



D3.1: Mapping stakeholders and scoping involvement – a guide for HEFRCs

September, 2021

Disclaimer:

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



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ABSTRACT

This deliverable includes the guide for HEFRCS on stakeholder engagement and scoping of involvement. The guide provides instructions on how organisations can proceed with stakeholder mapping when implementing an ETHNA System for ethical governance of RRI activities. It provides both theoretical background and practical recommendations on new and emerging patterns in civil society engagement, ideal criteria for stakeholder dialogue and step-by-step planning. Templates are included for conducting stakeholder mapping, which can be adapted to the organisational needs.

EXECUTIVE SUMMARY

The report includes the guide for HEFRCs on stakeholder engagement and scoping of involvement. It provides organisations with stakeholder mapping strategies when implementing an ETHNA System for ethical governance of RRI activities. The state-of-the-art review developed in the ETHNA System project provides insight into why stakeholder mapping is of major importance for RRI. Based on the results of the ENGAGE 2020, HEIRRI, NewHoRRizon and PE2020 projects, all dedicated to promoting research and innovation as well as public engagement, the guide presents new and emerging patterns of civil society participation. It also offers ideal-typical criteria for stakeholder participation, reflection and dialogue, derived from the discourse ethics tradition. Hands-on advice from recent practitioners' handbooks points to do's and don'ts in stakeholder engagement. Empirical analyses of the SATORI and HEIRRI projects are used as examples of what current RRI governance activities look like. An elaborated list of 12 principles can help to think through stakeholder mapping to finally start with the 6-step approach to stakeholder engagement that supports identifying, analysing, mapping, prioritising, selecting and recruiting relevant stakeholders. The templates in the annex of this manual help navigate through the step-by-step guide by making it easy to start directly with the mapping exercise. The templates can be used as blueprints and adapted to individual mapping strategies. The ETHNA System stakeholder mapping guide ends with an outlook on how to engage relevant stakeholders in deliberative events.

Mapping stakeholders and scoping involvement

»»»»» A GUIDE FOR HEFRCS 30|09|21

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What this guide is about and how you can use it

This guide enables Higher Education, Funding and Research Centres (HEFRCs) to explore possible stakeholder engagement strategies that can help to encourage sustainable research and innovation (R&I) practices. It can serve as a concrete roadmap for engaging stakeholders from a wide range of societal groups who are willing to participate in a dialogue on ethical governance. The stakeholder mapping guide aims to enhance the positive impact of implementing an ETHNA System by developing a governance structure that promotes more responsible research and innovation (RRI) based on citizen and community discourse. Using this guide can thus contribute to ensure that research is more responsive to society's needs, values, and expectations (cf. González-Esteban et al. 2021).

The stakeholder mapping guide can be read from A to Z to get an overall view of stakeholder engagement, or it can be used in sections to find answers to specific questions. Rather than starting from scratch, many institutions build on well-established structures for stakeholder involvement. If this applies to your institution, you can skip content that you are already familiar with. For example, if you would like to start directly with a [6-step guide](#) on stakeholder engagement, you can jump to the relevant section in this document. If you would like to get hands-on advice on the do's and don'ts of stakeholder engagement, then take a look at the pieces of advice in the speech bubbles, derived from current practitioners' handbooks of public participation. In case you are not yet familiar with the topic, you should take the time to read this guide from the beginning to gain an initial insight into the subject and learn about possible actions for your tailored mapping strategy. Approaches from other projects can also be helpful. Take a look at the different projects referred to in this guide and start with a stakeholder mapping adapted to the implementation of an ETHNA System.

To provide you with concrete guidance in this process, this document covers

1. Context for stakeholder mapping and RRI activities
2. RRI governance examples
3. New and emerging patterns of civil society involvement
4. Dialogue criteria between science and society
5. Principles to stakeholder mapping
6. Steps for stakeholder engagement planning
7. An outlook on deliberative participation
8. Templates as blueprints or for adaptation to the individual mapping strategy

Step by step towards stakeholder mapping at your own institution:

The stakeholder mapping process is described here in general terms, so try to contextualise and relate instructions to your institution's RRI activity. Ask yourself: How does the mapping strategy have to look like in practice so that the planned RRI activity can be successful?

Results from other EU-funded projects

| | | | |
|--|--------------|---|---|
| RRI governance examples | ETHNA System | https://ethnasystem.eu/ | Moan, M. H./ Ursin, L./ González-Esteban, E., Sanahuja-Sanahuja, R./ Feenstra, R./ Calvo, P./ García-Campá, S./ Rodríguez M. (2021): ETHNA System: Literature review and state of the art description Mapping examples of good governance of research innovation (R&I) related to responsible research and innovation (RRI), in Higher Education, Funding and Research Organisations (HEFRs) in Europe. Available at: https://ethnasystem.eu/results/ . |
| New and emerging patterns in civil society involvement | ENGAGE2020 | http://engage2020.eu/ | The Engage2020 Consortium (2015): Engage2020. Science, Society and Engagement. An e-anthology. ENGAGE2020 D2.2. Available at: http://engage2020.eu/media/Engage2020_withVideo.pdf . |
| | HEIRRI | https://heirri.eu/ | Creek, M. (2015): Forum Guide of Work or FGW, HEIRRI D 1.1. Available at: http://www.guninetwork.org/files/images/imce/heirri_wp1_d1.1.pdf . |
| | NewHoRRlzon | https://newhorizon.eu/ | Lindner, R./ Edler, J./ Matamoros, H. G. O./ Randles, S./ Walhout, B./ Gough, C./ Kuhlmann, S./ Loeber, A./ Cohen, J. (2018): Framework for comparative assessment, NewHoRRlzon D8.1. Available at: https://newhorizon.eu/deliverables/ . |
| | PE2020 | https://cordis.europa.eu/project/id/611826 | Ravn, T./ Mejlgaard, N. (2015): Public Engagement Innovations – Catalogue of PE initiatives. PE2020 D 1.2. Available at: https://tuhat.helsinki.fi/ws/portalfiles/portal/156529598/Public_Engagement_Innovations_H2020.pdf . |
| Comparative empirical analysis for typical patterns of stakeholder involvement | HEIRRI | https://heirri.eu/ | Creek, M. (2015): Forum Guide of Work or FGW, HEIRRI D 1.1. Available at: http://www.guninetwork.org/files/images/imce/heirri_wp1_d1.1.pdf . |
| | SATORI | https://satoriproject.eu/ | Shelley-Egan, C./ Wright, D./ Benčin, R./ Šumič Riha, J./ Strle, G./ Ovadia, D./ Pastor Cañedo, A./ Angeli, Chr./ Sotiriou M. (2014): Report (handbook) of participatory processes, SATORI D 2.1. Available at: https://satoriproject.eu/media/D2.1_Report-handbook-of-participatory-processes_FINAL1.pdf . |

You might also want to use tools that can facilitate stakeholder mapping. Even though these have been designed for businesses, their approaches might be useful for implementing an ETHNA System as well. You might for example consider Smaply (<https://smaply.com/>) an innovation software that supports, among other things, stakeholder mapping. It provides how-to guides, digital tools and templates, case studies, as well as blog articles on the issue.

