

EUROPEAN AND NATIONAL FUNDS FOR HIGHER EDUCATION AND RESEARCH

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The Structural Funds are financial instruments through which the European Union acts in order to eliminate the economic and social disparities between the regions, towards achieving an economic and social cohesion. The structural funds are post-adherence funds supplied through the European Union budget whose purpose is to support the member countries. They also support the investments in education and research.

These structural funds are allocated by taking into account the convergence criterion, a standard that stipulates the elimination of the existing gaps between country regions, the correspondence with the European economic and social standards, the improvement of the quality of life and nature. The structural funds can be accessed through instruments named **operational programmes**, which in turn contain a series of subprograms that provide a large number of activities that can be funded with grants.

THE STRUCTURE OF THE RESEARCH DEVELOPMENT AND INNOVATION SYSTEM

Today, scientific research in Romania is conducted under the National Strategy for Research, Development and Innovation. The management levels of the Research, Development and Innovation system (CDI system) in Romania are the following:

- The National Authority for Scientific Research (ANCS)
- The Executive Unit for Financing Higher Education, Research Development and Innovation (UEFISCDI)

- National Advisory Bodies:
 - The National Research Council (CNCS)
 - The National Council for Development and Innovation (CNDI)
 - The Advisory Body for Research Development and Innovation (CCCDI)

The plan, as main deployment tool, is structured on six component programmes:

- **Human Resources** with the purpose of increasing the number of researchers and their professional performance;
- **Capacities**, for the development of the research infrastructures and for the pan-European and international cooperation;
- **Ideas**, for international excellence and visibility,
- **Partnerships in priority areas** for solving complex issues and transferring the solutions to the business environment;
- **Innovation**, for the support of the pre-competitive and competitive research conducted by economic operators and
- **Supporting institutional performance**, for encouraging the activity of the national institutes in their own field of activity.

As a EU member Romania adopted the economic growth principles of the EU member countries, namely intelligent, sustainable and favourable to the social inclusion economic growth. Within the Europe Strategy 2020 the priority for the scientific research, technological development and innovation is announced as an emblematic resolution, namely an innovation Europe, which stipulates a coherent action set in order to increase the CD&I performances. The new European programme Horizon 2020 integrates all the programmes dedicated to research and innovation with the announced

purpose of ensuring the continuous financing of the innovative processes based on the scientific research and the technical knowledge defined by the phrase "from idea to market".

For the 2014-2020 period, the substantiating of the political decisions for establishing the objectives and for resources assignment will be done according to the recommendations of the National Research Development and Innovation Strategy for the 2014-2020 period and the Sectorial Operational Programme financed from structural funds with the thematic objective "Research, technological development and innovation consolidation" for the period 2014-2020, The National Council of Scientific Research initiated the analysis of the economic growth potential based on RD&I - Identifying the Intelligent fields.

At present there are three strategic orientations for the National CD&I System that regard the capacity and performances of the CD&I System, growth of economic competitiveness through innovation and international funds absorption.

Capacity and performances growth for CD&I System

The investments in the RD&I System focused on human resource development resulting in the growth of the quality and number of the researchers and their results, as well as on offering an appropriate environment for supporting their activity by building or updating the research substructure.

Economic competitiveness growth by stimulating the innovation for the Research Development investments in the private field

The national economy competitiveness growth claims mainly two aspects: a number as high as possible of companies capable of penetrating the international markets and the existence of an inner open market functionally compatible with the EU market.

Emphasis of the international dimension of the RD&I policies and programmes for the community funds absorption growth

The Romanian research internationalization policy, sustained at this time by several instruments for financing and cooperation at bilateral level with other countries (Bilateral programmes, at multilateral level, through the Main Research Development and Innovation Programme of the European Community, the EUROATOM Programme, and other EUREKA pan-European programmes and resolutions.

