

FCT Project Grant Schemes

Guide for Peer Reviewers

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1. INTRODUCTION

This third version of the Guide for Peer Reviewers applies to all projects submitted in the call for projects in all scientific domains – 2010 and any later calls.

FCT mission

The *Fundação para a Ciência e a Tecnologia* (FCT), the Portuguese Foundation for Science and Technology, is the public agency responsible for implementing the Portuguese Science and Technology government policy.

FCT started its operations in August 1997, succeeding the previous equivalent agency, JNICT, created in the 1980s.

FCT's mission consists in continuously promoting the advancement of scientific and technological knowledge in Portugal, exploring opportunities that become available in any scientific or technological domain to attain the highest international standards in the creation of knowledge, and to stimulate their diffusion and contribution to improve education, health, environment, and the quality of life and well being of the general public.

This mission is mainly accomplished through the funding, subsequent to the evaluation of the merit, of proposals presented by institutions, research teams or individuals in public open calls, and also through cooperation agreements and other forms of support in partnership with universities and other public or private institutions, in Portugal and abroad.

FCT main functions are:

- To promote, finance, follow and evaluate science and technology institutions, programs, projects and qualification of human resources;
- To promote and support infra-structures for scientific research and technological development;
- To promote the diffusion of scientific and technological culture and knowledge, in particular when relevant for educational purposes in close collaboration with the agency *Ciência Viva*;
- To stimulate the update, interconnection, reinforcement and availability of science and technology information sources.

FCT's viewpoint on science and technology is wide, including exact, natural and health sciences, engineering, social sciences and humanities.

As of January 2011, FCT main action lines include:

- Research projects
 - Circa 3200 active projects. The last call in all scientific domains was held in 2009 and resulted in 738 approved projects.
- Fellowships and grants
 - 5 years contracts for PhD holders
 - 1200 contracts
 - Post-doc and PhD grants
 - Circa 8000 grantholders
 - Other types of grants are awarded but are much less significant in number.

- Research units
 - Plurianual funding
 - 320 R&D units
 - 25 Associate Laboratories
 - 11400 researchers with PhD

Grants for research projects

The funding of research projects by FCT is based on peer review of proposals submitted in specific on-line application forms after an open call for proposals. Evaluation is assigned to Evaluation Panels organized by scientific fields covering the areas considered.

Each call is subject to a public announcement containing the main characteristics of the proposals to be accepted and the evaluation criteria to be applied. The rules under which the proposals and the accepted projects are governed are stated in a public document entitled: [Regulations Governing Access to Funding for Scientific Research and Technological Development Projects](#).

FCT regularly opens calls for projects:

- In all scientific domains,
 - Since 2000, this call has been opened every other year, in 2002, 2004, 2006 and 2008, for projects with a maximum duration of 36 months. In 2009 FCT announced its commitment to open such calls every year starting with 2009.
- In targeted research areas, e.g., Clinical Research, Particle Physics, Nanotechnologies, Social Policies.

Proposals are submitted online, at a specific FCT site, on a specially designed Web application.

After login, in the cover page of each application, the Principal Investigator (PI) is asked to identify, from a given list, the primary scientific area and sub-area of the project, and to indicate up to four key words that characterize the proposed scientific activity. Based on this information, the proposals are assigned to be reviewed by Evaluation Panels set up by scientific domains.

Moreover, the PI has the possibility to choose a secondary scientific area and sub-area, which is of particular importance in case of multidisciplinary projects. This second choice does not change the evaluation panel allocation, defined by the primary scientific area, but together with the primary area gives the reviewers the indication of the PI's judgment of the project proposal scientific contents.

2. THE CALLS FOR R&D PROJECTS

All the FCT R&D project calls follow the same procedures, satisfy the same rules and use the same forms.

The PI candidates have at their disposal extensive documentation to guide them through the call, in particular:

- The [Public Announcement call](#), both available from the FCT website and published in the press, and distributed by a mass e-mail to all doctoral level researchers registered in FCT databases.
- [Regulations Governing Access to Funding for Scientific Research and Technological Development Projects- 2010](#) that establish the rules under which the proposals are accepted and evaluated, and the funded projects have to be managed;

- A [Guide for the elaboration and submission of R&D project proposals](#), with a set of suggestions on how to write a good proposal. The Annex IV of this guide contains a summary of the structure of the Application Form and the recommendations on how to fill it.
- A set of [FAQs about Calls](#);
- [Instructions on how to use the Project Call portal](#).

This section states the main aspects of the Regulations concerning the scientific evaluation.

Main rules

In what concerns project submission and evaluation, the main aspects of the Regulations Governing the access to funding of scientific R&D projects include:

- The proposal content is required to be written in English, with the exception of the Title and Summary where a Portuguese version is also required.
- Each PI should have a minimum of 35% of his/her time allocated to the project. For the remaining research team members a percentage of 15% applies.
 - o These conditions are automatically checked during proposal preparation. Every submitted proposal satisfies this condition.
- Projects whose approval would make the Principal Investigators or any member of the team exceed 100% FTE of time dedicated to FCT research projects will not be funded. This condition is to be verified by FCT should the project be recommended for funding.
- The general funding conditions are:
 - o Maximum duration of projects: 36 months
 - o Maximum funding per project: 200.000 €
- The recipient entities and the PI must agree to comply with the applicable national and European community norms, namely in what regards competition, the environment, equal opportunity and gender, and public contracting whenever applicable. In cases of projects involving:
 - o Animal experimentation, the PI has to state that the research team will comply with the EU directives and the corresponding Portuguese laws regarding the protection of animals used for experimental and other scientific purposes.
 - o The donation, procurement, testing, processing, storage, distribution and preservation of human tissues and cells, the PI has to state that the research team will comply with the EU directives and the corresponding Portuguese laws on the standards of quality and safety.
- Funded items (Article 4 of [Regulations](#)):
 - o **Human Resources**, including fellowships associated with the project (not applicable to public servants) or contracts specially signed for the project;
 - [Grants of the type BDCC \(Scientific Career Development grants\)](#) can only be issued to the project PI. This condition is automatically checked during proposal preparation.
 - For all the types of possible grants, the monthly value to be paid to the grant holder is fixed and established by FCT. The cost considered in each proposal automatically assumes the authorized monthly cost of the grant, with the number of months fixed by the PI.
 - o **Missions** in Portugal and abroad;
 - o **Consultants**;