Stakeholder engagement – A pathway towards the impact of your RRI activity

Have you ever heard about the so-called Collingridge dilemma? The dilemma describes how the impact of technologies can be difficult to anticipate until the technologies in question are fully developed, while in turn, the control of these technologies can become challenging once they are implemented (cf. Collingridge, 1980). This shows that the impacts of R&I cannot be governed in a socially desirable way in retrospect. Instead, the impacts would ideally need to be controlled in advance. However, this is impossible due to high uncertainty. An uncertain future related to scientific and technological progress can, on the other hand, justify an expansion of the actors involved (cf. Moan et al. 2021, 10, referring to Beck/ Lash/ Wynne 1992). This is because stakeholder engagement can mitigate the problem by, first, setting the desirable direction of R&I, and second, aligning R&I with societal values, needs and expectations. In this way, those affected by the results and products of the R&I activity have a say right from the beginning, rather than only when an ethical problem, dilemma, or undesirable consequence arises. An ethical governance system for the management of R&I activities must not only consider but also embrace the diversity, complexity and dynamics of R&I networks, e.g., the deliberative potential as well as the capacity for broad integrative processes, the ability to address problems in an inter- or transdisciplinary way, and the potential to quickly change the direction of a project as new information emerge (cf. Moan et al. 2021, 32). Involving a wide range of stakeholders in participatory processes and aligning research with society's needs, values and expectations is thus essential for RRI (cf. Strand, 2019).¹

A possible way to diversify stakeholders and develop an intersectional focus, is to apply the quadruple helix model (QHM), which emphasises the importance of society's participation in R&I (cf. Schütz et al. 2019). With this model, stakeholders can be grouped by sector. If you know in which area each stakeholder is located, you can also ensure greater diversity by including stakeholders from as many different areas as possible. "The Quadruple Helix Model of innovation recognizes four major actors in the innovation system: science, policy, industry, and society. In keeping with this model, more and more governments are prioritizing greater public involvement in innovation processes" (Schütz et al. 2019). Following the quadruple helix model, the below mentioned stakeholder groups are regarded as relevant key actors for the implementation of an ETH-NA System on RRI governance in HEFRCs:

¹ For various accounts of understanding RRI and criticisms of its conception, cf. Moan et al., 2021.



Stakeholder groups, diagram

Stakeholder engagement is sensitive to context. Depending on the context, different stakeholders can belong to different groups. For example, the same stakeholder (e.g., farmer) might be a local beneficiary who is a consumer in one case while contributing as a producer of a particular product in another context. When identifying and assigning relevant stakeholder groups, ask yourself, for example, which context might be relevant for the promotion of ethical governance according to the RRI key areas relevant to the ETHNA System.

*Identify stakeholders systematically:
by interest,
by sector,
by location (cf. Creighton 2005, 48f.).*

New and emerging patterns in civil society involvement

A lack of trust in science, technology, politics, as well as “top-down” governance has fostered “bottom-up” activism as well. Increasingly proactive attempts at governance have evolved to directly engage citizens in science and technology decision making, whether for public opinion, consultation, or direct democratic decision making (cf. Landeweerd et al. 2015, 11 referring to Bucchi/ Neresini 2007). However, the greatest demand is not for democratisation of science in general, but rather for a two-way exchange between science and society (cf. Schütz et al. 2019).

But what exactly is a two-way exchange?

To illustrate this approach, you can use a two-dimensional classification scheme and distinguish between one-dimensional communication and two-dimensional dialogue, which span different levels of engagement. Civil society can be engaged at several levels, ranging from a low level of engagement that may not require extensive participation, e.g. by providing information for citizens to voice their opinions, to a high level where they can have a major impact, e.g. by participating in discussions and debates that decide on the further development of RRI activities (cf. Shelley-Egan et al. 2014, 5). In one-dimensional communication, for example, relevant stakeholders are informed and educated. However, the information flows without mechanisms for dealing with feedback. A two-dimensional dialogue differs in that the exchange is accompanied by a debate in which knowledge can be acquired and applied at the same time (cf. Ravn/ Mejlgaard 2015, 102). This not only ensures that the information has reached the target audience, but also reflects on how this information is understood. A two-dimensional dialogue is thus particularly important to ensure responsiveness and to take different perspectives into account (cf. Ravn/ Mejlgaard 2015, 132, 146). The result of such dialogue is a well-considered perspective that may differ from initial viewpoints and is reached through careful consideration of the alignment of R&I with societal values, needs and expectations.

Examples of different levels of public engagement²

| Classification | One-dimensional | | | Two-dimensional | |
|-----------------------------|--|---|--|---|--|
| Process | Public communication | Public consultation | Public activism | Public participation | Public deliberation |
| Method and technique | Focus group | Public internet hearing | Social movement | Participatory budgeting | Consensus conference |
| Stakeholder group | Civil society/ Business and industry/ Research, innovation, funder community | Civil society/ Business and industry/ Research, innovation, funder community/ Policy makers | Civil society | Civil society/ Business and industry/ Research, innovation, funder community/ Policy makers | Civil society |
| Project | Nanodialogue Project | RESEARCH 2015 | “Let’s Do It” – Movement and World Clean-up | Law no. 69/07 of the Tuscany Region | Consensus Conference on Future Energy Supply |
| Objective | Raise curiosity/ Stimulate debate/ Raise awareness etc. | Demand better policies on prioritisation of research funds/ Foster democratisation/ Enable knowledge co-production etc. | Clean up the world/ Raise awareness/ Educate and build capacity/ Strengthen community/ Waste management etc. | Renew democracy/ Foster co-governance/ Increase and regenerate social capital/ Voice powerless interests etc. | Evaluate science-based options/ Formulate recommendations on the future energy supply etc. |

Did you know?

