



Grounding RRI Actions to Achieve Institutional Change in European Research Funding
and Performing Organisations

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WP3 - Governance and mutual learning

BASIC SCHEME FOR SELF-ASSESSMENT

Prepared by



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INTRODUCTION

This scheme

This scheme is aimed at providing implementing organisations with some guidelines for making a preliminary self-assessment to be used for better defining and designing the **Grounding Actions** (GAs) and for developing a provisional view of the 8-year **Roadmap towards RRI**.

The proposed scheme is termed as “**basic**” for two different reasons:

- On the one side, it should be complemented with issues relevant to specific features of the concerned organisation
- On the other side, it should be complemented with issues relevant to the RRI keys which implementing organisations are primarily focused on.

Two sections are included:

- One concerning a **diagnosis of the organisation** in the light of RRI
- One concerning a **feasibility analysis of the Grounding Actions and the Roadmap** in order to start the design process

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How to use the scheme

The scheme is a reflection tool and it can be used by the implementing partners **as they see fit**. In this perspective, the scheme can be modified, enlarged, or restricted according to the needs and expectations of each partners or used only partially.

In this perspective, it provides a **basis for a discussion** within the team. However, it could be also important, in order to make an appraisal of the situation of the organisation from the point of view of RRI, to **make some consultations with relevant staff members** in order to both collect information which are lacking and better understand the type of attitudes the main concerned actors have about RRI and single RRI keys.

Which are the expected outputs

The self-assessment process should help the team:

- **Define the scope of the action**, i.e. where the GAs will be implemented (the entire organisation, a department/unit of it. etc), and **decide if the scope will be enlarged** for developing the Roadmap towards RRI
- Better **identify the GAs** to be implemented during the GRACE project, enhancing, modifying or even change the GAs mentioned in the project proposal

- **Start designing the GAs**, tentatively defining, for each of them, e.g., objectives, tools, strategies, phases, timeline, and targets
- Roughly **develop structure and contents of the Roadmap towards RRI** (also in view of preparing the preliminary version of the Roadmaps which are expected to be delivered by October 2019)
- **Start building the team** in charge of designing and implementing the GAs and **establishing first relations** with key actors or stakeholders.

A provisional definition of RRI

Responsible Research and Innovation (RRI) can be generically understood as a specific policy approach aimed at managing science in a different way it was in the past. However, exactly defining what RRI is and which are its contents and dimensions is not actually simple do, since different definitions and views of RRI have been developed in the last decade.

At the present stage, a provisional definition of RRI can be adopted, i.e., that developed by the European Commission. According to such a definition, RRI is a concept including a set of principles for governing research and innovation. The declared aim is to strengthen the relationship between science and society, and centring research on solving societal challenges and contributing to environmental, social, and financial prosperity and sustainability in alignment with the fundamental values and rights of the European Union.

The European Commission identifies five keys of RRI:

- **Public engagement.** This key aims to engage all societal actors – researchers, industry, civil society, and policy-makers – in the conduct of research and innovation and in discussions about its priorities.
- **Gender equality.** This key seeks to address the underrepresentation of women in research and innovation and include female viewpoints in practices and content of research and innovation.
- **Science education.** This key aims to equip future generations to participate in, discuss, and act responsibly in research and innovation. This includes boosting science-literacy in society and sparking the interest of children in math, science and technology.
- **Open access.** This key strives for greater transparency and accessibility of research and innovation by giving free and easy online access to research publications and data.
- **Ethics.** This key concerns the respect of fundamental rights and the adoption of high ethical standards but it also considers how to increase societal relevance and acceptability of research and innovation.

Another key is **governance** which is an overarching key. In organisational terms, it refers to the governance structures (units, officers, committees, etc.) and programs (for example, action plans) aimed at embedding RRI in the organisation. As a principle, governance refers to the responsibility of decision makers to prevent harmful and unethical developments in research.

SECTION ONE – DIAGNOSIS OF THE ORGANISATION

This section is aimed at making a self-assessment of the organisation from the point of view of RRI and its keys. Seven issues are considered:

- a. The state-of the-art on **gender equality**
- b. The state-of the-art on **citizen engagement**
- c. The state-of the-art on **ethical issues**
- d. The state-of the-art on **open access**
- e. The state-of the-art on **science education**
- f. The state-of the-art on **RRI in general**
- g. The **general critical issues** affecting the organisation.

a. State-of-the-art on gender equality

This subsection concerns gender equality. The aim is understanding, on the one side, the situation of women in the organisation and, on the other side, policies and measures adopted in the organisation to promote gender equality. The analysis should also include norms and structures which are established by law.

