







# Procedure file

Basic information		
INI - Own-initiative procedure	<a href="#">2006/2004(INI)</a>	Procedure completed
Nanosciences and nanotechnologies: an action plan for Europe 2005-2009		
Subject 3.50.08 New technologies; biotechnology		

Key players			
European Parliament	Committee responsible	Rapporteur	Appointed
	 <b>ITRE</b> Industry, Research and Energy		
	Committee for opinion	Rapporteur for opinion	Appointed
	 <b>ENVI</b> Environment, Public Health and Food Safety		07/02/2006
		PSE <a href="#">BUSQUIN Philippe</a>	
	 <b>IMCO</b> Internal Market and Consumer Protection	The committee decided not to give an opinion.	
	 <b>JURI</b> Legal Affairs		30/01/2006
		PPE-DE <a href="#">KAUPPI Piiia-Noora</a>	
European Commission	Commission DG	Commissioner	
	<a href="#">Research and Innovation</a>	POTOČNIK Janez	

Key events			
07/06/2005	Non-legislative basic document published	<a href="#">COM(2005)0243</a>	Summary
19/01/2006	Committee referral announced in Parliament		
20/06/2006	Vote in committee		Summary
22/06/2006	Committee report tabled for plenary	<a href="#">A6-0216/2006</a>	
28/09/2006	Results of vote in Parliament		
28/09/2006	Debate in Parliament		
28/09/2006	Decision by Parliament	<a href="#">T6-0392/2006</a>	Summary
28/09/2006	End of procedure in Parliament		

Technical information

Procedure reference	2006/2004(INI)
Procedure type	INI - Own-initiative procedure
Procedure subtype	Initiative
Legal basis	Rules of Procedure EP 54
Stage reached in procedure	Procedure completed
Committee dossier	ITRE/6/32138

Documentation gateway					
Non-legislative basic document		<a href="#">COM(2005)0243</a>	07/06/2005	EC	Summary
Committee draft report		<a href="#">PE369.838</a>	23/03/2006	EP	
Amendments tabled in committee		<a href="#">PE374.013</a>	03/05/2006	EP	
Committee opinion	ENVI	<a href="#">PE370.108</a>	30/05/2006	EP	
Committee opinion	JURI	<a href="#">PE371.966</a>	31/05/2006	EP	
Committee report tabled for plenary, single reading		<a href="#">A6-0216/2006</a>	22/06/2006	EP	
Text adopted by Parliament, single reading		<a href="#">T6-0392/2006</a>	28/09/2006	EP	Summary
Commission response to text adopted in plenary		<a href="#">SP(2006)4772</a>	19/10/2006	EC	
Commission response to text adopted in plenary		<a href="#">SP(2006)5317</a>	13/12/2006	EC	
Follow-up document		<a href="#">SEC(2009)1468</a>	29/10/2009	EC	
Follow-up document		<a href="#">COM(2009)0607</a>	29/10/2009	EC	Summary

## Nanosciences and nanotechnologies: an action plan for Europe 2005-2009

**PURPOSE:** to present a European Action Plan for nanotechnologies, 2005-2009.

**CONTENT:** this action plan is being presented on the back of a 2004 Commission Communication 'Towards a European Strategy for Nanotechnology?', which highlighted the need for Europe to reinforce its leading position in N&N technologies, whilst at the same time addressing any environmental, health, safety and social question raised in connection with the use of nanotechnologies. It is also a response to a conclusion issued by the European Competitiveness Council, in which it welcomed the Commission's intention to draw up a nanotechnology action plan.

In preparing this action plan, the Commission has defined a series of inter-connected actions for immediate implementation based on a safe, integrated and responsible N&N strategy. To begin with the action plan focuses on Europe's need for knowledge, hence priority being given to research and development. In order to achieve this goal the Commission will reinforce the role of N&N in the EU's 7<sup>th</sup> Framework Programme by doubling the budget in comparison to the 6<sup>th</sup> framework programme. It also proposes to support specific research into nanoelectronics in order to stimulate industrially relevant research in a technologically mature field and to provide for the foundation for a next generation of electronics. It will also boost support for collaborative research into 'particular engineered nano-scale entities' and their possible effect on human health and the environment through toxicological and eco-toxicological studies. The Commission will also foster the development of European Technology Platforms in the field of, for example, nanomedicine. In return, the Commission calls on the Member States to increase public investment in N&N research, corresponding to increased R&D expenditure to match the 3% Barcelona objectives, to try and minimise a duplication of effort (possibly through the ERA-NAT scheme), and to promote N&N activities by raising awareness for nanotechnology amongst universities and R&D institutes.