- **Acquisition of goods and services** and other current expenses directly related to execution of the project, and the intervention of licensed auditors or accountants;
 - **Registration abroad of patents**, copyrights, utility models and designs, national models or brands associated with other forms of intellectual property, namely fees, prior art searches and consultants' fees;
 - **Adaptation of buildings and facilities** when essential to carrying out the project, in particular for environmental and safety questions, provided that these costs do not exceed 10% of the total eligible cost of the project;
 - The percentage bound in this item is automatically checked by the submission tool. Proposals cannot be sealed if this condition is not verified.
 - **Acquisition of scientific and technical instruments** essential to the project and which shall remain attached to the project during the period of its execution;
 - **Overheads** (up to 20% of the funding for direct costs).
 - The percentage bound in this item is automatically checked by the submission tool. Proposals cannot be sealed if this condition is not verified.
- Salaries of public servants and amortization of existing equipment are not funded.
 - The [Guide for project preparation and submission](#) (also available from the evaluation panel web page) contains a set of recommendations on how to write a good scientific proposal, how text should be written and not written. Moreover, it is recommended that it is the PI's responsibility to maintain URL links cited in the proposal active up to the end of the evaluation.
 - The PI, the core elements of the proposals and the remaining elements of the research team are required to write their CV in English, and to follow a set of rules when writing it.

Scientific areas and sub-areas

Each project has an associated Main Scientific Area and, in many cases, a Scientific Sub-area. Choices of these areas are made by the Principal Investigator (PI) during application and determine the Evaluation Panel responsible for the project's review. Any changes of evaluation panels for a given proposal require written authorization of the PI.

The 2009 Call for R&D projects in all scientific domains comprises 31 scientific areas listed in Annex I.

3. EVALUATION CRITERIA AND RATINGS

Evaluation Criteria

The evaluation and selection process is based in the following main four review criteria:

- A. Scientific merit and innovative nature of the project from an international standpoint;
- B. Scientific merit of the research team;
- C. Feasibility of the work plan and reasonability of the budget;
- D. Contribution to the body of knowledge in this field and improvement in the competence of the scientific community.

Application of these criteria shall take into account, among other considerations, the following:

A. For **criterion A:**

- i.) Relevance and originality of the project proposed (based on the state-of-the art in a determined scientific area and previous work done by the proposing team);
- ii.) Methodology adopted for carrying out the project;
- iii.) Expected results and their contribution to scientific and technological knowledge;
- iv.) Resulting publications and articles;
- v.) Contribution towards promoting and disseminating science and technology;
- vi.) Production of knowledge that can contribute to benefits to society or to the business sector.

B. For **criterion B:**

- i.) Scientific productivity of the team evaluated according to criteria accepted internationally by the different scientific communities (ranging from references to publications and citations in published works as used by the basic and engineering sciences, to performance and artistic work in the arts, or monographs and books in the humanities and social sciences);
- ii.) Abilities and skills to adequately execute the proposed project (team configuration, Principal Investigator's qualifications);
- iii.) Ability to involve young researchers in training;
- iv.) Availability of the team and non duplication of objectives in relation to other projects underway;
- v.) Degree of internationalization of the team;
- vi.) Degree of success in previous projects of the Principal Investigator (PI) (in the case of young PIs, this requirement must be assessed based on the potential revealed by the PIs curriculum vitae in the absence of prior concrete accomplishments);
- vii.) Level of commitment of any companies participating in the project (if applicable).¹

C. For **criterion C:**

- i.) Organization of the project in terms of the proposed objectives and resources (duration, equipment, size of the team, institutional and management resources);
- ii.) Institutional resources of the participating entities, in particular of the Principal Contractor (PC) (technical-scientific, organizational and managerial and, when appropriate, co-funding capacity on the part of companies).

D. For **criterion D:**

- i.) Contribution to the body of knowledge and competence of the National Science and Technology System (expected effects and results).

Ratings

Each of the four criteria is rated as Excellent, Very Good, Good, Fair, and Poor.

The individual evaluators and the panel also give an overall rating to each project which is based on their own judgment of the merit of the overall proposal without resorting to any sort of quantitative algorithms. The overall rating is also expressed as Excellent, Very Good, Good, Fair, and Poor.

The ranking of projects with the same final rating takes into account, in decreasing order of importance, the ratings of criterion A, B, C and D.

¹ The proposal overview has the indication if a participating entity is a for profit organization.

Special attention in the application of Evaluation Criteria

- Following the lines of the “Commitment to Science” of the Portuguese Government, **FCT aims at fostering the development of the research abilities of young researchers (with good CV and promising potential), giving them the possibility to be responsible for important scientific projects.** This should be considered by the individual reviewers and the panel members when rating Criterion B. In particular, young researchers should not be penalized in what concerns their scarce experience as project PIs but rather their youth and potential should be taken into account.
- **Priority should always be given to the quality, relevance and excellence of work, rather than simplistic metrics that do not require the thorough analysis of the content.** FCT supports the assessment of the contents of the R&D work and does not support in any way oversimplified quantification of outputs, number of items and citation or impact indices, as it is unfortunately being tried in many university environments.
- The default situation is that the PI should be a PhD holder. However:
 - Researchers with the category of Assistant Researcher, Principal Researcher or Coordinator Researcher (Law nº 124/99 of the 20th April) integrated in the Portuguese Scientific Research Career can act as PI of research projects even if they do not hold a PhD degree. It is a condition to access the position of Assistant Researcher to hold either a PhD degree or an equivalent type of degree as defined in the Law.
 - In a few cases in specific scientific areas, the PI, even though having an outstanding CV may not have a PhD degree. In these cases, and depending upon the scientific evaluation, FCT might accept the project and propose it for funding.
 - Also, in a few cases, the PI does not hold a PhD degree at the time of sealing his/her proposal but is at a final stage of his/her PhD exam process and is expected to hold the degree at the time the project contract is signed.
 - Individual Reviewers and the Evaluation Panel are asked to point out, in their confidential comments to the panel and to FCT, respectively, the situations of PIs that do not hold a PhD degree.
- The number and type of grants (scholarships) proposed on the project application has to be fully justified. The evaluation panel should recommend not only the total funding to be allocated to each proposal but also the part of that funding to be applied in Human Resources, in particular for the allocation of grants (scholarships). Therefore, the availability for personal contracts and for grant allocation in approved projects will be conditioned by the recommendations of the evaluation panel. Grants within research projects may be of the following types
 - [BCC – Invited Scientist Grant](#)
 - [BDCC – Scientific Career development Grant](#) (only to be issued to the project PI)
 - [BPD – Post-doctoral Grant](#)
 - [BI – Research Grant](#)
 - [BIC – Scientific Initiation Grant](#)
 - [BTI – Research Technician Grant](#)

whose nature is explained in section [Glossary and Translations](#) of this guide.