a.1. **DATA ON GENDER EQUALITY.** Are there data available about the presence of women within the organisation? Main data to consider can be: presence of women at the different career levels (e.g., students, PhD students, Postdocs, staff scientists, Assistance professors, Full professors, etc.) and different career paths (e.g., researchers, administrative staff, technical staff, etc.); evolution of the presence of women in the last years; presence of women at top leadership positions (including, e.g., the composition of the different committees, board of directors, etc.).

a.2. **INTERNAL DEBATE ON GENDER EQUALITY.** Has gender equality been or is an issue dealt with in the organisation? We can refer to, e.g., internal debates, single events, research projects, conferences, publications, agreements, etc. If so, do you think that these initiatives have had some impacts? And how do you think GRACE could leverage on them?

a.3. **GOVERNANCE STRUCTURES ON GENDER EQUALITY.** Are there general structures (e.g., officers, offices, general norms, etc.) dealing with gender equality issues as a whole? If so, which is your opinion and feeling about their impacts and effectiveness? Please include also the structures established by law or national policies.

a.4. **RECRUITMENT AND PROMOTION.** Are there specific gender-sensitive measures, policies, projects or procedures pertaining to recruitment and promotion (including, e.g., the organisation of interview, the proactive search of candidates, the contents and language used in advertising job vacations, the training of committee, members)?

a.5. **CAREER DEVELOPMENT AND TRAINING.** Are there specific gender-sensitive measures, policies, projects or procedures pertaining to career development and training (including, for example, mentoring programmes, career development initiatives, women networks, specific training for improving the crosscutting skills, etc.)?

a.6. **WORK-LIFE BALANCE.** Are there specific gender-sensitive measures, policies, projects or procedures pertaining to work-life balance (including, for example, support to parents and women, organisation of time and space compatible with family life, special measures for parents returning after parental leaves, in-house kindergartens or lactation rooms or facilitated access to external kindergartens, etc.)?

a.7. **WORKING ENVIRONMENT.** Are there specific gender-sensitive measures, policies, projects or procedures pertaining to the working environment (including, for example, fight against sexual harassment, fight against gender bias, gender-sensitive communication and language, gender pay gap, activities aimed at increasing the visibility of women in research, etc.)?

a.8. **GENDER DIMENSION IN RESEARCH CONTENTS.** Are there specific measures, policies, projects or procedures pertaining to the gender dimension in research contents (including, for

example, training, conferences and workshops, guidelines on how incorporate gender and sex as variables in research, etc.)?

a.9. **INTERNAL SKILLS ON GENDER EQUALITY.** Are there staff members, within the organisation, which have experiences or competences pertaining to gender equality? Are there units focused on gender studies? Please, analyse who are they, their experiences and competences and if and how they can be involved with the design and implementation of the GAs.

a.10. **EXTERNAL RELATIONS ON GENDER EQUALITY.** Is the organisation in contact with external entities at local, national, or European level (other research organisations, funding organisations, governmental organisations, networks and associations), with the aim of promoting gender equality?

Please, consider any further issue you think as relevant.

The analysis of the above issues should allow to reflect on the **critical issues** requiring specific actions, to sketch, as far as possible, a **diagnosis** of the situation and to start envisaging **policy orientations** concerning gender equality, also collecting opinions from stakeholders or key actors.

b. State-of-the-art on citizen engagement

This subsection concerns citizen engagement. The aim is understanding whether an organisation possesses structures for designing, organising and implementing participatory approaches that are integrated in and/or complement its research processes

b.1. **INTERNAL DEBATE ON CITIZEN ENGAGEMENT.** Has citizen engagement been or is an issue dealt with in the organisation? We can refer to, e.g., internal debates, single events (i.e, events not connected to or part of broader programmes), research projects focused on citizen engagement and participatory mechanisms, conferences, publication of documents, leaflets, or brochures, agreements, etc. If so, do you think that these initiatives have had some impacts? And how do you think GRACE could leverage on them?

b.2. **GOVERNANCE STRUCTURES ON CITIZEN ENGAGEMENT.** Are there general structures (e.g., officers, offices, general norms, etc.) dealing with citizen engagement? If so, which is your opinion and feeling about their impacts and effectiveness?

b.3. **SCIENCE COMMUNICATION.** Are there or have there been in the past initiatives on science communication (including, e.g., initiatives like Open days or researchers' night, training to staff members on how communicating science, an officer, office, or unit specialised in communicating the activities of the organisation and its research programmes, web-based science communication activities, etc.)? Are there specific measures, policies, projects and procedures on science communication?

