

# THE NATIONAL PLAN FOR RESEARCH, DEVELOPMENT AND INNOVATION 2007-2013, PNII

## The Program HUMAN RESOURCES The Subprogram “Postdoctoral research projects”

### Information package<sup>1</sup>



MINISTERUL  
EDUCAȚIEI  
CERCETĂRII  
TINERETULUI  
ȘI SPORTULUI

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<sup>1</sup> Unauthorised translation. Only the Romanian version of the pack has legal validity.

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## **POSTDOCTORAL RESEARCH PROJECTS**

**Call number: PN-II-RU-PD-2011 - 2**

### **1. Goal**

Supporting young researchers with doctorates in the sciences, with high level results, who wish to develop an independent professional career in Romanian R&D units or institutions, with an aim to stimulate excellence in Romanian scientific research. The subprogram is also open to those who are working abroad and who are interested in leading high level research projects in Romanian institutions.

### **2. Objectives**

- creating, for young researchers, an additional chance to obtain a stable research position in R&D units and institutions in Romania;
- providing the financial and logistical support in order to allow young doctorate recipients to continue a research career in Romania;
- promoting advanced fundamental research, with results up to the highest international standards;
- implement the principle “the funds go with the performance”;
- increasing the visibility of Romanian research internationally, by improving the quality level and the efficiency of exploitation of research results;
- helping research units and institutions to offer the adequate conditions to the return and professional reintegration of high level Romanian researchers, with a proved potential for excellence in scientific research;
- an increase in the number of full time researchers financed via project based funding and employed on permanent contracts in Romanian R&D units or institutions.

### **3. Expected results**

The funding for these projects seeks:

- to obtain excellent scientific results reflected in an increase in the number of publications of high international impact, as well as an increase in the number of patented technologies, applied in the industry;
- to increase the research capacity, including through the increase in the number of full-time researchers, encouraging their formation and development in a medium of high scientific quality;

- to attract and involve researchers working abroad in projects with an impact on the international visibility of Romanian scientific research;
- to increase the capacity to successfully apply for European and international research funds.

#### **4. Eligibility criteria**

- a) The Project leader has a doctorate, obtained not more than 5 years before the date of submission of the project. Persons who have successfully defended their doctorate can also apply, provided that the diploma is presented before the date of the signing of the funding contract. If the doctoral diploma is not officially recognized in Romania, its recognition must be obtained before the signing of the funding contract;
- b) The project leader had not reached the age of 35 on the date on which the project was submitted. For researchers who have completed or are enrolled as resident physicians in programs regulated at the European level (general medicine, dental medicine, pharmacy), the limit is extended to age 40. In order to justify this exception, the project leader will present, at the time the contract is signed, either a document certifying the status of resident physician (in authorized translation if the resident program followed is abroad), or the specialist diploma (in authorized translation if the diploma was obtained abroad).
- c) The Project must be implemented in a Romanian R&D unit or institution, including in a higher education institution, referred to below as the host institution. The host institution cannot be an enterprise, in the sense of the state aid legislation;
- d) The project leader is employed full time in the host institution, with a permanent position, or with a fixed term contract covering at least the duration of the project, or has the agreement of the host institution for his or her employment at least for the duration of the contract; in case the funding is awarded, the employment contract must be signed by the project leader and the host institution before the signing of the funding contract;
- e) The host institution is not in the state of payment default; it does not have its accounts blocked following a court order; it has not made false declarations concerning the information required by the UEFISCDI in view of selecting the contractors; it has not broken the terms of a different contract signed previously with a contracting authority;
- f) The host institution must be different from the institution that granted the project leader the doctoral diploma;
- g) There is an agreement to assume the role of postdoctoral advisor from a researcher satisfying the minimal eligibility standards in Appendix 1, employed full time at the host institution with a

permanent contract or with a fixed term contract covering at least the duration of the postdoctoral project. The information necessary to verify the eligibility standards must be filled out in the online proposal submission platform;

- h) A given person can submit, as a project leader within the first competition of the year 2011, a single proposal of the PD type (postdoctoral research projects), of TE type (research projects for supporting the establishment of young independent research groups) or of PCE type (exploratory research projects). In case more than one proposal is submitted by the same project leader, all of them will be declared ineligible;
- i) A given person can be the leader of a single project of the PD type or of a postdoctoral fellowship funded through European cohesion funds (POSDRU), ongoing at any given time. Project leaders who already lead PD projects but who are in the last 12 months of the projects can submit project proposals for projects of type PD, TE or PCE, which will begin after the end of the ongoing PD project;
- j) It is forbidden to submit proposals which seek to fund activities which are have already obtained funding from the state budget.
- k) A given person can participate, as postdoctoral advisor, in not more than 3 PD type projects ongoing at any given time.

## **5. Duration**

The duration of the project is of minimum 12 months and maximum 24 month.

## **6. Budget**

The ceiling for the funding awarded for a project with a duration of 24 months is 300.000 lei.

The maximum amount awarded for projects which are shorter than 24 months is calculated proportionally to the duration, with reference to the 24 month maximum duration.

### **Eligible expenses**

- *expenses with the salaries* (including all corresponding state and social contributions); for the postdoctoral advisor the expenses with the salaries, including all corresponding state and social contributions, cannot exceed 700 lei/month;
- *inventory expenses* necessary for the project, including equipment, consumables, material expenses, publication, information/bibliography expenses or for access to the research infrastructure of third parties, etc.;

- *mobility expenses* corresponding to national or international travel of the team members, for documentation periods, participation in high level scientific conferences, workshops and communications in the field of the project; travel expenses for national or international collaborators as well as for participants to scientific events organized within the project may also be financed;
- *indirect expenses* (overhead) - indirect expenses are calculated as a percentage of direct expenses: salaries, inventory and mobility. These cannot be larger than 20% of direct expenses.

The funding contract will specify the budget breakdown over the budget categories. During the duration of the project funds can be redirected between the following budget categories: salaries, inventory and mobility, in the limit of 15% of the total budget, without any prerequisite approval, in agreement with the provisions of the funding contract.

The budget allocated to projects being contracted as a result of the present call of the TE subprogram for the entire duration of the contracts, is of maximum 50.000.000 lei.

### **Budget cuts**

In case of large cuts in the budget of the National Plan for years subsequent to the year in which the contracts were signed, if the reduction of the budgets of the contracted projects becomes necessary, this reduction will be implemented as follows:

- If the necessary reduction, for a program or subprogram, for the totality of the ongoing projects, is less than 20% of the budget of the program or subprogram for that year, then the project budgets will be reduced uniformly with the given percentage.
- if the necessary reduction exceeds 20%, then the reductions will be differentiated, based on the grade level of the projects, as follows:
  1. For projects in the first 18 months after the date of the signing of the contracts, the grade level will be equal to the level obtained at the initial evaluation, prior to the selection of the projects, between 0 and 100 points.
  2. For projects for which more than 18 months have passed, there will be an exceptional, intermediate evaluation, through which each project will obtain a grade level between 0 and 100 points. These evaluations will take into consideration the performance indicators below. The final level will be obtained as the mean of the initial evaluation grade level and the exceptional intermediate evaluation grade level.
  3. The budget reduction will be obtained as a percentage of the initial budget for the given year, where the percentage will be obtained as a linear relationship with the level obtained, depending on the available budget.

The exceptional intermediate evaluation will take into consideration the following performance indicators:

	Names of indicators	UM
Result indicators	Cumulated relative impact factor of works published or accepted for publication	
	Number of works in international collaboration, published or accepted for publication in the international scientific mainstream	Num.
	Number of researchers from abroad integrated in the national R&D system	Num.
Result indicators (for the humanities only)	Number of articles published in journal indexed AHCI or ERIH category A or B	Num.
Result indicators (for the humanities and the social sciences only)	Number of chapters published in collective volumes, in major international languages, at prestigious foreign publishing houses	Num.
	Number of authored books published in major international languages at prestigious foreign publishing houses	Num.
	Number of edited books in major international languages at prestigious foreign publishing houses	Num.
Impact indicators	The cumulated relative influence score of works published or accepted for publication	

## 7. The presentation of the project proposals

Project submission is done in one step, using the online project submission platform - [www.uefiscdi-direct.ro](http://www.uefiscdi-direct.ro). The proposal may be written only in English, with the exception of humanities projects (see Appendix 4 for a list of humanities research areas), where proposals in English, French or German are allowed, and with the exception of projects with a national Romanian character, where proposals in Romanian, English, French or German will be allowed. In cases where the proposal is not written in English, the choice of language must be justified by the specific research proposed.