4. EVALUATION PROCESS AND PROCEDURES

General information

- Each evaluation panel has a number of members agreed with the FCT Executive Board. The panel is headed by the **Panel Chair**, and among its members it might have **Panel Co-Chairs** indicated by the panel Chair.
- Prior to review start, all the members of the panels will have to sign the Terms of Reference for the evaluation exercise (see Annex III).
- Each project must have, at least, two individual reviews. The individual reviewers are either the panel members or external reviewers.
- The Panel Chair can propose to FCT the naming of external reviewers that will submit individual reviews of the proposals whenever these are deemed necessary. External reviewers are assigned by FCT.
- External reviewers can be either foreign researchers or Portuguese researchers, provided they are affiliated with non-Portuguese institutions, of recognized competence in the scientific areas of the proposals to be evaluated, which shall be responsible for issuing the individual reviews that are requested by the evaluation panels. The name of external reviewers will not be made public.
- Each individual review includes:
 - the rating and comments for each of the four evaluation criteria,
 - the proposal of an overall rating of the project,
 - a general comment on the proposal,
 - funding recommendation, with no quantification,
 - confidential comments to the panel members, if considered necessary by the reviewer.
- The project final rating and the comments made available to the applicants are given by the panel, during the panel meeting, having access to the ratings and comments of the two individual reviewers. The panel review for each project includes:
 - the rating and the comments for each of the four criteria to be transmitted to the PI;
 - the overall rating of the project, to be transmitted to the PI;
 - a general comment on the proposal to be transmitted to the PI;
 - quantified funding recommendation to be transmitted to the PI;
 - confidential comments to FCT, if considered necessary by the panel.
- The ranking of projects with the same final rate takes into account, in decreasing order of importance, the ratings of criteria A, B, C and D.
- The funding decision by FCT is based on the proposed ranking and budget availability defined for each call. Guidelines will be provided by FCT Executive Board to each panel chair at review process start.
- The first time a panel member or an external reviewer logs in the evaluation web pages, he/she has to sign a [Confidentiality Statement](#).
- The panel should issue a final report on its activities.
- There is an allocated FCT project officer for each scientific area. He/she is the contact point of FCT with the panel coordinator.

The content of the Individual and Panel Evaluation Forms are available in this guide in Annex II.

Evaluation timeline

The evaluation timeline is established by FCT Executive Board and transmitted to the panel chair. The date of the final meeting of the evaluation panel, to be held in Lisbon, is proposed by the panel chair and transmitted to FCT that carries out all logistic aspects.

Evaluation stages

The evaluation of the research proposals involves the following stages:

1. Panel Chair and Co-Chairs (if any) are informed by the FCT project officer, allocated to the corresponding scientific area, that review process can start and receive the username and password used for the allocation of individual reviews.
2. **Allocation of Reviewers** - Panel Chair and Co-Chairs (if any) allocate two individual reviewers to each project, according to a methodology defined by the Panel Chair. The list of available individual reviewers includes, at a first stage, only the panel members. At a request of the panel Chair and Co-Chairs, the FCT project officer adds additional external reviewers to the list. The full name and e-mail of these external reviewers should be provided. Panel Chair and Co-Chairs should detect possible conflicts of interest in this allocation process.
3. Upon conclusion of the allocation process, the Panel Chair notifies the FCT project officer. This can be done also whenever the allocation in each sub-area is completed.
4. The FCT project officer sends:
 - a. username and password for individual review purposes to all the members of the panel²;
 - b. an e-mail invitation to each of the external reviewers and, in case of acceptance, sends him/her a username and password together with related documentation, in particular the indication of the review submission deadline.
5. **Individual (on-line) evaluation** - Individual reviewers input their evaluation for each project in the Individual Reviewer Evaluation Form and seal the review.
6. **Panel Evaluation** to take place during the [Panel meeting](#), in Lisbon, with the panel members, to:
 - a. Conduct panel (on site) evaluation: input the final evaluation of each research proposal (in the Panel Evaluation Form), including ratings and comments for each evaluation criteria, final rating for the project and a global statement that fully explains the panel judgment on the proposal and states recommendations including those regarding budget, all written in a specific form available online. Include confidential comments to FCT if necessary.
 - b. Prepare a final evaluation panel report.


² Panel Chair and Co-Chair will also receive a username and password for individual review which is different from the ones used for the allocation of reviewers to the projects.

Allocation of reviewers

The username and password sent to Panel Chair and Co-chairs (if any) for project allocation gives access through <https://www.fct.mctes.pt/evaluation> to:

- allocation of two individual reviewers for each project;
- monitoring of the individual reviewers' work flow; information is given on sealed (i.e., finished) and not yet sealed (i.e., not finished) individual reviews;
- sorting the proposals according to various items, including evaluation rates, requested funding, etc.

The main menu has four options:

- Project List – This list displays all the projects within the scientific area, sorted by scientific sub-area (if applicable). The reference / title are links to access the selected proposal form overview, the status of its evaluation and the contents of the individual reviews, if sealed. The link on the right column () should be used to associate the names of the evaluators assigned to review the proposal. Each proposal should be reviewed by at least two evaluators. Accordingly, every proposal with less than two reviewers will appear with a different color on the screen.
- Evaluators List - This list displays the names of the evaluators appointed to this area. By clicking each name you will access the list of proposals associated with him/her.
- Evaluators / Ratings – lists of all projects, with data relative to the evaluators work flow.
- Additional Documents – set of documents with information relative to the evaluation process, the particular call, logistic aspects, etc.

Individual (on line) Evaluation

Individual reviews are carried out prior to panel meetings and done remotely. Whenever possible, one of the individual reviews should be carried out by a panel member that will be present in the subsequent panel meeting.

The content of the [Individual Evaluation Form](#) is available in this guide in Annex II.

The meaning of "individual"

During the individual review step, there shall be no discussions on the proposal between the reviewers involved.

Conflict of Interest (CoI) Declaration

Before starting the evaluation of each project, and to be able to access the evaluation form, the individual reviewer needs to complete a Conflict of Interest Declaration, as follows:

Conflict of Interest Declaration

Please state:

- No, I have no conflict
- Yes, I have a strong conflict (see [Disqualifying CoI](#))
- It is possible that I have a conflict (see [Potential CoI](#))

Add any comments below

The individual reviewer will not be able to proceed in case of a strong conflict of interest. In this case the individual reviewer is required to inform the Panel Chair of the situation, for project de-allocation.

