



NANO futures Member Info August 2011

Meeting

Reserve the date: next NANO futures meeting will be on Nov 22nd - 23rd at Nanotech Italy <http://www.nanotechitaly.it> special rate for NANO futures members is offered, details will follow.

Linkedin

Did you know about the NANO futures Linkedin group? Please join and support the dissemination of the NANO futures topics at <http://www.linkedin.com/e/u9khp6-gqnj8voy-5m/vgh/4021868/>

Working groups updates

The WG Industrialisation/Nanomanufacturing

Members: 132 (26 different countries)

Chair: Vito Lambertini (CRF S.C.p.A., Italy) vitoguido.lambertini@crf.it

This WG aims to focus on industry needs related to manufacturing of nanomaterials and products and to the industrialization and scaling-up of innovative nano-inventions/prototypes developed within funded projects, laboratory research, proof of principle studies etc. This target will be achieved in close collaboration with all the relevant ETPs and related sectors linked to NANO futures Initiative, with particular relevance to MINAM, dedicated to micro and nano manufacturing issues.

The WG Industrialisation and Nanomanufacturing aims to identify industry needs related to manufacturing of nanomaterials and products in order to:

- Establish the complete value chain leading to the manufacturing of European nano and microtechnology products
- Develop Europe as the leading location for the production of Nanomaterials, Nanointermediates, Nanotools and Nano-enabled products, overcoming the current situation in which only R&D, pilot cases and first production lines are set in Europe.

The Industrialization and Nanomanufacturing WG was considered the starting point to transfer information to all the other NANO futures WGs about high potential applications with impact on EU grand challenges and market opportunities. The WG Industrialization and Nanomanufacturing includes by July 2011 131 members.

The main contributions of the WG to NANO futures have been identified:

- Definition of methodology for mapping gaps related to industrialization of nanotechnology based products/materials.
- Contribution to the identification of relevant key-nodes for the successful implementation of nanotechnology and nanomaterials based innovations

- Connections between NANO futures and relevant activities within NanoCom and MINAM2.0 CSAs.
- Integration of ETPs needs starting from SRAs of the 11 ETPs involved in NANO futures identifying 22 more potential needs over the 51 collected.
- Contribution in communication of NANO futures activities to nanotechnology community (in particular in connections with the Italian NANO futures platform).

By analysing the needs of the ETPs involved in NANO futures the following key-nodes coming out of the value chain gaps have been identified: 1) Nano-enabled surfaces; 2) Nanostructures and composites; 3) Nano-micro scale integration; 4) Design and Modelling; 5) Safe and Sustainable.

To continue the work performed within this WG, the key-node 3 was assigned to the chair of Industrialization and nanomanufacturing WG.

The latest events related to this WG and the key-node 3 are:

- Participation at EURONANOFORUM 2011 to explain the methodology used for the identification of key nodes.
- Organization of the first inventive session (Expert group) related to the key-node Nano-micro scale integration with the main objective to identify value chains for specific EU challenges (Italy, Mogliano Veneto, 30 June – 1 July 2011).

The next Expert group is planned in January 2012.

The WG Industrial Safety Strategy

Members: 73 (21 different countries)

Chair: Peter Krüger (Bayer MaterialScience AG, Germany) peter.krueger@bayer.com

This WG aims to support the responsible industrial development of nanotechnologies and nanomaterials by developing a roadmap for the safety research strategy incorporating the particular needs of ETPs related to NANO futures. In collaboration with the WGs Safety Research, Standardization, Regulation and Communication and other European safety initiatives a relevant network can be formed to support responsible and safe nanotech based innovations addressing effectively societal Grand Challenges in Europe.

The Industrial Safety Strategy WG aims to support the responsible and safe industrial development of nanotechnologies and nanomaterials based products along the value chain:

- incorporating the needs of the value chains in different application sectors and especially of the ETPs involved in NANO futures
- identifying relevant safety issues and developing a roadmap for the industrial relevant safety research strategy

In collaboration with the WGs Safety Research, Standardization, Regulation and Communication and other European safety initiatives a relevant network can be formed to support responsible and safe nanotech based innovations addressing effectively societal Grand Challenges in Europe. The WG will help identifying cross-sectional gaps and challenges in standardization relevant to nanotechnologies. The WG incorporates by mid of July 2011 72 members.

