**Navigating Responsible Research & Innovation (RRI)**

**The Responsibility Navigator**

Dear workshop participants,

Thanks for participating in [this workshop on ……..]. The objective of the workshop is to develop [explain your objective with the workshop here]

# Content and purpose of this background document

This background paper introduces three elements in the development of our framework for RRI governance that will be used and discussed during the workshop:

* **Aim and approach**: developing a *governance* framework for RRI is a challenging task, as research and innovation involve a wide variety of activities and ideas about what is responsible are also evolving. Against this background we have developed “The Responsibility Navigator” that can be used by actors who want to reflect on their own position as well as those of others in navigating research and innovation towards RRI. These can be organizations, in particular those charged with the task to define RRI goals and implementing appropriate instruments and arrangements (such as research funding organizations; boards of universities or of companies; professional organizations; policy makers etc.), but also individuals within (these) organizations.
* **Framework content**: to support actors we have identified three important dimensions in RRI governance and formulated guiding principles for each dimension. The list of principles and their ordering as well as terminology needs careful consideration.

# The case for RRI

The European Commission has defined RRI as an integrative element in its three-pillar approach to research and innovation: excellent science, competitive industry and better society. Rather than worrying about tensions between them, RRI is about making these three goals mutually reinforcing. The European Commission is not alone in that. The idea of responsible innovation has been voiced and practiced elsewhere, particularly in the domain of nanotechnology and in research funded by UK research councils. RRI brings together many goals by which research and innovation are thought to benefit society. From addressing societal challenges, such as sustainability or security, and anticipating potential risks or social and ethical concerns to including stakeholders in charting the paths of research and innovation.

However, positioning these goals in an overarching frame which judges what is responsible, or defines responsibilities towards these goals, does raise the question what difference RRI will make. Many of the above goals are not new and already pursued through various governance mechanisms. Think of Corporate Social Responsibility (CSR) schemes, safety or privacy regulations, public dialogue and stakeholder involvement initiatives, gender policies, sustainability policies, business and engineering ethics courses, etc. These practices already do shape the governance of research and innovation. If RRI has to make a difference, the question becomes how it can be meaningfully taken up within these practices so as to transform them positively. The Responsibility Navigator offers a framework for guiding the design and evaluation of governance mechanisms for RRI.

# Our approach

In developing our framework we have been considering two things:

**What is RRI governance about?** The challenge of a multi-dimensional governance concept like RRI lies in its inherent tensions. This has also been illustrated in the previous workshops held on RRI e.g. the one on Shale gas extraction touches on local concerns as well geo-political stakes. The regulation of genetically modified organisms is framed in terms of safety, but much of public and political debate about it is fuelled by positions on nature, agriculture and competing approaches. Research funders would like to encourage free and open science, but yet also have to direct research and innovation towards sustainable, scientific and economic performance. Research departments have to be dedicated in their tasks, while at the same time they have to open up to outside worlds, in order to learn how to connect to needs, preferences and requirements. The idea behind is not that actors behave irresponsibly, but that there is a need to find out how individuals as well as organizations are able to move beyond their immediate, individual responsibilities and to navigate research and innovation towards more sustainable and responsible actions on all governance levels.

**What is to be done?** The above examples also show that responsibility in governance of research and innovation is part of – and thus affected by – a broader set of governance mechanisms for research and innovation. Thus, next to enabling actors to become more responsive towards RRI, the challenge for RRI governance is as much in making governance mechanisms really supportive and integrative, while at the same time allowing for learning, experimentation and contestation. The key aspect to consider here is that while governance is shaped by (the dynamic interplay between) a multitude of governance mechanisms and instruments, these are not just a given, but actually constructed, both in design and operation. Whether it is about design principles, professional education, voluntary codes, public and stakeholder participation, financial incentives or hard regulation, all of these instruments are developed through processes of problem framing, coordination, negotiation and evaluation. Therefore, we want to identify ways how to incorporate RRI goals in processes of designing governance mechanisms or deliberating the goals these have to achieve.

# The framework

For actors to be responsive and governance mechanisms to be integrative and facilitating learning we have identified three key dimensions in RRI governance and have formulated guiding principles for each.

* The 1st dimension concerns the way actors interact with one another
* The 2nd dimension is about how governance mechanisms structure action and interaction.
* The 3rd dimension relates to how individual and institutional formation can support the collective ability to direct and shape research and innovation responsibly.

For each of these dimensions we have identified a number of principles. These describe key properties, or functions, of RRI governance that have to be fulfilled.