b.4. **DISCUSSION, DIALOGUE, AND CONSULTATION.** Are there or have there been in the past initiatives involving stakeholders, citizens or other actors (for example, Civil Society Organisations) in discussion, dialogue and consultation initiatives (including, e.g., single events,

surveys, focus groups, web-based initiatives or platform, or more complex programmes) pertaining both the research process (for example, design or implementation of research programmes, use of the research products, etc.) and the decision making process (e.g., on resource allocation, research programmes to launch, etc.)? Are there specific measures, policies, projects and procedures aimed at promoting discussion, dialogue, and consultation?

b.5. **DELIBERATION.** Are there or have there been in the past initiatives involving stakeholders, citizens or other actors (for example, Civil Society Organisations) in deliberative processes? Are there specific measures, policies, projects and procedures on deliberation?

b.6. **CITIZEN SCIENCE.** Are there or have there been in the past initiatives directly involving citizens or other actors in designing and implementing research programmes? Are there specific measures, policies, projects and procedures on citizen science?

b.7. **OPEN INNOVATION.** Are there specific structures, measures, policies and procedures aimed at involving the organisation in innovation processes (they may include, for example, knowledge transfer offices, liaison offices, participation in innovation platforms, spin-off structures and incubators, patent offices, agreements with external innovation actors, etc.)?

b.8. **INTERNAL SKILLS ON CITIZEN ENGAGEMENT.** Are there staff members, within the organisation, which have experiences or competences pertaining to citizen engagement? Please, analyse who are they, their experiences and competences and if and how they can be involved with the design and implementation of the GAs.

b.9. **EXTERNAL RELATIONS ON CITIZEN ENGAGEMENT.** Is the organisation not occasionally in contact with external entities at local, national, or European level (other research organisations, funding organisations, governmental organisations, networks and associations), with the aim of promoting citizen engagement?

Please, consider any further issue you think as relevant.

The analysis of the above issues should allow to reflect on the **critical issues** requiring specific actions, to sketch, as far as possible, a **diagnosis** of the situation and to start envisaging **policy orientations** concerning citizen engagement, also collecting opinions from stakeholders or key actors.

c. State-of-the-art on ethical issues

This subsection concerns ethical issues. The aim is understanding how and to what extent ethical issues (including research integrity issues) are considered and treated in the organisation.

c.1. **INTERNAL DEBATE ON ETHICAL ISSUES.** Has ethical issues and research integrity been or is an issue dealt with in the organisation? We can refer to, e.g., internal debates, single events, research projects, conferences, publications, agreements, etc. If so, do you think that these initiatives have had some impact? And how do you think GRACE could leverage on them?

c.2. **GOVERNANCE STRUCTURES ON ETHICAL ISSUES.** Are there general structures (e.g., officers, offices, ethics committees, general procedures on ethics screening, review, follow-up and audit, etc.) dealing with ethical issues and research integrity?

c.3. **DATA PROTECTION, PRIVACY AND INFORMED CONSENT.** Are there specific measures and procedures pertaining to data protection, privacy issues and informed consent concerned with the implementation of research programmes (for example, in social research, in clinical trials, etc.)? Please, also consider, in this framework, how the EU General Data Protection Regulation (GDPR) is applied in your organisation, especially in the context of research activities.

c.4. **ETHICALLY SENSITIVE RESEARCH ISSUES.** Are there specific measures and procedures pertaining to the management of ethically sensitive research or the application of the precautionary principle (for example, research on human embryos or fetuses, research developing technologies which can be used for both peaceful or military aims, research producing invasive technologies like those aimed at surveillance, etc.)?

c.5. **ANIMAL RESEARCH.** Are there specific measures and procedures aimed at managing research involving animals?

c.6. **FORECASTING.** Are there or have there been in the past initiatives aiming at forecasting future risks and undesirable effects of research programmes? Are there specific measures, policies, projects and procedures on forecasting?

c.7. **RESEARCH INTEGRITY.** Are there specific measures and procedures aimed at preventing, detecting and managing cases of frauds, plagiarism, conflicts of interest, corruptions, and other acts endangering research integrity? Please, consider in this framework how the European Code of Conduct for Research Integrity is applied in your organisation.

c.8. **INTERNAL SKILLS ON ETHICAL ISSUES.** Are there staff members, within the organisation, which have experiences or competences pertaining to ethics and research integrity? Please, analyse who are they, their experiences and competences and if and how they can be involved with the design and implementation of the GAs.

c.9. **EXTERNAL RELATIONS ON ETHICAL ISSUES.** Is the organisation in contact with external entities at local, national, or European level (other research organisations, funding organisations, governmental organisations, networks and associations), with the aim of promoting ethics and research integrity? Are there forms of direct involvement of external entities or individuals within the organisation (for example, external members in the ethics committees)?

