

Moving from reflection to **proactive engagement and action** on societal needs, values, and concerns



The move to action can be supported by:

- Building collaboration in the early stages of research and development and encourage creativity and design thinking
- Supporting the training of interactional skills, literacy and expertise
- Implementing rewards for researchers that invite other experts and societal stakeholder to discuss and contribute to their work

The issue at stake

A perceived increasing public mistrust in science has led to scrutinising the normative authority of scientists and science. One result is the call for scientific practices and scientific norms of public research to be at more publicly accountable. Regarding this accountability, RRI scholars have put emphasis on “responsiveness”, a term that refers to the alignment between scientific and societal values, in short, between science and society. In the debate on a more inclusive science, as well as safer technological solutions, the main question has been “who is going to be (potentially) affected, in what ways, and how may we develop better solutions?”.

Evaluation of perceived risks and benefits of new technologies like nanotechnologies may differ e.g. between experts’ and the public’s evaluations. Such differences are not only a normative challenge, they also influence the uptake, use and acceptance

The results from the citizen workshops suggest that citizens recognise and appreciate the promise of nanotechnologies, but they also realise the fact that scientific progress does not necessarily create merely benefits. Their recognition that benefits cannot be taken for granted because of technological development was clearly visible. Citizens repeatedly wanted the relevant stakeholders to make sure that nanotechnologies do not harm our natural environment or the human body.

Outcome GoNano Citizen Workshop 2019



of new innovations and technological solutions in e.g. healthcare (see also GoNano Policy Briefs 6 and 7). Therefore, aligning science with desired research strategies or product solutions, can also reduce losses of capital expenditure for the public as well as private research and product development.

GoNano strategy and key findings

GoNano's co-creation approach enabled the transition from a mainly risk-oriented approach to an active involvement of non-scientists in the product development process. The aim of this was to focus deliberation on the relation between values, needs, and concerns product ideas or research lines. Doing this gradually and iteratively allowed for better alignment of the guiding principles and real-life research undertakings or plans and to take them further in a creative, active and common manner. This process created transparency (as a foundation for general trust) between different actor groups (i.e. research actors and a wider public), allowed for dialogue and networking between participants, and resulted in win-win situations for scientists, experts and other participants.

Key recommendations on moving from reflection to action

- Leave space for the recognition of opportunities and consciously integrate "interactional expertise"

Opportunities to enhance responsiveness require attention (and time) to identify them, and the openness and willingness to recognise and act on them.

- Build bottom-up to encourage creativity and design thinking

There is clearly a need for collaboration between researchers, stakeholders and citizens, and one should provide the opportunity for all to actively participate from the beginning, contributing ideas as much as identifying concerns. This requires time and a good organisation which needs to be supported by management and financial resources.

- Support the training of interactional skills, literacy and expertise

This can successfully enhance the collective potential to identify suitable scopes within research design settings and relevant questions that can meaningfully be addressed by actors striving for responsiveness.

- Implement rewards for researchers in the research system

Facilitating responsiveness between research and broader values to counter a perceived democratic deficit is widely appreciated. Policy needs to ensure a provision of benefits on a systemic level for individual researchers who are willing to invest in mechanisms and structures to foster responsiveness.

The EU-funded GoNano project (Governing Nanotechnologies through Societal Engagement) aims to align future nanotechnologies with societal needs and concerns. From September 2017 until December 2020, GoNano brought together citizens, researchers, industry, civil society organisations and policy makers across Europe to co-create concrete suggestions for future nanotechnologies.

The GoNano policy briefs present the results of the engagement activities and provide recommendations based on the GoNano experiences. This is the second of a series of seven policy briefs. Please see <http://gonano-project.eu/policy-briefs/> for the complete series.



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