A second action is to focus on a nanotechnology infrastructure and the establishment of 'Poles of Excellence'. To achieve this aim the Commission will establish a map of existing European N&N infrastructure and explore ways in which this can be improved upon through an exchange of best practice. Special attention will be given to the role of SME's. In addition, the Commission will offer support to trans-national networking as well as the integration of resources across the university and research institute spectrum. Member States are being called upon to launch the construction of new inter-disciplinary N&N infrastructures as well as encourage the creation of Poles of Excellence

A third action being proposed is the interdisciplinary nature of human resources and Europe's need to foster creativity. Under this heading, the Commission recognises that the generation of knowledge depends very much on up-to-date education, training and life-long learning. As such the Commission will promote the dissemination of educational and training best practice, explore ways in which to encourage the development of cross-border thematic networks and promote the creation of an interdisciplinary European N&N award. Marie Curie actions such as the

creation of fellowships stimulating trans-national, doctorate-level programmes will also be encouraged. Member States, in turn, are called upon to foster interdisciplinary training and education with a particular focus on physics, chemistry, biology, toxicology and eco-toxicology.

Under the heading "Industrial Innovation: From Knowledge to the market", the Commission is hoping to encourage a better dissemination of results so that N&N research can translate into commercially viable, inherently safe products for processing. To do so, the Commission will foster the industrial exploitation of N&N research by bringing stakeholders together to exchange best practice for the commercialisation of N&N technology. It also intends to increase industrial involvement in EU R&D projects and to support the creation of a web-based "Digital N&N Library". A further proposal is the establishment of an N&N "Patent Monitoring System" to work through the European Patent Office. As far as the role of the Member States are concerned, the Commission calls on the Member States to reach an agreement, as soon as possible, on the adoption of the Community patent.

As well as focusing on the research aspect, the Commission recognises the importance of integrating social concerns relating to the use of nanotechnologies and wants to encourage the development of a society where the public, scientists, industry and financial operators feel comfortable in dealing with issues associated with N&N. A further area in need of examination under the action programme relates to public health, safety and environment/consumer protection. Here, the Commission wants to guarantee that all N&N applications must comply with the highest level of public health and safety. The Commission also notes that some nanotechnology applications may cover certain aspects of the REACH legislation. Lastly, the Commission action plan, includes an international dimension.

To conclude, an integrated strategy can not be implemented in a linear fashion but requires coherent and co-ordinated action. In light of increased societal interest in nanotechnologies, it is important that any action be as visible as possible. As such the Commission proposes that it focus on:

- Monitoring and overseeing the implementation of the actions plan.
- Report on progress made within the plan every two years.
- Perform a range of activities to foster a useful as well as profitable exploitation and application of nanotechnology in the EU.

## Nanosciences and nanotechnologies: an action plan for Europe 2005-2009

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The committee adopted the own-initiative report drawn up by Miloslav RANSDORF (GUE/NGL, CZ) welcoming the Commission communication on an action plan for Europe on nanosciences and nanotechnologies for the period 2005-2009. MEPs said that nanotechnologies could help address needs such as public health, energy and transport, and contribute to the EU's competitiveness and sustainable development goals, and they welcomed the "clear focus" in the Commission paper.

[The report](#) stressed the need to increase publicly funded investment in R&D, saying that world-class R&D infrastructure is needed in order for the EU to remain competitive in nanosciences. The EU must also clarify the legal and business environment for these technologies and create a nanoscience and nanotechnology patent monitoring system governed by the European Patent Office. In addition, MEPs said that an ethical approach was essential to win public trust. They therefore welcomed planned reviews of issues such as non-therapeutic human enhancement and the links between nanosciences and nanotechnologies and individual privacy, but they urged that these reviews be made public. They also called for ethical committees to be set up to help ensure the public is properly informed and to create a climate of trust based on awareness of the risks and the benefits of nanotechnologies.

