

# SMART·map

RoadMAPs to Societal Mobilisation for  
the Advancement of Responsible  
Industrial Technologies

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#euSMARTmap



## BENEFITS OF THE PROCESS TO DIFFERENT STAKEHOLDER GROUPS

The Industrial Dialogues and the pilot experience demonstrated that implementing RRI practices in industrial context has a number of benefits not only for the industry but also for other stakeholders. This section aims to present these benefits.

### 5.1 Benefits at the Ecosystem level

1/Building an on-line *Repository of Learning Case Studies* is an important step towards identifying the criteria for constructing shared standards. Creating a synthetic biology 'Responsible Innovation Standard' will help differentiate good-practice.

2/The collection of learning cases studies will provide documented information on the RRI practices in various organizations working on synthetic biology topic within the synthetic biology ecosystem.

### 5.2 Benefits for Industry/Companies

1/Contributing with case studies to the building of an on-line *Repository of Learning Case Studies*, is an important step towards identifying the criteria for constructing shared standards. Creating a synthetic biology 'Responsible Innovation Standard' will help differentiate good-practice.

2/Engaging in RRI processes helps businesses and other industry actors to build their reputation as responsible actors, in turn to gain customer/public trust.

– .... and as reported by the piloting companies

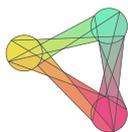
3/The possibility to present the perspective of a microbusiness on the promotion of RRI and the challenges it faces in this process, brings into an open debate important issues for industry embarking on RRI and facilitates the promotion of RRI in the ecosystem .



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4/The possibility to be open about how the company consider/take into account RRI dimensions while building capacity in synthetic biology, and the criteria for reflection and learning (ex. how to define society, what aspects of anticipation came with the new product) offered by the case-study template, which provided a common guidance through which the Learning Case Studies were self-authored by the pilot companies.

5/The possibility to be seen as good citizen company and to be involved in the development process of RRI and be involved in development social capital/networks in UK and internationally.

6/The opportunity to reflect on what RRI mean in the particular context of the company and to consider practical ways to incorporate RRI in the company's existing procedures. Collaborative reflection on how to define public/society in public engagement actions of the company.

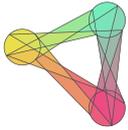
7/The opportunity to contribute examples of best practice and share with others their case, to demonstrate transparency and to evidence their interest in learning from others.

### **5.3 Benefits for other Stakeholders**

– *Benefits for Policy Makers:*

1/Acknowledging and identifying/understanding the diversity of roles and functions present in the RRI-sensitised innovation ecosystem, such as anchor institutions and boundary-crossing intermediaries and the variety of organisational types and sizes that RRI projects may put under the single heading of 'industry' will help to define more tailored and effective processes for the development and promotion of RRI.





2/For RRI tools to be effectively developed through multi-actor participatory processes, pre-investment will pay dividends, as a necessary preparatory stage before expecting all actors to engage equally in cross-sectoral ID and tool development processes.

3/The Repository of Learning cases is a cost-effective and low-bar tool where Social Enterprises and micro-businesses can be encouraged to author Learning Case-Studies, thereby enabling their visibility, skills and expertise to be show-cased, in order to bring them to the table as active and important transformative participants in the RRI process.

4/Utilising the Case Study Template, or a similar template, to act as a boundary object, enables all case-authors to write their cases according to a common standard structure and set of questions.

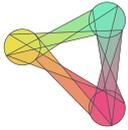
5/Initiating trainings, Advisory Boards or mentorship schemes would be excellent ways to promote RRI in those EU countries where there is no or very little RRI or existing capacity.

– *Benefits for Civil Society*

1/Continuing to reach and engage with a wide variety of citizens, including those who are usually underrepresented/non represented results in better inclusion and promotes the core principle of RRI that all actors are valued participants to the research and innovation process.

2/Early CSO involvement in the RRI process facilitates communication and dialogue between various actors through feedback to the scientists/industry on how their innovation are perceived by individuals without scientific/technological training and this contributes to the development of shared language/shared understanding that is essential for a meaningful dialogue. This way trust in research and innovation, built through constructive and open processes through which products and services are produced and new





technologies are developed, will make society less likely to reject a technology at a late stage of development, as in the case of GMO.

3/CSOs will benefit if get involved in the RRI Accreditation and 'Award' process – to mark quality and excellence in RRI terms within an RRI accreditation scheme – in particular to have a Voice in the conversations that specify and evaluate good practice.

4/CSO participation in multi stakeholder dialogues is vital, and the critical and constructive engagement of civil society is absolutely necessary to promote RRI, for example by providing case studies for disseminating CSO participation in RRI good practice.

– *Benefits for Academia and University Researchers*

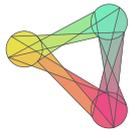
1/The learning cases can be used to assist in Schools and Public Education, so that people have a better and more transparent idea of what goes on in research and innovation processes and reflect on what it means to do these processes and practices responsibly and ethically.

2/Participation in the learning cases as an educational resource for early career researchers will facilitate the next generation of scientists to be 'RRI sensitized' and this will benefit the science base.

3/Awareness-raising of gender balance in the lab, through the case-studies, will highlight gender and diversity issues, especially related to structural and unconscious biases at senior positions

4/The Repository and Learning Cases will benefit the research process for example by enabling greater transparency of research results and assist researchers at all stages, from thinking more carefully about what questions to ask? To the better and transparent dissemination of research results





5/The Repository of Learning Cases can be authored by different disciplines, and co-authored across disciplines, so will help to develop a research system that involves all disciplines, social sciences, regulatory as well as natural sciences.

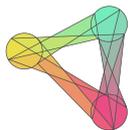
## **KEY MESSAGES AND FINDINGS FROM THE SMART-MAP TOOL DESIGN AND DEVELOPMENT PROCESS**

The Industrial Dialogue workshops and the pilot experience triggered an important learning process about the way RRI is perceived by different stakeholders, including the role that industry plays.

The Synthetic Biology Dialogues and Pilot activities converged on the key messages from the IDs on Precision Medicine and 3D Printing, finding that:

1. RRI should not be discussed as an abstract concept: the conversation about the implementation of RRI principles cannot be carried out without linking it to the concrete needs, challenges and opportunities in the innovation field in which RRI is to be embedded; The tools proposed however, include most of the RRI dimensions and show that RRI becomes naturally embedded in initiatives proposed by mixed stakeholder groups. This living-RRI perspective should be considered and propounded with conviction s a selection criteria of the tools selected.
2. Some experiences in industry already include RRI practices, but without necessarily labelling them as such;
3. RRI seems embedded “de-facto” in initiatives proposed by mixed stakeholder groups (co-design);
4. Any tools addressed to industry need framework measures carried out by other stakeholders in order for the tools to be transparently and inclusively legitimate to all stakeholders. Participation in the final tool design and implementation from numerous players from the surrounding ecosystem is therefore necessary in order to reach the RRI-compliant goals. The industrial focus of the roadmaps need to highlight the co-creation aspect and that participation of different stakeholders is needed (in particular civil society) in order to reach RRI principles and objectives.





## 6.1 The UK and Hungary experience

The UK and Hungary synthetic biology comparative contexts highlight that significant country-level institutional, regulatory, and industrial structure differences exist, as well as significant differences in the awareness and 'maturity' of RRI. Nevertheless, it is also striking that in the two Dialogues, the tools proposed and prototyped were remarkably consistent and complementary. This suggests that tools developed in one country, *can be* valuable and helpful for developing the awareness and local implementation of RRI in another, albeit care needs to be taken to ensure the products of the tool development process can be flexibly adapted to accommodate and be sympathetic to very different institutional, maturity, awareness and local capacity contexts.