The project proposal must follow the structure described in *Appendix 2*.

## 8. Project evaluation

### 8.1. Checking eligibility

The project proposals are received and verified by the UEFISCDI personnel, for the host institution as well as for the project leader. The list of eligible project proposals will be published on the UEFISCDI website - [www.uefiscdi.gov.ro](http://www.uefiscdi.gov.ro).

Candidates who wish to appeal the eligibility results can send their appeals by email to [contestatiiPD@uefiscdi.ro](mailto:contestatiiPD@uefiscdi.ro), by fax to 021 3071919, or directly to the UEFISCDI headquarters, within 3 workdays from the date of publication of the results.

## **8.2. The expert evaluation**

The eligible projects are evaluated by experts of international recognition. For each project, at least 50% of the expert evaluators are selected from outside the country, from other member states of the European Union, or from member states of the Organisation for Economic Cooperation and Development, with the exception of the projects with a national Romanian character (see Appendix 4).

The evaluators must satisfy the minimal eligibility standards presented in *Appendix 1*.

**8.2.1. The individual evaluation step.** The quality of each proposal declared eligible is evaluated, independently, online, by at least 3 expert evaluators who form the evaluation committee. These assign individual grades for each criterion, according to the evaluation sheet. The grades assigned to each criterion are justified with comments, which point out the strong and weak points. After all individual evaluations are available for a given project, each evaluator in the committee will have access to the grades and comments of the other evaluators. If they consider it necessary, the evaluators can adjust their initial grades.

The evaluation sheet is presented in *Appendix 3*.

**8.2.2. Consensus.** Consensus is reached if the difference between the grade level given by each evaluator and the mean of the levels does not exceed 10 points. If consensus has not been reached after the individual step, the evaluators may communicate via the online evaluation platform, maintaining anonymity, and they can adjust their grades and comments in order to reach consensus. The project proposals for which consensus is not reached are evaluated by a final committee, composed of the evaluators in the original committee, to which is added at least one other evaluator. The final grade level is obtained as the mean of the grade levels given by the members of the final committee.

**8.3. The evaluation results.** The list of the project proposals and the levels obtained by each of them, in decreasing order, will be published on the UEFISCDI website - [www.uefiscdi.gov.ro](http://www.uefiscdi.gov.ro).

**8.4. Communication.** The candidates are informed of the evaluation results and they receive the grade levels and comments given by each evaluator, via email, at the address specified on the application form.

**8.5. Appeals.** The candidates may submit appeals during 3 workdays following the date of publication of the evaluation results. Appeals can attack only faults of procedure that the candidate considers as non conforming to the information pack. Appeals cannot attack the levels and the comments given by the evaluators. They may be sent by email to [contestatiiPD@uefiscdi.ro](mailto:contestatiiPD@uefiscdi.ro), by fax to 021 3071919, or directly to UEFISCDI headquarters.



**8.6. The competition results.** Project proposals are selected in decreasing order of the grade levels obtained, taking into account the available funds.

**8.7. Budget negotiation and signing the contracts.** Evaluators will be given a chance to give appreciations of the proposal budgets, and whether and to what extent the budget is well correlated with the planned activities and objectives. In cases where the evaluators will point out mismatches in this area, the project directors will negotiate with CNCS/UEFISCDI the funding amounts and the structure of the contract budget. The contract is signed after the negotiation is concluded.

*Evaluations are anonymous, ensuring the confidentiality and impartiality of the expert evaluators.*

The list of the evaluators used in the evaluation of projects in the TE subprogram will be published on the UEFISCDI website, at the end of the call.

## **9. Main obligations of the parties**

### ***Project leader:***

1. Is responsible for the execution of the project.
2. Compiles and sends to the UEFISCDI reports of scientific progress during the course of the project, and a final report, at the time and in the format specified by CNCS/UEFISCDI in the funding contract. The deadlines of the intermediate reports are proposed by the project leader, in accordance with the workplan presented in the project proposal;
3. For the duration of the contract, the project leader is registered on the portal [www.cercetatori-romani.ro](http://www.cercetatori-romani.ro) and has the obligation of maintaining an up to date CV and of participating in the evaluation process of other competitions, at the request of the contracting authority;
4. Publishes up to date information on the project activities (at least a summary and the list of publications supported by the project) on a webpage, in English; for projects with a national Romanian character, the site can be written in Romanian as well, with a short summary in English.

### ***The postdoctoral advisor:***

Coordinates the activity of the team hosting the postdoctoral project, providing access to the existing experience in the team and helping to guide and support the activity of the postdoctoral researcher.

### ***The host institution:***

1. Provides access of the project leader to the existing research infrastructure and provides the administration services which are required for an efficient implementation of the project.
2. Compiles and sends to the UEFISCDI the financial reports of the project, at the end of each

financial report phase. The form of the financial reports is specified in the contract.

3. The host institution, via the signature of its legal representative, certifies the legality and correctness of the information which is presented in the application forms, accepts to host the project on its premises, provides access to the resources mentioned in the project proposal, commits to provide all needed administrative support for an efficient implementation of the project and to employ the members of the project team for the duration of the project, in respect of all legal provisions in force, if the project is selected for funding.

***UEFISCDI:***

Makes available the funds, and carries out the monitoring of the project, in respect of all legal provisions, of the contract provisions and in the limit of the available budget.

**10. Project mobility**

In general, the project leader will implement the project in the host institution through which he or she submitted the project proposal. However, for project longer than 12 months, UEFISCDI can allow the project leader to transfer the project to a different host institution in the country, at most once for a given project, and only during the first 12 months of the duration of the project. The reason for offering this freedom to the project leader is to optimize the chances of success of the project.

The project leader has the obligation to address a written request to the UEFISCDI for the transfer of the project to a different host institution, along with a detailed justification and a written agreement of the new host institution and of the original host institution. In the case in which the original host institution refuses the transfer, it must send UEFISCDI the reasons for the refusal. CNCS will analyze the request for transfer and, depending on the situation, will make a decision in order to optimize the chances of success of the project implementation. If the request is accepted, the UEFISCDI will terminate the contract with the original host institution and will sign a new contract with the new host institution, through which to ensure the timely transfer of all remaining funds (not spent and not committed to be spent) and all equipment and materials acquired through the project to the new institution. The original host institution has the obligation to transfer, within 30 days of the contract termination, all funds and all equipment and materials acquired through the project, to the new institution, in order to allow the resumption of the project as quickly as possible. The transport expenses for the equipment and materials to the new location will be supported by the new host institution.

## 11. Deadlines

<b>ACTIVITY</b>	<b>TIME</b>
<b>Call launched</b>	<b>22 March 2011</b>
<b>Proposal submission</b>	<b>06 May 2011</b>
<b>Eligibility results published</b>	<b>23 May 2011</b>
<b>Appeals to the eligibility results</b>	<b>24-26 May 2011</b>
<b>Final eligibility results published</b>	<b>07 June 2011</b>
<b>Evaluation of eligible proposals</b>	<b>08 June – 23 August 2011</b>
<b>Preliminary results published</b>	<b>29 August 2011</b>
<b>Appeals to the evaluation results</b>	<b>30 August – 01 September 2011</b>
<b>Final results published</b>	<b>9 September 2011</b>
<b>Final list of selected projects published</b>	<b>16 September 2011</b>
<b>Contracts signed</b>	<b>22 September 2011</b>
<b>Projects start</b>	<b>01 October 2011*</b>

\*Depending on the specific situations, some projects may start after this date.

