

ORGANISATIONAL MANUAL – EMBEDDED NUCLEI

Deliverable 5.1



NUCLEUS

DELIVERABLE DESCRIPTION

This is the Organisational Manual for Embedded Nuclei, the institutions that will trial and test RRI strategies based on the recommendations from the first phase of the project, as part of the NUCLEUS project from November 2017-August 2019.

DELIVERABLE

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PROJECT

NUCLEUS is a four-year, Horizon 2020 project bringing Responsible Research and Innovation (RRI) to life in universities and research institutions. The project is coordinated by Rhine-Waal University of Applied Sciences. For more information, please visit the NUCLEUS website, follow our social media, or contact the project management team at info@nucleus-project.eu.

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EXECUTIVE SUMMARY

This document is a support manual for the Embedded Nuclei partners responsible for implementing RRI strategies based on the learnings from phase 1 of the project. The Implementation Phase will run from November 2017-August 2019.

This manual outlines 'how' Embedded Nuclei can deliver the Action 1-8 of the NUCLEUS Action Framework, as presented in the Implementation Roadmap (D3.6). It draws on the interventions listed under the actions in the framework, explains further what they are and provides examples and methodologies to implement them.

This document contains the Action Plans for the Embedded Nuclei (as part of Action 2 and located in Part 2 of the document). These plans are based on the 8 Actions NUCLEUS Action Framework. The interventions adopted by each institution vary, to suit the suit the local context and level at which the institution has structural and cultural aspects in place implement to RRI at the start of the process. The Action Plans will guide the Implementation Phase for each unit, be used as a basis for meeting conversations between mentor and mentees. The plans will be reviewed during M34-M35 with any necessary adjustments made at this point.

In addition to providing the Action Plans, tools and support to deliver the interventions, the document outlines the mentoring process, the envisaged working structure, timeline and tasks for Embedded Nuclei are outlined.

This document is being prepared at the start of the Implementation Phase for Embedded Nuclei. If and when further support needs arise over the course of the Implementation Phase for Embedded Nuclei, the relevant materials will be prepared and uploaded to the NUCLEUS website. The mentoring process also provides the Embedded Nucleus with continuous development support throughout the Implementation Phase. Working Groups will be scheduled at interment points during the Implementation Phase to troubleshoot issues, develop key competencies and skills for Embedded Nuclei appointed staff as well as capacity building through sharing lessons learned.

Apart from the Implementation Roadmap (D3.6), The Organisational Manual is directly linked with T5.1-T5.1.13, conducting an Embedded Nuclei in the 10 institutions and providing coaching and mentoring and training by the 3 mentoring institutions. This

document will also support the case analysis and cross-case analysis of Embedded Nuclei T5.1.14 (WP5, M35) and is closely linked with the Monitoring and Evaluation Reports (D7.2). The details outlined in this document therefore also support the basis of the final Recommendations for Embedded Nuclei for RRI Guidelines (D5.8, M47) and The Final Monitoring and Evaluation Report (D7.4, M48).

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1 INTRODUCTION

1.1 PURPOSE OF DOCUMENT

This document is a support manual for the Embedded Nuclei partners responsible for delivering action plans to trial and test RRI strategies and interventions during the second phase of the NUCLEUS project (M27-M46): Implementation and Recommendation.

It outlines 'how' Embedded Nuclei can deliver Action 1-8 of the NUCLEUS Action Framework (D3.6). The Organisational Manual provides the Embedded Nuclei units with the tools, skills and knowledge to test the implementation of RRI strategies in line with their institutional action plans. It draws on the interventions listed under the actions in the framework, explains further what they are and provides examples and methodologies to implement them. Section 4 contains the action plans for the Embedded Nuclei. These plans will support the Nuclei deliver the 8 Actions from the NUCLEUS Action Framework with a selection of processes and initiatives that fit the local context. In addition to providing tools and support to deliver the interventions, the document outlines the mentoring process, the work and communication structure for Embedded Nuclei. A timeline and task table illustrating the key communication, interaction points and input requirements for the Embedded Nuclei is provided.

The document is presented in two distinct parts. Part 1 presents detail of the interventions listed in the NUCLEUS Action Framework (refer to D3.6) and outlines how they can be delivered in practice. It also contains the envisaged operational support elements over the course of the Implementation period. Part 2 of the document contains the Action Plans for the Embedded Nuclei.

Section 2, provides an overview of the Embedded Nuclei and the role these institutions play in the NUCLEUS project.

Sections 3-13 form Part 1 of the document. These sections present details of the interventions contained in the NUCLEUS Action Framework and highlight resources and provide guidance to deliver them in practice. Section 11 provides an overview of the mentoring process, Section 12 outlines the working structure during the implementation phase. Section 12 outlines the working structure, timeline and contains a task table and checklist with anticipated work-flows during implementation. Section 13 highlights the data management and ethical considerations for the Nuclei as project partners.

The Action Plans, Part B of the document, can be found in Section 14.

The document concludes and outlines the next steps for the host institutions, Section 15.

This is a working document. Further resources and supports will be developed, accessed and shared with and amongst the Embedded Nuclei and Mobile Nuclei partners over the course of the Implementation Phase.

2 EMBEDDED NUCLEI

2.1 ROLE & OVERVIEW OF EMBEDDED NUCLEI

From November 2017, the following 10 research institutions and Universities will set-up dedicated units, or Embedded Nuclei, to trail and test RRI strategies.

The institutions represented are located across Europe, Georgia, South Africa and China and vary greatly in terms of year of establishment, size, research focus and cultural norms. Throughout the Implementation Phase, mentors will stimulate the Nuclei's capabilities and support the process of growth. The Nuclei and the mentoring institution are listed below:

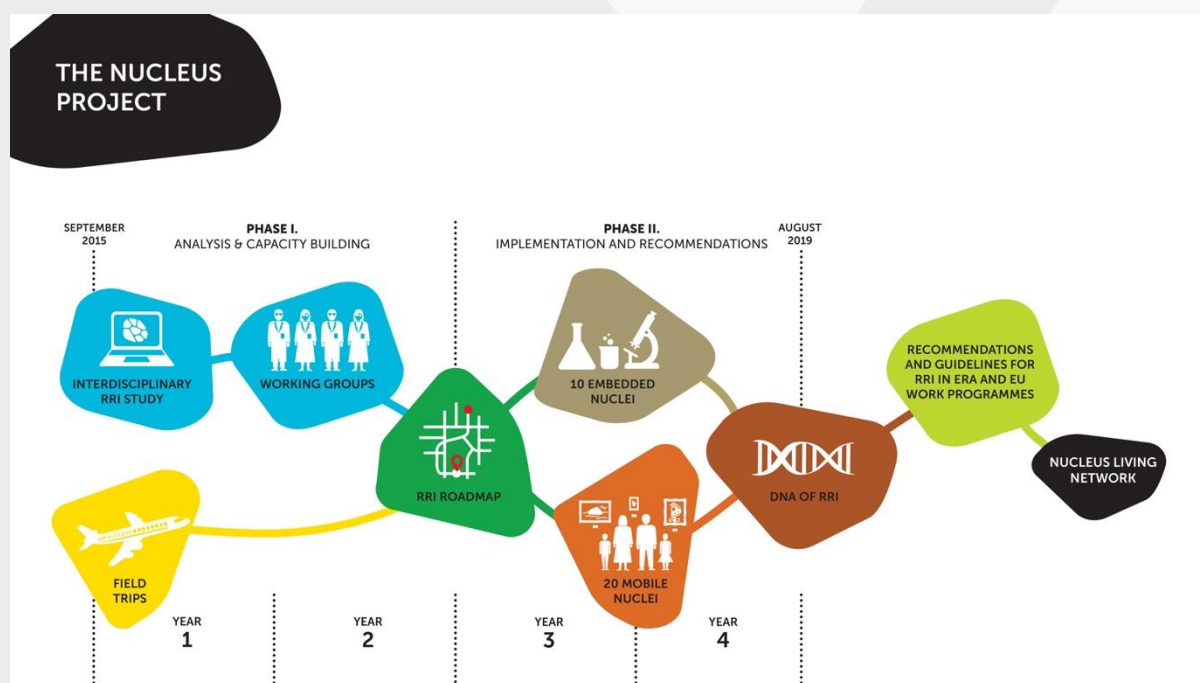
	Embedded Nuclei	Mentoring Institution
1	Rhine Waal University	University of Aberdeen
2	CRISP	University of Aberdeen
3	Ruhr-University, Bochum	University of Aberdeen
4	Ilia State University	Dublin City University
5	Lyon University	Dublin City University
6	Nottingham-Trent University	Dublin City University
7	University Twente	University of Edinburgh
8	University of Malta	University of Edinburgh
9	MISANU (Mathematical Institute of the Serbian Academy of Sciences and Arts).	University of Edinburgh
10	The South African Institute for Aquatic Biodiversity (SAIAB) in partnership with SAASTA (South African Agency for Science and Technology)	University of Edinburgh

Table 2-1: Embedded Nuclei and Mentoring Institutions

The Embedded Nuclei will operate in parallel with the 20 Mobile Nuclei. A profile description of each Embedded Nucleus is provided in the Action Plans contained in Part 2 of this document.

2.2 ROLE OF EMBEDDED NUCLEUS UNIT

Based on the Implementation Roadmap (D3.6), Embedded Nuclei will install 'RRI test beds' in the Universities and research institutions listed in Table 1 from November 2017 until July 2019. These organisational units will demonstrate how RRI can be implemented in practice based on recommendations from the NUCLEUS Studies (WP3) as well as the Field Trips and Working Groups (WP4).



The NUCLEUS project challenges the way in which these institutions operate. The Embedded Nuclei units will play a critical role of catalysing the culture change within the institutions. Embedded Nuclei will draw from the recommendations derived from phase 1 of the NUCLEUS project and from relevant RRI literature and RRI projects to create a local Action Plan consisting of practical interventions, processes and initiatives to encourage reflection on governance and top-down strategies as well as bottom-up initiatives. These interventions will test, enrich and extend institutional processes and practices – to become RRI focused. Embedded Nuclei units therefore aim to progressively but measurably embed RRI into the governance and culture of the institution.

2.3 ACTION FRAMEWORK FOR EMBEDDED NUCLEI

The NUCLEUS Action Framework (Outlined in The Implementation Roadmap D3.6) provides Embedded Nuclei with a structured approach for introducing step-changes, grounded by findings from Phase 1 of the NUCLEUS project, towards embedding RRI in the local structure and culture in the 10 institutions. It offers the prospect of continued growth and improvement beyond the life span of the NUCLEUS project.

In summary, the 8 NUCLEUS Actions for Embedded Nuclei implementation are as follows:

Action 1: Conduct RRI context mapping: identify, extend and enrich the processes that already exists

Action 2: Develop RRI Policy, Committee and Strategy: create structures to engage thought leadership and build RRI institutional capacity

Action 3: Build institutional bridges between the research community, stakeholders and citizens: foster trust, dialogue and dynamic communications with internal and external stakeholders

Action 4: Catalyse ongoing debates about the role of science in open societies – encourage ongoing reflection, discussion and consideration in public and academic circles about the role of society in the research process.

Action 5: Develop, nurture and support new forms of transdisciplinary research - external stakeholders have the opportunity to collaborate with researchers, when appropriate

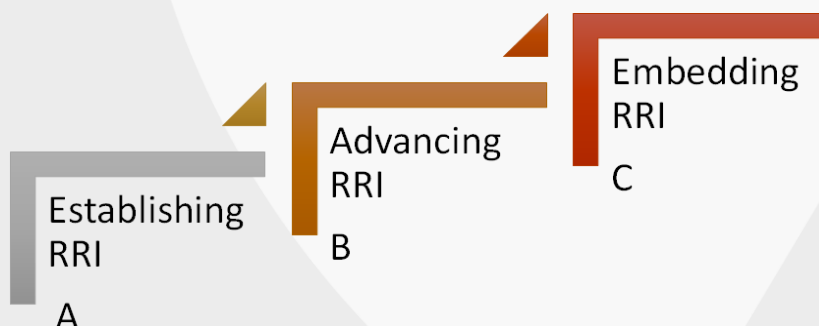
Action 6: Stimulate co-responsibility of all actors involved in the process of research and innovation - external stakeholders have the opportunity to collaborate with researchers, when appropriate

Action 7: Question and redefine the prevailing notion of ‘recipients’ and ‘agents’- More researchers are open to working with stakeholders to include diverse range of inputs and opinions into the research decision making process

Action 8: Embed ongoing reflection, analyse processes and procedures for Nuclei by monitoring and evaluating progress during the implementation phase

Each action consists of interventions aligning with three levels for proposed RRI implementation (Establishing RRI, Advancing RRI, Embedding RRI).

The three levels are:



LEVEL A - ESTABLISHING RRI– The institution has a portfolio of initiatives and processes that engage internal and stakeholders. Evidence is demonstrated by taking measurable steps to introduce RRI practice to these existing initiatives and processes that impact a limited number of internal groups, cell(s), or particular stakeholder groups.

LEVEL B - ADVANCING RRI- The institution develops formal systems and processes to encourage RRI practices with internal and external stakeholders. This involves a more systemic change that affects wider internal communities and/or involves a number of stakeholders and is reflected in internal policies at departmental or section level.

LEVEL C - EMBEDDING RRI–The institution reflects the needs of societal actors needs and integrates them into the strategic plans and policies as well as in the values and actions of the academic and administrative practices.

The NUCLEUS Action Framework for Embedded Nuclei (Refer to D3.6 the NUCLEUS Implementation Roadmap. It outlines several practical interventions aligned with these 8 Actions. Sections 3-10 in this document will outline, discuss and describe how these Actions and the interventions can be practically delivered by the Embedded Nuclei.

DOCUMENT PART 1: DELIVERING NUCLEUS ACTION 1-8

This part of the document outlines Action 1-8 from the NUCLEUS Action Framework and provides a selection of tools and mechanisms for Embedded Nuclei to trial and test to deliver these actions. Part 2 of the document contains the Action Plans prepared by the Embedded Nuclei institutions.

3 ACTION 1: CONDUCT RRI CONTEXT MAPPING

This action is focused on understanding the predisposition of each Embedded Nucleus to RRI related initiatives, and procedures. It is a critical starting point for each institution to create the local action plan. PE2020 (2017b) also advises assessing current RRI procedures and practices adopted by the institution prior to creating Action Plans for sustained institutional change.

There are three primary tools which have been developed during Phase 1 of the

NUCLEUS project to support Embedded Nuclei gain insight into the local RRI context. The three tools include:

- The two-part NUCLEUS Self-Assessment tool
- SWOT analysis
- Theory of Change

All Embedded Nuclei are encouraged to use each of these tools, preferably in the order listed above. The use of a multi-method triangulation approach for the context mapping will support a Nucleus and its mentor understand the essential information needed to establish the starting point for the institutions. These will inform the institution to formulate a Nucleus Action Plan based on the Action Framework,, with an aim to implement RRI in the local context.

3.1 THE TWO-PART NUCLEUS SELF-ASSESSMENT TOOL

The NUCLEUS Self- Assessment tool (refer to D3.6 NUCLEUS Implementation Roadmap) supports each Nucleus investigate and understand the current RRI landscape in the institution.

The NUCLEUS Self- Assessment tool is inspired by the Edge Tool, which was generated by the National Co-Ordinating Centre for Public Engagement in the UK, to understand how well institutions support Public Engagement. We have taken this approach but extended it to include RRI. It will be a reference point from which a Nucleus can develop and build the Embedded Nucleus in an institution and a useful means of reflecting and tracking progress of the NUCLEUS unit during the Implementation Phase of the project (refer to Action 8).

Part 1 of the tool features the keys of RRI used by the European Commission (Public Engagement, Gender Equality, Open Access and Transparency and Ethics). The five “keys” give direction to the EC’s policy on RRI: Ethics, Gender Equality, Open Access, Public Engagement and Science Education. NUCLEUS recognises these as a valuable part of the RRI landscape and takes into account the findings

and recommendations of RRI projects which, in a large majority, follow the five“key” approach.

However, while recognising the keys as common landmarks in the RRI landscape a major aspect which distinguishes the NUCLEUS approach from other RRI projects is that it is less focused on the five keys and more oriented towards co-responsibility with and responsiveness to different stakeholders. Instead of focusing on the keys as the sole indicators of RRI, the NUCLEUS concept reflects the idea of interrelations among different institutions and frameworks.

This makes it all the more important to complete Part 2 of this tool, which focuses on the cells, as it is central to the NUCLEUS approach.

Using the NUCLEUS Self-Assessment

It is the responsibility of each NUCLEUS partner representing an Embedded Nucleus to complete the self-assessment using the tool. The tool should be completed with input from colleagues within the Embedded Nucleus unit and beyond with feedback from the mentor.

Step 1: Populate the categories as per listed in Part 1 and Part 2 of the tool with concrete examples and references. Please insert weblinks etc. where possible, specific examples on how your institution works with other cells (Part 2). Complete the categories as much as possible, arranging and identify any gaps in your knowledge.

Step 2: If you do not have the necessary information to complete the self-assessment tool then you need to take note of what is missing and seek it out and complete the self-assessment. Arrange meetings with internal stakeholders.

Step 3: Highlight areas where evidence of RRI is stronger and areas where it is less evident. Remember the language or use of the term RRI does not have to be explicitly used for it to exist.

Step 4: The tool is designed to prompt discussion. It is designed to start the process of identifying where the current gaps are, the departments/structures and resources that could be further developed and the challenges in making this happen.

Step 5: Arrange meetings with your mentor, discuss each category and collectively decide on the rating for each category. Refer to section ‘Rating RRI in your institution’.

Rating RRI in your institution

The descriptors for each score are kept as simple as possible and intended as guidelines. The circumstances and culture at each institution will be different so it is important that you consider how the simple descriptors translate for your own institution.

The NUCLEUS Self-Assessment aligns with the Levels outlined in the NUCLEUS Action Framework for Embedded Nuclei (Level A- Establishing RRI, Level B – Advancing RRI, Level C- Embedding RRI).

In particular, you should consider what a higher score would look like. For example, if you give your institution a score of 2 in one part of the matrix, what would you need to do for the score to be a 3 and how could you show that a 3 had been achieved?

Guide for each score:

1. Establishing” (including weak or not at all)
2. Some but irregular: not formalised, widespread or properly supported
3. Good with some degree of formalisation, support and spread across institution
4. Embedded

3.2 SWOT ANALYSIS

In addition to the NUCLEUS Self-Assessment, Embedded Nuclei should undertake a SWOT analysis. Organise a workshop/meeting with the immediate team from the Nucleus but include other representatives from the institutions, if possible.

Similar to the NUCLEUS Self-Assessment tool, a SWOT analysis can be helpful in identifying the factors of, in and outside an organisation that can shape the formation and realisation of goals.

The following characteristics are adopted from RRI Tools SWOT analysis of RRI practice:

- **Strengths:** Things that are good now – maintain them, build on the and use as leverage
- **Weaknesses:** characteristics that place RRI at a disadvantage to others
- **Opportunities:** Elements in the supporting external environment that the Nucleus could capitalise on to embed RRI.

- **Threats:** Elements in the external environment that could inhibit the successful implementation of RRI.

Base the assessment on sources, such as, policy documents, vision statements, or interviews. Strengths and weaknesses are characteristics; they describe what an organisation, or Nucleus, is (not) known for. Opportunities and threats identify factors that can positively or negatively influence the future of an organisation. Opportunities and threats can be both internal to a complex organisation as well as external, e.g. new evaluation criteria or changes in funding. Identified SWOTs should be realistic and relate to the short to midterm.

Analysing these four factors can assist in developing a plan to work towards the goals of the NUCLEUS project. The results of the analysis are often presented in a matrix, but other forms can be used.

3.3 THEORY OF CHANGE

The Theory of Change is an outcome-based approach which applies critical thinking to identify the short-term and intermediate steps that need to occur to realise the long-term result or outcomes which support change (Vogel 2012). It logically maps out the connections between activities outputs and outcomes that occur in each step along the way (Talpin et al 2013).

During the Embedded Nuclei Working Group 2, Belgrade, The Theory of Change was presented as a useful tool to encourage the relevant partners to question what might influence change in order to achieve the ultimate outcome – RRI is embedded in the governance and culture of the institution. It enabled the Embedded Nuclei to consider and logically ‘map-out’ local activities/interventions that would enable them to deliver the shared goals for the Embedded Nuclei (Actions 3-7 of the Action Framework for Embedded Nuclei):

- Build institutional bridges between the research community, stakeholder and the general public
- Catalyse ongoing debates about the role of science in open societies
- Develop, nurture and support new forms of transdisciplinary research including RRI principles in the scientific community
- Stimulate co-responsibility of all actors involved in the process of research and innovation
- Question and redefine prevailing notions of ‘recipients’ and ‘agents’

The flexible nature of the Theory of Change approach supports the Embedded Nuclei in the pre-implementation phase to think logically about creating a complex, systematic networked based culture change approach within their institutions.

For guidance on using the Theory of Change for Embedded Nuclei has been developed and circulated to all Embedded Nuclei partners. Please refer to Embedded Nuclei workspace to retrieve it.

4 ACTION 2: DEVELOP RRI POLICY, COMMITTEE AND STRATEGY

This action comprises of setting out a clear rationale and structure for developing RRI approaches and practices within the institution and with external stakeholders. A successful RRI approach requires change-management processes at the policy- and governmental level of each institution. This action also includes the development of policies and incentives for the research community to engage RRI practices and research.

4.1 APPOINT A PERSON RESPONSIBLE FOR CATALYSING CHANGE

Each Nucleus has budget to cover the hire of person for a period of 22 months to support with the finalisation and delivery of local Action Plans for the duration of the project.

The appointed person will work with the main NUCLEUS partner, to form the Nucleus unit. This unit will manage key relationships within the University and with external stakeholders. The Nucleus unit or Embedded Nuclei will facilitate in an integrated way a 'chain-reaction' by engaging internal and external stakeholders in a community of practice, by supporting them with the tools and knowledge to enrich their practices and approaches as well as systems to reflect on the impact of their interventions.

One of the key recommendations from phase 1 of the NUCLEUS project included having an individual to broker relationships between research and societal actors. Appointing an individual with the skills and competencies to 'broker' stakeholder relationships was considered by all Embedded Nuclei in advance of hiring the new candidates. A dedicated session was held to discuss the key competencies, experience and qualifications of candidates. It took place during the Working Group for Embedded Nuclei in Belgrade. The sample job specification, which can be further customised to suit the local institutional context, can be found in the Appendix of D3.6 – The Implementation Roadmap.

4.2 CATALYSING CHANGE

In order for RRI to become embedded in the governance of the institution, the Nucleus and those working in this unit are a critical source to drive innovation and to catalyse change.

The key question for the Embedded Nuclei is ‘how do we best connect the Nucleus unit with researchers and the societal actors in ways that systematically allows internal and external stakeholders to generate and share ideas and develop new approaches that lead to better research and societal outcomes?’.

Research carried out by Arena et al (2017) revealed that many innovation initiatives/programmes fail because, in part, they tend to separate innovation from the networks required to support the innovation processes. By creating contexts that facilitate and allow people, ideas and information to flow between and across groups, innovation can be facilitated. The environment, in which the information flows from key individuals in these networked groups, is referred to as adaptive space.

