outlined in relation to policies about Public Engagement (if any):

	please describe in bullet points supporting actions outlined in relation to policies about Public Engagement (if any): Additional comments (if any):
Please note below the specific policy documents or dedicated websites examined: [Country_RPOnumber_PEnumber_Title_Language; weblink]	
Policies and supporting structures and actions for the Third Mission	Please note, if the RPO has specific policies about the Third Mission: Yes_____ or No_____ If yes, please describe in a few sentences, what the RPO aspires to achieve in this area: please describe in bullet points any concrete goals, targets, or performance indicators outlined in relation to this area (if any): please describe in bullet points supporting structures outlined in relation to policies about the Third Mission (if any): please describe in bullet points supporting actions outlined in relation to policies about the Third Mission (if any): Additional comments (if any):
Please note below the specific policy documents or dedicated websites examined: [Country_RPOnumber_TMnumber_Title_Language; weblink]	

SECTION 3: INSPIRATIONAL OR INNOVATIVE SUPPORTING STRUCTURES AND ACTIONS

While examining the RPO, have you come across any particularly inspirational or innovative ways of enhancing responsible research? If so, please describe in some detail the supporting structure or action that you would like to highlight:

Why do you consider this example particularly inspirational or innovative?

Please provide links or further information about the example here:

* A printable / word version of this template is provided at OwnCloud.

9. DATA HANDLING AND MANAGEMENT

All elements of each RPO Case Reports generated by country correspondents will be uploaded to a secure space on the *Fraunhofer* OwnCloud platform. Details regarding access to the secure space on OwnCloud will follow the procedure already established in the previous CCN-RFO study.

Access to the case profiles will be provided to SUPER MoRRI team members for data processing and analysis purposes. Following confirmation that the material is safely stored, the country correspondent will erase all locally stored versions of all data (including email correspondence related to the validation inquiries).

No personal information will be collected as part of the study. In the unlikely event that personal or sensitive information is obtained unintentionally, e.g. in relation to the validation inquiries, such information will be eliminated and hence not used in analyses or in any academic and other outputs generated from the research. The SUPER MoRRI Data Management Plan contains comprehensive general information about data security, handling and use.

10. ETHICS APPROVAL

As the SUPER MoRRI CCN-RPO study does not collect personal data and does not include human research subjects (e.g. as respondents to a survey or participants in a focus group), ethics approval is not required. The core empirical material for the study is publicly available information collected from the RPOs' websites. The email inquiry to validate the list of identified materials and to acquire potential supplemental, non-confidential material, does not evoke a need for ethical assessment.

11. QUALITY ASSURANCE

A quality assurance procedure will be used to ensure comparable information across all Case Reports. Country correspondents have been grouped together in small cells (n=4-6) to act as peer support and review partners. A member of the SUPER MoRRI consortium will be included in each group and act as team leader.

Each RPO Case Report submitted will be reviewed by the leaders of the CCN-RPO study (Aarhus University and INGENIO). Any requests for clarifications will be sent within two weeks of submission, with a turnaround for responses of a further week, prior to final acceptance of the Case Report.

Coding of the Case Reports will be led by Aarhus with the involvement of INGENIO and all team leaders if relevant. In the case of multiple coders, a procedure to ensure inter-coder reliability will be set up.

REFERENCES

ENERI 2019a. *What is research integrity?* Accessible at https://eneri.eu/what-is-research-integrity/.

ENERI 2019b. *What is research ethics?* Accessible at https://eneri.eu/what-is-research-ethics/.

Molas-Gallart J. et al. 2002. *Measuring Third Stream Activities: Final Report to the Russell Group of Universities*. Brighton: SPRU.

Neresini, F. & Bucchi, M. 2011. Which Indicators for the New Public Engagement Activities? An Exploratory Study of European Research Institutions. *Public Understanding of Science*, 20 (1): 64-79.

OECD. 2015. *Making Open Science a Reality*. OECD Science, Technology and Industry Policy Papers, No. 25, OECD Publishing, Paris.

Open Science and Research Initiative. 2014. *Open Science and Research Handbook*. Accessible at https://master-7rqtwti-lfuznrqfbx3l2.eu-4.platformsh.site/sites/default/files/2020-01/openscience%20handbook.pdf.

Woolley, R. 2020. *Protocol for the Country Correspondent Network Study of Research Funding Organisations (CCN-RFO)*. SUPER MoRRI. Accessible at https://osf.io/84dta/.

Wroblewski, A., Bührer, S., Leitner, A. & Fan, C. 2015. Monitoring the Evolution and Benefits of Responsible Research and Innovation (MoRRI) - Analytical report on the gender equality dimension. Accessible at file:///C:/Users/au18497/Downloads/MoRRI-D2.3.pdf.

APPENDIX

Standard email for validation inquires

Subject: Promoting responsible research at [RPO NAME]

Dear [NAME OF RECIPIENT]

I am contacting you in relation to a cross-European effort to explore responsible research and innovation. The SUPER MoRRI project, which is funded by the European Commission, undertakes several studies designed to solicit knowledge about the ways that organisations promote responsible research cultures and practices. Currently, the project is exploring 122 universities across Europe to gain an understanding of their approaches to fostering responsible research and innovation.

As a country correspondent to the project, I have been examining the publicly available documents and policies related to Open Science, Research Ethics and Integrity, Gender Equality, Public Engagement, and the Third Mission at [RPO NAME]. I have found a range of interesting documents that I have listed below.

Open Science:

- [TITLE OF POLICY DOCUMENT; ONE BULLET FOR EACH]

Research Ethics and Integrity:

- [TITLE OF POLICY DOCUMENT; ONE BULLET FOR EACH]

Gender Equality:

- [TITLE OF POLICY DOCUMENT; ONE BULLET FOR EACH]

Public Engagement:

- [TITLE OF POLICY DOCUMENT; ONE BULLET FOR EACH]

Third Mission:

- [TITLE OF POLICY DOCUMENT; ONE BULLET FOR EACH]

To ensure that I have not overlooked any important documents or policies relating to these areas, I kindly ask you to review the list and point to any additional sources of information that I should take into account. You are also more than welcome to inform me of any particularly interesting initiatives at [RPO NAME] that other organisations might learn from. The SUPER MoRRI project intends to present such exemplary cases at its website.

I hope to hear from you soon. Your help in this matter would be highly appreciated.

Kind regards

[COUNTRY CORRESPONDENT]

SUPER MoRRI

Scientific Understanding and Provision of an Enhanced and Robust Monitoring system for RRI **Horizon 2020, Science with and for Society Work Programme 2018-2020**, Topic: SwafS-21-2018 **Grant Agreement Number**: 824671

Appendix II Study Protocol RFO

Grant Agreement Number: 824671

SUPER MoRRI – Scientific understanding and provision of an enhanced and robust monitoring system for RRI

Protocol for the Country Correspondent Network Study of Research Funding Organisations (CCN-RFO)

Authors:
Submission date:
Version: 21 December
Type: Internal working document
Dissemination Level:

Contents

1. INTRODUCTION

The development of a framework for monitoring responsible research and innovation (RRI) is a measure designed to support transformation in research and innovation (R&I) to better address future challenges and meet societal expectations. The SUPER MoRRI project Strategic Plan describes some broad principles for the development of a monitoring framework during the period 2020-24. The accompanying SUPER MoRRI Implementation Plan (WP2) sets out a number of planned data collection activities for SUPER MoRRI designed to populate quantification tools, while the Case Research Plan (WP5) describes a series of research projects designed to increase our understanding of responsible transformation pathways and explore opportunities to monitor these pathways.

Together the strategic, implementation and case research plans are designed to orient the SUPER MoRRI approach to the formulation of general research questions, and to the specification of empirical research questions for operationalisation in empirical work (Figure 1).

Figure 1: SUPER MoRRI project development: three pillars

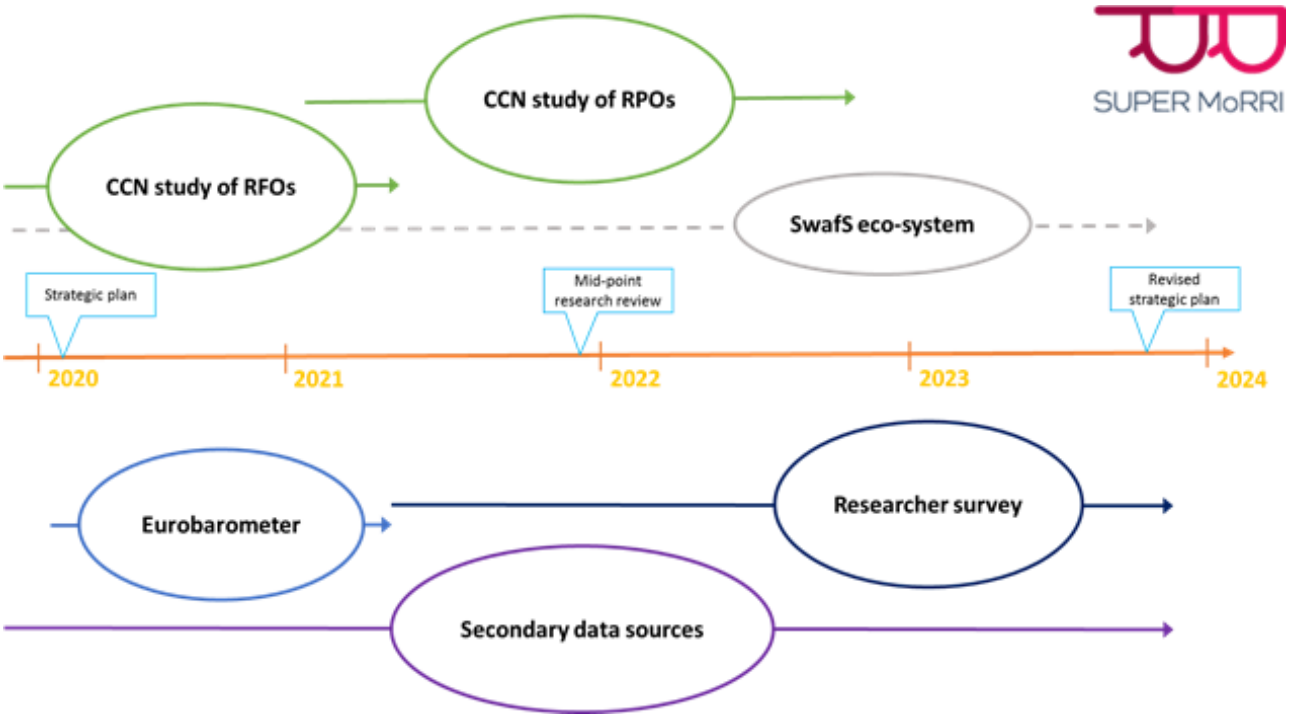
The data collection activities carried out will generate new primary data from original research studies and the reuse of secondary data from a wide variety of different sources. Multiple data sources generated in different research activities will be used to address research questions, for example to triangulate around a particular question, to explore an exemplar case to deepen understanding, or to use a selection of cases to develop comparative dimensions.

While some of the research activities of SUPER MoRRI will therefore be designed to monitor 'patterns' that can be analysed at regional or national level with broad coverage, other studies will be designed to identify

and describe a relevant phenomenon. Still others will seek to explore paradigmatic cases to establish the potential utility of a monitoring tool (for example an indicator) and assess whether it would add sufficient value to the monitoring framework to expend resources to develop broader 'coverage' using this tool.

The Implementation Plan is built around a set of 'data vehicles' (Figure 2) that will produce information at the levels of researchers/groups, research performing organisations, research funding organisations and citizens. A mix of quantitative and qualitative social science data collection methods will be used. Secondary data sources will be used to complement SUPER MoRRI data vehicles. Each data vehicle will be designed to support monitoring for a range of purposes and to generate outputs that support the activities of different types of users. The objective of the SUPER MoRRI data vehicles is to establish information about the patterns and pathways of institutionalisation of responsibility in R&I that can be constructively communicated to interested stakeholders.

Figure 2: Data vehicles for SUPER MoRRI



This document sets out a protocol for the conduct of the first study set out in the SUPER MoRRI Implementation Plan, the Country Correspondent Network (CCN) study of research funding organisations (CCN-RFO). The remainder of this document contains the following elements:

- an overview of the Country Correspondent Network;
- an overview of the CCN-RFO study, including an implementation timetable;
- a description of the study objectives;
- study definitions;
- a description of the methodology for desk research;
- a summary of the process for selecting and inviting participation in the study;
- ethics approval;

- methodology for desk research;
- the research fieldwork design, including the interview instrument;
- a reporting template;
- data handling and management procedures; and
- a description of the study quality assurance procedure.

Updated versions of this document will be available at Open Science Framework (OSF).

2. COUNTRY CORRESPONDENT NETWORK

A key component of both the Implementation and Case Research plans is the country correspondents network. The SUPER MoRRI CCN consists of one correspondent per European Union Member State (MS). A member of each SUPER MoRRI project team will be the correspondent for their respective country. The remaining members of the CCN were selected from applicants who responded to a call for correspondents conducted in late 2019 (Table 1).

The network of country experts is envisaged to contribute to SUPER MoRRI through three main activities:

1. provide background intelligence and information about policy and practice contexts in relation to RRI in their country;
2. conduct fieldwork, generate primary data and contribute where relevant to analyses for the study of responsibility in research funding organisations (RFOs) in their country (CCN-RFO study); and
3. conduct fieldwork, generate primary data and contribute where relevant to analyses for the study of responsibility in research performing organisations (RPOs) in their country (CCN-RPO study).

Country correspondents will receive online training regarding the conduct of these tasks at two online workshops to be held 29th November and 4th December, 2020.

In addition to the CCN, four international satellite partners (ISPs) will participate in the online training workshop and conduct fieldwork for the CCN-RFO study. These ISPs are:

- Peta Ashworth (Australia);
- Luisa Massarani (Brazil);
- Mu Rongping (PR China); and
- Michael Bernstein (USA).

The participation of the ISPs will provide a global comparative dimension. A number of important dimensions of the global context of understanding and implementing RRI were identified by the ISPs in the *Global Response to RRI Monitoring* report (deliverable D4.1, April 2020).

Table 1: Country correspondents

Correspondent	Country	Correspondent	Country
Magdalena Wicher* + Milena Wuketich*	Austria	Agrita Kiopa	Latvia
Marzia Mazzonetto	Belgium	Reda Nausedaite	Lithuania
Teodora Georgieva	Bulgaria	Marzia Mazzonetto	Luxembourg
Ruzica Tokalic	Croatia	Edward Duca	Malta
Petros Pashiardis	Republic of Cyprus	Inge van der Weijden*	Netherlands
Ondrej Daniel	Czech Republic	Laura Drivdal*	Norway
Astrid Lykke Birkving*	Denmark	Anna Domaradzka	Poland
Arko Olesk	Estonia	Luis Junqueira + Ana Delicado	Portugal
Mika Nieminen	Finland	Ana Godonoga	Romania
Suzanne de Cheveigne	France	Tomas Michalek	Slovakia
Hendrik Berghäuser*	Germany	Jadranka Turnes	Slovenia
Panagiotis Kavouras	Greece	Paula Otero-Hermida*	Spain
Peter Kakuk	Hungary	Gustav Bohlin	Sweden
Padraig Murphy	Ireland	Bernd Stahl	United Kingdom
Anna Pellizzone	Italy		

* SUPER MoRRI team member

3. OVERVIEW OF THE CCN-RFO STUDY

The overall aim of this project is to examine the mechanisms through which research funding organisations (RFOs) enhance responsibility in research and innovation. Mechanisms that will be the focus of CCN-RFO include:

1. setting priorities for research funding;
2. designing funding instruments; and
3. conducting assessments of grant proposals.

For each of the countries included in the CCN-RFO study, a selection of RFOs will be invited to participate (see RFO Selection Criteria, below).

The CCN-RFO study will involve three major tasks for the correspondent within each country. The national correspondent will:

1. study publicly available strategic documents relating to the policies and priorities of the organisation;
2. perform a limited number of interviews regarding the mechanisms of priority setting, design of funding instruments, and assessment procedures; and
3. produce written summaries of their desk and field research activities.

The CCN will work from this shared study protocol document, which specifies the research process for the study and details the quality assurance procedure. To the extent that the SUPER MoRRI international satellite partners are able to contribute to this study, additional RFOs in their respective country may be added to the overall sample of RFOs to provide a global comparative dimension.

Results from the CCN study of Research Funding Organisations were planned for inclusion in the First Monitoring Report. However, due to delays related to the SARS-CoV-2/Covid 19 public health pandemic, these results will now first appear in the Second Monitoring Report (due April 2022). Subsequently, a co-creation user-group will be invited to discuss the relevance and quality of the results and potential provisional indicators identified, in order to prioritise the selection of indicators and other elements to be transferred to the SUPER MoRRI dashboard (WP3). Table 2 specifies the implementation activities for CCN-RFO, their provisional timing and the division of leadership responsibilities among SUPER MoRRI partners.

The CCN-RFO study is **not designed to assess or evaluate RFOs either individually or comparatively**. The study wishes to understand how RFOs work to improve responsibility in research practices and cultures. We also want to gather inspiring examples and innovative approaches of RFOs' work in this regards. Of central interest is how RFO stakeholders, both scientific and societal, may be able to contribute to RFOs' setting of priorities, development of funding instruments and research assessment processes.

Table 2: Implementation timetable, CCN-RFO study

Period	Activity	Responsible
June 2020	Drafting of CCN-RFO study protocol	CSIC
July 2020	Review and comment on first draft of Protocol	All
July - September 2020	Pilot interviews and completion of protocol	AU, CSIC
November 2020	Ethical approval of study protocol	Fraunhofer
November - December 2020	CCN training workshop (online); user revisions and final quality assurance (QA) procedure for CCN-RFO protocol	AU, CSIC
December 2020 – March 2021	CCN conducts field work	AU, CSIC
March 31, 2021	Deadline for submission of draft CCN case reports	CSIC, AU
April 2021	QA procedure for case reports	CSIC, AU
April - May 2021	Revision of pre-coding schema, coding protocol developed	CSIC, AU
May 2021	Final submission of RFO Case Reports Transferring of study materials from CCN to Own Cloud	CSIC, AU
May - June 2021	Coding of case reports	CSIC
July - September 2021	Analyses and preparation of descriptions, potential indicators and visualisations for inclusion in Second Monitoring Report	CSIC, AU
April 2022	Presentation of preliminary results in Second Monitoring Report	CSIC, AU
May 2022	User-group review and deliberation	CSIC
June – October 2022	Final identification of 'exemplary cases', indicators and material to be transferred to WP3 and WP6	CSIC

4. STUDY OBJECTIVES

The CCN-RFO study is designed to address the general objective of understanding how research funding organisations devise and operationalise processes and instruments for allocating scarce resources to research and innovation activities, such that these processes and instruments (or aspects of them) support the institutionalisation of responsible research practices and the building of responsible professional competences, careers and cultures. This includes any elements that are designated as 'RRI', but is not limited to these.

This overall objective can be broken down into two project objectives.

- RFO-Obj1: Identify relevant RFO policies, programmes and practices and specify how they support and advance responsibility in research; and
- RFO-Obj2: Identify how RFOs define the anticipated benefits of these policies, programmes and practices and specify how they monitor their effectiveness.

These objectives can be applied to each and all of the roles and functions of an individual RFO. Obviously, any policies, programmes and practices that are designed explicitly to enhance responsibility fall within the scope of these objectives, including both those that use the designation 'RRI' and those that do not.

5. STUDY DEFINITIONS

The CCN-RFO seeks to identify support for the institutionalisation of responsible research practices and the building of responsible professional cultures in the work of RFOs. Table 3 summarises elements that fall within our definitions of **responsible research practices** and **responsible research cultures**. Responsible research practices refer to how science is done. Responsible research culture refers to how science is organised, through appropriate career structures and responsible scientific communities and institutions. The items included are not an exhaustive list of relevant elements and will be added to in the course of the CCN-RFO study and SUPER MoRRI. There is also obvious overlap between these two categories as they are mutually co-constitutive and reinforcing of each other.