***Ensuring qualities of interaction (dimension 1)***

**1 .Inclusion:** RRI governance will be game-changing if governance mechanisms can accommodate the full diversity of the actors relevant to the problem or project at hand in such a way, that they are either engaged effectively in the debate or in joint activities. This requires that stakeholders have an understanding of the problem and of the management instruments discussed. It is equally important that actors perceive the process of decision-making as both legitimate and trustworthy. The principle of broad inclusion therefore comes with two other principles:

**2. Moderation:** Because direct and immediate interactions between actors are neither always reasonable nor possible, there will be a need for "forums" such as institutionalized places where interaction between conflicting parties (disputing actors) can take place. In the case of geographical distance or large belief differences among disputing actors, a mediating organization should be able to build trust, collect data and create a dialogue that allows for constructive inclusion making sure that everyone involved has a say and is heard and understood.

**3. Deliberation:** The quality of problem assessment and solving is closely related to the question which knowledge base is used. Knowledge is in-it-self always subject to negotiations and improvements. Therefore, in order for information to be "objective" it should always include and express the complexities, uncertainties and ambiguities which underlie any information relied on and collected from a comprehensive knowledge base. Clarification of the diversity of perspectives involved, not only between actors but also for the individual actors themselves, would help to promote synthesis rather than just advancing compromise.

***Positioning & orchestration (dimension 2)***

**4. Modularity and Flexibility:** Legitimate and effective governance of RRI will rest on a judicious mix of both soft and hard regulatory mechanisms. This is necessary to ensure that self-regulatory processes can be effectively incorporated in the external control systems; from everyday level accountability structures, such as reporting performance, to high level political checks and balances. It also concerns the alignment of diverse mechanisms, such as codes of conduct and industry level agreements, or different kinds of safety regulations.

**5. Subsidiarity:** While both hard and soft regulatory instruments regularly are based on overarching legal frameworks (e.g. from European directives to national constitutions and higher level frameworks), it requires a proper mutual agreement on how these are actually regulated at different levels and how these adjustments will be mutually enforced at all levels.

**6. Adaptability:** As RRI ambitions as well as the benefits and costs of governance instruments will change over time calibration of regulatory mechanisms also applies to a necessary forth running assessment on whether governance instruments systems are up-to-date, effective and legitimate in terms of supporting RRI.

***Developing supportive environments for RRI (dimension 3)***

**7. Capabilities:** RRI will crucially depend on actors being able to recognize, anticipate and pursue socially desirable research processes and results. The many facets of RRI governance require specific deliberative skills, vision and strategy. Thus, it is necessary to create the right educational framework to promote RRI and to support the reflexive and investigative skills of the actors involved in RRI processes.

**8. Capacities:** Where capability building serves to promote RRI at the individual level, so does capacity building at the institutional level: rules, roles, resources and organizational structures. An important element here is the availability of forums in which actors can interact. These can be the fora for deliberation as mentioned in principle 2, or the creation of a multi-perspective knowledge base, as mentioned in principle 3, but also capacities internal to organizations such as the ability to anticipate, reflect and deliberate societal questions in relation to research and innovation.

**9. Institutional entrepreneurship:** To build RRI capacity is an ongoing process. It is not only about encouraging organizational structures to change, but equally to push entrenched rules and habitual behavior into motion within organizations. It often takes great effort and much debate introducing real institutional change. This requires leadership on the one hand and willingness and supportive cultures towards RRI on the other.

**10. Culture of transparency, tolerance and rule of law:** This is a basic social condition for fostering RRI. The ability to invoke legal and political means drawing on equality, inclusiveness and the rule of law, are necessary.

# The framework at work

We envision our framework to be of use for actors wanting to reflect on their own position and abilities as well as those of others in navigating research and innovation towards RRI. For this, two points are important. First, the framework is meant to be considered as a whole. In a specific situation, for example in facing controversies over GMO and genetic engineering, the immediate concerns may primarily be about how different groups interact with each other: who has a voice, in which debates, what arguments are being used and how is the process moderated (the first dimension in the framework). However, it is no less important to consider how governance mechanisms structure these interactions as well as follow-up action (the second dimension in the framework). Think of environmental impact studies, safety regulations or energy market mechanisms. Likewise, when one wants to build broad-based capacities for recognizing, communicating and addressing societal dimensions in research and innovation (the third dimension covered in the framework), it has to be acknowledged this involves a learning process in itself. It then makes little sense to push change mainly in a top-down, non-deliberative manner (again covered by the first dimension of the framework).

Second, while the framework does provide an orientation for reflecting on and intervening in the governance of RRI, we do not assume that either individuals or organizations are in full control. Rather the opposite: many actors will find themselves in a position in which they are quite depending on existing governance mechanisms, or on the actions of others. It is for this reason that our framework is not meant as a set of static rules, but as a tool for analyzing what aspects of RRI governance are at stake in a specific situation and what aspects of RRI governance have to be taken into account for improving it. Crucially, the principles in our framework are not meant as normative *goals* for RRI, but as normative *guidance* for the *governance* of RRI. In this way, our framework can also be used to reflect on how to achieve and implement RRI ambitions and instruments defined elsewhere.