The report emphasised that all applications and uses of nanosciences and nanotechnologies must comply with the high level of protection for human health, consumers, workers and the environment prescribed by the EU and insisted on the need for codification of nanomaterials. Lastly, the committee stressed the importance of international cooperation in the field of nanosciences and nanotechnologies and urged the Commission to develop further the already excellent relations with Russian scientists in particular and to investigate "the possibilities and limitations" of cooperation in this area with the USA, Japan, China and India.

## Nanosciences and nanotechnologies: an action plan for Europe 2005-2009

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The European Parliament adopted a resolution on the Commission Communication on an action plan on nanosciences and nanotechnologies, based on an own-initiative report drafted by Miloslav RANSDORF (GUE/NGL, CZ). (Please see the summary dated 20/06/2006.)

## Nanosciences and nanotechnologies: an action plan for Europe 2005-2009

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The Nanotechnology Action Plan 2005-2009 has provided an impetus for a variety of developments, in research and innovation as well as in policy making. After the first two years of the Action Plan, progress in almost every area was identified in the First Implementation Report ([COM\(2007\)0505](#)).

This Communication outlines the key developments during 2007-2009 in each policy area of the Action Plan, identifies current challenges, and draws conclusions relevant to the future European nanotechnology policy.

As a general remark, the past two years have seen a substantial development of nanotechnology, supported by a further growth in research funding and the active development of policy. Novel applications and products of nanotechnology are constantly being realised.

Bringing together public and private organisations across Europe to carry out collaborative research and development is of particular importance in the interdisciplinary approach needed in nanotechnology.

According to the Communication, support for nanotechnology research under the Community's Framework Programmes has continued to grow, from EUR 1.4 billion in the four-year period 2003-2006, to more than EUR 1.1 billion in the two-year period 2007-2008. Further growth is expected in the years up to the end of the 7th Research Framework Programme (FP7) in 2013. This investment is complemented by

significant public funding in Member States, to the tune of more than EUR 2.5 billion in 2007-2008. Private funding, however, still lagged behind public funding in Europe. At the same time, funding was increasing rapidly in other parts of the world, and dynamic new players were coming on the scene.

The Community funding covered a very wide spectrum, from fundamental nanoscience to industrial applications, with an increasing emphasis on applications. Much of this funding came from the cross-thematic approaches developed in FP7, as nanotechnologies have an interdisciplinary and enabling character and can contribute to different industrial sectors and policy objectives in health, food, environment, energy and transport.

The industrial participation in projects is gradually increasing, having reached 40 %. The Commission is also directly engaged in nanotechnology research through its Joint Research Centre (JRC), whose activities are directly linked to a number of related policy areas.

In conclusion, the Communication considers that significant progress has been made on all points of the Action Plan. Building on this, it is proposed to continue and consolidate the present actions in the coming years, with emphasis on:

- deepening the research efforts and roadmaps for key nanotechnology sectors, to enhance innovation and competitiveness; whilst advancing fundamental understanding of how nanomaterials throughout their life cycle interact with living organisms, to ensure a high safety level and protection of human health and the environment;
- developing infrastructures and the educational system further, consistent with the multidisciplinary character of nanotechnology;
- strengthening the mechanisms available for industrial innovation, stressing the concept of open innovation and facilitating technology transfer;
- implementing a more direct, focused and continuous societal dialogue; and monitoring public opinion and issues related to consumer, environmental and worker protection;
- continuing to review the adequacy of regulation, adapting as appropriate the implementation instruments, proposing regulatory change where necessary, and engaging where possible with international developments;
- surveying the market for products of nanotechnology, including their safety aspects, and likely developments;
- intensifying the research effort on safety assessment, including risk management, throughout the product life cycle; support the further development and validation of nanomaterial characterisation and test methods;
- enhancing coordination and exchange of information with Member States.

Building on achievements so far and with these needs in mind, the Commission is considering proposing a new Nanotechnology Action Plan that would be one of the driving forces of the European Research Area and address important societal and environmental issues.