Basically, the origins of stakeholder involvement go back to business theory and two contrasting approaches, used to show that a company cannot exist without all the individuals and groups that facilitate the business in the first place. The so called “shareholder value doctrine” states, that a company must be governed in the interests of shareholders by generating value on their behalf. The stakeholder approach, on the other hand, says, that a company must be governed according to the interests of stakeholders who are directly or indirectly affected by the company’s actions. However, since stakeholder interests are diverse and conflicting, there must be a compromise between pursuing various interests (cf. Chilosi/ Damiani 2007).

Want to read more on this?

In a discourse ethical understanding, stakeholders should not only be given a say but their voices must also be heard and have influence under non-coercive, reciprocal, generalisable circumstances. This understanding originates in the political theory and philosophy of Jürgen Habermas (cf. Habermas 1984), who, as a representative of the Critical Theory of the Frankfurt School, has striven for the goal of a society free of coercion. In this sense, Habermas argues for the strengthening of communicative rationality, which enables individuals to come together and engage in a discourse to voice their ideas for the benefit of society (cf. Habermas 1984 I/II). The discourse ethical tradition can be an effective tool to overcome possible barriers between science and society, since “RRI as a governance approach focuses, among other things, on the establishment of spaces for debate and negotiation, and policy instruments ‘helping to achieve legitimate agreements’” (Moan et al. 2021, 26 citing Lindner et al. 2016, 48).

² These examples are selected from the PE2020 project. The project provides a list of 38 examples of public engagement that can serve as a basis for adopting similar methods and techniques for stakeholder engagement.

When it comes to stakeholder engagement, where key actors should have the opportunity to express their values, needs and expectations, Habermas’s conception of the role of speech is particularly important. According to Habermas, the potential for rationality and understanding is embedded in speech, insofar as people are subjects capable of speech and action. Thus, when actors reach out to one another for the purpose of understanding, they engage in a process that Habermas calls ‘communicative action’, where they are not acting alone but are accessing a common world together with others to pursue the objective of understanding through communicative rationality. Speech, then, creates “space for understanding” where a knowledgeable stakeholder acts among other knowledgeable stakeholders (cf. Bohman/ William 2017). In this space, speakers align their actions and efforts in seeking individual (or shared) objectives based on a common understanding (cf. Bohman/ William 2017). Communicative action is thus a consent-based form of social agency in which participants ‘mobilize the potential for rationality’ inherent in ordinary speech and its aim of rationally motivated consent (Bohman/ William 2017). In this context, a rule of action or decision can only be considered justified, and therefore valid, if all who are affected by the rule or decision can accept it in a rational discourse (cf. Bohman/ William 2017). Therefore, the question of which stakeholders may be affected in the RRI activity you plan to undertake and the challenge of giving them a voice is such a significant issue.

“For Habermas, rationality consists not so much in the possession of particular knowledge, but rather in ‘how speaking and acting subjects acquire and use knowledge’” (Bohman/William 2017 citing Habermas 1984, 11).

New spaces for understanding through deliberative engagement methods.³

| Example: | Citizen panel | Consensus conference | Citizen jury | Deliberative Workshop | Participatory budgeting |
|-----------------------------|--|---|---|---|--|
| Description: | A large group of citizens assess public preferences and opinions | A group of citizens question experts on a particular topic at a public conference. Their recommendations are then widely disseminated | A small group of people come together to deliberate on an issue framed by a specific question | A group of people have in-depth discussions in a small-scale dialogue event | Variety of mechanisms that delegate power or influence over local budgets, investment priorities and economic spending to citizens |
| Level of engagement: | High | High | High | High | High |
| Costs: | Low – medium | High | Medium | Low – medium | High |
| Time expense: | Medium | Low | Low | Various | High |

³ For detailed methodological guidance on facilitating stakeholder dialogue in flexible workshops, please refer to the ETHNA System guide on stakeholder involvement in the ethical governance of R&I (cf. <https://ethnasystem.eu/results/>).

Ideal typical criteria for stakeholder dialogue

Now, how can two-dimensional stakeholder dialogue be conducted? The following ideal-typical criteria can help to ensure that all stakeholders who might be affected by the RRI activity you wish to undertake can accept the R&I process in a rational discourse:

Consider, for example, the low proportion of women in science, which reduces the pool of potential speakers (cf. Ravn/Mejlgaard 2015, 144).

- › Establishing spaces for exchange, debate, and legitimate agreements ●●●
- › Including all stakeholders who might be affected by the RRI activity you are planning to undertake
- › Empowering communication by giving a say to “invisible”, “hidden” and “indirect” stakeholders who may have been overlooked or not considered relevant before. ●●●
- › Keeping in mind that the interests of minority groups are often ignored or misinterpreted. Therefore, respond to the realities of stakeholders’ experiences and perspectives ●●●
- › Guaranteeing that stakeholders are heard right from the beginning and not only when problems arise
- › Ensuring equal opportunities for dialogue initiation and participation for all stakeholders involved
- › Enabling an open and transparent communication by sharing information, for example in clearly expressing objectives, expectations, but also limits of participation in the RRI activity ●●●
- › Acknowledging stakeholder’s values, needs and expectations as well as their potential concerns⁴
- › Ensuring a non-hierarchical dialogue at eye level, where proper speech is respected
- › Remaining unprejudiced and being convinced by the better argument
- › Expressing validity claims, such as truth claims about the empirical world, rightness claims about the kind of treatment we owe to each other, authenticity claims about the good life, or technical-pragmatic claims about the means suitable to different goals (cf. Bohman/William 2017)
- › Speaking intelligibly to ensure clarity of argument
- › Addressing and clarifying arguments in the discourse if they remain doubtful or unclear

Ensure that stakeholders have fair and equal access to the public participation process and the opportunity to influence decisions (cf. iap2, undated).

Have you ever thought about involving the members of an Ethics Committee? Use this forum for participation, reflection, and dialogue between the organisation’s different stakeholders in R&I matters.

“Ethics committees include, but are not limited to, research ethics committees, institutional review boards, ethical review committees, ethics boards, and units consisting of one or more ethics officers” (Bøgh et al. 2017, 4).

When it comes to minority groups, you might also want to think about including representatives of those who might be affected by the approach (cf. Creighton 2005, 48f).

“Habermas’s theory of communicative action rests on the idea that social order ultimately depends on the capacity of actors to recognize the intersubjective validity of the different claims on which social cooperation depends” (Bohman/William 2017).

⁴ Although research must be responsive to and consider the needs and concerns of the general public to build a better future and sustainable solutions, especially when publicly funded, this is not to say that science should be driven by the needs of society alone. Many important inventions, such as the internet, are based on research that had no clear purpose at the time it was developed.