Table 3: CCN-RFO study definitions

Responsible research practices	**Refers to all aspects of doing research**
	Aspects of how research is designed: *gender analysis; pre-registration; reflection on potential negative consequences; citizen science; non-academic partners; consultation with stakeholders about research questions or methods; co-creation of research problems, questions and approaches with diverse partners; etc.* How a research design is implemented: *openness; reproducibility; research integrity; ethical conduct; transparency regarding design modifications; etc.* How research is reported and disseminated: *FAIR open data deposited; no publication fraud; no p-hacking; dissemination to participants and stakeholders; communication to the public; etc.*
Responsible research culture	**Refers to all aspects of the research environment**
	Training of researchers: *open science; FAIR open data; principles of anticipation, inclusiveness, reflection and responsiveness (AIRR); societal readiness thinking tool; research integrity and ethics; cultural sensitivity; engaged research designs; etc.* Assessment of research and researchers: *Declaration on Research Assessment* (DORA) *Recognition of and reward for both researchers' scientific contributions and their societal contributions: employment; promotion; evaluation; grant proposal assessment; alternative CV formats and criteria for assessments of various types; etc.* Recognition of and reward for researchers' interdisciplinary contributions: *evaluation; grant proposal assessment;* Shared and systemic valuing of responsible research practices Support for developing responsible professional competences by leadership at all levels of formal and informal organisation of research: *groups; specialisations; epistemic communities; scientific fields;* Formal support (incentives and rewards) for research careers that make both scientific and societal contributions: *universities; public sector research organisations; research funding organisation; accreditation agencies; evaluation frameworks; etc.* Formal support (organisational procedures) for responsible research cultures: *gender equality in hiring panels, ethics committees, management committees; etc.*

6. PARTICIPANT RFO SELECTION AND INVITATION

6.1. Case Selection

Selection of the RFOs for inclusion in the study will be on an information-oriented basis (Flyvbjerg 2001), according to our expectations about the amount and type of available information. Due to the small number of RFOs operating in most national contexts our selections will often be both critical cases and paradigmatic cases within the landscape of existing RFOs.

Criteria for selecting the two key cases are:
RFO-MS1: the most important public sector research funding organisation in the country, by total budget and/or by influence and importance within the scientific community.
RFO-MS2: a research funding organisation (in the same country) that also funds research projects through regular research funding Calls.
(Note: replace MS in the RFO identifier with the country initials.)

Although these criteria are straightforward, and in many countries the 'most important' public RFO will be easily identified, this will not always be the situation. The correspondent could choose between equally important alternatives due to a secondary criterion such as ease of access, or demonstrated involvement in promoting responsible research practices or RRI.

The choice of a second funding organisation may be influenced by a number of different factors, such as their importance in a particular scientific field, their leadership of funding at a regional level, or their known focus on societal engagement and the funding of societally relevant research, for example. It would be best to choose RFOs that make Calls for funding in which both a proposed research project and the proposing researcher's track record are assessed, wherever possible.

Where there are multiple interesting candidates for the second RFO some degree of institutional diversity, or different emphases in terms of funding orientation (basic research, applied research, innovation), would be other factors that could be considered. In case of uncertainty, please feel free to discuss the alternatives with your Team Leader or the CCN-RFO study leader, prior to making a final decision.

Of course, if the correspondent wished to conduct research with an additional RFO then this would also be welcomed, though no changes to the CCN budget could be made. Once you have made your selection please advise your Team Leader or the study leader via email.

6.2. Identification and invitation of interviewees

Country correspondents will be responsible for contacting the selected RFOs and seeking their participation. The best approach for achieving this will largely depend on each correspondent's contact network and familiarity with administrative context in their country. Correspondents should feel free to use their own judgement about how best to approach each RFO.

In general**, we are interested in a relatively senior official of the RFO who can articulate the organisation's strategic view (or lack thereof) regarding the institutionalisation of responsible practices and cultures in research**. This strategic view should go beyond simply the implementation of 'RRI' per se, to embrace the RFO's understanding of its role in shaping the relationship between science and society through the institutionalisation of responsible research practices and cultures. The interviewee should also be **directly engaged with actual funding processes in the RFO, particularly funding instruments and research proposal assessments**. The level and title/role of a suitable interviewee will quite possibly vary between organisations, however it will be important that the interviewees has been working in the organisation for a substantial period of time and is not a recent appointee.

However, we are aware that there will be potential difficulties identifying a suitable interviewee depending on the **size and scope of the RFO**. Very large RFOs can have multiple funding programmes and organisational units administering distinctive funding areas. In such organisations, a Director or senior official with broad overall or strategic responsibilities may lack direct engagement with processes and details regarding funding instruments and assessment processes. In this situation, it would be better to seek **an intermediate level official, who is engaged directly with specific funding processes but also connected to higher levels of strategic direction**. For smaller RFOs, it is anticipated that it will be relatively straightforward to identify an interviewee who is both engaged with funding processes and aware of or involved in the strategic approach of the RFO. Where the interviewee is able to speak only about a part or programme within the RFO's work, the interviewer should prompt for whether their part is typical of the RFO as a whole. This could be done in the discussion following the opening question.

Once again, country correspondents will be free to exercise their own judgement about the interviewee suitability, including also considerations about access. **It will be very important to go into the interview as well prepared as possible regarding the organisational level and responsibilities of the interviewee**, including whether they are likely to speak about the RFO as a whole, or about the part of the RFO in which they work. CCN-RFO study leaders will be available for direct discussions with country correspondents about problems or doubts arising from this crucial issue whenever required.

The goal is to conduct one interview with each RFO, however where access and opportunity for additional interviews exists then the correspondent can decide to conduct a second or third interview. In some cases, an interviewee may offer to put you in contact with a colleague in the organisation who may be better placed to answer some of the question. It would likely be highly beneficial for the study if such opportunities could be taken up by country correspondents, where it is possible for them to do so. Information for the reporting template would then be a synthesis of the data generated by the multiple interviews, and could point out different perspectives that co-exist and additional issues that may emerge.

To **invite participation**, wherever possible it would be best to start informally through the correspondent's professional network to try and identify the most appropriate role in an RFO for the interview, and the individual occupying that role. It is preferable that the target for participating in the interview has prior knowledge of the formal approach prior to receiving it. Cold-calling or emailing a potential interviewee may work out in some cases, but if there is no response or a refusal it can sometimes be difficult to then approach a different person in the same organisation.

Please note that the CCN-RFO study would like to achieve the greatest possible degree of gender balance among interviewees and keep this in mind when searching for, or selecting among, potential interview candidates.

A number of support documents will be provided that correspondents can use to assist the process of inviting an interview participant. These documents will be available for correspondents to download from the CCN-RFO study OwnCloud space, including:

- A support letter from the European Commission;
- A text for the invitation email that introduces the SUPER MoRRI project and the CCN-RFO study, which correspondents can translate and adapt to their own needs; and
- A SUPER MoRRI project information sheet.

7. ETHICS APPROVAL

The SUPER MoRRI CCN-RFO study received ethics approval from *Fraunhofer*, Munich on the 12th of December 2020. The Ethics Approval and Ethics Declaration are attached as Appendices. As part of the study ethics process Country Correspondents must sign a form confirming they have read and will comply with the Ethics requirements. The compliance form is also attached as an Appendix. SUPER MoRRI partners in some countries may also need to notify relevant authorities of their intention to conduct research and the ethics approval obtained.

Ethics approval information is included in the informed consent form for participants. The informed consent must be signed under our ethics approval, without this data cannot be used. Please upload the signed form to your country folder on OwnCloud then delete the local copy. Signed informed consent forms will be moved to a folder in the SUPER MoRRI OwnCLoud safe space, where they will be stored securely and treated confidentially by project partners.

8. METHODOLOGY FOR DESK RESEARCH

Each correspondent will produce a concise **RFO Case Report** for each participant RFO, very briefly summarising the organisation, its place in the national research and innovation system and highlighting its key research funding policies and programmes. This summary will be submitted through set fields included in the RFO Case Report template (below).

A series of simple desk research steps will be required for the RFO Case Report:

- Familiarise yourself with the RFO Case Report template;
- Identify and download key policy and programme documents, including national research priorities, RFO funding priorities, funding calls and assessment criteria, for each RFO;
- Upload a copy of each key document to the project OwnCloud repository at Fraunhofer ISI (maximum ten documents per case); these documents can be annotated to highlight elements relevant to the RFO Case Report; and

- Write responses to questions in the first section (RFO Background Information) of the Case Report template.

Background knowledge developed through desktop research will also feed into the discursive summary section of the Case Report (see Table 10).

Wherever possible, key documents should be collected in both the local language and in English. If both documents are available, please annotate the English version primarily, but also write short comments in local language versions where there is additional information or detail not included in the English version.

Relevant documents to consider include a statement of national research priorities, usually found in a national research strategy or plan, which may influence or direct RFO priorities. Current policy documents or position papers developed by the RFO itself should be reviewed. One or two relevant funding Call documents should be examined in detail and annotated to highlight relevant responsibility elements and definitions of criteria such as quality, excellence or impact that are contained. Whilst it is important to focus on one or two main Calls, interesting or innovative examples of responsibility-related elements in other calls should also be noted and can be followed up in interview.

It would also be relevant to note whether the RFO, either on its website or in documents examined, endorses responsible research related declarations such as DORA, FAIR or the Leiden Manifesto. A useful summary of these and other similar initiatives is contained in a recent position paper on research funders' role in responsible research assessment.

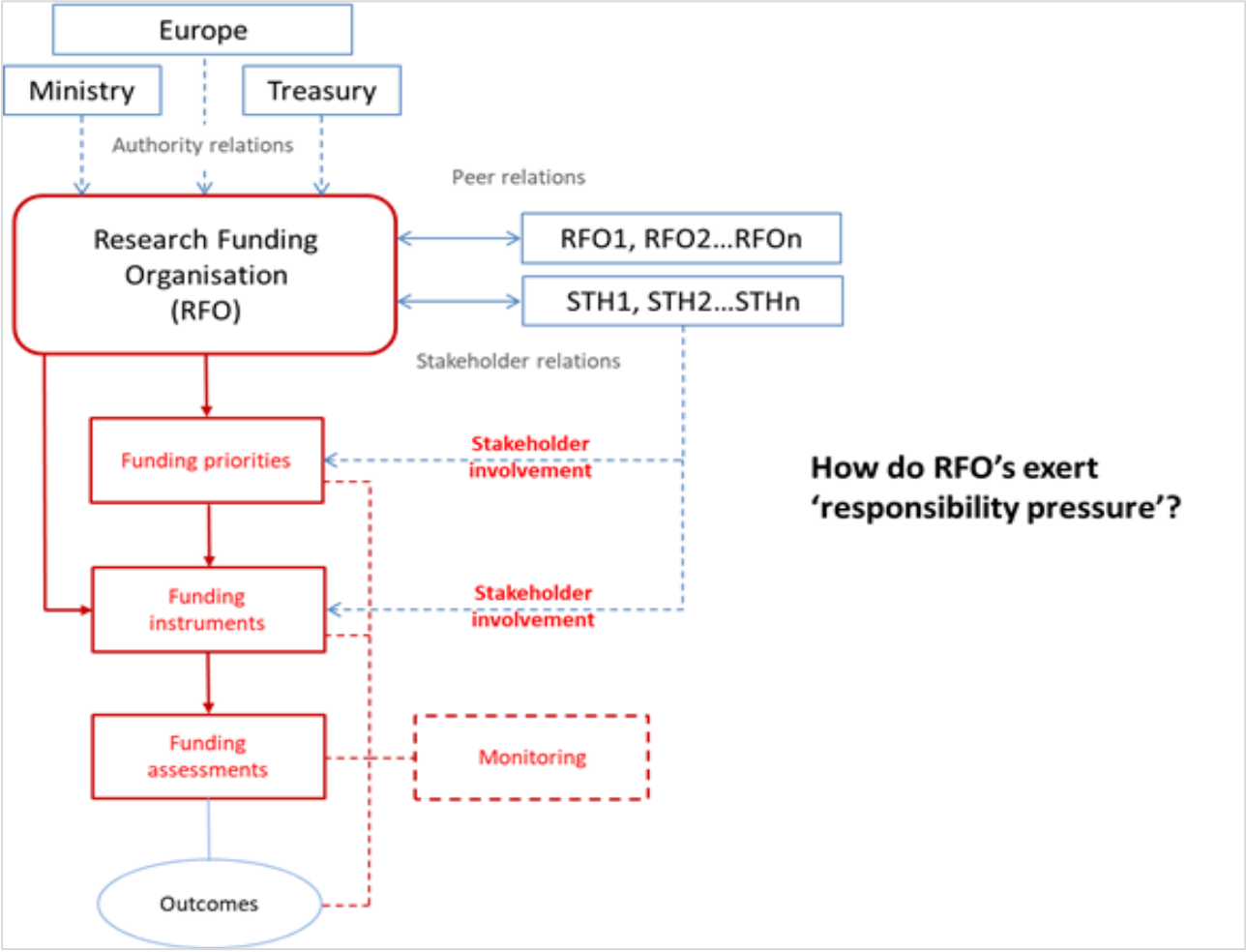
A small number of background documents on national research systems could be consulted in preparation for completing the RFO Case Profile task. These include:
RIO Country Analysis
EUFORI study country reports

9. RESEARCH INTERVIEW PROTOCOL

The most important task in the CCN-RFO study is the conduct of interview(s) with participating RFOs. This section sets out the guidelines on the conduct of the interviews including the main themes, research questions, variables and their dimensions, and derives a set of questions for the interviews.

The interviews are designed to answer our general research questions: How do research funding organisations support responsible practices and cultures in science? Which mechanism(s) do research funding organisations use to exert 'responsibility pressure' on scientific practices and cultures? What are the strategic priorities of the RFO for improving the alignment between scientific research and societal outcomes in the future?

Figure 3: CCN-RFO study research question



9.1. CCN-RFO empirical research questions

The CCN-RFO study investigates how research funders are able to influence their clients to adopt increasing levels of responsibility. The main research question is how do research funding organisations exert pressure for responsible research and research cultures?

Three empirical research questions (RQs) guide our investigation, each linked to one of the key mechanisms that RFOs use to allocate scarce research funding resources. These are mechanisms that allow RFOs to (directly or indirectly) influence what research is done and how it is done. The three RQs are:

CCN-RQ1: How do research funding organisations support the development of responsible research practices and cultures through the design and implementation of **priority settings**?

CCN-RQ2: How do research funding organisations support the development of responsible research practices and cultures through the design and implementation of **funding instruments**?

CCN-RQ3: How do research funding organisations support the development of responsible research practices and cultures through the design and implementation of research **funding assessments**?

The interviews will prioritise obtaining responses to the three empirical research questions initially. The three mechanisms for exerting 'responsibility pressure' have been developed from the prior literature on authority relations between research funders and scientific communities (Whitley, Gläser & Engwall, 2010).

In answering these empirical research questions we are particularly interested in the contribution of **RFO stakeholders**. By RFO stakeholders we refer to organisations or other agents that have an interest in the main field of operation of the RFO (science, research and innovation) and which might wish to contribute to the setting of priorities, design of funding instruments or research assessment processes. RFO stakeholders can be divided into two main groups (what follows are not intended as exhaustive lists).

- Scientific stakeholders: research performing organisations; RPO representative organisations; learned or science academies; alumni associations; technology transfer offices; research centres or groups; individual scientists; etc. and
- Societal stakeholders: government agencies (e.g. health, military, etc.); industry associations; individual firms; NGOs organised around various issues (e.g. environment, immigration, etc.); civil society organisations of many kinds; citizen science groups; labour unions; career/professional development organisations; patient organisations; citizens; etc.

There are prompts to ask about stakeholder involvement in the three mechanisms included in the interview guide. The importance of this aspect of the research and how to approach it will be a focus of the CCN training workshop.

9.2. Interview questions

The interview questions are organised in five sections.

9.2.1. Opening

In the preamble to the initial question of the interview the researcher should:

- introduce themselves;
- ask the interviewee to state their position in, or relation to, the RFO; and
- outline the structure of the interview.

The initial phase of the interview will allow the respondent to set out their broad understanding of the RFO's role in the research system. The respondent is asked or prompted to articulate the 'role' or 'vision' of their organisation in shaping the research system. This can refer in part to the role they expect the research that they fund will play in future societies. It can refer to the normative values that might underpin this expected role. It can also refer to expectations about how the research should be done, e.g. ethically, openly, etc.

The concepts 'role' or 'vision' may not be the right one in some languages/cultures, or may be considered too abstract by respondents. An appropriate way to frame this opening may therefore need to come from country correspondents themselves. **This opening will be discussed and tested with correspondents in the training workshop.**

The opening phase and initial question are also vital to encourage the respondent to become talkative. This is why the initial question is relatively open and the interviewer should persist with different framings of the opening question until the respondent is comfortable with what is being asked and finds their voice. Allowing the respondent space to talk and reflect is more important than trying to steer what they actually say in the opening phase.

Nevertheless, the interviewer should try to shape this initial dialogue in order to do two things:

a) **allow the respondent to construct an overall picture of the work the RFO**
b) once the respondent has outlined this overall vision of the RFO, **question or prompt for the place of 'responsibility'** and the development of responsible research practices and cultures and/or RRI in the RFO's work. The respondent may have already outlined a vision that is strongly motivated by responsibility, or elements that we would consider fit within our broad definitions of responsible research practices and cultures. Respondents can also be prompted specifically about their awareness or implementation of RRI.

Table 4: Interview questions and prompts, opening

	Main question - key interviewer prompts in question form
1. Opening	**How does your organisation work to support scientific research and its contribution to society?**
	- What place does 'RRI' or the development of responsible research practices and cultures have in your organisation's work?

9.2.2. Research funding priorities

The first question following the Opening relates to research funding priorities.

The initial aim of this phase of the interview is to understand the RFO's **process for developing and deciding on their funding priorities**. How does the RFO arrive at their funding priorities and who contributes to defining these priorities? Here we want to know if there is a formal process and how it works; which actors play a part in shaping research priorities? Are there informal elements that are also important to understand?

We would like to know if these priorities are understood by the respondent to 'fit' with the broader societal governance and policy landscape. Are priorities developed in coordination with other R&D linked socio-economic policies, such as smart specialisation (RIS3), for example?

It is important to prepare for these questions by reviewing the relevant documentation, to have knowledge of the RFOs funding priorities. It is also useful to understand if priorities are formally arranged as Challenges, Missions or Pillars, if they are aligned with external objectives such as sustainable development goals (SDGs), or national interests such as education, health or research. The advantage of this familiarity will be in focusing on how priorities are developed instead of running through a checklist of actual priorities. It may also allow the interviewer to prompt the respondent about the development of particular key priorities, for example.

Without asking directly, in asking these questions we would also like to be able to form a broad understanding of the **degree of autonomy the RFO has in setting funding priorities**. Does the RFO direct the process of setting priorities, for example, by interacting with its direct stakeholders in the research community and beyond? Do they receive a set of priorities from another part of the government or state administration (public), or from their Board (private)? This may also relate to the formal status of the RFO, for example as an independent public agency, or as a unit of a Ministry within the national public administration. Country correspondents should be clear on the formal status of the RFO from their desktop research.

Table 5. Interview questions and prompts, research funding priorities

	Main question - key interviewer prompts in question form
2. Research funding priorities	**How are your organisation's key research funding priorities set?**
	- Which stakeholders influence or contribute to this process? - Are funding priorities influenced by related policies?

9.2.3. Research funding instruments

This phase of the interview aims to understand how the design of the RFO's research funding instruments supports responsible research practices and cultures. A funding instrument refers to a programme or Call for research proposals that sets out detailed requirements for applications (eligibility, topics, budget, assessment criteria, etc.), resources to be committed by the funder and the process for execution of the Call. This information may be detailed on one or more documents.

In CCN-RFO we are particularly interested in funding calls for research projects in which grant assessment processes are 'dual', in that both the proposed project design and the researcher's track record are assessed.

The first question seeks to understand if funding instruments are designed in a way that engages within, and beyond, the research community. Whose voices contribute to how key concepts such as 'excellence' or 'impact' are translated into assessable criteria?

The second question is also a key question where the interviewee should be encouraged to talk about **how the design of funding instruments tries to, or is hoped to, influence the way in which research is done and the values that are embedded in research practices, communities and cultures.**

The interviewer should also try to find a way to formulate a follow-up question, or a prompt, that encourages the interviewee to **focus on a best practice example** (or examples) of how a funding instrument has attributes that encourage or require a responsible approach, for example inclusion of a gender analysis, commitment to open science, etc.

Table 6: Interview questions and prompts, research funding instruments

	Main questions - key interviewer prompts in question form
3. Research funding instruments	**How are your organisation's funding instruments designed?**
	- Which stakeholders influence or contribute to the design process? - What is the process for defining key funding criteria, such as "excellence" or "impact"?
	Do your funding instruments include any incentives or requirements for responsible research?
	- Listen/prompt for: i) engaged/participatory research designs; ii) gender analysis; gender balanced research teams iii) open science; iv) anticipation/reflection about potential consequences of research - positive and/or negative; v) ethical and research integrity considerations; vi) identification of beneficiaries; vii) consideration of innovation/impact pathways viii) citizen science

9.2.4. Research grant application assessments

This phase of the interview aims to understand how the assessment of applications for research funding support responsible research practices and cultures. The first question focuses on **the processes the RFO put in place for grant proposals and research assessment**. It allows the respondent to describe elements of the way these processes are organised to support responsible assessment.

The second question focuses on **how the assessment itself is done**, particularly what broader attributes of the proposal and the researcher's track record are taken into account beyond publication metrics. The interviewer may orient the respondent with a follow-up question or prompt asking whether an excellent proposal or researcher can be judged fairly if based purely on scientific publication metrics, or whether **past and potential benefits of the researcher's work for society** can also somehow be considered in the assessment.

