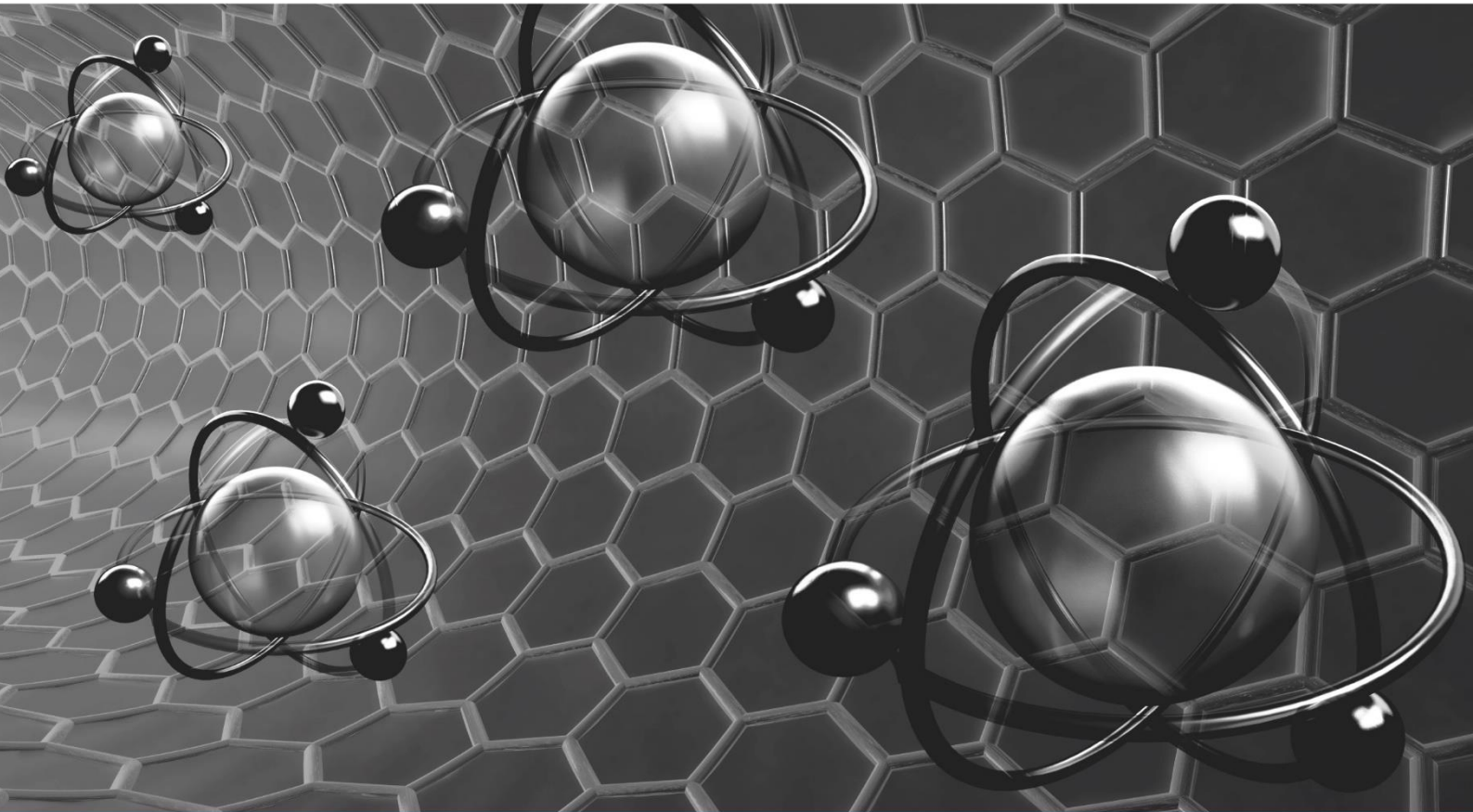




NANO2ALL
SOCIETAL ENGAGEMENT ON RESPONSIBLE NANOTECHNOLOGY



preliminary results - Multi-Stakeholder Dialogue in Italy



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NANO2ALL – MULTI-STAKEHOLDER DIALOGUE

Organised by MUSE

Trento, Italy – October 21, 2017 (9:30 – 17:30)

Venue: MUSE Science Museum

Context

Nanotechnologies offer interesting promises to improve the quality of life in many areas. Alongside these promises, nanotechnology applications also raise public concerns about potential risks by raising relevant social and ethical issues.

