

**‘Implementing RRI’ in NUCLEUS**  
**- some considerations based on**  
**the NanoDiode experience**

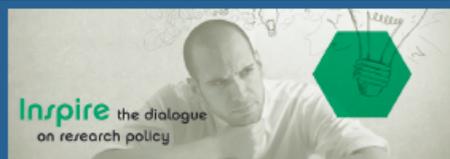
***Daan Schuurbiers***

***NUCLEUS Annual Conference, 14 October 2016, Lyon***



*NanoDiode is a Coordination and Support Action funded by  
the European Union under Grant Agreement 608891.*





## Inspire

'Gauging European citizens' views on innovation in nanotechnologies, as well as the relevant societal and ethical issues. Sharing ideas and inspirations policy-makers, researchers and industry.

### NanoDiode survey

- Map non-expert Europeans' preferences for fields of nano-innovation

### School kids' and students' competition on innovative ideas

- Engage European youth in the discussion
- Highlight young Europeans' preferences for fields of innovation



## Create

Co-creating during research and innovation by way of deliberation, user committees and regulatory research processes.

### Deliberative processes

- Bringing together researchers, civil society organisations (CSOs), industrial partners and policy-makers
- Discuss nanotechnology innovations

### User committees

- 'Users' (industrial customers as well as consumers) identify and discuss key challenges, desired properties and technical features



## Engage

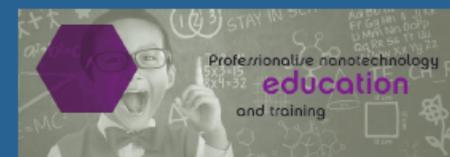
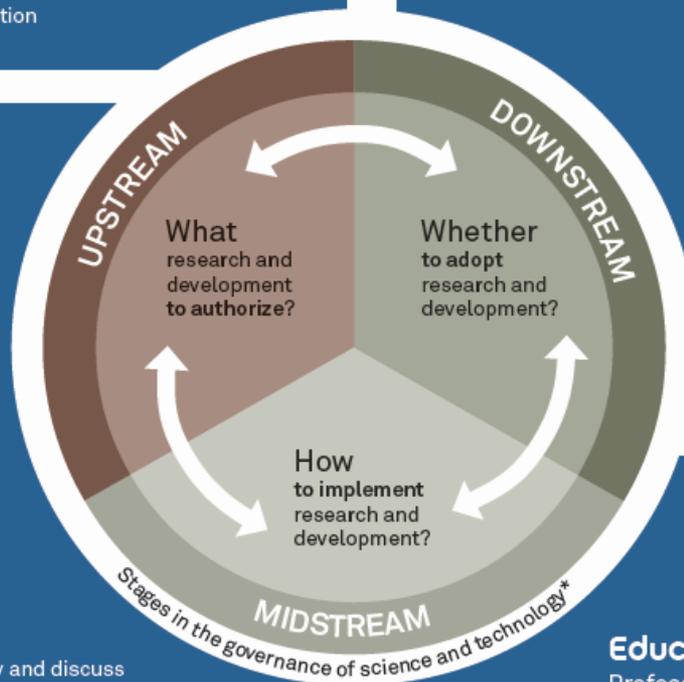
Involving stakeholders and civil society in a coherent outreach and communications programme on nanotechnology.

### Engagement

Engaging stakeholders and citizens in constructive dialogue on the ways that nanotechnologies could benefit society. By involving a broader range of stakeholders in technological decision-making, enhance the responsiveness of nanotechnology and innovation.