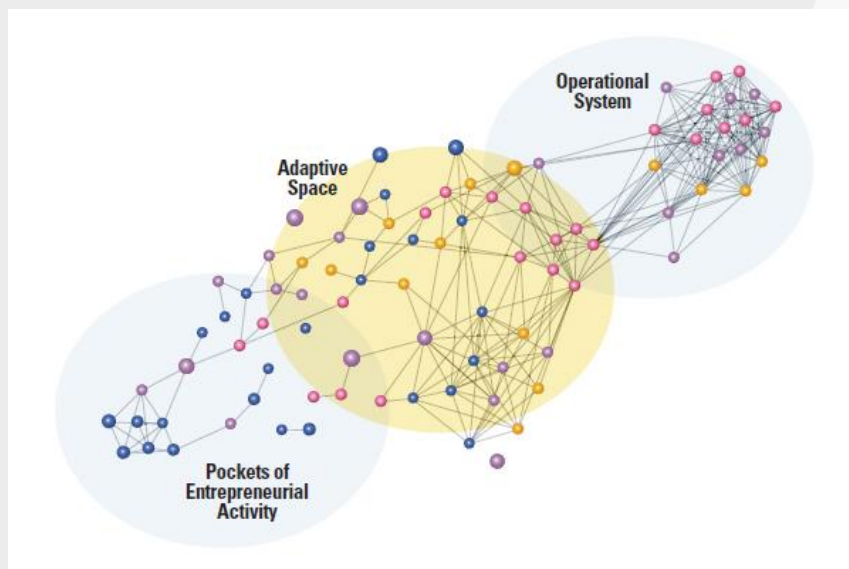


Figure 1: The Role of Adaptive Space (Arena et al 2017)

Adaptive space is the network and organisational context that allows people, ideas, information, and resources to flow across the organisation and spur successful emergent innovation. It is not a physical space but instead is any environment — such as a hackathon or internal crowdsourcing event — that creates an opportunity for ideas generated in entrepreneurial pockets of an organization to flow into its operational system.

In this study, Arena et al (2017) identified the network roles of ‘brokers, central connectors and energisers’ as critical in order to create the environment conducive to supporting the flow of ideas from groups into the operational system.

Table 1 (from Arena et al 2017)

Table 1: What Brokers, Central Connectors, and Energisers do		
<i>Brokers, central connectors and energisers play important roles in successful innovation processes within large organisations. While brokers and central connectors represent distinct positions in a network, energisers can be anywhere, in any network, they can be a broker, a central connector or other individuals</i>		
Brokers	Central Connectors	Energisers
Connect different groups in	Are well-connected in a	Can be anywhere in a
Bridge silos	Get things done	Provide support
Explore and seek new ideas	Organise others	Inspire others to act
Have diverse perspectives	Serve as experts	Fully engage in the moment
Focus on many things	Quickly solve problems	Strive towards vision

The concept of ‘brokers’ arose as a recommendation from the Phase 1 of the NUCLEUS project as a means to connect with societal actors, speak a common language and ‘connect’ relevant groups from the institution to the external stakeholders.

Arena et al’s (2017) study highlights the key ways the NUCLEUS unit can catalyse innovation and culture change in Embedded Nuclei. These are:

- Facilitating and creating contexts that allow, people, ideas and information to be generated and flow across different groups effectively (6 cells)
- Being ‘brokers’ who create bridges between the relevant groups and stakeholders within the institution and societal actors (6 cells) - identifying silos – bridge two thought worlds,
- Identifying and working with central connectors (senior leadership, key people from relevant functions in the institution and externally- RRI Champions)
- Make interactions early in the process – getting the right people engaged as early in the process can result in more divergent ideas, shared responsibility and values, ownership.

4.3 IDENTIFYING KEY INSTITUTIONAL FUNCTIONS

No one individual or unit can be responsible for embedded RRI across the governance structure for the entire institution.

In short, Embedded Nuclei must take a strategic planned approach to embedding RRI in the governance and culture of the institution. This will support that the institution shares responsibility and develop approaches that are co-created at all levels.

To ensure an informed focused approach to creating institutional-wide step-change to RRI implementation, there needs to be commitment from a range of internal stakeholders.

The identification of key internal stakeholders will be largely informed by the context mapping exercises, the NUCLEUS Self-Assessment (3.1.) and the SWOT Analysis (3.2) in particular. Based on the information from these exercises, key personnel or key functions in the Embedded Nucleus can be identified, approached to discuss how they can potentially engage and support the implementation of RRI across the institution.

One of the key elements revealed in Phase 1 of the NUCLEUS project was the fact that the term RRI was not commonly known. In order to bridge support for implementing RRI actions in the institution, Embedded Nuclei should prepare a presentation explaining RRI, the NUCLEUS project and what your institution aims to achieve from being involved. (refer to RRI Basecamp Training – Section 5.1)

4.4 DEVELOPING AN EMBEDDED NUCLEUS ACTION PLAN

Following the completion of the context mapping exercises, Embedded Nuclei formalised the processes and activities they will undertake to deliver the Embedded Nucleus at a local level, by populating the Embedded Nucleus Action Plan template.

Tips! Guidance notes for completing the Action Plan template:

- Each Embedded Nucleus is required to populate the action plan template with details of the activities they will put in place to deliver each of the 8 actions as outlined in the Action Framework for Embedded Nuclei (D3.6)

The Implementation Roadmap).

- A theoretical example Embedded Nucleus Action Plan can be found in Appendix D4 in D3.6 -The Implementation Roadmap.
- The Embedded Nuclei should include some generic detail about your institution – e.g. when established, primary research foci. Where Embedded Nucleus located, strengths, challenges, opportunities to embed RRI (brief details from context mapping exercises).
- The institutional base level (starting level) can be determined from the completion of the Context Mapping exercises. Refer to NUCLEUS Self-Assessment (Appendix of D3.6) for further details. Please include some text here describing why the institution has the relevant base level.
- The interventions listed under each level of the Action Framework for Embedded Nuclei act as a guide. These interventions were highlighted as recommendations for embedding RRI. They originate from the studies, Field Trips and Working Groups carried out in phase 1 of the NUCLEUS project. Recommendations from relevant RRI Literature and projects are also included.
- Each Embedded Nucleus must provide activities/initiatives for completing each of the 8 actions. Depending on the challenges in the institution, the 'level which you can 'deepen' the outputs will vary. Setting up meetings to explore topics to get an action started is better than not achieving anything!
- Like any plan, the initiatives you set-out to achieve should challenge you – but they must also be realistic.
- Plans will be discussed on a monthly basis with your mentor.
- Good plans are flexible and adaptable to changing circumstances. If attempts to deliver an action in a particular way become unachievable due to factors beyond control of the Nucleus, then plans will be revised accordingly. These plans should both challenge and support Embedded Nuclei.

4.5 EMBEDDED NUCLEI ACTION PLANS – 10 INSTITUTIONS

The initial Action Plan for the Embedded Nuclei can be found in Part 2 of this document.

These Action Plans will act as a guide for each institution. They will be used as the basis for discussion during the monthly mentoring meetings (refer to Section 11 of this document).

Action Plans for the Embedded Nuclei will be formally reviewed between M32-M34. During this period of time the plans can be updated to reflect upon, with adjustments made to reflect current developments. The rationale for any changes must be documented and explained. Further information will be communicated by WP5 leader in advance of this process.

4.6 ENGAGING SENIOR LEADERSHIP COMMITMENT & REPORTING PROGRESS

Articulating NUCLEUS strategic vision and gaining support from senior leadership within each of the Embedded Nuclei is critical to the success of the implementation process.

Engaging Senior Leadership Commitment

- Engaging senior leadership commitment to the NUCLEUS project during the pre-implementation/early implementation process is essential to manifest commitment from a range of key internal stakeholders across the institution from the outset.
- The NUCLEUS Shared Vision Statement communicates the main goals of Embedded Nuclei (5 goals for Embedded Nuclei listed in 3.3).
- The statement is signed by the mentoring institution, the NUCLEUS project management team and by the senior lead contact in the Embedded Nucleus institution.
- By signing this document, it re-instates the respective institutional commitment to work towards embedding RRI in the culture and governance of the selected Embedded Nucleus institution for the lifecycle of the NUCLEUS project.
- The Shared Vision Statement can be viewed in the Appendix of D3.6

Embedding RRI across the governance and culture of the institutions requires a series of small and some bigger changes across the institution.

To impact change sustainably, having top-down strategic support (engagement by management)



coupled with bottom-up (engagement with researchers and staff) is critical to realise structural change in an institution (PE2020, 2017c). Creating an established engagement and reporting structure with senior leadership is therefore an important means of achieving institutional and culture change.

Tips! Setting up a reporting structure with senior leadership

- Set-up a reporting structure to share developments and progress at pre-defined intervals over the project lifecycle with senior leadership.
- Involve the inclusion of a 'senior leadership' sponsor at the RRI Committee meetings.
- Updates could include developments and engagements with internal and external stakeholders as well as demonstrating the usefulness of RRI to management (PE2020, 2017c).
- Clearly outline what expectation and commitment, if any, is required by senior leadership following receipt of the information

4.7 DEVELOPING A RRI INSTITUTIONAL POLICY

- Following initial communication with researchers and staff from key functions in the institution, and from senior leadership as well as the formulation of the Embedded Nucleus Action Plan, develop an institutional RRI Policy which clearly communicates the rationale for embedding RRI in the local institution.
- The RRI policy is an umbrella policy that clearly communicates the vision and the key objectives of the implementing RRI into the institution. A worthwhile RRI policy is one that creates a climate for cultivating the attributes of interest, courage, adaptability in the internal research community.
- The policy should outline where the Embedded Nucleus unit in the institution, the team members (include cross-functional contacts/committee members) as well as the key objectives for the institution (can be drawn from the Embedded Nucleus Action Plan). This document is worded to suit the current culture of the local institution and aligns where possible with the local institutional strategy.
- A template for a RRI institutional policy can be found in Appendix A. Guidance notes for developing a RRI policy will be issued to partners and will be placed on the online workspace.

TIPS! Developing an institutional RRI policy

- Review the institutional and national policy frameworks. An enabling policy framework can support the Nucleus unit embed RRI in the institution
- Part 1 of the NUCLEUS Self-Assessment Tool (3.1) supports the Embedded Nucleus to identify the institutional policies that exist which are orientated toward RRI.
- Based on this information, work with the RRI Committee and Senior Leadership in the institution to devise ways of integrating RRI more explicitly into these existing policies and into the institutional strategic policy so it becomes a cross-cutting theme.
- The RRI policy is an umbrella policy which clearly communicates the rationale for embedding RRI in the local institution.
- Introduce RRI as a cross cutting theme in other relevant policies. This will enable researchers to benefit from collaborations across disciplines and to interact more readily with stakeholders from the economy, public policy, public engagement etc.

Example! DCU's Societal Impact Platform: Example of Societal Based Cross-Cutting Policy

- The Societal Impact Platform is a key policy strand to DCU's institutional strategy
- Dublin City University's Societal Impact Platform sets out to incorporating societal perspectives into research and to increased engagement with diverse range of publics. Building on the core of academic excellence, four research and enterprise hubs will develop research that will have impact on important priority areas for the economy and society. These activities will be reinforced by additional expertise in the three cross-cutting platforms –science and technology enhancement platform, business innovation platform and societal impact platform.

4.8 SETTING-UP A CROSS-FUNCTIONAL RRI COMMITTEE

Like any important project, when it comes to achieving results and creating systematic change, teamwork, sharing values and responsibilities is key.

Combining top-down (engagement of management) and bottom-up (engagement with staff) approaches to structural change (PE2020, 2017c) will support Embedded Nuclei deliver a holistic approach to developing long-term structural and culture changes in the respective institutions.

Set up a cross-functional RRI committee consisting of representation – ideally at a senior level, from relevant/key functions across the University (e.g. Human Resources, Communications, Research School, Ethics, Library etc.). The RRI context mapping exercise will inform which functions are most appropriate.

A fitting high-level, cross-functional team/network with regular meetings support the Nucleus unit in each institution extend and share the responsibility for embedding RRI across the institution. Having a committee is an effective way to influence change in the institution and bring about good RRI practices and systems that link the work of the committee members with the institutional strategy. This group act as change-agents and ‘Champions of RRI’ (the sub-connectors).

TIPS! Putting your committee into practice:

- Develop a set of clearly defined terms of reference for committee members.
- At the start of the process, explain how each person’s function has a role to play in the committee
- Appoint a ‘senior leadership’ sponsor who keeps RRI and the developments of the NUCLEUS project and the Embedded Nucleus unit as a discussion item at the highest possible level within the institution – this role could be rotated amongst a number of senior leader institution staff.
- Agree a set of actions items at the end of each meeting.
- Assign responsibilities of completing tasks to committee members
- Write up meeting minutes and circulate them to committee members

4.9 RRI CHAMPIONS, INCENTIVISING AND REWARDING RESEARCHERS

To foster a culture of RRI and pave way for institutional change, developing systems and procedures to identify and appoint RRI champions, or RRI change-agents within the institution and amongst the external stakeholder cells will support the Embedded Nucleus unit demonstrate to relevant peers how RRI can be practiced and the benefits of doing so.

In addition to appointing RRI Champions, motivating individual researchers within the institution to engage in RRI related practices and approaches was raised in phase 1 of the NUCLEUS project as a critical means of realising institutional change.



The NUCLEUS Field Trips (D4.10) and Academic Studies (D3.4) recommended required for effective implementation of RRI in the institution included incentives for individual researchers to engage in RRI practices. Incentives aimed at motivating individual researchers could include prizes, awards, career and professional development opportunities (RES-AGoRA 2016).

Given the budgetary constraints associated with NUCLEUS project for additional material costs for the Implementation Phase, the following examples of incentives schemes are put forward for Embedded Nuclei to consider. As the project unfolds, more examples in practice will be shared with consortium partners.

Examples! Incentivising, rewarding researchers, appointing champions:

Creating a Fellowship Scheme

During the [Beacons for Public Engagement \(PE\)](#)¹ culture change initiative, the universities in Edinburgh, a shared fellowship scheme (refer to page 8 of booklet) was developed to incentivise and recognise individuals who took a strategic approach to supporting Public Engagement within their institution. The scheme bought out 20% of researcher's time for 6 months, provided mentorship and training, and enabled peer support in the cohort of fellows from across the various institutions. The fellowship scheme was competitive (providing esteem) and also supportive (developing capacity and leadership). The fellows also provide case studies and became exemplars and role models for researchers considering how to incorporate PE in their research practice.

Appointing Institutional Academic Leads

Edinburgh Napier University appointed [academics as public engagement \(PE\) leads](#)² in each of their Schools. They are given a modest budget and are tasked with developing public engagement action plans for their school. They meet

¹ https://www.publicengagement.ac.uk/sites/default/files/publication/nccpe_bridging_the_gap_brochure_0_0.pdf

² <http://staff.napier.ac.uk/services/research-innovation-office/public-engagement/Pages/Public-Engagement-at-Edinburgh-Napier.aspx>

regularly as the university wide PE forum and work with the university Public Engagement officer.

Awarding Staff, Researchers, Students:

1. [DCU's President's Award for Engagement](#)³ is designed to celebrate the engagement of staff and students in the life of the wider community and to make awards for the top entries in the Staff and Student categories. The award recognises outstanding contributions to the engagement mission of DCU. Current entries cut across the various pillars of engagement: civic, public, enterprise, sustainability, student.
2. [Heriot-Watt University's Principal's Public Engagement Prize](#)⁴ is now in its 7th year. There are three categories of prizes: Early Career (including PhD students); Senior and Team. Prizes are awarded at an internal ceremony. Originally, nominations needed to be endorsed by Head of Schools raising the profile of the initiative and the nominees contribution with senior management. Over the years, the programme has assembled a good sample of high quality case studies and the application process serves as means to survey activities and good practice across the university. This model has been adopted elsewhere, at the University of Aberdeen for example, and proved to be extremely successful. The prize judging process also involves external stakeholders and highlights some of the excellent engagement work being undertaken by members of staff. Crucially, the application process highlights the value of the activity to the individual and the institution.
3. At the University of Edinburgh, students can gain recognition for extracurricular activities through the [Edinburgh Awards](#)⁵. This scheme allows students to evidence their personal and professional development afforded by these activities, and have it recognised on their final transcripts. The scheme framework is managed by Careers Services and individual initiatives have been developed for a variety cohorts including those involved in community engagement activities.

- **Promoting Staff & Including RRI practices into Work Plans**

At the University of Aberdeen an exercise was undertaken as part of the public engagement culture change process where promotions procedures were evaluated at all levels to ensure that researchers were recognised for their contributions to public engagement. It was clear from feedback received on the South Africa Field Trip that any changes would need to be written in to staff work plans to enable them to deliver those activities or actions.

³ <http://www.dcu.ie/community/civicEngagement/presidents.shtml>

⁴ <https://www.hw.ac.uk/research/engage/principals-prize.htm>

⁵ <https://www.ed.ac.uk/edinburgh-award>

- **The Changing Policy Landscape**

The changing policy landscape across the NUCLEUS participating countries provides an important context and incentive not only to create excellent research but to reflect, engage and demonstrate meaningful societal impact. ‘Societal Challenges’ are often priority research areas. As such the need to demonstrate societal impact is integrated as a key requirement of funded research in an increasingly competitive research climate. Supporting researchers and the institutions orientate towards this policy agenda, will support the institutions research participation

4.10 RRI AS AN EVALUATION CRITERION FOR FUNDED RESEARCH

The NUCLEUS Field Trips and studies identified the need for support at policy level and with funding agencies to include RRI as an evaluation criterion for funded research. This was supported by (Porcari et al., 2015) when stating that RRI should be a mandatory element of problem oriented research and funding bodies should include RRI outcomes among the criteria for the evaluation of research projects. There is a need, therefore, to develop metrics to assess the impact of RRI (Porcari et al., 2015).

Tips: lobbying for inclusion of RRI as an evaluation criterion:

- Set-up a meeting with local research funding agency to discuss how RRI can support research institutions address a wide of societal issues holistically
- Highlight RRI is now a cross-cutting issue in how Horizon 2020 project’s impacts are assessed and the benefits for adopting this new approach to research.
- Share the European Commission leaflet and video explaining what RRI is – [Responsible Research and Innovation – Europe’s ability to respond to societal challenges](#)
- An example: In the Dublin Field Trip, Science Foundation Ireland’s impact Framework (2015)⁶ was considered a best practice example by consortium partners. The Impact Framework used by this national research funding agency consists of 6 pillars and three cross-cutting themes. The pillars include societal and international and the cross-cutting theme includes research to improve resilience and sustainability. Researchers applying for

⁶ http://www.smalladvancedeconomies.org/wp-content/uploads/SAEI_Impact-Framework_Feb_2015_Issue2.pdf

funding through this national agency must demonstrate impact across six pillars and three cost-cutting themes. For more information

4.11 INCLUDING SOCIETAL ACTORS ON INSTITUTIONAL COMMITTEES

One of the key goals of the NUCLEUS Project and of RRI in general is having multi-stakeholder representation and dialogue in the key decision making stages of the research process and priority setting agendas.

As highlighted in the Implementation Roadmap (D3.6), before establishing an RRI-process, it is important to develop a shared understanding of backgrounds, interests and expectations of all partners. Developing a committee or opening up existing programme boards with a representative voice for each of the stakeholder groups supports this case

Tips! Including representatives from stakeholder groups in committees:

- Identify key strategic linkages for the institution which are representative of the 6 external stakeholder cells
- Further analysis and benchmark the contacts listed – are they in a position to add a representative voice for the sector? What has been the previous interaction with the institution, if any?
- Create a **Terms of Reference** so all parties understand the following details:
 - A. role they play in joining the committee/board;
 - B. what influence they can expect to have as part of joining group;
 - C. how many times they will meet
 - D. the average duration of the meetings
 - E. who the programme board/committee chair is
 - F. the general structure of the meeting
- Ensure you get diverse representation from different stakeholders groups and members across committees (things to consider – gender, socio-economic background, location)

5 ACTION 3: BUILD INSTITUTIONAL BRIDGES

This action focuses on creating and sustaining collaborative relationships between the research community, stakeholders and the general public. It involves fostering trust, dialogue and dynamic communications with internal and external stakeholders, building a 'community of practice'.

Phase 1 of the NUCLEUS project revealed the diverse expectations and needs of the stakeholders. For example, academic researchers are concerned about losing their impartiality by becoming too close to policymakers and media, or by being seen as advocates of a particular point of view. Industry and CSO partners suggested that academics need to understand that things happen differently outside of the institutional setting – the language is different; the pace is faster; the goals are broader than peer-reviewed research. Unfortunately, due to the short-term nature of research funding streams, short-term outputs are usually prioritised over long-term societal impact measures. There is often an inherent tension between academic, institutional and external stakeholder goals, outputs and impacts. Understanding the needs and having a clear understanding and appreciation of the expectations from all stakeholder groups is critical. The Framework for Communication and Shared Understanding sets out valuable questions to consider when engaging in collaborative processes with stakeholders- see Figure 2 (Quillinan 2016). Taking time to set-up effective processes from the outset, forges the way to create successful partnerships.

The following tips will support Embedded Nuclei establish a stakeholder network that aims to achieve positive changes in the community.

TIPS! Identifying and developing a stakeholder network

Identifying external stakeholders:

- Draw on data collected in Action 1- the context mapping exercises.
- Identify what external stakeholders the institution has established connections with already.
- The SWOT analysis and the NUCLEUS Self-Assessment will reveal the stakeholders you have most and least engagement with. Arrange meetings with all relevant units internally to ensure the data presented is accurate.

Preparation & Consideration: Why RRI is important for each stakeholder group?

- What role do universities, policymakers, civil society, economy, media, public engagement institutions play have in RRI? Why is RRI important to them?

- Before embarking on setting-up a series of meetings with stakeholders, reflect and consider the questions raised above
- Develop key cards and presentations for each stakeholder answering these questions. Examples of presentations and key cards are available on <http://www.nucleus-project.eu/resources/>
- Ensure that connections with stakeholders reflect a true representation and diversity of all relevant actors

Developing a stakeholder network:

- Set-up consultation meetings with each stakeholder group (6 cells)
- Develop a reciprocal understanding of stakeholders needs and strengths. Use the **Framework for Shared Understanding and Communication** (Figure 2) to raise open-ended questions to develop the partnership
- Prepare, organise and hold an **RRI Stakeholder Workshop** (*Refer to D5.6 The Organisational Manual for Mobile Nuclei for details on how to deliver the 1-day workshop*)
- Following the workshop, agree areas for collaborative focus, develop and share actions. Consider the [Guiding Principles of Partnerships](https://ccph.memberclicks.net/principles-of-partnership)⁷(CCPH) 2013
- Set a structure for working together throughout the NUCLEUS Implementation phase – format and frequency of meetings, actions, key contact points
- Partnerships are not created in one meeting; relationships take time to develop – keep in contact regularly!