Funded by the European Union under the Horizon 2020 Research and Innovation Programme, the NANO2ALL project is based on a new approach to addressing scientific research and the transfer of its results and applications to society, known as Responsible Research and Innovation (RRI).

Its goal is to improve the relationship between those who produce scientific innovation and those who can benefit from it. Ultimately, the project seeks to promote the transparent co-production of knowledge, more responsive to the needs of society and capable of engaging all the people involved in scientific innovation: who produces it, who benefits from it and who governs it.

To do so, the project organises a series of constructive dialogues to address knowledge gaps between various types of actors and develop a shared understanding of the benefits and risks of advancing responsible nanotechnology. In particular, the NANO2ALL national multi-stakeholder dialogues bring together diverse groups of stakeholders from nanotechnology sectors with the goal of discussing how to better identify and integrate societal perspectives in nanotechnology research and innovation processes.

Its outputs will go on to inform a series of evidence-based recommendations and a roadmap that reflect the feedback of the “societal voice”, including its concerns and opportunities.

MUSE, the science museum of Trento, privileges interdisciplinary experiences for the public’s engagement in science, allowing the sharing of knowledge and perspective among various actors through informal and formal settings.

The Multi-stakeholder dialogue

The Italian multi-stakeholder dialogue was held on October 21, 2017 at MUSE, for an entire day. Twelve participants, aged between 28 and 70, were selected as relevant national and local representatives of 5 categories of stakeholders from the field of nanotechnology in textiles, or Nanotextiles:

- i. 2 policy makers belonging to “The Research and University Department” and to the “Agency for Health Services” of Trento Autonomous Province;
- ii. 2 researchers affiliated to the “University of Trento” and to the “University of Bergamo” (Italy);
- iii. 2 representatives of the textile company “De Caro”;
- iv. 2 representatives of the civil society organizations “FIDAPA” (Italian Federation of women, arts, professions and business) and “Tessile e Salute” (National observatory on textile, clothing, leather and footwear);
- v. 2 journalists from the press office of SAT (Trentino Mountaineers Society) and from Wikipedia.

In addition to these categories, MUSE invited 2 citizens who had previously participated in the meeting of May 5, 2017 (the Italian NANO2ALL Citizens Dialogue). Their task was to represent the public voice by bringing the point of view of lay citizens into the discussion.

During the multi-stakeholder dialogue meeting, participants analysed different nanotechnology scenarios and perspectives and discussed how to achieve innovative research and accountability and how to bring societal values and concerns into the innovation process. By taking into account nanotechnology in textiles, participants also had the opportunity to explore the changes that the introduction of a new technology may bring into the relationship between the various actors of a society.

The first exercise, “**What is important?**”, analysed the output of the Citizen Dialogues. The citizens’ concerns, needs and values emerging from the dialogues were presented through a series of posters about imaginary “future objects” built with nanotechnology applied to textiles.

Participants were asked to look closely at the posters and note down their impressions, and then they were invited to interview each other in pairs. This exercise also aimed at introducing participants to the theme of nanotechnology and RRI and at making people more relaxed together. During these interviews, participants expressed the hope that nanotechnology should improve everyone's life and that research results should be applied to the community wellbeing.

In the second exercise, “**What aspects are important?**”, the group envisaged several future scenarios about nanotechnology in the textile sector.