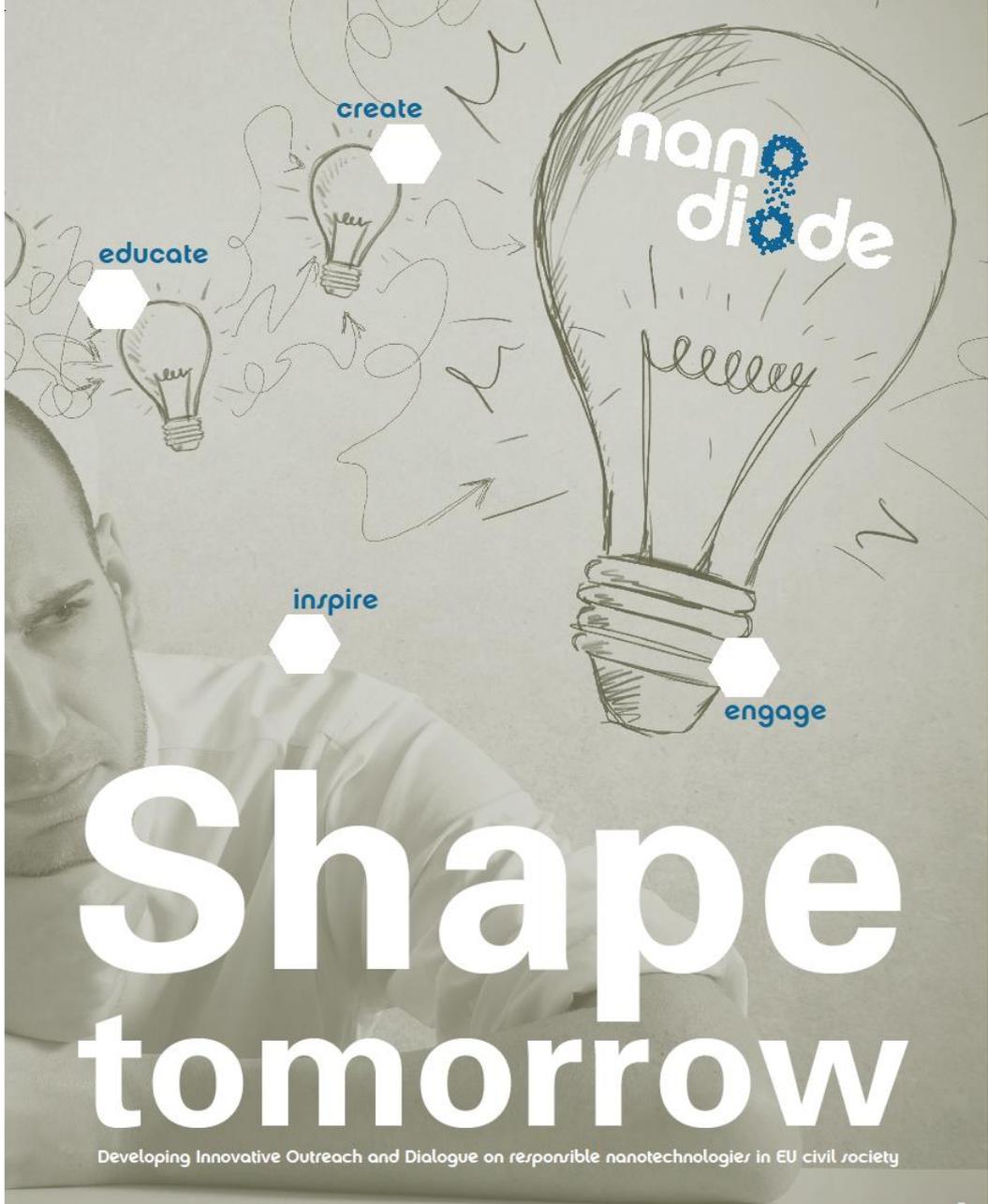
### Communication activities

- Nano Tubes
- Nano Bazaar
- Picture Contest and Exhibitions
- Student Journalists Competition
- Nano Slams
- Nano Trivia



## Educate

Professionalising nanotechnology education and training, establishing a multidisciplinary 'community of practice' of



create

educate

inspire

engage

nanodiode

# Shape tomorrow

Developing Innovative Outreach and Dialogue on *responsible nanotechnologies* in EU civil society

[www.nanodiode.eu](http://www.nanodiode.eu) find us on     

design studio HB

4 action plans for outreach and dialogue on nanotechnologies

14 project fact sheets

1500+ responses to a public survey on nanotechnologies

3 NanoBazaars attracting 4,000 visitors

6 third generation deliberative processes involving 175 participants

7 citizens' and multi-stakeholder dialogues

3 regulatory research workshops in France, Belgium, and Italy

3 journalist workshops in Poland, Belgium and Greece

56 NanoTube videoclips receiving 12,500 views

11 experts in a Community of Practice on nanomaterials in the workplace

27 interviews with academics and practitioners around Europe

10 posters on NanoDiode and specific activities

5 user committees bringing together 100 users and producers of nanotechnology knowledge and applications

2 NanoSlams in Spain and Germany

2 school competitions involving 66 groups of school students around Europe

15 reports on individual tasks and 4 progress reports

2 policy workshops on nanotechnology governance in Brussels

7 school workshops and 3 teach-the-teacher workshops

6 NanoGallery exhibitions

60 in-depth interviews in 6 different countries

Home > Videos

### videos

The NanoTube is a collection of short videoclips, interviewing specialists around Europe who work with nanotechnologies in different ways. Physicists, chemists, toxicologists, philosophers, artists, sociologists, industrialists and policy makers shed light on how they think nanotechnologies will impact society. Taken together, the clips express the variety of hopes, dreams, expectations, fears and concerns associated with nanotechnologies.