Please pay attention to the rules on Conflict of Interest stated in this guide and refrain from reviewing any proposal for which a CoI exists.

Ratings and comments

Individual reviewing includes:

- Applying the evaluation criteria and rating each criterion;
- Providing a succinct but substantial explanatory comment for each criterion. This statement should address the relative importance of the criterion and the extent to which the proposal actually meets the criterion;
- Providing a final rate for the project, which is based on the evaluator's own judgment of the merit of the overall proposal without resorting to any sort of quantitative algorithms;
- Providing a global substantial explanatory comment for the project. This statement should fully explain the evaluator's judgment on the proposal stating recommendations regarding the research work and the project organization;
- Providing recommendations, with due justification, on overall budget reduction or reduction on human resources budget;
- Providing recommendations, with proper justification, of possible modifications to the plan of work;
- Suggesting associations or collaboration between projects in order to form larger teams with greater scientific capabilities, with the necessary changes in the funding to be awarded;
- Providing information to FCT on particular projects;
- Providing confidential comments to the panel members, if necessary.

The importance of ratings and comments

Both rating and comments are critically important:

- The individual review ratings and comments are the starting point for the panel discussions and for the panel final rating;
- The comments may be reproduced, verbatim, in the feedback to applicants, upon decision of the panel members.

Ratings

The final rating of the project and the rating of each criterion are expressed as Excellent, Very Good, Good, Fair, and Poor.

The nature of the comments

Comments should be succinct but substantial. They should also be impeccably polite. If so decided by the panel members, the comments may be reproduced totally or partially in the feedback to applicants.

Comments should take the form of a statement of key strengths and key weaknesses, in the light of the criteria. This should be a few sentences long.

Reviewers are encouraged to observe the following additional guidelines:

- Avoid comments that give a description or a summary of the proposal.
- Avoid the use of the first person or equivalent: "I think..." or "This reviewer finds...".
- Always use dispassionate and analytical language: avoid dismissive statements about the PI, the proposed science, or the scientific field concerned.
- Avoid asking questions, as the PI will not be able to answer them.
- Evaluate the proposed work and not the work you consider should have been proposed.

Webpage for Individual Reviewers

The username and password sent to each individual reviewer gives access through <https://www.fct.mctes.pt/evaluation> to the list of projects under evaluation by the corresponding reviewer. Please see the Instructions on the top of the menu.

- For each project proposal, the following is available:
 - o A statement on Conflict of Interest;
 - o All the information submitted is the Form Overview. In this form, the name of each team member has a link to his/her CV and the financed projects by the same PI have a link to the project description and results;
 - o The information in the Form Overview can be printed and a pdf file can be generated with it. See the links on "Print this page" and "Instructions to view and print this page" for this purpose.
 - o Different applications by the same PI or research team member (even in different scientific areas), for the sake of detecting superposition of objectives or resources;
 - o The Individual Evaluation Form;
 - o Possibility to **SAVE** the submitted evaluation report. This means that the uploaded information will be kept for future revision;
 - o Necessity to **LOCK** the submitted evaluation report. This means that the reviewer will no longer be able to modify the uploaded information.
- A summary of the work done and yet to be done.

Panel (on-site) Evaluation during Panel Meeting

Panel Meeting

All the panel members meet in Lisbon to issue the final evaluation for each project. Before this meeting, the Panel Chair and Co-Chairs (if any) have to be sure that two individual evaluation forms for each project are complete and sealed.

The logistic aspects of the meeting and the members' travel arrangements are handled by FCT project officers.

Project ranking and panel recommendation for funding

Projects are ranked according to their final rate (Excellent, Very-Good, Good, Fair, Poor). The ranking of projects with the same final rate takes into account, in decreasing order of importance, the ratings of criterion A, B, C and D.

- Projects rated as Excellent will, in principle, be funded provided that the total recommended funding does not exceed the allocated budget.
- Projects rated as Very Good may be funded, depending on their relative merit with respect to others, and up to the total allocated budget.
- Projects rated Good will likely result in non funded projects.
- Projects rated as Fair or Poor will not be funded.

Panel Evaluation Form and Feedback to Applicants

Based on the online evaluation individual reports, but according to the own judgment of the panel members, the projects should be evaluated and rated.

A consensus panel report must be written for each project using the [Panel Evaluation Form](#) provided on-line. The Panel Evaluation Form is similar to the Individual Evaluation Form used for individual review. In order to simplify the Panel Evaluation Form completion, the panel will access both individual review forms, and will be able to choose to copy the contents of one of the individual forms and further edit it.

FCT will provide each PI with the final rate and overall comments as well as the panel rates and comments for each criterion. Except for proposals rating and budget recommendations if the projects are approved, the most important output of the panel meeting is the feedback to applicants. Please provide in these fields the comments on the proposal, including the extent to which it meets the evaluation criteria. Your substantive written comments on the proposal's strengths and weaknesses are critical to the evaluation and to the proponents' understanding of your judgments. Include in this field any recommendations you find desirable or necessary regarding the research work or the project organization.

PI will also be informed on the total budget recommended by the panel, and the associated justification.

Panel Conflict of Interest

If a CoI emerged for any panel member, the panel should solve it or, should this not be possible, report it on the panel final report.

Panel Final Report

The panel members should prepare a panel final report, to be sent, dully signed by all the panel members, to FCT at the end of the panel meeting.

The report should be organized in two main parts:

Part I – Evaluation, including, but not limited to,

- Panel adopted working methodology;
- Identification of potential CoI situations and their solution;

Part II – Recommendations to FCT, on the various aspects of the evaluation that might help FCT to improve procedures in future calls. Please refer, among other considered important:

- Comments and criticism on the application form, with suggestions for possible improvements;
- Comments on the material available to the PIs, in particular the *Guide for the elaboration and submission of R&D project proposals*;
- Strong and weak aspects of the evaluation web application;
- Strong and weak aspects of the FCT officers' support;
- Strong and weak aspects on logistic aspects (travel, hotel, meeting).

A PDF version of this report, duly signed by all its members, can be uploaded at the panel internet area, after the evaluation completion of all projects. Alternatively, the original, preferably in electronic form and PDF format, may be delivered to the FCT project officer.

