

Public Engagement in R&I processes – Promises and Demands

The current policy brief is the second one out of six that will be published during the Engage2020 project. It discusses the ways the society can be engaged in R&I practices as well as R&I policies, it presents the roles the public can play on the different levels of R&I processes and summarises the most important motives and achievements of public engagement.

The need for broad consensus in society on science and innovation policy and the growing criticism with regard to the management of risks and detrimental effects of the implementation of technologies led to a turn away from the established technocratic mode of governance in the field of science and technology (S&T), regarding S&T policy making as a closed shop activity of scientists and politicians, to a new approach in policy making engaging the public at large by various participatory practices (e.g. citizen conferences or stakeholder dialogues). The public can be involved at all levels of the R&I processes and R&I policy making.

PUBLIC ENGAGEMENT IN SCIENCE

There are a multitude of benefits associated with engaging societal actors in research and innovation. *Users*, for example, can be involved on all levels of the R&I process and can contribute with providing more reliable notion of users' demands and needs. The everyday adaptability of innovations can be improved by taking into account the practical knowledge of actual or potential users. Users can also provide knowledge for finding solutions for already identified problems or indicate still unknown problems and suggest possible solutions.

With regard to "problem oriented research" (research which is driven by problems defined by a community or

organised civil society group) *lay people* can contribute to each step of the research process. In this case, lay persons enter into formal interactions with experts as 'clients' and partners in problem solving. They can contribute with their own views on the nature of the issue at stake, as well as with specific knowledge on the environmental and social aspects that need to be considered when evaluating the impact of different technical or organisational solutions.

Although there are lots of examples of lay people contributing successfully to scientific projects, scientists are still not prone to include them in research due to data quality concerns. Most of the projects that involve lay people fall in the category of contributory projects, in which the role of the members of the public is primarily to provide data, while all the rest is left to the professional scientists. Lay people, however, may also intervene in the interpretation of data (collaborative research) or contribute to the scientific design of the research process (co-created projects).

PUBLIC ENGAGEMENT IN SCIENCE POLICY MAKING

Societal engagement can take place not only at different levels of R&I processes but also in terms of involvement in R&I policy making. In this case, public engagement is not about intervention in science or research as a practice but about involvement in decision making on the socio-political framework for funding and regulation of research and the implementation of innovations.

Public engagement is meant to connect established decision making processes (representative democratic bodies or management of a company) with societal debates, which increases the legitimacy of the decisions taken. Better (inclusive) democratic quality of the decision making process and/or of the decision itself improves the chances to find societal support. Public engagement does not have to be regarded as a



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substitute for established decision making structures and institutions, but as forms and modes of expanding the deliberative space and scope of voices included in the process of “informing” decision making. Public engagement can improve the conditions for a better informed policy making process in terms of taking into account relevant interests and having a better basis for finding compromises between conflicting interests as well as factual knowledge that is relevant to the decision making. Although the small panel of lay people involved in a consensus conference, for example, cannot represent the society, in a sense it ‘simulates’ an informed public sphere, which—according to the common understanding of democracy—forms the foundation for decision making processes in the system of representative democracy.

The central issue with regard to public engagement on any level of decision making is the relation of the public engagement exercise to the established decision making structure. This comprises the issue of knowledge being introduced by the society as well as the commitment of decision makers to the process and outcomes of public engagement. Political commitment to processes of public engagement is decisive to produce desired effects in policy making. Commitment could be enforced by formal rules about how to precede with public engagement outcomes in decision making processes but it will mainly be dependent on political factors that normally are not within the reach of public engagement procedures themselves. These conditions will vary case by case. On a general level, however, political culture has changed in a direction that enforces political commitment to public engagement. This has been demonstrated by the discussions on new modes of knowledge production, the new role for science as well as the debates on new forms of governance and responsible research and innovation.