The involvement of RFO stakeholders in assessment processes is of particular interest to CCN-RFO. Industry or other professional experts may be included on review panels for initially assessing applications or on assessment panels that rank and decide on cut-offs. Citizen juries may be set up to consider the merits of projects seeking funding. RFOs that are more innovation-oriented or focused on funding applied research

may require that industry or other non-academic partners are included in a collaborative or participatory research design to access project funding. It would be important in such cases to also prompt the interviewee to discuss **how responsible research practices or RRI approaches are considered in assessing applications for innovation or applied research focused funding**.

Note: in CCN-RFO grant assessment processes refer only to processes required to assess applications and award grants and not to any *ex post* evaluation or assessment of research conducted by grantees.

Table 7: Interview questions and prompts, grant applications assessments

	Main question - key interviewer prompts in question form
4.Research grant application assessments	**How does your organisation seek to ensure a responsible grant assessment process?**
	- Listen/prompt for: i) criteria for selecting reviewers (beyond H-index, etc.) ii) diversity in committee composition (gender, discipline) iii) involvement of societal actors (non-academic practitioners, professional experts, citizen juries, etc.) iv) guidance to avoid negative bias toward interdisciplinary research proposals; on gendered careers and researcher track records v) training on assessing societal contributions
	How does your organisation support responsible research assessment?
	- consideration of the value and impact of all research outputs (including datasets, software, etc.) - use a of a broad range of measures of quality and impact, including qualitative indicators - by valuing or rewarding research involving: i) collaborative/engaged/participatory research designs; ii) gender analysis; gender-balanced research teams iii) open science; iv) anticipation/reflection about potential consequences - positive and/or negative; v) consideration of ethical and research integrity issues; vi) identification of proposed beneficiaries; vii) consideration of innovation/impact pathways; viii) citizen science; ix) ethics and values in design (e.g. in ICTs)

9.2.5. Monitoring

This section inquires as to whether the RFO is monitoring its activities in such a way that might be producing data or information that could be of interest to SUPER MoRRI. The follow up on what monitoring they do generally should focus on aspects of responsible research and integrating more responsible approaches into their own activities.

Table 8: Interview questions and prompts, monitoring

	Main question - key interviewer prompts in question form
5. Monitoring	**How does your organisation monitor or evaluate the continued relevance and effectiveness of its work?**
	- Does this include monitoring progress toward more responsible research and/or responsible research funding processes? - What information is considered relevant to collect in this regard? - What information would support your work in this regard?

9.2.6. Closing

This section is designed to wrap up the interview and **allow the interviewee space to reflect** on any thoughts or relevant information that may have been prompted by the interview, or occured to them without really fitting with the questions being asked. If there are issues of interest that the interviewer has noted earlier in the interview these can be asked about now, either following the interviewee's reflections or once they indicate they have nothing further.

Table 9: Interview questions and prompts, closing

	Main question - key interviewer prompts in question form
6. Closing	**We have completed the formal part of the interview; on reflection following what we have talked about do you have any other comments to add that you consider may be relevant or of interest?**
	- Follow up on issues noted earlier in the interview

9.3. Conduct of the Interviews

The correspondent must ensure the participant has the maximum clarity and comfort about the conduct of the research interview, prior to commencement. The respondent shall be supplied with an Information Sheet about the project, its funding and objectives and the legal basis for the treatment of data in the project. The participant will also be asked to sign an Informed Consent form, confirming that that they understand the purpose of the interview and their right to withdraw from the interview (and participation in the project). The Information Sheet and the Informed Consent form are attached as Appendices to this document.

Recording of the interviews is not required. However, if the correspondent prefers to record the interview to improve their recall and reduce reliance on in-interview note-taking then they must request permission from the interviewee. If the interviewee agrees to the recording of the interview they should also be informed that recording can be paused or stopped immediately at their request. Transcriptions of interviews are not to be uploaded to OwnCloud or otherwise shared with the SUPER MoRRI team. Interview recordings and notes must be stored securely by the Correspondent until the relevant RFO Case Report is approved and then deleted.

Where interviews are not being recorded, note-taking will be of even greater importance. It may even be advisable to take a second person as note-taker to the interview. It is always best to try and fill out your interview notes as soon as possible after the interview, but particularly where no recording was made.

The CCN-RFO Interview Instrument is designed as a structured guide to ensure the collection of essential information of the study. However, it is NOT a prescription for the conduct of the interviews that must be followed. Experienced interviewers may prefer to organise the interview differently and trust in their interviewing skills to capture the critical information as described in this protocol and required in the reporting template. Considerable time will devoted to the conduct of the interviews in the CCN training workshop.

Due to the SARS-CoV-2/Covid-19 pandemic most interviews are likely to be conducted online. If possible, please email the Informed Consent form, signed and dated by you to the interviewee and ask them to sign and return to you via email or post.

9.4. Language

This protocol and the interview guide will only be provided in English. The key written research outputs to be provided by the country correspondents will also be in English. However, the language used to conduct the interviews is a matter for each country correspondent. Country correspondents also have the freedom to translate questions as they consider necessary for the best outcome in the conduct of the interview.

A decision about the language used in the interview will also depend on the English language competence and/or preference of the interviewee. If the interviewee is not known to the country correspondent, it would be best to settle on the language for the interview beforehand. This will allow for preparation of translated versions of the questions. An interview can also be conducted formally in English, but with

switches to the native language to allow for further clarification or rendering of greater detail or nuance in an explanation, for example.

Issues regarding the translation and 'translatability' of the English language questions will be fully discussed during the project training workshop.

10. REPORTING

The national correspondent will be required to produce a RFO Case Report for each RFO studied, consisting of:

- A short background statement based on publicly available information describing the RFO, including bullet point lists setting out:
  - the RFO's research priorities
  - main funding instruments
  - criteria for assessing research 'excellence' or 'quality' as specified in major funding calls.
- A descriptive-analytical report based on the preparatory work and the interview. This is divided into sections: priority setting; funding instruments; grant assessments; and monitoring (maximum three pages).
- A discursive summary of each RFO case (1-2 pages).
- A list of the documents that were examined and used for preparation and analysis.

The country correspondent will provide the information for each RFO Case Report through a simple template. The template sets a soft limit on the amount of text that can be submitted for each information field. These limits are designed to ensure the country correspondent provides a synthesis of the information they gather. The template can be completed as a word document or a google doc.

Each field in the template will include prompts for information that must be supplied. Table 10 shows the template fields and the information required. Note that where there is nothing to report regarding required information please state that this is the case, e.g. 'the RFO does not have a strategy regarding RRI'.

A preliminary coding guide for the CCN-RFO Case Reports is attached as an Appendix for use by SUPER MoRRI team members in coding RFO Case Reports. This guide contains a non-exhaustive selection of variables and dimensions that might be expected to emerge from the Case Reports, particularly the interviews. Country correspondents may also find this preliminary guide useful as a reference document in preparing for the interview and writing their Case Reports.

The discursive summary should include, wherever possible, a brief discussion of whether RFOs are fulfilling their own principles or objectives as expressed in their key documents. Are they engaged in institutional change processes, what are the objectives, and how is this progressing? This summary can be from the perspective of the respondent and/or the impressions of the country correspondent, or a combination of the two.

RFO Case Reports are to be written in English. Feedback and support on language quality of written work will be available through the quality assurance process. Any concerns about English writing can also be discussed with your Team Leader or you could follow your normal process for quality assurance with English writing.

Case Reports are the key empirical input for the study outputs. Case Reports will not be published to maintain the anonymity of participating RFOs. Direct quotes can be included in Case Reports, but should not include information that makes it possible to identify the interviewee.

Although not included in the interview instrument, the non-funding activities of RFOs are also of secondary interest and should be largely know from desktop research. Such activities, e.g. science communication, may be raised by the interviewee and can be followed up at the end of the interview particularly if interviewees appear to attach importance to these activities in relation to the capacity of the RFO to exert responsibility pressure. A short summary of these activities and their significance in this regard can be included in the descriptive analytical summary of the interview(s).

Table 10. Summary of CCN-RFO Case Report template: field, description, required information*

Template Field	Description - required information
RFO Background Information (four items; approximately one page for the RFO)	Please briefly describe the research funding organisation (RFO) and its position in the overall national landscape for research funding.
	Please describe any explicit strategy or policy elements regarding RRI, Open Science, or other promotion of responsible research practices and culture.
	Please use bullet points to list: a) the RFO's major research funding priorities b) the RFO's major funding programmes c) excellence criteria in funding programmes
	Please describe briefly any other policies or factors you consider relevant for understanding the work of the RFO.
Descriptive - Analytical Summary of the Interview(s) (six items; maximum three pages for the RFO)	Please briefly summarise the RFO's approach to shaping research and its societal contribution.
	Please describe how the RFO uses research priority settings in this work, including any references to supporting responsible research practices and cultures
	Please describe how the RFO uses funding instruments in this work, including any references to supporting responsible research practices and cultures
	Please describe how the RFO uses grant application assessments in this work, including any references to: a) ensuring a responsible approach to the conduct of research assessment in the organisation; b) support responsible assessment of research and researchers.
	Please summarise how the RFO monitors or evaluates the relevance and effectiveness of its funding programmes and instruments and its RRI or other relevant initiatives (where applicable)
	Please describe any other information emerging in the interview(s) that you consider relevant for the RFO Case Profile.
Discursive Summary of the Case (one field; 1-2 pages)	Please write a discursive summary of the RFO case, summarising all elements and including your impressions of the RFO and its approach to supporting the transformation of research practices and cultures in the direction of greater responsibility. Please highlight any tensions between how the RFO defines and/or

	operationalises 'excellence' and how they define and/or operationalise expectations regarding responsible research practices and cultures.
Documents (one field)	Please list all the relevant documents used in this RFO Case Profile, minimum two - maximum ten. Please ensure the documents listed are uploaded to the secure space at Fraunhofer OwnCloud

* A printable version of this template is attached as an appendix.

11. DATA HANDLING AND MANAGEMENT

All elements of each RFO Case Report generated by country correspondents will be uploaded to a secure space on the *Fraunhofer* OwnCloud platform. Details regarding access to the secure space on OwnCloud will be provided separately.

The anonymity of participating RFOs and interviewees will be preserved in all published materials from the CCN-RFO study. All information and data gathered through interviews will be treated confidentially and anonymised.

Country correspondents may wish to record interviews and produce a transcript to assist themselves with writing the RFO Case Report. Permission to record the interview must be obtained from the interviewee beforehand. Audio recordings and interview transcripts are **not** to be uploaded to the OwnCloud platform, but stored securely by the correspondent. Where a recording or transcript exists, direct quotes from the interview can be included in the descriptive-analytical summary of the interview(s). However, these should be avoided where the identity of the interviewee would be revealed. Once a RFO Case Report has been approved, audio recordings and transcripts should be deleted by the country correspondent.

It will be the responsibility of the SUPER MoRRI team to ensure that any direct quote included the Case Report that is used in subsequent project outputs does not reveal the identity of the RFO concerned.

In general, the SUPER MoRRI team will be responsible for ensuring that any personal information related to interview participants is maintained confidentially. The SUPER MoRRI Data Management Plan contains comprehensive information about data security, handling and use.

12. QUALITY ASSURANCE

A quality assurance procedure will be used to ensure minimum comparable information from all interviews conducted. Country correspondents will be grouped together in small cells (n=4-6) to act as peer support and review partners. A member of the SUPER MoRRI consortium will be included in each group.

In relation to the descriptive-analytical summary of the interviews and the discursive summary of the case components of the RFO Case Report, the SUPER MoRRI partner in each sub-group will circulate their draft versions to provide a model for correspondents.

Each RFO Case Report submitted will be reviewed by the leaders of the CCN-RFO study (INGENIO) and WP2 (Aarhus). Any requests for clarifications will be sent within two weeks of submission, with a turnaround for responses of a further week, prior to final acceptance of the profile.

Coding of the Case Reports will be led by Aarhus with the involvement of INGENIO and Team Leaders depending on their availability. Where possible coded Case Reports will be shared and compared among Team Leaders to improve inter-coder reliability.

13. INTERNATIONAL SATELLITE PARTNER FIELDWORK

The international satellite partners (ISPs) will follow the CCN-RFO study protocol in its main objectives and approach, to enable a strong degree of comparability with the work of the European correspondents. However, contexts for research funding and the way in which responsible and research and its societal contribution is understood, described and supported in Australia, Brazil, PR Chin and the USA may vary considerably.

In this light, ISPs will also be asked to use their judgement in presenting the study and conducting fieldwork so as to enhance the effectiveness of the study in their own contexts. Key here is the most appropriate form to present RRI, or the concept of responsible research practices and cultures. ISPs should adapt the language and use of concepts to enable an entry point and framing of discussion that resonates with participants in their context. It should then be possible to return to the main lines of questioning included in the study.

A short statement on the conceptual and terminological framing of 'responsible research and innovation' in the ISP countries can be included in the 'other information' section of the case background in preparing Case Reports.

REFERENCES

Flyvbjerg, B. (2001) *Making Social Science Matter*. CUP, Cambridge.

Whitley, R., J. Gläser & L. Engwall (2010) *Reconfiguring Knowledge Production*. OUP, Oxford.

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APPENDICES

CCN-RFO study interview instrument (basic prompts and simple question list versions)
Invitation email text
Informed consent form
CCN-RFO pre-coding guide
RFO Case Report template overview
Ethics Approval
Ethics Declaration
Country Correspondent confirmation of Ethics compliance

CCN-RFO study interview instrument

Thank you for agreeing to take part in this interview. I confirm that you have received and signed the project Informed Consent form and an Information Sheet summarising the project, both of which contain ethics approval and contact information for the study in case any issue should arise from this interview that you may later wish to discuss in confidence.

Could you please state your name and your relationship to [name of RFO].
[IF APPLICABLE: Could you please confirm that we have agreed to record this interview? Thank you.]

CCN-RFO interview questions with prompts

F.01 **How does your organisation work to support scientific research and its contribution to society?**

- What place does 'RRI' or the development of responsible research practices and cultures have in your organisation's work?

F.02 **How are your organisation's key research funding priorities set?**

- Which stakeholders influence or contribute to this process?
- Are funding priorities influenced by related policies?

F.03 **How are your organisation's funding instruments designed?**

- Which stakeholders influence or contribute to the design process?
- What is the process for defining key funding criteria, such as "excellence" or "impact"?

F.04 **Do your funding instruments include any incentives or requirements for responsible research?**

- Listen/prompt for: i) engaged/participatory research designs; ii) gender analysis; gender-balanced research teams iii) open science; iv) anticipation/reflection about potential consequences - positive and/or negative; v) consideration of ethical and integrity issues; vi) identification of proposed beneficiaries; vii) consideration of innovation/impact pathways; viii) citizen science.

F.05 **How does your organisation seek to ensure a responsible grant assessment process?**

- Listen/prompt for:
  - i) criteria for selecting reviewers (beyond H-index, etc.)
  - ii) diversity in committee compositions (discipline, gender, non-academics, professional experts, citizens, etc.)
  - iii) guidance to avoid negative bias toward interdisciplinary research proposals; on gendered careers and researcher track records
  - iv) training on assessing societal contributions

F.06 **How does your organisation support responsible research assessment?**

- i) consideration of the value and impact of all research outputs (including datasets and software)
- ii) use a of a broad range of measures of quality and impact, including qualitative indicators, narrative of societal contribution, etc.
- iii) by valuing or rewarding research involving:
  - i) engaged/participatory research designs; ii) gender analysis; gender-balanced research teams iii) open science; iv) anticipation/reflection about potential consequences - positive and/or negative; v) consideration of ethical and integrity issues; vi) identification of proposed beneficiaries; vii) consideration of innovation/impact pathways; viii) citizen science; ix) ethics and values in design (e.g. in ICTs)

F.07 **How does your organisation monitor or evaluate the continued relevance and effectiveness of its work?**

- Does this include monitoring progress toward more responsible research and/or responsible research funding processes?
- What information is considered relevant to collect in this regard?
- What information would support your work in this regard?

F.08 **We have completed the formal part of the interview; on reflection following what we have talked about do you have any other comments to add that you consider may be relevant or of interest?**

- Follow up on issues noted earlier in the interview

Thank interviewee and confirm possibility of following up on issues via email.

If possible, go have a tea or coffee and write up any important notes straight away.

CCN-RFO Interview Questions

F.01 How does your organisation work to support **scientific research** and its **contribution to society**?

F.02 How are your organisation's key **research funding priorities** set?

F.03 How are your organisation's **funding instruments** designed?

F.04 Do your **funding instruments** include any incentives or requirements for responsible research?

F.05 How does your organisation seek to ensure a **responsible grant assessment process**?

F.06 How does your organisation support **responsible research assessment**?

F.07 How does your organisation **monitor** or evaluate the continued relevance and effectiveness of its work?

F.08 We have completed the formal part of the interview; on reflection following what we have talked about do you have any other comments to add that you consider may be relevant or of interest?

Invitation email text

Model text for email to potential RFO interviewees
(Replace ORGANISATION NAME with the name of the RFO)

Responsible research and innovation (RRI) aims to support processes of transformation of the R&I system through better alignment with societal values, needs and concerns, and by encouraging societal actors to work together during the whole research and innovation cycle.

The SUPER MoRRI project aims to develop a monitoring framework to support R&I stakeholders in their efforts to shape institutional change toward more responsible research practices and cultures.

SUPER MoRRI is undertaking several studies designed to develop both our understanding of R&I stakeholders' transformative activities and to develop monitoring elements, such as best-practice examples or indicators, that can support the diffusion of these activities.

The study of Research Funding Organisations (RFOs) is a key study within SUPER MoRRI. The current initial phase of the RFO study involves desk research and interviews with participating RFOs, to establish a sound understanding of RFOs' activities that contribute to shaping research practices and cultures. In the second phase, the SUPER MoRRI team and a small Working Group of RFOs will co-create monitoring elements that can support RFOs in this ongoing work. The study is not a benchmarking or evaluative exercise but is focused on how monitoring can contribute to strengthening RRI.

We would very much appreciate the participation of ORGANISATION NAME in this study.

I am writing to you to invite your participation in an interview on behalf of your organisation. This interview would involve a general discussion about your organisation´s work, and a small set of questions (six) regarding your organisation's funding priorities, funding instruments and research assessment processes. In our pilot testing these interviews have required an average of 45 minutes.

Attached to this message you will find a letter from the European Commission encouraging participation in the study, along with an information flyer for the SUPER MoRRI project (super-morri.eu).

I would also welcome the opportunity to discuss the project and the interview with you. If you do not consider yourself the appropriate person to receive this invitation in your organisation we would very much appreciate your advice on an alternative contact.

I look forward to hearing from you.

Yours sincerely

Informed consent form

Informed consent statement for signing by interview participants

Informed consent for participation in SUPER MoRRI Country Correspondents Network study of Research Funding Organisations (CCN-RFO)

SUPER MoRRI European Commission Horizon 2020 Framework Project (H2020) (SwafS – Grant Agreement No. 824671)

Declaration of Consent for participation in SUPER MoRRI Country Correspondents study of Research Funding Organisations (CCN-RFO)

Name of participant:

Contacts:
Study leader: Richard Woolley, Ingenio (CSIC-UPV), ricwoo@ingenio.upv.es Ph: +34 963 877 048
Project Coordinator: Ralf Lindner, Fraunhofer ISI, ralf.lindner@isi.fraunhofer.de Ph: +49 721 68090

Project aims

SUPER MoRRI is a 5-year H2020 project (2019–2023) that extends the work of the prior MoRRI project. SUPER MoRRI will undertake data collection and refinement of relevant existing indicators to develop a monitoring framework to support responsible research and innovation. The Consortium includes nine institutions, covering eight countries.

Participation in the study

Participation in this study requires one interview of around 45 minutes. Risks of participation should be negligible, but it is always possible that sensitive opinions or confidential information could be shared inadvertently. Participation in the study is always voluntary: you may choose not to respond to any question or to discuss a particular topic, and you can terminate the interview at any time.

Storage of personal data

During the course of the project, personal data will be collected by means of observation, interviews and group discussions. Data will only be used for the activities relating to SUPER MoRRI. This includes the processing for research purposes and dissemination activities.

Personal data will be used only within the framework of SUPER MoRRI, and will not be made accessible for any third party. Personal data do not contain the names or addresses of participants and will be edited for full anonymity before being processed (e.g., in project reports).

During data analysis, the data will be accessible only by members of the project team. The research project will remove as best as possible any direct identifiers in the data prior to depositing it in the SUPER MoRRI repository or processing it any further.

Nature of data from interviews

The SUPER MoRRI team is committed to maintaining full confidentiality of data resulting from formal interviews or informal discussions. No data, including direct quotes, will be used in such a way as to reveal the identity of participants where confidential matters are under discussion.

Audiovisual material

Audio of the interviews may be recorded with the agreement of the participant. The participant may indicate at any time to pause or stop recording the interview. Recorded interviews will be only be used by Country Correspondents to complete their study reports. The recorded interviews will not be submitted to the SUPER MoRRI team.