Please, consider any further issue you think as relevant.

The analysis of the above issues should allow to reflect on the **critical issues** requiring specific actions, to sketch, as far as possible, a **diagnosis** of the situation and to start envisaging **policy orientations** concerning ethical issues and research integrity, also collecting opinions from stakeholders or key actors.

d. State-of-the-art on open access

This subsection concerns open access. The aim is understanding the level of engagement of the organisation in promoting open access to both publications and research data.

d.1. **OPEN ACCESS CULTURE.** Are there initiatives or programmes (e.g., conferences, training modules or courses, awareness-raising initiatives, meetings, awards, etc.) aimed at promoting a culture of open access among researchers and staff members? Has open access been or is an issue dealt with in the organisation? If so, do you think that these initiatives have had some impacts? And how do you think GRACE could leverage on them?

d.2. **GOVERNANCE STRUCTURES AND POLICIES ON OPEN ACCESS.** Are there general structures (e.g., officers, offices like the library department, etc.) dealing with open access to publications and research data?

d.3. **OPEN ACCESS PUBLICATIONS.** Are there programmes, measures, policies or procedures for promoting open access publications of any type. e.g., the creation of an institutional OA repository, the allocation of a specific budget for OA publishing, set of rules about archiving, acknowledgement and documentation, etc.?

d.4. **OPEN ACCESS DATA.** Are there programmes, measures, policies or procedures for promoting open access to research data (e.g., aimed at sharing protocols, workflows, notebooks, codes, data, reference libraries or grant proposals)?

d.5. **OPEN SCIENCE EVALUATION.** Are there programmes, measures, or procedures for the adoption of open science evaluation approaches (including, e.g., open peer review, webmetrics, bibliometrics, etc.)?

d.6. **INTERNAL SKILLS ON OPEN ACCESS.** Are there staff members, within the organisation, which have experiences or competences pertaining to open access? Please, analyse who are they, their experiences and competences and if and how they can be involved with the design and implementation of the GAs.

d.7. **EXTERNAL RELATIONS ON OPEN ACCESS.** Is the organisation not occasionally in contact with external entities at local, national, or European level (other research organisations, funding organisations, governmental organisations, networks and associations), with the aim of promoting open access policies?

Please, consider any further issue you think as relevant.

The analysis of the above issues should allow to reflect on the **critical issues** requiring specific actions, to sketch, as far as possible, a **diagnosis** of the situation and to start envisaging **policy orientations** concerning open access, also collecting opinions from stakeholders or key actors.

e. State-of-the-art on science education

This subsection concerns science education. The aim is understanding the presence of an RRI orientation in the field of science education, also including the education to a responsible research. In this section, the contribution of the organisation in better equipping citizens with the necessary knowledge and skills so they can participate in R&I debates and in promoting scientific vocations is considered.

e.1. **INTERNAL DEBATE ON SCIENCE EDUCATION.** Has science education been or is an issue dealt with in the organisation? We can refer to, e.g., internal debates, single events, research projects, conferences, publications, agreements, etc. If so, do you think that these initiatives have had some impacts? And how do you think GRACE could leverage on them?

e.2. **GOVERNANCE STRUCTURES ON SCIENCE EDUCATION.** Are there governance structures (e.g., officers, offices or other kind of structures, etc.) dealing with education activities oriented to RRI and/or education activities targeting secondary students, citizens, and external actors? We also consider less formal structure such as informal networks or working groups?

e.3. **SCIENCE EDUCATION IN SECONDARY SCHOOLS.** Are there or have there been in the past initiatives or programmes for promoting science education in secondary schools (being they also concerning RRI or not)?

e.4. **SCIENCE OUTREACH.** Are there or have there been in the past initiatives of science outreach? We consider the concept of outreach in the broadest sense as possible to encompass any education and teaching initiatives targeted on citizens, group of citizens, entities of any kind (for example, civil society organisations, industries, or local authorities). Science outreach also concerns lifelong learning programmes or initiatives and cooperation with science centres and science museums.

e.5. **INTERNAL SKILLS ON SCIENCE EDUCATION.** Are there staff members, within the organisation, which have experiences or competences pertaining to science education? Please, analyse who are they, their experiences and competences and if and how they can be involved with the design and implementation of the GAs.

e.6. **EXTERNAL RELATIONS ON SCIENCE EDUCATION.** Is the organisation institutionally in contact with external entities at local, national, or European level (other research organisations, funding organisations, governmental organisations, networks and associations), with the aim of promoting science education?

Please, consider any further issue you think as relevant.

