

The need for a comprehensive view on public engagement in S&T – the case of nanotechnology in the Netherlands

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	Societal sphere	S&T sphere	Political sphere
Informing	<p><i>Public understanding of science</i></p> <p>One-way communication to inform lay citizens</p>	<p><i>Classical ELSI-research, upstream reflection</i></p> <p>ELSI-research to timely signal problems and inform researchers to stimulate development of desirable solutions</p>	<p><i>Classical parliamentary TA</i></p> <p>TA research to timely inform MPs</p>
Engaging	<p><i>Participatory TA, public dialogue, upstream public engagement</i></p> <p>Two-way communication between citizens, experts and policy makers; TA to stimulate the public debate on science and technology</p>	<p><i>Constructive TA, real-time TA, upstream public engagement</i></p> <p>Engaging scientists in a dialogue with citizens and stakeholders to identify problems and stimulate the development of desirable solutions</p>	<p><i>Participatory parliamentary TA</i></p> <p>TA to timely engage MPs in the political debate on science and technology</p>

	Societal sphere	S&T sphere	Political sphere
Informing	<ul style="list-style-type: none"> Rathenau study (Van Est et al. 2004) Societal Dialogue Nanotechnology (2009-2010) 	<ul style="list-style-type: none"> Foresight study STT (1998) TA NanoNed (2005-2010) TA NanoNextNL (2011) 	<ul style="list-style-type: none"> Expert Committee Royal Academy of Art and Sci (2004) Gezondheidsraad (2006) Cabinet View on Nanotechnologies (2006) Dutch Food and Consumer Product Safety Authority (VWA 2007) Action Plan on Nanotechnologies (2008) Rathenau study on nanodialogue (Hanssen et al. 2008) Advice by Social Economic Council (SER 2009) Agenda for Nanotechnology by Commission Societal Dialogue Nanotechnology (CSDN 2011)
Engaging	<ul style="list-style-type: none"> Rathenau workshop on nanotoxicity (2004) Series of Rathenau workshops (2004) Rathenau workshop with CSOs (Hanssen et al. 2008) Societal Dialogue Nanotechnology: CSO participation in 8 out of 35 projects (2009-2010) 	<ul style="list-style-type: none"> TA NanoNed (2005-2010) TA NanoNextNL (2011) 	<ul style="list-style-type: none"> Public meeting "Small technology – Big consequences" organised by Rathenau & parliamentary Theme Commission (2004) Parliamentary debates (2004-2011) Stakeholder platform Sound Board Group Risks Nanomaterials Parliamentary round table hearing organised together with the Rathenau Instituut (Parliamentary Documents 2009a).

Analysing the nanodebate



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Technology Assessment

- Questions to be considered:
 1. Which types of activities have (not) been organised?
 2. Relationship between informing and engaging activities?
 3. Interaction between information and engagement processes within the different social spheres?
 4. Ways to overcome organisational and institutional inertia in the governance of S&T?

Informing and engaging

- Both informing and engaging play important, complementary roles: drive each other! (as for example Health Council Report)
- Engagement processes require custom-made information (as for example produced in the Dutch Nanodialogue)



Interaction between the spheres



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Technology Assessment

- *Informing activities* in societal and S&T sphere have impacted activities in the political sphere
- Initiatives in the political sphere have impacted *engaging activities* in societal and political sphere
- Impact of *engaging activities* on political sphere less clear-cut!

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dyname kennis
 verandering - innovatie

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Conclusion: dynamics and constraints in the Dutch governance of nanotech



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Technology Assessment

- Dynamic pattern of interaction between informing and engaging and between different social spheres
- But also constraints in the relation between spheres. Might to some extent be necessary constraints, especially in regard to “public engagement”? Ten Lessons for a Nanodialogue (Rathenau Instituut 2008)