*Useful information:*

*Funding proposals are to be submitted via the online submission platform - [www.uefiscdi-direct.ro](http://www.uefiscdi-direct.ro), which will be available after march 31<sup>st</sup> 2011. No paper submission is necessary. Project proposals are signed only by the project leader, are scanned in pdf format and are loaded into the online platform in the section provided for this purpose.*

*Also, the proposal must be accompanied by a declaration (signed and stamped by the legal representative) by which the host institution offers the necessary administrative support, provides access to all necessary infrastructure, agrees to support the implementation of the project in good conditions and to employ the members of the project team, while observing all legal provisions in force, if the project is selected for funding. This declaration is signed and scanned in pdf format, and is loaded into the online platform in the section provided for this purpose.*

## APPENDIX 1 - Minimal eligibility standards for the postdoctoral advisor and the evaluators

### a) For fields outside the humanities and social sciences

To have published, in the period 2001 – 2011, as a main author (see Appendix 5 - Definitions), articles in journals with a relative influence score<sup>2</sup> not less than 0.5, and with a cumulated relative influence score not less than 1. These articles must be published in journals indexed in the Web of Science database, labeled with the document type *article* or *review*.

### b) For the social sciences (see Appendix 4 – Scientific Domains)

To have accumulated at least 50 points from published works after January 1<sup>st</sup> 2001, from the following categories:

1. Books published as author or co-author: 60 points per book;
2. Chapters published as author or co-author in collective volumes: 30 points per chapter;
3. Articles published as the main author (see Appendix 5 - Definitions) in journals with a relative influence score<sup>1</sup> not less than 0,25. These articles must be published in journals indexed in the Web of Science, labeled with the document type *article*, *review* or *proceedings paper*. For each such article, points are obtained as follows: 50 points × relative influence score.

For categories 1 and 2: will be considered only works available in at least 3 libraries of higher education institutions from the other member states of the European Union, or from the member states of the Organisation of Economic Cooperation and Development, indexed in the worldwide catalogue WorldCat (available at [www.worldcat.org](http://www.worldcat.org)<sup>3</sup>).

### c) For the humanities (see Appendix 4 – Scientific Domains)

To have accumulated at least 50 points from works published after January 1<sup>st</sup> 2001, from the following categories:

1. Reference works for the humanities (authored books, dictionaries/encyclopaedias, particularly difficult critical editions<sup>4</sup>), published at publishing houses from outside of Romania and of the Republic of Moldova, in major international languages (see Appendix 5). These works must be available in at least 3 libraries of higher education institutions from other member states of the European Union or from member states of the Organisation for Economic Cooperation and

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<sup>2</sup> The relative influence score is defined in Appendix 5 and is available on the UEFISCDI website [www.uefiscdi.gov.ro](http://www.uefiscdi.gov.ro)

<sup>3</sup> In order to determine the number of libraries, after searching for the work in WorldCat, you must fill out the “Enter your location” field with a city name such as “Paris”, since WorldCat does not recognize Romanian cities.

<sup>4</sup> By „particularly difficult critical edition” is meant the publishing of a volume which contains sources relevant for at least one discipline in the humanities, and whose origins are not restricted to a certain period if they consist of manuscripts, but which date to before 1800 for printed texts, and the editing work involved at least 2 of the following activities: 1. the (re)establishment of the text by the critical comparison of several versions; 2. the (re)translation of the original text and editing it bilingually, by using rare paleographic/epigraphic/linguistic knowledge (by which one means the knowledge of languages particular to civilizations from the antiquity or the middle ages, or from the early modern period); 3. the elaboration of an introductory contextualizing study or of an ample series of explicative notes.

Development, indexed in the worldwide catalog WorldCat (disponibil la [www.worldcat.org](http://www.worldcat.org)): 100 points per work.

2. Reference works for the humanities published at publishing houses in Romania or the Republic of Moldova (authored books, dictionaries/encyclopaedias, particularly difficult critical editions<sup>3</sup>). These works must be indexed in the world catalogue WorldCat. Maximum 2 works may be considered from this category: 20 points per work.

3. Studies published in journals indexed in the Arts & Humanities Citation Index sau included in the European Reference Index for Humanities (ERIH), categories A or B ([www.esf.org/research-areas/humanities/erih-european-reference-index-for-the-humanities.html](http://www.esf.org/research-areas/humanities/erih-european-reference-index-for-the-humanities.html)), or chapters authored in collective volumes edited in major international languages, or volumes edited in major international languages. The collective volumes must be found in not less than 3 libraries of higher education institutions from other member states of the European Union, or member states of the Organisation for Economic Cooperation and Development, indexed in the worldwide catalogue WorldCat: 10 points per study, chapter or volume edited.

## **APPENDIX 2 – Application Form**

*This document uses Times New Roman font, 12 point, 1.5 line spacing and 2 cm margins. Any modification of these parameters (excepting the figures and their captions), as well as exceeding the maximum number of pages set for each section can lead to the automatic disqualification of the application. The grey text contains instructions for the candidates and it may be removed and replaced with the required information. The black text must be kept, as it marks the mandatory information and sections of the application.*

### **A. General information**

**Project title (maximum 150 characters):**

**Summary (maximum 1500 characters, spaces included):**

**Project leader:**

Last name:

Previous last names:

First name:

Birthday (DD/MM/YYYY):

Doctorate obtained in the year:

Phone number:

Email address:

**Host institution:**

Name of institution:

Address of institution:

Registration code in the Register of Potential Contractors (<http://rpc.ancs.ro/>):

**Domain of the proposal** (see appendix 4 – Scientific Domains)

Domain:

Subdomain:

Main research area:

Secondary research area:

Secondary research area (optional):

**Keywords:**

1:

2:

3:

4 (optional):

5 (optional):

## **B. Project leader**

### ***B1. Curriculum vitae*** (max. 3 pages)

Contains at least the following categories of information:

- a) education, degrees and diplomas;
- b) professional experience, former employers;
- c) list of publications and patents;
- d) Hirsch index and the total number of citations, according to Web of Science (this applies to research areas outside of the social sciences and humanities);
- e) optionally, the address of the researcherid.com profile (recommended for proposals in research areas outside of the humanities).

## ***B2. Scientific contributions from the period after the 1<sup>st</sup> of January 2006***

### **For research areas outside of the humanities**

Please include the most important and representative publications of the project leader (at most 3). This can include for instance, articles, monographs or intellectual property titles.

*Articles.* This section will point out the most important articles indexed in the Web of Science database, published by the project leader as the main author. The number of citations (without auto-citations) for each article will be included as well. It is possible to include articles accepted for publication, with the mention of the date of acceptance. If available, the DOI (digital object identifier) may be provided. If there are important articles published as coauthor, that the project leader considers as relevant for his or her scientific activity, these can be mentioned as well.

Articles will be listed in the following format:

Authors. Article title, Journal title, volume, pages (Year published).

No. of citations:

DOI (optional):

Summary (optional):

*Monographs.* Please indicate only the scientific monographs published at prestigious international publishing houses. The names of at most 10 university libraries that hold the monograph may be included (these may be obtained from the worldcat.org website or directly on the webpage of the university library catalogue). University or lower level textbooks will not be considered, even if published by prestigious international publishing houses.

Monographs will be listed in the following format:

Authors. Book title, Publishing house (Year published).

No. of libraries in worldcat.org:

University libraries:

*Intellectual property titles.* Only IP titles obtained in other countries of the EU or in countries of the OECD will be considered.

IP titles will be listed in the following format:

Authors. Title of patent/model (Year obtained). Name of emitting office.



### **For the humanities**

The most important works will be indicated (at most 3): books, chapters, articles, critical editions, dictionaries or encyclopedias. The proposal may also include one work (or fragment) considered representative for the activity of the project leader. This will be loaded in electronic format on the online proposal submission platform.

Works will be listed in the following format:

Authors. Title of the article/chapter/book. Publishing house (Year published).

**C. Visibility and experience of the postdoctoral advisor** (max. 2 pages)

- a) list of the 10 most representative works, especially publications in prestigious journals, books published abroad or in major foreign languages, patents;
- b) information about the professional experience and the former employers, including international collaborations;
- c) Hirsch index and the total number of citations, according to Web of Science (this applies to research areas outside of the social sciences and humanities);
- d) optionally, the address of the researcherid.com profile (recommended for proposals in research areas outside of the humanities).

## **D. Description of the research project** (max. 8 pages)

In this section the candidate will detail the scientific context, the goals and objectives, the approach to these objectives, and the required material resources.