By means of a participatory and role-playing game, participants were invited to build 2 futuristic scenarios, a desirable (utopic) and an undesired (dystopic) scenario, that would take place within a time horizon of 15 years. The exercise's aim was to understand which societal aspects are critical in the framework of research and innovation in the nanotechnology field. Interestingly, the dystopic scenario seemed to reflect actual Italian dynamics and, in particular, the various actors payed less attention to the voice of the industry representative.

During the utopic scenario it was pointed out that the collaborations among all actors seemed to be more frequent and at the same time more superficial than within the dystopic scenario. At the end of the utopic scenario, the participants pointed out a lack of critical thinking, since everyone focused on their own interests, without interacting with others' choices too much.

In both scenarios, the research representative was the actor who received more trust from the public voice (citizenship representatives), even if the research roadmap was not always as clear as well the results.

As a conclusion of this exercise, participants expressed how difficult it is to take decisions and, at the same time, how challenging it is to find solutions by proposing scenarios, by changing perspectives and by exchanging different roles.

In the third activity, "**Which (inter)actions are needed?**", participants framed the current situation of the innovation process and the involvement of the various actors. This frame was the starting point to develop a desirable situation and to identify the most suitable strategy (actions and interactions) to pursue in order to implement a research and innovation agenda more attentive and responsive to society's demands.

The need to be informed at all levels emerged out of the discussion, but at the same time, participants recognized that citizens' knowledge and skills are also required. Therefore, participants proposed (in one table) to identify and involve a new group of actors: those citizens who are better informed about technologies and aware of the magnitude of the phenomenon of nanotechnology, or who represent specific societal needs. Labelled as "competent agents", they would mediate between citizens and policy-makers, industry and research. Participants speculated that, in a new scientific or economic approach, the presence and actions of these agents could represent a factor that tips the balance in one direction or another, towards a utopic or dystopic scenario respectively.

In the second dialogue table, participants pointed out how the innovation process is more a circular process than a linear one, and how, at each stage of the process, all the actors are involved but with different weight. They also discussed about the importance of the information process and the difference between information and advertisement.

Some findings and conclusions

In conclusion, the need for greater interaction between the sectors of society was recommended. This would not necessarily involve citizens at every stage of the innovation process, but rather making sure their spokespersons are included. Depending on the case, in addition to "competent agents", policy makers or non-profit associations may need to be included.

The role of the media was considered fundamental. The follow-up level of the information was discussed and participants questioned whether responsibility should fall more on the media (which must inform) rather than on citizens and individuals (who must ask for information and at the same time keep themselves up to date).

These extensive discussions resulted in several concrete recommendations for (inter)actions and participants' thoughts on the pre-conditions that would enable them to take hold.

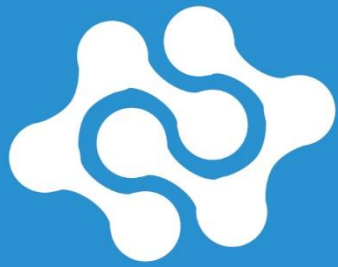
Participants remarked on the importance of competence and knowledge, as fundamental step for each (inter)action. Consequently, they pointed out how important the role of the media is in our society, in particular that there be a proper interaction between media and citizens. This requires the media to follow a professional ethics code in order to ensure trust in the information provided.

Participants also recommended better interaction between policy makers and researchers: policy makers have the duty to interpret the values of citizens and their needs in order to regulate all sectors of the research and eventually fund, monitor and filter [the researchers' activity/innovation]. In order for this to take place, the ability to balance different needs with a defined economic base is a necessary precondition.

In conclusion, participants were pleasantly involved in a broad, articulate and challenging discussion on the social aspects of introducing new technologies and innovation, from the research phase to the market.

They showed enthusiasm for working side by side with people whom they had met for the first time on this occasion people with different training and from different realities. They exchanged different opinions and discussed how to act and react to the introduction of new technological issues. They wished to have more time to continue the dialogue meeting.

The opportunity to develop a multi-faceted and complex reflection on the role and responsibilities of both individuals and institutions was much appreciated. The active, responsible and informed participation of people is a possible key to both collaboration and improving the flow of information.



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