⁷ <https://ccph.memberclicks.net/principles-of-partnership>



Figure 2: Framework for Communication and Shared Understanding (Quillinan 2016)

5.1 RRI AWARENESS TRAINING FOR RESEARCHERS

Setting up a training process to create awareness of RRI and to connect people with tools and resources will support Embedded Nuclei to overcome of the key barriers identified in phase one of project; that RRI was an uncommon term and stakeholders did not understand how it could be put into practice.

RRI Basecamp Training is one of the formats developed by Mobile Nuclei. During this half day workshop, researchers will become familiar with the concept of RRI and how to deliver RRI in practice.

For full details on how to set-up and deliver Basecamp Training, refer to D5.6, The Organisational Manual for Mobile Nuclei. A training session on delivering the training will be delivered at the Workshop for Embedded Nuclei in February 2018.

Practical tips for including the training into the governance of the research institution are listed below:

Tips! Delivering RRI Basecamp Training in your institution:

- Review the current training provision, if any, within the institution
- Review the training session plans –what courses align with the NUCLEUS actions?
- Discuss and map-out with Human Resources how and when RRI Basecamp Training could be offered to researchers of different disciplines during the academic year
- Attend ‘Train-the-Trainer session offered by NUCLEUS partner, EUSEA
- Advertise the training provision approx. 2 months in advance
- Create a database of those registered – these group of researchers could be your future RRI Champions!
- Evaluate the participants’ reactions after the training session
- Follow-up approx. 3 months after the session. Have researchers’ awareness/attitude towards RRI changed? Are they practicing any RRI approaches?

5.2 CREATING SPACES FOR RESEARCHERS-STAKEHOLDERS TO INTERACT

Having shared spaces for researchers and stakeholders to interact, generate and share ideas is an important way foster the development of RRI practices and support innovation within the institution.

Researchers have their own set of interests, personal beliefs and agendas. Providing the opportunity to listen, discuss and share key issues and concerns of community partners through such forums is a way to further understanding and build institutional bridges between researchers and societal actors.

These spaces can be physical or virtual spaces and can be formal or informal in nature. As the use of social media continues to grow, with increasing amounts of information being communicated and shared online, the scientific community have

showed signs of increased interaction online also Bik and Goldstein (2013). As detailed in D4.10, this provides an opportunity for researchers and scientific institutions to engage with publics in two-way dialogic conversations. Bik and Goldstein (2013) claim that online interactions have the potential to enhance broader impacts by improving communication between scientists and publics.

The physical formats selected by the Mobile Nuclei can be adopted by Embedded Nuclei during the Implementation Phase. These are listed in the table below.

Examples of virtual and physical spaces to generate two-way dialogic exchanges between researcher-stakeholder discussions to include:

Virtual/ Online	<ol style="list-style-type: none"> 1. Your Science Your Say⁸ – this is an independent online forum where new, or emerging technologies and how they will be developed, funded and regulated into the future is debated publicly (online). Researchers talk about their work in four short YouTube videos. Publics leave a response on the forum. This response is taken into future policy consideration by the national agency (Ireland in this case). 2. Reddit ‘Ask Me Anything’ sessions where ‘experts’ can be asked anything by a general audience from around the globe on the online platform Reddit. 3. Living Knowledge Online debates⁹ (Buckley 2014) As part of the Living Knowledge Network, a format of agenda setting debates, called the Knowledge Debates was developed. This testing new ways to involve civil society stakeholders in interacting with and informing research agendas <p>Ensuring that you are findable online with a clear understandable, up to-date description of your work and research can be the first step in connecting with stakeholders.</p> <p>Remember, not everyone can access online resources or platforms. Ensure the stakeholders you are looking to engage with are present online and create opportunities for engagement in the spaces they use online (e.g.</p>
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⁸ <http://ysys.agtel.ie/#about>

⁹ http://www.livingknowledge.org/fileadmin/Dateien-Living-Knowledge/Library/Project_reports/PERARES_LK_Online_Debates_Summary_Report_D_2.1.pdf

	connecting with representatives from business via LinkedIn).
Physical	<p><i>Topics 1-4 below are formats developed by EUSEA for Mobile Nuclei. A training session on delivering these formats will be set-up for Embedded Nuclei partners in February 2018. Refer to D5.6 for full details of these formats.</i></p> <ol style="list-style-type: none"> 1. Installation: An Installation is a setting that creates a context for discussion and facilitate the possibility to dialogue with people and to collect their visions on a specific topic or issue. It can be a booth-like space with a particular shape/structure (a) and color or it can be an interactive exhibit, a symbolic installation 2. Hackathon - A Hackathon is an event format which is about actual problem solving. At a scientific hackathon (or hackathon), researchers, developers, designers and all those who enjoy tinkering come together. Together, the work in interdisciplinary groups on solving a problem: they discuss, craft and develop prototypes which can come in the form of tools and hardware or apps and software. A recommendation from the Field Trips included, turning Hackathons into bases for solving societal based problems. 3. Pop-up Science Shop - Science Shops mediate between citizens, citizen groups and research institutions. 'The Pop-up Science Shop' refers to the way civil society's requests and problems can be transferred into a research setup. Citizens are called clients, in the context of the "shop". Science Shops operate under different names and in different ways throughout Europe and worldwide. What they share is that research is done on the basis of concerns of civil society, and that projects are governed in a partnership between civil society organisations (CSOs) and research institutes. 4. Fish Bowl – An interactive discussion format between researchers and lay people used to discuss/debate controversial or emotional science issues, or topics of local or regional relevance. 5. <u>Access Lab</u>¹⁰ – aims to improve access and judgement to information by pairing scientists/researchers with citizens. The key question put forward is 'why do you believe this information?'. This platform provides researchers with the opportunity to engage with

¹⁰ <https://fo.am/accesslab/>

	<p>those who are impacted by the research. This format provides opportunity for researchers to take on-board the comments from citizens at earlier phases of the research process.</p> <p>6. <u>VOICES Consultation¹¹</u> – VOICES was a consultation using opinions and ideas of citizens across Europe. They ran 100 three-hour focus groups aimed at engaging citizens, gathering their opinion and ideas about research. The VOICES focus group methodology (Kupper 2013) can be applied to gain opinions of citizens and stakeholder in partner countries.</p> <p>1. <u>Matchmaker and Research Showcase</u> – DCU currently use this format as an opportunity for companies to meet face-to-face with researchers that have applications across industry sectors. Businesses meet and present the challenges they face. Together they explore new ideas and options to collaborate through state funded and European funded projects. The purpose of the showcase is to facilitate targeted knowledge exchange between researchers and industry partners as well as exploring collaborative ways of finding solutions to stakeholder needs. While this current format is primarily focuses on solving commercial solutions, it can be adapted to bring together different stakeholder groups to solve societal based issues.</p>
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6 ACTION 4: CATALYSE ONGOING DEBATES

Action 4 from the Action Framework for Embedded Nuclei refers to the creation of opportunities to discuss questions of uncertainty, motivations, social and political constitutions, trajectories and directions of innovation. It includes the generation of discussion on anticipatory approaches to scientific developments. Although it could form part of the process, it does not mean that debates are scheduled public events. Debates in this context refer to generating discussion about science and research with the societal actors.

This action can be achieved through adopting many of the formal and informal formats for bringing researchers and stakeholders together to interactively discuss and debate scientific topics and the future direction of science research, outlined in Section 5.2 of this document.

¹¹ http://www.voicesforinnovation.eu/files/02_VOICES_focusgroup_methodology.pdf

Traditional and social media has a key role to play in catalysing open and transparent debates about scientific developments and their societal impacts. It is a vehicle through which publics are can be informed about scientific discoveries, it can prompt public to engage the public in authoritative and clear debates about scientific issues. Social Media tools can increase the exchange of information and knowledge across disciplines, sectors and national borders. Media has a role to play in creating open and transparent dialogue with public at large as scientific discoveries unfold and publics anticipate the future direction of scientific developments.

Means of fulfilling this action includes developing researcher skills to engage in discussion on traditional and online media platforms as well as providing strategic support to the functions. Functions including marketing in the institution to facilitate researchers engage directly with publics. Supporting the accessibility of scientific information and results is also a way to open up conversation with a diverse range of publics. After all, if people don't have access to information, how can they discuss and engage in dialogue effectively?

6.1 DEVELOPING MEDIA TRAINING FOR RESEARCHERS

One of the key recommendations arising from the NUCLEUS Media Field Trip was to provide media training for researchers. Media training will provide researchers with the knowledge and skills to bridge understanding of how media processes operate, and how to engage audiences early in the research process. Another key aspect in providing training for researchers is to enable researchers to overcome fears of communicating through the media. Bik and Goldstein (2013) illustrate the common fears researchers can have of communicating online, see Figure 3.

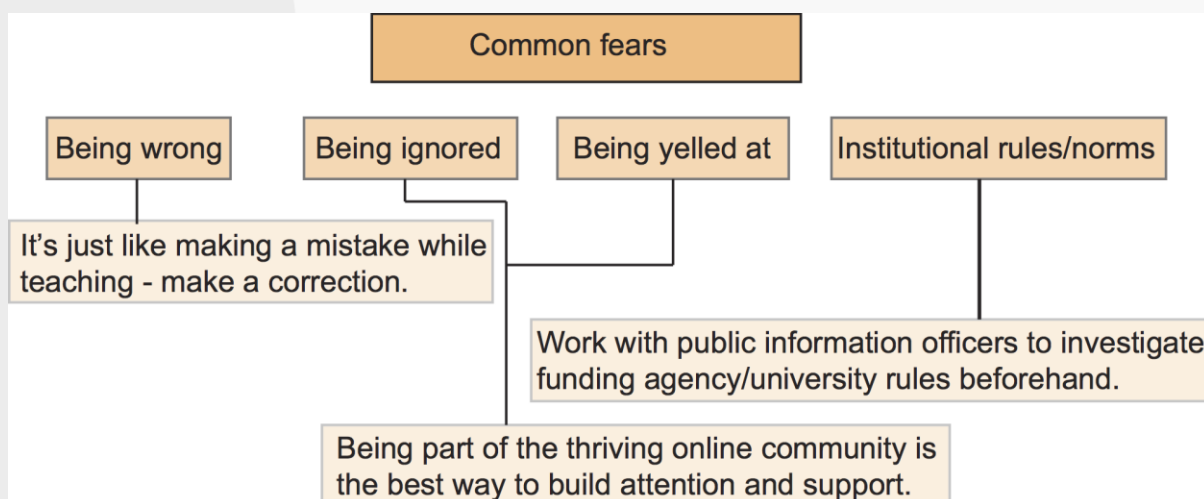


Figure 3: Fears of communicating online (Bik and Goldstein 2013)

It has been widely reported in academic research that there lies the inherent tension between researchers and media. For example, the academic process is slow, precise and grounded in accuracy, media processes tend to sensationalise stories. As described in Action 3- Building Bridges, developing a reciprocal understanding of values of all stakeholders is a fundamental starting point for building successful partnerships.

- A session template for media training will be developed by WP leader DCU. It will be shared prior to the Working Group session in February 2018.
- Embedded Nuclei are advised to liaise with local media partners to **co-develop the final media training** that will be delivered internally and refine and adjust based on feedback.
- As you build 'bridges' with media partners, invite local journalists to co-deliver the media training, where possible.

The following template outlines an indicative media training for researchers. Due to the focus on practical exercises, such sessions accommodate maximum of 10 researchers.

Course Preparation: Researchers write a approx. 220 words popular summary of your current research work in a style that a friend or family member with no connection to scientific research can understand

9:30 – 10:00	Science and the Media - an important relationship for RRI <i>Understanding the values and expectations of both stakeholders</i>
10:00–10:30	Feedback on media writing
10:30-11:00	Working with the media – Introduction
11:00-11:15	Coffee

11:15-12:30	Practical – working with the media – radio interviews Researchers engage with journalist/course provider in a live interview setting.
12:30-13:15	Practical – working with the media – radio interviews Feedback to all participants – discussion
13:15-14:00	Lunch
14:00-14:30	My research in 3 minutes – public speaking – intro Consider your audiences: pitch to different audiences <ul style="list-style-type: none"> • <i>Potential scientific collaborator – can use jargon</i> • <i>A potential investor – emphasise the impact of research</i> • <i>A dinner guest who knows nothing about the discipline – ‘what do you do’</i>
14:30-15:15	My research in 3 +3 –preparation <i>All participants chose an audience and prepare and deliver details about their research in a 3-minute timeframe.</i>
15:15-16:00	Coffee/ tea – Research in 3 video recordings (x10 participants)
16:00-16:20	Research in 3 – feedback
16:20-16:45	Mechanisms to engage audiences through media – the RRI approach
16:45-17:00	Course roundup and evaluation
Review personal learning in workshop and provide feedback/evaluation	

6.2 PROMOTE AWARENESS OF RRI AND RESEARCHER ACROSS THE INSTITUTION

Institutions often rely the communication and marketing departments are responsible for communicating and profiling the research outputs. Building bridges between the researchers and the local PR/Marketing office, fostering a culture of understanding and openness can pave ways for more effective flows of information across the institution and with external stakeholders.

Tips! Creating strategic partnerships with institutional communications

- Set-up and facilitate a ‘network’ meetings/workshops between the communications/PR office and researchers.
- During such sessions:
 - A. Researchers share their research foci and highlight risk and impact of scientific developments, if any
 - B. Communication function identify the institutions strategic communications goals
 - C. Work together to identify areas researchers could become more

involved in direct communications with publics and opportunities to engage via the PR office.

- These platforms/interactions can:

Support a culture of openness in institutions between researchers and communications/marketing teams

Support researchers understand the nuances of the media landscape – they can identify the stories that might ‘stick’

Support the sharing of solid information and contacts with relevant media outlets

Support PR office to receive information that upholds researcher values and content but is aligned with institutional strategy

Support the institution raise accurate questions about scientific risk and impact in the public sphere

6.3 MAKING RESEARCH RESULTS & INFORMATION AVAILABLE

It is acknowledged, that making research results and scientific information more widely accessible to publics contributes to better science and better societies. Societal actors cannot fully participate in robust scientific discussions and debates, and contribution to a better society unless they have access to the relevant information.

Making scientific results more widely available is dependent on a number of factors including: the institutional infrastructure, intellectual property rights, the national and local policy and governance structures.

In the table below, information sources for developing more open access approaches to information in the Embedded Nuclei at the national, institutional and individual level are highlighted.

1. The European Commission factsheet on Open Access in H2020 ¹²(2013) outlines the key aspects of open access.
2. Engage with funding bodies and institutional leadership to develop policy documentation to support open access of research. The EU RECODE¹³ project and the Policy Guidelines for the development and promotion of Open Access provide step-by-step details on developing open access policies at institutional and national level.
3. Work with institutional leadership and national funding agencies to discuss and lobby for the development of an intellectual property protocol for societal innovation
4. Create awareness about the importance of sharing scientific information with publics by engaging in global Open Access Week¹⁴. This online interactive week which provides researchers with an opportunity to learn, share and engage in discussions about the benefits of open access for them and for society.
2. AccessLab – (outlined in section 5.2). Create opportunities for researchers to engage in physical and online knowledge sharing platforms with publics, such as AccessLab.

7 ACTION 5: SUPPORT NEW FORMS OF TRANSDISCIPLINARY RESEARCH

Transdisciplinary research can be defined as research which moves beyond the bridging of divides within academia to engaging directly with the production and use of knowledge outside of the academy (Toomey et al 2015). In this approach, societal impact is laid out as a central aim of the research at hand. Solutions that emerge from the research may additionally be put into place through an action-oriented process built on direct collaboration with the groups involved (Klein 2004). Through NUCLEUS project, Embedded Nuclei aim to engage with stakeholders (cells) at the early stages of the research process to enable new forms of transdisciplinary research which embed the RRI principles.

Setting up the structures and supports at a strategic level and facilitating researchers to bridge academic silos is central to this action. Developing the skills and competencies of researchers to engage in transdisciplinary projects is also important.

¹² https://ec.europa.eu/programmes/horizon2020/sites/horizon2020/files/FactSheet_Open_Access.pdf

¹³ <http://recodeproject.eu/>

¹⁴ <http://www.openaccessweek.org/>

This model can also be applied to student teaching modules. Supporting researchers' skills and competencies will be covered in section 8 of this document.

7.1 PROFILING TRANSDISCIPLINARY RESEARCH

To further engagement in transdisciplinary research, the Embedded Nuclei must first understand the level of transdisciplinary research which currently takes place in the institution. Creating a database of transdisciplinary projects will support Nuclei.

Tips! Creating a profile of institutional transdisciplinary projects

- How many transdisciplinary projects have taken place in the past in your institution?
- How many are ongoing?
- Do these projects involve external stakeholders?
- Do they have a societal based research line?
- Who is not included from the 6 stakeholder cell group?
- Create a database with database to track the information

Use the database as a resource: it can support you identify RRI Champions, develop case study examples of transdisciplinary projects with stakeholder involvement

- A. Talk to the researchers involved – what was their experience like? What support do they need to engage in transdisciplinary projects? Can they become Champions for RRI?
- B. Is there scope to integrate the database on a localised system/intranet so researchers can add their details?

7.2 INCENTIVISING TRANSDICPLINARY SOCIETAL-BASED RESEARCH LINES

In the current academic climate, researchers are rewarded for publishing research. In order to encourage more researchers to develop research which has societal-based outcomes, the following practical suggestions are put forward for consideration for the Embedded Nuclei:

- Work with institutional leadership and national funding agencies to offer societal [innovation vouchers](#)¹⁵ to assist researchers and stakeholder partners explore a societal based problem with the institution.
- Discuss with senior leadership the scope to provide additional **time researchers in their working schedule** to conduct societal based research.
- Time is a precise resource for researchers. Explore options to provide researchers with the support to help them **complete societal based research funding applications. Further information on how to design a RRI project proposal can be found on [RRI Tools](#).**¹⁶
- **Draft protocols on data sharing, knowledge management** – so researchers and stakeholders are aware of the data management aspects of the research (Campus Engage 2016)
- **Peer-to-peer support** – identify the researchers that have engaged in societal based research. Set-up a mentoring support system so peer-to – peer support builds skills, knowledge and confidence of those researchers which have not formally engaged in societal-based research lines
- **Identify existing regional or national initiatives to support transdisciplinary research.** Lobby relevant agencies to extend the focus of an enabling policy framework can support institutions effectively The following examples exist:
 - A. [Research Pooling](#)¹⁷ – In 2003, the research pooling initiative was set-up by the Scottish Funding Council (SFC) to encourage Higher Education Institutions in Scotland to ‘pool’ resources and respond to international competition. Such an initiative fosters a culture of cross-institutional collaboration. Similar cross-institutional collaborations could be encouraged for institutions practicing RRI approaches
 - B. [Proteus](#)¹⁸ is a transdisciplinary and trans-institutional project funded by the UK Engineering and Physical Sciences Research Council. This transdisciplinary approach is enabled by an external funding mechanism. The requirement for Public engagement was

¹⁵ <https://www.enterprise-ireland.com/en/research-innovation/companies/collaborate-with-companies-research-institutes/innovation-voucher.shortcut.html>

¹⁶ <https://www.rri-tools.eu/how-to-stk-rc-design-a-rri-oriented-project-proposal>

¹⁷ <http://www.sfc.ac.uk/research/research-pooling/research-pooling.aspx>

¹⁸ <https://proteus.ac.uk/>

made specific and so a Public Engagement officer is funded by the project to support the researchers to engage. Similarly, an RRI officer could achieve similar results with RRI.

- C. [The University of Edinburgh's Global Academies](https://global.ed.ac.uk/our-work/global-academies)¹⁹ cross boundaries in research and teaching, adopting a multi-disciplinary responses to challenging global issues. They provide opportunities for transdisciplinary post graduate studies. There are still challenges on doing research in this area in particular as research funding is provided for disciplines and is assessed differently in each discipline. Some means of recognising the value of RRI activities is needed.
- [IAP2 Certified Public Participation Professional](https://iap2usa.org/certification)²⁰ – The International Association for Public Participation in the US offers an assessment process which was developed by a Task Force of IAP2 members from USA, Canada and South Africa. The program has two certification levels: Certified Public Participation Professional (CP3) and Master Certified Public Participation Professional (MCP3). The application has a combined of mandatory and optional criteria. Professionals must obtain the CP3 certificate before progressing to obtain the MCP3. A similar certification could be explored for RRI at an institutional level and at national level. This certification is linked with the development of core competences and can be linked with Action 9 of the NUCLEUS Action Framework- section 9.2 of this document.

8 ACTION 6: STIMULATE CO-RESPONSIBILITY OF ALL ACTORS

The 6 NUCLEUS 'cells' are essential partners in order to receive and transmit signals, thus interacting with and reacting to the impulses from academia. Through this "responsiveness", they actively contribute to long-term productive relationships - an essential factor for successfully conducting RRI. Stimulating the co-responsibility requires understanding the expectations of the stakeholder group. It involves identifying what and how the parties can contribute and having an openness as well as a willingness to act together.

8.1 EXPLAINING RRI AND ROLE OF ALL ACTORS

This Action is closely aligned with Action 3 (Building Institutional Bridges) and therefore engaging with the societal actors and delivering the RRI Basecamp

¹⁹ <https://global.ed.ac.uk/our-work/global-academies>

²⁰ <https://iap2usa.org/certification>

Training can be used as a tool to establish how each stakeholder group can contribute and how they can work together with the institution/researchers.

Further information on the role of RRI for each stakeholder is available on the NUCLEUS Consortium website - <http://www.nucleus-project.eu/resources/>

8.2 PROVIDING EXAMPLES OF RRI IN PRACTICE

Learning from others will be a key part of the Implementation Phase, practical examples will be shared with the consortium partners through NUCLEUS communication (mentors, on an online workspace for Embedded Nuclei) and at the NUCLEUS Annual Conferences.

In addition to developing simple documentation outlining what RRI is, providing researchers with relatable practical examples of how RRI can be implemented in practice will support the stakeholders develop a deeper understanding of the concept.

During the Implementation Phase of the project, practical examples will be uploaded and shared with the consortium partners.

- The book, [Navigating Towards shared Responsibility²¹](#), is the result of the Res-Agora project (Linder et al 2016) and includes several examples of RRI implementation in different stakeholder settings.
- [The RRI Tools project²²](#) contains details of how to apply RRI concepts and strategies in specific aspects for the research community, and other stakeholders

8.3 CREATING STRUCTURES TO ENCOURAGE COLLABORATIVE PARTNERSHIPS

Meeting with researchers and stakeholder groups to encourage more collaborative research practices is important but they must be supported with operational structures to result in sustained impact.

²¹ <http://res-agera.eu/news/navigating-towards-shared-responsibility/>

²² <https://www.rri-tools.eu/how-tos>

Below, are some processes and initiatives aimed at developing a structured approach for collaborative partnerships:

Tips! Developing structures to encourage collaborative partnerships

- **Memorandum of Understanding:** create a formal non-binding agreement between the institution and the mentoring association and/or the community stakeholders. It is similar to a letter of intent outlining what the engaged parties will contribute, share as part of the working relationship.
- **Appoint a contact point:** the Field Trips highlighted the importance of having a 'broker' or a contact point to establish and build relationships between the different actors and the university. This supports Arena et al's (2017) study highlighted in section 4.2 (Catalysing Change).
- **Guide for communities in participatory research projects (Gallagher et al 2016)**– what do communities need to be aware of when engaging in community. Refer to Action 7.