**D1. *Scientific context and motivation.*** Please describe the main concepts of the project in the context of the state of the art in the field. The choice of project will be explained and motivated, with a focus on identifying the new aspects and open problems which are to be tackled.

**D2. *Objectives.*** Please detail the project objectives with explicit references to the importance of the subject for the broader field of research and to the novel notions that will be studied or elaborated.

**D3. *Career development.*** Please describe the objectives and the impact of the project on the career development of the project leader, in the sense of gaining knowledge and experience, for obtaining the autonomy which is necessary for developing an independent research career. Please highlight the techniques, methods and concepts which will be studied and assimilated, in order to consolidate, broaden and diversify the knowledge base and experience of the project leader, without neglecting the issue of interdisciplinarity;

**D4. *Method and approach.*** The approach taken to the stated objectives must be described in detail, with reference to the most recent techniques in the field. Several intermediate milestones must be proposed. The organization and planning of the project will be presented in the form of a workplan. The workplan will include an estimation of the time commitment from each of the team members in units of man-months. The adjoining argument must underline the convergence of the material resources and the human resources in the available time, to the goal of reaching the stated scientific objectives.

**D5. *Impact, relevance and applications.*** The candidate will discuss the aspects related to the expected impact of the proposal in the larger scientific field, including a discussion of the possible applicative research directions which will be explored within the project, from a scientific, social or economic viewpoint.

**D6. *Resources and budget.*** The existing, relevant infrastructure will be described, as well as the equipment which is to be acquired within the project. In case one or more pieces of equipment of more than 15000 euro are thought to be needed, a detailed justification will be given for each their roles and importance for the project. The yearly budget layout and the types of expenses will also be detailed and justified. The candidates will assume a starting date of October 1<sup>st</sup> 2011. The types of expenses are as follows: salaries, logistics, mobility, and indirect expenses (overhead). The overhead is calculated as a percentage of the direct expenses. The percentage must be agreed upon by the project leader and the host institution and must be smaller than 20%.

**Budget Breakdown (lei)**

<b>Budget chapter (expenses)</b>	<b>2011 (lei)</b>	<b>2012 (lei)</b>	<b>2013 (lei)</b>	<b>2014 (lei)</b>	<b>Total (lei)</b>
<b>Salaries</b>					
<b>Inventory</b>					
<b>Mobility</b>					
<b>Overhead</b>					
<b>Total</b>					

**Budget Breakdown (euro)**

<b>Budget chapter (expenses)</b>	<b>Total budget (euro)</b>
<b>Salaries</b>	
<b>Inventory</b>	
<b>Mobility</b>	
<b>Overhead</b>	
<b>Total</b>	

**The information in this application is hereby certified to be correct.**

Project leader,

Last name, first name:

Signature:

Date:

## **APPENDIX 2 - Evaluation Sheet**

### **1. Project leader (PI) and Postdoctoral advisor (50%)**

1.1. How relevant is the PI's expertise, as derived from his/her publications and background, for the proposed objectives? (15%)

1.2. How would you rate the Postdoctoral advisor's professional prestige and international visibility in his/her research field? (10%)

1.3. How do you assess the PI's publications in his/her field of research? (20%)

1.4. Based on the information available in this proposal, how would you rate the potential of the candidate to develop an autonomous research activity based on independent, creative thinking? (5%)

### **2. Proposal, work plan (50%)**

2.1 Significance. How would you rate the level of importance of the specific problem studied and the potential impact of the proposed objectives for science, society or technology? (15%)

2.2 Approach. To what extent are the methods, design and investigation tools adequately selected and/or developed, well integrated, well reasoned, and appropriate for the aims of the project? Are potential problem areas adequately analyzed, and reasonable alternative approaches considered? (15%)

2.3 Innovation. How original and innovative are the proposed research directions? For example: Does the project challenge existing paradigms or address an innovative hypothesis or critical barrier to progress in the field? Does the project develop new methods/technologies or significantly extend/improve previous ones? Does the project employ novel concepts, approaches, tools, or technologies within the specific area? (10%)

2.4 Work plan and resources. How appropriate and well adapted is the work plan for achieving the goals of this project, and how likely is it that the goals be achieved within the proposed timescale and resources, taking into account the existing and the newly acquired resources and infrastructure? (10%)

#### **Recommendations for evaluators:**

- a) Please give a grade for each subcriteria: 0 – absent, 1 – very poor, 2 – poor, 3 – fair, 4 – good, 5 – very good
- b) The final score will be calculated as a sum of the grades for each of the subcriteria weighed by the corresponding percentage and multiplied by 20 (final score between 0 and 100).
- c) Please add comments in support of your evaluation, for each of the subcriteria.

## APPENDIX 4 – Scientific domains and research areas

<b>Domain Code:</b>	<b>SH</b>
<b>Subdomain Code:</b>	<b>SH1, SH2, SH3, SH4, SH5, SH6</b>
<b>Research Area Code:</b>	<b>SH1_1..SH1_12, SH2_1..SH2_14....</b>

### DOMAIN SOCIAL SCIENCES AND HUMANITIES

<b>SH1</b>	<b>Individuals, institutions and markets:</b> economics, finance and management
<b>SH1_1</b>	Macroeconomics, growth, business cycles
<b>SH1_2</b>	Microeconomics, institutional economics
<b>SH1_3</b>	Econometrics, statistical methods
<b>SH1_4</b>	Financial markets, banking and corporate finance
<b>SH1_5</b>	Competitiveness, innovation, research and development
<b>SH1_6</b>	Consumer choice, behavioral economics, marketing
<b>SH1_7</b>	Organization studies, strategy
<b>SH1_8</b>	Human resource management, employment and earnings
<b>SH1_9</b>	Public administration, public economics
<b>SH1_10</b>	Income distribution, poverty
<b>SH1_11</b>	International trade, economic geography
<b>SH1_12</b>	Economic history, development
<b>SH2</b>	<b>Institutions, values, beliefs and behavior:</b> sociology, social anthropology, political science, law, communication, social studies of science and technology
<b>SH2_1</b>	Social structure, inequalities, social mobility
<b>SH2_2</b>	Ageing, work, social policies
<b>SH2_3</b>	Kinship, cultural dimensions of classification and cognition, individual and social identity, gender
<b>SH2_4</b>	Myth, ritual, symbolic representations, religious studies
<b>SH2_5</b>	Ethnography
<b>SH2_6</b>	Globalization, migration, interethnic relations
<b>SH2_7</b>	Transformation of societies, democratization, social movements
<b>SH2_8</b>	Political systems, legitimacy of governance
<b>SH2_9</b>	Legal systems, constitutions, foundations of law
<b>SH2_10</b>	Private, public and social law
<b>SH2_11</b>	Global and transnational governance, international law, human rights
<b>SH2_12</b>	Communication networks, media, information society

<b>SH2_13</b>	Social studies of science and technology, S&T policies, science and society
<b>SH2_14</b>	History of science and technology
<b>SH3</b>	<b>Environment and society:</b> environmental studies, demography, social geography, urban and regional studies
<b>SH3_1</b>	Environment and sustainability
<b>SH3_2</b>	Environmental regulation and mediation
<b>SH3_3</b>	Social and industrial ecology
<b>SH3_4</b>	Geographical information systems, cartography
<b>SH3_5</b>	Human and social geography
<b>SH3_6</b>	Spatial and regional planning
<b>SH3_7</b>	Population dynamics
<b>SH3_8</b>	Urbanization and urban planning, cities
<b>SH3_9</b>	Mobility and transportation
<b>SH4</b>	<b>The Human Mind and its complexity:</b> cognition, psychology, linguistics, philosophy and education
<b>SH4_1</b>	Evolution of mind and cognitive functions, animal communication
<b>SH4_2</b>	Human life-span development
<b>SH4_3</b>	Neuropsychology and cognitive psychology
<b>SH4_4</b>	Clinical and experimental psychology
<b>SH4_5</b>	Formal, cognitive, functional and computational linguistics
<b>SH4_6</b>	Typological, historical and comparative linguistics
<b>SH4_7</b>	Acquisition and knowledge of language: psycholinguistics, neurolinguistics
<b>SH4_8</b>	Use of language: pragmatics, sociolinguistics, discourse analysis
<b>SH4_9</b>	Second language teaching and learning, language pathologies, lexicography, terminology
<b>SH4_10</b>	Philosophy, history of philosophy
<b>SH4_11</b>	Epistemology, logic, philosophy of science
<b>SH4_12</b>	Ethics and morality, bioethics
<b>SH4_13</b>	Education: principles, techniques, typologies
<b>SH5</b>	<b>Cultures and cultural production:</b> literature, visual and performing arts, music, cultural and comparative studies
<b>SH5_1</b>	Classics
<b>SH5_2</b>	History of literature
<b>SH5_3</b>	Literary theory and comparative literature, literary styles
<b>SH5_4</b>	Textual philology and palaeography
<b>SH5_5</b>	Visual arts