12 principles of stakeholder inclusion⁵

1. Be clear about your intentions and expectations right from the beginning. Above all, this means starting as early as possible to specify your RRI activity and share information with stakeholders. Also clarify the extent to which stakeholders might have an impact on outcomes. In this way, you take the first step towards a culture of openness, transparency, and participation (cf. The Engage2020 Consortium 2015, 13).
2. Ensure to have sufficient resources in terms of time, skills, and funding for your engagement processes. For this purpose, systematic planning and budgeting is important (ibid.).
3. Map persons and institutions alike. Stakeholders can be either individuals or groups that might affect or be affected by the RRI activity you wish to undertake.
4. Embrace diversity and involve stakeholders representing different interests and groups to consider a wide range of perspectives.

HEIRRI, an EU-funded project which focused primarily on teaching RRI in higher education institutions (<https://heirri.eu/>), has highlighted as a typical pattern of stakeholder involvement the importance of involving different societal stakeholders and considering their unique perspectives in the joint development process (cf. Creek 2015, 19f.).

HEIRRI does so, for example, by bringing together students and researchers from different disciplines with various R&I stakeholders from industry or civil society, as well as with other groups and members of society.

5. Engage directly and indirectly affected stakeholders and legitimate both.

“To illustrate, one theoretical construct demarcates the distinction between direct stakeholders, those who interact directly with a technology under consideration, and indirect stakeholders, those who are more broadly affected by the technology” (Friedman/Hendry 2019, 40).

6. Cover the values, expectations, interests, and concerns held by stakeholders from the research, innovation and funding community, business and industry, politics and civil society and involve as many perspectives as possible (cf. The Engage2020 Consortium 2015, 13).
7. Consider local factors and reflect on whether the identified stakeholder is a national or international actor. For example, assign a city, region, country, neighbouring country, or international context to them (cf. Creighton 2005, 49).
8. Span different RRI key areas, stakeholder groups, levels of engagement or process dimensions for RRI (cf. D’Angelo et al. 2021, 11).

⁵ The ENGAGE 2020 project lists 10 things to keep in mind before starting public engagement (cf. The Engage2020 Consortium 2015, 13). This list is available to you in a modified form of 12 principles adapted to the specific needs of implementing an ETHNA System. You can use it for orientation and guidance both before and during the stakeholder engagement process.

9. Take steps to support stakeholders in engaging in the discourse. You can encourage collaboration, networking, broader participation, and co-operation in relation to engagement with RRI (cf. The Engage2020 Consortium, 13).
10. Employ engagement methods and techniques that are appropriate to the aims of the RRI activity you wish to undertake (cf. The Engage2020 Consortium 2015, 13). Demonstrate a variety of deliberative engagement techniques to prevent stakeholder fatigue. You might also note that participants will vary according to the issue and the scope. The topics addressed should therefore be oriented towards knowledge, experience, skills, and controversy (cf. Shelley-Egan et al. 2014, 4).
11. Evaluate the 6 steps of the stakeholder engagement process (cf. Engage2020 Consortium 2015, 13).
12. Protect academic freedom in your RRI activity, which is valuable and even a fundamental right in some communities.

How to map stakeholders and scope their involvement – a guide in 6 steps

In this section, you will find a concrete 6-step guide to stakeholder mapping that you can go through step-by-step. You can also jump to whichever step is relevant to your RRI undertaking right now and focus on that specific process. This how-to-guide also includes guiding questions that you can use in your mapping exercise to systematically conduct stakeholder engagement, sharpen your focus, and tailor the stakeholder mapping strategy to best fit your RRI activity.

In the following you will learn how to

1. Identify,
2. Analyse,
3. Map,
4. Prioritise,
5. Select and
6. Recruit

relevant stakeholders.⁶

⁶ Business for Social Responsibility (BSR) identifies 4 steps in stakeholder mapping:
 "1. Identifying: listing relevant groups, organizations, and people
 2. Analyzing: understanding stakeholder perspectives and interests
 3. Mapping: visualizing relationships to objectives and other stakeholders
 4. Prioritizing: ranking stakeholder relevance and identifying issues" (Business for Social Responsibility (BSR), 2011, 1).

1. Identify

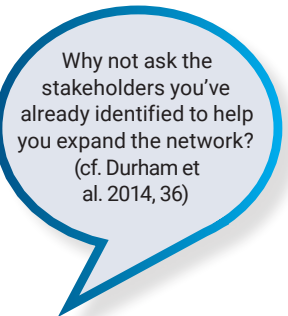
The best way to start the mapping is within a team of people who are already committed to the planned RRI activity of your institution. Don't do the mapping alone; instead, reach out to your team to work together and to make sure you identify a large number and diverse range of relevant stakeholders (cf. Creighton 2005, 50). You can start with a brainstorming session, possibly with pen and paper, or on a whiteboard. Come together and note any relevant individual, organisation, network, or others who might be affected by your RRI activity. Based on the following identification techniques, create a list of stakeholders. You can for example use the template for stakeholder identification from BiodivERsA Stakeholder Engagement Handbook.



Use the template “Stakeholder identification” from BiodivERsA Stakeholder Engagement Handbook

“The Public Participation Handbook: Making Better Decisions Through Citizen Involvement”, indicates that it might be useful to split the stakeholder mapping and distinguish between internal and external stakeholders (cf. Creighton 2005, 50). Think about this and, if you wish, start with the internal stakeholder mapping by looking for stakeholders in your own institution who are interested in getting involved in your RRI activity. Once you have successfully recruited internal stakeholders, they might even be willing to support you find external stakeholders by reaching out to their own networks, for example (cf. Durham et al. 2014, 36). Feel free to adapt the mapping templates included in this guide to make a differentiated mapping of internal and external stakeholders if you consider that useful.

- › Look through your address book to find people who might be interested in your RRI activity. Going through your own network might also provide an opportunity to have your professional contacts nominate stakeholders who are working on similar issues.
- › Do a bibliographic review to seek out authors who are influential in the field you will be working on.
- › Review participants at conferences, forums, workshops etc. with a similar interest and reach out to them.
- › Analyse prior decision-making documents, such as environmental documents or reports, and find out who has participated in similar activities (cf. Creighton 2005, 50).
- › Conduct a desk research and screen websites. Go through the websites of universities, science centres, ethics committees, projects or other institutions and organisations to identify relevant staff, members, coordinators, policy makers, citizens or others holding official positions that indicate an interest in fostering RRI.