The main contributions of the WG to NANO futures have been identified:

- Sensitization and Engagement of industrial downstream representatives of different value chains in relevant sectors and especially the ETPs involved in

NANO futures that in particular nano-safety is not only related to materials suppliers.

- Identification of relevant key-nodes for the successful implementation of nanotechnology and nanomaterials based innovations
- Analysis of ongoing and finalized projects and other activities with respect to nano related industrial relevant safety research
- Analysis of future industrial relevant safety research needs of different value chains and ETPs in relevant sectors
- Identification of potential gaps in safety research to close existing or future gaps
- Development of an integrated industrial relevant safety research roadmap including the value chains in different sectors
- Communication and dialogue to stakeholders with respect to industrial nano safety strategy

By analysing the needs of the ETPs involved in NANO futures the key-node “Safe and Sustainable” has been identified during the first half of the year 2011. This key-node will start its actions by having its kick off in this autumn in Rome and it will include among others the topics of the WG “Industrial Nanosafety Strategy”.

For the first step the following potential action points have been identified for the WG Industrial Safety Strategy:

- Develop awareness among the ETPs and the participating organizations along value chains for the importance of a safety strategy with respect to the commercial deployment of nanomaterials
- Gather existing information on safety and safety strategy for nanomaterials and share with ETPs and the participating organizations
- Gather input from industry along the value chain to ensure that the industrial relevant safety strategy framework is based on the needs of future developments in these value chains
- Gather input from industry along different value chains to ensure that industrial relevant safety strategy framework is based on suitable scientific/technical knowledge to avoid perception based regulation which could impede innovation without further improvement of safety
- Develop a sector- and value-chain specific/differentiated safety strategy framework (as opposed to overarching)
- Ensure the global harmonization of testing and assessment procedures

The WG Safety Research

Members: 108 (21 different countries)

Chair: Rob Aitken (IOM/SAFENANO, United Kingdom) rob.aitken@iom-world.org

This WG aims to improve knowledge concerning the risks exposure/toxicology/safety/impact, particularly in relation to risk assessment and to contribute to promote safe, sustainable and socially responsible nanotechnology. This WG will try to create synergies among on-going EU activities and networks in the field of safety.

The Safety Research WG aims to improve knowledge concerning the risks/exposure/toxicology/safety/impact of nanotechnology, particularly in relation to risks assessment, and to contribute to the promotion of safe, sustainable, and socially responsible nanotechnology. A key element is to define and implement an interface process between academia, industry, policy makers and society to facilitate open exchange (data, methods, knowledge) between the stakeholder groups on these issues. This can provide a trusted (independent) information resource which captures, interprets and disseminates the

emerging evidence on nanoparticle risk issues. The NANO futures Coordination Action provides a basis for how this can be achieved. The Safety Research WG will create synergies among ongoing EU activities including the NanoSafetyCluster, the ERANET on safe implementation of innovative Nanoscience and Nanotechnology (SIINN) and the NanoimpactNet network. In the framework of the regulatory research, the WG will closely interact with the regulation and standardisation WGs and will establish contacts with the OECD Working party on Manufactured Nanomaterials (WPNM) and the Working Party on Nanotechnology (WPN).

As of July 2011 the Safety Research WG, which is chaired by Rob Aitken from the Institute of Occupational Medicine (IOM), has 106 members from a range of backgrounds including government, academia, industry, and consultancy. Associated with the overall objectives of the WG, the following forum topics have been initiated since January 2011:

- "First meeting of the working group", created by Rob Aitken in January 2011;
- "EFSA's Scientific Committee public consultation on nano in food", created by Rob Aitken in January 2011;
- "WG response to ETP needs - your input welcome", created by Rob Aitken in February 2011;
- "Feedback request on Safety Research Actions and documentation for WG meeting", created by Margherita Cioffi in February 2011;
- "Brief Report of the Safety Research WG meeting in Lausanne 16th February", created by Rob Aitken in February 2011;
- "Presentation made at the WG technical meeting, Brussels, 15th March", created by Sheona Peters in March 2011;
- "SAFENANO Nanotechnology Safety Website Re-launches", created by Sheona Peters in July 2011.