9 ACTION 7: QUEST. & REDEFINE NOTION OF 'RECIPIENTS' & 'AGENTS'

This action is focused on providing the support for researchers so they can develop the key skills to become a responsible researcher – to become more open to working in an ethical manner with a diverse range of stakeholders, and to include these views into their research, where appropriate. This action includes researchers moving to socially and ethically based participatory and co-produced science.

Participatory and co-produced science challenges traditional research processes, it requires the redress of the power-balances, so all parties are experts in the process. Such changes require researchers and community partners to acquire new knowledge, skills and abilities so it can be delivered effectively. Guidance and examples for setting up participatory research projects are outlined in this section.

Training and coaching will improve researchers' skills and knowledge on RRI practices. According to Hartley et al (2016), training and education in RRI will address the social dimensions of science and encourage the growth of socially responsible researchers over the long term.

Training and skills development can include RRI related training (research integrity, participatory research training etc) in induction sessions for researchers, as part of their continuous professional development (CPD). RRI Basecamp Training referred to in section 5.1 of this document can support the development of awareness of RRI, but this action is focused on development of key skills in order to actively engage and deliver RRI practices as part of the research process.

Having RRI as an integral element of the competency framework for researchers will support the researchers develop these key skills and practice RRI approaches as the norm.

9.1 SETTING UP PARTICIPATORY RESEARCH PROJECTS

As mentioned, setting up participatory research projects requires a different approach. It is not research on a community; it is research with the community. The role and involvement of the community partner requires a greater role.

Considerations for academic-research community partnerships:

Gallagher et al (2016) developed a guide for communities working with academics on participatory research projects. They put forward six steps community partners should consider before engaging in participatory research:

- **Establish a language that can be understood by all** to discuss and plan processes and structure to make it easier to work together
- Involve participants in decision making and governance of your research project in order to promote democratic practice and encourage debate on how to ensure all parties have the ability to be heard in a fair and consistent way
- Consider the **effect of policies and procedures that participants may be bound to** as part of their role within their community and also those of the university.
- **Agree on ethical principles**, protocol for safety, handling conflict 4 and safeguarding.
- Create a **written working agreement or contract which sets clear boundaries**. This can be flexible so amendments can be made as the project

and the participants develop. A working agreement can include a framework for measuring the progress of your research and outline basic agreed practices. It could also be used to set clear guidelines and promote accountability for agreed responsibilities, working as a written reference to decisions that have been made.

- Familiarise everyone with policies and procedures around ethics, such as handling personal data, equality and diversity and talk to others who may have experience of similar research projects.

Toolkits, databases, examples of participatory research agendas/structures

- [The community-campus partnerships²³](#) have developed and curated a number of toolkits to address common challenges for practicing engaged research
- [RRI Tools²⁴](#) offer an array of materials to support the research community set up participatory research approaches
- VSO, a leading international development organisation, has developed a [facilitators guide for participatory research²⁵](#)
- [Campus Engage \(2016\)²⁶](#) – has developed the Engaged Research Framework which presents practical steps and recommendations for designing and delivering engaged research in Higher Education Institutions. It includes a number of examples of engaged research projects.
- [CARL – Community-Academics Research Links²⁷](#) – this forum is operated by University College Cork. It enables organisations to engage with students who carry out researchers (undergraduate or postgraduate) These offer communities opportunities to engage with academics from a range of different disciplines and with a range of different skills on an affordable or pro-bono (fee free) basis. It provides communities with means of approaching academics with a particular end in mind.

²³ <https://ccph.memberclicks.net/toolkits-databases>

²⁴ <https://www.rri-tools.eu/how-to-stk-rc-set-up-a-participatory-research-agenda>

²⁵ http://www.participatorymethods.org/sites/participatorymethods.org/files/VS_O_Facilitator_Guide_to_Participatory_Approaches_Principles.pdf

²⁶ <http://www.campusengage.ie/>

²⁷ <https://www.ucc.ie/en/scishop/ac/>

9.2 DEVELOPING RESEARCHER RRI SKILLS

To embed RRI in the fabric of the institution, including the skills acquisition and practice of RRI as an integral part of researcher professional training and career development, is essential. RRI skills which enable professional researchers conduct studies include research management skills, research integrity and ethics.

What skills for researchers need to practice RRI?

The recent report [providing researchers with the skills and competencies they need to practise Open Science](https://www.rri-tools.eu/-/providing-researchers-with-the-skills-and-competencies-they-need-to-practise-open-science-report-of-the-working-group-on-education-and-skills-under-op)²⁸ (2017)– outlined some skill and training recommendations in order for them to practice Open Science. These include:

- Open access publishing
- Open data and data management
- Professional research conduct
- Broader citizen skills

The revised edition of the [European Code of Conduct for Research Integrity \(2017\)](http://www.allea.org/wp-content/uploads/2017/03/ALLEA-European-Code-of-Conduct-for-Research-Integrity-2017-1.pdf)²⁹. It includes a section for researchers on conduct for 'collaborative working' (2.6).

RRI skills and competency framework and training provision

- Meet with Human Resources to explore the scope introducing an RRI Basecamp workshop, and other RRI formats during the academic year
- Liaise with HR to map out skills-competencies for a Responsible Researcher
- Map out the training provisions which currently address these

²⁸ <https://www.rri-tools.eu/-/providing-researchers-with-the-skills-and-competencies-they-need-to-practise-open-science-report-of-the-working-group-on-education-and-skills-under-op>

²⁹ <http://www.allea.org/wp-content/uploads/2017/03/ALLEA-European-Code-of-Conduct-for-Research-Integrity-2017-1.pdf>

competencies

- Develop frames such as [Vitae RDF \(researcher development framework\)](https://www.vitae.ac.uk/vitae-publications/rdf-related/researcher-development-framework-rdf-vitae.pdf/view)³⁰. Support for this will also be provided by WP Leader
- Discuss scope to include/augment the scope of training courses so RRI/Open Science skills are addressed
- Embed RRI skills training into PhD school training provision – offer RRI training during induction to the course. Include it as a CPD requirement throughout the postdoctoral training
- Discuss with HR the scope to track and reward researchers that engage in RRI training – a CPD log which captures the RRI training

9.3 CREATING AN ONLINE LIBRARY OF RRI LITERATURE AND BEST PRACTICES

Creating easily accessible content on RRI for colleagues within the institution and for external stakeholders can increase support an increased level of awareness and understanding of RRI. Best practice examples support stakeholders and researchers to identify with the societal contributions they can offer.

Creating an online library

- Engage with local IT department/marketing department to explore the scope of creating an online profile of RRI literature on the institutional website
- Share RRI academic studies on this site as well as best practices
- Add case studies of transdisciplinary projects – tell the story of RRI – how did it the collaboration impact the stakeholders? The researchers?
- Include profiles of RRI champions – tell the story of RRI
- Include local information, it increases the relevance to the audience
- Link with local community library or engage on community platforms to share RRI best practices

³⁰ <https://www.vitae.ac.uk/vitae-publications/rdf-related/researcher-development-framework-rdf-vitae.pdf/view>

10 ACTION 8: REFLECT, ANALYSE PROCESSES AND PROCEDURES

Action 8 will be coordinated with the NUCLEUS Evaluation and Monitoring team (WP7). This action is focused on integrating monitoring and reflection into the operational and working practices of the Embedded Nucleus unit in each institution. This action focuses on sharing information and lessons learned with Embedded Nuclei partners to build capacity during the implementation Phase.

It focuses on noting successes, celebrating failures and adapting as required to the needs of the institution – all elements which will contribute towards delivering informed recommendations for implementing RRI in HEIs.

10.1 CREATING MECHANISMS FOR MONITORING, EVALUATING, REPORTING RRI

From December 2017 (M28) to February 2018 (M30), a meeting will take place with each Embedded Nucleus representative, the respective mentor and the Evaluation Team.

The goal of these meetings is to set up the localised monitoring and evaluation procedure for each Embedded Nucleus (refer to D7.3). The overall procedure and the instruments, questionnaires, The NUCLEUS Self-Assessment tool, focus groups, will be applied to all of the 10 institutions.

The NUCLEUS Evaluation team (WP7) has developed a list of indicators. These indicators are described in D7.3. These indicators will be reviewed and adapted, where necessary, to the context of each Embedded Nucleus. The general plan and timelines for evaluation can be

As described in D7.3, indicators based on the local Action Plans will be developed. These meetings will set out what these indicators will be.

11 THE MENTORING RELATIONSHIP

During the first Working Group for Embedded Nuclei, a section of the meeting focused on establishing how the mentoring process and support will work prior and during the Implementation Phase. Section 11.1-11.3 outlines the Nucleus Mentoring process including the responsibilities for mentors and mentees.

11.1 THE MENTORING PROCESS

- Meetings between the Mentor-Mentee will commence during the pre-implementation phase of the NUCELUS project. The formalised mentor-mentee relationship will continue until the project is completed. The NUCLEUS Executive Board encourage the longevity of these relationships beyond the determined timeline of the project.
- The Mentoring Universities (refer to Table 1) will hold a short meeting (30 minutes) every 6-8 weeks via telephone/online. The purpose of this meeting will be to support the mentors discuss and identify common approaches arising from meetings with mentee Universities. It will provide an opportunity for the mentors to discuss the best approaches to addressing/overcoming potential challenges identified during the mentor-mentee discussions. DCU will be responsible for making taking notes during these meetings.
- The WP Leader (DCU) will identify the key meeting deadline dates for discussions/meetings between Mentor-Mentees. Other meetings maybe arranged in addition to these key meetings once both parties are in agreement. The format of the meetings will be a combination of Skype/telephone/face-to-face. When face-to-face meetings are required, it will be the responsibility of the mentor and mentee to arrange the meeting date within the timeframe issued by the NUCLEUS Executive Board.
- A Mentor Log (Refer to Appendix B) has been developed. It will be the responsibility of the Mentee to complete the log and send it to the relevant mentor within one week after the meeting date.
- Mentees are required to prepare and share an agenda with their mentor prior to the meeting. They are also required to take notes, share the key actions arising from the meetings and share them with the mentors following the meeting.
- If one/both parties in the mentoring relationship has given

11.2 ROLES AND RESPONSIBILITIES

NUCLEUS Executive Board & wp LEADER – key responsibilities

- Support the mentors and mentee institutions by affording the partners the time, structure and opportunity to communicate feedback.
- Support the mentor/mentee relationship when required. This includes taking feedback if one/both parties are not satisfied with mentoring relationship.
- As a final resort, the Executive Board can dissolve a relationship if not working for one or both of the parties.
- The Executive Board (EB) and/or WP Leader may encourage mentoring relationship practical advice and assistance where appropriate.

Mentor – Key responsibilities

- Prioritise attendance at all meetings
- Share personal, institutional insights and experience in relation to RRI in your University.
- If the Mentor does not have the specific experience/knowledge on a certain aspect of RRI that will further support your mentee, where appropriate, the mentor can link the mentee with relevant experts in their institution, with other mentees or from other relevant sources.
- The mentor will assume confidentiality during mentoring process.
- The mentor will provide non-prescriptive advice regarding the solutions for the Nuclei.

Mentee- key responsibilities

- Schedule meetings with Mentor in accordance with the meeting timeline
- Prepare and share the meeting agenda and objectives with Mentor and issue a copy to the WP Leader.
- Take responsibility for investigating, preparing and sharing the knowledge with Mentor during scheduled meetings.
- Openly contribute during meetings and ensure attendance at same.
- Mentees will record key notes and actions from the mentor-mentee meetings. It will be the responsibility of each mentee to record and complete this log.
- Mentees send forward the completed mentoring log to the relevant mentor to verify detail captured is accurate,
- A copy of these notes in the mentoring log template should be shared and stored by both parties following the meeting. (Refer to section 13 for further information on data management and storage)

11.3 PREPARATION & DOCUMENTATION

- Mentees prepare and share an agenda with both their Mentor and WP Leader. The agenda is populated in the Mentoring Log (Appendix B)
- Mentees are responsible for taking notes during the meetings and sharing key actions arising from the meetings with their mentors.
- Mentors and mentees will be asked to participate in an evaluation in order to ensure that the relationship and supports provided is fit-for-purpose and benefits both mentees and mentors.

12 WORKING STRUCTURE & TIMELINE

As outlined the Mentoring relationship will form a key means of stimulating the capabilities of the 10 Embedded Nuclei. In addition to the ongoing support from the mentors during the Implementation Phase of the project, there will be communications and support mechanisms in place to provide Embedded Nuclei with structured support.

Supports include face to face meetings, online platform for sharing best practices across the consortium, the provision of templates, presentations and video content to support engagement with internal and external stakeholders during the Implementation Phase.

The following passages outline the planned support mechanisms for the host institutions. As the needs of the Embedded Nuclei, further documentation and supports will be provided by work package leader (WP5).

12.1 EMBEDDED NUCLEI ONLINE WORKSPACE

- From November 2017, Embedded Nuclei will have access to the online platform Basecamp.
- This platform will be used as a workspace to notify, share and manage the dissemination of relevant reports, articles, templates and scheduling with partners. Hosting institutions can use this platform to share key learnings with other institutions. Notifications (chats) can be issued/created with individuals and groups.
- Deadlines/schedule details can also be saved. For example, mentor visits, meetings can be logged and exported.
- Embedded Nuclei will receive an email notification to their email account when new content is uploaded to the platform.
- This information will support WP5 develop the mid-term cross case analysis (M35).
- This workspace will support WP2 identify and create communications and dissemination outputs

12.2 WORKING GROUPS/WORKSHOPS

During the Implementation Phase, working groups for Embedded Nuclei will be set-up. These working group meetings will bring together mentors, Embedded Nuclei partners and the NUCLEUS management team. They aim to address

immediate issues for the Nuclei in implementation their Action Plans and provide knowledge and training to successfully deliver the local Action Plans.

Working Group have been tentatively scheduled for the following dates:

- 22nd and 23rd February – Delft University
- Prior to the Annual Conference 2018 (Malta)

The Working Group in February will focus on developing skills to deliver the formats for developed by Mobile Nuclei (RRI Basecamp Training, Hackathon etc).

Further information on the schedules and items to prepare for these Working Groups will be communicated via the online Basecamp workspace.

12.3 NUCLEUS ANNUAL CONFERENCES

During the Implementation Phase, Embedded Nuclei partners will play a central role in sharing and engaging audiences with insights into the process and outputs of embedding RRI into their institutions.

12.4 MOBILE AND EMBEDDED NUCLEI KNOWLEDGE SHARING

WP5 leader will hold monthly meetings with the coordinator of the Mobile Nuclei (EUSEA) to identify the key learnings that could be integrated across both Nuclei streams.

12.5 WORKING TIMELINE & CHECKLIST

A timeline for Mobile and Embedded Nuclei was presented in D3.6. Overleaf, is a similar timeline with some further detail included.

The timeline (Table 12.1) highlights key project milestone deliverable dates and sets out the timeframe for the Embedded Nuclei partners to develop materials and the supporting mechanisms provided. The detail is expanded upon in the accompanying Table12.2. The table focuses on aspects and envisaged task involvement from the Embedded Nuclei partners for the tasks outlined. The numbers in The Task Table and Checklist (table 12.2) correspond with those listed in the Timeline (12.1). The Task Table outlines the future tasks and the anticipated input required from the Embedded Nuclei to deliver these tasks effectively. As referenced in previously in this document, additional supports, structures and resources will be added over the course of the Implementation Phase. The Task Table and Checklist (12.2) will be uploaded to the online workspace.

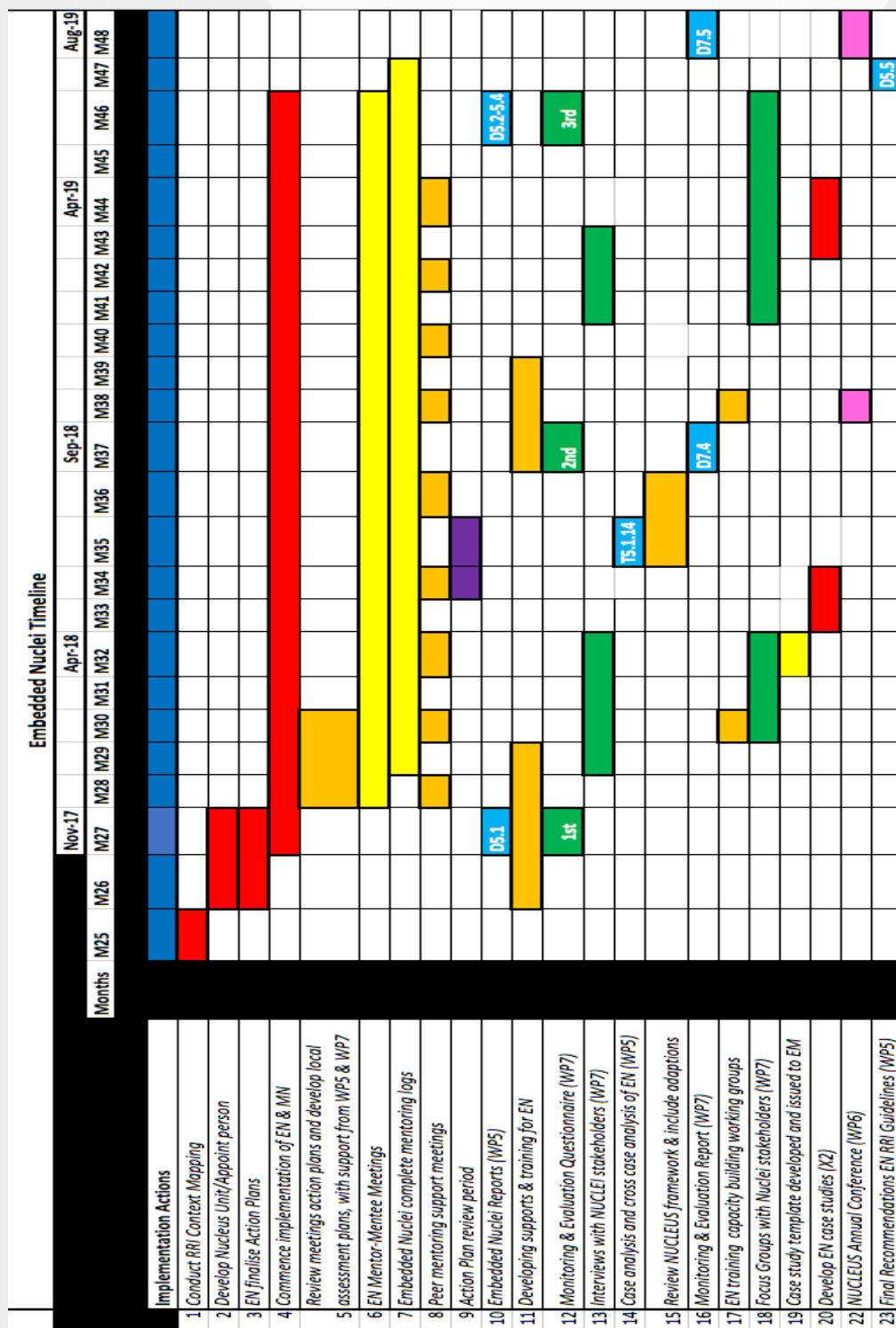


Table 12-1: Embedded Nuclei Timeline

EMBEDDED NUCLEI TASK TABLE & CHECKLIST					
	Task	Explanation	Project Month	Calendar Month	Complete (tick)
1	Conduct Context RRI mapping	Each EN uses 3 tools (self-assessment, SWOT, Theory of Change) to assess current RRI landscape	M21-M25	June-Sept 17	
2	Develop NUCLEUS unit	Set-up plans to put NUCLEUS unit in place. Appoint person	M22-M25	June-Sep 17	
3	Finalise Action Plans (V1)	Develop, share and discuss local actions plans with mentor	M25-M27	Sept-Nov 17	
4	EN Commence Implementation	Nuclei begin formal implementation – delivering aspects of 8 Actions	M27-M46	Nov 17-July 19	
5	Develop EN assessment plan	Hold meeting with WP7 & WP5, review action plan and develop assessment plan (local indicators	M28-M30	Dec 17-Feb 18	
6	Mentor Meetings	Arrange monthly mentor meeting, prepare agenda and share in advance with mentor (use mentor log)	M28-M46	Dec 17-July 19	
7	Mentor Logs	Populate mentor logs based on discussion and agreed actions, share with mentor, file and send copy to mentor	M28-M46	Dec 17-July 19	
8	Peer mentoring	Mentors hold bi-monthly meetings, share learnings, WP5 populates peer-mentoring log (Appendix C) and share summary with Executive Board	M28-M46	Dec 17-July 19	
9	Action Plan Review	Action plans are formally reviewed with any necessary adjustments made. Changes must be documented and communicated with mentor & WP5	M34-M35	June –July 18	
10	EN Reports	Mentors will submit a progress report for each mentee (D5.2-5.4) Information and support from EN will be required in the period leading up to this deliverable	M46	July 19	

11	Supports and Training for EN	Based on review period, WP5 will develop resources, templates and training. Input and feedback from EN required	M37-M39	Sept 18-Nov 18	
12	Questionnaires (WP7)	WP7 will issue questionnaires. Input from EN required	M37	Sept 18	
13	Interviews with stakeholders (WP7)	WP7 will hold interviews with stakeholders. Support needed to identify and arrange interviews	M29-M32 M41-M43	Jan-April 18 Jan-Mar 19	
14	Case & Cross Case analysis	WP5 will mid-term analysis of EN. Input and support required from EN partners e.g. submission of data etc.	M35	July 18	
15	Review NUCLEUS Framework	WP5 will review NUCLEUS Action Framework based on current developments. Feedback from EN required.	M35-M36	July-Aug 18	
16	Monitoring & Evaluation Report	WP7 monitoring and evaluation report (D7.4)	M37	Sept 18	
17	Training and Capacity Building Working Groups	Based on needs of EN, WP5 will develop resources and use working groups to link with experts, build capacity and skills of EN	M30 M38	Feb 18 Oct 18 (Malta)	
18	Focus Group with EN (WP7)	WP7 will conduct focus groups. Support required to identify and coordinate focus groups	M30-M32	Feb –April 18	
19	Case study template	WP5 will develop case study template in partnership with EN	M32	April 18	
20	EN develop case studies	EN develop 2 case studies (per timeframe) of RRI using template	M33-M35 M43-M44	May -June 18 Mar- April 18	
22	NUCLEUS Conference	EN share, disseminate insights into RRI implementation. Preparation and input required	M38, M48	Oct 18 TBC 19	
23	Final RRI Recommendations	Input required from EN to develop co-created recommendations (D5.5)	M47	July 19	

Table 12-2: Embedded Nuclei Task List & Checklist

13 DATA MANAGEMENT AND ETHICS

During the Implementation Phase of the project, Embedded Nuclei partners will engage with a diverse range of internal and external stakeholders. Embedded Nuclei partners are therefore advised to adhere protocols outlined in the NUCLEUS ethics, data storage and management reports (D8.1 – D8.6). In addition, institutions are advised to liaise with the institutional ethics board during the planning stages and comply with local ethical and data storage measures and regulations.