Webpage for the Panel Final Evaluation

The panel username and password to be used for the panel evaluation will be distributed to all panel members at the meeting, or before it upon request to FCT project officer. They give access, through <https://www.fct.mctes.pt/evaluation>, to a web page with a set of links

- Project List. For each project proposal:
 - o All the information submitted as the project proposal (Form Overview);
 - o Different applications by the same PI or research team member in the present call (even in different scientific areas), and proposals by the same PI from the previous call with rebuttals pending, for the sake of detecting duplication of objectives or resources. As stated in the text of the call duplication is not allowed;
 - o The contents and ratings of the two Individual Reviews (Evaluation);
 - o The Panel Evaluation Form to be filled (Panel Evaluation).
- Summary of Evaluation. A list of allocated projects with information of panel evaluation and the possibility to make sort relative to a chosen column. Bottom global information on number of panel recommended projects for funding and panel recommended funding.
- Extra Information. Five different lists with information on the projects.
- Evaluation Report.
- Close Panel.

5. CONFIDENTIALITY AND CONFLICT OF INTEREST

Confidentiality

The confidentiality of written proposals must be protected. All the experts involved in the evaluation are asked not to copy, quote or otherwise use material from them. They are requested to sign a statement of confidentiality relative to the contents of the project proposals and to the results of the evaluation.

The text to be accepted, that appears the first time each panel member or external reviewer uses his/hers username and password to access the evaluation area, is the following:

STATEMENT OF CONFIDENTIALITY

Thank you for accepting to participate in the scientific evaluation of Research Projects submitted to the Portuguese Foundation of Science and Technology (Fundação para a Ciência e a Tecnologia) – FCT.

The reader of this message pledges, on his/her honor, not to quote or use in any way, the contents of the project proposals, nor to make available, other than to FCT or the evaluation panel, the results of the evaluation of project proposals.

Conflict of interest (CoI)

A disqualifying conflict of interest exists if the panel member or external reviewer:

- Has direct involvement in the research proposal being discussed, or has collaborated with the PI;
- Stands to benefit directly should the proposal be accepted;
- Has a close family relationship with any person representing an *applicant legal entity* in the proposal;
- Is from the same immediate department, institution or company as the applicant(s);
- Is employed by one of the *applicant legal entities* in the proposal;
- Was employed by one of the *applicant legal entities* in a proposal within the previous three years.

A potential conflict of interest may exist, even in cases not covered by the clear disqualifying conflicts indicated above, if the panel member or external reviewer:

- Is already involved in a contract or research collaboration with an *applicant legal entity*, or has been so in the previous three years;
- Has been a student or supervisor of the applicant(s) within the last five years;
- Has had an on-going scientific or inter-personal conflict with the applicant(s);
- Is in any other situation that could cast doubt on his or her ability to evaluate the proposal impartially, or that could reasonably appear to do so in the eyes of an external third party.

If any individual reviewer considers that there is a disqualifying CoI in a particular project, he/she must contact his/her panel chair or co-chair and ask for the project de-allocation. The panel co-chair must remove the allocation and proceed with the allocation to a different individual reviewer. This CoI should be reported in the panel final report.

If a CoI emerged for any panel member, the panel should solve it or, should this not to be possible, report it on the panel final report.

6. GLOSSARY AND TRANSLATIONS

Portuguese to English Translation and explanations

Agregação = Aggregation. This is an academic title. It states

- i.) the quality of the academic, professional, scientific and pedagogical curriculum
- ii.) the capacity to carry out research work
- iii.) the capability to coordinate and carry out independent research work.

and is issued to PhD holders after a public exam by a jury. The exam is required by the candidates and takes place during two days.

Doutoramento = PhD, doctoral degree

Licenciatura = Licenciatae (3, 4 or 5 years graduate course)

Bolsa = Grant, fellowship

Bolseiro = Grant Holder

BCC = Bolsa de Cientista Convidado = Invited Scientist Grant

- Invited scientist grants are designed for university professors or researchers with scientific curricula of notable merit for the purpose of carrying out activities in Portuguese science and technology institutes.
- The total duration of this type of grant can vary between three months and three years.

BDCC = Bolsa de Desenvolvimento da Carreira Científica = Scientific Career Development grants

- Scientific career development grants are designed for individuals who already have a doctoral degree and whose work since completing the doctorate, in the two to six years period prior to applying for the grant, has shown a high level of scientific merit. As the aim of these grants is to support the development of skills in directing and coordinating scientific projects in Portugal, the grant recipient must direct his/her own scientific project in a Portuguese scientific institute.
- BDCC have to be PIs of the projects.

BPD = Bolsa de Pós-Doutoramento = Post-doctoral Grant

- Post-doctoral grants are intended for individuals who have already completed a doctoral degree, preferably within the last five years, for the purpose of carrying out advanced research in Portuguese or foreign scientific institutes of recognized merit.

BI = Bolsa de Investigação = Research Grant

- These research grants are available for bachelor, graduation or master degree holders for the purpose of obtaining scientific training in research projects or in Portuguese science and technology institutions.
- These grants are, in principle, one year in length, renewable for up to a total of three years, and cannot be awarded for periods of less than three consecutive months.

BIC = Bolsa de Iniciação Científica = Scientific Initiation Grant

- Scientific initiation grants are designed primarily for students who have completed at least 3 years of higher education (1st cycle or equivalent) for the purpose of obtaining scientific training by participating in research projects in Portuguese institutions.
- These grants are, in principle, one year in length, renewal for up to two years, contingent on good scholastic performance. They cannot be awarded for periods of less than three consecutive months.

BTI = Bolsa de Técnico de Investigação = Research Technician Grant

- Research technician grants are designed to provide for additional specialized training of technicians to support the operation and maintenance of scientific laboratory equipment and infrastructures and other activities relevant to the Portuguese scientific and technological system.
- The length of this type of grant varies, up to a total of five years, and cannot be awarded for periods of less than three consecutive months.

NUTS = Nomenclaturas de Unidades Territoriais para fins Estatísticos – Denomination of the Territorial Units for Statistical purposes

Glossary

Associate Laboratory = Private not-for profit and public research institutions together with State Laboratories can join in an association, named Associate Laboratory, aiming at the achievement of special objectives of the national science and technological policy. The status of Associate Laboratory is granted by the Ministry of Science, Technology and Higher Education, for periods not exceeding 10 years, upon recognition of their Excellence.

Autonomous Regions = Madeira and Azores Islands

FEDER = European Regional Development Fund

FTE = Full Time Equivalent

MCTES = Ministry of Science Technology and Higher Education

Postdoctoral fellow = a PhD holder that has a Post-doctoral grant

ANNEX I - 2010 CALL FOR R&D PROJECTS – SCIENTIFIC AREAS AND SUB-AREAS

The following table lists the scientific areas and sub-areas in the 2009 Call for R&D projects in all scientific domains.

