



Romanian initiative in nanoscience and nanotechnologies
(with a special emphasis on life quality, including the quality of the environment)
<http://www.romnet.net/ro/initiativaNN/>

Preliminary

- Romanian research needs a long - term strategy. The strategy for research should be part from a general strategy, aiming at a competitive Romanian economy, integrated in EU. See also point 1d.
- In the "knowledge-era", research should be considered together with education and industry: we are therefore considering a "three-dimensional" initiative.
- The backbone of strategic approach in research: advanced research integrated in ERA, with a potential for both traditional industries and new innovative SMEs (perhaps the later will introduce products and technologies in the former).
- The initiative will be correlated with "Investing in research: an action plan for Europe"

Why nanoscience and nanotechnologies?

Valorizing resources and taking opportunities (also accepting challenges!).

| General motivation | Motivation specific to Romania |
|---|---|
| Nanoscience brings a new, multidisciplinary, approach to the basic sciences | A reorientation, eliminating parallelisms and reducing fragmentation is essential for this country, especially in basic sciences |
| Nanoscience and nanotechnologies have a huge innovative potential for new materials and production processes, for industry in general | The traditional industries need modern technologies. New industries should be promoted. However, science is just a factor in the process! |
| At the level of FP 6, "nano" from priority 3 (NMP) is important for priorities 1,2, 5 etc. | This addresses some basic priorities of a country like Romania: health, food quality, environment etc. |
| The importance of human resources (two million of new researchers are needed in the field in the next years) | The motivation for science and technology of young people is an advantage which could be exploited for "an European career" |
| Integration of resources in ERA provides a critical mass and gives a chance in competition with US, Japan etc. | Romania cannot be competitive alone in this field, integration in ERA is the only chance. |

The main lines of action of the Romanian "nano" initiative:

- An awareness campaign for researchers, industry and general public;
- Evaluating resources and defining priorities and applications in the field, taking into account all Romanian public research systems (national institutes, universities, Romanian Academy) and beyond;
- Reorienting the research in basic sciences according to the multidisciplinary vision of the nanoscience;
- Rethinking various curricula in the "nano" perspective; promoting "training by research"; stimulating a "European career", providing human resources to private industry etc.;
- Correlating the R&D programmes from the national plan for RTDI (application of new technologies in health, food quality, environment etc.), other national programmes (of CNSIS, Romanian Academy, as well as sectorial programmes) and correlating the future programmes within ERA (using the ERA-NET programme);
- Striving at a long-term research-industry as well as a public-private partnership in developing and applying nanotechnologies; public research will provide more abundant human sources, as well as access to the technical/scientific structure;
- Achieving rapidly a critical mass in research by networking and by focussed investment;
- Developing scientific and technological parks in the field.

Key actors

- Ministry of Education and Research
- Ministry of Economy and Resources
- Romanian Academy
- National Council for Research in Universities (CNCSIS)
- Chamber of Commerce and Industry
- Others (professional bodies, governmental agencies etc.).

- The above text was put forward by Dan Dascalu, by consulting Renzo Tomellini (Head of Unit Nanoscience and Nanotechnologies, Directorate Industrial technologies, European Commission) and Antoaneta Folea (from the same unit).
- After agreed by the Ministry of Education and Research (Department of Research) it is now under debate on the web page www.romnet.net.
- It is expected to be launched officially in May 2004.