



Commissioner Janez POTOČNIK

*Nanotechnology: global cooperation for a
global opportunity*

Renaissance Hotel, Brussels

17 April, 2007

Ladies and Gentlemen,

Thank you for asking me to speak to you here today. I am pleased that an international city like Brussels is welcoming such an international audience. And, of course, we are here to discuss international issues in nanotechnology.

One of the main areas we need to look at is cooperation. And I think that having this event in Brussels is already a good example of cooperation. The last two INC events were in the US, next year's in Japan. This policy of rotating continents for the location of events seems to have worked for the Olympic Games, and I am sure it will work for us.

Just like the Olympics, today we are welcoming some of the most able and talented performers in the field. Both the audience and the list of speakers include high level research players from the US, Japan, South Korea, Europe and several other countries.

For me, this conference is not just about bringing people together – although that is essential for real cooperation. It is also about bringing issues together.

Nanotechnology's success has been driven, and will continue to be driven, by linking up with relevant areas.

- **Relevant neighbouring disciplines**, such as nano-biotechnology, nano-materials technology, nano-photonics and nano-systems technologies.
- **Relevant challenges**, such as how to improve energy generation technologies, how to make better use of resources and create less waste and how to tackle threats to the environment
- **And relevant issues** such as intellectual property rights protection, standards and regulation.

Nanotechnology has already shown the benefits of cooperation. By linking up with areas such as info and bio-sciences, it has provided advances such as implants for ears and eyes, artificial limbs that contain nano-electronic circuits, and nano-bio interfaces to nerve cells in the body.

Just as the science has used the best of many areas to advance, we too must look at the areas surrounding nanotechnology, such as its economic and societal implications. In this way, we can ensure that nanotechnology's progress is neither blocked nor unbalanced, nor left to chance.

Risks and ethical issues raised by nanotechnology, both real and imagined, need to be carefully addressed. For example by responding to ethical questions raised by radical new medicines and to data-privacy issues linked to the widespread use of advanced information

communication technologies. We also need to provide more information on health or environmental risks, such as the possible toxicological effects of human-engineered nano-particles.

This conference can play a lead role in developing a long term vision for nanotechnology - particularly for the time when the present CMOS technology reaches its limits. The regional overviews given here by the US, Japan, Europe and others will form a global picture of nanotechnology's promise - and pitfalls.

One issue we can probably all agree on is that pace of the nanotechnology sector's advances in science and technology is impressive. New knowledge is becoming available. New products, processes, structures and working methods are rapidly replacing existing ones and creating new markets.

Change at this speed requires a coherent response. For me, one of the greatest challenges we face is joining

together the triangle of knowledge. In other words, how can we better link the way knowledge is produced in education, developed through research and applied through innovation?

This was one of the areas the European Commission looked at when we formulated its Action Plan for Europe in Nanosciences and Nanotechnologies, 2005-2009.

We wanted to improve the field from start to finish by:

- fostering innovation
- increasing investment
- boosting inter-disciplinarity
- creating the necessary infrastructures and
- expanding human resources

The Plan also addresses the need, for example, for more education and training, and more dialogue between science and society. And it emphasises international cooperation is a way of avoiding a "nano-divide".

The Action Plan addresses some of the concerns that have already been raised about new nanotechnology applications. So special information and communication projects - presenting both sides of the argument – have been funded, explaining how nanotechnology works in simple terms.

In addition, the European Group on Ethics in Science and New Technologies has been working on an opinion on the ethics of nanomedicine.

The EU is committed to ensuring a balanced approach to developing nanotechnology. It is fundamental to have a high level of public health, safety, and environmental and consumer protection. To do this, we need to:

- identify safety concerns
- collect more data for health and environmental impact assessments of products, and

- act at the earliest possible stage through adjustments, where necessary, of risk assessment procedures for nanotechnology.

The Commission is also looking at the European legislation applicable to nanotechnology. We are assessing how adequate and appropriate it is to deal with the increasing use of nanotechnologies. We also need to consider potential regulatory issues.

Finally, we are active in many international fora, addressing new issues and seeking to develop a "code of good conduct".

This is an important point. Legislation and regulation cannot cover everything in such a broad and fast moving area. We need to rely on responsible approach, which allows nanotechnology the freedom it requires to develop. But we also need the safeguards to ensure it works for our benefit as a whole.

One of the best ways of doing this is to have a clear code of good conduct, in which everyone can participate, which can act as a flexible blueprint for the nanotechnology field. This not only provides clarity and an inclusive approach, it also avoids the need for a top down attitude to nanotechnology from law makers.

We in the EU have provided strong financial support for our nanotechnology Action Plan. European Commission funding for research in nanosciences and nanotechnologies has steadily increased (to about 470M€ in 2005).

In fact, the Commission has now become the largest single public funding agency of nanotechnology in the world. It accounted for 30% of public funding of nanotechnology research in the EU last year.

And significant funding increases are expected over the duration of the new EU's Seventh R&D Framework

Programme, or FP7. The Commission has expanded funding for nanotechnology, with a new emphasis on developing infrastructures and projects assessing the risk of nanotechnology for humans and the environment.

In the previous Framework Programme, FP6, the Commission provided almost 1,4 billion euro for research on nano-sciences and nanotechnologies. The total budget for nanotechnologies and nano-sciences in FP7 is almost 3,5 billion for the seven-year period 2007-2013.

International cooperation is another area that will be beefed up in FP7. The programme is very flexible and organisations in countries outside the EU will be able to participate in projects under all thematic areas, including nanotechnologies and nano-sciences. For countries with lower per capita income the participation can even be funded by the EU.

We are looking, as I said at the beginning, at a coherent approach from the beginning to the end of the field. At

the end of the process is protection of results, products and innovations. So I'm pleased that an international workshop on nanotechnology related IPR issues was held yesterday.

Ladies and Gentlemen,

Nanotechnology has already shown us the promise it holds. It offers not only new solutions to many current problems, but also opens up new innovation opportunities, boosting the economy and creating jobs.

Nanotechnology is already making a difference to many people's lives.

- For businesses, who can perform better with the smaller, better performing materials, components and systems

- For patients with brain tumours and Alzheimer's disease, who are given hope by new medical treatments
- And for all of us concerned by climate change, by providing better batteries and more efficient light sources.

The world is getting smaller. Our technologies are getting smaller. But our challenges are not. So we need global cooperation in many areas, including in nanotechnology.

We need leaders to make that happen. I am pleased to be here at a conference which is leading rather than following. Leading to a promising nano-future in a balanced and responsible way.

I wish you all the best over the next three days.

Thank you.