Scientific Area/Scientific Sub-area	Acronym
Mathematics	MAT
Physics	FIS
Chemistry and Biochemistry	QUI
Chemistry and Biochemistry - Chemistry	QUI-QUI
Chemistry and Biochemistry - Biochemistry	QUI-BIQ
Earth and Space Sciences	CTE
Earth and Space Sciences - Astronomy and Astrophysics	CTE-AST
Earth and Space Sciences - Atmosphere	CTE-ATM
Earth and Space Sciences - Internal and External Geodynamics	CTE-GIX
Earth and Space Sciences - Space Sciences	CTE-SPA
Environment and Global Changes	AAC
Environment and Global Changes - Environment	AAC-AMB
Environment and Global Changes - Global Changes	AAC-CLI
Biological Sciences	BIA
Biological Sciences - Genomics	BIA-GEN
Biological Sciences - Cellular and Molecular Biology	BIA-BCM
Biological Sciences - Proteins and Structural Biology	BIA-PRO
Biological Sciences - Biology of Microorganisms	BIA-MIC
Biological Sciences - Evolution and Phylogenetics	BIA-EVF
Biological Sciences - Ecosystems	BIA-ECS
Biological Sciences - Biodiversity and Conservation	BIA-BIC
Marine Sciences and Technologies	MAR
Health Sciences	SAU
Health Sciences - Medical Genetics and Functional Genomics	SAU-GMG
Health Sciences - Microbiology and Infection	SAU-MIC
Health Sciences - Immunology and Inflammation	SAU-IMU
Health Sciences - Neurosciences - molecular and cellular	SAU-NMC
Health Sciences - Neurosciences - systems, clinical and behavior	SAU-NSC
Health Sciences - Biomaterials	SAU-BMA
Health Sciences - Bio-Medical Engineering	SAU-ENB
Health Sciences - Epidemiology	SAU-EPI
Health Sciences - Public Health and Environmental Factors	SAU-SAP
Health Sciences - Pharmacology and Toxicology	SAU-TOX
Health Sciences - Pharmaceutical sciences	SAU-FAR
Health Sciences - Oncobiology	SAU-ONC

Health Sciences - Developmental Biology	SAU-BID
Health Sciences - Organs and Systems: Mechanisms of Disease	SAU-ORG
Health Sciences - Metabolism and Nutrition	SAU-MET
Animal Science and Veterinarian Sciences	CVT
Agricultural and Forestry Sciences	AGR
Agricultural and Forestry Sciences - Agricultural Production	AGR-PRO
Agricultural and Forestry Sciences - Food Science and Technology	AGR-ALI
Agricultural and Forestry Sciences - Forestry Sciences	AGR-CFL
Agricultural and Forestry Sciences - Plant Genomics	AGR-GPL
Agricultural and Forestry Sciences - Management of Nature and Landscape	AGR-APO
Biological Engineering and Biotechnology	EBB
Biological Engineering and Biotechnology - Biological Engineering	EBB-EBI
Biological Engineering and Biotechnology - Biotechnology	EBB-BIO
Mechanical Engineering	EME
Mechanical Engineering - Mechanical Design	EME-PME
Mechanical Engineering - Mechanics of Fluids and Energy	EME-MFE
Mechanical Engineering - Mechanical Technology	EME-TME
Mechanical Engineering - Control and Robotics	EME-CRO
Mechanical Engineering - Industrial Management	EME-GIN
Material Science and Engineering	CTM
Material Sciences and Engineering - Biomaterials, Processing and Characterization	CTM-BPC
Material Sciences and Engineering - Polymers, Polymeric and Composite Structures	CTM-POL
Material Sciences and Engineering - Metals, Coatings, Thin film Structures and Devices	CTM-MET
Material Sciences and Engineering - Nanomaterials, Synthesis and Functional Devices	CTM-NAN
Material Sciences and Engineering - Ceramics, Glass and Energy Materials Systems	CTM-CER
Civil and Mine Engineering	ECM
Chemical Engineering	EQU
Chemical Engineering - Chemical Engineering	EQU-EQU
Chemical Engineering - Chemical Reaction Engineering	EQU-ERQ
Chemical Engineering - Product Engineering	EQU-EPR
Chemical Engineering - Systems Engineering	EQU-ESI
Chemical Engineering - Thermodynamics and Transport Phenomena	EQU-FTT
Electrical Engineering	EEA
Electrical Engineering - Automation	EEA-AUT
Electrical Engineering - Control and Robotics	EEA-CRO
Electrical Engineering - Electronics and Computers	EEA-ELC
Electrical Engineering - Telecommunications	EEA-TEL
Electrical Engineering - Electrical Energy	EEA-EEL
Electrical Engineering - Computational Processing of Portuguese Language	EEA-PLP
Computer Engineering	EIA
Computer Science and Engineering - Computer Engineering	EIA-EIA
Computer Science and Engineering - Computer Science	EIA-CCO
Economics and Management	EGE
Economics and Business - Economics	EGE-ECO
Economics and Business - Business	EGE-GES

Social Sciences	CS
Social Sciences - Sociology	CS-SOC
Social Sciences - Demography	CS-DEM
Social Sciences - Geography	CS-GEO
Social Sciences - Anthropology	CS-ANT
Social Sciences - Studies on Science and Society	CS-ECS
Political Sciences and Law Sciences	CPJ
Political Sciences and Law Sciences - Political Sciences	CPJ-CPO
Political Sciences and Law Sciences - Law Sciences	CPJ-JUR
Education Sciences and Policies	CPE
Education Sciences and Policies - Education Sciences	CPE-CED
Education Sciences and Policies - Science and Education Policies	CPE-PEC
Psychology	PSI
Psychology - Clinical Psychology	PSI-PCL
Psychology - Cognitive Psychology	PSI-PCO
Psychology - Educational and Developmental Psychology	PSI-EDD
Psychology - Applied Psychology	PSI-APL
Psychology - Social and Organizational Psychology	PSI-PSO
Philosophy	FIL
Philosophy - Philosophy	FIL-FIL
Philosophy - Ethics	FIL-ETI
Philosophy - Religion	FIL-REL
Philosophy - Philosophy of Science	FIL-FCI
Communication and Information Sciences	CCI
Communication and Information Sciences - Communication Sciences	CCI-COM
Communication and Information Sciences - Journalism	CCI-JOR
Communication and Information Sciences - Information Sciences	CCI-CIN
History	HIS
History - History	HIS-HIS
History - Archaeology	HIS-ARQ
History - Cultural Heritage	HIS-HEC
History - History of Science and Technology	HIS-HCT
Architecture and Urban Planning	AUR
Architecture and Urban Studies - Architecture	AUR-AQI
Architecture and Urban Studies - Urban Studies	AUR-URB
Language Sciences and Literature Studies	CLE
Language Sciences and Literature Studies - Linguistics	CLE-LIN
Language Sciences and Literature Studies - Languages and Literature	CLE-LLI
Art Studies	EAT
Art Studies - Art Studies	EAT-EAT
Art Studies - History of Art	EAT-HAT
Art Studies - Visual and Performing Arts	EAT-AVP
Art Studies - Music and Musicology	EAT-MMU
Art Studies - Museum Studies	EAT-MUS

African Studies	AFR
Sport Studies	DES
Engineering Systems	SEN
Engineering Systems - Energy	SEN-ENR
Engineering Systems - Transportation Systems	SEN-TRA

ANNEX II - EVALUATION FORMS

Individual Evaluation Form

Referee. Name of referee, automatically filled

Project reference. Project reference as issued by FCT at project proposal phase.