All categories   All countries







**nano  
diode**

Develop new strategies for outreach and dialogue  
along the nanotechnology value chain



## Project fact sheet 1

# The NanoDiode project

## Enabling dialogue on nanotechnologies

- 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](http://www.nanodiode.eu)

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

From July 2013 to June 2016, the NanoDiode project has organised a wide range of outreach and dialogue activities. Different work packages addressed different stages of the research and innovation process: from policy making and research to the diffusion of research outcomes in society. :

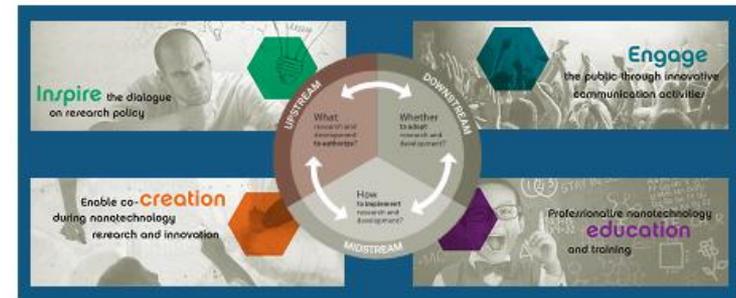
**WP2 INSPIRE** initiated engagement and dialogue at the 'upstream' level of nanotechnology research policy, organising a survey on public perceptions, a school competition and a series of citizens' dia-

logues on nanotechnologies;

**WP3 CREATE** sought to enable processes of co-creation at the 'midstream' level of concrete nanotechnology research and innovation processes, organising a series of 3rd generation deliberative processes, user committees and regulatory research workshops throughout Europe;

**WP4 EDUCATE** aimed to professionalise nanotechnology education and training, identifying and selecting the best tools for nanotechnology education and establishing a community of practice for safe working with nanomaterials;

**WP5 ENGAGE** organised activities at the 'downstream' level of public communication on nanotechnologies including the NanoTube, NanoBazaar, NanoGallery and NanoSlams.