The core activities of the Safety Research WG to date have focussed on the identification of key nodes in strategic nano-activities, stemming from an analysis of the needs of European Technology Platforms (ETPs) and actions identified as important to address these needs. "Safe and Sustainable" has been identified as one of five key nodes, which includes safer processes and products, regulation and the environment. Key actions have been identified in relation to this key node, across the following areas: supply chain gaps; research and technology methods/techniques; TechTransfer and innovation financing; skills and education; standardisation; safety research; communication and networking. A meeting to further progress the "Safe and Sustainable" node will be held in Rome, Italy on the 2nd-3rd November 2011, with invited experts from the NanoSafetyCluster, standardisation and regulatory bodies, industry, industry associations.

The WG Regulation

Members: 65 (17 different countries)

Chair: Anna Gergely (Steptoe & Johnson LLP, Belgium) AGergely@Steptoe.com

This WG aims to identify the current gaps and possible strategies for the establishment of a suitable regulatory environment which will enable the responsible development of the industry. The WG will establish interactions with current initiatives and networks on industrial-driven voluntary regulation initiatives. The general aim of the Regulation Working Group (WG) of NANO futures is to facilitate communication among all relevant stakeholders, i.e. regulators in different jurisdictions, all the different industry sectors using nanotechnology, universities/research bodies and the general public. It is essential to build a suitable regulatory framework which can support the competitive development of this nascent technology ensuring that the necessary checks (especially safety) are in place but avoiding stifling innovation and creating barriers to trade.

The Regulation WG is focusing on the following topics:

I. Communication

- Gathering existing information on regulatory initiatives re nanomaterials and share with ETPs;
- Developing awareness among ETPs re the importance of regulation;

II. Sound scientific basis

- Supporting the input from industry to ensure a regulatory framework based on relevant scientific/technical knowledge;
- Supporting the development of a differentiated regulatory framework (as opposed to overarching) supported by sector-specific risk/benefit analysis;

III. Harmonisation

- Support the efforts towards global regulatory harmonisation

The cornerstone is the interaction with industry in the creation of a regulatory framework. The Regulation WG in collaboration with other WGs makes every effort to mobilise industry in this process.

The WG Standardization

Members: 73 (19 different countries)

Chair: Michael Stintz (TU Dresden, Germany) michael.stintz@tu-dresden.de

The WG will help identifying cross-sectional gaps and challenges in standardization relevant to nanotechnologies. Example of key topics of interest are: occupational health and safety protocols, measurement and characterization protocols to support hazard and risk assessment of nanomaterials, performance and sustainability assessment.

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- Occupational health and safety protocols,
- Measurement and characterization protocols to support hazard and risk assessment of nanomaterials, performance and sustainability assessment.

In collaboration with the WGs Safety Research, Regulation and Communication and other European Technology Platforms (ETPs) a relevant network can be formed to support responsible and safe nanotech based innovations addressing effectively societal Grand Challenges in Europe. The WG Standardization incorporates by July 2011 72 members.

The main contributions of the WG to NANO futures have been identified:

- Contribution to the identification of relevant key-nodes for the successful implementation of nanotechnology and nanomaterials based innovations
- Analysis of current activities and networks in the field of standardization issues
- Analysis of recent and on-going EU projects related to standardization issues
- Contribution to the Integrated Industrial and Research Roadmap and related implementation plan, with a focus on standardization issues, through the revision and development of documents, discussions etc.
- Communication and dialogue to stakeholders in the international standardization

By analysing the needs of the ETPs involved in NANO futures the key-node "Safe and Sustainable" has been identified during the first half of the year 2011. This key-node will start its actions by having its kick off in this autumn in Rome and it will include among others the topics of the WG "Standardization".