The analysis of the above issues should allow to reflect on the **critical issues** requiring specific actions, to sketch, as far as possible, a **diagnosis** of the situation and to start envisaging **policy orientations** concerning science education, also collecting opinions from stakeholders or key actors.

f. State-of-the-art on RRI in general

This subsection concerns the situation of RRI in general, i.e., not pertaining to the single RRI keys. The aim is understanding if there is a favourable environment for activating a debate on RRI, which are the measures and actions which GAs may be based on and which is the impact that, in case, these measures and actions have been in the concerned organisation.

f.1. **RRI-RELATED INTERNAL DEBATE.** Has RRI been or is an issue significantly dealt with in the organisation? We can refer to, e.g., internal debates, single events, research projects, conferences, publications, agreements, etc. If so, evaluate the impact of these initiatives and how the GRACE project can leverage on it.

f.2. **RRI-RELATED MEASURES AND PROGRAMMES.** Are or have been there initiatives or programmes connected to RRI in general, including those promoted, not directly by the organisations, but by individual researchers or single units? Or are or have RRI been a subject of study, research programmes, teaching and training initiatives?

f.3. **RRI GENERAL STRUCTURES.** Are there structures (of any kind: units, officers, norms, website page, procedures, guidelines, etc.) in the organisation which are devoted to RRI in general? If so, analyse these structures, including their nature, history, aims, achievements, and impacts.

f.4. **RRI-RELATED INTERNAL SKILLS.** Are there staff members, within the organisation, which have experiences or competences pertaining to RRI in general? Please, analyse who are they, their experiences and competences and assess if and how they can be involved with the design and implementation of the GAs.

f.5. **EXTERNAL RELATIONS ON RRI.** Is the organisation not occasionally in contact with external entities at local, national, or European level (other research organisations, funding organisations, governmental organisations, networks and associations), with the aim of promoting RRI?

f.6. **RRI IN TEACHING CURRICULA.** Are there programmes, measures, or procedures for embedding RRI in higher education curricula (e.g., specific courses on responsible education, teaching modules, conferences and special events, etc.)? Please, consider teaching initiatives pertaining to not only RRI in general, but also RRI keys (even when they have been mentioned in the previous sub-sections) or RRI-related contents (e.g., forecasting and anticipation, inclusiveness, reflexivity in research, etc.).

Please, consider any further issue you think as relevant.

The analysis of the above issues should allow to reflect on the **critical issues** requiring specific actions, to sketch, as far as possible, a **diagnosis** of the situation and to start envisaging possible **policy orientations** concerning RRI in general, also collecting opinions from stakeholders or key actors.

g. General critical issues affecting the organisation

This subsection is aimed at reflecting on the critical issues which are not related to RRI but which can be also addressed through RRI.

g.1. **INTERNAL LIFE TO THE ORGANISATION.** Which are the critical issues related to the internal life of the organisation staff members are usually worried about (for example: lack of internal coordination; lack of planning; lack of time; increase in the activities and tasks to be carried out such as administrative works, innovation-related activities, teaching; inadequate resources, staff, funds and equipment; lack of managerial expertise; excessive administrative constraints and burden; etc.)?

g.2. **CHANGES AFFECTING SCIENCE.** Which are the main critical issues pertaining to changes affecting science the organisation is presently facing (for example: increasing competition; difficulties in retaining young researchers and ensuring them career opportunities; difficulties in accessing research funds; difficulties in ensuring high quality research products; problems related with peer reviewing and research quality assessment; accelerated pace of the research process; problems related with peer reviewing and research quality assessment; over-exploitation and over-training of young researchers; etc.)?

Please, consider any further issue you think as relevant.

Based on the analysis of the above issues, please develop a **map the main critical issues** which, according to you, the organisation is facing and of their mutual relations.

SECTION TWO – FEASIBILITY OF THE GROUNDING ACTIONS

This section is aimed at start designing process, making a self-assessment of the organisation from the point of view of the feasibility conditions of the GAs and the Roadmap. Four main issues are considered:

- a. The development of a self-tailored **RRI profile**, allowing to design the GAs and to define the Roadmap towards RRI
- b. The **creation of the team** in charge of the GAs
- c. The **mobilisation of single actors and types of actors** in the GAs and the Roadmap
- d. The **sustainability** of the GAs after the GRACE project lifespan.

a. RRI Profile

This subsection is aimed at developing a self-tailored RRI profile for the organisation, reviewing and detailing the actions to be carried out under GRACE and defining the structure of the Roadmap. The key criterion for developing the RRI profile is that of usefulness of RRI to solve problems already existing in the organisation.