Ethics and advice

The CCN-RFO study received ethics approval from *Fraunhofer*, Munich on the 12th of December, 2020. The contact person for ethics issues related to the study is Cornelia Reimoser, Ethics Advisor. Any participant may discuss ethics questions, or receive instructions or advice from the ethics contact at any time. The ethics advisor can be contacted via:

Anna Buechl: anna.buechl@zv.fraunhofer.de, Ph.: +49 89 1205-1144
Address: Office of the Ethics Advisor, Fraunhofer Headquarters
c/o Anna Buechl, Hansastrasse 27c, 80686 Muenchen, Germany

Code of Conduct

Participation in SUPER MoRRI is meant to be as agreeable and pleasant as possible for all those involved. Therefore, all participants agree to respect the following rules:

- Racism and discrimination: racist comments, discrimination on the basis of sex, age, or disability, publication of racist or sexist pictures and insulting persons are strictly banned.
- SUPER MoRRI may not be misused for political, religious or advertising purposes.
- Infringements of copyright laws are not permitted.
- All participants' conduct should always be appropriate and never offensive or deprecating.

Consent

After having stated these general conditions and rules, we are looking forward to good cooperation and positive project results. We would like to thank you in advance for your participation in the project.
The undersigned declare that they understand and consent to the conditions and rules of SUPER MoRRI. Both parties receive a copy of this declaration of consent.
I hereby release SUPER MoRRI and any of its associated or affiliated institutions, their directors, officers, agents, employees and customers from all claims of every kind on account of such use.

Participant's signature:

Location, day/month/year

Contact's signature:

Location, day/month/year

CCN-RFO pre-coding guide

Preliminary codes for RFO Case Reports.

Table A1: CCN-RFO pre-coding guide

Mechanism	Question	Sub-question	Variables	Dimensions
Priority setting	How are research funding priorities set?	Where do inputs to priorities come from?	Authority External sources Co-creation	EU, national SDGs etc. Peer networks etc Stakeholders
		Which stakeholders contribute to cocreation of priorities?	Type; Interests Level;	Public; private Sector; e.g. SDGs, EU, etc
		How are priorities co-produced?	Process	
	Are funding priorities linked to other national policies?		Policy domains e.g. health, social welfare, educations	Policies: e.g. Smart Specialisation; Innovation policy
Funding instruments	How are funding instruments designed?	Which stakeholders contribute?	Type; Interests	Public; private Industry, etc
		How are instruments co-created?	Process	
		Which stakeholders could be added?	Type; Interests	Public; private Industry , etc
	Do funding instruments contain incentives or requirements for responsible research?	Engaged/ participatory research designs with stakeholders and citizens	Non-academic research partners; Publics Beneficiaries Innovators	Stage of research and innovation cycle; Co-creation; Citizen science; Public communication;
		Gender bias	Gender balanced teams; Gender analysis of research; etc.	

		Open science	Open data; Open access; Open software; open workflows; etc.	Deposit of datasets; Support for data sharing; open access publications; Use of preprint servers; etc.
		AIRR	Anticipation Reflection	Positive Negative Identification of potential beneficiaries and vulnerable groups
		Research integrity	personal values; research process	Honesty, care and respect; rigour, transparency and open communication, accountability, privacy
		Innovation pathways	Interested stakeholders	Engagement activities Dissemination activities
		Citizen science		Modes of participation
Research assessment	How does RFO seek to ensure a responsible assessment process?	How are reviewers selected?	Criteria	H-Index, etc
		How are evaluation panels composed?	Membership	academic v. non-academic; internal v. external; citizens; gender; discipline; etc. Roles and decision-making process
		How is a	Training	How to assess

		responsible process promoted?	Guidance	societal contribution Transdisciplinary/ interdisciplinary bias Gendered career awareness, etc.
		How is gender bias mitigated in assessment processes?	Institutional mechanisms	Gender balanced assessment panels; Periodic gender assessment of grant awards; Gendered career considerations, etc.
	How is responsible research supported in the assessment process?	Researcher track record	Research outputs (broad range beyond papers and citations)	Papers datasets software guidelines etc
			Societal contributions/ impact	Narrative of societal contribution Impact statements; Stakeholder testimonies; Letters of support; etc.
			Excellence/quality measures	quantitative qualitative mixed

		Project proposal	Research Design elements	Engaged and/or participatory research designs; Gender analysis; Gender balanced research teams; Open science; Anticipation and reflection about potential consequences of research - positive and/or negative; Ethical and research integrity considerations; Identification of potential beneficiaries; Communication strategy; Consideration of innovation/impact pathways; Citizen science; Etc.
Monitoring	How does the RFO monitor or evaluate their approach to supporting responsibility?		Processes; Measures	Evaluation criteria; Internal versus external participation; rolling versus periodic self-assessment; qualitative approaches; indicators

RFO Case Report template

Printable version of the template fields

Template Field	Description - required information
RFO Background Information (four items; approximately one page for the RFO)	Please briefly describe the research funding organisation (RFO) and its position in the overall national landscape for research funding.
	Please describe any explicit strategy or policy elements regarding RRI, Open Science, or other promotion of responsible research practices and culture.
	Please use bullet points to list: a) the RFO's major research funding priorities b) the RFO's major funding programmes c) excellence criteria in funding programmes
	Please describe briefly any other policies or factors you consider relevant for understanding the work of the RFO.
Descriptive Analytical Summary of the Interview(s) (six items; maximum three pages for the RFO)	Please briefly summarise the RFO's approach to shaping research and its societal contribution.
	Please describe how the RFO uses research priority settings in this work, including any references to supporting responsible research practices and cultures
	Please describe how the RFO uses funding instruments in this work, including any references to supporting responsible research practices and cultures
	Please describe how the RFO uses grant application assessments in this work, including any references to: a) ensuring a responsible approach to the conduct of research assessment in the organisation; b) support responsible assessment of research and researchers.
	Please summarise how the RFO monitors or evaluates the relevance and effectiveness of its funding programmes and instruments and its RRI or other relevant initiatives (where applicable)
	Please describe any other information emerging in the interview(s) that you consider relevant for the RFO Case Profile.
Discursive Summary (one field; 1-2 pages)	Please write a discursive summary of the RFO case, summarising all elements and including your impressions of the RFO and its approach to supporting the transformation of research practices and cultures in the direction of greater responsibility. Please highlight any tensions between how the RFO defines and/or operationalises 'excellence' and how they define and/or operationalise expectations regarding responsible research practices and cultures.
Documents (one field)	Please list all the relevant documents used in this RFO Case Profile, minimum two - maximum ten. Please ensure the documents listed are uploaded to the secure space at Fraunhofer OwnCloud

Ethics Approval

Attached as separate file

Ethics Declaration

Attached as separate file

Country correspondent ethics compliance form

Form for completion by country correspondents

Please return the signed form to:

Dr Ralf Lindner
Coordinator of the SUPER MoRRI project
Fraunhofer Institute for Systems and Innovation Research ISI

ralf.lindner@isi.fraunhofer.de

SUPER MoRRI RFO Study
Confirmation of Compliance with the Study's Ethics Declaration

I, the undersigned ....., herby confirm to have received, read and unterstood the "Ethics Declaration RFO study". When conducting the RFO study in my role as a Country Correspondent of the SUPER MoRRI project, I will diligently adhere to the principles outlined in the Declaration, particularly with regard to obtaining written informed consent of the interviewees, data protection, data management and data handling. To this end, I confirm to have received the Research Protocol for the RFO Study, the SUPER MoRRI Data Management Plan (D8.2), the support material to obtain informed consent (D9.1) and information on Data Protection Compliance (D9.2). In case unforseen ethical issues arise during the study process, I will immediately inform the Study Lead and the Coordinator, and collaborate closely with them to resolve any such issue.

Place and date *Signature*

....

Country Correspondent

SUPER MoRRI

Scientific Understanding and Provision of an Enhanced and Robust Monitoring system for RRI **Horizon 2020, Science with and for Society Work Programme 2018-2020,** Topic: SwafS-21-2018 **Grant Agreement Number**: 824671.

Appendix III Study Protocol RESU

Grant Agreement Number: 824671

SUPER MoRRI – Scientific understanding and provision of an enhanced and robust monitoring system for RRI

Protocol for the Researcher Survey (RESU)

Authors: Susanne Bührer, Hendrik Berghäuser, Richard Woolley, Niels Mejlgaard, Thomas Kjeldager Ryan, Inge van der Weijden

Date: 3 December, 2022

Version: 0.2 (DRAFT)

Type: Study protocol – revised following pilot test

Dissemination Level: To be registered at Open Science Framework following finalisation

Project website: www.super-morri.eu

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 824671.The opinions expressed in this document reflect only the authors' view and in no way reflect the European Commission's opinions. The European Commission is not responsible for any use that may be made of the information it contains.

Table of Contents

1. INTRODUCTION[1]

The development of a framework for monitoring responsible research and innovation (RRI) is a measure designed to support transformation in research and innovation (R&I) to better address future challenges and meet societal expectations. The SUPER MoRRI project Strategic Plan describes some broad principles for the development of a monitoring framework during the period 2020-24. The accompanying SUPER MoRRI Implementation Plan sets out a number of planned data collection activities for SUPER MoRRI designed to populate quantification tools, while the Case Research Plan describes a series of research projects designed to increase our understanding of responsible transformation pathways and explore opportunities to monitor these pathways.

Together the strategic, implementation and case research plans are designed to orient the SUPER MoRRI approach to the formulation of general research questions, and to the specification of empirical research questions for operationalisation in empirical work (see Figure 1).

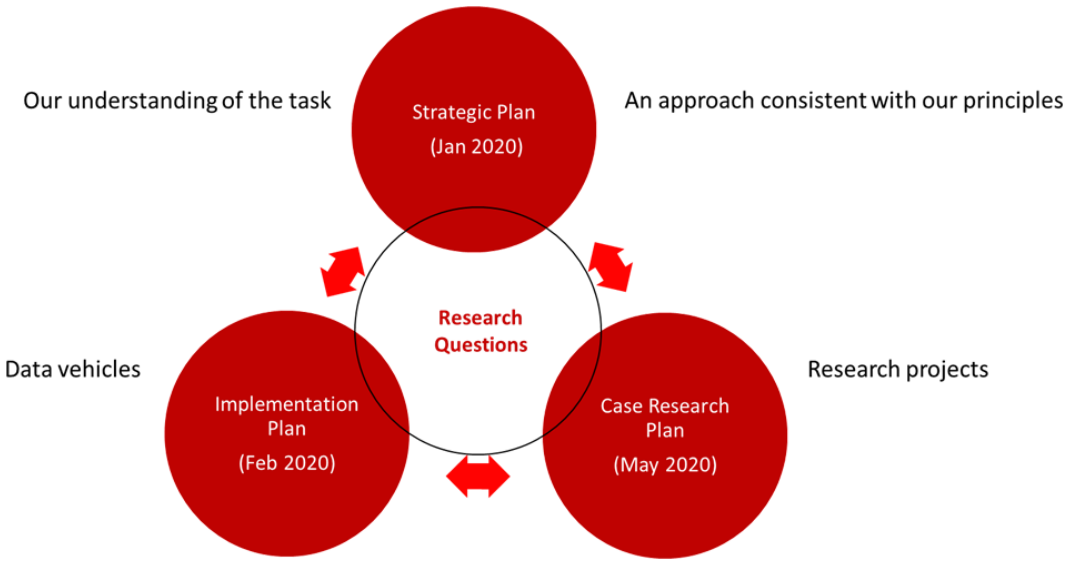


Figure 1: SUPER MoRRI project development: three pillars

The data collection activities carried out will generate new primary data from original research studies and the reuse of secondary data from a wide variety of different sources. Multiple data sources generated in different research activities will be used to address research questions, for example to triangulate around a particular question, to explore an exemplar case to deepen understanding, or to use a selection of cases to develop comparative dimensions.

While some of the research activities of SUPER MoRRI will therefore be designed to monitor 'patterns' that can be analysed at regional or national level with broad coverage, other studies will be designed to identify and describe a relevant phenomenon. Still others will seek to explore paradigmatic cases to establish the potential utility of a monitoring tool (for example an indicator) and assess whether it would add sufficient value to the monitoring framework to expend resources to develop broader 'coverage' using this tool.

[1] This protocol is modelled on the protocol for the previous study of research funding organisations, also conducted by the SUPER MoRRI country correspondent network (see https://osf.io/84dta/). Some parts are identical.

The Implementation Plan is built around a set of 'data vehicles' (see Figure 2) that will produce information at the levels of researchers/groups, research performing organisations, research funding organisations and citizens. A mix of quantitative and qualitative social science data collection methods will be used. Secondary data sources will be used to complement SUPER MoRRI data vehicles. Each data vehicle will be designed to support monitoring for a range of purposes and to generate outputs that support the activities of different types of users. The objective of the SUPER MoRRI data vehicles is to establish information about the patterns and pathways of institutionalisation of responsibility in R&I that can be constructively communicated to interested stakeholders.

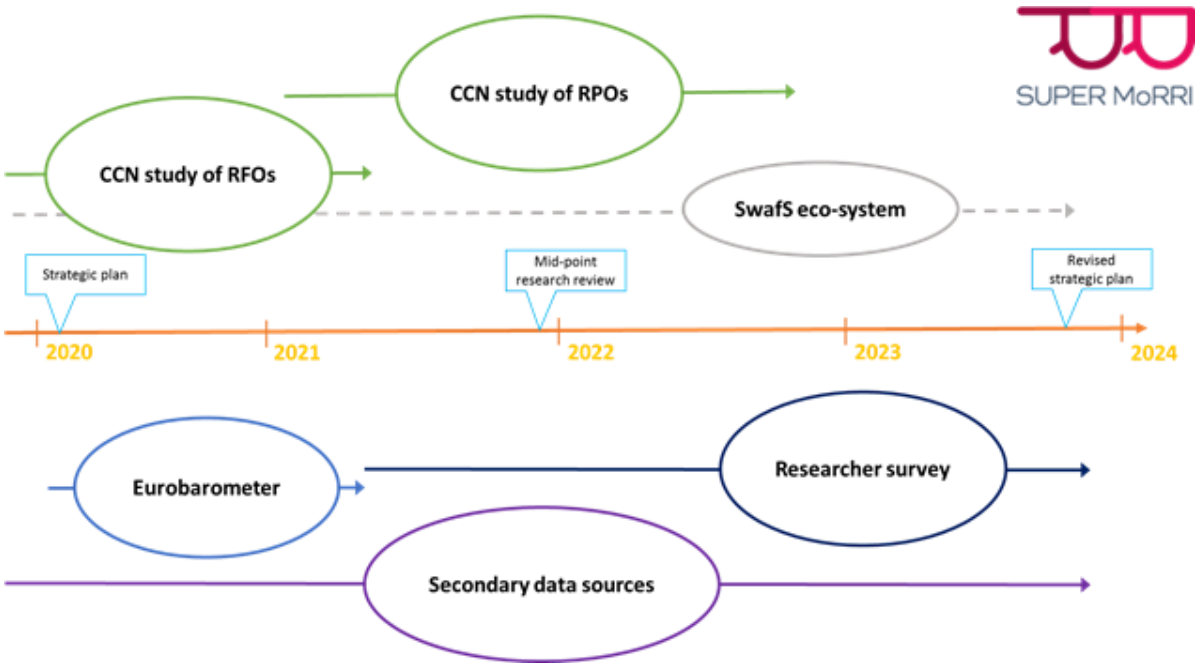


Figure 2: Data vehicles for SUPER MoRRI

This document sets out a protocol for the conduct of one of the studies set out in the SUPER MoRRI Implementation Plan, the **Researcher Survey (RESU).** The remainder of this document contains the following elements:

- an overview of the RESU study, including an implementation timetable;
- a description of the study objectives;
- study definitions;
- a summary of the process for selecting survey participants for inclusion in the study;
- a reporting template;
- data handling and management procedures;
- a note on ethics approval; and
- a description of the study quality assurance procedure.

We used several prior documents, in particular the implementation plan and the RPO study protocol for this study document.

Updated versions of this document will be available at Open Science Framework (OSF).

2. OVERVIEW OF THE RESU STUDY

The overall aim of this component of the implementation of the monitoring framework is to examine responsible research practices and perceptions of responsibility among European researchers. Mapping of perceptions may refer to researcher's role responsibilities towards colleagues, but also societal stakeholders, external collaborators, and citizens generally. It may include tapping into perceptions of virtues in the context of research, but it may also relate to how researchers respond to the institutional structures and incentive schemes from the perspective of cultivating responsible conduct of research. Mapping of practices may cover actual behaviour of researchers in connection with key markers of responsibility (e.g. interaction with citizens and stakeholders, combatting gender inequalities, preregistration, open access publishing etc.). In this regard, we are fully aware that we need to ask very tangible questions and be careful to ask weighted questions that relate more to values and perceptions of "good behavior" in order to elicit the relevant information with the least amount of bias and maximum precision.

The survey instrument will be informed by the MoRRI Researcher Survey, but will be further developed based on a set of research questions consistent with the purposes of the SUPER MoRRI objectives. This includes exploring how organisational governance arrangements (as identified in the CCN study of RPOs) as well as funding arrangements (as identified in the CCN study of RFOs) interact with perceptions and practices of researchers. Moreover, the alignment of citizen perceptions of responsible research (as examined through the Eurobarometer) and researcher perspectives and practices will be considered. Depending on the research questions of the SUPER MoRRI consortium and particular needs related to studies planned for WP5, the survey-based researcher data may integrate further relevant questions that fed into the case study work (for example on responsible careers). The instrument will be pilot-tested within a broad community of researchers from different research performing organisations in order to collect feedback and recommendations for improvement. The final version of the instrument will be in English language. We decided not to translate the questionnaire to other languages, to reduce costs and complexity. All details of the Researcher Survey will be specified in the following.

Table 1 specifies the implementation activities for the RESU study, their provisional timing and the division of leadership responsibilities among SUPER MoRRI partners.

Table 1: Implementation timetable, RESU study

Period	Activity	Responsible
Since Sept 21	Drafting of protocol for the study; including specification of objectives, study population, scraping procedure, and development of survey instrument	Fraunhofer, ULEI, AU, CSIC
December 2022 – January 2023	Internal consortium QA and revisions to draft protocol for the study	Fraunhofer, ULEI, AU, CSIC
January 2022 – September 2022	Sampling approach defined and implemented	Fraunhofer ULEI
August – September 2022	Development of web-version of the survey instrument	Fraunhofer
September 2002 – October 2022	Substantive and technical pilot test of survey instrument	Fraunhofer
November 2022 – December 2022	Survey administration with reminders	Fraunhofer

January 2023 – February 2023	Analyses and preparation of descriptive statistics, potential indicators, and visualisations for inclusion in 3rd Annual monitoring report	Fraunhofer, ULEI, CSIC, AU
Jan 2023	Final identification of indicators to be transferred to WP3 and WP6	AU, Fraunhofer

3. STUDY OBJECTIVES

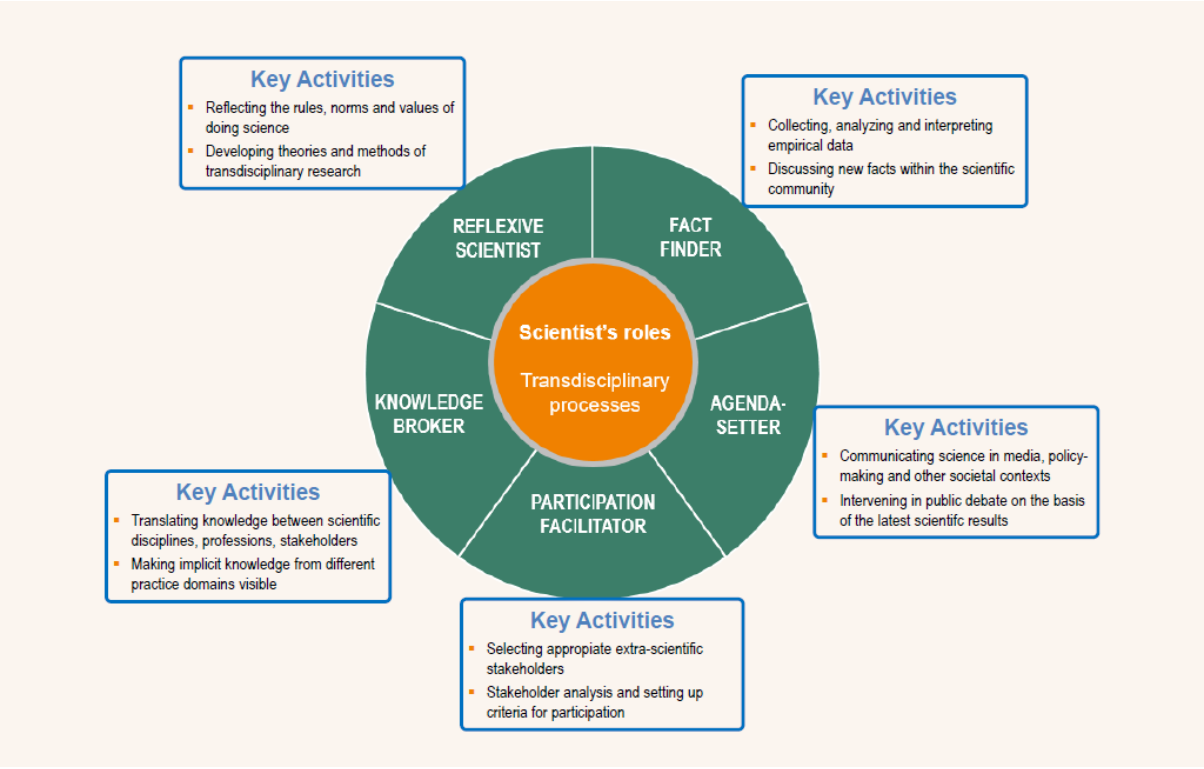
The main aims of the RESU study are to

- Examine responsible research practices and perceptions of responsibility among European researchers;
- Identify Researcher's role responsibilities towards colleagues, but also societal stakeholders, external collaborators, and citizens generally;
- Describe perceptions of virtues in the context of research;
- Identify how researchers respond to the institutional structures and incentive schemes from the perspective of cultivating responsible conduct of research;
- Map actual behaviour of researchers in connection with key markers of responsibility (e.g. interaction with citizens and stakeholders, gender enequality, open science and ethics)

The study starts from the assumption that organisational priorities, policies, and supporting structures and actions contribute to shaping research practices at an individual level, by offering promoting or hindering incentive and reward systems. The national background plays an important role here as well and ensuring geographical diversity thus means that the role of the national research policies can at least partly be reflected in our study as well. Finally, as research funding systems increasingly rely on competition-based allocation mechanisms which urges researchers to apply for external grants, the different research funding systems play a crucial role in determining individual behaviour as well. Finally, the disciplinary background is assumed to shape responsible behaviour as well.

