



Nanotechnology  
Industries Association

- *Nanotechnologies: Chancen für die Nachhaltigkeit* -  
14<sup>th</sup> September, Darmstadt

Rüdiger Iden, NIA Board für Steffi Friedrich, NIA GM

***Zwischen Wettbewerbsfähigkeit & Nachhaltigkeit:  
Wie viel Regulierung braucht die Nanotechnologie?***

*... the **sector-independent**, responsible voice for the industrial nanotechnologies supply chains;*

*... it **proactively** supports the ongoing innovation and commercialisation of the next generation of technologies and promotes their safe and reliable advancement.*

# Nanotechnologies – the Story of Supply Chains

*Manufacture of  
(Nanomaterials &  
nanoenabled Products*

*Trade & Manufacture of  
intermediate  
nanoenabled Products*

*Retail of  
nanoenabled Products*

*Instrumentation & Services:  
Characterisation , Analysis, Detection*



[source: Intrisig]



[source: RAS Materials]



[source: Naneum]



[source: Oxonica]



[source: Beneq]



[source: RAS Materials]



[source: BASF]



[source: UMICORE]

*Associated Support Services (Insurance, Legal Representation, etc.)*

*Wie viel Regulierung braucht die Nanotechnologie?*

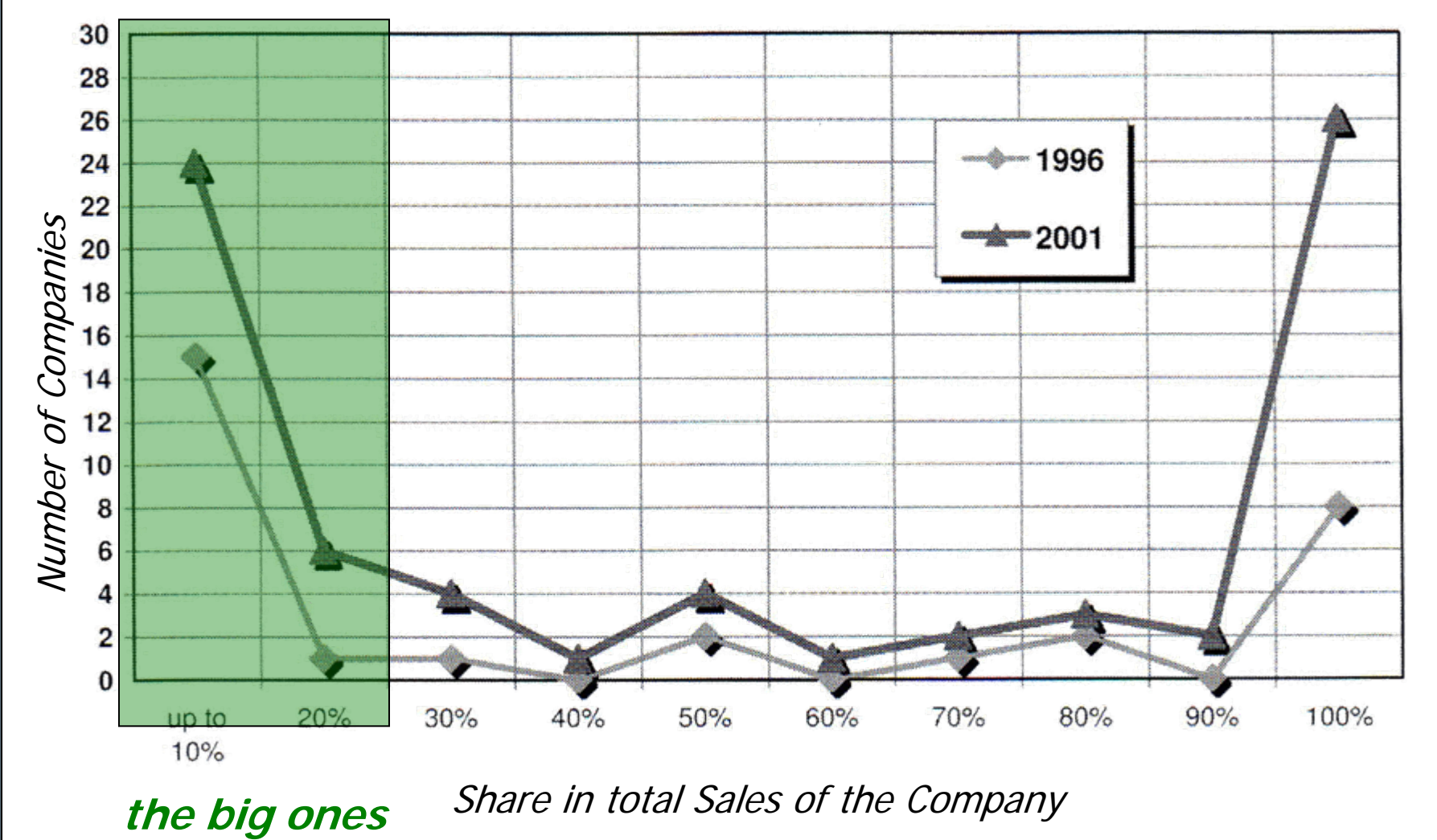
Öko-Institut, 14<sup>th</sup> September 2010

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# Nanotechnologies – Who's making money?