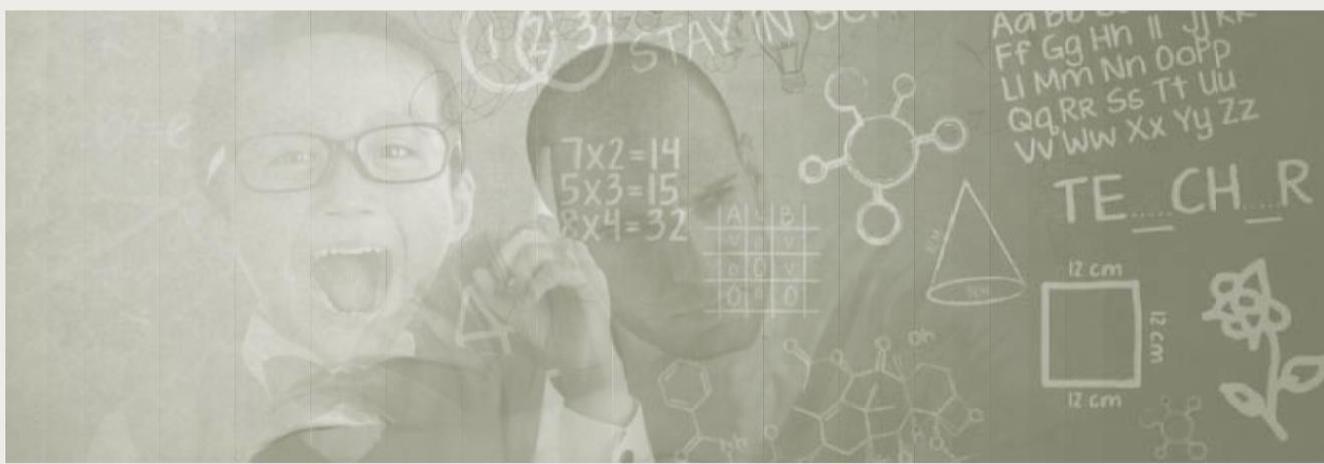
  
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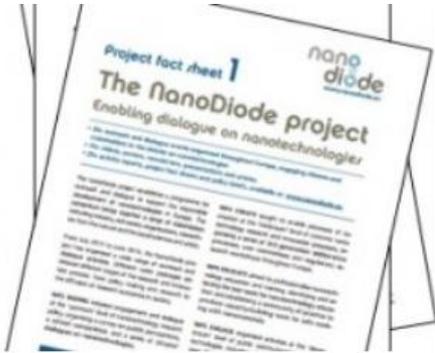
NanoDiode establishes an innovative, coordinated programme for outreach and dialogue throughout Europe to support the effective governance of nanotechnologies.  
[More about NanoDiode](#)

Tweets by @NanoDIODE



NanoDiode is a Coordination and Support Action funded by the European Union under the NMP Cooperation Work Programme of the 7th Framework Programme, Grant Agreement n° 608891.

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### **NanoDiode fact sheets**

The NanoDiode fact sheets provide brief summaries of the various activities within the NanoDiode project and their most ...



### **Governance workshops: engaging societal stakeholders**

The NanoDiode project organised two innovation governance workshops to discuss the project findings with policy makers a...



### **NanoTube Videoclips**

The NanoTube is a collection of short videoclips, interviewing specialists around Europe who work with nanotechnologies ...



### **Report on third generation deliberative processes**

One of the tasks of NanoDiode was to arrange stakeholder deliberations on questions on nanotechnology in six of the part...



### **NanoBazaar**



### **Report on User Committees**



### **Report on risk governance for**



### **Citizen survey and in-depth**

# Building a bridge to NUCLEUS...

- Focus on 'midstream' engagement activities:
  - '3rd generation deliberations'
  - 'user committees'
  - 'regulatory research workshops'
- ***Explore how to engage societal stakeholders more productively in R&I decisions***
  - Findings suggest relevant considerations for 'implementing RRI' in NUCLEUS pilots

# Societal engagement at the midstream

– What did we learn?

Conditions for more productive stakeholder engagement along three dimensions:

1. Mandate
2. Organisation
3. Uptake

# 1. Mandate - Impact of stakeholder engagement depends on:

- relation to formal processes and initiatives (European sectoral dialogues, Solvay Way)
- driven by someone 'on the inside' (champions)
- continued interactions
- binding outcomes

## 2. Organisation

- venue, duration, dissemination
- getting the 'right' participants around the table:  
balanced representation, those who have a *stake*.
- enabling dialogue on what is actually *at stake*
- specificity: discussing real-life decisions

# 3. Uptake - from constructive dialogue to practical action

- *Most 'enactors' do not see societal engagement as core business.* Participation driven by a sense of civic duty, not seen as directly relevant.
- Business case is required to encourage uptake: added value in relation to enactors' own goals and objectives (e.g. new research opportunities, increased funding, address public resistance).
- Clear story, compelling examples required – not many around!
- Need to 'institutionalise' engagement: embed in daily practices; link to reward structures; part of the organizational culture.

# Considerations for NUCLEUS pilots

# Suggestions for NUCLEUS pilots

## - *Mandate*

- ✓ Is there a formal commitment to implement RRI from the participating research organisations?
- ✓ Connection with existing structures / initiatives? E.g. codes of conduct, public engagement exercises, research assessment initiatives – *without the initiative simply being reduced to these efforts?*
- ✓ Is there a champion within the organisation?
- ✓ Less is more!

