

The National Plan for R&D and Innovation for 2007-2013, Ministry of Education, Research and Youth

In order to sustain the process of RDI policies planning for 2007-2013, NASR launched in 2005, within the sectoral R&D plan of NASR (National Authority for Scientific Research, Ministry of Education, Research and Youth), the project on „The elaboration of the national RDI strategy for 2007-2013”, with the following main objectives:

- elaboration of the national R&D and innovation strategy for 2007-2013, as well as of the implementation instruments and procedures, including the performance monitoring and evaluation system;
- elaboration of the National R&D and Innovation Plan for 2007-2013 (programmes profile, expected results, evaluation indicators, aso), including recommendations for contracting and financing, as well as monitoring and control mechanisms to be developed and applied.

The project aimed to determine the strategic and specific objectives and their prioritisation, and to define the programme tools to be used, for the development of the RDI system in Romania during 2007-2013. The project coordinator was the National Council of University Research (CNCSIS), the operational management was ensured by the Executive Unit for Financing Research in Universities (UEFISCSU) and the consortium included 32 R&D institutions and universities.

The main project phases were the following: • the analysis of the current organisation and management of RDI activities and the evaluation of their present performances; • the evaluation of internal/ external factors influence on the RDI system and activities and the selection of those with strategic importance; • reviewing the vision, mission and strategic objectives, producing alternatives for the development of the RDI system and the selection of the most adequate strategy; • elaboration of strategy implementation instruments and procedures; • defining the system of performance and achievement indicators and the elaboration of monitoring instruments and procedures.

The project entailed the use of specialized systems and instruments for public consultation and for developing medium and long term prognoses (including tools for forecast, foresight), process of interrogation, consultation and analysis involved the participants for more than 800 research institutes, firms, NGOs, policy makers and 4000 persons consulted online.

The National Plan for R&D and Innovation for 2007-2013: The objectives and priorities established by the Strategy document were taken into account as reference elements for the elaboration of the main strategy implementation instrument: the National Plan for R&D and Innovation for 2007-2013 (NPRDI II). The construction of the National Plan for RDI has in view to ensure the conditions for fulfilling the strategic role of the national RDI system, that of developing science and technology in order to increase economic competitiveness and to improve the quality of life, and to develop and enhance the reservoir of potentially applicable S&T knowledge. The structure of the National Plan for RDI for 2007-2013, elaborated within the strategy project, includes six programmes, with the following objectives:

Programme 1. Human resources: Increasing the number of researchers and improving their professional performances;

Programme 2. Capacities: The development of RDI infrastructures and their better connection and use at national and international level;

Programme 3. Ideas: The generation of high level S&T results, contributing to a higher international visibility and recognition for Romanian research;

Programme 4. Partnerships in priority RDI fields: Promotion of S&T partnerships leading to innovative technologies, products

and services, for solving complex problems in key application areas;

Programme 5. Innovation: Promotion of industry-led research, technological development and innovation, based on the absorption of research results, for improving economic competitiveness and the quality of life;

Programme 6. Promoting institutional performance: Promoting the continuity and stability of R&D institutions, through the development of their own strategies, in accordance with the National RDI Strategy;

The National Plan for RDI for 2007-2013 allows the RDI system to attain the level of excellence necessary for international recognition and, also, to promote innovation-based performance in all the fields that contribute to ensuring the well-being of citizens. The National Strategy for R&D and Innovation for 2007-2013, was forwarded by NASR to the Government and received the approval through Government Decision 127 from 28th of February 2007. NASR launched the National Plan for RDI for 2007-2013 – PNCDI II during the first term 2007.

The micro and nanotechnology topics from FP7 programme are represented in NPRDI II Programmes as follows (excerpts from Partnerships Work Programme):

1.7 Nanoelectronics, photonics and integrated micro- and nanosystems:

Nanoelectronics: 1.7.1 Experimenting new materials and technologies at nanometric scale for nanostructures and integrated circuits.

1.7.2 Experimenting new designs and architectures for nanoelectronic systems

1.7.3 Experimenting new concepts (principle) for nanoelectronics devices

1.7.4 Transparent electronics

Micro- and nanosystems: 1.7.5 Microsystems and components developments for communication systems; intelligent, reconfigurable and flexible Microsystems.

1.7.6 Microfluidics technologies, micro/nano- biosensors, lab-on-a-chip, microarrays, micro/nanostructures and micro/nanosystems for diagnosis and medical treatment (including nanomedicine).

1.7.7 Microsensors and actuators (including 3-dimensional)

1.7.8 Technologies for heterogenous integration and 3-dimensional assembly/encapsulation for development of complex system on a chip.

1.7.9 Converging technologies: micro-nano-bio-info

Photonics: 1.7.10 New photonics materials (artificially materials: photonics crystals, materials with negative refractive index etc.)

1.7.11 Micro and Nanophotonics systems and components for networks and communications.

1.7.12 Optical microsensors for surveillance, monitoring and robotics.

1.7.13 New photonics technologies and photonics microsensors for non-invasive systems used in in vivo diagnosis and treatments.

1.7.14 Photonics technologies for advanced fabrication processes at the micro- and nanoscale used in quality control.

NASR implements the RD&I strategy by co-ordinating the programmes carried out through projects realized by national organizations or by active participation at international programmes. The national programmes are financed in most cases by public funds, but also by private ones (co-financing), depending on the type of programme and organization.

The international programmes are financed by means of Romanian contributions from public funds to the programmes of the international organizations or by applying the international co-operation agreements settled at Governmental or institutional level.

As now Romania is part of EU, a new type of programme is financed by structural funds, in order to reach the community goal of increasing national competitiveness at the European development strategy level.