ROLES OF THE PUBLIC IN THE DIFFERENT LEVELS OF R&I PROCESSES

There are different roles the public can play in the different levels of the R&I process:

1) **Setting R&I agenda** - It is possible for civil society organisations (CSOs) or lay people to be involved in the process of setting the research agenda of (national) R&I programmes through the mediation of a Technology

¹ *Technology Assessment* is an analytic and democratic practice which aims at broadening the knowledge base of policy decisions by comprehensively analysing the socio-economic preconditions as well as the possible social, economic and environmental impacts of the

Assessment (TA)¹ process/institution, which provides a knowledge base for decision makers in parliaments and governmental bodies. CSOs can also contribute to agenda setting in R&I policies via public consultations which invite views of CSOs on research programmes for important research areas. With regard to the direct involvement of CSOs in governmental advisory boards, although CSOs have asked for involvement in order to orientate the research towards societal needs, advisory boards still comprise mostly representatives of the scientific community and experts from related industries. In the business sector, users can influence the R&I agenda of companies with respect to taking up users’ demands and suggestions into research programmes or translating their demands into R&I projects.

2) **Supervising and assessing R&I** – The public can participate in the supervision and assessment of R&I programmes and projects in various ways. Societal groups can contribute to R&I policy making by discussing ethical aspects, possible risks and benefits and thus contribute to the socially sound decision making in regard to research programmes or regulatory approaches to R&I. Advisory boards including CSOs can observe the ethical or e.g. environmental principles in research processes. With regard to workplace innovation, employees can oversee the effects of the innovation processes on workforce’s needs and interests. In Science Shops communities (which are also often the initiators of a project) can supervise the research process and evaluate the results in the light of community members’ needs and expectations.

3) **Actively initiating and funding research** – In the recent years, a growing number of cases of research initiatives coming from CSOs and lay citizens have been observed. Especially in the sector of medical research patient organisations take an active role in defining research which should help to explore possible treatments for rare diseases. Another way for initiating research is the science shop model, where researchers offer support to communities, CSOs or groups of citizens to define and set up research that serves their own needs. In research areas where there is no appropriate funding provided, crowd funding can be used.

4) **Shaping the R&I process** – There are public engagement activities which are designed in a way to

implementation of new technologies. It is thus employed at the interface of science, society and policy making (For more information, See the website of PACITA project (Parliaments and Civil Society in Technology Assessment): <http://www.pacitaproject.eu>

give opportunities for lay people to put their specific knowledge into a research process. Researchers and citizens can cooperate in order to define a specific research question, or to discuss research results, the validity with regard to the problems-perceived by communities and the solutions needed and risks involved. It is also possible for users to be involved in shaping the R&I process. In the field of software design, for example, they can contribute with their practical knowledge to inspire improvement of technologies or new R&I innovation processes.

5) **Gather data** – Another possibility for public engagement is in the process of gathering data. Lay people can play the role of co-researchers (and not only observers) by making observations and interpretations in research fields like meteorology, astronomy, environmental monitoring, biodiversity research, brain research and many others. In most cases scientists are the ones to define the research process and the role of lay people is to contribute to the research with everyday life skills or common sense knowledge. Lay people can also be trained to become involved in more specific research tasks.

6) **Dissemination of R&I outcomes** – CSOs and/or lay citizens can play an important role in the dissemination of R&I results, especially in the case of medical research. Patient organisations often act as intermediaries between the research community and the public helping to spread the practically relevant knowledge. In other research areas the involvement of CSOs can imply the role of serving as a bridge between the scientific community and the wider public interested and/or affected by R&I processes. In the case of science shops, the dissemination of knowledge by participants may not only empower those involved in the project, but also other affected/interested citizens with regard to using the research results for their case.

MOTIVATIONS AND ACHIEVEMENTS OF PUBLIC ENGAGEMENT

The most important motives and achievements of public engagement can be summarised in three categories. These are:

a. Functional motives

- *R&I targeted towards societal needs* – This motive corresponds to the European Union's approach to R&I funding in the Horizon2020 programme, namely to direct R&I process towards problems that form the grand challenges of societal and economic development. The engagement of civil society in the

innovation process is important in terms of creating innovations that have user-friendly design and that meet needs and problems that would not be considered if the public was not involved.