## Nanotechnology-related Sales Share



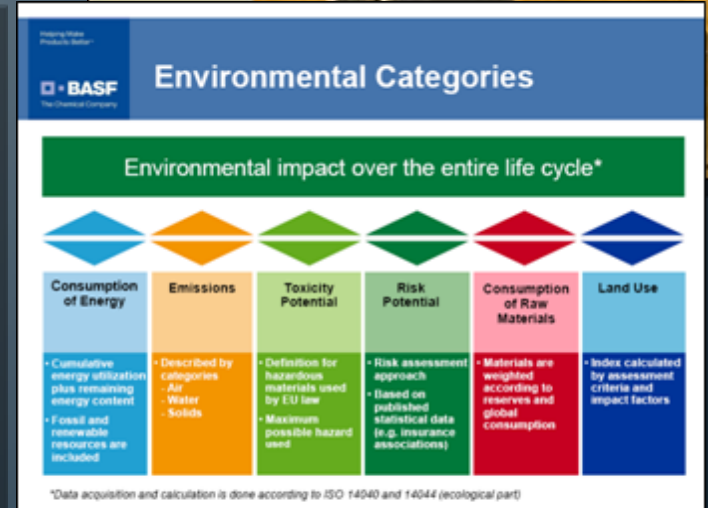
[source: Malanowski et al, Growth Market Nanotechnology, Wiley-VCH, Weinheim 2006]

# Nanotechnologies – not just for the sake of it!

No technology-push,

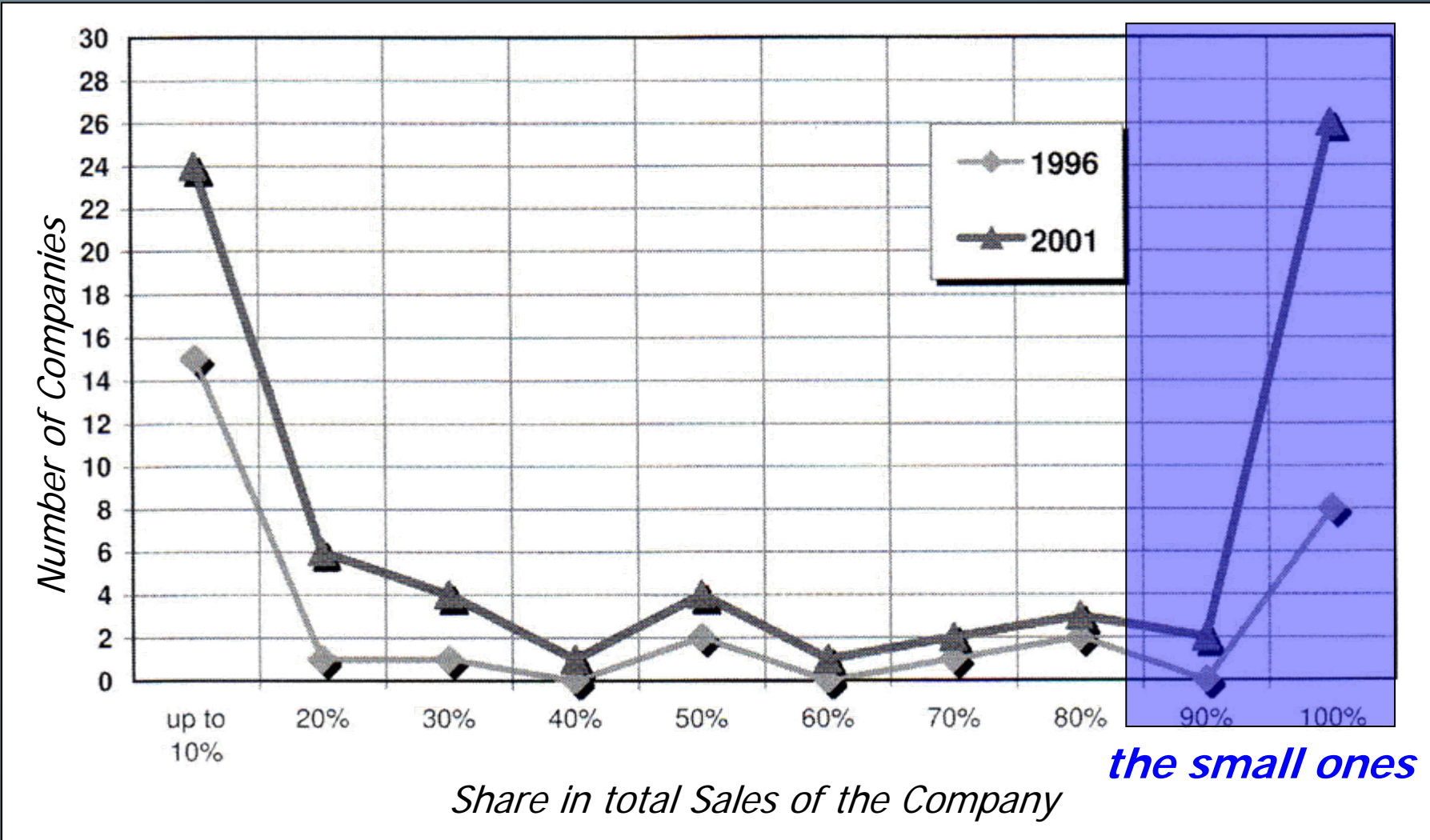
... but a market-pulled demand for sustainability (external & internal):