Associated with the above general objectives, since December 2010, the following actions have been undertaken:

- Gathering of existing information on international standardization of nanotechnology and nanomaterials based innovations and sharing with ETPs and the participating organizations,
- Contributions (invited papers) to the Seminar on "Standards and standardization as a tool for the dissemination and implementation of research results", DG Research, Brussels, 14th December 2010, see also Peter Hatto: Standards and Standardization Handbook. Ed. by EC, Directorate-General for Research, Directorate G - Industrial Technologies, Unit G1, 2010 (http://ec.europa.eu/research/industrial_technologies/pdf/handbook-standardisation_en.pdf),
- Coordination of standardization activities for safety related to nanoparticles (NanoRef initiative) together with ETP on Industrial Safety (ETPIS) and Nanodevice,
- Nanodevice, ETPIS and NANO futures with the support of CEN TC 352 organise a workshop "Coordination of Standardization activities related to NanoSafety" on September 14, 2011, to investigate the possible synergies and opportunities from on-going projects for standardization activities in the field of nanosafety (<http://www.industrialsafety-tp.org/news.aspx?lan=230&tab=148&nid=458#n458>).

A next WG Standardization meeting is foreseen as a side event at Nanotech Italy 2011 on 23-25 November 2011 in Venice.

The WG Research and Technology

Members: 175 (28 different countries)

Chair: Udo Gommel (Fraunhofer IPA, Germany) udo.gommel@ipa.fraunhofer.de

The activity of this WG is aimed at focusing European strategic efforts on key aspects related to nano research and technology. For all the key issues, it is necessary to work on roadmaps, vision papers, etc. for supplying and establishing accessible instruments. The WG Research and Technology aims at focusing European strategic research efforts on key aspects related to nano research and technology. This will overcome the fragmentation of European Research, which then will lead to a combined dominated position relevant to nanotechnologies.

Key topics of interest are:

- Covering interest of research community, especially to work on roadmaps, vision paper
- Supply and establishing accessible instruments for research and technology

In collaboration with the WGs Industrialisation & nanomanufacturing, Safety Research, Technology Transfer & Innovation Financing, and other European Technology Platforms (ETPs) a relevant network can be formed to support responsible and safe nanotech based innovations addressing effectively societal Grand Challenges in Europe.

The main contributions of the WG to NANO futures have been identified:

- Coordination of research and industry activities to align them with Nanofutures goals and to contribute to roadmap, vision paper and strategic research agenda.
- Monitoring foresight and trends especially on technological and scientific points of view with regards to the needs of the industry.
- Exchange of basic knowledge between researchers from Universities and Research Centres in different regions and support for technology transfer to the industry.
- By carrying out action plans for supplying and establishing accessible instruments.
- Close interaction with other existing CAs such as: NanoCom (analysis of barriers and best practices related to nanotechnology commercialization) and ProNano (support and coaching for commercialization of public funded projects).
- Interaction with MINAM2.0 by consistent contribution to the roadmapping activities;
- Communication and dialogue to stakeholders in the international communities and forums

Associated with the above general objectives, since December 2010, the following actions have been undertaken:

- Contribution to the identification of relevant key-nodes for the successful implementation of nanotechnology and nanomaterials based innovations
- Awareness rising to different stakeholders from several background and communities on regional and supra-regional level about the platform. To harmonize and compensate different views, bring it to a well balanced discussion standard will bring further best outcomes for any individual and stakeholders
- first working group meeting: for January 2011, meet physically (Brussels) with key players
- filter CORDIS for nano related Research Projects, coordinated action with other WGs
- collect information from members/networks on recent and on-going EU nano projects projects of regional clusters that have a focus on Research & Technology, list of nano research centers (especially local, regional, ...)
- Promotion for Open Day on Nanotechnology 27th October 2010, Brussels

A next WG Research and Technology meeting is foreseen as a side event at Nanotech Italy 2011 on 23-25 November 2011 in Venice.