DOCUMENT PART 2: EMBEDDED NUCLEI ACTION PLANS

This part of the document contains the Embedded Nuclei Action Plans. The plans are working documents and further detail will be added, adjustments made as the units develop.

Each unit is scheduled to meet with WP5 and WP7 to discuss and operationalise the plans as well as an assessment plan (refer to Table 12.2). The information contained in this Organisational Manual document will also support the Embedded Nuclei further refine and focus the plans.

The NUCLEUS Action Plans will be presented in the following order:

- Ilia State University
- Nottingham Trent University
- University of Lyon
- Twente University
- University of Malta
- MISANU
- South African Institute for Aquatic Biodiversity (SAIAB)
- Ruhr University Bochum
- University Rhine Waal

<i>Institution Name</i>	<i>Ilia State University</i>
<i>Embedded Nucleus Profile</i>	<p>Established in 2006 as a merger of six different institutions, each having a long history and a diverse institutional profile, in a very short period of time Ilia State University became a flagship research and comprehensive higher education institution in Georgia.</p> <p>In terms of research, our strategic vision is to focus on three main components:</p> <ol style="list-style-type: none"> 1) Support research excellence, researchers, having a leading position in the region in their fields; 2) Support studies that are especially significant for the country and the region at large: These include research and documenting cultural and linguistic heritage; Georgian language corpus, corpus of Georgian epigraphy, of Georgian Ethno-music or polyphony. 3) Support studies inspired by social responsibility. the development of educational and other resources for people with special needs; for example, the grammar of Georgian sign language, Online-Vocabulary of Georgian Sign language, resources for children with autism spectrum and children with mental disorders. <p>Current institutional mission/focus - The mission of Ilia State University is to create, transfer and apply knowledge for the purposes of scientific advancement and societal development at the local as well as international level.</p> <p>Values - In view of the role of higher education and in creating the bases for societal development, Ilia State University founds its strategy of 2018 – 2024 on the principles and values as follows:</p> <ol style="list-style-type: none"> 1. Autonomy – the university is an autonomous educational institution, which, within the framework of the law, makes independent decisions to manage its prime activities; 2. Equal opportunities – the university provides students and its academic personnel with equal opportunities for learning, teaching, working and development, which involves the freedom of choice, as well as assistance from the university to carry out the corresponding actions; 3. Diversity – the university is an educational institution which promotes diversity of cultural, educational and research activities as the foundation for creating societal values; 4. Academic freedom – the university ensures freedom in making academic choices and carrying out academic activities for its academic personnel, as well as students. 5. Social responsibility – the university implements different projects which by involving unique scientific and human resources promote sustainable development of the society; 6. Integrity – the key criterion of the university in its activities is integrity in the process of teaching, learning and holding research.

<p>7. Transparency and openness – the university is accountable before society, which is why it regularly spreads information on its activities and is ready for cooperation;</p> <p>8. Centered on development – the university proactively assesses its activities, seeks its weak points and attempts to eradicate them.</p> <p>Our Vision - In 2024, Ilia State University will be the leading and rapidly developing university in Georgia, as well as the region, which, through its innovative approaches, creates the bases for scientific and technological progress, high standard educational processes and public well-being.</p> <p>Our current strengths for embedding RRI is that Ilia State University has a lot of science activities, like Science picnic events as science popularization activity facilitating citizens engagement in science, Open Science, which means that science visibility is very high.</p> <p>Current challenges are in Ethics, Gender equality and in governance direction.</p> <p>Opportunities with NUCLEUS project is to boost professional management for University R&I ; To connect science and the general public through scientists, agents, and science popularization events, to maintain and develop our cultural heritage, to adopt and promote up-to-date standards and methods.</p>					
<i>Base level (Level A, B or C)</i>		A (WITH SOME ELEMENTS OF B)			
		<i>Intervention /Action</i>		<i>Desired Outcome</i>	<i>Completion timeframe (by Month)</i> <i>Cells engaged</i>
<i>Action 1: Conduct RRI Context Mapping-identify, extend and enrich the processes that already exists</i>	Level A-C	Conduct context mapping actions, identify and extend the processes and knowledge which already exists. Make an self-assessment and SWOT analysis. To Conduct the	Gain more information about the processes which already exists and enrich them, share this information with external and internal	M25	University.

		<p>research in already existing data which is material cultural heritage, integrate and spread this knowledge inside the university and also for external stakeholders. Make this knowledge recognizable and develop the popularization into the RRI concept. This cultural heritage is from different Ilia State University's Institutes (Botanical Institute's Herbarium, Astrophysics and seismic monitoring centre) data. Our aim is to make them up-to-date, integrate this knowledge in more a broad concept.</p> <p>To adopt and promote up-to-date standards and methods of digital Humanities in general, both in research and teaching. aimed at documenting of cultural heritage properties discovered or preserved in Georgia according to the standards of Digital Humanities. Apart from Georgian there are also Urartian cuneiform, Aramaic,</p>	<p>stakeholders.</p> <p>This information will be used as a basis for realistically embedded RRI into the institution.</p> <p>This action raises an awareness of the University and makes it more open with sharing it's cultural heritage data basis, which helps scientists and researchers to use already collected useful information in their research.</p>	M29-M46	
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		Greek, Jewish, Persian, Armenian, Albanian and Arabic epigraphic material and Greek, Jewish, Persian, Armenian, Albanian and Arabic manuscripts.			
<i>Action 2: RRI Policy, Committee and Strategy - Thought leadership and institutionalised capacity building</i>	Level A	<p>Meetings with the laboratory heads and doctoral Schools, also with different departments (development office, foreign relationship office, PR department, research office) in RRI policy, committee and strategy. Establish the format for meetings and project Updates.</p> <p>Institutional policies and standards to ensure open access to research processes and outputs.</p>	Engaging University departments and research units in RRI implementation.	M30-M35	University, Government, public policy
	Level B	Introducing measures to support RRI capacity skills development trainings (science communication module also integrated in curricula, grant and		M29-M48	University, Government, public policy, public engagement.

		<p>proposal writing, use and talking with media, PE principles and practice) to experienced and early career researchers on PE web resource on PE Science</p> <p>Communication and PE Summer School Opportunity for doctoral students and young researchers public engagement incentive system/external support from the GoG (National Foundation for Research) for researchers and staff involved in PE.</p>			
	Level C	<p>Research Coordination Unit, Technology Commercialization Office, Office of Development, Graduate School, Research Centres and Institutes for setting RRI Agenda and R&I Development Programme.</p> <p>PE support research-active coordinators, enhancement of profile of ISU research centres and institutes to public and stakeholders, inclusion of PE with Research in the</p>	Developed programme and vision from different University departments for implementation of RRI.	M31-M44	University, Government, public policy

		<p>institutional strategy.</p> <p>Resource allocation (experts and technical assistance) in strengthening RRI.</p> <p>Senior Leadership Support (Vice-Rector for Research and Academic Affairs supervising the NUCLEUS Embedding Pilot.</p>			
<p>Action 3: <i>Build institutional bridges between the research community, stakeholders and the general public</i></p>	<p>Level A</p>	<p>Work with internal stakeholders (research Institutes, researchers, institute's directors, exchange knowledge and development with alumni offices) to identify existing networks of external Stakeholders.</p> <p>Attend one-to-one meetings with representatives of external stakeholders and discuss RRI and common goals and potential projects.</p> <p>Coordinate a series of RRI Basecamp Trainings (6 in total) to create awareness of what RRI is and</p>	<p>Cross institutional support and awareness of existing relationships.</p> <p>Build a network with researchers and research institutes with administrative stuff and RRI coordinator.</p> <p>Develop a sustainable 'network', Built on Trust.</p>	<p>M30-M45</p> <p>M30-M40</p> <p>M32-M44</p>	<p>University, Media, Civil Society, Policy Makers, Industry, Public Engagement</p>

		<p>the role of internal functions in the University and the external stakeholders</p> <p>Attend one-to-one meetings with research Institute Directors, share with them an RRI concepts and future plans with this project. Exchange an information about their research, research results and how we can populate and share their research activities and results with external stakeholders.</p> <p>Invite external (Media, Government sector, economy) and Internal stakeholders (researchers, professors, PhD Students) to develop and deliver training for their engagement. This is important to build the bridges between an university research units and external stakeholders.</p> <p>Invite external stakeholders to</p>	<p>Share information and engage external stakeholders. Empowering researchers to embed and include RRI within the research process.</p> <p>Engagement of external stakeholders which is crucial for RRI implementation.</p> <p>Involvement of University</p>	<p>M30-M40</p> <p>M29-M46</p> <p>M30-M35</p>	
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		<p>Science café talks to engage with researchers to discuss and share their opinions and experience.</p> <p>Work in partnership with the PR department to assess the communication tools currently offered to stakeholders. Develop a plan to accessible to diverse stakeholders and elaboration of the standard of outreach of activities.</p> <p>Conduct meetings to elaborate and communicate the operational strategy of practical ways of RRI/PE with 4 ISU Schools & 30 Research Centres and Institutes.</p>	<p>Departments and share an ideas.</p> <p>Involvement of research centres, ISU Schools and institutes.</p> <p>Increase awareness of RRI project, share an ideas which will help RRI concept integration.</p>	M31-M46	
	Level B	<p>Work with external (especially with stakeholders who are at this moment difficult to rich for us, government, economy sector, public engagement organizations) and internal stakeholders to develop a novel interactive meeting formats or</p>	<p>Engagement of internal and external stakeholders for successful implementation of RRI. Share ideas and develop collaboration.</p>	M30-M46	<p>University, Media, Civil Society, Policy Makers, Industry, Public Engagement.</p>

		<p>gathering together for public discussion about difficult and popular topics.</p> <p>Create a space at the University for emerging as a national/regional hub for science communication and engagement activities.</p> <p>Make activities (for example science café, open lectures, tour in the University) for STEM education popularisation and science popularization where citizens engagement is crucial.</p> <p>Apply this call, for European Researchers Night, for two years.</p> <p>Conduct regular media trainings with journalists with University researchers, institute directors and media representatives, where they can</p>	<p>Increase information about ISU activities and science popularisation project development.</p> <p>Trained journalists who will collaborate with ISU and work with different ISU researchers to cover different research topics.</p> <p>This will help our local journalists to get more information how to work with science topics and how make it more popular and understandable for general public.</p>	<p>M30</p> <p>M30; M38; M43</p>	
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		<p>share their interest.</p> <p>Facilitate a webinar for local journalist network with international science journalists or science communication professionals – so they can share and learn practices of communicating scientific news following an RRI approach.</p> <p>Conduct a training sessions with researchers focused on outlining the principles of RRI, the benefits and practical steps of what they can do.</p> <p>Contact identified key individuals from economy, government and civil society sector to build relationships between them and the university. Establish their expectations and how they might collaborate with ISU research.</p>	<p>Societal actors will be involved within research and innovation process.</p> <p>Engagement of Researchers into the process of implementation RRI into the university, will increase.</p>	<p>M32-M40</p> <p>M30-M46</p>	
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		Set a series of meetings (5) with University researchers to develop ideas how they can support and help on-going RRI project in science popularisation and stakeholder's engagement.			
	Level C	<p>Encourage professors and University stuff (researchers, PhD Students) to be more involved in science education (science cafe series, science Picnic annual event, young explorers' club, European Researchers Night, science highlight videos online – vodcasting research.</p> <p>Hold annual reporting of research Institutes where all the University researchers meet each other, share their results and experience. Here they can meet to share information about scientific issues, the future of scientific developments.</p>	<p>Build capacity internally and externally for high quality, high impact research outcomes. Increase Involvement of University and also external students in research process.</p>	<p>M29-M45</p> <p>M28; M40;</p> <p>M29-M46</p>	<p>University, Media, Civil Society, Policy Makers, Industry, Public Engagement</p>

		<p>Hold Science café lectures and open lectures where students, external stakeholders and professors can discuss on popular science topics.</p> <p>Connect science and the general public through scientists (on science picnics, tours in University, science café, open access lectures), and science popularisation events. Citizens can involve in science popularization event, they can make by themselves science fun experiments on science picnic, they can actively involve at our University's Fablab, where they can develop and create new ideas.</p> <p>ILIAUNI Science Communication and Popularization Activities (Science Picnic, Science Café, Research Made at ISU, Media Interactions).</p>			
<i>Action 4: Catalyse ongoing debates</i>	Level A	Work with internal communications and PR department to	Raise awareness and interest in	M30-M45	University, Media, public engagem

<p><i>about the role of science in open societies</i></p>		<p>conduct some meetings with University staff and professors about RRI issues.</p> <p>Elaborate Transparency measures traceable for staff, students, structures, and stakeholders.</p> <p>Develop/Improve communication activities accessible to diverse stakeholders and elaboration of the standard of outreach of activities.</p> <p>To boost professional management for University R&I.</p> <p>Organize a series of university wide seminars on RRI with invited speakers from external stakeholders and funding bodies.</p> <p>Develop a training with media and University researchers, plan a</p>	<p>RRI</p> <p>Changes in open access direction.</p> <p>Raise awareness and interest in RRI.</p> <p>Share information between Media (external Stakeholder) and researchers.</p>		<p>ent.</p>
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		meetings with them.			
	Level B	To enhance dialogue across the organisation and between the stakeholders (societal actors) in fostering RRI.	Raise awareness and interest in RRI.		University, Media, public engagement, Ethics
	Level C	Media trainings for researchers RRI concept and its activities which ISU is planning to do in the future.	Develop researchers capacity and confidence to engage with media outlets and communicate research and scientific issues with a diverse range of publics	M30-M44	University, Media, public engagement.
<i>Action 5: Develop, nurture and support new forms of transdisciplinary research including RRI principles in the scientific community</i>	Level A	<p>Foster RRI requisites, benefits, and paradigms in big research funding calls (triggered by the EU agenda: Horizon 2020, ERC, or by the National Funding (absent but could be appealing to the foundation)).</p> <p>Meet with government research representatives to</p>	Increased awareness of the values of transdisciplinary research	M30-M46	University, Funding Bodies, Policy makers

		<p>discuss focus of future themes and directions. Introduce them to values of more transdisciplinary research.</p> <p>Meet with University professors and researchers to get more ideas how to integrate RRI principles into a new forms of transdisciplinary research.</p>	<p>which will 'sow the seed' for future funding programmes that focus on this area.</p> <p>Get more detailed ideas and information for transdisciplinary research.</p>		
	Level B	<p>Explore, conduct meetings with University departments and administrative staff practicalities of hosting transdisciplinary projects within the institution.</p> <p>Introduce measures and opportunities to support RRI with Researchers. Share an ideas and information about how they can help us in implementation</p>			<p>University, policy makers, public engagement.</p>

		<p>process of RRI.</p> <p>Map out and set-up a database on the number of transdisciplinary projects which are taking place in the institution.</p> <p>Meet with research agencies and funders to discuss national plans on transdisciplinary research</p>			
	Level C				
<i>Action 6: Stimulate co-responsibility of all actors involved in the process of research and innovation</i>	Level A	<p>Capacity skills development trainings (science communication module also integrated in curricula, grant & proposal writing, use and talking with media, PE principles & practice) to experienced and early career researchers on PE.</p> <p>Develop a web resource on PE.</p> <p>Science Communication & PE Summer School Opportunity for doctoral students & young researchers .</p>	Create awareness about RRI through local university.	M42-M46	University, Gender, public engagement

		<p>Public engagement incentive system/external support from the GoG (National Foundation for Research) for researchers & staff involved in PE.</p> <p>Send information to all the University researchers and professors about RRI, what this project means and where to go when they will need a support or more information about ongoing project.</p>	<p>The research community will know how they can be supported in embracing the RRI principles.</p>	M29-M40	
	Level B	<p>Create an regular events for Popularisation of outstanding women in R&I; outreach of outstanding results & addressing stereotypes in all processes</p> <p>making STEM careers attractive to women.</p>		M30-M46	
	Level C				
<i>Action 7: Question and redefine the prevailing notion of</i>	Level A	<p>Work with a doctoral training group in a different discipline and also with newly accepted</p>		M29-M46	University

<i>'recipients' and 'agents'</i>		<p>researchers to engage/create dialogue about RRI principles and activities going within the project.</p> <p>Develop case studies of RRI Champions so researchers understand how RRI is practiced in the local context.</p>			
	Level B	<p>To offer RRI trainings for scientists & students to help them better assess ethical, legal, and social implications (ELSI) of their research.</p> <p>To increase an ethics importance in research process, embed peer review for research proposals (grants).</p> <p>Introduce official guidelines and standards on ethics component related to RRI.</p> <p>Assessment of research proposals (all?) against ethics and harmful impact guidelines.</p>	<p>Enrich the stakeholder community.</p> <p>Increase an Ethics involvement in grant writing and RRI implementation process.</p> <p>Strengthening the ethics component in R&I will potentially facilitate to avoid possible research misconduct to enhance credibility and quality of outputs.</p>		

	Level C				
<i>Action 8: Embed ongoing reflection, analyse processes and procedures</i>	Level A-C	<p>Collect data on attitudes to RRI within the institution (Implement the self-assessment tool), how researches understand what is RRI concept, how they are helping on improvement of RRI implementation and tools at the University, using tools such as questionnaires.</p> <p>Create a project timeline with set points for reflection and measurements. These to coincide with discussions with mentor. Understand what data is currently gathered and used for reporting within the institution to see if there is overlap with RRI principles.</p>		M29-M46	University

13.2 NOTTINGHAM-TRENT UNI ACTION PLAN

<i>Institution Name</i>	Nottingham Trent University (NTU)				
<i>Embedded Nucleus Profile</i>	<p>Nottingham Trent University (NTU) was founded in 1992 and is one of the largest UK universities. With nearly 28,000 students and more than 3,500 staff across four campuses, it contributes £496m to the UK economy every year. The University is home to world-class research, excelling in fields such as sustainable futures, safety and security of citizens and society, health and wellbeing and medical technologies, and advanced materials. Nottingham Trent University has a 2020 strategic plan which aspires to create the University of the Future. As part of this strategic plan there are five key strategic themes which include: creating opportunity, valuing ideas, enriching society, connecting globally and empowering people. These strategic aims strongly align to the underlying core principles of RRI. Therefore, this provides a strong platform for the NUCLEUS project to work towards embedding RRI within the governance structures and organisational culture at NTU. One of the key opportunities within NTU is that the research integrity governance structures are currently undergoing a period of transition. Therefore, there is potential for the NUCLEUS project to make an institution-wide impact by participating in the development and implementation of a new ethical governance framework.</p>				
<i>Base level</i> <i>(Level A, B or C)</i> <i>(according to the NUCLEUS self-assessment what is the baseline 'Level' for the institution)</i>	<p>Based on the results from the context mapping tools and self-assessment analysis we have identified that NTU is currently at Base Level A (Establishing RRI) and that it has some elements of Base Level B (Advancing RRI). Nottingham Trent University engages in numerous activities which incorporates RRI elements and principles. However, many of these initiatives and activities occur at a localised level and are often restricted to their individual organisational silo (i.e. an individual personal, research group or department). This silo culture has led to limited communication and a lack of cross-organisational support. In addition, whilst there are many activities that incorporate elements of RRI at NTU, they are not formally labelled as such. Moreover, whilst the University has established structures and policies for many of the core RRI principles (i.e. open access, ethics) the engagement of both staff and student communities with these policies and structures is limited, and communication is often fragmented.</p>				
	<i>Intervention /Action</i>		<i>Desired Outcome</i>	<i>Completion timeframe (by Month)</i>	<i>Cells engaged</i>
<i>Action 1:</i> <i>Conduct RRI Context Mapping-identify, extend and enrich the processes that already exists</i>	Level A-C	Conduct context mapping exercises including self-assessment, SWOT analysis and Theory of Change.	Gain an insight into the internal structures and policies which relate to RRI. Obtain a baseline of ongoing activities that align to RRI at NTU. This information will	M25-M26	University

			be used as a basis for embedding RRI at NTU.		
<i>Action 2: RRI Policy, Committee and Strategy - Thought leadership and institutionalised capacity building]</i>	Level A	Localise the job specification to NTU. Post job advert, interview and select candidate.	Hire person to support with the implementation process.	M25	University
	Level A	Liaise with the Research Office, Equality, Diversity and Inclusion Team (EDI), Doctoral School, Employability team, Organisational Development, Environment Team and the Green Academy to discuss scope of supporting implementation of RRI. Establish regular meetings for project updates.	Opportunity to seek collaboration to enhance ongoing activities and goals at departmental levels and aspire to meet some of the University's strategic goals.	M27-M29	University
	Level A	Liaise with Director of Partnerships, Local Engagement and Commercial Services (PLECS).	Opportunity to leverage existing initiatives within the University (such as Anchor institutions and SMART cities initiatives) and to seek commitment to engage in actions.	M27-M46	University
	Level A	Develop a NUCLEUS action plan utilising information gained from the context mapping and self-assessment.	Identify clear, quantifiable actions at short, medium and long timescales.	M27-M37	University
	Level A	Share updates on the project with senior leadership such as the senior Pro Vice-	Senior leadership will be informed of initiatives and	M30-M46	University

		Chancellor for Research on a regular basis (i.e. at six month intervals).	activities occurring and can advise on implementation.		
Action 3: <i>Build institutional bridges between the research community, stakeholders and the general public</i>	Level A	Explore the potential, with the Employability team, to develop a STEM alumni network aimed at PGR students. There is potential to advance to Level B by creating a sustainable network of Alumni Fellows.	Expand the network of external stakeholders. Develop and enhance partnerships with employers and create Alumni Fellows, facilitating a learning resource that extends students' experience into professional practice.	M27-M31	University, Economy, Civil Society
	Level B	Work with the STEM city network and contribute to existing events and activities.	Build long-term relationships, develop trust and build a culture of mutual respect.	M27-M46	University, Public Engagement, Civil Society, Economy, Public Policy
	Level B	Collaborate with the PLECS department to facilitate the University obtaining Anchor Institution accreditation.	Establish ways to resource and develop research within NTU on six key areas that have been identified by the district and borough councils as key priorities for Nottinghamshire.	M27-M46	University, Public Engagement, Civil Society, Economy, Public Policy
	Level B	Work with internal stakeholders including the Research Office, EDI team and PLECS department to identify existing	Create a sustainable network of stakeholders for the University.	M29-M39	University, Economy, Civil Society, Public Policy,

		networks of external stakeholders.			Media
	Level B	Liaise with PLECS department to identify ways to support the Smart Cities initiative and develop long term relationships with stakeholders. There is potential to advance to Level C if support structures can be developed to enhance and sustain these relationships.	Create a pathway to develop impactful research and knowledge exchange across a range of issues that will benefit Nottingham and its citizens. The Mobile Nucleus workshop will be promoted to PLECS as a potential model for engaging stakeholders.	M27-M46	University, Public Engagement, Civil Society, Economy, Public Policy
<i>Action 4: Catalyse ongoing debates about the role of science in open societies</i>	Level A	Create a RRI Yammer group within the University.	Create an informal opportunity for both academic and professional services staff to contribute to discussions related to RRI.	M37-46	University
	Level A	Scope the potential for creating a platform that could disseminate information on research that incorporates RRI principles (M27-30). Identify the most appropriate platform to circulate this research i.e. through a blog or via social media (Instagram or Twitter) and establish who would hold responsibility for this platform (M30-33). Develop and produce the most appropriate	Raise awareness of research internally and externally. The platform could also highlight the benefits of conducting transdisciplinary research, increase RRI literacy across the institution and illustrate to researchers what RRI looks like in practice.	M27-46	University, Public engagement, Civil Society

		platform.			
	Level A	Explore the potential to develop alternate formats for communicating challenging topics in science (e.g. ethics, future innovations in STEM) with a potential collaboration with the School of Art and Design. The exploration phase is projected to occur from M27-30, with the proposed development and implementation phase occurring in M31-M46.	Elicit visions and expectations about the future of science and innovation using an interdisciplinary approach.	M27-46	University
	Level B	Create an online module on RRI for the NTU intranet (NOW Platform). This learning room will include a library of key RRI literature, a discussion forum and best practice case study examples.	This module will act as central hub for knowledge exchange and will signpost key contacts and RRI activities occurring at NTU. The learning room will create a platform for dialogue of RRI for both academic and professional services staff.	M31-M46	University
	Level B	Develop a training workshop for PGR students on public engagement. Invite external stakeholders to contribute.	Build capacity for researchers to engage with the public.	M36-M46	University, Public Engagement
<i>Action 5: Develop, nurture and support</i>	Level A	Liaise with the leads of the newly formed Strategic Research Themes to identify	Build internal capacity for high quality, impactful	M27-M30	University