<b>SH5_6</b>	Performing arts
<b>SH5_7</b>	Museums and exhibitions
<b>SH5_8</b>	Numismatics, epigraphy
<b>SH5_9</b>	Music and musicology, history of music
<b>SH5_10</b>	History of art and architecture
<b>SH5_11</b>	Cultural studies, cultural diversity
<b>SH5_12</b>	Cultural memory, intangible cultural heritage
<b>SH6</b>	<b>The study of the human past: archaeology, history and memory</b>
<b>SH6_1</b>	Archaeology, archaeometry, landscape archaeology
<b>SH6_2</b>	Prehistory and protohistory
<b>SH6_3</b>	Ancient history, ancient cultures
<b>SH6_4</b>	Medieval history
<b>SH6_5</b>	Modern and contemporary history
<b>SH6_6</b>	Colonial history, entangled histories, global history
<b>SH6_7</b>	Military history
<b>SH6_8</b>	Historiography, theory and methods of history
<b>SH6_9</b>	History of ideas, intellectual history
<b>SH6_10</b>	Social, economic, cultural and political history
<b>SH6_11</b>	Collective memories, identities, lieux de mémoire, oral history
<b>SH6_12</b>	Cultural heritage



<b>Domain Code:</b>	<b>PE</b>
<b>Subdomain Code:</b>	<b>PE1, PE2, PE3 .. PE10</b>
<b>Research Area Code:</b>	<b>PE1_1..PE1_18, PE2_1..PE2_17....</b>

**DOMAIN**  
**MATHEMATICS, PHYSICAL SCIENCES, INFORMATION AND COMMUNICATION,**  
**ENGINEERING, UNIVERSE AND EARTH SCIENCES**

<b>PE1</b>	<b>Mathematical foundations:</b> all areas of mathematics, pure and applied, plus mathematical foundations of computer science, mathematical physics and statistics
<b>PE1_1</b>	Logic and foundations
<b>PE1_2</b>	Algebra
<b>PE1_3</b>	Number theory
<b>PE1_4</b>	Algebraic and complex geometry
<b>PE1_5</b>	Geometry
<b>PE1_6</b>	Topology
<b>PE1_7</b>	Lie groups, Lie algebras
<b>PE1_8</b>	Analysis
<b>PE1_9</b>	Operator algebras and functional analysis
<b>PE1_10</b>	ODE and dynamical systems
<b>PE1_11</b>	Partial differential equations
<b>PE1_12</b>	Mathematical physics
<b>PE1_13</b>	Probability and statistics
<b>PE1_14</b>	Combinatorics
<b>PE1_15</b>	Mathematical aspects of computer science
<b>PE1_16</b>	Numerical analysis and scientific computing
<b>PE1_17</b>	Control theory and optimization
<b>PE1_18</b>	Application of mathematics in sciences
<b>PE2</b>	<b>Fundamental constituents of matter:</b> particle, nuclear, plasma, atomic, molecular, gas, and optical physics
<b>PE2_1</b>	Fundamental interactions and fields
<b>PE2_2</b>	Particle physics
<b>PE2_3</b>	Nuclear physics
<b>PE2_4</b>	Nuclear astrophysics
<b>PE2_5</b>	Gas and plasma physics
<b>PE2_6</b>	Electromagnetism
<b>PE2_7</b>	Atomic, molecular physics
<b>PE2_8</b>	Optics and quantum optics

<b>PE2_9</b>	Lasers and laser physics
<b>PE2_10</b>	Acoustics
<b>PE2_11</b>	Relativity
<b>PE2_12</b>	Classical physics
<b>PE2_13</b>	Thermodynamics
<b>PE2_14</b>	Non-linear physics
<b>PE2_15</b>	General physics
<b>PE2_16</b>	Metrology and measurement
<b>PE2_17</b>	Statistical physics (gases)
<b>PE3</b>	<b>Condensed matter physics:</b> structure, electronic properties, fluids, nanosciences
<b>PE3_1</b>	Structure of solids and liquids
<b>PE3_2</b>	Mechanical and acoustical properties of condensed matter
<b>PE3_3</b>	Thermal properties of condensed matter
<b>PE3_4</b>	Transport properties of condensed matter
<b>PE3_5</b>	Electronic properties of materials and transport
<b>PE3_6</b>	Lattice dynamics
<b>PE3_7</b>	Semiconductors
<b>PE3_8</b>	Superconductivity
<b>PE3_9</b>	Superfluids
<b>PE3_10</b>	Spintronics
<b>PE3_11</b>	Magnetism
<b>PE3_12</b>	Nanophysics: nanoelectronics, nanophotonics, nanomagnetism
<b>PE3_13</b>	Mesoscopic physics
<b>PE3_14</b>	Molecular electronics
<b>PE3_15</b>	Soft condensed matter (liquid crystals...)
<b>PE3_16</b>	Fluid dynamics (physics)
<b>PE3_17</b>	Statistical physics (condensed matter)
<b>PE3_18</b>	Phase transitions, phase equilibria
<b>PE3_19</b>	Biophysics
<b>PE4</b>	<b>Physical and Analytical Chemical sciences:</b> analytical chemistry, chemical theory, physical chemistry/chemical physics
<b>PE4_1</b>	Physical chemistry
<b>PE4_2</b>	Nanochemistry
<b>PE4_3</b>	Spectroscopic and spectrometric techniques

<b>PE4_4</b>	Molecular architecture and Structure
<b>PE4_5</b>	Surface science
<b>PE4_6</b>	Analytical chemistry
<b>PE4_7</b>	Chemical physics
<b>PE4_8</b>	Chemical instrumentation
<b>PE4_9</b>	Electrochemistry, electrodialysis, microfluidics
<b>PE4_10</b>	Combinatorial chemistry
<b>PE4_11</b>	Method development in chemistry
<b>PE4_12</b>	Catalysis
<b>PE4_13</b>	Physical chemistry of biological systems
<b>PE4_14</b>	Chemical reactions: mechanisms, dynamics, kinetics and catalytic reactions
<b>PE4_15</b>	Theoretical and computational chemistry
<b>PE4_16</b>	Radiation chemistry
<b>PE4_17</b>	Nuclear chemistry
<b>PE4_18</b>	Photochemistry
<b>PE5</b>	<b>Materials and Synthesis:</b> materials synthesis, structure-properties relations, functional and advanced materials, molecular architecture, organic chemistry
<b>PE5_1</b>	Structural properties of materials
<b>PE5_2</b>	Solid state materials
<b>PE5_3</b>	Surface modification
<b>PE5_4</b>	Thin films
<b>PE5_5</b>	Corrosion
<b>PE5_6</b>	Porous materials
<b>PE5_7</b>	Ionic liquids
<b>PE5_8</b>	New materials: oxides, alloys, composite, organic-inorganic hybrid, superconductors
<b>PE5_9</b>	Materials for sensors
<b>PE5_10</b>	Nanomaterials : nanoparticles, nanotubes
<b>PE5_11</b>	Biomaterials synthesis
<b>PE5_12</b>	Intelligent materials – self assembled materials
<b>PE5_13</b>	Environment chemistry
<b>PE5_14</b>	Coordination chemistry
<b>PE5_15</b>	Colloid chemistry
<b>PE5_16</b>	Biological chemistry
<b>PE5_17</b>	Chemistry of condensed matter