Principal Investigator. Name of the principal investigator, automatically filled

Title. Automatically filled

Criterion A: Scientific merit and innovative nature of the project from an international standpoint, including but not limited to: i) Relevance and originality of the project proposed (based on the state-of-the art in a determined scientific area and previous work done by the proposing team); ii) Methodology adopted for carrying out the project; iii) Expected results and their contribution to scientific and technological knowledge; iv) Resulting publications and articles; v) Contribution towards promoting and disseminating science and technology; vi) Production of knowledge that can be incorporated into and applied to the business sector.

Excellent (5) Very Good (4) Good (3) Fair (2) Poor (1)

Rating: (from 1 to 5)

Comments on Criterion A

Criterion B: Scientific merit of the research team, including but not limited to: i) scientific productivity of the team (ranging from references to publications and citations in published works as used by the basic and engineering sciences, to performance and artistic work in the arts or monographs and books in the humanities and social sciences); ii) Abilities and skills to adequately execute the proposed project (team configuration, Principal Investigator's qualifications); iii) Ability to involve young researchers in training; iv) Availability of the team and non duplication of objectives in relation to other projects underway; v) The degree of internationalization of the team; vi) Degree of

success in previous projects in relation to the Principal Investigator (PI) (in the case of young PIs, this requirement must be assessed based on the potential revealed by the PIs curriculum vitae in the absence of prior concrete accomplishments); vii) Level of commitment of any companies participating in the project (if applicable).

Excellent (5) Very Good (4) Good (3) Fair (2) Poor (1)

Rating: (from 1 to 5)

Comments on Criterion B

Criterion C: Feasibility of the plan of work and reasonableness of the budget, including but not limited to: i) organization of the project in terms of the proposed objectives and resources (duration, equipment, size of the team, institutional and management resources); ii) institutional resources of the participating entities, in particular of the Principal Contractor (PC) (technical-scientific, organizational and managerial and, when appropriate, co-funding capacity on the part of companies).

Excellent (5) Very Good (4) Good (3) Fair (2) Poor (1)

Rating: (from 1 to 5)

Comments on Criterion C

Criterion D: Contribution to the body of knowledge in this field and improvement of competence of the scientific community in general, including but not limited to: i) Contribution to the body of knowledge and competence of the National Science and Technology System (expected effects and results).

Excellent (5) Very Good (4) Good (3) Fair (2) Poor (1)

Rating: (from 1 to 5)

Comments on Criterion D

The overall rating of the project is based on the evaluator's own judgment of the merit of the overall proposal without resorting to any sort of quantitative algorithms. The overall rating is also expressed as Excellent, Very Good, Good, Fair, and Poor.

Excellent (5) Very Good (4) Good (3) Fair (2) Poor (1)

Overall Rating: (from 1 to 5)

Overall Comments

(Please provide an overall comment on this proposal, including the extent to which it meets the evaluation criteria. Your substantive written comments on the proposal's strengths and weaknesses are critical to the evaluation and to the proponents understanding of your judgment. Include any recommendations you find desirable or necessary regarding the research work or the project organization)

Should the requested funding be reduced, in case of project approval?

Answer
Yes/No

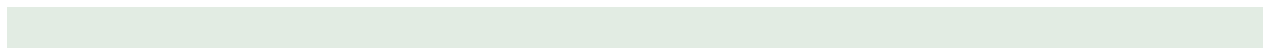
Please comment on the answer

Should the requested funding for Human Resources be reduced, in case of project approval?

Answer
Yes/No

Please comment on the answer, referring the number and type of fellowships to award

Confidential comments to the evaluation panel



Panel Evaluation Form

Panel. Name of panel, automatically filled

Project reference. Project reference as issued by FCT at project proposal phase.

Principal Investigator. Name of the principal investigator, automatically filled

Title. Automatically filled

Criterion A: Scientific merit and innovative nature of the project from an international standpoint, including but not limited to: i) Relevance and originality of the project proposed (based on the state-of-the art in a determined scientific area and previous work done by the proposing team); ii) Methodology adopted for carrying out the project; iii) Expected results and their contribution to scientific and technological knowledge; iv) Resulting publications and articles; v) Contribution towards promoting and disseminating science and technology; vi) Production of knowledge that can be incorporated into and applied to the business sector.

Excellent (5) Very Good (4) Good (3) Fair (2) Poor (1)

Rating: (from 1 to 5)

Comments on Criterion A (to be transmitted to applicants)

Criterion B: Scientific merit of the research team, including but not limited to: i) scientific productivity of the team (ranging from references to publications and citations in published works as used by the basic and engineering sciences, to performance and artistic work in the arts or monographs and books in the humanities and social sciences); ii) Abilities and skills to adequately execute the proposed project (team configuration, Principal Investigator's qualifications); iii) Ability to involve young researchers in training; iv) Availability of the team and non duplication of objectives in relation to other projects underway; v) The degree of internationalization of the team; vi) Degree of success in previous projects in relation to the Principal Investigator (PI) (in the case of young PIs, this requirement must be assessed based on the potential revealed by the PIs curriculum vitae in the absence of prior concrete accomplishments); vii) Level of commitment of any companies participating in the project (if applicable).

Excellent (5) Very Good (4) Good (3) Fair (2) Poor (1)

Rating: (from 1 to 5)

Comments on Criterion B (to be transmitted to applicants)

Criterion C: Feasibility of the plan of work and reasonableness of the budget, including but not limited to: i) organization of the project in terms of the proposed objectives and resources (duration, equipment, size of the team, institutional and management resources); ii) institutional resources of the participating entities, in particular of the Principal Contractor (PC) (technical-scientific, organizational and managerial and, when appropriate, co-funding capacity on the part of companies).

