Responsible and safe nano-innovations – The role of stakeholder engagement

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Responsible and safe nanoinnovations

...to make research and innovation more effective in addressing today’s grand societal challenges.
...need to find ways to integrate societal considerations more effectively into research and innovation decisions.

Stakeholder engagement in RRI

• The early engagement of stakeholders can lead to productive insights and perspectives on the future application of research;
• These perspectives raise the awareness of researchers of the relevance of reflection on possible future use and impacts of their work;
• The outcomes of this process can ‘modulate’ the direction of research.
Stakeholder engagement in RRI

...to better align research and innovation to societal challenges.

...combining

(i) ‘upstream’ public engagement (by way of dialogues that integrate societal needs, ideas and expectations into the policy debate)

(ii) ‘midstream’ engagement (by organising innovation workshops at the level of the R&D practices that are at the heart of the research and innovation enterprise)

(iii) ‘downstream’ strategies for communication, outreach, education and training.
**NanoDiode – Key facts**

- **Project title:** Developing Innovative Outreach and Dialogue on responsible nanotechnologies in EU civil society
- **Start:** July 2013
- **Duration:** 36 months
- **Call identifier:** FP7-NMP-2013-CSA-7
- **Beneficiaries:** 14 partners
- **Total budget:** 2.4 mio €

The NanoDiode project established a programme for outreach and dialogue to support the responsible development of nanotechnologies in Europe. The consortium brought together a range of stakeholders including industry, civil society organisations, researchers from the natural and the social sciences and artists.

NanoDiode webpage: http://www.nanodiode.eu/
NanoDiode – Aims

I. Develop new strategies for outreach and dialogue along nanotechnology value chains;

II. Organise engagement and dialogue at the 'upstream' level of research policy;

III. Enable processes of co-creation during research and innovation;

IV. Professionalise nanotechnology education and training;

V. Establish an innovative programme for outreach and communication on nanotechnologies;

VI. Assess the impact of the project’s activities and provide policy feedback with a view to Horizon 2020.
Overview of the NanoDiode project, by Hannie van den Bergh (Studio HB)
NanoDiode – Project outcomes

• 30+ outreach and dialogue events organised throughout Europe, engaging citizens and stakeholders in the debate on nanotechnologies
• 70+ videos, posters, newsletters, presentations and articles
• 20+ activity reports, project fact sheets and policy briefs, available at www.nanodiode.eu
• 1,500 Europeans gave their views on the potential impacts of nanotechnologies
• Over 70% responded positively when asked about the effect of nanotechnologies on our overall way of life, but there were concerns on the effects on the environment, health and safety
NanoDiode – Project outcomes

What do you think about the use of nanotechnologies in the following areas of innovation? (in %)

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Stakeholder engagement – Key messages

Citizens’ dialogues are most useful in the early stages of technological development.

Various activities should encourage mutual learning, building on the symmetry of ignorance: the notion that all experts in one field are laymen in most others.

Different visions on the ways in which nanotechnologies could impact our society need to be respected, without dictating which perspective is more relevant or important.

Buy-in from all stakeholders will be essential for the transition towards a research and innovation system where societal considerations become part of the innovation drive rather than a problem to be addressed.
BioNanoNet Forschungsgesellschaft mbH

• Our partners offer scientific expertise:
  – Molecular Imaging, Drug delivery, Molecular targeting, Nanotoxicology, Biobanking, Biosensors, Process analytical technologies (PAC)...

• ...and BioNanoNet adds know-how in...
  – NanoSafety, Safe-by-Design, regulatory aspects
  – Coordination, management, communication and dissemination activities
BNN safety & toxicology team

Andreas Falk  Susanne Resch  Christa Schimpel
NanoMedicine-Austria

• Austrian Platform founded in 2015 by BioNanoNet

• Aims:
  – Fostering the Austrian Nanomedicine-community in science, research and application to boost interdisciplinary expertise
  – Creating synergies between Austrian academia, research facilities, industry and policy makers
  – Coordinated cooperations on national and international level
  – Representation of existing knowledge and scientific expertise in European platforms (e.g. ETPN) → NM-A Expertise Folder

• Focus Areas:
  (i) Nano-Therapeutics and Targeted Delivery
  (ii) Nano-Enabled Imaging & Diagnostics
  (iii) Nanotechnologies for Regenerative Medicine
1st NanoMedicine-Austria Day

5th of April, 2016 at Danube University in Krems, Austria
SusChem Austria

• SusChem is the European Technology Platform for Sustainable Chemistry that brings together industry, academia, governmental policy groups and the wider society

• Aims:
  – SusChem’s mission is to initiate and inspire European chemical and biochemical innovation to respond effectively to society’s challenges by providing sustainable solutions.
  – SusChem’s vision is for a competitive and innovative Europe where sustainable chemistry and biotechnology together provide solutions for future generations.
  – SusChem’s priority areas, led by industries, include Resource and Energy Efficiency, Water, Raw Materials, Smart Cities, Enabling Technologies and Education.
SusChem Austria Strategic Board

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Member of strategic board  
TU WIEN - Institute of Chemical Engineering (Getreidemarkt 9, A-1060 Vienna)

9. nanoNET-meeting - Nov 16th, 2016
Susanne Resch
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Danke für die Unterstützung an:

9. nanoNET-meeting - Nov 16th, 2016