4. STUDY DEFINITIONS

One of the main aims of the RESU study is to investigate the complex interplay between the individual, the organisational and the national level. In the SuperMoRRI context, we already implemented two further studies that investigate how RPOs and RFOs support responsible research practices and the building of responsible professional cultures. Table 3 summarises elements that fall within our definitions of **responsible research practices** and **responsible research cultures**. Responsible research practices refer to how science is done. Responsible research culture refers to how science is organised, through appropriate career structures and responsible scientific communities and institutions. The items included are not an exhaustive list of relevant elements and will be added to in the course of the CCN-RFO study and SUPER MoRRI. There is also obvious overlap between these two categories as they are mutually co-constitutive and reinforcing of each other



Source: Mirko Suhari (2021): Actor Roles in Transdisciplinary Research. 2nd Meeting of NorQuATrans, 1st/2nd of September 2021, Hamburg.

The questionnaire itself is divided into the following sub-parts:

- Part I deals with core characteristics of the respondents' research and asks for researcher's role responsibilities towards colleagues, but also societal stakeholders, external collaborators, and citizens generally; this part also includes questions about the perceptions of virtues in the context of research
- Part II examines responsible research practices and perceptions of responsibility among European researchers, along the main pillars of RRI (public engagement, gender equality, science education, open access, ethics) respectively key markers of responsibility (e.g. interaction with citizens and stakeholders, combatting gender inequalities, preregistration, open access publishing etc.)
- Part III investigates the main drivers and barriers for conducting the respective activities

- Part IV investigates how researchers assess the institutional structures and incentive schemes from the perspective of cultivating responsible conduct of research
- Part V relates to the perceived and expected benefits, and
- Part VI investigates the general background of the respondents

5. SELECTION of the Survey participants

The selection of the survey respondents will be based on the identification of (active) researchers from the RPOs included in the CCN study.

Figure 3 below recaps the close relationship between the CNN study and the RESU: As mentioned in the study protocol for the RPO-CCN-study, the European Tertiary Education Register (ETER) and the Community Research and Development Information Service (CORDIS) were used to build a sample frame and to draw a stratified sample ensuring variation in basic organisational properties. The selected RPOs were examined by the CCN to determine the priorities, policies, and supporting structures and actions that the organisations use to promote responsible research practices. Build on this, the researcher survey will be administered to researchers within the selected organisations to examine their research practices.

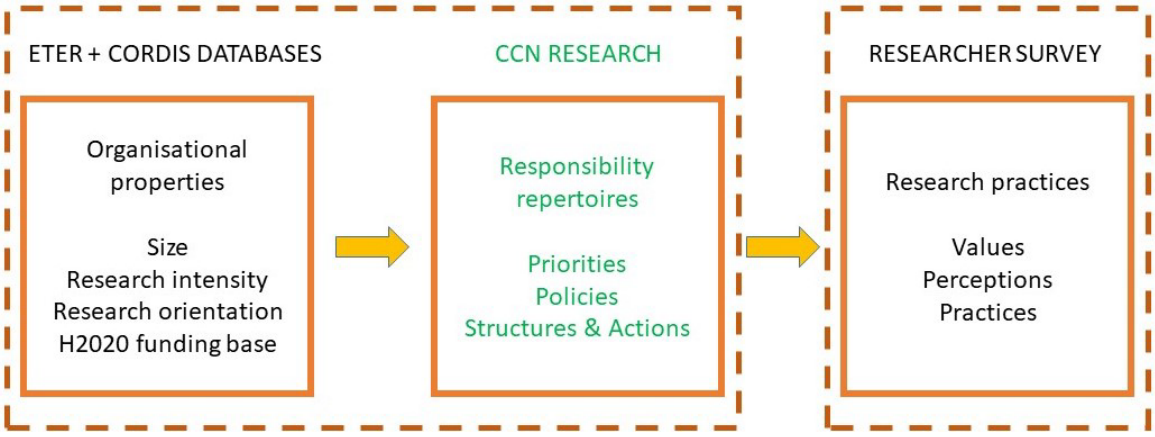


Figure 3: Link between the CCN RPO and the RESU study

All active researchers from all of the RPOs included in the CCN study of RPOs will be included in the Researcher Survey. Alignment between these meso-level and micro-level interventions will enable multi-level analyses. Compilation of the Researcher Survey sample will be based primarily on scraping institutional websites for contact details. In this way, the title, first name, last name, gender and e-mail address of the researchers are to be collected. This information is necessary for a correct form of address in the online survey.

First analyses of ETER and internet research on various RPOs covered in this study suggest that a total sample of around 150.000 to 200.000 persons can be expected. However, for some universities an exact number of employed scientists could not be determined. Therefore, the description of the expected sample is initially a rough estimate.

In a first step, the data availability on the websites of each RPO is assessed in preparation for the scraping method. We expect that the contact information of scientists will be easier to collect at some RPOs than at other universities. Some RPOs may have fully published and accessible lists or registries of all employees or, in the ideal case, a full list of all researchers. In these cases, it will be easy to collect the contact information of the researchers. For other RPOs, the various websites of the institutes or even of the individual chairs must be examined if there are no complete list of all researchers or if these are not publicly accessible. Data collection in these cases will be more difficult and time consuming, as the scraping approach here will have to be supplemented with manual copy & paste of

contact information as well as a manual check to ensure that only the contact information of researchers will be collected (i.e. professors, postdocs, PhD-students etc.) and not the contact information of non-scientific staff (i.e. research assistants, students, administrative and technical staff etc.). The contact details of the scientists are then recorded list by list by university. The number of scientists identified will be compared with the total number of employed scientists according to ETER for example. This is to check the validity of the scraping procedure. Finally, the contact data of the scientists will be transferred to a standardized list and conve4rted into a format with which the data can be uploaded into the survey tool.

The online survey will be build using EFS Survey, Questback's professional high-end solution for conducting online surveys with which Fraunhofer ISI has an established working record in the context of numerous European and national projects. The survey tool contains a data protection assistant that will be used to install data protection notes and declarations of consent in compliance with GDPR.

The software allows for the design of all the various question types needed for the envisaged survey (as well as many others) and provides an intuitive, user-friendly interface for its potential respondents. A multi-language module enables the project partners to conduct surveys in additional languages should this become relevant for this proposal. Furthermore, comprehensive plausibility checks as well as automatic test tools ensure the development of high-quality, consistent and valid datasets.

Depending on the chosen mode of access, EFS Survey can generate personalized invitations that include the addressees name and the name of the project. In addition to its ability to export data in most common formats (e.g. SPSS, Excel) EFS Survey provides overview statistics and reports at the push of a button so that the project partners could in regular intervals report on the state of play in the ongoing survey.

Technically, EFS Survey is based on MySQL, PHP, Apache and Linux and hosted at Questback's certified data centre (155 Mbit connection, redundant power supply, 24 hours security) where all data are processed and secured according to the most current standards. The raw data generated in the course of the survey will be saved and stored in SPSS and Excel format.

The organisations selected for inclusion in the study appear in Table 2.

Table 2: RPOs to be included in the study

Country	**English Names**
Austria	Medical University of Vienna, University of Music and Performing Arts in Vienna, Danube University Krems, University of Vienna
Belgium	University of Antwerp, Hasselt University, Transnational University Limburg, Ghent University
Bulgaria	Paisii Hilendarski University of Plovdiv, National Academy of Art, Angel Kanchev University of Ruse, International Business School
Croatia	University North, Koprivnica, University of Zadar, University of Dubrovnik, University of Zagreb
Czech Republic	University of Veterinary and Pharmaceutical Sciences, Brno, Brno University of Technology, University of Finance and Administration, Masaryk University
Cyprus	Frederick University, Open University of Cyprus, Frederick University, University of Nicosia, Cyprus University of Technology
Denmark	University of Copenhagen, Aarhus University, Copenhagen Business School, Technical University of Denmark

Estonia	Tallinn University, Tallinn University of Technology, Estonian University of Life Sciences, Estonian Business School
Finland	University of Helsinki, Finnish Academy of Fine Arts, University of Lapland, University of Turku
France	Université de La Rochelle , University of Montpellier, University of Angers, Université de Rennes 1, Lille University, University of New Caledonia
Germany	University of Duisburg-Essen, Bauhaus-Universität Weimar, Technical University of Munich, Steinbeis Hochschule Berlin, University of Bayreuth, University of Bremen
Greece	Harokopio University, University Of Thessaly, Athens University of Economics and Business, Aristotle University of Thessaloniki
Hungary	Pázmány Péter Catholic University, Liszt Ferenc Academy of Music (University), Corvinus University of Budapest , University of Pécs
Ireland	University of Limerick, National University of Ireland, Galway, University College Dublin, Maynooth University
Italy	University of Calabria, Università degli Studi di NAPOLI "Parthenope", University of Macerata, Online University "Pegaso", Sapienza University of Rome, University of Florence
Latvia	Latvia University of Agriculture, Riga Technical University , Riga Stradinš University, University of Latvia
Lithuania	Mykolas Romeris University, LCC International university, Aleksandras Stulginskis University, ISM University of Management and Economics, JSC
Luxembourg	University of Luxembourg, LUNEX University
Malta	University of Malta, Malta College of Arts, Science & Technology
Netherlands	VU University Amsterdam, University of Humanistic Studies, Leiden University, Eindhoven University of Technology
Norway	University of Oslo, University of Agder, The Norwegian University of Science and Technology, University of Tromso - Norway's Arctic University
Poland	Hugo Kołłątaj Agricultural University of Cracow, Andrzej Frycz Modrzewski Cracow College, Wrocław Medical University, University School of Physical Education in Wrocław, Pedagogical University in Cracow, Jagiellonian University in Cracow
Portugal	University of Minho, ISCTE - University Institute of Lisbon, Open University of Portugal, Egas Moniz Higher Institute of Health Sciences
Romania	"Grigore T. Popa" University of Medicine and Pharmacy Iasi, "Vasile Alecsandri" University of Bacau, University of Constanta, "Ion Mincu" University of Architecture and Urbanism
Slovakia	Pavol Jozef Šafárik University in Košice, Alexander Dubček University of Trenčín in Trenčín, University of Ss. Cyril and Methodius in Trnava, Slovak Medical University in Bratislava
Slovenia	University of Ljubljana, University of Maribor, University of Primorska, University of Nova Gorica
Spain	Carlos III University of Madrid, Universidad de Cantabria, University of Seville, National University of Distance Education, Universidad Católica San Antonio de Murcia Autonomous University of Barcelona
Sweden	Dalarna University, Swedish University of Agricultural Sciences, Uppsala University, Linköping University
UK	London School of Hygiene and Tropical Medicine, Queen Margaret University, The University of Sheffield, The University of Greenwich, Staffordshire University, The Open University

Based on a consolidated distribution list, the survey will be administered by the SUPER MoRRI partner leading this study. Block-wise implementation to avoid capture by organisational spam-filters or firewalls will be pursued. The email invitation will inform clearly about the purpose of the study and provide opt-in and opt-out paths. The first page of the web-survey will invite consent before turning to the survey items. Non-responding individuals (who have not explicitly opted out) will be re-approached twice with 2-week intervals.

6. METHODOLOGY FOR RESU

The following steps will be taken to design, implement and analyse the researcher survey:

Design of the study

1. Design of the questionnaire according to the main items mentioned above (SuperMoRRI team members).
2. Expert engagement to validate the clarity, comprehensibility and completeness of the questions
3. Web-searches to identify all active researchers at the selected RPOs
4. Prepare an email inquiry to validate and complement the list of names gathered by webmining approaches (see chapter 5 on sampling)

Implementation of the study:

5. Programming of the online questionnaire using the ESF survey tool
6. Conducting several tests to ensure the validity and reliability of the questions as well as the technical functionality of the online version
7. Launch the survey and end it after two reminders

Data analysis and reporting:

8. The survey data will be extracted from the survey software mentioned above in CVS format, which will be then transferred to a spread sheet software for data cleaning.
9. The raw data will be tabulated, documented and presented in a way that is as easy to use by the interested parties
10. Finalise the report.

A quite probably risk with this planned survey lies in particular in particular in a rather low participation. This is due especially to the special subject matter on the one hand and the breadth of the survey sample on the other hand. For example, despite all quality mechanisms foreseen, it will be possible that also retired scientists whose contact details are still listed on the universities' websites will be contacted, or that scientists who do little or no research in the narrower sense, such as laboratory assistants or people who are predominantly active in teaching, will also be included in the sample.

To minimize this risk at least to a certain degree, the collection of contact information should be accompanied by close manual control. In addition, a key to high participation lies in a transparent, informative and concise invitation email as well as in a personal address to the participation ("Dear *firstname lastname* instead of Dear all or Dear Mr./Mrs.). On the other hand, the approach of contacting universities' management or other multiplies at the given RPOs in advance and asking them for support in participating will not be followed, since university management do usually not support surveys among their employees by external actors, not even for research purposes.

Participation in the survey can be monitored on an ongoing basis at the survey tool EFS. Depending on the ongoing participation, at least one reminder action will be launched after about 10 to 14 days of the initial start of the survey. If the overall participation will be rather low, a second reminder action will be started after about 4 weeks of the initial start. Experiences show that reminder campaigns can increase participation in an online survey be 30-40%.

In general we expect an overal participation to the survey of about 4-10%.

7. REPORTING

The analysis of the RESU data will reflect the needs of the SUPER MoRRI Monitoring Reports, the comparison with the results from the MoRRI researchers' survey and finally the scientific ambitions of the RESU and SuperMoRRI team.

Table X gives an overview of the foreseen structure for the RESU report:

1. Introduction
2. Methodological Approach
3. Characteristics of the respondents
4. RRI by dimension
   - 4.1 Public engagement
   - 4.2 Open Science
   - 4.3 Gender equality
   - 4.4 Ethics
4. Drivers and barriers for RRI
   - 4.1 Main motivations
   - 4.2 Institutional support structures
   - 4.3 Barriers
   - 4.4 Perceived benefits
5. RRI dimensions by researchers role, gender, country and and discplinary background
   - 5.1 Researchers role and RRI activities
   - 5.2 RRI and Gender
   - 5.3 RRI and Country
   - 5.4 RRI and Scientific Disciplines
6. Comparison with the MoRRI Researcher Survey
   - 6.1 Notions of RRI
   - 6.1 RRI activities
   - 6.2 Perceived RRI benefits
   - 6.3 Perceived supportive and hindering factors
7. Discussion
8. References

8. DATA HANDLING AND MANAGEMENT

All elements of each RESU survey will be uploaded to a secure space on the *Fraunhofer* OwnCloud platform. Details regarding access to the secure space on OwnCloud will follow the procedure already established in the previous CCN-RPO study.

The invitation email will clearly address the data protection procedures in alignment with the European Union Law, specifically Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data – General Data Protection Regulation (applicable as of 25 May 2018 in all European Union member states).

When clicking on the access link to the online survey, the participants will see all necessary data security information on the starting page. This page also entails a consent form which is mandatory for filling out the survey. The invitation email details that informed consent is given by the individual choosing to participate in the survey, specifically by clicking on 'Take the survey'.

Participants will be informed of the following:

- The scope and purpose of the research for which personal data about them will be collected;
- How they were selected;
- How their personal data will be used;
- Who will have access to their data;
- That participation is made on a voluntary basis;
- The length of time their data will be retained;
- Their right to withdraw themselves and their data at any time;
- The degree of risk and burden involved in participation;
- The benefits of participation;
- The procedures that will be implemented in the case of incidental findings.
- It is not the intention of RESU to collect sensitive data, although it is possible that the survey may reveal unintended sensitive information. Respondents will be asked not to provide information that could identify individuals or organisations.
- All participants will be ensured anonymity and confidentiality.
- There will be no commercial exploitation of this research.

Access to the raw data will be provided to SUPER MoRRI team members for data processing and analysis purposes. No personal information will be collected as part of the study. In the unlikely event that personal or sensitive information is obtained unintentionally, e.g. via answers to open questions, such information will be eliminated and hence not used in analyses or in any academic and other outputs generated from the research. The SUPER MoRRI Data Management Plan contains comprehensive general information about data security, handling and use.

Data will be anonymised according to standard protocols. In this survey tool, the participant data and the survey results are separated from each other. It is only possible to export the survey results but

not participants' data. It is therefore technically impossible to draw conclusions about individual participants.

No sensitive data is expected to be recorded. In preparation for release of anonymised data for the public domain, the data will be examined carefully and subjected to statistical disclosure controls, such that combinations of variables or small numbers within a subpopulation for example, cannot be used to identify individuals or groups of individuals.

Only anonymised data will be used for analysis.

In case of a data breach, affected participants will be contacted and data will be temporarily removed from the compromised storage.

9. ETHICS APPROVAL

Ethical issues such as the treatment of genetic material information of human beings or human biological samples are not foreseen as part of RESU. Neither the processing of information related to the search of human cloning for reproductive purposes nor the modification of their genetic heritage. The project, however, involves the interaction with researchers at different hierarchical levels of Higher Education Institutions (HEIs) and Research Performing Organisations (RPO). In all cases, these are adults aged 18 and over.

This level of human involvement produces a set of ethical and legal issues, which the Consortium is well aware of and determined to address it consequently. In this respect, all partners in the RESU study team will comply fully with the General Data Protection Regulation (GDPR - Regulation (EU) 2016/679 of the European Parliament and of the Council). All partners in RESU will place Ethics at the core of their work.

RESU is intended to be privacy oriented. Since the project intends to identify individual attitudes and behaviour towards responsible research in its different forms and assess existing organisational frameworks to promote a responsible behaviour, the participation of data subjects will be requested. However, they will be appropriately informed of the processing and the purpose of such processing so they can either accept it or reject it with full guarantees.

Recruitment process: participants will be researchers aged 18 and over. Recruitment will be carried out using different screening methods (web-crawling), which will collect personal data only to the extent that it enables the accurate identification of eligible participants.

10. QUALITY ASSURANCE

A quality assurance procedure will be used to ensure that the survey design, implementation and exploitation meet the highest scientific quality criteria in particular with regard to the validity and reliability of the study results.

In detail, this means that the design of the questionnaire is based on comprehensive scientific reflections on the main drivers and constraints of responsible research practice. The questionnaire design also provides for several feedback loops with different stakeholder groups, both inside and outside the SuperMoRRI team, so that a high validity of the questions and question formulations is ensured.

The selection of potential respondents is strictly along the lines of the CCN-RPO study, ensuring good coverage of different states, types of organizations, and scientific disciplines (for sampling, see also chapter 5).

The implementation of the online-survey is carried out by a very experienced team that has already conducted the MoRRI researcher survey with great success. Nevertheless, several content-related and practical tests are carried out before the questionnaire is released.

Before the actual data analysis starts, an intensive data cleaning will take place and plausibility tests will be performed.

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Bührer, Susanne; Lindner, Ralf; Berghäuser, Hendrik; Woolley, Richard; Mejlgaard, Niels; Wroblewski, Angela; Meijer, Ingeborg (2018): Monitoring the Evolution and Benefits of Responsible Research and Innovation (MoRRI). Report on the researchers' survey on RRI benefits. ISBN 978-92-79-92854-3, DOI 10.2777/130485, Luxembourg.