<i>new forms of transdisciplinary research including RRI principles in the scientific community</i>		ways that the NUCLEUS project can support the initiatives for developing research collaborations with stakeholders within NTU and externally.	transdisciplinary research. Foster discussions that encourage the incorporation of RRI principles from the inception of research projects.		
	Level A	Organise a workshop that identifies what successful transdisciplinary research would look like in practice.	Increases awareness of the values of transdisciplinary research and explore approaches to overcome any potential barriers to this approach.	M31-M35	University
	Level A	Explore the potential to organise a seminar series with external stakeholders linked to the University's five new strategic research themes.	Highlight the importance of transdisciplinary research across University.	M36-M46	University, Civil Society, Policy Makers, Economy, Public Policy
	Level A	Explore the potential to develop a transdisciplinary student consultation project in collaboration with the Green Academy.	Establish a platform for transdisciplinary research within the student community.	M27-M46	University, Civil Society, Economy, Public Engagement
	Level B	Conduct a review on the number of research projects that incorporate elements of stakeholder inclusion at NTU. Collate these into case studies to illustrate best practice and disseminate these via the NOW platform.	Provides a baseline of knowledge of stakeholder engagement and signposts experts in this field. The findings can also help to shape the transdisciplinary workshop for	M32-M42	University

			stakeholder engagement.		
Action 6: <i>Stimulate co-responsibility of all actors involved in the process of research and innovation</i>	Level A	Scope the potential to conduct a workshop on participatory action research (PAR) through formal discussions with researchers who are already employing PAR techniques. In addition, survey researchers who are interested in developing these methods to identify what they perceive as barriers to adopting an PAR approach. Establish the best model for the workshop that addresses these concerns and promotes RRI and transdisciplinary research. Convene the workshop in collaboration with 'expert users' of PAR techniques.	Provide researchers with the knowledge and skillset to engage with stakeholders and include them in all stages of the research process. Signpost experts who conduct participatory research.	M27-M46	University
	Level A	Collaborate with PLECS to develop and set up a citizen panel (both online and in-person panels).	Allows stakeholders to engage with academic research and empowers them to contribute to innovation.	M33-M43	University, Civil Society, Economy, Public Engagement
	Level B	Explore the potential to develop media training for researchers in collaboration with the Centre for Broadcasting and Journalism.	Builds the capacity of researchers to engage with the media.	M39-M42	University, Media
Action 7:	Level A	Collaborate with the Women's staff	The mentoring scheme will	M27-	University

<i>Question and redefine the prevailing notion of 'recipients' and 'agents'</i>		network to develop a mentoring scheme.	provide an opportunity for staff to support each other, share information, inspire others and improve the workplace through consultation and collaboration.	M33	
	Level B	Working with the EDI team and the Athena Swan Self-Assessment Team establish if there are any initiatives that could be developed to support the institution in achieving Athena Swan accreditation. Conduct qualitative interviews or focus groups on participants' perceptions of gender equality at NTU.	Move towards creating a platform to help to address existing gender imbalances at NTU. The qualitative assessment will provide additional depth and context to support the quantitative data already collated by NTU.	M31-M46	University
	Level A	In collaboration with the Research Office, conduct a holistic evaluation of the current procedures, structures and hierarchies concerning research integrity at NTU. Alongside this, a review of the academic literature, policy and guidance documents relating to research integrity will also be produced.	Provides a baseline of how the current institutional framework and practice aligns to the broader policy landscape and external benchmarks. The systematic review will provide an evidence-based framework to propose solutions to current	M29-32	University

			challenges to research integrity at NTU.		
	Level A	Develop and run a series of 'best practice' workshops. Initially three workshops are proposed, one at each campus.	Obtain an understanding of what is considered 'best practice' between different disciplines. This information will be used to support the review of ethical practice and policies at NTU. It will also provide a platform for increased reflection of ethical practice and integrity across the institution.	M32-M36	University
	Level B	In collaboration with Research Office determine the best approach to implement a new ethical governance framework at NTU. The NUCLEUS project will assist with the development of introducing a new research integrity committee.	The new governance framework would foster an organisational culture of research integrity. The formation of a new committee will provide a new forum for sharing best practice in research integrity and will help to provide oversight in the implementation of the ethical review process at NTU.	M36-M46	University

	Level B	Develop PhD training on RRI in collaboration with the Doctoral School. This training will include a talk, small group work and facilitated class discussion with interactive exercises.	Provide researchers with an introduction to the key RRI principles, as well as the knowledge and skills to critically engage with the concepts and reflect on their own practice.	M27-M43	University
	Level B	Explore the potential to develop an ethical grand challenge project in collaboration with the Green Academy.	Fosters future thinking, enables students to become global citizens through the promotion of social and ethical responsibility.	M27-40	University, Public Engagement
<i>Action 8: Embed ongoing reflection, analyse processes and procedures</i>	Level A-C	Produce a portfolio of all relevant documents and policies. This portfolio will include meeting logs which will detail all meetings held with internal and external stakeholders.	Provides a detailed record of discussion points, reflections and proposed initiatives that may not be captured in the action plan, or by the formal monitoring and evaluation process.	M27-M46	University
	Level A-C	Create a timeline for activities and interventions with fixed evaluation and monitoring points (i.e. at six-month intervals).	Enables reflection and analysis at regular intervals across the project. The fixed evaluation points will facilitate an assessment of progress towards the	M27-M46	University

			objectives and goal.		
	Level A-C	Capture attitudes to RRI at beginning and end of the project via a short survey.	Enables analysis of the impact of the NUCLEUS project in influencing cultural change at NTU.	M27-M46	University

13.3 UNIVERSITY LYON ACTION PLAN

<i>Institution Name</i>	<i>Université de Lyon (UDL)</i>				
<i>Embedded Nucleus Profile</i>					
<i>Base level</i> (Level A, B or C) (according to the NUCLEUS self-assessment what is the baseline 'Level' for the institution)	<i>Level B</i>				
	<i>Intervention /Action</i>		<i>Desired Outcome</i>	<i>Completion timeframe</i> (by Month)	<i>Cells engaged</i>
<i>Action 1:</i> Conduct RRI Context Mapping- identify, extend and enrich the processes that already exists	Level A-C	Conduct context mapping exercises (assessment, SWOT, ToC)	(Nucleus) will gain insight into the internal system and connections with stakeholders. This information will be used as a basis for planning	M25	University
<i>Action 2:</i> RRI Policy, Committee and Strategy - Thought leadership and institutionalised capacity building	Level A	Localise the Job spec to institutional context. Post job advert, interview & select candidate Prepare an RRI Policy in line with the current institution strategy	Hire Nucleus person to support with the implementation process RRI is communicated in line with the institutional vision	M25-M26	University
	Level B				
	Level C				
<i>Action 3: Build</i>	Level				

<i>institutional bridges between the research community, stakeholders and the general public</i>	A				
	Level B	<p>Identify territorial key actors, representing civil society</p> <p>Identify key actors inside the university and research community</p>	<p>Reception of their needs and expectations</p> <p>Get connected with all key actors</p> <p>Develop the modus operandi between all key actors</p> <p>Define our service proposal</p>		University, Civil society, Policy Makers
	Level C	<p>Create a governance</p> <p>Establish governance committee</p> <p>Analyse governance efficiency</p>	<p>Develop a sustainable network</p>		
<i>Action 4: Catalyse ongoing debates about the role of science in open societies</i>	Level A				
	Level B				
	Level C	<p>Continue to develop our digital platform POPSCIENCE</p> <p>Develop a new digital tool: POPSCIENCE online - magazine (6 per year)</p> <p>Develop partnership and regular cooperation with media</p>	<p>Raise awareness and interest in RRI</p> <p>Make research results and information on specific processes available to all levels of society</p>		University, Public Engagement, Science Education, Media

		Organise bi-annual seminar POPSCIENCE			
Action 5: <i>Develop, nurture and support new forms of transdisciplinary research including RRI principles in the scientific community</i>	Level A				
	Level B	Development of a new form of digital scientific mediation Creation of a Laboratory for social innovation			University, Public Engagement, Science Education, Media
	Level C	Continue to develop our programme (« Et si on en parlait » = multidisciplinary cultural programme) Organisation of a cultural program 1) Artificial Intelligence 2) Sports	Enhance public engagement Make research results and information on specific processes available to all levels of society		University, Public Engagement, Science Education, Media
Action 6: <i>Stimulate co-responsibility of all actors involved in the process of research and innovation</i>	Level A				
	Level B				
	Level C	Continue activity of our internal Committee "Ethics" Organise a training for PHD students about "Ethics & Research" and "conflict of interest" Writing of an ethical charter	Establish ethical values And increase awareness		University, Science Education

		MOOK for PHD Students about "Ethics & Integrity & Co-Responsibility"			
<i>Action 7: Question and redefine the prevailing notion of 'recipients' and 'agents'</i>	Level A				
	Level B				
	Level C				
<i>Action 8: Embed ongoing reflection, analyse processes and procedures</i>	Level A-C				

	13.4 UNIVERSITY TWENTE ACTION PLAN
<i>Institution Name</i>	University of Twente
<i>Embedded Nucleus Profile</i>	<p>The University of Twente (UT) in the Netherlands is situated in Twente, a region in the east of the Netherlands and part of the province of Overijssel. The UT profiles itself as an entrepreneurial university, and complements this with the emphasis on societal impact reflected both in research as well as education. The UT's motto 'High Tech, Human Touch' captures the relationship between the university and society.</p> <p>Research at the UT focuses on both engineering as well as social sciences. Founded in 1961, and originally being a polytechnic university, societal aspects of technology have always been incorporated in the educational programmes in some way. Research is organized in various research institutes while teaching is within programmes which are the responsibility of five faculties. Multidisciplinary collaboration within research groups is encouraged. There are currently more than 3,300 researchers and over 9,000 students at the UT. Current important research fields at the UT include amongst others robotics, nanotechnology, health. The Embedded Nucleus at the UT is situated in the department Communication Science (CS) of the Faculty of Behavioural, Management and Social Sciences (BMS).</p> <p>One of the current strengths for embedding RRI at the university is the focus on fostering the science-society relationship at the policy level. At the policy level societal impact – being societally relevant – is emphasized. Challenges are at the practical level where individual researchers see the wish to engage with society but where other pressing issues often prevail.</p> <p>NUCLEUS is not the only project aiming to achieve results related to RRI. Opportunities within the NUCLEUS project are to build on existing relationships as well as on existing projects, which include activities between groups of stakeholders (in NUCLEUS' terminology 'cells') and the university and make these more sustainable in small steps.</p>
<i>Base level (Level A, B or C) (according to the NUCLEUS self-assessment what is the baseline 'Level' for the institution)</i>	<p>A with some elements of B</p> <p>The institution engages with many stakeholders representing the various cells. Not always the terminology of RRI, or even the ideas between RRI are known or fully accepted and applied. Current practices needs to be further identified, and can be fostered and stimulated.</p> <p>During the remainder of the project two specific cases will pay attention to the developmental process of bringing RRI in practice, next to the overall activities where we will foster and stimulate RRI practices as well.</p> <p>The first project will be 'Responsive Robotics'. In this case relationships will be built with a small group of young robotics researchers and steps for more responsive research will be stimulated. The second project will be 'Science to</p>

	Design for Society'. In this project, the existing S2D4S workshops which consider societal challenges, will be further developed to help build sustainable relationships with groups of stakeholders. More general, at various levels bringing in RRI aspects in courses, meetings and policy developments will be enhanced. An example of current attention to RRI aspects is the policy for 'open access' at the UT which already has attention at the policy level but needs implementation UT-broad at the researchers' level.				
	<i>Intervention/Action</i>		<i>Desired Outcome</i>	<i>Completion timeframe (by Month)</i>	<i>Cells Engaged</i>
<i>Action 1: Conduct RRI Context Mapping- identify, extend and enrich the processes that already exists</i>	Level 1 A-C	<ul style="list-style-type: none"> Conduct multiple times context mapping within the project life-time (SWOT and stakeholder analysis) 	<ul style="list-style-type: none"> Insight in the current relationships with stakeholders. This will feed into the actions during the remainder of the project Insight in domains where RRI aspects have attention Insight in / development of current policies – at UT, e.g. implementing policies from the Vision2020 report 	M26 M36 M46 continuous	<ul style="list-style-type: none"> University Internal External
<i>Action 2: RRI Policy, Committee and Strategy - Thought leadership and institutionalised capacity building</i>	Level 1 A	<ul style="list-style-type: none"> Hire staff Liaise with various internal management as well as researchers 	<ul style="list-style-type: none"> Staff has been hired Raise awareness of project, of ideas behind project 	M26	<ul style="list-style-type: none"> University Internal
	Level 1 B	<ul style="list-style-type: none"> Invite people to discuss science-society relationship – mention 	<ul style="list-style-type: none"> Raise awareness that current policies often are related to what RRI aims for E.g. dean faculty, library, graduate school director Raise interest in the project and how we 	M25-M46 continuous	<ul style="list-style-type: none"> University Key positions

		<ul style="list-style-type: none"> RRI Interview people about current practices Use current networks and contacts 	could do something for them		
	Level C	<ul style="list-style-type: none"> Lobby for courses with RRI elements in doctoral education offer 	<ul style="list-style-type: none"> Raise attention for changing roles for researchers in various course elements and implementing changes in the educational programmes. Involvement in new Summerschool offer 	M26 continuous	<ul style="list-style-type: none"> TGS director UT news Marketing & Communication
<i>Action 3: Build institutional bridges between the research community, stakeholders and the general public</i>	Level A	<ul style="list-style-type: none"> Work with internal stakeholders to identify existing networks Attend meetings and discuss RRI aspects Invite people to develop training for PhD students (e.g. research ethics) 	<ul style="list-style-type: none"> Support by various key people Raise awareness and interest in fostering the science-society relationship Build network Support and coordinate development of education (e.g. course on research ethics) 	M26-M46	<ul style="list-style-type: none"> University As much as possible all cells
	Level B	<ul style="list-style-type: none"> Within other projects build new relationships (e.g. development of doctoral education) 	<ul style="list-style-type: none"> Expand current network Connect people so they can work together on science-society issue, e.g. via Design Lab and the S2D4D workshops Stimulate building of relationships at the university 	M30-40	<ul style="list-style-type: none"> Twente Graduate School International partners Local relations

		<ul style="list-style-type: none"> • Liaise between current relationships 			
	Level C	<ul style="list-style-type: none"> • Organise meeting with high official • MOU's 	<ul style="list-style-type: none"> • Gain support for developing science-society relationships as a research topic • With Edinburg – various levels • With CRISP – to conduct and publish about research 	M40	
<i>Action 4: Catalyse ongoing debates about the role of science in open societies</i>	Level A	<ul style="list-style-type: none"> • Develop and teach course on science-society relationship • Contribute to a discussion on RRI aspects • Further develop the S2D4S workshop methodology for one of the cases 	<ul style="list-style-type: none"> • Build on current course work • To increase knowledge, insight and skills with young researchers to understand society better • Let participants experience the workshops • Improve the methodology 	M26-M28 M38-M40	<ul style="list-style-type: none"> • Researchers, PhD students • Other cells – can vary
	Level B				
	Level C	<ul style="list-style-type: none"> • Apply for funding together with other researchers • Contribute to funding proposals which include societal aspects as well 	<ul style="list-style-type: none"> • Bring RRI into practice. An example is the GoNano project where co-creation processes will be conducted to stimulate researchers to bring in rri-elements into their future research or research proposals. 	M36-M48	

<i>Action 5: Develop, nurture and support new forms of transdisciplinary research including RRI principles in the scientific community</i>	Level 1 A	<ul style="list-style-type: none"> Interview researchers 			
	Level 1 B	<ul style="list-style-type: none"> Engage in process of developing how researchers can include societal considerations within their research (for robotics) 	<ul style="list-style-type: none"> Process is experienced, outcomes give insight in what works and what needs researchers have Apply midstream modulation methodology Provides insights what small steps help (do's and don'ts) Connected to action 7 	M30 – M35	<ul style="list-style-type: none"> Young researchers – various internal and external stakeholder
	Level 1 C				
<i>Action 6: Stimulate co-responsibility of all actors involved in the process of research and innovation</i>	Level 1 A	<ul style="list-style-type: none"> Run a course with RRI elements 			
	Level 1 B	<ul style="list-style-type: none"> Develop material for courses (e.g. summer school) 			
	Level 1 C	<ul style="list-style-type: none"> Incorporate course or classes in fixed offer 	<ul style="list-style-type: none"> Empower researchers to consider societal aspects in their new research proposals 		
<i>Action 7: Question and redefine the prevailing notion of 'recipients' and 'agents'</i>	Level 1 A	<ul style="list-style-type: none"> Meet regularly with a group of researchers (robotics) 	<ul style="list-style-type: none"> Build relationships, raise awareness for elsi-aspects in research 	M31-M42	researchers

	Level 1 B	<ul style="list-style-type: none"> Take the initiative for preparing a co-creation workshop (with focus group and interviews) 	<ul style="list-style-type: none"> Prepare for a co-creation process 		
	Level 1 C	<ul style="list-style-type: none"> Conduct a co-creation workshop 	<ul style="list-style-type: none"> Submit a proposal with elsi-aspects included together with a researcher 		
<i>Action 8: Embed ongoing reflection, analyse processes and procedures</i>	Level 1 A	<ul style="list-style-type: none"> Include training on an incidental base 			
	Level 1 B	<ul style="list-style-type: none"> Embed training including RRI aspects in Twente Graduate School 	<ul style="list-style-type: none"> To train young researchers, so they will be more inclined to consider responsive research when they have become professor 	M46	
	Level 1 C				

13.5 UNIVERSITY OF MALTA ACTION PLAN					
Institution Name	University of Malta (UM)				
Institutional Profile	<p>The UM is situated in Msida and is within the Central Region of Malta which town lies West of the Capital City of Valletta. Research is being conducted in a variety of areas, including innovation management, innovation communication (specialised in science and art collaborations), entrepreneurship, creativity and idea generation, future studies (foresight), and startups from a variety of fields.. The University's strengths for embedding RRI include its abilities to engage with internal stakeholders at the University and other external stakeholders having a direct link to the societal cells such as economy and civil society.</p> <p>Presently the challenges faced by the University with respect to RRI are resistance, availability of funds, limited foundation, ego, time and counter productive efforts.</p> <p>Nonetheless, the opportunities for the project include direct contact to the decision makers, existing relationships, communications resources and several EU funded projects.</p>				
Base level (Level A, B or C)	A				
	Action (indicate the level)		Desired Outcome	Completion timeframe (by Month)	Societal Actors engaged
Action 1: Conduct RRI Context Mapping- identify, extend and enrich the processes that already exists	Level A-C	Conduct context mapping exercises (assessment, SWOT, ToC)	(Nucleus) will gain insight into the internal system and connections with stakeholders. This information will be used as a basis for planning	M25	University
Action 2: RRI Policy, Committee and Strategy - Thought leadership and institutionalised capacity building	Level A	<p>Localise the Job spec to institutional context. Post job advert, interview & select candidate</p> <p>Formulate an RRI Policy for the University of Malta</p> <p>Hold bi-monthly sessions with an internal core NUCLEUS committee at UM to</p>	Hire Nucleus person to support with the implementation process	<p>M25-M26</p> <p>M45</p>	<p>University</p> <p>University</p>

		<p>discuss project progress.</p> <p>Meet up with key persons within the library, HR, ethics and gender quality to seek commitment to include RRI actions</p>	<p>To monitor and oversee the implementation of RRI within the University</p> <p>Taking RRI to key units within the University and to embed RRI in their practices</p>	<p>M 27-M48</p> <p>M29 - M31</p>	<p>University</p> <p>UM Library, Ethics committee, Gender Issues Committee, HR office at UM</p>
	Level B	<p>Identify RRI champions within the University whose research and focus is on e.g. public engagement, diversity/gender equality, economy, media, public policy</p> <p>Profile these RRI champions on Social Media, and, THINK magazine</p>	Highlight the work of these researchers to explain RRI in practical terms	M46-M48	University
	Level C	Award researchers whose work embeds RRI	To ensure that research is impacting society	M47	
	Level A	Hold bi-monthly sessions of the core NUCLEUS to external	To discuss the interaction	M36-M48	University, Entities from Economy,
Action 3: Build institutional bridges between					

the research community, stakeholders and the general public		stakeholders (a NUCLEUS THINK TANK) from the cells dealing with Economy, public policy, public engagement, civil society and media to have an External Think Tank.	between the UM and each cell with respect to RRI.		Media, Public Policy.
	Level B	Regular bi monthly meetings of NUCLEUS THINK TANK	To identify and overcome barriers to RRI between cells and UM.		
	Level C				
Action 4: Catalyse ongoing debates about the role of science in open societies	Level A	Organise seminars on RRI with invited speakers from external stakeholders at University Organise RRI sessions at science events which attract the public	Provide a forum for discussion on RRI Discussion with society about societal and ethical issues	M36-M46 M36	University Science in the City/Media/Journalists
	Level B				
	Level C				
Action 5: Develop, nurture and support new forms of transdisciplinary research including RRI principles in the scientific community	Level A	Through the self-evaluation exercise foreseen we will be able to identify research best practice examples and projects. The identified best-practice research projects will be supported through the NUCLEUS team members and committee and THINK	Supporting their work to make it sustainable and, closer to society	M 29-M32 M35 - M46	NUCLEUS team Members NUCLEUS team Members and THINK TANK