The WG Technology Transfer and Innovation Financing

Members: 143 (23 different countries)

Chair: Donato Zangani (D'Appolonia, Italy) donato.zangani@dappolonia.it

This WG aims to create an open, networked and adaptive nanotechnology innovation system by developing Technology Transfer and Innovation Financing services and strategies. NANO futures will promote technology transfer of nanotechnologies from different sectors to the industrial sectors of relevance to the involved ETPs, linking together network of excellence on nanotechnology. The Technology Transfer & Innovation Financing WG aims at creating an open, networked and adaptive nanotechnology innovation system by developing/making available and known Technology Transfer and Innovation Financing services and strategies.

The TT&IF WG is also promoting technology transfer of nanotechnologies from different sectors, addressing in particular the industrial sectors of relevance to the involved ETPs, linking together networks of excellence on nanotechnology. The WG has cooperated with other CSAs, in particular ProNano (innovation consultancy services); NanoCom (open-

innovation models; results of the analysis of best practices in nanotechnology innovation) and ano2Market (best practices for IPR management and protection).

Associated with the above general objectives, since January 2011, the following forums have been initiated within the WG:

- “Nanotechnology researchers need to approach investors to reach the market”, created by Elena Gaboardi on June 2011;
- “ProNano Coordinator about coaching experiences”, by Andrea Elisabeth Reinhardt on May 2011;
- “Nano to Market - results of NanoCom - EC supported action”, by Andrea Elisabeth Reinhardt on May 2011
- “Overcome Barriers on the way to market - CSA ProNano”, initiated by Andrea Elisabeth Reinhardt on April 2011
- “New Patent Classification for Nanotechnology” created by Robert Harrison on March 2011;
- “Your feedback on Technology Transfer and Innovation Financing Actions”, by Margherita Cioffi on February 2011;
- “Technology Licensing Royalty Rates”, by Robert Harrison on January 2011.

The WG activities have been presented in January 2011 in Bruxelles focusing in particular on the activities related to the definition of the key nodes and the needed actions of relevance for the TT&IF WG. According to the survey carried out, the top TT&IF needed actions resulted TT from academia to industry and cross-sectorial TT programmes. When safety issues are concerned, extra-EU trans-national cooperation & networking actions become more important. Actions targeted to SMEs, including involvement of investors and investment readiness programmes for SMEs, seem more relevant when manufacturing and cost reduction issues are involved.

A TT event is foreseen at Nanotech Italy 2011 on 23-25 November 2011 in Venice, it is organised by Veneto Nanotech and AIRI Nanotech. A matchmaking session with one-to-one meetings related to NANO futures members will be organised by the TT&IF WG to take place on the first day. NANO futures members will benefit of a special discount fee.

The WG Skills & Education

Members: 76 (20 different countries)

Chair: Costas Kiparissides (Aristotle University of Thessaloniki, Greece) cypress@certh.gr

This WG will develop a set of strategies to promote an effective and interdisciplinary education and training of R&D personnel involved in nanotechnology together with a strong entrepreneurial mindset. A key issue could be the fast transfer of basic knowledge from research to application by education in “learning factories” equipped with new solutions for information supply like ubiquitous computing, wireless technology and navigation systems. The WG Skills & Education aims to develop a set of strategies to promote an effective and interdisciplinary education and training of R&D personnel involved in nanotechnology together with a strong entrepreneurial mindset.

The work performed by the WG Skills & Education during the first year of the project can be summarized as follows:

Preparation of an extensive report on nanotechnology degree programs in Europe in comparison to those in North America. The “Nanoeducation Report” addresses the geographical allocation of the programs, the degree types, the disciplines and areas of interest, the motivation for the development of such programs, the barriers to their development, the involvement of industry (learning factories), etc. Identification of European

research projects (e.g., FP7, FP6, Erasmus, Leonardo da Vinci, Transversal Programmes, Erasmus Mundus, Tempus, Co-operation with industrialised countries) on Skills & Education for nanotechnology within the period 2007-2011. Mapping of the EU Research Centers (i.e., Universities, Research Institutes, Companies) that participated in these projects. Identification of Skills & Education WG priorities (i.e., address skills needs for nanotechnology related positions (scientists and technicians), consensus on the most effective curriculum and teaching / training methods, greater involvement of industry in academic curriculum development, transdisciplinary approach (collaboration between departments, schools & institutions), strong connection with nanotechnology research facilities and related programs, learning factories, education/training of faculty members to teach nanotechnology aspects) to address the needs of the European Technology Platforms (ETP). Ranking of S&E WG priorities with respect to first level and second level clustering according to the feedback from S&E WG members. Presentation of findings.