a.1. **RRI IN GENERAL.** Based on the diagnosis done under Section One, how RRI could positively impact on the critical issues emerged in the previous subsection? Please define a general self-tailored RRI profile for the organisation (main objectives, main structures to develop, main actions to develop, etc.), for both the GRACE project and the Roadmap.

a.2. **GOVERNANCE STRUCTURE.** Based on the diagnosis done under Section One, which governance structure of RRI can be developed? Different options are possible: a unique governance structure (e.g., an officer, a specific department or unit, a devoted team) for all the GAs and the Roadmap; the attribution of GAs to one or more specific departments (e.g., HR department); the establishment of a coordinating unit (for example, a network, a committee, etc.), among those (units, officers, etc.) in charge of the different RRI keys (for example, open access, gender equality, etc.).

a.3. **GENDER EQUALITY.** Why and how actions aimed at gender equality may help facing the issues emerged in the previous section? Please define a profile on gender equality tailored on the organisation (main objectives, main structures to develop, main actions to develop, etc.), for both the GRACE project and the Roadmap.

a.4. **CITIZEN ENGAGEMENT.** Why and how actions aimed at citizen engagement may help facing the issues emerged in the previous section? Please define a profile on citizen engagement tailored on the organisation (main objectives, main structures to develop, main actions to develop, etc.), for both the GRACE project and the Roadmap.

a.5. **ETHICAL ISSUES.** Why and how actions aimed at promoting ethical issues and research integrity may help facing the issues emerged in the previous section? Please define a profile on

ethical issues tailored on the organisation (main objectives, main structures to develop, main actions to develop, etc.), for both the GRACE project and the Roadmap.

a.6. **OPEN ACCESS.** Why and how actions aimed at promoting ethical issues and research integrity may help facing the issues emerged in the previous section? Please define a profile on open access tailored on the organisation (main objectives, main structures to develop, main actions to develop, etc.), for both the GRACE project and the Roadmap.

a.7. **SCIENCE EDUCATION.** Why and how actions aimed at promoting science education may help facing the issues emerged in the previous section? Please define a profile on science education tailored on the organisation (main objectives, main structures to develop, main actions to develop, etc.), for both the GRACE project and the Roadmap.

b. Implementing team

This subsection dwells upon the establishment of the team in charge of implementing the GAs and developing the Roadmap. In this subsection a distinction is made between core team (which only includes people directly involved with GRACE) and extended team (a team which may also include other people, sometimes only occasionally involved with GRACE, who anyhow can facilitate the implementation of GAs and of the Roadmap).

b.1. **COMPOSITION OF THE CORE TEAM.** The composition of the core team is a pivotal element for developing actions aimed at producing institutional change. In the case of GRACE, GAs are few and the core team should be small. Moreover, budget constraints make it difficult to allocate permanent human resources. However, ensuring a certain continuity in the development of GAs, should be also necessary. Considering the diagnosis made so far and the RRI profile defined above, which could be the composition of the core team? How many people could or should be involved? Is the composition of the team compatible with the available budget? Could someone include in the core team engaged on a voluntary basis? Is the team authoritative enough for mobilising other actors (for example, a team leader who is not part of the permanent staff of the organisation may be not taken seriously by permanent staff member or leaders)?

b.2. **SKILLS AND COMPETENCIES OF THE CORE TEAM.** GRACE teams will be supported by the “experienced partners”. However, also in view of developing the Roadmap, it is important to see if the core team has or can access the necessary skills and competencies necessary to design and implement the GAs and, in the future, the Roadmap towards RRI. Which are, according to your opinion, the main skills and competencies the team should have? Are they already available within the core team? If not, are there other members of the organisation who could be involved in the GRACE project?

WHICH SKILLS AND COMPETENCIES AND HOW TO FIND THEM

Which skills and competencies could be needed?

Some of the so-called “**soft skills**” will be necessary. They could be those related to, e.g., basic communication, problem-solving and negotiation, interpersonal relationships or time management. They are probably already available in the core team or in the extended team (see next point).

Specialised skills and competencies related to the RRI keys are obviously also needed. For example, to develop GAs in gender equality it could necessary a knowledge and, as far as possible, a direct experience of, e.g., the basic mechanisms producing and reproducing inequality (related to, e.g., gender bias, behavioural patterns, languages, etc.) or problems and solutions connected to work-life balance policies. Similarly, approaching ethical issues could make it necessary a knowledge of the main ethical questions pertaining to the research and innovation process and products as well as a competence on the main solutions adopted (e.g., ethical committees, guidelines and protocols, etc.).