		TANK members according to the needs of society and the research performed			
	Level B				
	Level C				
Action 6: Stimulate co-responsibility of all actors involved in the process of research and innovation	Level A				
	Level B	Hold training sessions with researchers outlining the principles of RRI, the benefits and practical steps of what they can do	Empowering researchers to embed and include RRI within the research process		University
	Level C				
Action 7: Question and redefine the prevailing notion of 'recipients' and 'agents'	Level A	Using the NULCEUS THINK TANK to discuss the notions of 'recipients' and 'agents'	To identify barriers to RRI between the cells	M36- M46	Chamber of Commerce, Government Public Policy key persons, Journalists
	Level B	Through the NUCLEUS THINK TANK's networks, bring these (recipients and agents) societal actors together for effective action	To overcome the barriers to RRI between all cells	M37 - M46	Chamber of Commerce, Government Public Policy key persons, Journalists
	Level C				
Action 8: Embed ongoing reflection, analyse processes and procedures	Level A-C	Analyse feedback collected from academics, students and staff on RRI, reflect on this and on how to take it further. This will be done in discussion with our	Better understanding of whether RRI is being done and if yes, where and	M26-M48	

		mentor from the University of Edinburgh.	how. Address shortcomings and give support in embedding RRI.		
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13.6 MISANU ACTION PLAN

<i>Institution Name</i>	The Mathematical Institute SANU			
<i>Embedded Nucleus Profile</i>	<p>The Mathematical Institute of the Serbian Academy of Sciences and Arts (MISANU), (http://www.mi.sanu.ac.rs/), founded in 1946, is a unique centre for mathematically-oriented research in Belgrade (Serbia), with more than 70 full-time researchers and 250 part-time collaborators from all university centres in Serbia.</p> <p>MISANU Mission Statement, which includes the RRI principles, will be the starting point of integrating the RRI within the Institute. MISANU could be the centre of promoting RRI among the mathematicians in Serbia, since it collaborates with the Ministry of Education, Science and Technology in planning and conducting scientific projects. Also, MISANU, as part of the Serbian Academy of Sciences and Arts, could foster the cooperation between the mathematical sciences and other scientific disciplines in directing research towards solving current societal challenges. In addition, MISANU experience in trans-disciplinary projects like research related to information security or cultural heritage digitization projects or public engagement activities could bridge the gap between the academia and industry or the academia and general public.</p> <p>There are two main challenges. Even though the formal documents of MISANU include the RRI principles, they are not recognized under the RRI name. Furthermore, the RRI principles are used in real practice, but the researchers are not familiar with the formal notion of RRI. The second challenge is a opening towards the civil society and media and working with them on identifying the societal needs.</p> <p>The participation in NUCLEUS project will help MISANU to familiarize with the best RRI practices, as well as to incorporate the RRI principles in its vision, mission and practice.</p>			
<i>Base level</i> <i>(Level A, B or C)</i> <i>(according to the NUCLEUS self-assessment what is the baseline 'Level' for the institution)</i>	LEVEL A (WITH SOME ELEMENTS OF B)			
	<i>Intervention /Action</i>	<i>Desired Outcome</i>	<i>Completion timeframe</i> <i>(by Month)</i>	<i>Cells engaged</i>

Action 1: <i>Conduct RRI Context Mapping- identify, extend and enrich the processes that already exists</i>	Level A-C	Conduct context mapping exercises (assessment, SWOT, ToC)	Insight into the internal system and connections with stakeholders is gained. This information will be used as a basis for realistically embedded RRI into the institution	M25	U ³¹
Action 2: <i>RRI Policy, Committee and Strategy - Thought leadership and institutionalised capacity building</i>	Level A	Localise the Job spec to institutional context. Post job advert, interview & select candidate	Hire Nucleus person to support with the implementation process – person who will be the ‘catalyser’	M25-M27	U
		Prepare an RRI policy. Align with current institution strategy/language where possible.	RRI is communicated in line with the institutional vision – ensuring greater opportunity to gain ‘buy-in locally’	M27-M30	U
	Level B	Invite key personnel from HR, ethics, PR, library, research school to discuss RRI- present the role of the institution – seek commitment to engage in actions and to meet at agreed periods over the course of the project	Responsibility and ownership for embedding RRI is shared beyond the Nucleus unit	M30-M32	U
		In committee meeting discuss the best format and structure for sharing updates with senior leadership. Suggest 1 representative from leadership attend the meeting – can be rotated	Senior leadership are aware and can input into action and the delivery	M30-M32	U
		Profile RRI champions on institutional Web page. Highlight what they are doing and how they are doing	Overcome issue that researchers cannot envision what RRI is in practice	M34-M46	U

³¹ U-University and Research Institutions (Governance); PP-Public Policy; PE-Public Engagement; M-Media; E-Economy; CS-Civil Society.

Action 3: <i>Build institutional bridges between the research community, stakeholders and the general public</i>	Level A	Dialogue with Serbian Chamber of Commerce to bridge the gap between industry and academia <i>Assumptions:</i> The meeting will be the first step in addressing the lack of collaboration between enterprises and research institutions.	The Serbian Chamber of Commerce is aware of the willingness of the research institutions to cooperate; 5% increase in joint projects between industry and academia.	M38-M41	U,E
		Consultation with the Serbian Office for Cooperation with Civil Society in order to establish networks with civil society organizations linked to science engagement <i>Assumptions:</i> The scientists often neglect to consult the CS organizations, because they are convinced that they know enough about the needs of society.	The Institute has several agreements with CS organizations; The scientists address the expectations of society properly.	M34-M37	U,CS,PE,M
	Level B	Schemes (based on the Law on Scientific Research in RS) for students and researchers to physically spend time at partner organizations <i>Assumptions:</i> Researchers mobility will increase the researchers' willingness to listen to external stakeholders & develop new directions in their work.	Every department has a mobility scheme; 25% of researchers visit other institutions	M34-M40	U
		Working group of researchers, supported by the internal and external stakeholders, to develop	The Institute has the ethical code of conduct; 90% acceptance rate of the	M27-M42	U,PP

		<p>the ethical code of conduct in MISANU</p> <p><i>Assumptions:</i> The ethical guidelines will help the researchers to better understand the mission of the Institute and their rights and responsibilities as employees.</p>	ethical code by the researchers.		
	Level B	<p><i>Regular seminars for Students and Young Researcher to familiarize them with research career and its possibilities</i></p> <p><i>Assumptions:</i> The young people are not motivated to pursue a research career in Serbia as there is no guarantee of safe and stable employment with appropriate salary.</p>	The Students and Young Researchers have a place to inform themselves about the research issues and to express their expectations; The research institute has the students' feedback to improve its policies/training in accordance with the needs of young people.	M27-M42	U,CS,PE,M
Action 4: <i>Catalyse ongoing debates about the role of science in open societies</i>	Level A	<p>Proposal to Ministry of Education, Science and Technology (EST) for inclusion of open science measures in national scientific projects to boost engagement of Serbian research institutions in open research</p> <p><i>Assumptions:</i> Ministry of EST recognizes the significance of the availability of scientific data for the development of science and the research system in general; Misperception by researchers: open access journals are predatory journals.</p>	Ministry of EST has a national policy for open science/research; Researchers are aware of the benefits to scientific community and society at large of open science/research.	M34-M37	U,PP

		<p>Social media training for researchers to provide them with skills and confidence to engage in social media platforms</p> <p><i>Assumptions:</i> Researchers don't have time to "waste" on social media; Researchers don't know how to use social media platforms to get their research visible.</p>	25% of research groups at MISANU have its own profile on social media platforms; There is an increase in engaging with followers on social media.	M34-M42	U,CS,PE,M
Level B		<p>Collaboration with Center for the Promotion of Science in organizing the manifestation "May Month of mathematics" to popularize the mathematics in society and the community</p> <p><i>Assumptions:</i> The new management of the Center for the Promotion of Science is motivated to cooperate with researchers in order to create a math festival that will inspire the community to explore the beauty of mathematics.</p>	May in Serbia is a month dedicated to popularization of mathematics; Increase in visitor and participant numbers by 10%; 60% of researchers collaborate with science centres on popularization of mathematics in Serbia	M29-M30 and M41-M42	U,CS,PE,M
Level B		<p>Popular scientific meeting (conference) hosted by MISANU and Telekom Serbia to improve the general understanding of data privacy issues, as well as to motivate the nonacademic individuals to share their personal data for the research/analysis/treatment purposes</p> <p><i>Assumptions:</i> Researchers and entrepreneurs are working together on security strategies to protect data and personnel. Nonacademic</p>	The increase of nonacademic participants in the conference; MISANU and Telekom Serbia have a mailing list of nonacademic individuals willing to share their personal data for the research/analysis/treatment purposes.	M34-M35	U,E,PE

		individuals trust the researchers and share their personal data for the research/analysis/treatment purposes.			
		<p>Science debates at MISANU Colloquiums (Mathematics, Mechanics, Computer Science and Applied Mathematics), where researchers, society representatives and the general public can discuss on the recent research findings</p> <p><i>Assumptions:</i> The engagement of the MISANU Colloquiums could be oriented towards the theoretical direction only. It is Self-sufficient. The moderators of colloquiums need a mentoring by Center for the promotion of Science/INTERSECTION in how to engage nonacademic participants to take part in debates, workshops, etc.</p>	The increase in the number of events (workshops, debates, etc.) hosted by MISANU Colloquiums, which are open to the public; More than 25% increase in youth engagement.	M27-M46	U,CS,PE,M
<p>Action 5: Develop, nurture and support new forms of transdisciplinary research including RRI principles in the scientific community</p>	Level A	<p>Proposal to Ministry of EST to dedicate resources for public engagement in the next call for national scientific project proposals and to motivate the creators of the proposals to include RRI activities.</p> <p><i>Assumptions:</i> Project leaders and researchers, due to a lack of financial support by government and excessive research and administrative work don't consider RRI in the context of their project/research activities.</p>	Ministry of EST has a budget for inclusion of RRI activities; More than 5% of national scientific project proposal includes RRI.	M34-M37	U,PP,PE
	Level B	<p>Agreement on cooperation between MISANU, Ministry of Culture and Telekom Serbia, the national telecom provider, on digitization of cultural heritage with aim to create</p>	General public and media support the cultural heritage digitization via crowd sourcing (contribute content; take part in user studies;	M27-M46	U,E,PP,CS,M,PE

		<p>the central digital register, which will be open and available to the widest audience</p> <p><i>Assumptions:</i> Digitization if defined as one of the priorities of the Serbian Government in the Draft of National strategy for cultural heritage 2017-2027. The establishment of digital infrastructure is based on cooperation between the 6 stakeholder cells.</p>	constructive feedback; etc.)		
	Level B	<p>Joint Project with the Telekom Serbia to employ researchers (especially young researchers) in market driven science projects</p> <p><i>Assumptions:</i> The recent report of the World Economic Forum shows Serbia ranked number one in the world in brain drain, or the departure of experts and young researchers to work in other countries.</p>	MISANU participate in market driven science; Decrease in brain drain in the next ten years by 5%.	M27-M37	U,E
		<p>Pilot Project with Ministry of EST, Association of Serbian Banks and Visa Inc. to include financial education in regular school curricula</p> <p><i>Assumptions:</i> Financial education is nearly non-existent in Serbian schools. The collaboration between government, financial organizations and educational institutions will create an environment for the development of functional knowledge in this field.</p>	Ministry of EST has a guideline for the systematic inclusion of financial education in regular school curricula; There is a National Strategy for Financial Education, which provides the relevance and long-term sustainability of programs for financial education in the educational system of Serbia.	M27-M34	U,PP,E,PE
Action 6: <i>Stimulate co-responsibility of all actors involved in the process of research and innovation</i>	Level A	<p>Meeting with the Coordination Body for Gender Equality of the Government of the Republic of Serbia to execute the first analysis of gender and mathematics performance in Serbia in order to improve the gender and minority</p>	MISANU collaborate with external stakeholders in developing Gendered Research Strategy in Serbia; An increase in the percentage of women that are principal investigators on a project/first	M30-M42	U,PP,CS

		<p>equality in science and innovation.</p> <p><i>Assumptions:</i> There is no official cooperation between the research institutions and government/civil society organizations. The established cooperation could lead to Gendered Research Strategy in Serbia that will define a number of specific actions that minimize barriers in a work environment that disadvantage one sex.</p>	<p>authors of research papers/participate in the decision making process.</p>		
<p>Action 7: Question and redefine the prevailing notion of 'recipients' and 'agents'</p>	<p>Level A</p>	<p>Simple Web page within the MISANU official Web site that outlines the key RRI terminology along with practical examples for implementation</p> <p><i>Assumptions:</i> Scientific and research community, as well as the economy, media and society, are not familiar with the notion of RRI (even though they practice it).</p>	<p>The increase in Web page traffic (number of Web page visitors, bounce rate, conversion rate, number of comments, user mailing lists).</p>	<p>M30-M32</p>	<p>U,CS,PE,M</p>
		<p>Training sessions to Government Officials for better understanding of RRI principles and benefits in improving the culture of research and science in Serbia</p> <p><i>Assumptions:</i> Government Officials often are not aware of the concept of RRI and thus are not able to provide a necessary support to execute research proposals that embeds RRI principles.</p>	<p>10 of Government Officials attended the training sessions; Government Officials have a basic RRI knowledge and cooperate with research institutions in including the RRI culture.</p>	<p>M39-M41</p>	<p>U,PP</p>

Action 8: <i>Embed ongoing reflection, analyse processes and procedures</i>	Level A	Create a project timeline with set points for reflection and measurements. These to coincide with discussions with mentor.	Reflections will take place regularly at appropriate points in the process where follow up actions can be discussed and put into process.	M29-M46	
		Understand what data is currently gathered and used for reporting within the institution to see if there is overlap with RRI principles.	Current data can be used as a tool to measure how the institution is embracing RRI principles and if data to understand this isn't available then this can be identified and addressed.		
	Level B	Collect data on attitudes to RRI within the institution using tools such as questionnaires/polls and focus groups	The efforts of the NUCLEUS project in culture change and attitudes can be assessed.	M29-M46	
	Level C	Develop, with input from senior staff from research and reporting departments a sustainable process of monitoring and progressing RRI actions within the institution.	An ongoing process of reflections on RRI within the Institution can be established.	M29-M46	U + Senior Leadership + RRI Committee

13.7 SAIAB ACTION PLAN

<i>Institution Name</i>	SOUTH AFRICAN INSTITUTE FOR AQUATIC BIODIVERSITY (NRF-SAIAB)				
<i>Embedded Nucleus Profile</i>	<p>Situated in Grahamstown in the rural Eastern Cape province of South Africa, NRF-SAIAB has built on a legacy of Ichthyological discovery that began with the ground-breaking discovery of the 'living' coelacanth in 1938. Established as a research institute in 1968, SAIAB is an internationally recognised centre for the study of aquatic biodiversity and in 1999 became a Research Facility of the National Research Foundation. SAIAB is also an Associated Institute of Rhodes University.</p> <p>Current strengths and opportunities for embedding RRI: SAIAB serves as a major scientific resource for understanding globally significant aquatic ecosystems and has established multi-institutional, multi-disciplinary stakeholder networks. SAIAB's unique research platforms and scientific leadership and expertise in marine and freshwater aquatic biodiversity are vital to the national interest when dealing with issues arising from exponentially increasing pressures of human population growth and development, climate and global change. Through these platforms, SAIAB runs an established marine science transformation programme which provides specialist equipment and training to equip the next generation of scientists and managers with tools to understand and manage environmental change.</p> <p>Inland fisheries are highly relevant in southern Africa because they provide an opportunity for socio-economic benefits including, jobs, rural livelihoods, food security and economic development based on the small-scale fishing and recreational fishing value chains. SAIAB holds the DST/NRF South African Research Chair in Inland Fisheries and Freshwater Ecology, the overall goal of which is to develop regional capacity and research on inland fisheries to support their sustainable development.</p> <p>The challenge in this dynamic context is to recognise and optimise relevant science-to-society links, integrate these into our research strategy and better articulate them to policy makers and the public.</p>				
<i>Base level (Level A, B or C)</i>	<p>SAIAB already has a reasonably well-established culture of RRI and a history of highly successful outreach and public engagement. Researchers are involved in providing advice to policy makers and regularly interact with media. SAIAB is highly leveraged in the research community and involved in many multi-institutional and multi-disciplinary projects, so it is operating at all levels.</p> <p>However, elements of Levels B and C can be promoted and further developed, so that RRI is integrated at the planning level and all projects can be rationalised in relation to societal imperatives.</p>				
	<i>Level</i>	<i>Intervention /Action</i>	<i>Desired Outcome</i>	<i>Completion timeframe (by month)</i>	<i>Cells (Societal actors) engaged</i>
<i>Action 1: Conduct RRI Context Mapping- identify, extend and enrich the processes that already exists</i>	Level A-C	Conduct context mapping exercises (assessment, SWOT, ToC)	Gain insight into the internal system and connections with stakeholders. Information to be used as a basis for realistically embedded RRI in the institute.	M27	<p>Institutional Review (2015) informed the mapping exercises. Diversity workshop led by Wits University</p> <p>Centre for Diversity Studies, DST-NRF National Research Chair in Critical Diversity Studies with leadership at SAIAB: exec members; union reps; researchers; student rep; intern</p>

					rep.
		Map the library network system and the way in which research is shared - open resources, etc.	Networks are strengthened through awareness and bridging of any gaps	M29	Universities and Institutions; Civil Society
<i>Action 2: RRI Policy, Committee and Strategy - Thought leadership and institutionalised capacity building</i>	Level A	Prepare RRI action plan and an RRI policy and align with SAIAB Strategic Plan 2018-2022	Strategic plan for SAIAB that articulates science to/ with society interface: Who, what, why and how?	M27-M30	SAIAB Executive members; Deputy Chief Executive Officer: National Research Infrastructure Platforms; researchers; principal scientists using research platforms; partner universities; SAIAB Advisory Committee; NRF CEO; NRF Board; DST. Identify other societal actors interaction with whom informs planning - e.g. policy makers; subsistence fishers; SANParks; WRC; DEA; DAFF etc.
	Level B	Using SAIAB general meetings to their full advantage as a time when the entire institution is together	Inclusivity: Open forum; consistent messaging; circular meeting format = no hierarchies	Quarterly/ biannual/ ad hoc meetings	Staff, students and Interns
	Level C	The institution takes ownership of the level of responsibility in the research undertaken. Research applicants are assessed on their considerations of societal needs, and engagement with society. Research proposals are subjugated to strict	Research is immediately applicable to solving societal issues; funding is easier to obtain as clear outcomes can be defined	M41	All cells are engaged

		criteria of responsibility			
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<i>Action 3: Build institutional bridges between the research community, stakeholders and the general public</i>	Level A	MACE Regional Conference - invited to attend as guest speaker. 'Talk entitled: How marketing offices at HEIs can support research planning'	Introduce NUCLEUS and encourage marketing and communication staff to consider how their offices can support and drive RRI in their respective institutions.	M26	Marketing and communications staff from four Eastern Cape universities: RU; UFH; WSU; NMU and Technical Vocational Education and Training (TVET) colleges
		Attend WWF-SASSI Networking Partners Meeting	Introduce NUCLEUS and identify areas in which collaboration could be fostered/ facilitated	M27	WWF-SASSI Networking partners: Two Oceans Aquarium; Seaworld; Endangered Wildlife Trust (EWT); NRF-SAEON; Save Our Seas Foundation (SOSF).
		Identify existing local community engagement programmes that could help inform/ direct target activities	Introduce NUCLEUS and identify areas in which collaboration could be fostered/ facilitated	M30	Rhodes University; Albany Museum; Adventure Province Eastern Cape; Makana Tourism; Grocotts Mail; GTN Parenting Network
	Level B	Facilitate training opportunities to aid scientists with the institution communicate with other sectors of society	Scientists feel more prepared and confident to share their work	M30	SAASTA, SAIAB Media, Public Engagement

		Promote South African science awareness events as an opportunity for NUCLEUS partners to visit South Africa and engage with civil society	Project partners use the opportunities - e.g. Scifest Africa and National Science Week - to visit South Africa and participate	M31, M36, M43	DST; SAASTA; Eastern Cape Provincial government; Makana Municipality; Grahamstown Foundation; scientists; public
	Level C	Pop-up science centre - Water World @ Scifest Africa (SA National Science Festival)	Showcase SAIAB research and infrastructure platforms. Provide a platform for other organisations undertaking research in aquatic biodiversity to showcase their work and interact with public and learners	M31, M43	Local service providers; ACEP Open Call project leaders; Rhodes University: IWR; DIFS; Zoo & Entomology Biological Control Unit; Biochemistry; SAEON; WESSA; SASSI; Ocean Research; etc.
<i>Action 4: Catalyse ongoing debates about the role of science in open societies</i>	Level A	Send more articles and stories to media outlets, encourage them to discuss concepts in accessible ways	Science stories will become more common place to the general public	M30	Media
	Level B	Encourage the university to host debates and science cafes around particular topics	Reaching out to audiences that may be unfamiliar with science	M38	Universities and Institutions; Public Engagement
		Support discussion platforms around Grahamstown and beyond; supplying events with information and resources	Science conversations are happening on their own, all around.	M44	Universities, Public Engagement; Civil Society; Media
	Level C	DST Science Forum - facilitate interactive workshop (World Café methodology) using principles of RRI and change theory	On invitation from SARAQ - workshop with radio astronomers as preparation for plenary discussion	M28	Scientists; astronomers; DST; SAASTA; NRF; students...

			session		
		DST Science Forum - presentation session by Rachel Rayner which will include reference to RRI and the roles of SAATA as South African partner and SAIAB as Embedded Nucleus on NUCLEUS project	Ensure High level awareness of the project and the roles of SAATA and SAIAB in representing the Cultural Adaptation component of the project.	M28, M40	DST; NRF; Universities, Public Engagement; Civil Society; Media; Policy; (Industry?)
<i>Action 5: Develop, nurture and support new forms of transdisciplinary research including RRI principles in the scientific community</i>	Level A	Analyse how different disciplines currently work	Stronger links are formed between different disciplines	M31	Universities and Research Institutions
	Level B	Encourage transdisciplinary research, and help researchers to spot when it is applicable	The concept of transdisciplinary research becomes accessible	M38	Universities and Research Institutions
	Level C	Put in place a system that rewards transdisciplinary research; i.e. these projects are awarded first/get more funding, scientists participating in this research are more likely to be promoted, etc.	There is a culture of transdisciplinary research - this type of research is the norm rather than exception	M48	Universities and Research Institutions

<i>Action 6: Stimulate co-responsibility of all actors involved in the process of research and innovation</i>	Level A	INTERNAL: Establish digital notice board: IT - set up new communication tools; relevant staff to post notices:	Dedicated internal communication tool; improved communication; everyone is better informed and feels included	M32	Blog; internal intranet SAIAB; pop up on computer
	Level B	INTERNAL: utilise SAIAB general meetings as a platform for discussion	Inclusivity: Open forum; consistent messaging; circular meeting format = no hierarchies	Quarterly/ biannual/ ad hoc meetings	Staff, students and Interns

	Level C	INTERNAL: Provide access to Policies and Processes	Staff, students and interns are more aware of the policy around what they do	M28	Access to NRF Policies - NRF Intranet/ NRF-SAIAB Internal Intranet
<i>Action 7: Question and redefine the prevailing notion of 'recipients' and 'agents'</i>	Level A	Creating shared events between SAIAB and civil society, run by the Wellness Committee	Civil society becomes involved with SAIAB through fun ways	National focus days: e.g. Women's Day (August), Heritage Day (September), Mandela Day (July), World Aids Day (Dec)	SAIAB Lecture Hall and facilities; other civil society organisations with venues in closer proximity to target publics
	Level B	Set up dedicated listening room	Different groups are empowered to really listen, and increase their understanding	M31	MD, Support Services; HCD office; Wellness Committee; Students; interns; staff; social support services; RU Psychology Department when appropriate
		Essential skills development for staff, interns and students who have had limited or no access to training or facilities: Fieldwork courses; driving lessons; swimming lessons; writing courses; first-aid; fire-fighting; laboratory skills; statistics; relative weights and measures; etc..	Staff, students and interns understand that they are fully "agents" of their research - not just their supervisors The training shows links with society, and shows that society is also an agent of the research (facilitating/allowing that research to happen)	On-going throughout the year	Competent and certified coaches and trainers; SAIAB vehicles; field technicians; etc.

