Nano and the public

Ilse Marschalek and **Margit Hofer** reflect on the outcome of their international NanOpinion project, focusing on raising public awareness about nanotechnology.

hat does it take to get people interested in the complex topic of nanotechnology? In our NanOpinion project (http://nanopinion.eu) we took on the challenge of answering this question by reaching out to the general public by engaging people in diverse communities in a wide range of activities and discussions. One of the main difficulties we were confronted with was getting in touch with so-called hard-to-reach groups. After all, people with no particular interest in science and technology are very unlikely to be found among typical science museum visitors. Building on the previous success of moving activities, such as the nanoTruck, we decided to come up with a solution that wouldn't necessarily require potential attendees to book tickets in advance or even to have previously expressed specific interest in the topic. In collaboration with our art and design team we created a tangible construction — later named 'orange mushroom' by our team due to its peculiar shape. Three sets of these monitoring stations were sent off on a journey across Europe and Israel¹.

With the help of our consortium partners and networks we lined up local teams at each site who conducted and promoted activities designed for the project. We managed to organize outreach events in 44 different locations, covering 26 cities in 18 countries, getting in contact with approximately 14,400 participants. These 'street labs' were aimed at encouraging people to voice their thoughts on nanotechnology and raise general awareness about the subject.

To ensure effective engagement with non-scientific audiences, we had to find a way to motivate people to participate in our street labs. By advertising events closely related to other commonly expressed interests such as sports, food and medicine, we were able to successfully introduce our visitors to the field of nanotechnology. The event locations were carefully chosen so as to target hard-to-reach groups. In the search for non-scientific audiences, we took part in various events organized at community centres, parks, shopping malls and city squares. We went to jazz, puppetry and arts festivals, school open days and sports events. On almost every occasion people were surprised to find out about the NanOpinion project activities. Our booth was often installed in waiting areas where passers-by were more likely to engage in conversation.

At every event we had a group of facilitators ready to provide any relevant information and answer various questions. They showed nanotechnology products, demonstrating experiments out of the 'nano schoolbox', a kit for schools containing different experimental setups and materials for regular 'nano shows'. They also used science busking to show general physical phenomena. Many of the stations had opinion boards, asking busy visitors for quick feedback. We had tablets and computers with background information on nanotech and plasma screens playing videos and slide shows.

Often fascinated by our mushroomshaped display, people would approach us to find out more. "The visual attraction of the monitoring station — its colour, aesthetics — and its location in the middle of the square made me curious," said one of our visitors in Spain². Once on site, people could get some general knowledge about nanotechnology and learn about the technological capabilities of our demonstrators. Among other things, the attendees wanted to understand for what and for whom this project was intended, and who were the people behind it. But most importantly, we were pleased to see that our activities sparked a great deal of curiosity and interest among the participants despite the complexity of the topic. Some people would return to the station after a while, often with their friends and family and a much better idea about nanotechnology. So it made a lot of sense to keep our display open for longer periods.

Reflecting back on the accomplishments of our project, we realized that the event organizers, with their relevant scientific background, inspiring attitude and great overall performance, were the key to its success. The demonstrators available at the event were indispensable in providing visitors with a good degree of interaction, stimulating their interest in nanotechnology via simple illustrations of its capabilities. Leaflets, brochures and other handouts distributed at the street labs were equally important. Through our experience we learnt that a good mix of activities aimed at different target groups with emphasis on interactive demonstrators serves to initiate the interest of general audiences.

Working on the project, we realized that the language is another key factor for any outreach activity, especially for difficult topics like nanotechnology. Handouts should be translated and adapted to specific target groups. Keeping in mind that most of the people have very limited prior knowledge of the subject, their introduction to nanotechnology can be facilitated by providing clear examples of its real-life applications, which in many cases can be done without even using the word nanotechnology.

With the help of our eye-catching orange mushroom we were able to attract significant public attention. It was designed as a multifunctional setting with dedicated spaces for small group discussions, video and experimental demonstrations and other activities specifically developed to reveal visitors' attitude towards nanotechnology³.

So, after all, what does it take to get people interested in nanotechnology? We still don't have a definitive answer to this question but through the project we've learnt that to some extent it can be achieved by illustrating nanotechnology applications with real examples from everyday life. In doing so it is vital to communicate a clear message about the aim of the outreach activity and the importance of the feedback from every single participant.

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