Why not ask the stakeholders you've already identified to help you expand the network? (cf. Durham et al. 2014, 36)

- › Do you read newspapers? You can also go through recent local newspapers and identify the people or groups that have been active on similar issues (ibid.).
- › Engage people to self-identify, for example, by sending out information about the RRI activity you plan to undertake and having those interested to self-identify (ibid.).
- › Consult other sources about potential stakeholders. You can for example identify likely stakeholders based on staff knowledge (ibid.).
- › Screen mailing lists



Ask yourself:

- › Who might be affected by the RRI activity?
- › Which stakeholders are dealing with the issues at stake in the RRI activity you wish to undertake?
- › Who are the stakeholders that might have the most power and influence on your RRI activity?
- › Who might qualify because of their position, reputation, or influence on past RRI activities similar to your undertaking?
- › Who are the “hidden” stakeholders that might have an impact behind the scenes?
- › Who are the “invisible” stakeholders that have been overlooked so far but are important to include?
- › Who are the “indirect” stakeholders that may not have direct influence but are still affected by the RRI activity?

Consider any individuals or groups that might be affected by, influence, or have an interest in being involved in the RRI activity (cf. Durham et al. 2014, 36).

Consider internal and external stakeholders (cf. Creighton 2005, 50).

2. Analyse

To better situate the potential role of the identified stakeholders in your RRI activity, you need to get to know them better. For example, use a matrix to analyse stakeholders and their expertise, their willingness to participate, potential impact and contribution, the legitimacy of involving them (are they affected by your RRI activity?), or the potential costs of having them on board.

“Reduce internal and external coordination costs deriving from possible conflicts and misconducts that have an economic and reputational impact” (González-Esteban et al. 2021, 6). One way to prevent this is by identifying potential conflicts entering a dialogue with individuals that might oppose the research (cf. Durham et al. 2014, 37). Thus, when mapping stakeholders, also assess potential concerns that might arise during the decision-making process. All values, expectations, interests, and concerns should be addressed so that they can be discussed openly among stakeholders” (cf. Creighton 2005, 47, 55).



Use the template “Assessment of potential conflict”

RRI scorecards can follow different criteria. The criteria for implementing an ETHNA System are based on the four process dimensions for responsible research following the principles of anticipation, inclusion, reflexivity, and reactivity proposed by Stilgoe, Owen and Macnaghten (cf. Moan et al. 2021, 34).

Thus, when analysing stakeholders, you can ask whether the inclusion of the identified stakeholder might help to ensure

1. Anticipation
2. Reflexiveness
3. Inclusiveness
4. Responsiveness.



Use the template “Stakeholder analysis”

| | Stakeholder | Contribution | Legitimacy | Willingness | Influence | Necessity |
|---|--------------|--------------|------------|-------------|-----------|-----------|
| 1 | Citizens | Low | High | Medium-Low | Low | Medium |
| 2 | Municipality | High | High | High | High | High |
| 3 | Schools | Medium | High | High | Low | Low |

Stakeholder analysis example (Reconfigure 2020).



Ask yourself:

- > Are the identified stakeholders willing to foster RRI governance?
- > Are they experts in the area you want to work on?
- > Can they contribute to your RRI activity?
- > Do they have a potential impact?
- > Is it legitimate to involve the identified stakeholder in the sense that they are potentially affected by your RRI activity?
- > Does their inclusion cause high costs?

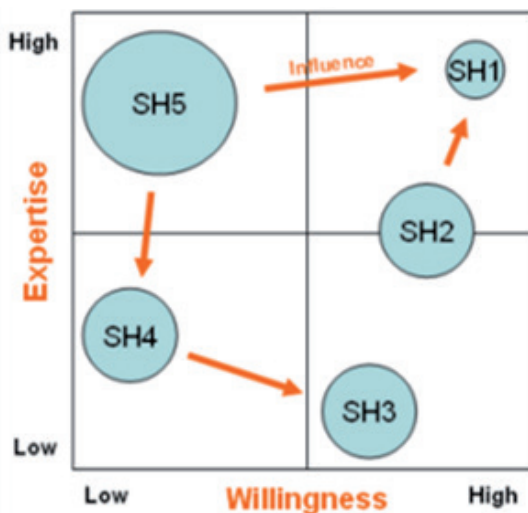
Conduct stakeholder interviews to ask about concerns, values, and interests.

3. Map

You can visualise and relate stakeholders’ relationships to specific aims, their potential influence on your RRI undertaking, their expertise and willingness to engage, and so on. Mapping their skills and expertise could, for example, help distinguish between knowledgeable people with extensive experience, who are more likely to be focused or able to make professional contacts, from less knowledgeable stakeholders (cf. Creek 2015, 6). It might also support efforts to contextualise and tailor stakeholders’ needs and demands, to explore prevalent views and attitudes and to acknowledge diversity of perspectives (cf. Lindemann 2021, 8). The following expertise-willingness matrix can serve as an example for this. Relate relevant indicators to your own expectations to ultimately explore potential stakeholder participation.



Use the template “Stakeholder map of connections for visualisation”



People tend to work in a way they already know. Steinar Krokstad, Director of the HUNT Health Survey and Initiator and Head of the Public Health Alliance, Central Norway emphasises that stakeholders’ awareness of the need for change towards public engagement in R&I processes is as important as their willingness to work towards this goal (cf. Moan et al. 2021, 44).

“Sample Mapping” (BSR 2011, 3).



Ask yourself:

- › Are the identified stakeholders well-known in their field of work?
- › Are they well networked?
- › Are they national or international actors?
- › Do you already know each other personally and can build on an established connection?
- › Are they familiar to one or more of the RRI key areas research integrity, gender perspective, public engagement, open access and so on?
- › Do they adhere to various existing ethical, political, and legal frameworks? (cf. González-Esteban et al. 2021, 6)
- › Are they committed to promote a close relationship with the community by responding to the values, needs and expectations of society (e.g., sustainability, social justice, gender perspective, and research integrity, etc.)? (ibid.)
- › Will they contribute to generate credibility and trustworthiness in the RRI activity through their reputation?

“Seek information about stakeholders’ relationships with other stakeholders, knowledge and attitudes towards the research, willingness and capacity to engage and best ways of communicating with them” (Durham et al. 2014, 49).

4. Prioritise

You already analysed the identified stakeholders, e.g., according to their expertise, willingness, or potential impact, and can now decide whether to collaborate with, involve, consult, or inform them (cf. Durham et al. 2014, 49).