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Appendix IV CCN RFO Coding scheme

Coding scheme – CCN RFO study

Version 0.1, 18-04-21

The preliminary coding scheme below includes a set of case classifications and codes (hierarchical) which are expected to capture main elements of the CNN RPO case reports. The distinction between case classifications and codes mirrors the structure of the software, NVivo 12, which will be used for organising our data. Case classifications are basic background information about the cases, i.e. the specific RFOs covered in the CNN RFO study. Classifications include location and organisation type. Codes are the categories that we use to link the empirical data to our research questions / topics. The revolve around the core foci on priority setting, funding instruments, and research assessment as mechanisms through which RFOs exert responsibility pressure. Some codes are hierarchically layered in 'families' (children, grandchildren). The case classifications and codes provide an initial, mechanistic framework for linking data (bits of text in the case reports) to our research themes. The classifications and codes included in the initial coding scheme could be supplemented by additional classifications and codes emerging (inductively) during the coding phase.

Cases

Description

NAME: Name of the funding organisation

NICKNAME: Consecutive numbering, e.g. #1

Classification

Classification	Sub-classification	Values	Note
Country		Austria, Belgium, [etc]	
CCN OR ISP		European, non-European	To distinguish CCN / ISP cases
Organisation type	Private OR public	Private, public	
	Type	Research council, Ministry, foundation, other	Values could be extended during coding
			ADDITIONAL CLASSIFICATION / SUB-CLASSIFICATION AND VALUES?

Codes

Position of the RFO in the national research funding landscape

Code	Children	Grandchildren	Note
Size	Major OR minor	Major funder	
		Minor funder	
	Overall budget		
Interdependencies			Relations to other organisations or networks, e.g. the Ministry
			ADDITIONAL CODES / FAMILIES?

RRI / Open Science strategy or policy elements

Code	Children	Grandchildren	Note
Explicit 'RRI' policy			
Open Science strategy or policy elements	Comprehensive Open Science policy		
	Open access		
	Open data		
Policy endorsements	FAIR Data		
	DORA		Children could be extended (inductively) during coding
Research Integrity strategy or policy elements	Compliance with codes of conduct		
	Dealing with breaches of research integrity		
	Conflicts of interest		
	Data management		
			Children could be extended (inductively) during coding
Gender equality strategy or policy element			Children?
Ethics strategy or policy elements			Children?
Science education and science communication strategy or policy elements			Children?

Public engagement strategy or policy elements			Children?
Societal impact strategy or policy elements			Children?
Innovation pathways strategy or policy elements			Children?
			ADDITIONAL CODES / FAMILIES?

Funding priorities and programmes

Code	**Children**	**Grandchildren**	**Note**
Comprehensive OR specialised	All scientific fields		
	Multiple fields/disciplines		
	Specialised / mono-disciplinary funding	Biomedical science	
		Social science & humanities	
		Natural science	
		Engineering/Technical science	
Major research funding priorities	Major funding priorities related to dimensions of RRI		Grandchildren?
Major funding programmes	Major funding programmes related to dimensions of RRI		Grandchildren?
Excellence criteria in funding programmes	Scientific criteria	Clarity	
		Rigour	
		Originality	
		Relevance	
		Innovativeness	
		Citations	
		Publications	Number, JIF
	Societal criteria	Impact	
		Non-academic collaboration	Industry
			Civil society
			Government

			ADDITIONAL CODES / FAMILIES?

Overall approach to shaping research and societal contribution

Code	Children	Grandchildren	Note
Approach to shaping research and its societal contribution	Excellence		
	Societal impact		
	Collaboration		
	Commercialisation		
			Children could be extended (inductively) during coding
			ADDITIONAL CODES / FAMILIES?

Priority setting

Code	Children	Grandchildren	Note
Substantive funding priorities			Children could be coded inductively
How funding priorities are set	External mandates		
Stakeholders involved in co-creation of funding priorities	Scientific stakeholders	Scientific communities	
		Learned academies or societies	
		Scientific Expert Panel or Advisory Board	
		Research performing organisations	
		Other research funding organisations	
	Societal Stakeholders	Policy makers	
		Civil society organisations	
		Citizens	
		Industry Associations	
		International organisations	
		Patient organisations	Grandchildren could be extended (inductively) during coding

	Procedures for involving stakeholders in co-creating funding priorities		
Linkage between funding priorities and other national policies	Health		
	Welfare		
	RIS3		
	Growth		
	Education		
	Sustainability including SDGs		Children could be extended (inductively) during coding
Other responsible research practices and cultures related to priority setting			
			ADDITIONAL CODES / FAMILIES?

Funding instruments

Code	**Children**	**Grandchildren**	**Note**
How funding instruments are designed	Scientific stakeholders involved	Research performing organisations	
		Scientific communities	
		Learned academies or societies	
		Scientific Expert Panel or Advisory Board	
		Other research funding organisations	
	Societal stakeholders involved	Policy makers	
		Civil society organisations	
		Citizens	
		Industry	
		International organisations	
		Patient organisations	Grandchildren could be extended (inductively) during coding
	Procedures for involving stakeholders	Formal consultation process	

	in designing funding instruments		
		Committee/ Working group	
		Informal consultation process	
		Invited/public submission process	
Eligible beneficiaries	Scientific stakeholders	Public RPOs	Universities; Institutes;
	Societal stakeholders	Private firms	
		Hospitals	
		CSOs	
Requirements / expectations for responsible research in funding instruments	Engaged / participatory research designs with stakeholders and citizens		
	Gender		
	Open science		
	AIRR		
	Research integrity		
	Innovation pathways		
	Citizen science		
			Children could be extended (inductively) during coding
			ADDITIONAL CODES / FAMILIES?

Research assessment

Code	**Children**	**Grandchildren**	**Note**
Assessment procedures	Criteria for selection of reviewers	Scientific impact	Publications, citations, H-index
		Geographic/system	International; National
		Societal stakeholder	Industry; CSOs; POs; Policymakers; etc
	Composition of assessment panels	Gender	
		Geographic/system	International; National
		Societal stakeholder	Industry; CSOs; POs; Policymakers; etc
		Fields	Disciplinary; intercisciplinary; transdisciplinary
	Training or guidance provided	CoI; Gender; Ethics; RRI	

			Grandchildren could be extended (inductively) during coding
	Mitigation of gender biases in assessment procedure		
Assessment of researchers	Scientific contributions	Publicationss	No. of papers; H-Index; Citation counts; JIF
		Datasets	
		Policy reports	
		Science communication	
		(Medical) guidelines	
			Grandchildren could be extended (inductively) during coding
	Societal contributions / impact	Statement or narrative of societal contribution	
		Impact cases / statement	
		Stakeholder testimonials	
		Letters of support	
			Grandchildren could be extended (inductively) during coding
	Excellence / qualitythresholds	Publications	No. of papers; H-Index; Citation counts; JIF
		Other	
Assessment of research (proposals)	Scientific quality	Clarity	
		Rigour	
		Originality	
		Relevance	
		Innovativeness	
	Societal contribution	Problem orientation	
		Engaged / participatory research designs	
		Stakeholder involvement	
		Consideration of innovation / impact pathways	
		Citizen science	
		Outputs/ Communication strategy	
	RRI	Gender analyses	

		Gender balanced research teams	
		Open science	
		AIRR	
		Ethics	
		Research integrity	
			ADDITIONAL CODES / FAMILIES?

Evaluation and monitoring

Code	Children	Grandchildren	Note
How does the RFO monitor or evaluate its approach to supporting responsibility?	Monitoring elements		
	Monitoring procedures		
			ADDITIONAL CODES / FAMILIES?

Tension between 'excellence' and 'RRI'

Code	Children	Grandchildren	Note
Tensions between understandings of excellence and of responsible research practices and culture			
			NOTE THAT THE 'DISCURSIVE SUMMARY' SECTION OF THE CASE REPORT SHOULD BE CODED TOWARDS THE 'PRIORITIES', 'INSTRUMENTS', AND 'ASSESSMENT' CODES.

Appendix V CCN RFO Analytics

CCN-RFO analytics to accompany first wave coding

As part of following the coding process for the RFO Case Reports, coders will be asked to make some simple preliminary analytical assessments. These assessments will help us to cluster, compare and plot RFOs on some simple dimensions. They will also provide a simple orientation to assist with the processes of developing simple descriptive and initial monitoring elements.

The assessments are of three types:

1. Choice among a set of classifications
2. Likert-scale type ratings
3. Ranking or part-ranking of a set classifications

Assessments will be made after main sections of the Case Report. However, it is likely that information contained in preceding or following sections, plus in the Discursive Summary will be relevant to some of the assessments.

For some assessment, making final and appropriate judgements will not be possible on the basis of the first or second CR coded. Rather provisional assessments can be made, but then revised after more cases have been read and the **relative rating** between the cases being coded becomes evident. We believe that with each coder dealing with 6-7 CRs, this will be enough of a sample to enable the coder to make adjustments on the ratings scales baked on inter-case comparison.

Once all analytics have been provided some and inter-coder comparison will be performed and further adjustments made to account for inter-coder differences if required.

About the RFO

Which classification fits the RFO?
(only select a close to exact fit)

Select	Classification	Descriptor 1	Descriptor 2
	Research Council	Largely self-governed by scientific community	Strong identification with norms and values of scientific community
	Departmental RFO	General funder; part of public administration (PA)	Share PA bureaucratic culture
	Delegated State Agency	Managerial autonomy	Execute state tasks; Close to PA bureaucratic culture
	Independent Delegated State Agency	High level of managerial autonomy	Mix of state and RFO defined tasks; Some separation from PA bureaucratic culture
	Innovation Agency	Managerial autonomy	Taking over innovation support tasks from economic or similar Ministry
	Public Foundation	Governed by national legal form and rules	State linked or partially dependent
	Private Foundation	Governed by civil society Board (but could include PA representation)	Independent of the State
	State sector RFO	Sectoral funder; part of PA (US model)	Defence, Energy, Health, etc.
	None of these		

For **public RFOS only**, which classification is the best fit?
(select one)

Select	Classification	Descriptor 1	Descriptor 2
	Science-based funding agency	Problems raised by disciplinary communities	Scientific disciplinary solutions
	Strategic funding agency	Problems raised by disciplinary communities, the scientific community, external actors	Disciplinary and interdisciplinary solutions
	Political funding agency	Problems raised by external actors	Multidisciplinary and /or transdisciplinary solutions
	None of these		

Consistent with their remit and priorities, this RFO funds research on:
(position on 7 point scale)

	Scientific questions *Societal problems						
Select							

*The funding targets effects outside the lab

Is the RFO a member of a peak body or peer organisation for funders, or a forum in which RFOs organise horizontal collaboration and learning?
(select any applicable)

Organisation	Select	No Check
Science Europe		https://www.scienceeurope.org/about-us/members/
European Foundation Centre		https://www.efc.be/membership/who-are-our-members/
Other		specify:

Which of the following RRI and related policies or strategies does the RFO have?
(select one for each row)

	Standalone policy	Included in general / mixed policy	Planned / aspiration expressed	None / not mentioned
RRI /responsibility				
Open science (comprehensive)				
Open access				
Research integrity				
Gender				
Ethics				
Science education / communication				
Public engagement				
Societal impact				
Innovation pathways				
Outputs / dissemination policy				
Other: specify				

Which classification best describes responsibility for the setting of research priorities in the RFO?
(select one)

Select	Classification	Descriptor 1	Descriptor 2
	Strong political	Ministry / Govt set	Low consultation
	Political	Ministry / Govt set	High consultation
	Scientific	RFO set	Consultation with scientific community
	Scientific-societal	RFO set	Consultation with scientific community and societal stakeholders
	Societal	Co-production	Open participatory process for all stakeholders
	None of these		

Which classification best describes the structure of formal advice to the RFO?
(select one)

Select	Classification	Descriptor 1	Descriptor 2
	Scientific Board	Natural and Physical science dominated	No SSH
	Scientific Board	Multidisciplinary	SSH included
	Scientific Expert Board	Scientific stakeholder dominated	Societal stakeholders included
	Science-Society Expert Board	Even mixture of scientific and societal stakeholders	
	Societal Expert Board	Societal stakeholders	No scientific stakeholders
	None of these		
	Don’t know from CR		

Which classification best describes how the RFO designs its funding instruments?
(select one)

Select	Classification	Descriptor 1	Descriptor 2
	Strong intra-organisational	Internal team design	Informal consultation with scientific community
	Intra-organisational	Peer organisation learning contributing to mainly internal design	Informal or formal consultation with scientific community
	Consultation	Consultation with advisory/ expert Board	Consultation with scientific community
	Expert consultation	Formal contribution of advisory/ expert Board	Consultation with scientific and societal stakeholders
	Political consultation	Formal contribution of Ministry/ Govt	Consultation with advisory/ expert board; scientific community
	Public consultation	Formal process for societal stakeholder and public participation	
	None of these		

Which classification best describes expectations regarding RRI / responsibility in the funding instruments of this RFO?
(select one)

Select	Classification	Descriptor 1	Descriptor 2
	Integrated	Specified in call	Required approach or actions
	Spirit	Statement of principles	Preferred approach or actions
	Standard	Research integrity	Free of gender bias; no conflicts of interest
	Simple	Ethics approval	
	None of these		

Which classification best describes the research assessment processes of the RFO?
(select one)

Select	Classification	Descriptor 1	Descriptor 2
	Responsible +	Non-academic expert reviewers and/or members of assessment panels	Gender balanced panels; guidance/ training on RRI aspects, interdisciplinarity
	Responsible	Gender balanced panels	Guidance/ training on RRI aspects, interdisciplinarity
	Unbiased	Gender balanced panels	No conflict of interest
	Simple	No conflict of interest	
	None of these		

Which classification best describes the assessment of researchers' track records in this RFO?
(select one)

Select	Classification	Descriptor 1	Descriptor 2
	Cognitive contribution	Papers	Citations
	Science community contribution	Papers, citations	Software, data sets, etc
	Science to society contribution	Papers, citations, software, etc	Policy reports, medical guidelines, patents, etc.
	Science with society contribution	Papers, citations, software, policy reports, guidelines etc.	Co-production outputs, stakeholder testimonials, impact statements, etc.
	None of these		

Which classification(s) best describes the assessment of research project proposals in this RFO?
(rank as many as apply)

Select	Classification	Descriptor 1	Descriptor 2
	Scientific merit	Potential cognitive contribution	Impact on scientific discipline
	Mission merit	Potential contribution to solving societal problems	Impact on science, policy, and innovation communities
	Market merit	Potential delivery of products or services	Impact on societal stakeholders; Impact on sectors: health, energy, industry, etc.
	Co-production merit	Potential contribution to societal transformation	Impact on institutions, organisations, localities, etc.
	None of these		

Overall, how active is this RFO in engaging with, and promoting, institutional change toward greater responsibility in science and science funding:
(position on 7 point scale)

	Conservative						Progressive
Select							

Overall, how innovative is this RFO in relation to its driving practices of responsible research assessment in its own work?
(position on 7 point scale)

	Conservative						Innovative
Select							

Appendix VI Codebook for RESU

SuperMoRRI - RESU 2022

Projekt-ID	*5381*
URL der Umfrage	*https://by4794.customervoice360.com/uc/team018/57e5/*
Datum	*26.01.2023 09:48:37*

Inhalt:

Questions on individual RRI-related activities - Public Engagement V

Questions on individual RRI-related activities - Open Science

Questions on individual RRI-related activities - Open Science II

Questions on individual RRI-related activities - Open Science III

Questions on individual RRI-related activities - Open Science III

Questions on individual RRI-related activities - Gender Equality

Questions on individual RRI-related activities - Gender Equality II

Questions on individual RRI-related activities - Gender Equality III

Questions on individual RRI-related activities - Gender Equality IV

Questions on individual RRI-related activities - Ethics

Questions on individual RRI-related activities - Ethics II

Questions on individual RRI-related activities - Ethics II

	Questions on individual RRI-related activities - Ethics III			
	Questions on individual RRI-related activities - Ethics IV			
	Funding			
	Siocio-demographic characteristics II			
	Endseite			
	Surveyvariablen			
1	**System (PGID 22291)**			
3	**Introduction / Introductory Questions / Characteristics (PGID 22294)**			
Researchers might identify with different roles in research. (q_39915 - Typ 411)				
v_4	v_4	int		Reflexive Scientist (reflecting the rules, norms and values of doing research; developing theories and methods of research)
			1	*1*
			2	*2*
			3	*3*
			4	*4*
			5	*5*

v_5	v_5	int	Fact Finder (Collecting, analysing and interpreting empirical data; formulating and discussing new theories and facts within the scientific community)	
			1	*1*
			2	*2*
			3	*3*
			4	*4*
			5	*5*
v_6	v_6	int	Agenda Setter (Communicating science in media, policy-making and other societal contexts; intervening in public debate on the basis of the latest scientific results)	
			1	*1*
			2	*2*
			3	*3*
			4	*4*
			5	*5*
v_7	v_7	int	Participation Facilitator (Selecting appropriate extra-scientific stakeholders; Stakeholder analysis and setting up criteria for participation)	
			1	*1*
			2	*2*
			3	*3*
			4	*4*
			5	*5*

v_8	v_8	int	Knowledge Broker (Translating knowledge between scientific disciplines, professions, stakeholders; making implicit knowledge from different practice domains visible)	
			1	*1*
			2	*2*
			3	*3*
			4	*4*
			5	*5*

4	**Country (PGID 23937)**			
Please select your country of work (q_39916 - Typ 131)				
v_9	v_9	int	Q2: Selection of country of work	
			1	*Austria*
			2	*Belgium*
			3	*Bulgaria*
			4	*Croatia*
			5	*Czech Republic*
			6	*Denmark*
			7	*Estonia*
			8	*Finland*
			9	*France*
			10	*Germany*
			11	*Greece*
			12	*Hungary*
			13	*Ireland*
			14	*Italy*
			15	*Latvia*
			16	*Lithuania*
			17	*Luxembourg*
			18	*Malta*
			19	*Norway*
			20	*Poland*
			21	*Portugal*
			22	*Republic of Cyprus*
			23	*Romania*
			24	*Slovakia*

			25 Slovenia *26 Spain* *27 Sweden* *28 The Netherlands* *29 The United Kingdom* *Other country (please* *30 name):*
v_662	v_662	varchar	Other country (please name):

5	**RPO (PGID 25766)**	
Please select the Research Performing Organisation (RPO) that you mainly work at (q_46083 - Typ 131)		
v_686	v_686	int

Q3: Selection of RPO
Danube University
1 Krems
Medical University of
2 Vienna
University of Music and
Performing Arts in
3 Vienna
4 University of Vienna

5 University of Antwerp
6 Hasselt University
Transnational
7 University Limburg
8 Ghent University
Paisii Hilendarski
9 University of Plovdiv
National Academy of
10 Art
International Business
11 School
Angel Kanchev
12 University of Ruse
University North,
13 Koprivnica
14 University of Zadar
15 University of Zagreb

16 University of Dubrovnik
17 Frederick University

18 *Open University of Cyprus*
19 *University of Nicosia*
20 *Cyprus University of Technology*
21 *Brno University of Technology*
22 *University of Finance and Administration*
23 *Masaryk University*

24 *University of Veterinary and Pharmaceutical Sciences, Brno*
25 *Aarhus University*
26 *Copenhagen Business School*
27 *University of Copenhagen*
28 *Technical University of Denmark*
29 *Tallinn University*
30 *Estonian Business School*
31 *Tallinn University of Technology*
32 *Estonian University of Life Sciences*
33 *University of Helsinki*
34 *Finnish Academy of Fine Arts*
35 *University of Lapland*
36 *University of Turku*

37 *Université de Rennes 1*
38 *University of Angers*
39 *Lille University*
40 *University of New Caledonia*
41 *Université de La Rochelle*
42 *University of Montpellier*
43 *University of Duisburg-Essen*
44 *Technical University of Munich*

45 *University of Bayreuth*
46 *University of Bremen*

47 Bauhaus-Universität Weimar
48 Steinbeis Hochschule Berlin
49 Harokopio University
50 University Of Thessaly
51 Athens University of Economics and Business
52 Aristotle University of Thessaloniki
53 Corvinus University of Budapest
54 Pázmány Péter Catholic University
55 University of Pécs
56 Liszt Ferenc Academy of Music (University)
57 University College Dublin
58 University of Limerick
59 National University of Ireland, Galway
60 Maynooth University
61 University of Calabria
62 University of Macerata
63 Sapienza University of Rome
64 University of Florence
65 Università degli Studi di NAPOLI "Parthenope”
66 Online University "Pegaso"
67 Latvia University of Agriculture
68 Riga Technical University
69 Riga Stradinš University
70 University of Latvia
71 Mykolas Romeris University
72 LCC International University

Aleksandras Stulginskis
73 University
ISM University of
Management and
74 Economics
University of
75 Luxembourg
76 LUNEX University
77 University of Malta

Malta College of Arts,
78 Science & Technology
University of
79 Humanistic Studies
Eindhoven University of
80 Technology
81 Leiden University
VU University
82 Amsterdam
83 University of Oslo
84 University of Agder
The Norwegian
University of Science
85 and Technology
University of Tromso -
Norway's Arctic
86 University
Wrocław Medical
87 University
Jagiellonian University
88 in Cracow
Hugo Kołłątaj
Agricultural University
89 of Cracow
Andrzej Frycz
Modrzewski Cracow
90 College
University School of
Physical Education in
91 Wrocław
Pedagogical University
92 in Cracow
93 University of Minho
ISCTE - University
94 Institute of Lisbon
Open University of
95 Portugal
Egas Moniz Higher
Institute of Health
96 Sciences

Grigore T. Popa University of Medicine
97 *and Pharmacy Iasi*
"Vasile Alecsandri"
98 *University of Bacau*

99 *University of Constanta*

"Ion Mincu" University of Architecture and
100 *Urbanism*
Alexander Dubček University of Trenčín in
101 *Trenčín*
Pavol Jozef Šafárik
102 *University in Košice*
University of Ss. Cyril and Methodius in
103 *Trnava*

Slovak Medical
104 *University in Bratislava*
University of Nova
105 *Gorica*

106 *University of Ljubljana*

107 *University of Primorska*

108 *University of Maribor*
Carlos III University of
109 *Madrid*
Universidad de
110 *Cantabria*
111 *University of Seville*

National University of
112 *Distance Education*

Universidad Católica San Antonio de Murcia
Autonomous University
113 *of Barcelona*
114 *Dalarna University*
115 *Uppsala University*

Swedish University of
116 *Agricultural Sciences*
117 *Linköping University*

			The University of
			118 Sheffield
			London School of
			Hygiene and Tropical
			119 Medicine
			Queen Margaret
			120 University
			The University of
			121 Greenwich
			122 Staffordshire University
			123 The Open University
			124 Other (please specify):
v_688	v_688	varchar	Other (please specify):

6	**The concept and practice of responsible RRI (PGID 22295)**		
Being responsible in research and innovation can mean many things. What comes to your mind when thinking about responsible research and innovation? (q_39919 - Typ 121)			
v_74	v_74	int	Citizen Science
			not quoted
			1 quoted
v_67	v_67	int	Corporate Social Responsibility
			not quoted
			1 quoted
v_63	v_63	int	Ethics
			not quoted
			1 quoted
v_70	v_70	int	Excellence
			not quoted
			1 quoted
v_65	v_65	int	Gender Equality
			not quoted
			1 quoted
v_62	v_62	int	Inclusive Innovation

			not quoted
			1 quoted
v_60	v_60	int	Open Access / Open Science
			not quoted
			1 quoted
v_66	v_66	int	Open Innovation
			not quoted
			1 quoted
v_61	v_61	int	Public Engagement
			not quoted
			1 quoted
v_64	v_64	int	Science Communication
			not quoted
			1 quoted
v_71	v_71	int	Science Education
			not quoted
			1 quoted
v_69	v_69	int	Social Equality
			not quoted
			1 quoted
v_59	v_59	int	Sustainability
			not quoted
			1 quoted
v_68	v_68	int	Transparency
			not quoted
			1 quoted
v_75	v_75	int	Other (please specify)
			not quoted
			1 quoted
v_76	v_76	varchar	Other (please specify)

7	**Introduction RRI questions (PGID 24254)**

8	**Questions on individual RRI-related activities - Public Engagement II (PGID 22685)**

Please answer in how far you have cooperated with the following non-academic actors in your research in the last three years? (q_42284 - Typ 311)			
v_511	v_511	int	Citizens *Yes, in all projects I* *1 have been a part of* *Yes, in most of the* *2 projects* *3 Yes, in few of them* *4 No, in none of them*
v_512	v_512	int	Government and agencies (Administration, Ministries, etc.) *Yes, in all projects I* *1 have been a part of* *Yes, in most of the* *2 projects* *3 Yes, in few of them* *4 No, in none of them*
v_513	v_513	int	Non-Governmental Organisations (NGOs) / Civil Society Organisations (CSOs) *Yes, in all projects I* *1 have been a part of* *Yes, in most of the* *2 projects* *3 Yes, in few of them* *4 No, in none of them*
v_514	v_514	int	Companies / Enterprises *Yes, in all projects I* *1 have been a part of* *Yes, in most of the* *2 projects* *3 Yes, in few of them* *4 No, in none of them*
v_515	v_515	int	Consumers and / or applicants (e.g. patient groups) *Yes, in all projects I* *1 have been a part of*

			Yes, in most of the *2 projects* *3 Yes, in few of them* *4 No, in none of them*
v_518	v_518	int	Other types of non-academic actors (please specify): *Yes, in all projects I* *1 have been a part of* *Yes, in most of the* *2 projects* *3 Yes, in few of them* *4 No, in none of them*
v_519	v_519	varchar	Other types of non-academic actors (please specify):
8.1	**Questions on individual RRI-related activities - Public Engagement (filter) (PGID 24256)**		
8.1.1	**Questions on individual RRI-related activities - Public Engagement (filter) (PGID 24257)**		
How did you interact with citizens in your research? (q_43317 - Typ 121)			
v_520	v_520	int	Development of research agenda and research questions *not quoted* *1 quoted*
v_521	v_521	int	Conducting the research (data collection, data analytics) *not quoted* *1 quoted*

v_522	v_522	int	Decision-making (e.g. on the implementation of research activities) *not quoted* *1 quoted*
v_523	v_523	int	Discussing the consequences of research / its application (incl. technology assessment) *not quoted* *1 quoted*
v_525	v_525	int	Commercialisation and exploitation *not quoted* *1 quoted*
v_524	v_524	int	Dissemination *not quoted* *1 quoted*
v_579	v_579	int	Presentation of research results to citizens *not quoted* *1 quoted*
v_580	v_580	int	Other activities (please specify): *not quoted* *1 quoted*
v_581	v_581	varchar	Other activities (please specify):

How did you interact with government and agencies (administration, ministries, etc.) in your research? (q_43318 - Typ 121)

v_526	v_526	int	Development of research agenda and research questions *not quoted* *1 quoted*
v_527	v_527	int	Conducting the research (data collection, data analytics)

			not quoted *1 quoted*
v_528	v_528	int	Decision-making (e.g. on the implementation of research activities) *not quoted* *1 quoted*
v_529	v_529	int	Discussing the consequences of research / its application (incl. technology assessment) *not quoted* *1 quoted*
v_530	v_530	int	Commercialisation and exploitation *not quoted* *1 quoted*
v_531	v_531	int	Dissemination *not quoted* *1 quoted*
v_582	v_582	int	Presentation of research results to government and agencies *not quoted* *1 quoted*
v_583	v_583	int	Other activities (please specify): *not quoted* *1 quoted*
v_584	v_584	varchar	Other activities (please specify):

How did you interact with non-governmental organisations (NGOs) / civil society organisations (CSO) in your research? (q_43319 - Typ 121)

v_532	v_532	int	Development of research agenda and research questions *not quoted* *1 quoted*

v_533	v_533	int	Conducting the research (data collection, data analytics) *not quoted* *1 quoted*
v_534	v_534	int	Decision-making (e.g. on the implementation of research activities) *not quoted* *1 quoted*
v_535	v_535	int	Discussing the consequences of research / its application (incl. technology assessment) *not quoted* *1 quoted*
v_536	v_536	int	Commercialisation and exploitation *not quoted* *1 quoted*
v_537	v_537	int	Dissemination *not quoted* *1 quoted*
v_585	v_585	int	Presentation of research results to NGOs / CSOs *not quoted* *1 quoted*
v_586	v_586	int	Other activities (please specify): *not quoted* *1 quoted*
v_587	v_587	varchar	Other activities (please specify):
How did you interact with companies / enterprises in your research? (q_43320 - Typ 121)			
v_538	v_538	int	Development of research agenda and research questions *not quoted* *1 quoted*

v_539	v_539	int	Conducting the research (data collection, data analytics) *not quoted* *1 quoted*
v_540	v_540	int	Decision-making (e.g. on the implementation of research activities) *not quoted* *1 quoted*
v_541	v_541	int	Discussing the consequences of research / its application (incl. technology assessment) *not quoted* *1 quoted*
v_542	v_542	int	Commercialisation and exploitation *not quoted* *1 quoted*
v_543	v_543	int	Dissemination *not quoted* *1 quoted*
v_588	v_588	int	Presentation of research results to companies / enterprises *not quoted* *1 quoted*
v_589	v_589	int	Other activities (please specify): *not quoted* *1 quoted*
v_590	v_590	varchar	Other activities (please specify):

How did you interact with consumers and / or applicants (e.g. patient groups) in your research? (q_43321 - Typ 121)

v_544	v_544	int	Development of research agenda and research questions

			not quoted *1 quoted*
v_545	v_545	int	Conducting the research (data collection, data analytics) *not quoted* *1 quoted*
v_546	v_546	int	Decision-making (e.g. on the implementation of research activities) *not quoted* *1 quoted*
v_547	v_547	int	Discussing the consequences of research / its application (incl. technology assessment) *not quoted* *1 quoted*
v_548	v_548	int	Commercialisation and exploitation *not quoted* *1 quoted*
v_549	v_549	int	Dissemination *not quoted* *1 quoted*
v_591	v_591	int	Presentation of research results to consumers and / or applicants *not quoted* *1 quoted*
v_592	v_592	int	Other activities (please specify): *not quoted* *1 quoted*
v_593	v_593	varchar	Other activities (please specify):

How did you interact with other non-academic actors in your research? (q_43322 - Typ 121)

v_550	v_550	int	Development of research agenda and research questions *not quoted* *1 quoted*
v_551	v_551	int	Conducting the research (data collection, data analytics) *not quoted* *1 quoted*
v_552	v_552	int	Decision-making (e.g. on the implementation of research activities) *not quoted* *1 quoted*
v_553	v_553	int	Discussing the consequences of research / its application (incl. technology assessment) *not quoted* *1 quoted*
v_554	v_554	int	Commercialisation and exploitation *not quoted* *1 quoted*
v_555	v_555	int	Dissemination *not quoted* *1 quoted*
v_594	v_594	int	Presentation of research results to other non-academic actors *not quoted* *1 quoted*
v_595	v_595	int	Other activities (please specify): *not quoted* *1 quoted*
v_596	v_596	varchar	Other activities (please specify):

9	**Questions on individual RRI-related activities - Public Engagement III (PGID 22687)**		
If you engage with non-academic actors, what is your motivation? (q_40570 - Typ 311)			
v_152	v_152	int	I see it as part of good research practice *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_153	v_153	int	My institute rewards these activities *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_154	v_154	int	It is a requirement of the research funders *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_641	v_641	int	I see it as an opportunity to attract further research funding *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_155	v_155	int	I want to comply with the respective legal requirements of my country *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree*

			5 don't know
v_156	v_156	int	I wish to maximize the reach and impact of my research *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_159	v_159	int	I am convinced that research must engage with the public *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_160	v_160	int	I have a personal interest to better involve the public in research *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_161	v_161	int	Other reason (please specify): *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_162	v_162	varchar	Other reason (please specify):
In your experience, what are the barriers to engage with non-academic actors? (q_40571 - Typ 311)			
v_163	v_163	int	It is too time consuming *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*

v_164	v_164	int	My university does not actively support Public Engagement activities *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_165	v_165	int	There are no particular institutional incentives to reward Public Engagement activities *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_642	v_642	int	I did not find it relevant for my research *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_166	v_166	int	The benefits are too few for me *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_167	v_167	int	I am not sure how to do it *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_173	v_173	int	Considering Public Engagement negatively affects the quality of research *1 strongly agree* *2 rather agree* *3 rather disagree*

			4 strongly disagree *5 don't know*
v_253	v_253	int	Other reason (please specify): *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_254	v_254	varchar	Other reason (please specify):

10	**Questions on individual RRI-related activities - Public Engagement IV (PGID 22688)**

Does one of the following institutional offers exist at your university? (q_40572 - Typ 311)

v_168	v_168	int	A practical Public Engagement guide I can follow *2 Yes* *3 No* *4 Don't know* *5 Not applicable*
v_169	v_169	int	Funding available for Public Engagement activities *2 Yes* *3 No* *4 Don't know* *5 Not applicable*
v_170	v_170	int	A Public Engagement team I can contact *2 Yes* *3 No* *4 Don't know* *5 Not applicable*
v_171	v_171	int	Public Engagement training sessions I can attend *2 Yes*

			3 No *4 Don't know* *5 Not applicable*
v_172	v_172	int	An institutional policy for integrating Public Engagement in my research *2 Yes* *3 No* *4 Don't know* *5 Not applicable*
v_174	v_174	int	Other (please specify): *2 Yes* *3 No* *4 Don't know* *5 Not applicable*
v_175	v_175	varchar	Other (please specify):

11	**Questions on individual RRI-related activities - Public Engagement V (PGID 24258)**

When engaging with non-academic actors, do you expect or have you already observed the following benefits? (q_43323 - Typ 311)

v_556	v_556	int	Emergence of new research topics *1 Yes, I have already observed the benefit* *2 No, I have not observed such a benefit but I expect it to arise* *3 No, I have not observed, nor do I expect such a benefit* *4 Don't know*
v_557	v_557	int	Higher social relevance of scientific outputs

			Yes, I have already *1 observed the benefit* *No, I have not observed such a benefit but I* *2 expect it to arise* *No, I have not observed, nor do I* *3 expect such a benefit* *4 Don't know*
v_558	v_558	int	Higher quality of scientific outputs *Yes, I have already* *1 observed the benefit* *No, I have not observed such a benefit but I* *2 expect it to arise* *No, I have not observed, nor do I* *3 expect such a benefit* *4 Don't know*
v_559	v_559	int	Increased societal impact of my research *Yes, I have already* *1 observed the benefit* *No, I have not observed such a benefit but I* *2 expect it to arise* *No, I have not observed, nor do I* *3 expect such a benefit* *4 Don't know*
v_560	v_560	int	Improved products and services *Yes, I have already* *1 observed the benefit* *No, I have not observed such a benefit but I* *2 expect it to arise* *No, I have not observed, nor do I* *3 expect such a benefit* *4 Don't know*
v_561	v_561	int	More innovations, including social innovations

			Yes, I have already *1 observed the benefit* *No, I have not observed such a benefit but I* *2 expect it to arise* *No, I have not observed, nor do I* *3 expect such a benefit* *4 Don't know*
v_563	v_563	int	Inclusion of disadvantaged groups *Yes, I have already* *1 observed the benefit* *No, I have not observed such a benefit but I* *2 expect it to arise* *No, I have not observed, nor do I* *3 expect such a benefit* *4 Don't know*
v_564	v_564	int	Recognition of citizens' knowledge in research *Yes, I have already* *1 observed the benefit* *No, I have not observed such a benefit but I* *2 expect it to arise* *No, I have not observed, nor do I* *3 expect such a benefit* *4 Don't know*
v_565	v_565	int	Increasing citizens competencies / Empowering citizens *Yes, I have already* *1 observed the benefit* *No, I have not observed such a benefit but I* *2 expect it to arise* *No, I have not observed, nor do I* *3 expect such a benefit* *4 Don't know*

v_566	v_566	int	Changed approach to risk in my research 1 *Yes, I have already observed the benefit* 2 *No, I have not observed such a benefit but I expect it to arise* 3 *No, I have not observed, nor do I expect such a benefit* 4 *Don't know*
v_567	v_567	int	Other benefit (please specify): 1 *Yes, I have already observed the benefit* 2 *No, I have not observed such a benefit but I expect it to arise* 3 *No, I have not observed, nor do I expect such a benefit* 4 *Don't know*
v_568	v_568	varchar	Other benefit (please specify):

12	**Questions on individual RRI-related activities - Open Science (PGID 22689)**

Please answer whether you enacted any of the following Open Science activities in your research during the past three years. (q_40575 - Typ 311)

v_204	v_204	int	Pre-registered studies or shared in other ways 1 *Yes, in all projects I have been a part of*

			Yes, in most of the *2 projects* *3 Yes, in few of them* *No, in none of the* *4 projects*
v_205	v_205	int	Considered how to make data and analysis openly available in the planning phase of the project *Yes, in all projects I* *1 have been a part of* *Yes, in most of the* *2 projects* *3 Yes, in few of them* *No, in none of the* *4 projects*
v_206	v_206	int	Published working papers that are freely accessible *Yes, in all projects I* *1 have been a part of* *Yes, in most of the* *2 projects* *3 Yes, in few of them* *No, in none of the* *4 projects*
v_207	v_207	int	Shared data in open repositories *Yes, in all projects I* *1 have been a part of* *Yes, in most of the* *2 projects* *3 Yes, in few of them* *No, in none of the* *4 projects*
v_208	v_208	int	Published Open Access *Yes, in all projects I* *1 have been a part of* *Yes, in most of the* *2 projects* *3 Yes, in few of them* *No, in none of the* *4 projects*
v_209	v_209	int	Improved data infrastructures to ease the use of data

			Yes, in all projects I *1 have been a part of* *Yes, in most of the* *2 projects* *3 Yes, in few of them* *No, in none of the* *4 projects*
v_210	v_210	int	Made data available for free to other researchers after it was requested *Yes, in all projects I* *1 have been a part of* *Yes, in most of the* *2 projects* *3 Yes, in few of them* *No, in none of the* *4 projects*
13	**Questions on individual RRI-related activities - Open Science II (PGID 22691)**		
If you practice Open Science, what is your motivation? (q_40577 - Typ 311)			
v_220	v_220	int	I see it as part of good research practice *1 Yes* *2 No* *3 Don't know* *4 Not applicable*
v_221	v_221	int	My institute rewards these activities *1 Yes* *2 No* *3 Don't know* *4 Not applicable*
v_223	v_223	int	I want to comply with the respective legal requirements of my country *1 Yes* *2 No*

			3 Don't know *4 Not applicable*
v_228	v_228	int	I have a personal interest to make my resaerch results publicly available *1 Yes* *2 No* *3 Don't know* *4 Not applicable*
v_231	v_231	int	I wish to maximize the reach and impact of my research *1 Yes* *2 No* *3 Don't know* *4 Not applicable*
v_233	v_233	int	I am convinced that research must be open *1 Yes* *2 No* *3 Don't know* *4 Not applicable*
v_229	v_229	int	Other reason (please specify): *1 Yes* *2 No* *3 Don't know* *4 Not applicable*
v_230	v_230	varchar	Other reason (please specify):
In your experience, what are the barriers to practice Open Science? (q_40578 - Typ 311)			
v_235	v_235	int	It is too time consuming *1 strongly agree* *2 partly agree* *3 rather disagree* *4 strongly disagree* *5 don't konw*

v_236	v_236	int	My university does not actively support Open Science, by, for example, offering financial support *1 strongly agree* *2 partly agree* *3 rather disagree* *4 strongly disagree* *5 don't konw*
v_237	v_237	int	There are no particular institutional incentives to reward Open Science activities *1 strongly agree* *2 partly agree* *3 rather disagree* *4 strongly disagree* *5 don't konw*
v_465	v_465	int	I did not find it relevant for my research *1 strongly agree* *2 partly agree* *3 rather disagree* *4 strongly disagree* *5 don't konw*
v_249	v_249	int	Article processing charges (APCs) are too expensive *1 strongly agree* *2 partly agree* *3 rather disagree* *4 strongly disagree* *5 don't konw*
v_239	v_239	int	The benefits are too few for me *1 strongly agree* *2 partly agree* *3 rather disagree* *4 strongly disagree* *5 don't konw*
v_240	v_240	int	I am not sure how to do it *1 strongly agree* *2 partly agree* *3 rather disagree* *4 strongly disagree*

			5 don't konw
v_248	v_248	int	The most important journals in my field do not provide Open Access *1 strongly agree* *2 partly agree* *3 rather disagree* *4 strongly disagree* *5 don't konw*
v_250	v_250	int	Other reason (please specify): *1 strongly agree* *2 partly agree* *3 rather disagree* *4 strongly disagree* *5 don't konw*
v_251	v_251	varchar	Other reason (please specify):
14	**Questions on individual RRI-related activities - Open Science III (PGID 22696)**		
Does one of the following institutional offers exist at your university? (q_40579 - Typ 311)			
v_241	v_241	int	An institutional repository *2 Yes* *3 No* *4 Don't know* *5 Not applicable*
v_242	v_242	int	Institutional software for data processing *2 Yes* *3 No* *4 Don't know* *5 Not applicable*
v_243	v_243	int	A practical Open Science guide I can follow

			2 Yes *3 No* *4 Don't know* *5 Not applicable*
v_244	v_244	int	Funding available for Open Access publishing *2 Yes* *3 No* *4 Don't know* *5 Not applicable*
v_245	v_245	int	An Open Science team I can contact *2 Yes* *3 No* *4 Don't know* *5 Not applicable*
v_255	v_255	int	Open Science training sessions I can attend *2 Yes* *3 No* *4 Don't know* *5 Not applicable*
v_256	v_256	int	An institutional policy for publishing Open Access *2 Yes* *3 No* *4 Don't know* *5 Not applicable*
v_509	v_509	int	An institutional policy for practicing Open Data *2 Yes* *3 No* *4 Don't know* *5 Not applicable*
v_246	v_246	int	Others (please specify): *2 Yes* *3 No* *4 Don't know* *5 Not applicable*
v_247	v_247	varchar	Others (please specify):

15	**Questions on individual RRI-related activities - Open Science III (PGID 24259)**		
When practicing Open Science, do you expect or have you already observed the following benefits? (q_43324 - Typ 311)			
v_569	v_569	int	Emergence of new research topics *Yes, I have already* *1 observed the benefit* *No, I have not observed such a benefit but I* *2 expect it to arise* *No, I have not observed, nor do I* *3 expect such a benefit* *4 Don't know*
v_570	v_570	int	Enhanced visibility in the research community *Yes, I have already* *1 observed the benefit* *No, I have not observed such a benefit but I* *2 expect it to arise* *No, I have not observed, nor do I* *3 expect such a benefit* *4 Don't know*
v_571	v_571	int	Higher social relevance of scientific outputs *Yes, I have already* *1 observed the benefit* *No, I have not observed such a benefit but I* *2 expect it to arise* *No, I have not observed, nor do I* *3 expect such a benefit*

			4 Don't know
v_572	v_572	int	Higher quality of scientific outputs
			1 Yes, I have already observed the benefit
			2 No, I have not observed such a benefit but I expect it to arise
			3 No, I have not observed, nor do I expect such a benefit
			4 Don't know
v_573	v_573	int	Faster diffusion of knowledge
			1 Yes, I have already observed the benefit
			2 No, I have not observed such a benefit but I expect it to arise
			3 No, I have not observed, nor do I expect such a benefit
			4 Don't know
v_574	v_574	int	Increased societal impact of my research
			1 Yes, I have already observed the benefit
			2 No, I have not observed such a benefit but I expect it to arise
			3 No, I have not observed, nor do I expect such a benefit
			4 Don't know
v_575	v_575	int	Mobilizing further research funding
			1 Yes, I have already observed the benefit
			2 No, I have not observed such a benefit but I expect it to arise
			3 No, I have not observed, nor do I expect such a benefit
			4 Don't know

v_576	v_576	int	Cost reduction due to improved access to knowledge and / or data *Yes, I have already* *1 observed the benefit* *No, I have not observed such a benefit but I* *2 expect it to arise* *No, I have not observed, nor do I* *3 expect such a benefit* *4 Don't know*
v_577	v_577	int	Other benefit (please specify): *Yes, I have already* *1 observed the benefit* *No, I have not observed such a benefit but I* *2 expect it to arise* *No, I have not observed, nor do I* *3 expect such a benefit* *4 Don't know*
v_578	v_578	varchar	Other benefit (please specify):

16	**Questions on individual RRI-related activities - Gender Equality (PGID 22680)**

Please answer whether Gender Equality was taken into account in your research during the past three years. (q_40561 - Typ 311)

v_81	v_81	int	Attempted to obtain a gender-balanced composition of the research team? *Yes, in all project I have* *1 been a part of*

			Yes, in most of the *2 projects* *3 Yes, in few of them* *No, in none of the* *4 projects*
v_77	v_77	int	Considered gender aspects in the research design phase? *Yes, in all project I have* *1 been a part of* *Yes, in most of the* *2 projects* *3 Yes, in few of them* *No, in none of the* *4 projects*
v_78	v_78	int	Considered gender aspects in the implementation phase of research? *Yes, in all project I have* *1 been a part of* *Yes, in most of the* *2 projects* *3 Yes, in few of them* *No, in none of the* *4 projects*
v_79	v_79	int	Considered gender aspects when analysing the data? *Yes, in all project I have* *1 been a part of* *Yes, in most of the* *2 projects* *3 Yes, in few of them* *No, in none of the* *4 projects*
v_80	v_80	int	Considered gender aspects when disseminating the results? *Yes, in all project I have* *1 been a part of* *Yes, in most of the* *2 projects* *3 Yes, in few of them* *No, in none of the* *4 projects*

17	**Questions on individual RRI-related activities - Gender Equality II (PGID 22682)**		
If you consider gender aspects and / or Gender Equality in your research, what is your motivation? (q_40563 - Typ 311)			
v_87	v_87	int	I have to comply with the respective legal requirements of my country *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_88	v_88	int	It is a requirement of the research funders *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_89	v_89	int	My institute rewards these activities *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_92	v_92	int	I wish to maximize the reach and impact of my research *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_93	v_93	int	It is good research practice *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree*

			5 don't know
v_95	v_95	int	I have a personal interest in better addressing gender aspects and gender equality in research *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_96	v_96	int	Other reason (please specify): *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_97	v_97	varchar	Other reason (please specify):
In your experience what are the barriers to consider aspects of Gender Equality? (q_40564 - Typ 311)			
v_98	v_98	int	My university does not support Gender Equality activities *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_99	v_99	int	There are no particular institutional incentives to promote Gender Equality activities *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_100	v_100	int	Considering Gender Equality negatively affects the quality of research

			1 strongly agree *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_101	v_101	int	I did not find it relevant for my research *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_102	v_102	int	I am not sure how to do it *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_467	v_467	int	It is too time consuming *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_468	v_468	int	The benefits are too few for me *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_469	v_469	int	Other reason (please specify): *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_470	v_470	varchar	Other reason (please specify):

18	**Questions on individual RRI-related activities - Gender Equality III (PGID 24261)**		
Does one of the following institutional offers exist at your university? (q_43331 - Typ 311)			
v_634	v_634	int	An institutional policy for integrating Gender Equality in my research *2 Yes* *3 No* *4 Don't know* *5 Not applicable*
v_635	v_635	int	Funding available for Gender Equality activities *2 Yes* *3 No* *4 Don't know* *5 Not applicable*
v_636	v_636	int	A practical Gender Equality guide I can follow *2 Yes* *3 No* *4 Don't know* *5 Not applicable*
v_637	v_637	int	A Gender Equality team I can contact *2 Yes* *3 No* *4 Don't know* *5 Not applicable*
v_638	v_638	int	Gender Equality training sessions I can attend *2 Yes* *3 No* *4 Don't know* *5 Not applicable*
v_639	v_639	int	Others (please specify): *2 Yes*

			3 No *4 Don't know* *5 Not applicable*
v_640	v_640	varchar	Others (please specify):
19	**Questions on individual RRI-related activities - Gender Equality IV (PGID 22683)**		
When taking Gender Equality into account in your research, do you expect or have you already observed the following benefits? (q_40566 - Typ 311)			
v_108	v_108	int	Emergence of new research topics *Yes, I have already* *1 observed the benefit* *No, I have not observed such a benefit but I* *2 expect it to arise* *No, I have not observed, nor do I* *3 expect such a benefit* *4 Don't know*
v_109	v_109	int	Findings which would not have occurred without taking gender aspects into account *Yes, I have already* *1 observed the benefit* *No, I have not observed such a benefit but I* *2 expect it to arise* *No, I have not observed, nor do I* *3 expect such a benefit* *4 Don't know*

v_110	v_110	int	Enhanced visibility in the research community *Yes, I have already* *1 observed the benefit* *No, I have not observed such a benefit but I* *2 expect it to arise* *No, I have not observed, nor do I* *3 expect such a benefit* *4 Don't know*
v_111	v_111	int	Higher social relevance of scientific outputs *Yes, I have already* *1 observed the benefit* *No, I have not observed such a benefit but I* *2 expect it to arise* *No, I have not observed, nor do I* *3 expect such a benefit* *4 Don't know*
v_112	v_112	int	Higher quality of scientific outputs *Yes, I have already* *1 observed the benefit* *No, I have not observed such a benefit but I* *2 expect it to arise* *No, I have not observed, nor do I* *3 expect such a benefit* *4 Don't know*
v_115	v_115	int	Increased societal impact of my research *Yes, I have already* *1 observed the benefit* *No, I have not observed such a benefit but I* *2 expect it to arise* *No, I have not observed, nor do I* *3 expect such a benefit*

			4 Don't know
v_116	v_116	int	Mobilizing further research funding *Yes, I have already* *1 observed the benefit*
			No, I have not observed such a benefit but I *2 expect it to arise* *No, I have not observed, nor do I* *3 expect such a benefit* *4 Don't know*
v_118	v_118	int	Products & services with higher comparative advantage due to ensured gender suitability *Yes, I have already* *1 observed the benefit*
			No, I have not observed such a benefit but I *2 expect it to arise* *No, I have not observed, nor do I* *3 expect such a benefit* *4 Don't know*
v_119	v_119	int	More innovations, including social innovations *Yes, I have already* *1 observed the benefit*
			No, I have not observed such a benefit but I *2 expect it to arise* *No, I have not observed, nor do I* *3 expect such a benefit* *4 Don't know*
v_129	v_129	int	Inclusion of disadvantaged groups *Yes, I have already* *1 observed the benefit*

			No, I have not observed such a benefit but I *2 expect it to arise* *No, I have not observed, nor do I* *3 expect such a benefit* *4 Don't know*
v_134	v_134	int	Other benefit (please specify): *Yes, I have already* *1 observed the benefit*
			No, I have not observed such a benefit but I *2 expect it to arise* *No, I have not observed, nor do I* *3 expect such a benefit* *4 Don't know*
v_135	v_135	varchar	Other benefit (please specify):

20	**Questions on individual RRI-related activities - Ethics (PGID 22697)**

Please answer whether you considered Ethics in your research during the past three years. (q_40587 - Typ 311)

v_345	v_345	int	I consider ethical issues when designing my own research *Yes, in all projects I* *1 have been a part of* *Yes, in most of the* *2 projects* *3 Yes, in few of them* *No, in none of the* *4 projects*

v_346	v_346	int	I involve other researchers competent in ethics in my research projects, e.g. in interdisciplinary research or as ethics advisors *1 Yes, in all projects I have been a part of* *2 Yes, in most of the projects* *3 Yes, in few of them* *4 No, in none of the projects*
v_347	v_347	int	I include work packages in my research that deal particularly with ethical issues that arise in my research *1 Yes, in all projects I have been a part of* *2 Yes, in most of the projects* *3 Yes, in few of them* *4 No, in none of the projects*
v_348	v_348	int	I submit my research projects to ethical review *1 Yes, in all projects I have been a part of* *2 Yes, in most of the projects* *3 Yes, in few of them* *4 No, in none of the projects*
v_349	v_349	int	I act as reviewer in ethics reviews for projects *1 Yes, in all projects I have been a part of* *2 Yes, in most of the projects* *3 Yes, in few of them* *4 No, in none of the projects*

v_350	v_350	int	I contribute to the development of ethical standards in my disciplines *1 Yes, in all projects I have been a part of* *2 Yes, in most of the projects* *3 Yes, in few of them* *4 No, in none of the projects*
v_351	v_351	int	I contribute to training on ethical issues in my discipline *1 Yes, in all projects I have been a part of* *2 Yes, in most of the projects* *3 Yes, in few of them* *4 No, in none of the projects*
21	**Questions on individual RRI-related activities - Ethics II (PGID 24513)**		
Thinking about your research carried out over the last three years, how often has the following occurred? (q_43673 - Typ 311)			
v_678	v_678	int	Wilfully failing to cite relevant publications that contradict your own beliefs, theories, hypotheses, methods or findings *1 often* *2 sometimes* *3 rarely* *4 never*

			does not apply in my
			5 case
v_679	v_679	int	When reviewing a manuscript, not investing the effort necessary to conduct a thorough review
			1 often
			2 sometimes
			3 rarely
			4 never
			does not apply in my
			5 case
v_680	v_680	int	Choosing not to report your findings if they could weaken or contradict your theories or hypotheses
			1 often
			2 sometimes
			3 rarely
			4 never
			does not apply in my
			5 case
v_681	v_681	int	Deliberately using another researcher's unpublished idea without giving credit. For example, publishing an idea voiced by a colleague at an informal meeting without giving them credit
			1 often
			2 sometimes
			3 rarely
			4 never
			does not apply in my
			5 case
v_682	v_682	int	In a publication, failing to disclose relevant personal, financial, political or intellectual conflicts of interests
			1 often
			2 sometimes

			3 rarely *4 never* *does not apply in my* *5 case*
v_683	v_683	int	Including authors on a paper who had not contributed sufficiently to the work to merit authorship *1 often* *2 sometimes* *3 rarely* *4 never* *does not apply in my* *5 case*
v_684	v_684	int	Inadequately supervising or mentoring junior co-workers *1 often* *2 sometimes* *3 rarely* *4 never* *does not apply in my* *5 case*
v_685	v_685	int	Carrying out research without getting the required ethical approval *1 often* *2 sometimes* *3 rarely* *4 never* *does not apply in my* *5 case*

22	**Questions on individual RRI-related activities - Ethics II (PGID 22699)**

If you consider Ethics, what is your motivation? (q_40589 - Typ 311)

v_358	v_358	int	I see it as part of good research practice *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_360	v_360	int	It is a requirement of the research funders *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_359	v_359	int	My institute rewards these activities *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_361	v_361	int	I want to comply with the respective legal requirements of my country *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_363	v_363	int	I wish to maximize the reach and impact of my research *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_365	v_365	int	I am convinced that research must be ethical *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_362	v_362	int	I have a personal interest in ethics *1 strongly agree*

			2 rather agree *3 rather disagree* *4 strongly disagree* *5 don't know*
v_367	v_367	int	Other reason (please specify): *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_368	v_368	varchar	Other reason (please specify):
In your experience, what are the barriers to consider Ethics in your research? (q_40590 - Typ 311)			
v_369	v_369	int	My University does not actively support ethics activities *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_370	v_370	int	There is no ethics committee in my research organization that would review my projects and guide me in how to include ethics in my research *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_371	v_371	int	There are no particular institutional incentives to reward ethics in research *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree*

			5 don't know
v_471	v_471	int	I did not find it relevant for my research *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_372	v_372	int	It is too time consuming *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_373	v_373	int	The benefits are too few for me *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_374	v_374	int	I am not sure how to do it *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_375	v_375	int	Considering ethics negatively affects the quality of research *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_377	v_377	int	Other reason (please specify): *1 strongly agree* *2 rather agree* *3 rather disagree* *4 strongly disagree* *5 don't know*
v_378	v_378	varchar	Other reason (please specify):

23	Questions on individual RRI-related activities - Ethics III (PGID 24260)		
Does one of the following institutional offers exist at your university? (q_43327 - Typ 311)			
v_616	v_616	int	A practical ethics guide I can follow *2 Yes* *3 No* *4 Don't know* *5 Not applicable*
v_617	v_617	int	Funding available for Ethics activities *2 Yes* *3 No* *4 Don't know* *5 Not applicable*
v_618	v_618	int	An ethics team I can contact *2 Yes* *3 No* *4 Don't know* *5 Not applicable*
v_619	v_619	int	Ethics training sessions I can attend *2 Yes* *3 No* *4 Don't know* *5 Not applicable*
v_620	v_620	int	An institutional policy for integrating ethics in my research *2 Yes* *3 No* *4 Don't know* *5 Not applicable*
v_621	v_621	int	A policy for designing ethical values and principles into projects and digital systems *2 Yes*

			3 No *4 Don't know* *5 Not applicable*
v_622	v_622	int	Others (please specify): *2 Yes* *3 No* *4 Don't know* *5 Not applicable*
v_623	v_623	varchar	Others (please specify):

24	**Questions on individual RRI-related activities - Ethics IV (PGID 22700)**		
When taking Ethics into account in your research, do you expect or have you already observed the following benefits? (q_40594 - Typ 311)			
v_393	v_393	int	Higher social relevance of scientific outputs *1 Yes, I have already observed the benefit* *2 No, I have not observed such a benefit but I expect it to arise* *3 No, I have not observed, nor do I expect such a benefit* *4 Don't know*
v_394	v_394	int	Higher quality of scientific outputs *1 Yes, I have already observed the benefit* *2 No, I have not observed such a benefit but I expect it to arise*

			No, I have not observed, nor do I *3 expect such a benefit* *4 Don't know*
v_396	v_396	int	Increased societal impact of my research *Yes, I have already* *1 observed the benefit*
			No, I have not observed such a benefit but I *2 expect it to arise* *No, I have not observed, nor do I* *3 expect such a benefit* *4 Don't know*
v_414	v_414	int	Changed approach to risk in my research *Yes, I have already* *1 observed the benefit*
			No, I have not observed such a benefit but I *2 expect it to arise* *No, I have not observed, nor do I* *3 expect such a benefit* *4 Don't know*
v_415	v_415	int	Other benefit (please specify): *Yes, I have already* *1 observed the benefit*
			No, I have not observed such a benefit but I *2 expect it to arise* *No, I have not observed, nor do I* *3 expect such a benefit* *4 Don't know*
v_416	v_416	varchar	Other benefit (please specify):

25 Funding (PGID 22765)

Please indicate whether the research over the last five years was funded by the sources listed below?(I) Application-based project funding from national public research funding authorities, e.g. from science foundations (q_40655 - Typ 111)

v_418	v_418	int	Q25-1: Received funding *1 yes* *2 no* *3 I don't know*

If yes, please specify the type of application-based project funding in your country (q_40674 - Typ 121)

v_448	v_448	int	Funding from national Science Funds (e.g. Austrian FWC, German DFG, Dutch NWO etc.) *not quoted* *1 quoted*
v_449	v_449	int	Funding from national research funding programs from ministries or research funding agencies *not quoted* *1 quoted*
v_450	v_450	int	Funding from private foundations etc. *not quoted* *1 quoted*
v_643	v_643	int	Others (please specify): *not quoted* *1 quoted*

v_644	v_644	varchar	Others (please specify):
(II) EU funding (q_40662 - Typ 111)			
v_425	v_425	int	Q25-2: EU-funding *1 yes* *2 no* *3 I don't know*
If yes, please specify the type of EU funding (q_40663 - Typ 121)			
v_426	v_426	int	European Research Council (ERC Grants, Marie Skłodowska-Curie Actions (MSCA)) *not quoted* *1 quoted*
v_427	v_427	int	Horizon2020 / Horizon Europe *not quoted* *1 quoted*
v_428	v_428	int	EUREKA *not quoted* *1 quoted*
v_429	v_429	int	COST *not quoted* *1 quoted*
v_430	v_430	int	European Innovation Council (EIC) *not quoted* *1 quoted*
v_431	v_431	int	European Institute of Innovation and Technology (EIT) *not quoted* *1 quoted*
v_432	v_432	int	Others (please specify): *not quoted* *1 quoted*
v_433	v_433	varchar	Others (please specify):

(III) Contract research (q_40664 - Typ 111)

v_434	v_434	int	Q25-3: Contract research *1 yes* *2 no* *3 I don't know*

If yes, please specify the type of contract research (q_40665 - Typ 121)

v_435	v_435	int	Studies and services for public national authorities like research ministries *not quoted* *1 quoted*
v_436	v_436	int	Studies and services for the European Commission *not quoted* *1 quoted*
v_437	v_437	int	Studies and services for private companies *not quoted* *1 quoted*
v_438	v_438	int	Studies and services for NGOs / CSOs *not quoted* *1 quoted*
v_441	v_441	int	Others (please specify): *not quoted* *1 quoted*
v_442	v_442	varchar	Others (please specify):

26	**Siocio-demographic characteristics II (PGID 22770)**

What is your gender? (q_40666 - Typ 111)

v_443	v_443	int	Q26: Current gender *1 Woman* *2 Man* *3 Non-binary* *5 Prefer not to state* *6 A gender not listed here (please specify):*
v_444	v_444	varchar	A gender not listed here (please specify):

What is the scientific field in which you mainly do resaerch? (q_40667 - Typ 111)

v_445	v_445	int	Q27: Scientific field *1 Medical and Health Sciences* *2 Agricultural and Veterinary Science* *3 Engineering and Technology* *4 Structural Sciences (Mathematics, Informatics, Logic)* *5 Natural Sciences (Physics, Chemistry, Geosciences, Astronomy, Biology)* *6 Social Sciences and Economics* *7 Arts and Humanities* *8 Others (please specify):*
v_446	v_446	varchar	Others (please specify):

How long have you been working in research / as a researcher (years after Masters' level)? (q_40668 - Typ 111)

v_447	v_447	int	Q28: Scientific age

			1 0-5 years *2 6-10 years* *3 11-20 years* *4 >20 years*
What is your current (scientific) career stage? (for details, see EURAXESS Research Profile Descriptors) (q_43311 - Typ 111)			
v_510	v_510	int	Q29: Current scientific career stage *R1: First Stage Researcher (up to the* *1 point of PhD)* *R2: Recognised Researcher (PhD holders or equivalent who are not yet fully* *2 independ-ent)* *R3: Established Researcher (researchers who have developed a level of* *3 independence);* *R4: Leading Researcher (researchers leading their research area or* *4 field)*

SUPER MoRRI

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