

Nanotechnology: Technology Trends and Impacts to 2025

NanoData Project 2013 - 2018

- ▶ Goal: To inform EU policies for nanotechnology to 2025
- ▶ Multi-partner project for DG RTD
- ▶ Gathering and analysing quantitative and qualitative data to gain systematic insights into the whole nanotechnology value chain
 - ▶ Landscape Compilation reports (snapshots):
http://ec.europa.eu/research/industrial_technologies/index_en.cfm
 - ▶ Searchable web-based resource
- ▶ Deepening the intelligence on markets, technologies and trends: Nanotechnology to 2025 and beyond

Exploring technology trends and potential impacts of NT to 2025 to inform European policy-makers and others

Work(shops, etc.) led to the focus areas below:

- ▶ Competition and globalisation
- ▶ Culture
- ▶ Environmental health and safety
- ▶ Funding, public and private
- ▶ Manufacturing issues
- ▶ Public procurement
- ▶ Regulation and standards
- ▶ Skills and training
- ▶ Tax and other fiscal measures
- ▶ Understanding and attitudes
- ▶ Other
 - ▶ Data
 - ▶ Mission-oriented policies
 - ▶ Technology convergence

RECOMMENDATIONS ON NANOTECHNOLOGY TECHNOLOGY TRENDS AND IMPACTS TO 2025

Selection of recommendations in context of
today's workshop

Recommendations

- ▶ Fund the NT value chain through continuous parallel streams of long-, medium- and short-term funding to match the needs and operations from research to commercialisation, including those of SMEs, avoiding the problems of ‘on-off’ funding streams and extending some projects on a cost-neutral basis to bring promising results to fruition.
- ▶ Support both generic and technology-specific research, development and deployment (e.g. NMBP)

Recommendations

- ▶ Support demonstration and deployment through test-beds, scale-up facilities and pilot plants linked to national and regional smart specialisation for long-term sustainability.
- ▶ Foster an intellectual property system suitable for enabling and dynamic technologies, supporting the European patent to be a powerful and responsive economic tool
- ▶ Support multi-disciplinary environments in research and industry, also enabling transfer of people and knowledge between research, commercial development, manufacturing and business development

Recommendations

- ▶ Promote knowledge transfer programmes (e.g. show-and-tell meetings, research internships, etc.) from third-level institutions to companies. Engage industry in developing courses at university so skills will be more directly relevant to jobs and competitiveness.
- ▶ Support training to meet human capital needs now and into the future - multidisciplinary, specialised and sector-specific training, and non-technical training in areas such as communication skills for entrepreneurs and media training for influencers.

Recommendations

- ▶ Disseminate balanced information on the benefits, opportunities and potential risks of NT and its ability to address tangible challenges.
- ▶ Communicate with and through stakeholders (decision-makers, influencers, industry, designers and marketing people, scientists-in-residence, the public, the education system, the media, etc.), individually and in public-private partnerships.
- ▶ Include NT in the school curriculum, to increase familiarity, awareness and well-informed perceptions in future generations. Make best use of existing tools such as EUON and the foreseen Risk Governance Council.