Your analysis shows which stakeholders might be prioritised. Stakeholders with higher priority can be assigned to the level of their potential engagement and participation. To find out at what level relevant stakeholders can contribute and to contextualise their potential engagement, roles, and tasks, you can ask yourself what the scope of participation might be or at which level you expect stakeholders to contribute (cf. The Engage2020 Consortium 2015, 9). Finally, contrast the stakeholders you think can have the greatest impact on your project against those who are less likely to engage, and rank them.



Use the template “Stakeholder participation”

Have you ever thought about the ethics of participation when dealing with a conceptualisation of R&I governance? “An ethics of involvement concerns, not the question of who should be involved in R&I processes and why, but the question of how the persons involved should be involved [...]” (Moan et al. 2021, 24).

Should stakeholders...

- › ... collaborate as partners who drive the direction?
- › ... be involved in developing resources and data?
- › ... be consulted for information and opinion?
- › ... receive information on results?

(cf. Lindemann 2021, 9 in reference to Durham et al. 2014, 11–12)

“Prioritize which stakeholders to emphasize and which to set aside given resource constraints” (Friedman/Hendry 2019, 41).



Ask yourself:

- › Do you want to sharpen the focus e.g., especially on one of the RRI key areas and therefore engage first and foremost stakeholders from the relevant domain?
- › Do you want to broaden the perspective and address as many stakeholders from different fields and sub-fields as possible?
- › What do you expect from selected stakeholders and what might they be willing to give?
- › What can stakeholders expect from participating in your RRI activity; what will be the benefits?
- › What tasks will they be responsible for?
- › To what extent will their engagement have an impact?

5. Select

You have collected sufficient information to make your selection. When selecting, you can assign stakeholders whom you would like to involve to stakeholder groups, record their contact details, indicate whether they will be directly or indirectly affected, specify their connection to one or more of the RRI key areas, and match them with the dimensions of the RRI process. In this way, you will have another list of stakeholders that serves as an overview. Think of this stakeholder map as a living document that is not set in stone but needs to be assessed regularly (cf. Durham et al. 2014, 36f.). Even at later stages of the RRI activity, you might wish to ensure that your map is kept up to date and actually covers the stakeholders that are relevant to your RRI activity.

“The key point is that the list of stakeholders is constantly evolving, with different people getting involved at different stages as they see their interest being affected” (Creighton 2005, 56).



Use the template “Stakeholder map”⁷

⁷ The stakeholder groups, as exemplified in the “stakeholder map” template for the implementation of an ETHNA System, go back to Sanahuja-Sanahuja, 2016.

6. Recruit

In the last step, you will contact relevant stakeholders based on your selection and try to engage them in your RRI activity. Again, carefully plan and coordinate this step. For example, clarify who will contact which stakeholder and how (face-to-face, by email, by phone call, etc.). Also consider what information to share to most effectively motivate stakeholders to participate. One option would be for the RRI office or the RRI officer to fulfil this task.

When approaching relevant stakeholders to recruit them as members of your stakeholder board, give a brief but concise overview of your RRI activity. Be as specific as possible, e.g., about your aims and expectations, what stakeholders' roles will be, what impact their engagement can have, or what the benefits of participation will be.



Use the template “Cover letter”

What's next? An outlook on deliberative participation

Once you have established a stakeholder board, you can start to involve them in RRI processes and conduct deliberative stakeholder events. Keep in mind that there is no one-size-fits-all approach to deliberative participation, but that events should be designed to meet the objectives of your RRI activity and the needs of the participants. Participatory events should have the clear objective of addressing the planned RRI activity, different RRI key areas, stakeholder groups, levels of engagement or process dimensions for RRI (cf. D'Angelo 2021, 11). Possible deliberative methods for stakeholder engagement have been illustrated in this guide through examples of two-way dialogue approaches, where citizens are recognised as equal contributors who can have a strong impact on the planned RRI activity (cf. Ravn/ Mejlgaard 2015). In the ETHNA System project, relevant stakeholders are to be engaged in a dialogue primarily through deliberative workshops.

Deliberative workshops have evolved from focus groups and are a more in-depth and deliberative alternative.

These workshops facilitate group discussions in which participants can discuss an issue in depth, challenge opinions and develop their arguments to arrive at an informed perspective. In this setting, relationships between different stakeholders can be built and improved, and new knowledge and skills can be acquired (cf. <https://www.involve.org.uk>). A guide to engaging stakeholders in dialogue in the ethical governance of R&I through a flexible deliberative workshop approach is designed to help HEFRCs plan and conduct such events. Use the guide explicitly dedicated to this topic to learn more about the methods and techniques of deliberative workshops to promote a dialogical learning environment (cf. <https://ethnasystem.eu/results/>).

When it comes to determining the extent to which stakeholder engagement should take place in the respective RRI activity, SATORI identifies as a key factor to "[...] include a detailed project plan, a risk assessment of the potential costs (social, financial, political, etc.) associated with the participatory approach, the provision of relevant and clear information to participants and the use of suitable venues" (Shelley-Egan et al. 2014, 5).



Ask yourself:

During the participatory activity, also support stakeholders to engage in the discourse by encouraging collaboration and cooperation and assisting whenever questions arise (cf. The Engage2020 Consortium 2015, 13).

- › What is the objective of the event?
- › What are the intended outcomes?
- › What are the possible costs?
- › What is the number and type of stakeholders involved?
- › What equipment do you and the participants need for the organisation and participation?
- › What conditions must be met for you to benefit from the event in terms of your RRI activity?
- › What might stakeholders themselves expect to take away after participating in the event?
- › How will you later implement the stakeholders' contribution?

"Defining the purpose of the participatory event is an important first step as this establishes the nature of the audience, structure of the event and the manner in which it is evaluated" (Shelley-Egan 2014, 4).

Keep in mind to reduce the risk of stakeholder fatigue (cf. Durham et al. 2014, 49). Therefore, explore issues and gaps and tailor to the needs and demands of the participants.

Consider for example that the willingness of stakeholders to engage with ETHNA System is likely to be high among stakeholders committed to responding to the values, needs and expectations of society, whereas it might be lower among stakeholders that regard R&I activities as incompatible with their organisational interests (cf. Lindemann 2021, 15).