# Suggestions for NUCLEUS pilots

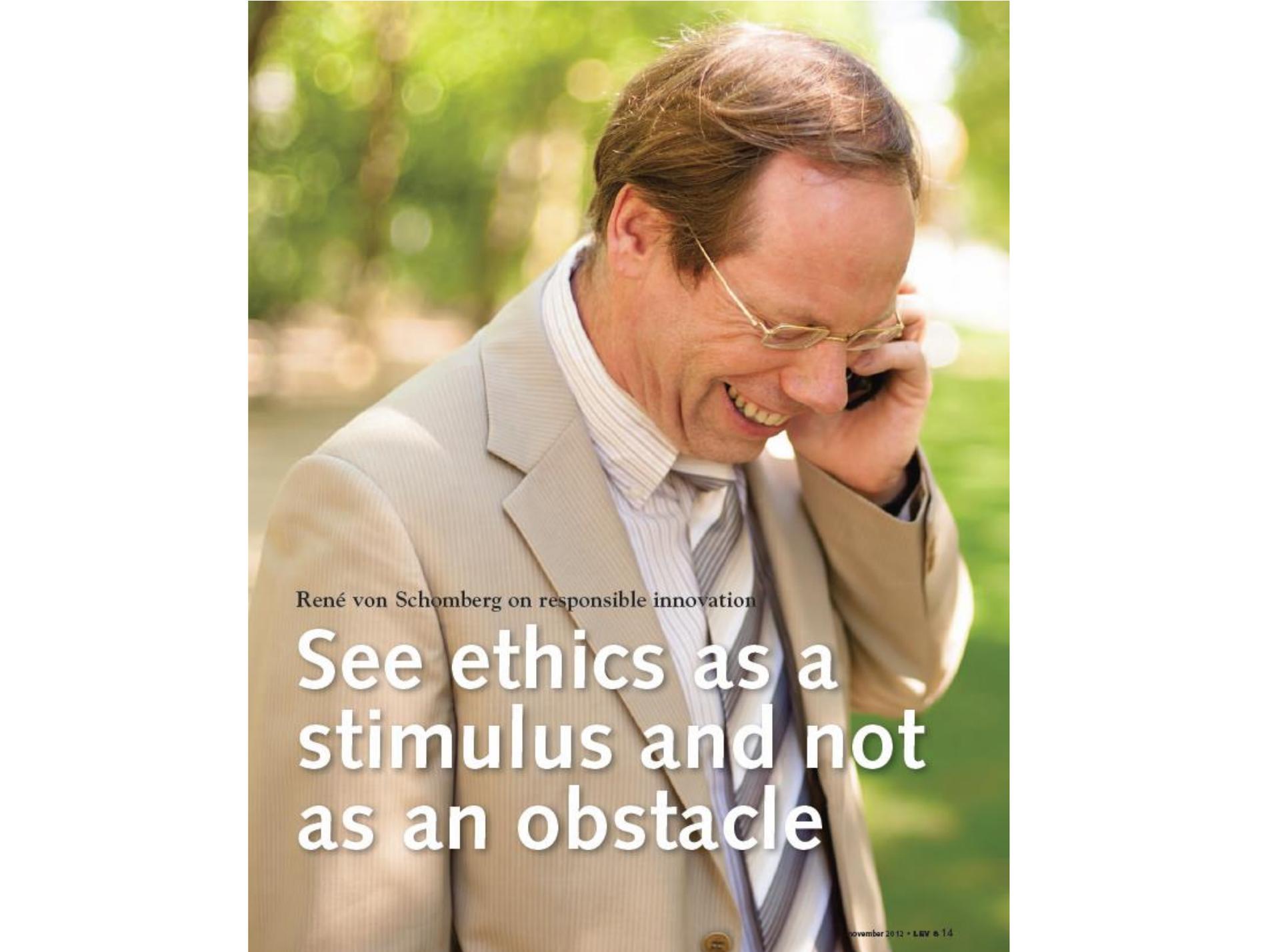
## - *Organisation*

- ✓ I won't ask 'What is RRI'...
- ✓ But what is your vision? Is this vision shared by the consortium? What are your focus areas?
- ✓ What specific cultural practices/ institutional mechanisms do you seek to change?
- ✓ Are the criteria for succes clear? When would you say the nucleus in question has succesfully implemented RRI? (in SMART terms: specific, measurable, attainable, realistic and timely)

# Suggestions for NUCLEUS pilots

## - *Uptake*

- ✓ How to ensure long-term embedding? Is there a mechanism for institutionalisation?
- ✓ How will you motivate enactors? RRI is ultimately 'implemented' by them: they are the ones who need to be convinced!
- ✓ Some form of reward (recognition, career opportunities)
- ✓ 'Translation and communication' of academic insights on RRI
  - ✓ *Consultancy mode*: convincing story in understandable terms; well-defined benefits for prospective users; clear examples

A photograph of a middle-aged man with glasses, wearing a light-colored suit jacket, a striped shirt, and a tie. He is smiling broadly while holding a mobile phone to his ear. The background is a bright, out-of-focus outdoor setting with green foliage and sunlight filtering through the trees.

René von Schomberg on responsible innovation

**See ethics as a  
stimulus and not  
as an obstacle**

In closing:

bon courage!