<b>PE5_18</b>	Homogeneous and heterogeneous catalysis
<b>PE5_19</b>	Characterization methods of materials
<b>PE5_20</b>	Macromolecular chemistry
<b>PE5_21</b>	Polymer chemistry
<b>PE5_22</b>	Supramolecular chemistry
<b>PE5_23</b>	Organic chemistry
<b>PE5_24</b>	Molecular chemistry
<b>PE6</b>	<b>Computer science and informatics:</b> informatics and information systems, computer science, scientific computing, intelligent systems
<b>PE6_1</b>	Computer architecture
<b>PE6_2</b>	Database management
<b>PE6_3</b>	Formal methods
<b>PE6_4</b>	Graphics and image processing
<b>PE6_5</b>	Human computer interaction and interface
<b>PE6_6</b>	Informatics and information systems
<b>PE6_7</b>	Theoretical computer science including quantum information
<b>PE6_8</b>	Intelligent systems
<b>PE6_9</b>	Scientific computing
<b>PE6_10</b>	Modelling tools
<b>PE6_11</b>	Multimedia
<b>PE6_12</b>	Parallel and Distributed Computing
<b>PE6_13</b>	Speech recognition
<b>PE6_14</b>	Systems and software
<b>PE7</b>	<b>Systems and communication engineering:</b> electronic, communication, optical and systems engineering
<b>PE7_1</b>	Control engineering
<b>PE7_2</b>	Electrical and electronic engineering: semiconductors, components, systems
<b>PE7_3</b>	Simulation engineering and modelling
<b>PE7_4</b>	Systems engineering, sensorics, actotics, automation
<b>PE7_5</b>	Micro- and nanoelectronics, optoelectronics
<b>PE7_6</b>	Communication technology, high-frequency technology
<b>PE7_7</b>	Signal processing
<b>PE7_8</b>	Networks
<b>PE7_9</b>	Man-machine-interfaces
<b>PE7_10</b>	Robotics

<b>PE8</b>	<b>Products and process engineering:</b> product design, process design and control, construction methods, civil engineering, energy systems, material engineering
<b>PE8_1</b>	Aerospace engineering
<b>PE8_2</b>	Chemical engineering, technical chemistry
<b>PE8_3</b>	Civil engineering, maritime/hydraulic engineering, geotechnics, waste treatment
<b>PE8_4</b>	Computational engineering
<b>PE8_5</b>	Fluid mechanics, hydraulic-, turbo-, and piston engines
<b>PE8_6</b>	Energy systems (production, distribution, application)
<b>PE8_7</b>	Micro(system) engineering
<b>PE8_8</b>	Mechanical and manufacturing engineering (shaping, mounting, joining, separation)
<b>PE8_9</b>	Materials engineering (biomaterials, metals, ceramics, polymers, composites, ...)
<b>PE8_10</b>	Production technology, process engineering
<b>PE8_11</b>	Product design, ergonomics, man-machine interfaces
<b>PE8_12</b>	Lightweight construction, textile technology
<b>PE8_13</b>	Industrial bioengineering
<b>PE8_14</b>	Industrial biofuel production
<b>PE9</b>	<b>Universe sciences:</b> astro-physics/chemistry/biology; solar system; stellar, galactic and extragalactic astronomy, planetary systems, cosmology; space science, instrumentation
<b>PE9_1</b>	Solar and interplanetary physics
<b>PE9_2</b>	Planetary systems sciences
<b>PE9_3</b>	Interstellar medium
<b>PE9_4</b>	Formation of stars and planets
<b>PE9_5</b>	Astrobiology
<b>PE9_6</b>	Stars and stellar systems
<b>PE9_7</b>	The Galaxy
<b>PE9_8</b>	Formation and evolution of galaxies
<b>PE9_9</b>	Clusters of galaxies and large scale structures
<b>PE9_10</b>	High energy and particles astronomy – X-rays, cosmic rays, gamma rays, neutrinos
<b>PE9_11</b>	Relativistic astrophysics
<b>PE9_12</b>	Dark matter, dark energy
<b>PE9_13</b>	Gravitational astronomy
<b>PE9_14</b>	Cosmology
<b>PE9_15</b>	Space Sciences
<b>PE9_16</b>	Very large data bases: archiving, handling and analysis
<b>PE9_17</b>	Instrumentation - telescopes, detectors and techniques

<b>PE9_18</b>	Solar planetology
<b>PE10</b>	<b>Earth system science:</b> physical geography, geology, geophysics, meteorology, oceanography, climatology, ecology, global environmental change, biogeochemical cycles, natural resources management
<b>PE10_1</b>	Atmospheric chemistry, atmospheric composition, air pollution
<b>PE10_2</b>	Meteorology, atmospheric physics and dynamics
<b>PE10_3</b>	Climatology and climate change
<b>PE10_4</b>	Terrestrial ecology, land cover change,
<b>PE10_5</b>	Geology, tectonics, volcanology,
<b>PE10_6</b>	Paleoclimatology, paleoecology
<b>PE10_7</b>	Physics of earth's interior, seismology, volcanology
<b>PE10_8</b>	Oceanography (physical, chemical, biological)
<b>PE10_9</b>	Biogeochemistry, biogeochemical cycles, environmental chemistry
<b>PE10_10</b>	Mineralogy, petrology, igneous petrology, metamorphic petrology
<b>PE10_11</b>	Geochemistry, crystal chemistry, isotope geochemistry, thermodynamics,
<b>PE10_12</b>	Sedimentology, soil science, palaeontology, earth evolution
<b>PE10_13</b>	Physical geography
<b>PE10_14</b>	Earth observations from space/remote sensing
<b>PE10_15</b>	Geomagnetism, paleomagnetism
<b>PE10_16</b>	Ozone, upper atmosphere, ionosphere
<b>PE10_17</b>	Hydrology, water and soil pollution

<b>Domain Code:</b>	<b>LS</b>
<b>Subdomain Code:</b>	<b>LS1,LS2.....LS9</b>
<b>Research Area Code:</b>	<b>LS1_1....LS1_8,LS2_1....LS2_14.....</b>

**DOMAIN  
LIFE SCIENCES**

<b>LS1</b>	<b>Molecular and Structural Biology and Biochemistry:</b> molecular biology, biochemistry, biophysics, structural biology, biochemistry of signal transduction
LS1_1	Molecular biology and interactions
LS1_2	General biochemistry and metabolism
LS1_3	DNA biosynthesis, modification, repair and degradation
LS1_4	RNA synthesis, processing, modification and degradation
LS1_5	Protein synthesis, modification and turnover
LS1_6	Biophysics
LS1_7	Structural biology (crystallography, NMR, EM)
LS1_8	Biochemistry of signal transduction
<b>LS2</b>	<b>Genetics, Genomics, Bioinformatics and Systems Biology:</b> genetics, population genetics, molecular genetics, genomics, transcriptomics, proteomics, metabolomics, bioinformatics, computational biology, biostatistics, biological modelling and simulation, systems biology, genetic epidemiology
LS2_1	Genomics, comparative genomics, functional genomics
LS2_2	Transcriptomics
LS2_3	Proteomics
LS2_4	Metabolomics
LS2_5	Glycomics
LS2_6	Molecular genetics, reverse genetics and RNAi
LS2_7	Quantitative genetics
LS2_8	Epigenetics and gene regulation
LS2_9	Genetic epidemiology
LS2_10	Bioinformatics
LS2_11	Computational biology
LS2_12	Biostatistics
LS2_13	Systems biology
LS2_14	Biological systems analysis, modelling and simulation
<b>LS3</b>	<b>Cellular and Developmental Biology:</b> cell biology, cell physiology, signal transduction, organogenesis, developmental genetics, pattern formation in plants and animals
LS3_1	Morphology and functional imaging of cells
LS3_2	Cell biology and molecular transport mechanisms

