



**Nanotechnologies and new  
dynamics in risk management  
looking at institutional emergence  
and public engagement  
experiments**

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# Our Purpose

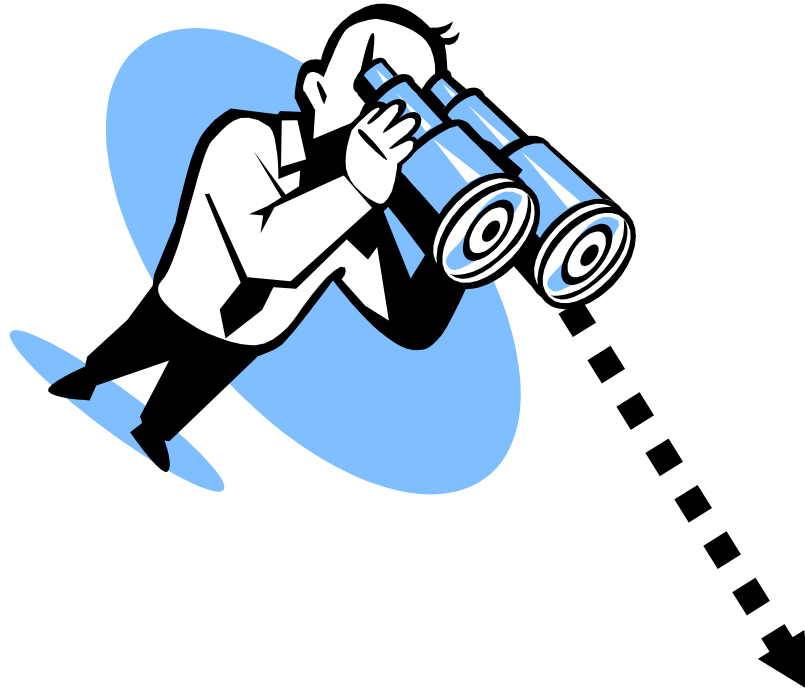


... is to explore new dynamics in risk management by focusing on the case of the development of nanotechnologies

# Agenda

1. Context and rationale
2. The case
3. Public engagement experiments and risk management
4. Outcomes and implications

# Context and rationale



**1 nm =  $10^{-9}$ m**

# Context and rationale



# Risk assessment of nanomaterials: some challenges

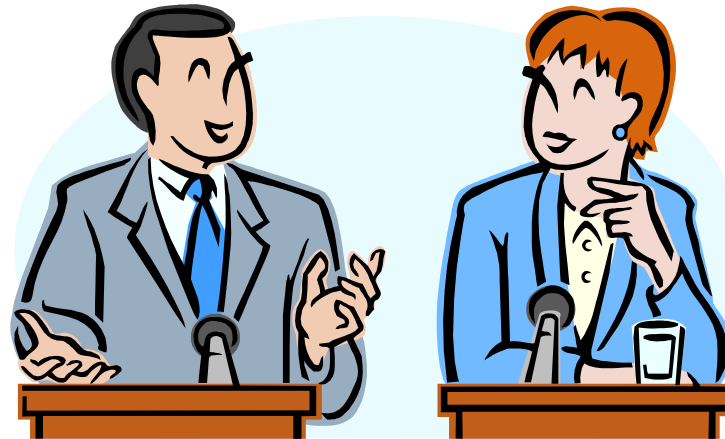


- Size
- Behaviour
- Methodology

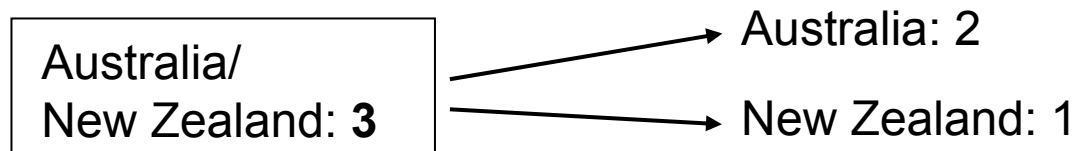
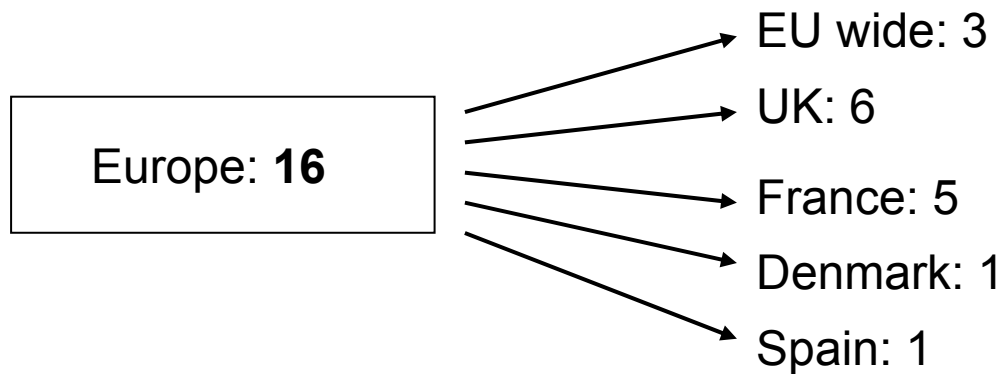
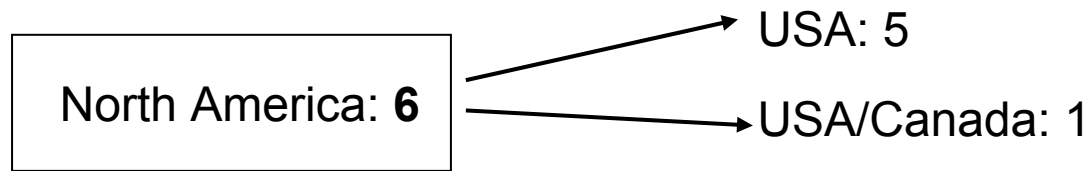
# The case

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Public engagement experiments as part of the institutional emergence of the nanotechnology field



# Countries involved in public engagement experiments: 2003-2007



# Public engagement



- Games and scenario playing
- Nano juries
- Deliberative public debates
- Citizens' panels
- Online consultations and interactive assessment tools

# Outcomes



- Convergence of perceptions
- Risk management perceived as a fundamental aspect of the development of nanotechnologies

# Risks

*linked with usage of nanomaterials*

Health risks

- Researchers
- Workers
- Users

Environmental risks

- Free nanoparticles
- End of life cycle
- New kinds of toxicity

Loss of freedom

- Monitoring devices

*linked with policy making*

Risk/benefit ratio

- More risks for less developed countries
- Risks/benefits for whom?
- Evolution of risk/benefit ratio in time

Lack of transparency

- Industrial and army non disclosure
- Ability of producers and regulators to control risk

# Conclusions



- Risk management is moving from a top down approach to more inclusive policy making
- New technologies and forms of communication lead to overall convergence of risk perception, and therefore to the globalisation of risk management



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