The WG Networking

Members: 121 (20 different countries)

Chair: David Gonzalez (PRODINTEC, Spain) dgf@prodintec.com

The main goal of the Networking WG within the NANO futures initiative is to coordinate the activities of stakeholders at regional and national level. This should align financial institutions, industry, research institutions and universities and civil society with the new platform objectives. This WG intends to create an environment that stimulates innovation and to provide firms with the incentive to perform R&D and innovative activities at trans-national level in nanotechnology.

Main WG aim:

The main objective of the Networking WG within the NANO futures initiative is to coordinate the activities of stakeholders at Regional and National level. This should align financial institutions, industry, research institutions and universities, civil society, etc. with the new Platform objectives. This WG intends to create an environment that stimulates innovation and to provide members with the incentive to perform R&D and innovative activities at trans-national level in nanotechnology.

Main Activities:

- Exchange and dissemination of good practises between stakeholders
- Promotion of collaborative projects between stakeholders from different regions.
- Organization of international technology transfer events where stakeholders can be aware of the last developments in nanotechnology field and of potential applications in lead markets.
- Promotion of training courses describing nanotechnology industrial applications particularly addressed to SMEs.
- Influence on development agencies and financial organisms responsible for the development and implementation of innovation policies at regional and national level.
- Promotion of basic knowledge Exchange between researcher from Universities and Research Centres in different regions and support for technology transfer to the industry.

Main mechanisms:

- Technology Transfer events
- Working Group meetings

- Participation in conferences and workshops
- Ad hoc meeting with stakeholders
- Communication tools: 2.0, Newsletter, emails, leaflets,...

Main actions carried out:

- Identification and participation in conferences/events to promote NANO futures Platform and inform possible new stakeholders. (8th European Cluster conference, AERODAYS 2011, IMAGINENANO, EURONANOFORUM 2011).
- Identification and contact with European most innovative clusters working on nanotechnology and clusters susceptible of using it to find synergies and approach links for possible collaborations in projects, services...(info in document D3.3)
- Identification of collaborative projects calls where Platform members could participate (PPPs, NMP...)
- Contacts with main organisations (ERRIN, Europa InterCluster, European Enterprise Network, to align policies and objectives, avoid duplications and involve new stakeholders.
- Contacts with sectorial Technology Platforms related to nanotechnology at national level.

The WG Communication

Members: 99 (22 different countries)

Chair: Andrea Reinhardt (microTEC, Germany) reinhardt@microtec-d.com

The objective of this WG is to support the NANO futures working groups and nano community. The members seek to integrate the knowledge and experiences of industry, SME and academia, speed up sharing and manage the path of emerging issues by tracking stock of trends, challenges, concerns, laws and regulations. In our first year the WG communication worked in strong cooperation with the networking group for the development of the key nodes. We set up web pages and interaction tools, supported the related events and the work in the other WGs, but also activities outside NANO futures e.g. within international cooperation frames. We are also taking care of the multi channel based sharing the latest information about topics discussed in working and key node groups and disseminate the information coming from NANO futures and the supporting projects (via Nanopaprika, Twitter, Xing, LinkedIn, newsletters a.s.o). Within our strategic work we discuss the today practice in nano communication and how our project can contribute for a faster uptake of best practice. Using Skype, t-conferences, online postings and the personal meetings we try to keep all as transparent as possible and also simple for to contribute (even if travelling to the events is not possible for all).

Our next meeting will be together with the other working groups at Nanotech Italy on Nov 22nd - 23rd.

Please feel free to join the working groups.

PS: Please have a look also at

<http://www.nanofutures.info/sites/default/files/TransatlanticEconomicCou...>

All EHS/Regulation related WG chairs need your input for the planned Sept t-call and how in regulation and EHS aspects the US-European cooperation can be supported in a way it respects consumer needs and helps building industries.