LS3_3	Cell cycle and division
LS3_4	Apoptosis
LS3_5	Cell differentiation, physiology and dynamics
LS3_6	Organelle biology
LS3_7	Cell signalling and cellular interactions
LS3_8	Signal transduction
LS3_9	Development, developmental genetics, pattern formation and embryology in animals
LS3_10	Development, developmental genetics, pattern formation and embryology in plants
LS3_11	Cell genetics
LS3_12	Stem cell biology
<b>LS4</b>	<b>Physiology, Pathophysiology and Endocrinology:</b> organ physiology, pathophysiology, endocrinology, metabolism, ageing, regeneration, tumorigenesis, cardiovascular disease, metabolic syndrome
LS4_1	Organ physiology
LS4_2	Comparative physiology
LS4_3	Endocrinology
LS4_4	Ageing
LS4_5	Metabolism, biological basis of metabolism related disorders
LS4_6	Cancer and its biological basis
LS4_7	Cardiovascular diseases
LS4_8	Non-communicable diseases (except for neural/psychiatric, immunity-related, metabolism-related disorders, cancer and cardiovascular diseases)
<b>LS5</b>	<b>Neurosciences and neural disorders:</b> neurobiology, neuroanatomy, neurophysiology, neurochemistry, neuropharmacology, neuroimaging, systems neuroscience, neurological disorders, psychiatry
LS5_1	Neuroanatomy and neurosurgery
LS5_2	Neurophysiology
LS5_3	Neurochemistry and neuropharmacology
LS5_4	Sensory systems (e.g. visual system, auditory system)
LS5_5	Mechanisms of pain
LS5_6	Developmental neurobiology
LS5_7	Cognition (e.g. learning, memory, emotions, speech)
LS5_8	Behavioral neuroscience (e.g. sleep, consciousness, handedness)
LS5_9	Systems neuroscience
LS5_10	Neuroimaging and computational neuroscience
LS5_11	Neurological disorders (e.g. Alzheimer's disease, Huntington's disease, Parkinson's disease)



LS5_12	Psychiatric disorders (e.g. schizophrenia, autism, Tourette's syndrome, obsessive compulsive disorder, depression, bipolar disorder, attention deficit hyperactivity disorder)
<b>LS6</b>	<b>Immunity and infection:</b> immunobiology, aetiology of immune disorders, microbiology, virology, parasitology, global and other infectious diseases, population dynamics of infectious diseases, veterinary medicine
LS6_1	Innate immunity
LS6_2	Adaptive immunity
LS6_3	Phagocytosis and cellular immunity
LS6_4	Immunosignalling
LS6_5	Immunological memory and tolerance
LS6_6	Immunogenetics
LS6_7	Microbiology
LS6_8	Virology
LS6_9	Bacteriology
LS6_10	Parasitology
LS6_11	Prevention and treatment of infection by pathogens (e.g. vaccination, antibiotics, fungicide)
LS6_12	Biological basis of immunity related disorders
LS6_13	Veterinary medicine
<b>LS7</b>	<b>Diagnostic tools, therapies and public health:</b> aetiology, diagnosis and treatment of disease, public health, epidemiology, pharmacology, clinical medicine, regenerative medicine, medical ethics
LS7_1	Medical engineering and technology
LS7_2	Diagnostic tools (e.g. genetic, imaging)
LS7_3	Pharmacology, pharmacogenomics, drug discovery and design, drug therapy
LS7_4	Analgesia
LS7_5	Toxicology
LS7_6	Gene therapy, stem cell therapy, regenerative medicine
LS7_7	Surgery
LS7_8	Radiation therapy
LS7_9	Health services, health care research
LS7_10	Public health and epidemiology
LS7_11	Environment and health risks including radiation
LS7_12	Occupational medicine
LS7_13	Medical ethics
<b>LS8</b>	<b>Evolutionary, population and environmental biology:</b> evolution, ecology, animal behaviour, population biology, biodiversity, biogeography, marine biology, eco-toxicology, prokaryotic biology
LS8_1	Ecology (theoretical, community, population, microbial, evolutionary ecology)
LS8_2	Population biology, population dynamics, population genetics, plant-animal interactions

LS8_3	Systems Evolution, biological adaptation, phylogenetics, systematics
LS8_4	Biodiversity, comparative biology
LS8_5	Conservation biology, ecology, genetics
LS8_6	Biogeography
LS8_7	Animal behaviour (behavioural ecology, animal communication)
LS8_8	Environmental and marine biology
LS8_9	Environmental toxicology
LS8_10	Prokaryotic biology
LS8_11	Symbiosis
<b>LS9</b>	<b>Applied life sciences and biotechnology:</b> agricultural, animal, fishery, forestry and food sciences; biotechnology, chemical biology, genetic engineering, synthetic biology, industrial biosciences; environmental biotechnology and remediation
LS9_1	Genetic engineering, transgenic organisms, recombinant proteins, biosensors
LS9_2	Synthetic biology and new bio-engineering concepts
LS9_3	Agriculture related to animal husbandry, dairying, livestock raising
LS9_4	Aquaculture, fisheries
LS9_5	Agriculture related to crop production, soil biology and cultivation, applied plant biology
LS9_6	Food sciences
LS9_7	Forestry, biomass production (e.g. for biofuels)
LS9_8	Environmental biotechnology, bioremediation, biodegradation
LS9_9	Biotechnology, bioreactors, applied microbiology
LS9_10	Biomimetics
LS9_11	Biohazards, biological containment, biosafety, biosecurity

**Research areas in the social sciences:**

SH1\_1 Macroeconomics, growth, business cycles

SH1\_2 Microeconomics, institutional economics

SH1\_3 Econometrics, statistical methods

SH1\_4 Financial markets, banking and corporate finance

SH1\_5 Competitiveness, innovation, research and development

SH1\_6 Consumer choice, behavioural economics, marketing

SH1\_7 Organization studies, strategy

SH1\_8 Human resource management, employment and earnings

SH1\_9 Public administration, public economics

SH1\_10 Income distribution, poverty

SH1\_11 International trade, economic geography

SH2\_1 Social structure, inequalities, social mobility  
SH2\_2 Ageing, work, social policies  
SH2\_3 Kinship, cultural dimensions of classification and cognition, individual and social identity, gender  
SH2\_6 Globalization, migration, interethnic relations  
SH2\_7 Transformation of societies, democratization, social movements  
SH2\_8 Political systems, legitimacy of governance  
SH2\_9 Legal systems, constitutions, foundations of law  
SH2\_10 Private, public and social law  
SH2\_11 Global and transnational governance, international law, human rights  
SH2\_12 Communication networks, media, information society  
SH2\_13 Social studies of science and technology, S&T policies, science and society  
SH3\_1 Environment and sustainability  
SH3\_2 Environmental regulation and mediation  
SH3\_3 Social and industrial ecology  
SH3\_4 Geographical information systems, cartography  
SH3\_5 Human and social geography  
SH3\_6 Spatial and regional planning  
SH3\_7 Population dynamics  
SH3\_8 Urbanization and urban planning, cities  
SH3\_9 Mobility and transportation  
SH4\_1 Evolution of mind and cognitive functions, animal communication  
SH4\_2 Human life-span development  
SH4\_3 Neuropsychology and cognitive psychology  
SH4\_4 Clinical and experimental psychology,  
SH4\_5 Formal, cognitive, functional and computational linguistics  
SH4\_7 Acquisition and knowledge of language: psycholinguistics, neurolinguistics  
SH4\_8 Use of language: pragmatics, sociolinguistics, discourse analysis  
SH4\_9 second language teaching and learning, language pathologies, lexicography,  
terminology  
SH4\_13 Education: principles, techniques, typologies

**Research areas in the humanities:**

SH1\_12 Economic history, development  
SH2\_4 Myth, ritual, symbolic representations, religious studies  
SH2\_5 Ethnography  
SH2\_14 History of science and technology  
SH4\_6 Typological, historical and comparative linguistics  
SH4\_10 Philosophy, history of philosophy