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List of Links

- › European Commission: <https://ec.europa.eu/programmes/horizon2020/en/h2020-section/responsible-research-innovation-2020-10-20>
- › International association for public participation (iap²): <https://iap2.org/page/corevalues>
- › Involve: <https://www.involve.org.uk/resources/methods/deliberative-workshop>
- › Smaply: <https://smaply.com/>
- › ENGAGE2020 project: <http://engage2020.eu/>
- › ETHNA System project: <https://ethnasystem.eu/>
- › HEIRRI project: <https://heirri.eu/>
- › NewHoRRizon project: <https://newhorizon.eu/>
- › PE2020 project⁸: <https://cordis.europa.eu/project/id/611826>
- › Reconfigure project: <http://riconfigure.eu/>
- › ROSiE project: <https://rosie-project.eu/>
- › SATORI project: <https://satoriproject.eu/>
- › Stakeholder involvement in ethical governance of R&I – a guide for HEFRCs:
<https://ethnasystem.eu/results/>

⁸ The official project website is no longer available. The Community Research and Development Information Service (CORDIS) provides information on the results from projects funded by the EU's framework programmes for research and innovation.

List of Figures



Figure 1: Stakeholder groups, diagram

| | Stakeholder | Contribution | Legitimacy | Willingness | Influence | Necessity |
|---|--------------|--------------|------------|-------------|-----------|-----------|
| 1 | Citizens | Low | High | Medium-Low | Low | Medium |
| 2 | Municipality | High | High | High | High | High |
| 3 | Schools | Medium | High | High | Low | Low |

Figure 2: Stakeholder analysis example (Reconfigure 2020)

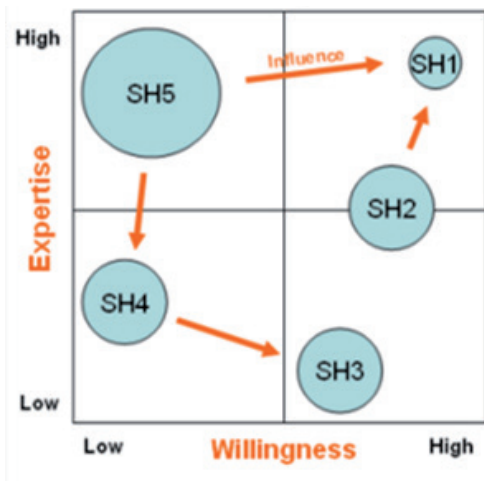


Figure 3: "Sample Mapping" (BSR 2011, 3)

List of abbreviations

| | |
|------------------|--|
| BSR | Business for Social Responsibility |
| CORDIS | The Community Research and Development Information Service |
| ENGAGE2020 | Engaging Society in Horizon 2020 |
| ETHNA System | Ethical Governance of RRI in Innovation and Research in Research Performing Organisations and Research Funding Organisations |
| EU | European Union |
| HEFRC | Higher Education, Funding and Research Centres |
| HEIRRI | Higher Education Institutions and Responsible Research and Innovation |
| iap ² | International Association for Public Participation |
| NewHoRRizon | Excellence in science and innovation for Europe by adopting the concept of Responsible Research and Innovation |
| PE2020 | Public Engagement Innovations for Horizon 2020 |
| R&I | Research and Innovation |
| Reconfigure | Reconfiguring Research and Innovation Constellations |
| ROSiE | Responsible Open Science in Europe |
| RRI | Responsible Research and Innovation |
| SATORI | Stakeholders Acting Together On the ethical impact assessment of Research and Innovation |
| QHM | Quadruple Helix Model |

Appendix

Collection of Templates

Stakeholder identification⁹

| Stakeholder | Category (e.g., NGO, general public, government department) | Reasons to involve the stakeholder(s) | Why the stakeholder may want to be involved (benefits) |
|-------------|---|---------------------------------------|--|
| | | | |

⁹ Cf. Durham et al., 2014.

Stakeholder analysis¹⁰

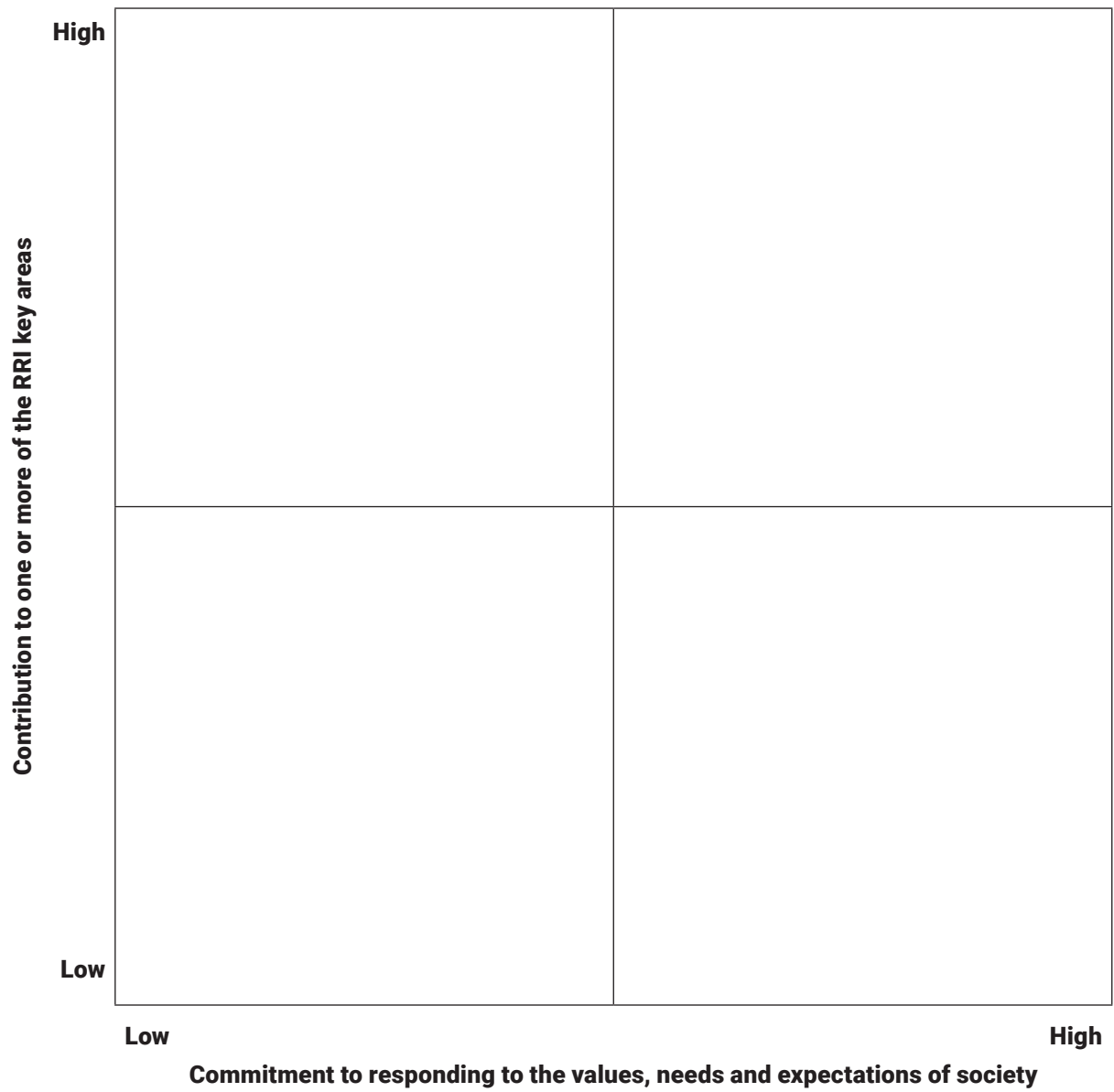
| | Stakeholder Groups | Expertise | Willingness | Impact | Legitimacy | Costs |
|---|--|--------------|-------------|--------------|--------------|--------------|
| 1 | Research, Innovation, Funder Community | Light Orange | Dark Orange | Light Orange | Light Orange | Light Orange |
| 2 | Business and Industry | Dark Orange | Dark Orange | Dark Orange | Dark Orange | Dark Orange |
| 3 | Policy Makers | Light Orange | Dark Orange | Dark Orange | Light Orange | Light Orange |
| 4 | Civil Society | Light Orange | Dark Orange | Dark Orange | Light Orange | Light Orange |