THE PLAN FOR THE NATIONAL RESEARCH DEVELOPMENT AND INNOVATION PROGRAMME

UEFISCDI is and acts as an institution that finances higher education, development and innovation and its main directions are the following:

- providing logistic, financial and informational support required by the national councils: the National Scientific Research Council (CNCS), the National Development and Innovation Council (CNDI), the National Higher Education Financing Council (CNFIS), and the National Council of Statistics and Forecast for Higher Education (CNSPIS) in order to perform their duties;
- coordination of the programmes Ideas, Capacities, Human resources, Partnerships in priority fields, Innovation from the National Research Development Innovation Plan 2007-2013 (PNCCDI II) under the scientific guideline of the national councils;
- accomplishment and implementation of projects regarding institutional and system development for higher education as well as research, development and innovation.

IDEAS Programme

The purpose of the programme is to obtain top scientific and technological results, comparable with the ones at the European level, reflected by the growth of visibility and international recognition of the Romanian research.

EXPLORATORY RESEARCH PROJECTS - PCE

The purpose of the projects is to support and promote the basic Romanian interdisciplinary and/or exploratory scientific research.

The Ideas programme targets researchers with proved performances in terms of quality and international recognition of their scientific work, including those who work abroad and want to conduct research projects of a high scientific level in Romanian institutions.

Complex Exploratory Research Projects - PCCE

The purpose of the programme is to support and promote Romanian multidisciplinary and interdisciplinary scientific research. Within this programme, several research teams from the same institution or from different institutions work together in order to develop complex research directions. The programme targets experienced researchers with outstanding scientific performances, proved by the originality and by the major international impact of their scientific work as well as important people who act as leaders in their specific field of research. The programme is also targeting researchers from other countries.

Exploratory Workshops

The purpose of the programme is to initiate scientific partnerships between Romanian and foreign researches in order to start and promote some new research lines and to involve students, Ph.D. students and young researchers in the day to day scientific activities at an international level.

Advanced academic courses - SSA

The purpose of the programme is to approach exploratory research themes / explicitly defined subjects which are included in one of the priorities sustained by the National Strategy for Research Development and Innovation and to report any further progress regarding these themes/ subjects, yet unexposed at the level of undergraduate courses.

CAPACITIES Programme

The purpose of the programme is to develop the National Research Capacity and the integration of the Romanian CDI system in the international scientific environment. The programme supports projects for the fields stipulated in the CDI National Strategy.

BILATERAL COOPERATION Programmes

The purpose of the programme is to ensure the development of the scientific and technical collaboration between excellence research teams in Romania and the countries with which there are different bilateral cooperation agreements through scientific and technological exchanges.

MAIN PROGRAMME 7

The purpose of the programme is to support the participation of the Romanian CDI organizations through the European Committee Main Research Programme - FP7.

This instrument ensures the required financing for covering, to the highest level, the participation rate of the Romanian partner in the project.

European Research Council Programme (ERC)

The purpose of the programme is to support Romanian researchers with excellent results in the competition organized by the European Research Council (ERC) for the implementation of projects in Romania. Two types of projects are being financed:

- Type 1 projects. Grant Support ("Bridge support") – projects which obtained at least the score of the imposed quality threshold needed for passing into the second evaluation stage, both for the Principal Investigator as well as for the Research Project;
- Type 2 projects. Excellence Grant – projects that in the second stage of ERC evaluation obtained an excellent score, but due to the limited budget of the ERC did not receive financing.

HUMAN RESOURCES Programme

The purpose of the programme is to grow of the number of researchers, to improve their professional performances, to attract foreign

researchers as well as to grow the attractiveness of a research career.

Competitions have been initiated under the scientific coordination of CNCS for the following financing instruments.

Prize award for the research results – type ARTICLE

The purpose of the programme is to grow the quality, impact and international visibility of the Romanian research through acknowledging and rewarding the significant results published in prestige journals from the main international scientific flow.

Postdoctoral research projects – PD

The purpose of the programme is to support young researchers and PhDs with exceptional results who want to develop an independent professional research career in Romanian research institutions, in order to encourage scientific excellence in Romanian research. The programme also targets researches who are working abroad and want to conduct research projects.