SH4\_11 Epistemology, logic, philosophy of science  
SH4\_12 Ethics and morality, bioethics  
SH5\_1 Classics  
SH5\_2 History of literature  
SH5\_3 Literary theory and comparative literature, literary styles  
SH5\_4 Textual philology and palaeography  
SH5\_5 Visual arts  
SH5\_6 Performing arts  
SH5\_7 Museums and exhibitions  
SH5\_8 Numismatics, epigraphy  
SH5\_9 Music and musicology, history of music  
SH5\_10 History of art and architecture  
SH5\_11 Cultural studies, cultural diversity  
SH5\_12 Cultural memory, intangible cultural heritage  
SH6\_1 Archaeology, archaeometry, landscape archaeology  
SH6\_2 Prehistory and protohistory  
SH6\_3 Ancient history, ancient cultures  
SH6\_4 Medieval history  
SH6\_5 Modern and contemporary history  
SH6\_6 Colonial history, entangled histories, global history  
SH6\_7 Military history,  
SH6\_8 Historiography, theory and methods of history  
SH6\_9 History of ideas, intellectual history  
SH6\_10 Social, economic, cultural and political history  
SH6\_11 Collective memories, identities, lieux de mémoire, oral history  
SH6\_12 Cultural heritage

**Research areas with a national Romanian character** are the Romanian language and literature and Romanian law which fall into the following research areas:

SH2\_10 Private, public and social law  
SH5\_2 History of literature  
SH5\_3 Literary theory and comparative literature, literary styles  
SH5\_4 Textual philology and palaeography

## APPENDIX 5 – Definitions

- **The main author or authors of a publication** can be any of the following:
  - the first author, when the order of the authors reflects the importance of their contribution;
  - the corresponding author (*reprint author* in Web of Science), when he or she is identified;
  - other authors whose contribution is explicitly indicated as being equal to the contribution of the first author or the corresponding author;
  - all the authors of a publication, in the case where, due to the accepted practice in the field, the order of the authors of a publication does not reflect their contribution to it (for instance in cases in which the authors of a publication are ordered alphabetically) for publications from the following fields: mathematics (subdomain PE1), theoretical computer science (research areas PE6\_3, PE6\_6, PE6\_7, PE6\_10), experimental high energy physics (research areas PE2\_1, PE2\_2 și PE2\_3) and economics (subdomeniul SH1).
- An **ISI indexed journal** is a journal which is indexed in the Science Citation Index Expanded, Social Sciences Citation Index or the Arts & Humanities Citation Index, databases maintained by Thomson Reuters.
- An **ISI ranked journal**, is a journal for which Thomson Reuters calculates and publishes an impact factor in Journal Citation Reports.
- **The influence score** is a quantity which reflects, for a given scientific journal, the average influence of an article in that journal in a 5 year interval after publication, by taking into account the number of times the articles of the journal are cited, weighed with the influence of the citing journals. The article influence score (AIS) is calculated by Thomson Reuters in Journal Citation Reports. Journals for which the AIS is not calculated are considered to have an AIS equal to zero.
- **Median influence score in a given subject area** is equal to the median of the influence scores of the journals in that subject area, which have non-zero influence scores, according to the journal grouping used by Thomson Reuters.
- **The reference influence score of a subject area** is the median influence score of that subject area, with the exception of the area “Multidisciplinary sciences”, for which the reference influence score is the mean of the median influence scores for all the other subject areas covered by Journal Citation Reports. **The reference influence score of a given scientific journal** indexed in Science Citation Index Expanded or Social Sciences Citation Index is the smallest of the reference influence scores of the subject areas to which the journal is assigned,

according to the grouping used by Thomson Reuters.

- **The relative influence score of a scientific journal** is equal to the ratio of the influence score of that journal and the reference influence score of the journal. **The relative influence score of an article** is the relative influence score of the journal that published the article.
- **The cumulated relative influence score** of a set of scientific articles is the sum of the relative influence scores of each article in that set.
- **The impact factor** of a scientific journal is a quantity that reflects the average number of citations received by articles in that journal, published in a given year, in the course of two years after publication. The impact factor is calculated by Thomson Reuters in Journal Citation Reports. The journals for which Thomson Reuters does not compute an impact factor are considered to have an impact factor equal to zero.
- **The aggregate impact factor of a subject area** is a quantity which reflects the average number of citations received by the articles of the journals in a subject area, published in a given year, in a time interval of 2 years after publication. The aggregate impact factor is calculated by Thomson Reuters in Journal Citation Reports.
- **The reference impact factor of a subject area** is the aggregate impact factor of that subject area, with the exception of the subject area "Multidisciplinary sciences", for which the reference impact factor is the mean of the aggregate impact factors of all the other subject areas of Journal Citation Reports. **The reference impact factor of a scientific journal** indexed in Science Citation Index Expanded or Social Sciences Citation Index is the smallest of the reference impact factors of the subject areas to which the journal is assigned, according to the grouping used by Thomson Reuters.
- **The relative impact factor of a scientific journal** is equal to the ratio between the impact factor of the journal and the reference impact factor of the journal. **The relative impact factor of an article** is the relative impact factor of the journal which published it.
- The relative impact factor and the relative influence score, for each ISI ranked journal, and the reference impact factor for each subject area are calculated by the UEFISCDI, according to the most recent available edition of the Journal Citation Reports, and are published on the UEFISCDI website, [www.uefiscdi.ro](http://www.uefiscdi.ro).
- **The number of citations** of a publication is the one shown by Web of Science.
- **The number of domain normalized citations** of a scientific article published in a journal indexed in Science Citation Index Expanded or Social Sciences Citation Index is obtained by taking the ratio of the number of citations of the article to the reference impact factor of the journal. In the case of other publications from the subject areas covered by the Science Citation Index Expanded or Social Sciences Citation Index, the number of domain normalized citations

is obtained by taking the ratio of the number of citations of the publication to the reference impact factor of the subject area in which the article fits best.

- **Major international languages:** English, French, German, Italian, Russian and Spanish.

**APPENDIX 6 – Process, results and impact indicators for the subprogram ID-PCE-2011-3**

	Names of indicators	Units.
Process indicators	Number of attendees of international conferences financed	Nr.
Results indicators	Number of articles published or accepted for publication in the international research publication mainstream	Nr.
	Relative cumulated impact factor of articles published or accepted for publication	
	Number of field normalized citations of articles	
	Number of articles in international collaboration published or accepted for publication in the international research publication mainstream	Nr.
	Number of researchers coming from abroad integrated in the national R&D system	Nr.
	Number of patent applications supported, of which EPO, USPTO, JPO, other EU and OECD countries	Nr.
Results indicators (applies to the humanities only)	Number of articles published in journals indexed AHCI or ERIH Category A or B	Nr.
Results indicators (applies only to the social sciences and humanities)	Number of chapters published in collective editions, in major foreign languages, at prestigious foreign publishing houses	
	Number of books authored in major foreign languages at prestigious foreign publishing houses	Nr.
	Number of books edited in major foreign languages at prestigious foreign publishing houses	Nr.
Impact indicators	Cumulated relative influence score of articles published or accepted for publication	Nr.



## **APPENDIX 7 - Legislation**

### **Ethics**

Ethics in research, development and innovation activities, referred to as R&D below, are based on a set of moral principles and on a set of procedures designed to enforce them. The competition and the projects financed as a result submit to the provisions of Law 206/2004 concerning the rules of good practice in R&D activities in Romania. Such activities must also obey the international regulations in the area, such as, in particular, the legislation of the European Union.

### **Other relevant legislation**

- Government decision no. 134/2011 for the approval of the Norms concerning the categories of expenses for R&D activities, eligible for funding from the state budget
- Government decision no. 1265/2004 for the approval of the Norms concerning the contracts, financing, monitoring and evaluation of R&D programs projects and actions which compose the National Plan for R&D;
- Government decision nr. 217/2007 concerning the approval of the National Strategy fo R&D, for the period 2007-2013;
- Government decision nr. 475/2007 concerning the approval of the National Plan for R&D, with the subsequent modifications;
- Government Ordinance no. 57/2002 concerning scientific research and technological development, approved with modifications through Law no. 324/2003, with the subsequent modifications;
- Law no. 319/2003, concerning the Statute of R&D personnel;
- Law no. 1/2011 of national education;
- Government decision no. 1860/2006 concerning the rights and obligations of the public authorities and institutions, during the delegation to other areas, as well as during the delegation to other locations within the same area, in the interest of the employer, with subsequent modifications;
- Government decision no. 518/1995 concerning some rights and obligations of Romanian personnel sent abroad in the interest of carrying out missions with a temporary character, with the subsequent modifications.