- *More effective R&I processes* – Engagement of civil society and users can contribute to R&I process by making it more targeted and effective. This is the main motive of employees' engagement in workplace innovation processes. The innovation process has to adapt to the interests and knowledge of the workforce in order to run effectively. What is more, civil society can contribute with its knowledge to problem oriented research on risks and opportunities of the implementation of new technologies. Also basic research can benefit from the engagement of citizens, which has been demonstrated by the increasing number of citizen science projects.

- *Social acceptance of R&I outcome* – Civil society is more likely to accept the R&I outcome when they have been involved in its development and shaping. Public engagement does not guarantee that an outcome of R&I process will be accepted by the society but it is an opportunity to increase the chance of acceptability.

b. Political motives

- *Legitimation of R&I* – The quality of a decision taken cannot be separated from in-put legitimacy, i.e. the inclusion of the full scope of public perspectives relevant to the problem at stake in the decision making process. Although societal engagement is not a legitimisation guarantee, the lack of it may be problematic. A decision on any level of R&I process may be perceived as illegitimate if being ignorant to societal interests and values.

- *Empowerment of Civil Society* – Public engagement can be viewed as a way of empowering those whose opinions are normally disregarded in the R&I process. This can be considered as an element of democratising R&I policy making. Civil society actors are also empowered to have access to knowledge that otherwise would have been difficult to access. CSOs involvement in research or Science Shop projects enables the involved citizens to better understand the problem at stake and equips them with means to develop (innovative) paths for problem solving as well as with means to argue in favour of their position with a scientific backing.

- *Public accountability and responsiveness* – Nowadays, the community of scientists is aware of being accountable not only to their peer communities but also to the public. Public engagement provides a space

for societal and R&I actors to meet in order to enter into a mutual learning process and to improve the “responsiveness” of researchers and policy makers with regard to the expectations, priorities, demands and fears of the public. Direct involvement of lay people in citizen science research projects may (indirectly) contribute to improved responsiveness and accountability.

c. Cultural motives

- *Science in Society* – This motive presents public engagement’s functionality to establish a new way of communication between science and society – establishing a dialogue based on cooperation and joint problem solving. Lay people are thus not considered as “those outside” but rather as co-creators. Public engagement in this respect offers ways of (re-) integrating the scientific community and scientific institutions in society, which is more than just bridging both sides into a dialogue.

- *A new mode of “Public Understanding of Science”* – By being engaged in science and research, the society sees science as something that they can have a say in (the political aspect), they can use (research on behalf of citizens or CSOs), and they can do themselves (citizen or crowd science). Public engagement can contribute to the public understanding of science in a way that is more appropriate to an open equitable relation of science and society than the usual top-down approach of “educating”.

- *Public appraisal and appreciation of R&I instead of public acceptance* – Raising social acceptance of R&I is one of the most prominent issues in discourses on innovation policies and a perceived lack of public support. Public engagement at all levels and in all fields of practice offers the possibility of fostering new forms of public appraisal and maybe appreciation of research and technology development. Public engagement can help to base such appreciation in practical experience instead of just promoting an abstract belief in the “blessings” of research and innovation.

ABOUT ENGAGE2020

Engage2020 is a project funded by the European Commission (DG Research) that looks at research, innovation and related activities, and explores how members of society are involved today and, perhaps more importantly, how they could be involved in the future. The project maps how, where and why members of the public, stakeholders, consumers and other groups are being engaged in the research process, from early policy development to the delivery of research activities.

The core ambition of Engage2020 is to increase the use of engagement methods and policies by mapping what is practiced and to spread awareness of the opportunities amongst researchers, policy makers and other interested parties.

To learn more about the project, its deliverables and partners involved, visit the website <http://www.engage2020.eu>. For further inquiries, please contact the project coordinator or any of the partners in the Engage2020 consortium.



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