¹⁰ Adapted from Reconfigure, 2020.

Stakeholder participation

| Higher priority stakeholders (individuals, companies, organizations, communities, associations, parties etc.) | Level of potential engagement | | | |
|--|-------------------------------|-------------|--------------|-------------|
| | Collaboration | Involvement | Consultation | Information |
| Research, Innovation, Funder Community | | | | |
| Business and Industry | | | | |
| Policy Makers | | | | |
| Civil Society | | | | |

Stakeholder map of connections for visualisation¹¹



¹¹ Adapted from BSR, 2011.

Assessment of potential conflict¹²

| Values, expectations, interests and concerns | | Significance to priority stakeholders | | | Possible level of conflict | | |
|--|--|---------------------------------------|--------|------|----------------------------|--------|------|
| | | Low | Medium | High | Low | Medium | High |
| 1. | | | | | | | |
| 2. | | | | | | | |
| 3. | | | | | | | |
| 4. | | | | | | | |
| 5. | | | | | | | |

¹² Cf. Creighton, 2006, 6.

Stakeholder map¹³

| Who enables ethical governance? | Contact details: name/organisation - position - e-mail | Directly or indirectly affected? | Relation to RRI key areas | | | | | Relation to the dimension of the R&I process | | | | | | |
|---|--|-------------------------------------|---------------------------|------------|--------|----------------------|----------------------|--|--------------|-----------|-------------|----------------|--|--|
| | | | Research Integrity | Governance | Gender | Public Engagement | Science Education | Open Access | Anticipation | Inclusion | Reflexivity | Responsiveness | | |
| RESEARCH, INNOVATION, FUNDER COMMUNITY | | | | | | | | | | | | | | |
| Research and innovation staff | | | | | | | | | | | | | | |
| Research governing bodies | | | | | | | | | | | | | | |
| Management staff | | | | | | | | | | | | | | |
| Committees related with R&I | | | | | | | | | | | | | | |
| Science communication professionals | | | | | | | | | | | | | | |
| Associations and research networks | | | | | | | | | | | | | | |
| Networks in the field of R&I | | | | | | | | | | | | | | |
| BUSINESS AND INDUSTRY | | | | | | | | | | | | | | |
| SMEs | | | | | | | | | | | | | | |
| Multinational companies | | | | | | | | | | | | | | |
| Associations / Networks | | | | | | | | | | | | | | |
| POLICY MAKERS | | | | | | | | | | | | | | |
| European organisms | | | | | | | | | | | | | | |
| International organisms | | | | | | | | | | | | | | |
| National organisms | | | | | | | | | | | | | | |
| Local and regional organisms | | | | | | | | | | | | | | |
| Political parties | | | | | | | | | | | | | | |
| Research sponsors | | | | | | | | | | | | | | |
| Political representatives | | | | | | | | | | | | | | |
| CIVIL SOCIETY | | | | | | | | | | | | | | |
| Consumer associations | | | | | | | | | | | | | | |
| Non-governmental organisations (NGOs) | | | | | | | | | | | | | | |
| Charities | | | | | | | | | | | | | | |
| Social movement organisations | | | | | | | | | | | | | | |
| European Citizens' Initiatives (ECIs) | | | | | | | | | | | | | | |
| Trade unions | | | | | | | | | | | | | | |
| Educational community (teachers, students) | | | | | | | | | | | | | | |
| Museums, art and cultural workers | | | | | | | | | | | | | | |
| Media | | | | | | | | | | | | | | |
| Religious organisations | | | | | | | | | | | | | | |
| Household based producers | | | | | | | | | | | | | | |
| Indigenous people | | | | | | | | | | | | | | |
| Lay citizens | | | | | | | | | | | | | | |
| Science in Parliament | | | | | | | | | | | | | | |

13 Cf. Sanahuja-Sanahuja, 2016.

Cover letter

Dear (Insert name),

I am contacting you on behalf of (Name of the organisation). We are currently implementing (Insert the name or description of your RRI undertaking) as an RRI activity based on the approach developed by the EU-funded Horizon2020 project ETHNA System. ETHNA System is a flexible ethical governance system for the management of R&I activities in higher education, research funding organisations, research performing organisations, and organisations that bring scientific and technological innovation to the market. Our institution is developing and implementing an ethics governance system to embed best practices in RRI, in which stakeholder engagement is an essential component.

Therefore, we would like to invite you to join our Stakeholder Board as we consider your expertise on (Insert e.g., expertise on RRI key areas) related to (Insert e.g., the objective of your planned RRI activity) very valuable and believe that your cooperation could help us make our RRI activity a success. Please let us know by (Insert deadline for response) if you would like to accept our invitation. Joining our Stakeholder Board is not related to any formal obligations. However, please only accept our invitation if you are genuinely interested in working with us and thinking through the paths that our RRI activity might take. Whether you want to actively participate in our activities or just give a smaller input, you have the opportunity to make a difference and benefit from our results. (If you become a member of our Stakeholder Board you may also be listed on our website and have access to the latest outcomes.)

We are looking forward to hearing from you. If you have any questions or queries, please contact us anytime and we will gladly respond.

Best regards,

(Insert name)