Research projects that encourage the creation of independent young research teams – TE

The purpose of the programme is to sustain young researchers and PhDs who are in the development or consolidation period of a research team, with an independent research programme, in order to obtain relevant results. The programme also targets researches who are working abroad and want to conduct research projects.

The PARTNERSHIP IN MAIN FIELD programme

The purpose of the programme is to create conditions for a better collaboration between different Research, Development and Innovation entities, economical agents and/or public administration units in order to solve the identified problems.

The research issues are the following:

- Information and communication technology;

- Energy;
- Environment;
- Health;
- Agriculture, food safety and security;
- Biotechnologies;
- Innovative materials, processes and products;
- Space and security;
- Socio-economic and humanist research.

Applied Collaborative Research Projects – PCCA

The purpose of the programme is to support and promote the applied research in the main inter- and transdisciplinary fields, relevant for the growth of competitiveness in CDI at the national level, and according to the knowledge-based global economy. Experimental research and technological development projects are being financed in partnership and they lead to the development of innovative products, technologies and services, with the purpose of solving and implementing solutions for the complex socio-economic problems of national priority and international actuality.

In the programme there are two types of projects:

- PCCA – Type 1 – the partnership structure: on this type of projects the participation of a company is not compulsory and the state budget financing can reach 100% of the project value.
- PCCA – Type 2 – the partnership structure: on this type of projects the participation of at least one company is compulsory.

INNOVATION Programme

The purpose of the programme is to grow the capacity of innovation and technological development and to assimilate in manufacture the results of the research in order to improve the competitiveness of the national economy and to improve the quality of life. Competitions have been initiated under the scientific coordination of CNDI for the following financing instruments:

- **Development of Products, Systems and Technologies**

Purpose: To stimulate of the technological and economic performances of Romanian companies by financing those entities that have a history, maturity and the capacity to transform ideas into

products and innovative technologies with real market potential.

➤ **Stimulation of HIGH – TECH Export**

Purpose: To Grow the competitiveness of the Romanian high-tech products and technologies.

➤ **Support Services for Innovation – Innovation Circles**

Purpose: To ensure a flexible instrument for sustaining the SMEs from the productive field in order to update the technology and to improve the innovation rate. The SMEs and freelancers – PFA are encouraged to develop partnerships with Research and Innovation institutions in order to create innovative products and services based on advanced technologies.

The Subprogram – European Cooperation EUREKA – EUROSTARS

The programme targets the economic agents, SMEs and Romanian legal entities interested in developing projects inside the EUREKA initiative, namely growing Romanian economic competitiveness, especially the industry, by obtaining new products, technologies and services. It is an innovative instrument which, by collaboration between economic agents and research institutions for advanced technologies, technological development, technology and innovation transfers, has the purpose of helping the member countries of the EUREKA Initiative to obtain and exploit new technologies for the growth of the economic competitiveness and for improving the quality of life.

The **EUROSTARS Programme** represents a European initiative aimed at helping the accomplishment of research – development activities by innovative SMEs.

A necessity for the sustainable development of higher education and research is to attract European funds which are presented in the following programmes:

Operational Regional Programme – POR

The main objective of POR is to support the economic, social, territorially balanced and sustainable development of the Romanian Regions, according to their specific needs and resources, by concentrating on the urban growth pole and by improving the infrastructure of the

business environment in order to make the regions of Romania, especially the less developed ones, more attractive places for living, visiting, investing and working.

Sectorial Operational Economic Competitiveness Growth Programme – POS CCE

The main objective of the POS CCE is to growth of the productivity of the Romanian companies in order to narrow the gap with the EU average productivity. These measures will generate by 2015 a medium productivity growth of approximately 5, 5% annually and will allow Romania to reach a level of approximately 55% of the EU average.