Finally, there are **specialised skills and competencies related to the type of actions** implemented such as skills and competencies on how to organise conferences or events, how to set-up a website or a webpage, how to make guidelines, reports, or press releases, how to organise a public consultation or a survey, or how to define a norm or a new regulation.

In order to **access the skills and competences which are lacking**, different sources of expertise can be identified, e.g.:

- **Guidelines, manuals, on-line courses and guidance-like publications**, available on internet, which can help acquire skills and competences pertaining to the RRI keys or those connected to the different types of actions to be carried out

- **Officers or units** within the organisation already institutionally in charge of RRI keys or having the necessary skills and competences for supporting the GRACE team in making the different types of action

- **Single researchers or individuals** who already gained an experience on RRI keys or in developing some kinds of actions

- **Internal or external groups, associations, or networks** which have an experience in the RRI keys or in other relevant areas.

The implementation of GRACE will surely require only a few of these skills and competences. Anyhow, making a balance of those already available and developing a strategy to access those that are lacking could be helpful.

b.3. STRUCTURE OF THE EXTENDED TEAM. The core team can be not capable alone to activate the concerned actors on institutional change. It could be therefore necessary to enlarge the team including people sometimes only occasionally involved with GAs implementation, who can anyhow facilitate their success and long-term sustainability. Some examples are given in the box below. Is the core team able to develop the GAs and the Roadmap without involving other people? In other words, is it necessary to establish an extended team? If so, which kind of extended team can be established?

THE EXTENDED TEAM: EXAMPLES

Different kinds of extended team can be found. Some examples are provided below.

A TEAM INCLUDING REFERENTS FROM ALL DEPARTMENTS. At the Paris Diderot University, in order to develop a Gender Equality Plan, a network of referents (i.e. voluntary members) in all the departments and services (including scientific and administrative personnel) concerned with the project was established and progressively incorporated in the extended team so as to favour the embedment of the project in the organisation. This decision initially was difficult to implement due to the difficulties met in coordinating them. However, afterwards this network revealed to be particularly effective for mobilising the different components of the university, getting information on the actual needs of each department, sharing information on the project, linking with the top and middle leadership and favouring the long-term sustainability of the actions initiated under the project.

A TEAM INVOLVING KEY ADMINISTRATIVE UNITS. At the Research Center for Molecular Medicine of the Austrian Academy of Sciences (CeMM), to make a gender equality programme, a core team and an extended team were created. The extended team includes the Administrative Director, the Director of Medical Affairs, the Head of Scientific Support, the Head of IT Services, the Media Relations Managers and the Head of Public Relations. Afterwards, two group leaders and an executive assistant joined the team voluntarily. Even though coordination was difficult at the beginning, teamwork improved quite rapidly overall, thanks to the adoption of a more participative approach, leading to increasing opportunities for discussion and information exchange. The involvement of high-level leaders from the administration, scientific support staff and senior researchers made the action plan institutionally stronger and more impactful.

A TEAM INVOLVING WHO ALREADY WORKS ON RRI. At the Universitat Autònoma de Barcelona (UAB), in order to pursue RRI-oriented objectives, an extended Team was created connecting with each other all the individuals already working on RRI-related issues across the university (e.g., on gender equality, open access, ethical issues, etc.), thus establishing a coordinated multi-focal network. A light integration approach was developed, i.e., an integration which did not entail the creation of new organisational units or structures but based on the establishment of a common policy and communication framework.

A TEAM THOUGHT TO INCLUDE THE NECESSARY EXPERTISE FOR IMPLEMENTING RRI. At the University of Gdansk, in order to conduct an RRI-oriented action plan, a core team has been established. To get the necessary expertise pertaining to the different RRI keys, an extended team has been also activated, involving, among others, experts on gender equality and on social engagement working at the Department of Social Sciences and the Director of the university Technology Transfer Office, in order to develop initiatives on public engagement. Moreover, a cooperation has been established with members of the team in charge of the university's Summer School to involve them in education-related activities; experts working at the Library unit have been asked to cooperate to develop the actions pertaining to open access.

A TEAM BASED ON AN INTERNAL COOPERATION AGREEMENT. At the Ruhr University in Bochum, the RRI programmes have been developed, in the framework of the NUCLEUS project, by a group based on a cooperation agreement between two university units, i.e., the Corporate Communications Department and the Research School.