	Level C	"Dangerous conversations": Culture is fostered around the ideas that anyone can be recipients and/ or agents of a research project	There is a sense of ownership around the research, especially developing this among students. Hierarchies will not affect the production of results, as all people within the project will be seen as making equally important/ valued contributions.	M48+	Universities and Research Institutions
<i>Action 8: Embed ongoing reflection, analyse processes and procedures</i>	Level A-C	(A) Report on the existing structures at SAIAB	Awareness of what exists, what doesn't and in what state they are in.	M30	SAIAB, SAASTA

13.8 RUHR UNIVERSITY BOCHUM

Action 1 (Level A-C) –

We have done the NUCLEUS self-assessment and are working on the SWOT-analysis

Action 2:

Level A

- NUCLEUS team is appointed, supported and well resourced
- We engage in senior leadership commitment
- We work on NUCLEUS-action plan and the institutional RRI policy

Action 3:

Level A

- We have identified (potential) stakeholders (internally and externally)
 - o Throughout several years of collaborating with researchers in science popularization
 - o For our contribution to the Bielefeld-Study
 - o By the NUCLEUS-Stakeholder Analysis
- We established connections with key persons in different stakeholder groups that seek information about science at RUB.
- We have decided to focus on the cells university, media, and civil society and build up a sustainable network on these cells: Our university cell focusses on doctoral researchers from all sectors who come together in the RUB Research School; the media cell is represented by the editorial staff at RUB and external science journalists; civil society is represented by the general public – e.g. people who visit science events and read science magazines organized and published by our Corporate Communications Department. So the RUB Research School and the Corporate Communications Department are the foundation of the network. - RUB Research School and the Corporate Communications Department offer trainings for doctoral researchers and Post-Docs in which they learn how to communicate their research to lay people.

Level B

- With the RUB Blue Square, a building in the city center of Bochum, a physical space is dedicated to the community of researchers and lay people. There, researchers communicate their topics to the public to create a dialogue. For this purpose, we develop new formats (to get the public in a more active role).
- This aim, i.e. fostering the dialogue between public and research, will be embedded in the action plan for the Blue Square of the Corporate Communications Department. RRI-training programs will be embedded as an obligatory part of the doctoral training program offered by the Research School.

Action 4

Level A:

- We have created opportunities for researchers and other institutional staff to discuss RRI as well as the risk and impact of scientific developments during special events organized by the Research School for doctoral researchers and during a presentation and discussion of the NUCLEUS project with our senior leadership, organized by the Corporate Communications Department.
- We constantly discuss opportunities and threats in our Bochum-NUCLEUS-team (Corporate Communications Department, Science Journalists and Research School). –
- We constantly seek information about RRI activities and attitudes of institutional staff within our university
- We organize focus groups to gather information about RRI attitudes and activities inside and outside our university (doctoral students and school goers, NGOs, etc.).
- We promote reflection on RRI across different units of our university by o Making RRI and NUCLEUS known across the campus (Corporate Communications Department) o Making RRI known across several different research disciplines by reaching out for doctoral researchers from all sectors (RUB Research School)
- We challenge negative perceptions of RRI and face it / see it as a part of the process.

Level B

- We plan RRI focused media-training for researchers. –

- Visitors to the Blue Square embrace an open and transparent communication. There, researchers present their topics to the general public in order to discuss it, for example regarding risks and impact.
- We make research results and processes transparent to all levels of society by events for the general public in the Blue Square, by Open Access publications and by magazines edited by RUB's Corporate Communication Department. –
- RUB's Corporate Communication leadership has participated in a working group who developed guidelines for good science PR including a checklist

Level C

- Researchers consider the role of the general public in their research depending on their topic. –
- Reflection activities on RRI will be included in the doctoral training program. –
- We – collaboratively with the division for transfer – initiate formats to get research and economy / other stakeholders in a dialogue on RRI, e.g. by events for science journalists, researchers and the Corporate Communications Department in order to create a community of practice.

Action 5

Level A:

- Research, Economy, the Division for Transfer and the Corporate Communications Department shall exchange their thoughts and mutually take them into account.
- RUB Research School provides opportunities to meet with societal actors outside university, e.g. Boehringer-Ingelheim.
- Closed collaborations with other embedded Nuclei are already developed, more intensive exchange will be ensured.
- RRI awareness by collaborating with policy makers is ensured, because the City of Bochum is a member of NUCLEUS as well. Additionally, we will foster dialogues between decision makers identified in our stakeholder analysis.

Level B

- By adding RRI-trainings to the doctoral training program and by establishing focus groups we develop an RRI-interested doctoral researcher network at RUB. That shall increase the number of RRI-related research projects in the future.
- Doctoral researchers who enable stakeholders from outside academia to participate will be provided with needful skills to foster those projects.

Level C

- By making RRI more popular at RUB, (future) doctoral researchers are incentivized to work with stakeholders from outside academia in order to solve societal issues.
- RRI trainings and experiences will be listed in the Research School certificate that doctoral researchers receive when they have successfully finished their PhD and participated in doctoral training programs.
- Best practice research projects related to RRI will be awarded

Action 6

Level A:

- The Corporate Communications Department is experienced in science communication and will ensure comprehensible wording to increase the dissemination of knowledge regarding RRI. –
- An RRI-training-structure is being developed by the Research School and Corporate Communications Department to encourage doctoral researchers and Post-Docs to involve stakeholders in their research process.
- Specific forums where expectations and ideas for future collaborations of stakeholder groups are shared openly are being developed (focus groups, etc.)

Level B

- Opportunities for several stakeholder groups to engage in dialogic interactions are planned.
- Researchers and other stakeholders are already connected in several ways, e.g. by institutions that fund research on relevant topics. Additionally, based on our stakeholder analysis, we will develop a network of internal and external stakeholders to incentivize and foster RRI-related collaborations.

- Meet with research school to find out how many researchers are doing transdisciplinary research projects
- We want to initialize discussions with people in the University on the scope of organizing meetings with societal actors at the funding application stage.
- We will explore the use of communication mechanisms e.g. social media to raise awareness about transdisciplinary projects.

Action 7

Level A

- Researchers will be offered trainings to act responsible according to RRI. A stakeholder network of doctoral researchers working on RRI-related topics will be developed (with focus groups as a starting point). It will enable researchers to engage with the local community. Therefore, doctoral researchers can share their experiences and learn from each other's case studies.

Level B

- We create more dialogue-oriented formats that question and redefine the roles of actors and recipients.
- Science journalism will focus on the researcher as a human being like you and me in order to show him or her as a person on eye level.
- We include RRI-training in our doctoral training program.
- Therefore, we will offer RRI as part of the professional development for researchers that is being documented in the Research School certificate. - Doctoral researchers' focus groups will foster communication regarding RRI and engagement processes that are acceptable for researchers.
- We will support RRI-activities by connecting RRI-oriented doctoral researchers to RRI experienced researchers.
- RRI-training will be embedded in the educational structure of the doctoral training program.

Action 8

- NUCLEUS-team is nearly complete.
- We will set up a precise system to reflect the change in the organizational structure and have already started to create mechanisms for evaluating RRI. - NUCLEUS-mentoring log is always actual.
- We have captured attitudes of internal and external stakeholders towards RRI. - Closed communication culture and collaboration with other Nuclei is ensured and will be fostered.

- We constantly review the implementation process.
- NUCLEUS self-assessment tool is being administered.
- We have an electronical system to evaluate stakeholders' views on our science events and their thoughts on several aspects of RRI. With that, we can ask doctoral researchers and evaluate the impact of our actions to increase RRI.

13.9 RHINE-WAAL UNIVERSITY ACTION PLAN

<i>Institution Name</i>	Rhine-Waal University of Applied Sciences (HSRW)
<i>Embedded Nucleus Profile</i>	<p>Founded in 2009, Rhine-Waal University of Applied Sciences (HSRW) is one of the youngest universities in Germany, and among the most recently established universities in the academic sector of North Rhine-Westphalia (NRW). With nearly 7.000 students from over 100 different countries, HSRW is also one of the most international universities of Germany. The founding of this University, which currently includes two campus locations in Kleve and Kamp-Lintfort, was based on a strong political commitment to establish a new regional institution of higher education fostering structural change and innovation processes in and for the Lower-Rhine region.</p> <p>The major goal of the Embedded Nucleus at HSRW will be to build upon this “founding history” by connecting Responsible Research and Innovation processes with knowledge-based development strategies and socio-economic challenges in the Lower Rhine region. As an accelerator of participatory and inclusive innovation processes in the region, the Embedded Nucleus will act both inside and outside of the university: Inside the academic institution the Embedded Nucleus will develop and test new organisational structures and formats closely related to the Strategic Development Plan of the university, published in 2017. Outside of the university, the EN will address the governance levels of the municipalities of Kleve and Kamp-Lintfort, plus regional governance levels, to foster new organisational structures and formats linking the Strategic Development Plan of HSRW to Regional Development Policies and socio-economic challenges.</p> <p>Reaching out inside and outside the university, the Embedded Nucleus at HSRW will establish dialogue-oriented processes allowing researchers and students to better respond to societal challenges in the Lower-Rhine. In addition to addressing the governance levels of university and region, the EN will actively involve students and researchers, citizens and NGOs, representatives from economy and media in collaborative dialogue-oriented, co-creative innovation processes. In doing so, the Embedded Nucleus at HSRW will strive to change the culture of communication and participation within the institution and between the university and the region.</p> <p>Within the given timeframe the EN will conceptualize innovative participatory formats, offer RRI trainings for students and researchers and will encourage incentives to foster RRI processes within and outside the university. While starting as an organisational unit embedded within the science communication department at HSRW, it will be discussed in M28 whether the EN could even be established as a unit located both within and outside of the academic institution – enabling both sectors to better establish sustainable relationships between all “cells”, as described in the NUCLEUS project.</p> <p>To achieve sustainable results, the Embedded Nucleus at HSRW will be accompanied by a “NUCLEUS Steering-Committee”, integrating stakeholders from all “cells”, allowing an active representation and participation of all relevant stakeholders over the whole process. A major goal of the EN will be an increased responsiveness between local and regional stakeholders and the university, expressed in new organisational structures, formats and transdisciplinary research projects. All partners will strive to develop solutions which could be adopted beyond the project’s timeline.</p>

<p><i>Base level (Level A, B or C)</i></p> <p><i>(according to the NUCLEUS self-assessment what is the baseline 'Level' for the institution)</i></p>	<p>HSRW expresses a strong commitment to transfer and regional engagement in the Strategic Development Plan of the university (Level C). The profiles of all faculty structures and study programs are linked with the specific needs of the region (Level C). However, despite of a strong commitment to link research to strategic regional development processes, most actual research and innovation processes at HSRW are not intertwined and connected to local or regional stakeholders (Level A, with a potential for Level B). While transfer-processes between the university and the region are considered vital in the universities' profile, there is no systematic knowledge-transfer from the region back into the university (Level A).</p> <p>HSRW offers a strong transdisciplinarity in research and teaching, which allows stakeholder-involvement more easily than other universities (Level B.1). Science Communication is an integral element of research and teaching in the Faculty of Technology and Bionics, but this asset is not fully interlinked with other faculties or external stakeholders (Level B.1). The university provides innovative venues for engagement, such as the Klimahaus or the largest FabLab in Germany (Level B.2).</p> <p>HSRW is a very young university. Structures are flexible (Level B). The strong international profile makes it easy to establish international partnerships, while it is at the same time a potential barrier to local collaborations due to a language deficit of many students (Level B). The university lacks a defined RRI Strategy (Level A), there is no strategic knowledge-management, neither inside the university nor connected to partners outside (Level A).</p> <p>Formats and venues for science society dialogues exist and show a good level of expertise and audiences (Level B2), but the activities are not linked with each other (Level A). Cooperation with the regional economy mostly takes place in the field of education, but less in research projects (Level B1).</p> <p>There are no established structural cooperations between the university and the cities or the region (Level A). There are no structural cooperations between the university and Media, apart from PR and Marketing Activities (Level A).</p>				
	<i>Intervention /Action</i>		<i>Desired Outcome</i>	<i>Completion timeframe (by Month)</i>	<i>Cells engaged</i>
<p><i>Action 1: Conduct RRI Context Mapping- identify, extend and enrich the processes that</i></p>	<p>Level A-C</p>	<p>Conduct context mapping exercises, including self-assessment and SWOT analysis</p>	<p>Gain an insight into internal RRI structures and policies. Define, discuss and</p>	<p>M25-M26</p>	<p>University</p>

<i>already exists</i>			describe areas in which the EN at HSRW can achieve the largest impact		
Action 2: RRI Policy, Committee and Strategy - Thought leadership and institutionalised capacity building	Level A	Localise the EN job specification to HSRW. Prepare process internally and post job advert at HSRW. Interview and select candidate	Find dedicated staff, meeting the specific requirements defined in the NUCLEUS project	M22-27	University
	Level B	Host internal Working Group with the University Governance, including president, deans and stakeholders from the Centre for Innovation and Transfer (ZFIT)	Communicate EN strategy and Action Plan to the university governance, link RRI Action Plan to the Strategic Development Plan of HSRW.	M28	University
	Level B	Shape and Communicate the NUCLEUS RRI Action Plan. Define regular meetings with HSRW governance to present and discuss progress	Further defined timelines, venues and individual stakeholders to be involved	M29	University
Action 3: Build institutional bridges between the research community, stakeholders and the general public	Level A	Establish and host a "NUCLEUS Steering Committee" at HSRW, involving stakeholders from all Cells, representing the region and the university	Ensure a representation of all Cells during the whole process of implementing RRI process inside and outside the university	M30-46, with regular meetings at least 4 times a year	University, Policy Making, Civil Society, Media, Economy, Public Engagement
	Level B	Arrange a meeting with the mayor of Cleves to analyse potential forms of collaborations in the organisation of the Embedded Nucleus.	Establish structures between the university and the municipality – if successful to be continued	M29	University Policy Making

		An option could be to position the Embedded Nucleus at least part-time of the work within Kleve City Hall to show the embeddedness of the unit in the municipality and the region	beyond the project's timeline (an outcome could be a "Science Office" in the Municipality ensuring community-based transdisciplinary research) research		
	Level B	Conduct meetings with all institutions fostering knowledge-transfer and stakeholder dialogues: FabLab, Climate House, Green FabLab, ZDI. Goal: Communicate RRI Action Plans and develop checklists for the cooperative formats and activities mentioned in the Action Plan.	Build on strength and improve on challenges: Develop the Action Plan based on successful venues and formats. Instead of inventing only new formats the EN should strive to improve existing dialogue formats, e.g. by encouraging extended collaborations with a larger variety of stakeholders	M29-30	University; partners working with Climate House and FabLab: Civil Society, Economy, Public Engagement, Policy Making
<i>Action 4: Catalyse ongoing debates about the role of science in open societies</i>	Level A	Conceptualize and organize a regular debate-forum entitled "WissenSchafftStadt" (Science Creates a City). In this forum, hosted in venues inside and outside the university (Climate House, FabLab, City Hall, Newspaper, National Gardening Exhibition, Churches) topics relevant for the socio-economic or cultural	Offer a regular meeting space for science-society dialogues related to regional innovation processes. Identify experts and topics to develop transdisciplinary research projects	M33-46	University, Civil Society, Media, Policy Making, Public Engagement, Economy

		development of the region will be discussed. Experts will come from the university, but also from economy, civil society, media and policy making. The forum will be planned quarterly, but can be conducted more often when successful. After each forum, each topic will be analysed for potential transdisciplinary research projects.			
<i>Action 5: Develop, nurture and support new forms of transdisciplinary research including RRI principles in the scientific community</i>	Level A	Offer regular RRI trainings (2 per semester) for students and researchers	RRI Capacity Building in the Academic Community	M33-46	University
	Level B	Find partners (researchers plus external stakeholders) for at least 2 new transdisciplinary research projects, based on the discussions in the forum "WissenSchafft Stadt". Include suggestions from the Steering Committee	Encourage new transdisciplinary research projects linking the university to the region	M31-46	University, Economy, Civil Society, Policy Making
	Level C	Encourage existing Public Engagement formats (Children's University, Studium Generale) to not just invite scientists but also experts from the region, representing the different cells	Build on strength, use existing formats and audiences to broaden the spectrum of stakeholders and perspectives. Ensure knowledge-transfer in both directions: from the university	M31-45	

			outside, and from outside into the university		
<i>Action 6: Stimulate co-responsibility of all actors involved in the process of research and innovation</i>	Level A	Develop an “Open Science Festival”, extending the existing “Open Day” into a swirling meeting place of all stakeholders involved in regional innovation processes. The festival should showcase co-creative, RRI-related research processes, foster dialogues on pressing societal challenges and present different forms of innovation to the public: economic, social and cultural.	Showcase collective innovation responsibilities of a variety of partners. Embed all stakeholders in a motivating, encouraging event, inspire citizens and other stakeholders to participate in Open Science processes. If successful, this festival could replace the traditional Open Day of the university	M45	University, Economy, Civil Society, Policy Makers, Media, Public Engagement
	Level B	Invite the ZFIT to reflect and develop co-creative ways of community-based research and transfer activities	Integrate the idea and concept of co-creation into existing transfer- and innovation department	M29	
<i>Action 7: Question and redefine the prevailing notion of ‘recipients’ and ‘agents’</i>	Level A	Conduct a Student Parliament of Science, inviting students to discuss research topics related to the region together with scientists and regional policy makers	Raise awareness about the complexity of policy making procedures, encourage evidence-based policy making, relate scientists to schools and policy makers	M45	University, Civil Society, Policy Makers
	Level B	Choose 2 formats developed by the “Mobile Nuclei” to test and implement them in the Embedded Nucleus of HSRW. A focus should be on the cell	Create a link between the Mobile Nuclei and the EN at HSRW	M34, M41	University, Media,

		"Media" to ensure their active participation in the stakeholder network and Steering Committee			
<i>Action 8: Embed ongoing reflection, analyse processes and procedures</i>	Level A-C	Produce a portfolio of all relevant documents and policies. The portfolio includes meeting logs detailing all meetings held with internal and external stakeholders	Enable ongoing reflection and analysis based on evaluation procedures developed by the project monitoring	M28-48	University
		Participate in NUCLEUS Working Groups and Conferences to present, reflect and further develop progress and challenges	Create a sustainable knowledge-transfer network with other EN institutions	M27-48	University

The Action Plan for China is currently being developed. Due to the fact that the partner institution is not a University, they have the added task of liaising with institutions to set-up an Embedded Nucleus unit for the duration of the Implementation Phase. In addition, the cultural differences as well as the fact they do not receive monetary support are also factors in finalising the local action plan. The Action Plan for the nominated Chinese institution will be shared with the consortium and the European Commission shortly.

14 CONCLUSION

From November 2017-August 2019, 10 institutions from across Europe, China and South Africa will trail and test RRI strategies and approaches. The strategies and approaches for each institution will be aligned with the Action Framework for Embedded Nuclei presented in The Implementation Roadmap (D3.6). The specific interventions undertaken by each institution to achieve these actions is dependent on the local context.

This Organisational Manual for Embedded Nuclei describes the 8 Actions of the Embedded Nucleus Framework and outlines how the key interventions can be delivered by the host institutions. The mechanisms selected by each institution will vary depending on the detail of the localised, flexible Action Plan.

This document is a working document and as the Implementation Phase, resources and supports provided to the Embedded Nuclei are not limited to those in this document. Future resources will be shared on the NUCLEUS online workspace. Working Groups and the continuous support of the mentors will also play a critical role in supporting the continuous capacity building and delivery of the institutional NUCLEUS Action Plans during the Implementation Phase of the NUCLEUS project.

Implementing RRI in the institutions requires a step-change approach in how the institution operates. Every step taken is a step closer to embedding RRI in the culture and structure of the institution. If something is not working, Embedded Nuclei are encouraged to recognise, adjust and create an alternative path to find the same outcome. Celebrate success and failures – it is about testing and learning, that is what drives innovation.

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Campus Engage Ireland

Available from: <http://www.campusengage.ie/>

CARL – Community-Academic Research Links

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DCU Matchmaker and Research Showcase

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RRI Tools – How to a RRI orientated project proposal

Available from: <https://www.rri-tools.eu/how-to-stk-rc-design-a-rri-oriented-project-proposal>

University of Edinburgh – Global Academies

Available from: <https://global.ed.ac.uk/our-work/global-academies>

APPENDIX A – RRI POLICY TEMPLATE



NUCLEUS RRI POLICY TEMPLATE

DATE:
EFFECTIVE DATE:
LAST REVISED:

POLICY OWNER:
POLICY CONTACT:

REASON FOR POLICY:

This summarises the commitment to RRI, why the policy must exist, the problem the policy seeks to address and cites any legal or regulatory requirement.

SCOPE:

Includes all the categories of people, process and governance to which the policy applies

POLICY STATEMENT:

This includes the intent of the policy, any actions or constraints. It doesn't describe procedures.

THE POLICY:

RESOURCES:

DEFINITIONS

Term	Definition

|

APPENDIX B- MENTORING LOG TEMPLATE

MENTORING LOG

Mentor Name:	Date:
Mentee Name:	Institution Name:
Meeting Format:	Meeting Attendees:
Action Items from previous meeting:	
Agenda Items: <i>(implementation progress updates, interaction with NUCLEUS cells, challenges)</i>	
Meeting Actions/Outcomes: <i>(please highlight connections to the nucleus cells - public engagement, civil society, media, economy, policy making):</i>	
Other:	Date for next meeting:
	Signature (Mentor University Representative):

APPENDIX C- PEER MENTORING LOG

Meeting chair:	Meeting date:
Meeting format: Skype	Meeting time:
Meeting attendees:	
Agenda Items:	
Meeting Actions/ Outcomes:	
Other:	Date for next meeting: