

## Dialogue Strategy and Stakeholder Mapping

### D.4.1.

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# List of abbreviations

CSOs	Civil society organizations
CSR	Corporate Social Responsibility
NGOs	Non-Governmental Organizations
PRISMA	Piloting RRI in Industry: a roadmap for tranSforMative technologies
RRI	Responsible Research and Innovation

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# Introduction

Especially industry organizations are becoming more aware of the importance to adopt a socially responsible behaviour and to integrate it on their conduct profile. In order for organizations and business operate in a sociality responsible way, they can find guidance in the ISO 26000.

ISO 26000 provides guidance on how businesses and organizations can operate in a socially responsible way, thus acting in an ethical and transparent way. Important practices to follow are the recognition of their own social responsibility and identify and engage with stakeholders (ISO 26000:2010).

Due to several types of pressures causes by different stakeholders to the company, the last ones tend to react by introducing social responsibilities in their practices. Therefore, Corporate Social Responsibility (CSR) can be defined as “as actions of the firm that appear to advance some social good, beyond the immediate interests of the firm and its shareholders and beyond that which is required by law” (Perez-Batres et al. 2012:158). The intention of going “beyond” can however be considered as a “substantive or symbolic commitment” (ibid.:168).

This critic can also be projected to Responsible Research and Innovation (RRI). Although there is not a mutual understanding of RRI, one suggestion is that it could be understood as “a strategy of stakeholders to become mutual responsive to each other and anticipate research and innovation outcomes underpinning the “grand challenges” of our time for which they share responsibility” (von Schomberg 2013:1). Thus, if RRI is to become a new label for business-as-usual, it also risks being used instrumentally, to smooth the path of innovation in society, and/or to achieve pre-committed policies’ (Owens et al 2012: 757).

In order to overcome such critics, one possible way would be to include in the company CSR, RRI aspects, requiring that companies move beyond a reactive or defensive position and embrace a more pro-active one, by dealing with social and ethical issues. By doing so, companies would be including an anticipatory strategy of managing possible collateral issues (especially the negative ones towards society in general), assume responsibility for them and attempt to better deal with these outcomes.

However, there is a limited experience with RRI in industry and there is also limited evidence of the added value of opening up the innovation process in industry for social engagement and gender considerations. The PRISMA project will try to overcome these current limitations by carrying out eight RRI pilot projects in a real-world industry context. To establish the added value of the RRI approach and the gender dimension in and for industry, in the project, the pilot projects will be assessed on a number of product and process RRI dimensions and compared the score of the pilots on the relevant RRI dimensions with the score of similar projects in the same companies in which the RRI approach has not been followed. The project will focus on implementing RRI for some of the major technological challenges in the EU including nanotechnology, synthetic biology, Internet of Things and self-driving or automated cars. These are all transformative technologies that have the potential to transform existing modes of production and to change the relation of the company with users, suppliers or other stakeholders. The pilots aim at integrating RRI in the CSR policies of the participating companies. Some pilots will take place in private companies and some in public-private partnerships. The project will be supported by extensive stakeholder consultations and dialogues. These will feed into the set-up and the carrying out of the pilots. The project will result in a RRI-CSR roadmap for transformative technologies. The roadmap will be widely disseminated through the partner's extensive industry network, and through industry branch and Civil Society Organizations (CSOs).

Thus, stakeholder's dialogues play a vital role. Stakeholder dialogues is a "methodology for designing and implementing consultation and cooperation in a complex change process that requires different interest groups to be included and integrated" (Kuenkel et al 2011:17). They are "guided conversations that ensure that people with different viewpoints and sometimes contradictory interests exchange (world)views" (ibid.:17).

The aim of the Deliverable 4.1 of the PRISMA project is to provide for a dialogue strategy that can work as a guideline for the five stakeholder dialogues that will be organized, in the course of the project. As an outcome of this strategy, several stakeholders will be map and identified as possible elements to participate in the dialogues.

The deliverable is organized in two main parts: the initial part will cover the strategy that will served as a guideline for the stakeholder's dialogues. Part two, will provide for a stakeholders mapping, in order to identify which main stakeholders are important to invite to participate in the dialogues.

# Part One – Stakeholders Dialogue Strategy

One of the main tasks of the project is to develop and carry out stakeholder dialogues with actors from areas that are important and influential for RRI.

Stakeholder engagement and participation are essential in shaping technologies according to societal demands ‘as an attempt to implement or step toward democratic governance of technology policy’ (Hennen 2012: 30). One of the assumptions of RRI is that ‘if technology could be designed according to social values [...] problems of rejection or conflict would no longer occur at all’ (Grunwald 2011: 14). Therefore, stakeholder dialogues are key to the PRISMA project.

The engagement of the various stakeholders is not only important for the development of robust RRI methods and tools, but also for ensuring the exchange of best practices and further development of the foundation of RRI. This poses an essential step in reforming the research and innovation systems in Europe (objective of Innovation Union).

During the project, a total of five stakeholder dialogues will be organized, focusing different transformative technologies, and promoting the involvement of different stakeholders.

Technical advances can lead to “unquestioned benefits, but they also generate new uncertainties and failures, with the result that doubt continually undermines knowledge, and unforeseen consequences cofound faith and progress” (Jasanoff 2033:224). So can transformative technologies. Thus, issues of risk and uncertainty are present in the pilots being developed in the PRISMA project. For instance, concerning nano and biotechnology uncertainty exists with regards to safety issues or acceptance by the public.

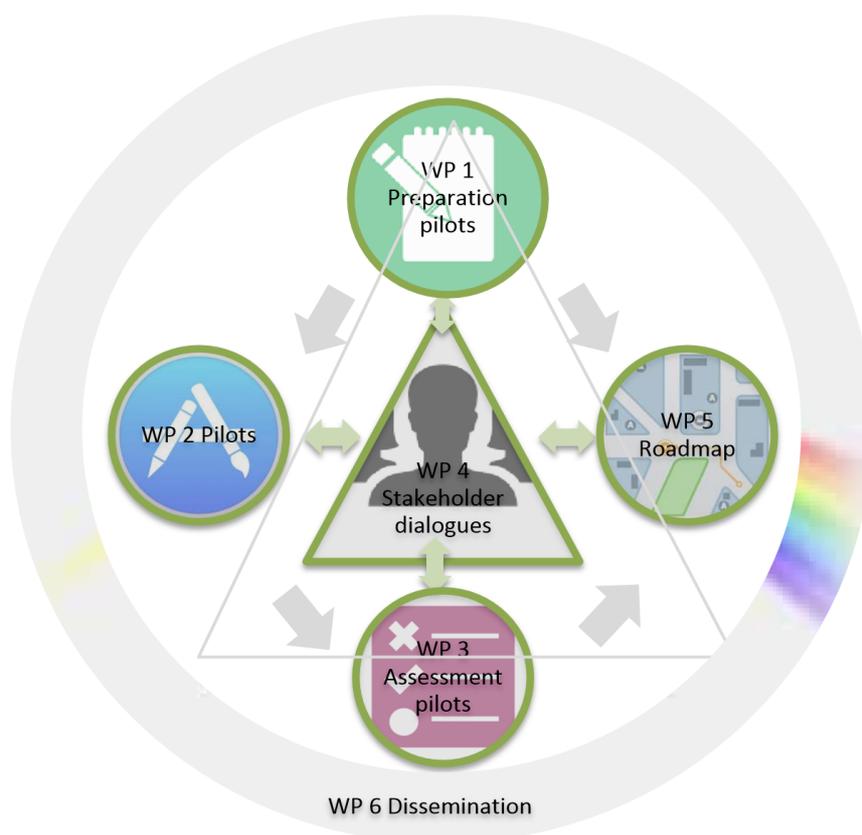
Also gender issues, transparency and products that reflect the values of consumers and society are key components of these dialogues.

The dialogues will be held from April 2017 to June 2018.

## The WP4 and its relation to the project

The dialogues aim to bring representatives of the Pilots together with stakeholders and experts which can give advice, in order to encourage a fruitful dialogue as a learning process on how to meaningfully exchange views and values interaction that can contribute on how to implement RRI practices and tools in companies.

The main aim of WP4 is, as stated previously, to develop and carry out stakeholder dialogues with actors from different areas, in order to act as a platform for group-specific discussions focused on important issues for stakeholders and how to best implement RRI and gain practical insights for Roadmap. Its relation to the different work packages in the project is central and essential and can be seen represented in Figure 1.



*Figure 1- Relations between the different work package in the PRISMA project*

In sum, the stakeholder's dialogues organized within WP4 will contribute to the following WP's:

- ✓ Preparation of the pilots (WP 1)
- ✓ Implementation of the pilots (WP 2)
- ✓ Assessment of the pilots (WP3)
- ✓ Feedback of the Roadmap (WP 5)

WP4 will also contribute to disseminate the project outcomes and therefore it will also contribute to dissemination of the project results (WP6).

In the project, the dialogues will also allow the stakeholders to discuss the pilots before they are put into practice, allowing feedback on the pilot structure, activities and ways to measure its performance.

## **Aim and expected outputs of the Stakeholders Dialogues**

The stakeholder dialogue will serve as a platform where industry, academia, social actors can be brought together in order to discuss specific needs and expectations, as well as concerns and challenges that RRI can introduce when put into practice in an industrial environment. Also, to the different stakeholders, it will give the possibility to discuss and design in a collaborative way the roadmap for the responsible development of transformative technologies such as nanotechnology, synthetic biology, autonomous vehicles and Internet of things.

The stakeholder's dialogues have for this reason specific goals, namely:

1. To improve the pilots as they are developed and implemented.
2. To aid dissemination of project results.
3. To generate inputs for the roadmap.

These aims will provide a clear underpinning of how to develop and set up the stakeholder's dialogues, thus they will lead the dialogue design and structure. Therefore, each dialogue will aim to achieve a specific goal, as stated previously, thus there will be a gradual shift in the stakeholder dialogues in the course of time:

- Stakeholder dialogue 1 – the focus will be on goal 1
- Stakeholder dialogue 2 – 3 and 4 – the focus will be on goal 1, 2 and 3
- Stakeholder dialogue 5 – the focus will be on goal 2 and 3

## Content of the Stakeholders Dialogues

In terms of content, the format of each stakeholder dialogue will be adopted according to the aim of the workshop. The transformative technologies, will also be approach differently in each dialogue, therefore the 2<sup>nd</sup>, 3<sup>rd</sup> and the 4<sup>th</sup> dialogue will have a specific technology focus as showed in Figure 2.

In order to have a clearer perspective of the dialogues structure, Figure 2 represent the dynamic process of the five events:

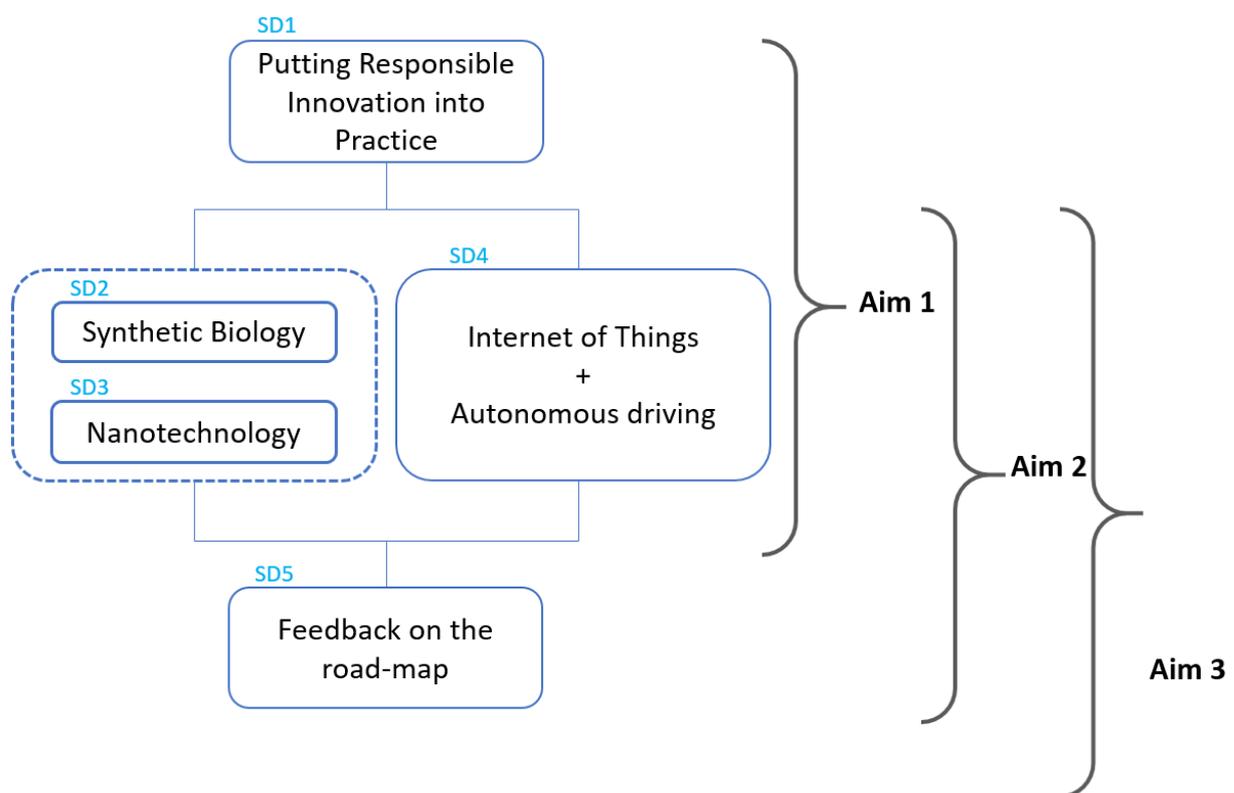


Figure 2 - Stakeholder Dialogue (SD) structure and its relation to the aims

### The first stakeholder dialogue

The first stakeholder dialogue will be organized in a way to act as a “reaction” to the pilots so far developed, as well as to frame the stakeholder’s familiarity with RRI and its inclusion in their CSR experiences. The aim is to trigger discussion on how to improve the approach to the pilots. Having the feed-back from the pilot workshop kick-off, the dialogue also aims at sharing experiences from

the pilot companies, creating awareness on good and bad practices. In terms of methodology, panel discussion and world cafés will be used to promote knowledge exchange and foster discussion.

### ***The second, third and fourth stakeholder dialogue***

The second stakeholder dialogue will have a special focus on synthetic biology and the third on nanotechnology. Since these two topics are becoming more convergent, some stakeholders and issues are common for both technologies. In order to make use of this convergence and to have a more interesting debate, these two stakeholder dialogues will be organized in a consecutive day.

The fourth dialogue will focus specifically on autonomous driving and Internet of Things (IoT).

It is aimed at the dialogue to have a participative approach, by involving interaction of wider ranges of stakeholders and experts in envisioning the future (Georghiou, Cassingena, Keenan *et al.* 2008). Since the aim of these dialogues is to reflect and actively discuss and anticipate the future in regard to the introduction and development of the focused transformative technologies, a foresight methodology will be used. Thus, aiming at “envisaging and exploring different potential ways the future may unfold” (Sutcliffe *nd*: 15) scenario methodology will be used.

Scenario building is an instrument for participatory planning, based on dialogue and collaboration between several stakeholders, in order to assess different solutions to a specific problem (Porcari, Borsella and Mantovani 2015). Issues of control and ownership and privacy of data as well as possible abuse of technology, safeguarding of human autonomy, for instance and when applicable to the companies’ pilots, the integration of RRI practices in already existent CSR practices will be discussed as well.

In terms of structure, the dialogues will be divided in two parts: the first part will address pilot specific issues and aims to have a deeper exchange on the development of the pilots in order to aid the involved companies to better frame possible obstacles encountered and how to overcome them. Thus, the involvement of the companies involved in the pilots is crucial. The key issues addressed will be gathered that feed into the second part of the dialogue.

In the second part, based on the outcomes of the first part, together with values and assumptions of the stakeholders, world cafes<sup>1</sup> will be organized in order to, for instance, group these values and assumptions into perspectives and then exploring scenario's working from the different perspectives. Afterword's, ideally, a SWOT analysis will be performed on each of the scenario's, in order to confront them against possible strengths and weaknesses. To finish, in a general discussion, the issue of how to overcome these strength and weaknesses, will be addressed.

The results from these dialogues, will help to improve the pilots in the companies and the dialogues will explore the different stakeholder experiences with RRI in order to incorporate them in the roadmap.

Extremely important is also the participation of the companies, partners in the project, in the discussion so that the development of the pilot case can also integrate the aspects discussed on the dialogue. Here, industry partners will also have the opportunity to present experiences of their on-going pilots.

### ***The fifth stakeholder dialogue***

The final stakeholder dialogue will act as a “validation” of the draft road-map that is to develop in the meanwhile in Work package 5. The draft version of the roadmap will be vividly discussed in order to understand its strengths and weaknesses, and how to overcome them. Once again, beside external stakeholders, the company's partners in the project will also have a fundamental role, not only by sharing once more results of their own pilot case but also to give inputs, based on their experiences to the roadmap.

In this event, project achievements will be focused and presented.

## **Target group for the Stakeholders Dialogues**

The stakeholders dialogue aim to gather a set of participants that can be representative of several stakeholder's groups.

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<sup>1</sup> “World Café” is a simple process for bringing people together around questions that matter. In small groups, discussions can link and build on each other, as people move between groups, change ideas and discover new insights (Brown and Isaacs 2005).

Stating for the initial mapping, a more in depth map will be conducted to adjust active and relevant stakeholders in each of the technologies focused on the dialogue. The update mapping will allow a better framing of the stakeholders.

The participants in the dialogues should (as much possible) represent the stakeholders in the technological field addressed. For this reason and also in order to achieve a good participative and interactive dialogue, for each event 15 participants are estimated, distributed equality by the different stakeholder's groups, whenever possible.

In order to have as many stakeholder representatives as possible, the location of the dialogues will vary according to the main location of the needed stakeholders. Locations can be, for instance, Belgium (Brussels), Germany (Berlin), England (Warwick) or Italy.

It is expected that all partners from the consortium will also actively participate and take part in the organization of the dialogues, acting either as moderators, speakers or rapporteur.

## Part Two – Stakeholders Mapping

The stakeholder mapping goes hand-in-hand with the dialogue strategy, proposed in the first part of this report.

Here, the aim is to identify the stakeholder's groups that are actively involved in the debate concerning RRI with an especial focus on the transformative technologies, approached by the project. Each group will provide main perspectives on how the concept and application of RRI is being developed.

The basic mapping of the relevant stakeholders will reveal important organizations in the debate on RRI with relation to the transformative technologies approach by the project, namely those addressing issues of regulations, risk measurements, personal safety and health impacts, privacy and data protection environmental impacts, societal implications,

At this stage, and for the purpose of this report, it is not our aim to identify specific individuals within each organization (although some are already identified), but rather identify organizations considered to be key players when addressing issues focused in RRI, namely and with whom the consortium members of the PRISMA Project have already an established contact.

In addition, non-European stakeholders can also be invited for the dialogues, since their contributions can help to provide inputs from non-European major economies with similar industrial research and development focus. Thus, a comparative analysis can enrich the dialogue and its outputs.

With this regard, four stakeholder's groups were identified: industry, policy making, civil society and "on-the -ground" stakeholders. Their description follows:

### Industry

Companies whose main activity involves manufacturing or selling products that incorporate the so called transformative technologies are the main target group of the project. It also involves business associations that support such organizations.

Their involvement in WP2 will ensure a close collaboration with the target group throughout the dialogue events. They will give direct feedback on the practicality of RRI tools and the roadmap with a view to apply and implement (activities of) the roadmap. Furthermore, it is important to address this group with respect to awareness raising of the RRI concept (and also is the focus of PRISMA project). Project findings will be specifically disseminated to this group.

Some issues that can be address are for instance, the best way to integrate RRI in processes and products while accounting for industry specific conditions (investments in product development, confidentiality of new products, involvement of users in product design).

Possible stakeholders to be invited for the dialogues are listed bellow (in order not to be exhaustive only for some a description in made):

Unilever	Is a Dutch-British transnational consumer goods company co-headquartered in Rotterdam, Netherlands and London, United Kingdom. Its products include food, beverages, cleaning agents and personal care products. Unilever is the world's largest producer of food spreads, such as margarine. Unilever is one of the oldest multinational companies; its products are available in around 190 countries <sup>2</sup> . Has a lot of experience with all kinds of CSR aspects, including gender, transparency and stakeholder participation.
DSM	Royal DSM is a global science-based company active in health, nutrition and materials. By connecting its unique competences in life sciences and materials sciences DSM is driving economic prosperity, environmental progress and social advances to create sustainable value for all stakeholders simultaneously <sup>3</sup> .

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<sup>2</sup> <https://en.wikipedia.org/wiki/Unilever> (accessed in 30.05. 2017). For more information: <https://www.unilever.com/>

<sup>3</sup> For more information: <http://www.dsm.com/corporate/about/our-company.html> (accessed in 30.05. 2017)

	DSM has experience in safety issues concerning biotechnology.
GeneArt - ThermoFisher	Thermo Fisher (formerly Life Technologies / Geneart) is a leading integrated solution provider in the field of DNA engineering and downstream processing to facilitate early steps in the development of pharmaceuticals and industry enzymes. Geneart is chairing the SYN-ENERGENE Business Forum and major contributions to Platform “Research & Policy”, in the SYNENERGENE project <sup>4</sup> .
BASF	Is a German chemical company and the largest producer in the world. In 2012 BASF started to organize the Dialogforum Nano (Transparency in communication on nanomaterials from the manufacturer to the consumer). In 2013 Stakeholder Advisory Council was established in order to approach to sustainability through continuous dialog. <sup>5</sup>
TerraVia (formerly Solazyme)	TerraVia makes a variety of algae-based oils and ingredients, some of which are made by applying the tools of biotechnology. TerraVia has experience with RRI principles. <sup>6</sup>

Other important companies were also mapped:

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<sup>4</sup> For more information: <http://corporate.thermofisher.com/en/home.html> (accessed in 30.05. 2017)

<sup>5</sup> For more information: <https://www.basf.com/en/microsites/nanotechnology.html> (accessed in 30.05. 2017)

<sup>6</sup> For more information: [http://terravia.com/Terravia\\_Sustainability.pdf](http://terravia.com/Terravia_Sustainability.pdf) (accessed in 30.05. 2017)

- Genomatica
- Novozymes
- DHV Royal Haskoning
- Shell
- Essent
- Rotterdams Havenbedrijf
- TKI-BBE
- Yes Delft
- VNO-NCW
- VNCI
- NVZ
- NCV
- HollandBIO
- VVVF
- NanoNext
- Novozymes
- EuropaBio
- DuPont
- Sofinnova Partners
- Festel Capital
- Phillips Group Innovation
- Virtualware Labs
- Siemens Health
- DECHEMA
- Jaguar Land Rover
- Bosch
- Tata Steel
- IBM
- BAE

### **Policy-makers and Advisors**

The policy making community is essential in the development of RRI concept. Policy makers such as governments, national and international authorities, ministries, parliaments, regulatory agencies, standards organizations and lawyers will be considered, since the actions of this stakeholders can shape the direction of the development in the different technological fields approached. They too have to decide on how they from their perspective have to deal with the issues of uncertainty and unclear risks: e.g. do they need to change regulations with respect to safety or privacy and ownership of data.

Main research and innovation ‘governing’ institutions will also include research funders, such as governments cooperation’s, ventures capitalists, institutional investors and supporting transformative technology research and innovation as well as ethical committees and technology assessment institutions. In a way, these stakeholders are guiding the development path of technologies, by means of research funds.

Issues that can be address are for instance: what specific funding for research and development is needed, possible aspects, legislation of new products or technologies related for instance to nano and biotechnology, legislation on risks to public health, etc.

Possible stakeholders to be invited for the dialogues are:

- European Commission - Directorate General for research Innovation: Chiara Tripepi
- European Commission: Anne Burril - Acting Head of Unit of the LIFE Nature (DG ENV E3) unit.
- European Commission: Philippe Galiay - Research DG RTD-L3 “Governance and Ethics”
- European Commission: Carmen de Vicente Coll - Research Programme Officer DG for Research & Innovation
- European Parliament, Dr. Lieve Van Woensel, Head of the Scientific Foresight Service at the European Parliamentary Research Service (EPRS)
- European Parliamentary Technology assessment (EPTA)
- Office of Technology Assessment at the German Bundestag (TAB)
- European Technology Assessment Group (ETAG)
- Coventry City Council (UK)
- Helmholtz Association (Forschungszentrum Jülich, German Cancer Research Centre, Helmholtz Zentrum München – German Research Center for Environmental Health, Max Delbrück Center for Molecular Medicine (MDC) Berlin-Buch, German Aerospace Centre, Karlsruhe Institute of Technology)
- De Montfort University (DMU) (UK): Prof Bernd Carsten Stahl, Director of the Centre for Computing and Social Responsibility
- Oslo and Akershus University College (Norway): Dr. Ellen-Marie Forsberg, Head of research at the Work Research Institute, leader of the Research Group on Responsible Innovation
- Arizona State University - The Center for Nanotechnology in Society (USA): Professor Dave Guston, Professor of Politics Science and Co-Director of the Consortium for Science, Policy and Outcomes. Principal investigator and director of the Centre for Nanotechnology in Society
- VDI/VDE Innovation + Technology GmbH: Dr. Marc Bovenschulte, Director of Institute for Innovation and Technology
- Applied Research and Communications Fund (ARC Fund) (Bulgaria)
- RWTH Aachen University: Professor Stefan Bösch, Professor of “Gender and Technology”
- ETH Zurich (Switzerland): Professor Dr. Sven Panke, Associate Professor of the Department of Biosystems Science and Engineering
- Demos (UK)
- International Genetically Engineered Machine (iGEM) Foundation
- Massachusetts Institute of Technology (MIT) (Professor Kenneth Oye)

- United States Environmental Protection Agency (EPA) (USA)
- National Institutes of Health (NIH) (USA)
- University of Edinburgh: Professor Joyce Tait, Proportionate and Adaptive Governance of Innovative Technologies (PAGIT) Project
- Wageningen University & Research: Prof.dr. Philip Macnaghten, Personal Chair in Technology and International Development
- Forum for the Future (UK)

### Civil Society Organizations

One can witness higher “demands for greater public involvement in assessing the costs and benefits, as well as the risks and uncertainties of new technologies” (Jasanoff 2003:236). For this reason, CSOs are crucial for the discussion on RRI issues. They can include labour associations but also non-governmental organizations (NGOs), consumer or human-rights advocates. The organizations are normally monitoring governmental regulatory activities, industrial activities, common and innovative and near market product (and processes) developments, due to the risk and uncertainties related to the research and application of transformative technologies. Here, consumers or citizens are also considered as they can contribute to awareness raising on the different technologies approached in the project. Furthermore, these groups can provide input on how the technologies might affect daily life but also to bring in aspects for creating safe, ethical and sustainable products and processes. As the RRI concept includes how to increase societal stakeholder’s engagement, these groups are important as to how this can be done.

Dialogues on which they can contribute are: how to design a roadmap that also meets the requirements of society. Since the products and technologies developed will be introduced in society and able to be used by citizens, the question is how to shape them to account for possible expectations or concerns (e.g. possible risks for society).

Regarding CSOs, it is important to include organizations representing the needs of specific groups (and here also important to include those representing consumers and those representing workers) as well as organizations representing general societal issues.

Possible stakeholders to be invited for the dialogues are:

Global Forest Coalition	International coalition of NGOs and Indigenous Peoples’ Organizations defending social justice and the rights of
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	forest peoples in forest policies. <sup>7</sup>
etc. Group	Operating at the global political level, the group address the socioeconomic and ecological issues surrounding new technologies that could have an impact on the world's poorest and most vulnerable people. They investigate ecological erosion (including the erosion of cultures and human rights); the development of new technologies (especially agricultural but also other technologies that work with genomics and matter); and they monitor global governance issues including corporate concentration and trade in technologies. <sup>8</sup>
Roundtable on Sustainable Biomaterials (RSB)	Third-party environmental, sustainability and food quality certification, auditing, testing and standards development. <sup>9</sup>
EuropaBio - the European Associations for Bioindustries	Promotes an innovative and dynamic European biotechnology industry. EuropaBio and its members are committed to the socially responsible use of biotechnology to improve quality of life, to prevent, diagnose, treat and cure diseases, to improve the quality and quantity of food and feedstuffs and to move towards a biobased and zero-waste economy. EuropaBio represents 80 corporate and associate members and bio regions, and 17 national biotechnology associations in turn representing over 1800 biotech SMEs. <sup>10</sup>
Women in Europe for a Common Future (WECF)	International network of over 150 women's and civil society organizations implementing projects in 50 countries and advocating globally to shape a just and sustainable world. <sup>11</sup>
European Trade Union Confederation (ETUC)	Major trade union organization representing workers at European level.  Aims to ensure that the EU is not just a single market for

<sup>7</sup> For more information: <http://globalforestcoalition.org/about-us/> (accessed in 30.05. 2017)

<sup>8</sup> For more information: <http://www.etcgroup.org/mission> (accessed in 30.05. 2017)

<sup>9</sup> For more information: <https://www.scsglobalservices.com/company> (accessed in 30.05. 2017)

<sup>10</sup> For more information: <https://www.europabio.org/> (accessed in 30.05. 2017)

<sup>11</sup> For more information: <http://www.wecf.eu/english/about-wecf/> (accessed in 30.05. 2017)

	goods and services, but is also a Social Europe, where improving the wellbeing of workers and their families is an equally important priority. The ETUC believes that this social dimension, incorporating the principles of democracy, social justice and human rights, should be an example to inspire other countries. Represents the voice of workers and represents 45 million members from 89 trade union organizations in 39 European countries, plus 10 European Trade Union Federations. <sup>12</sup>
Privacy International	Global movement for the protection of privacy. They are committed to fighting for the right to privacy across the world. <sup>13</sup>

### “On-the-ground” Stakeholders

With the development of transformative technologies, such as nanotechnologies and biotechnologies, a new type of stakeholders emerges applying and experimenting such transformative technologies, for instance latest biotech developments include DIY activities.

By “On-the-ground” should be understood as artists in dealing with the interfaces of science, technology, art and society. Examples of such stakeholders are DIY activists, BioHackers and FabLabs. These actors can bring in different perspectives on innovation and ethical considerations as well as how non-institutional science and technology development can work and be made accessible to a wider public.

Issues that are to be addressed in the dialogues are: bringing in their own codes of conduct, open access to technologies and innovations and adapting of technologies to address actual needs.

Possible stakeholders to be invited for the dialogues are:

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<sup>12</sup> For more information: <https://www.etuc.org/aims-and-priorities> (accessed in 30.05. 2017)

<sup>13</sup> For more information: <https://www.privacyinternational.org/> (accessed in 30.05. 2017)

Biofaction KG (Austria)	<b>Biofaction</b> is a research and science communication company based in Vienna, Austria. Biofaction has significant expertise in science communication, film production, technology assessment and the study of ethical, legal and social issues in a number of emerging sciences and technology (genetic engineering, synthetic biology, converging technology). <sup>14</sup>
FabLab Karlsruhe (DE)	Association that operates an open workshop, were with modern production techniques such as <i>3D printers, laser cutter, CNC milling</i> and other great machines, one can implement their own ideas. <sup>15</sup>
De Waag institute, (NL)	Waag Society explores emerging technologies, and provides art and culture a central role in the designing of new applications for novel advances in science and technology. The organisation concerns itself not only with technologies related to the Internet, but also with those related to biotechnology and the cognitive sciences. <sup>16</sup>
DIYbio Belgium (BE)	With a focus, mainly on making laboratory equipment and molecular biology, in a "Open Source" science and democratize the practice of biology <sup>17</sup> .

Others important “on-the-ground” stakeholder mapped are:

- BioHacking Experience (IT)

<sup>14</sup> For more information: <http://www.biofaction.com/about-us/> (access in 30.05.2017)

<sup>15</sup> For more information: <https://fablab-karlsruhe.de/> (access in 30.05.2017)

<sup>16</sup> For more information: <http://waag.org/en/about-us> (access in 30.05.2017)

<sup>17</sup> For more information: <http://www.diybio.be/index.php/en/> (access in 30.05.2017)

- Biotinkering Berlin (DE)

# Conclusion

The report aims to provide a strategy concerning the five stakeholder's dialogues that will take place during the project and also provide for a stakeholder mapping in order to identify potential to be invited to the dialogues, according to their expertise.

By integrating a wider societal aspect through the involvement of different stakeholders, resulting in mutual learning processes and strengthening of a knowledge base on all sides, the pilots will be enhanced, offering important insights for how innovation processes can work, which in turn will also inform the roadmap.

Stakeholders from industry, research, policy field and civil society will jointly, also through the stakeholder's dialogues, define, test out, evaluate, improve and, then, disseminate a roadmap for implementing RRI in industry. The project will pilot and demonstrate how industry and societal actors can work productively together according to the Responsible Research and Innovation approach, delivering practical evidence of the benefits for industry at large to follow up on similar paths. The roadmap and the experiences within the RRI pilots will be widely disseminated.

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