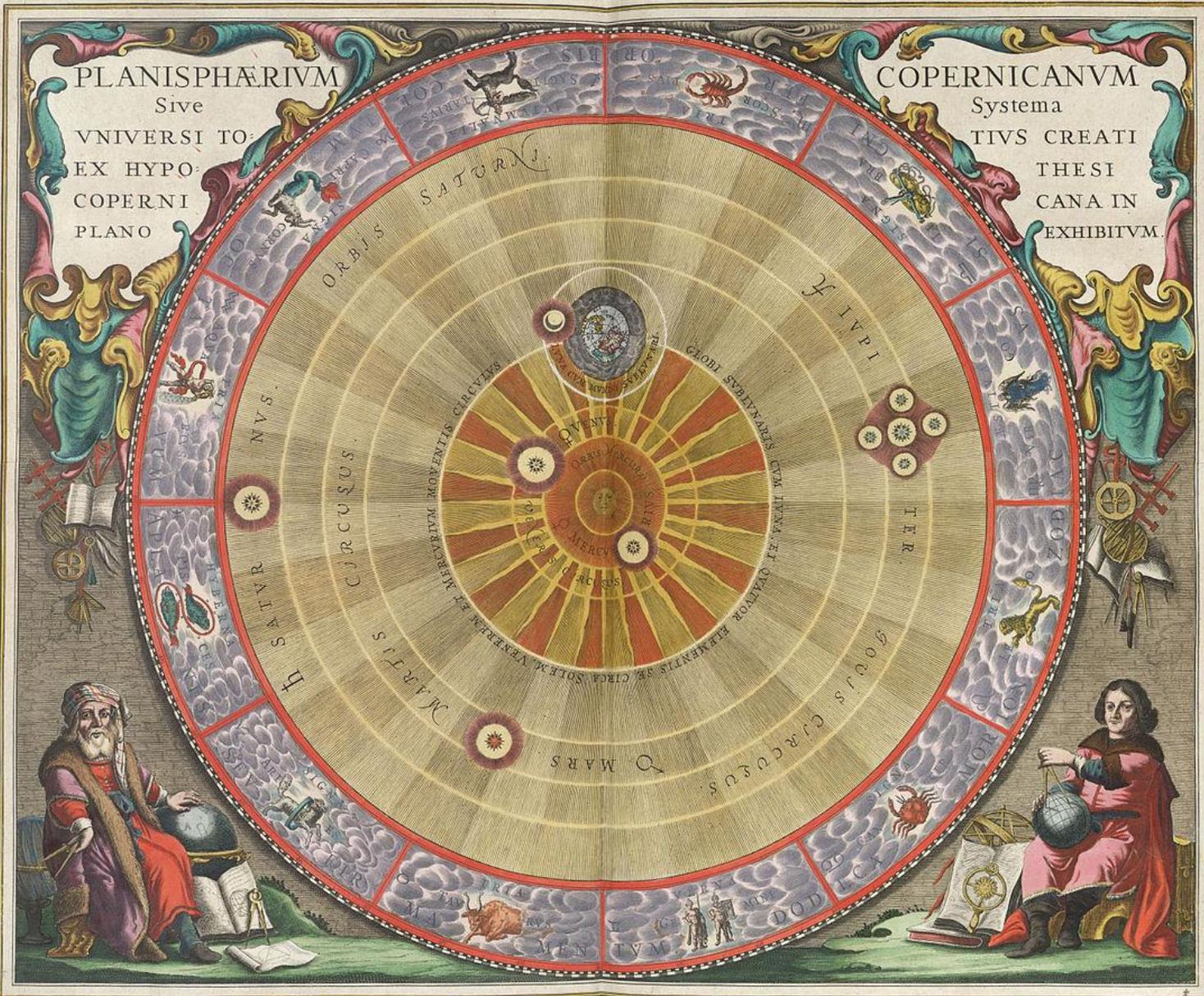
- ✓ The NUCLEUS pilot projects could provide hands-on examples, offer the examples and best practices that are so urgently needed to encourage adoption of RRI
- ✓ Much depends on 'getting it right' in terms of mandate, organization, uptake

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# Conclusion from NanoDiode

On a global level, technological and societal trends are pointing towards the need for new models for innovation governance that effectively integrate societal considerations in research and innovation. While the old model is increasingly criticised, new models are just beginning to emerge. The engagement of societal stakeholders thus falls within a broader area of experimentation into opening up the research and innovation system to societal needs and values.

Future efforts need to focus on communication and translation of these insights, providing hands-on tools and clearly explaining the benefits for those who engage in stakeholder engagement. 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.