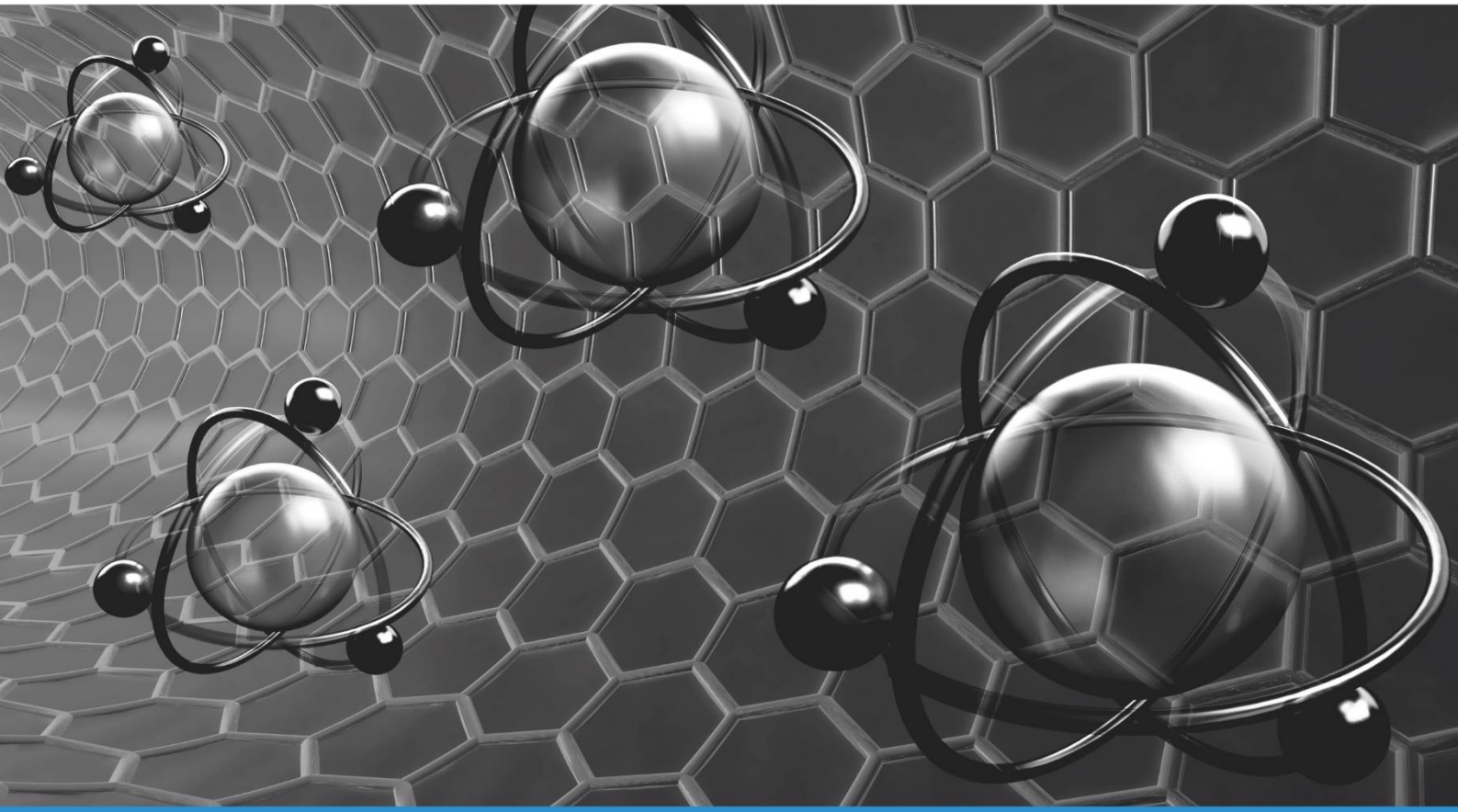
NANO2ALL

SOCIETAL ENGAGEMENT ON RESPONSIBLE NANOTECHNOLOGY



preliminary results - citizen dialogue in Spain

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NANO2ALL – CITIZEN DIALOGUE

Organised by ICN2 – Catalan Institute of Nanoscience and Nanotechnology

Barcelona, Spain – June 7, 2017

Venue: CCCB – Centre de Cultura Contemporània de Barcelona

Context

Nano2All is an ambitious Coordination and Support Action project funded under the European Commission's H2020 research and innovation funding programme that brings together 12 project partners across Europe and beyond. Its aim is to support responsible research and policy-making in nanotechnologies through consultation and engagement with all stakeholders from civil society to industry. One of its main lines of actions are its citizen dialogues, the last of which was held this week in Barcelona.

The aim of these dialogues is to gauge the impressions and understanding of the general public in areas of research and/or technology development related to nanotechnology. Participants are set short interactive tasks that encourage reflection and debate. In total, six sessions have been held in Israel, France, Sweden, Poland, Italy and Spain, the main outcomes of which will be used to inform decision-making processes at the respective national and EU levels.

The Spanish Nano2All citizen dialogue

The June 7 event was led by the ICN2 and focused on the concept of brain-computer interfaces. It took place at CCCB in the heart of Barcelona's Raval district. After a short introduction to nanotechnology, around a dozen participants, guided in the process by **Àlex Argemi**, head of the ICN2 *Marketing and Communications Department*, "invented" their own nanodevices and then projected themselves into the future to see what a world with these devices might look like. The inventions were incredibly varied, from a brain implant to restore speech and communication skills to an intravenous sensor and app combo that could tell you what nutrient(s) your body needed, what foodstuffs to get it from and maybe even stimulate a craving for it...

But the discussion wasn't without its dark side, with a sensation enhancement device intended to aid learning and augment media experiences being misappropriated for use in psychological torture, or safety glasses designed to heighten the wearer's attention when operating dangerous machinery potentially leading to workforce exploitation and the classification of people as "valid" or "invalid".

Some findings and conclusions

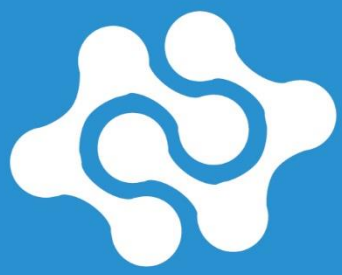
The session ended with the participants summarising the needs that can and should be addressed by brain-computer interfaces based on nanotechnologies, the concerns and potential negative consequences of developments in this area, and the values that they should embody or strive for.

For instance, using nanodevices to enable the recovery of cognitive and motor functions received universal approval among the participants. However, concerns were raised that this same technology could be packaged and sold by private companies as an intelligence- or strength-enhancing device that would compound existing and even create new social inequalities. Or worse, it could be used without people's knowledge to limit intelligence, ambition and/or physical abilities in a Hunger-Games-meets-Divergent citizen classification scenario.

So, while the pursuit of more efficient, more safety compliant and fairer societies and social processes were valued highly, the potential for abuse of the devices invented by the participants for these purposes was never far from view.

A summary of all of the themes discussed at this Nano2All debate will be passed onto the next stage in the process, the stakeholders dialogues, and used to inform the Europe-wide innovation agenda and roadmap to societal engagement in nanotechnology. The ICN2 will be coordinating the stakeholders dialogue on the same theme of brain-computer interfaces, being held in Barcelona next November.

On a side note, **Jantien Schuijer**, junior researcher at Vrije Universiteit Amsterdam and partner of Nano2All, commented on the lively nature of the debates in this Spanish context. By all accounts it was a very enjoyable morning that delivered much food for thought. A short video clip of the event will be available soon.



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