Sectorial Operational Human Resources Development Programme – POSDRU

The main objective of POS DRU is to develop the human resources and to grow the competitiveness by correlating education and lifelong learning with the labour market and to ensure increased opportunities for a future participation on a modern, flexible and inclusive labour market for 1.650.000 people.

Sectorial Operational Environmental Programme – POS MEDIU

The main objective of POS Mediu is to reduce the existing gap between European Union and Romania regarding the environmental infrastructure, both from a quantitative and qualitative point of view. This should lead to effective public services, taking into consideration the sustainable development principle and “the pollutant pays” principle.

Sectorial Operational Transport Programme – POS Transport

The main objective of POS Transport is to promote, in Romania, a sustainable transport system that would allow the fast, effective and safe circulation of people and goods, services at European and national standards, inside Europe, between and inside the regions of Romania.

Sectorial Operational Administrative Capacity Development Programme –PODCA

The main objective of PO DCA is to contribute to the creation of a more effective and efficient public administration to benefit the socio-economic Romanian society.

Operational Technical Assistance Programme - POAT

The main objective of the Operational Technical Assistance Programme is to ensure the support needed for the healthy, efficient and transparent coordination and implementation process of the structural instruments in Romania.

National Rural Development Programme - PNDR

The European Agricultural Fund for Rural Development (FEADR) is a financing instrument created by the European Union in order to support member countries in the implementation of the Common Agricultural Policy.

The European funds for agriculture may be accessed based on the key- document National Rural Development Programme (PNDR).

Operational Fishing Programme - POP

The Operational Fishing Programme of Romania (POP) contributes to the accomplishment of the strategic vision formulated in the National Strategic Plan for Fishing: "A competitive fishing sector, modern and dynamic, based on the sustainable activities of fishing and aquaculture that takes into account aspects regarding the environmental protection, social development and economic welfare".

Inside the Sectorial Operational Economic Competitiveness Growth Programme - POS CCE there are:

The priority axis 2 - Competitiveness through research, technological development and innovation

The Major intervention field 2.2. - Investments for the Research Development Innovation infrastructure.

Operation 2.2.2.: Developing poles of excellence

Inside the Sectorial Operational Human Resources Development Programme - POSDRU there are:

The priority axis 1:" Education and professional training in order to support economic growth and the development of the knowledge-based society"

➤ **Major intervention field 1.1,** "Doctoral and postdoctoral programmes in order to support research", aims to support the development of a flexible lifelong learning method and to improve access to education and learning by providing modern and good quality education and training, including higher education and research.

➤ **Major intervention field 1.2 "Quality in higher education"**

The programme priorities are the following:

- the reorganization and modernization of higher education both as a system and also regarding the universities;
- the development and implementation of the National Qualification Frame in Higher Education;
- the development and implementation of an assurance and quality management system;
- the development and implementation of the national qualifications system;
- the improvement of the university management;
- the increase of the higher education relevance for the labour market and for the knowledge-based society, through improved study programs.

Territorial Cooperation Programmes

These are:

➤ **Cross-border Territorial Cooperation**

The cross-border cooperation programmes are those that finance accessibility, environmental, risk prevention, economic and social development projects and the activities "people to people at the internal and external borders of UE".

➤ **Transnational Territorial Cooperation**

The main goal of the transnational cooperation programmes is to finance activities and develop networks that lead to an integrated territorial development in fields such as: environment, urban development, innovation and accessibility.

➤ **Interregional Territorial Cooperation**

The Interregional Territorial Cooperation programmes support the cooperation between public authorities regarding common interest

issues, through the transfer of experience and good practice between the regions of the European Union, by establishing networks between the UE cities and researchers.

For the development of higher education and research, funds can be accessed also through projects financed inside the International Programme FP7 – Frame Programme 7.

This programme is structured on following subprograms:

- Cooperation;
- Ideas;
- Human resources;
- Capacities.

The attraction of European funds, of national dedicated CDI funds and of funds within international projects represents a necessity for the sustainable development of the Romanian higher education and research.

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