- *Environment, Energy, and Climate*
- *Safety*
- Meeting global market needs through science and innovation
  - Agriculture & Food
  - Building & Construction
  - Communications
  - Transportation
- Reducing DuPont's Footprint
  - Greenhouse Gas Emissions
  - Water Conservation
  - Water Conservation
  - Independent Verification
  - Fleet Fuel Efficiency



# Nanotechnologies – Who's making money?

Nanotechnology-related Sales Share



[source: Malanowski et al, Growth Market Nanotechnology, Wiley-VCH, Weinheim 2006]



# Nanotechnologies – Whose Business is it anyway?



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# *The ongoing Debate on nano-specific Regulation*

Workshop III:

*Zwischen Wettbewerbsfähigkeit & Nachhaltigkeit:  
Wie viel Regulierung braucht die Nanotechnologie?*

Who will decide ...

- ... what defines 'nanotechnologies'?
- ... how safe is safe enough?
- ... how much risk is too much risk (and to whom)?
- ... how current regulation covers nanotechnologies?
  
- ... how to regulate enabling technologies?



# *'Nano' under the EC's Verdict (June 2008)*

*'REACH is based on the principle that manufacturers, importers and downstream users have to ensure that they manufacture, place on the market or use such **substances that do not adversely affect human health or the environment**. Its provisions are underpinned by the precautionary principle.*

*There are no provisions in REACH referring explicitly to nanomaterials. However, **nanomaterials are covered by the "substance" definition in REACH.** '*

*' Manufacturers and importers would therefore have to cover the nano form in the **same registration as the bulk substance**. The following information about the nano form would be required in cases where properties or uses differ between the nano and the bulk:*

- (1)the information about the properties and uses,*
- (2)safety assessment for the nano form,*
- (3)any different or additional classification with regard to hazardous properties of the nano form, and*
- (4)any risk management measure and operational conditions required. In order to address the specific hazards associated with the nanoform, additional testing or information may be required.*

[Regulatory Aspects of Nanomaterials, Communication from the Commission to the European Parliament, the Council and the European Economic and Social Committee, COM (2008) 366 final dated 17.06.2008.]



# Nanotechnology in Europe – hampering Progress?

## Nano-Specific Regulation:

- Cosmetics Regulation (since Spring 2006)
  - Labelling
  - Notification

- Novel Foods Regulation (in progress):
  - Labelling (?)
  - Notification (?)

- RoHS/WEEE Electronic Equipment (in progress):
  - Labelling?
  - Notification?
  - Prohibition?

- Biocides Directive (in progress):
  - Labelling?
  - Notification?
  - Prohibition?

- REACH Implementation Plans on Nanomaterials (in progress)
- Medical Device Guidelines ... Medical Device Directive ...

• 'Amendment 10, Council position – amending act, Recital 6: (6) It should also be clarified that a food should be considered as novel when it is applied to a production technology which was not previously used. [...] Novel food should therefore include [...] foods modified by new production processes, such as nanotechnology and nanoscience, which might have an impact on food. [...]'

• 'Amendment 13, Council position – amending act, Recital 7 a (new): (7a) Only nanomaterials entered in a list of approved substances should be present in food packaging, accompanied by a limit on migration into or onto the food products contained in such packaging.'

... would hamper significant improvements in cutting down on:

- Water use
- Energy use
- Surfactant use

without  
nanomaterials

... in standard food processing technologies.



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***Thank you!***