A TEAM PROMOTING A VOLUNTARY-BASED ENGAGEMENT. At the Radboud University in Nijmegen, for developing a gender equality action plan, the team in charge of the project promoted the creation of a women's network, involving female researchers, which started over time to manage some of the actions included in the action plan, thus creating a place for people to get involved on a voluntary basis.

c. Mobilisation of the actors

This subsection is aimed at helping implementing organisations to reflect about the actors to be involved in GAs and Roadmap. This issue has been partially dealt with above while speaking of the extended team

c.1. **VISIBILITY OF GAs AND ROADMAP.** In order to create an enabling environment for GAs and Roadmap, specific initiatives can be developed for making the GRACE, the GAs and the Roadmap visible. Are actions of this kind necessary? If so, which actions are more appropriate and effective, considering the elements emerged from the diagnosis? For example, making a survey or making a presentation of data on the condition of women in the organisation, on the use of open access publications and data in the organisation, on how to improve the existing policies in the realm of ethical issues; organising a launching initiatives on GRACE or on specific keys; creating a webpage devoted to GRACE in the institutional website; using already existing events for presenting GRACE; etc.

c.2. **INTERNAL KEY ACTORS.** An important step for designing and implementing the GAs and the Roadmap is that of involving the internal key actors, i.e., the actors within the organisation who are *de facto* already active on RRI or RRI keys. They should have already been identified in the previous section. Some questions could be considered. Is it useful to involve them at least from the beginning (in some cases, conflicts may arise between the GRACE team and key actors for, e.g., jealousy, different views and approaches, etc.)? Who are the key actors to be primarily involved, why and how (for example, including them in the extended team, organising with them a common initiative, establishing an agreement, etc.)? Can be they involved only on GAs or also in a longer perspective for developing the Roadmap?

c.3. **LEADERSHIPS.** A pivotal question is the involvement of leaders. On the one side, involving leaders is necessary for developing sustainable GAs and Roadmap. On the other side, involving leaders could have negative effects (for example, slowing down the actions, developing the GAs and the Roadmap as the leaders want, adopting a top-down approach in developing the GAs). Some questions could be considered. Which leaders are to be necessarily involved? Which kind of involvement can be the most appropriate? Which strategies and activities can be devised in order to favour their involvement?

c.4. **MANAGEMENT.** Another issue is the level of involvement of management. In some cases, this involvement is unavoidable. For example, many gender equality issues (such as recruitment and promotion policies, work-life balance or gender pay gap) concerns the Human Resources Department or other administrative offices. Similarly, citizen engagement or education policies should involve the Communication Department or the units in charge of innovation policies. Again, the key questions are: which management offices are to be necessarily involved? Which kind of involvement can be the most appropriate? Which strategies and activities can be devised in order to favour their involvement?

c.5. **STAFF.** Involvement of staff members (for example, researchers, PhD students, technical assistants) may have an important role in developing RRI-related issues. Usually, institutional change projects which do not involve them is destined to fail. However, mobilising staff members can be a difficult, costly and time-spending activity, also because, in many cases, they

do not want or do not have the time to get involved. Which strategies can be adopted for their involvement? Which tools revealed to be the most effective in the past? How to develop this kind of involvement all along the project duration?

c.6. **EXTERNAL ACTORS.** In many cases, involving external actors (at local, national, or even European level) can be an effective means for making institutional change projects more visible and impactful. For example, inviting well-renowned scholars for speaking of, e.g., the gender dimension in research contents, the future of open access, the increasing role of ethics or about the adoption of forecasting tools in research may be extremely attractive. Similarly, it could be important creating bridge with national or international associations and networks or with other institutions already engaged in RRI policies. Therefore, which actors can be involved, why and when? Which are the expected impacts deriving from their involvement?

d. Sustainability

This subsection is aimed at helping implementing organisations to start thinking about sustainability from the beginning of the project, so as to develop specific strategies and actions in this regard. It does not concern the GAs but the development of some general orientations pertaining to the Roadmap towards RRI, a provisional design of which is to be delivered by October 2019.

d.1. **IDENTIFYING THE TEAM.** Which team will be responsible for the GAs to be continued once the GRACE Project is ended? (They can be, for example, a specific unit of the organisation, a group of people engage on voluntary basis, external entities which could take on the GAs, a new office or officer, etc.).

d.2. **BUILDING PARTNERSHIP.** Are there internal or external actors who can advocate for the continuation of the GAs? Who are they? How they can be mobilised? (Again, they can be both internal units, leaders, or staff members as well as external entities, networks, or associations).

d.3. **SECURING POLITICAL SUPPORT.** Especially in a long-term perspective, smart negotiation strategies are required in order to gain the full support of the leaders and key partners for institutionalising the GAs and the Roadmap. Who they can be? How and why they would provide a support?

d.4. **FINDING RESOURCES.** Sustainability requires resources: primarily financial resources, but also human, organisational and technical resources. Which resources are necessary for ensuring the sustainability of GAs? Who can provide them and how? Who manage them and decide on their use?