Excellent (5) Very Good (4) Good (3) Fair (2) Poor (1)

Rating: (from 1 to 5)

Comments on Criterion C (to be transmitted to applicants)

Criterion D: Contribution to the body of knowledge in this field and improvement of competence of the scientific community in general, including but not limited to: i) Contribution to the body of knowledge and competence of the National Science and Technology System (expected effects and results).

Excellent (5) Very Good (4) Good (3) Fair (2) Poor (1)

Rating: (from 1 to 5)

Comments on Criterion D (to be transmitted to applicants)

The overall rating of the project is based on the panel's own judgment of the merit of the overall proposal without resorting to any sort of quantitative algorithms. The overall rating is also expressed as Excellent, Very Good, Good, Fair, and Poor.

Excellent (5) Very Good (4) Good (3) Fair (2) Poor (1)

Overall Rating: **(from 1 to 5) Overall Comments (to be transmitted to applicants)**

(Please provide the overall panel comment on this proposal, including the extent to which it meets the evaluation criteria. Your substantive written comments on the proposal's strengths and weaknesses are critical to the evaluation and to the proponents understanding of your judgment. Include any recommendations you find desirable or necessary regarding the research work or the project organization. These comments complement those associated with each evaluation criteria and that will also be transmitted to PIs)

Recommendations on budget, if project approved

It is absolutely necessary to recommend a total budget based on the opinions of the Evaluation Panel, to justify the decisions, to state recommendations for application of funding. If the panel recommends a budget reduction, please fill the following field with the recommended amount:

(please Round numbers and do not insert Commas or Periods to separate the number)

Please justify your recommendation

Recommendations on Human Resources budget, if project approved

Please make explicit the part of this funding that should be applied in "Human Resources" including the awarding of fellowships within the projects

(please Round numbers and do not insert Commas or Periods to separate the number)

Recommend how this funding should be applied in the various available fellowships

Confidential comments to FCT



ANNEX III - TERMS OF REFERENCE FOR THE PANEL MEMBERS

Prior to review start, all the members of the panels will have to sign the following Terms of Reference that are also signed by the President of FCT.

TERMS OF REFERENCE

We the undersigned declare to accept the following terms of reference for the 2010 Project Evaluation Exercise:

1. FCT will allow access of all Principal Investigators (PIs) to the classifications and comments on the 4 criteria of evaluation: Scientific merit and innovative nature of the project from an international standpoint; Scientific merit of the research team; Feasibility of the plan of work and reasonableness of the budget; Contribution to the body of knowledge in this field and improvement in the competence of the scientific community.
2. The panel comments will be phrased in order to guarantee Principal Investigators full understanding of the panel's judgments thus providing the necessary recommendations for improvement of their proposals in subsequent calls (when not proposed for funding in the present call).
3. The Chair of the panel will guarantee that each proposal has a minimum of 2 reviews. These reviews can be made by 2 members of the panel or one panel member and one external reviewer. Reviews by two external reviewers can be accepted only in those cases where the panel lacks full expertise in the specific field of the proposal(s). The panel is free to appoint the external reviewers considered necessary to assure the minimum of 2 reviews by proposal.
4. The panel comments should be succinct but substantial. They should also be impeccably polite. Reviewers' substantive written comments on the proposal's strengths and weaknesses are critical to the evaluation and to the proponents' understanding of the panel judgments and classifications. Comments include any recommendations the panel finds desirable or necessary regarding the research work or the project organization.
5. Reviewers agree to identify repetitions and signal overlaps with other funded projects they have access to, during the evaluation procedure.
6. FCT will process the payment of 50% of the due remuneration, by the end of the meeting of the panel in Lisbon.
7. FCT insures the remaining payment of the evaluation exercise within two months of the conclusion of the submission of the evaluations reports and verification that all panel comments have been elaborated in accordance with the present terms of reference.

ANNEX IV - STRUCTURE OF THE APPLICATION FORM

The application form has nine sections:

1. Project identification
2. Involved institutions and their roles
3. Scientific component
4. Research team
5. Previous funded projects of the same PI
6. Expected output indicators
7. Budget
8. Budget rationale
9. Attachments

1 - Project identification

PI, Project title, main scientific area and sub-area, secondary scientific area and sub-area, requested funding, four key-words, predicted initial date, and project duration.

2 - Involved institutions and their roles

Principal Contractor and other Participating Institutions: names and short description. These are the legal institutions that will receive the funds from FCT. The PI is affiliated to the Principal Contractor. Moreover, the research units where the project activities will take place are identified. The Main Research unit is the one to which the PI is affiliated. Additional Research Units to which are affiliated up to 3 key elements of the research team, chosen by the PI, may be identified.

Some R&D units are funded, on a regular basis, by FCT. These units are subject to scientific evaluation. The evaluation system is based upon periodic assessments, carried on by international experts, of reports and activity plans including direct contacts with researchers and their institutions during visits to all units. From this evaluation exercise follows the award of a qualitative grade, which determines the volume of plurianual funding to be received up to the next evaluation.

The last evaluation of a set of 383 units was carried out in 2007-2008. The results are available at <http://www.fct.mctes.pt/unidades/08/> (web page in Portuguese, results in English).

3 - Scientific Component

This section is organized in the following sub-sections:

- Summary
- Technical Description
 - o Literature review
 - o Research plan and methods
 - o Tasks
 - o Project timeline and management
- Bibliographic references
- Past publications

The descriptions presented relative to this section of the application form are those given to the PIs in the guide for the elaboration and submission of R&D project proposals

Summary

The executive summary "sells" to the reviewer the proposed research ideas and the methods utilized. It replaces the conventional introduction with a more focused assessment of the state of the art, major

problems to be addressed, expertise in the group, the approach taken identifying the novelty, and the expected results. A good executive summary must be authoritative, permeated with solid references, and key observations that distinguish the researcher and the proposed work from the rest of the research being carried out in the area. It should have clear statements on how the proposed work would result in significant advances in the proposed field. If the summary is too ambitious for the duration of the grant, the human resources and the budget requested, this summary is weighted heavily against the proposal.

Technical Description

This subsection should answer the question, "Why should public funds be spent on this project?" Your description should be written in a positive tone and explain in detail what you intend to do in the project, what objectives you hope to achieve and the reasons why these are important.

You are expected to describe **in detail** the problem to be investigated, the challenges it poses, and the approaches and methods to be used to achieve the objectives. You must also convince the evaluators that the PI and the research team are capable of achieving these objectives. You should show that the proposed methodologies are appropriate for achieving the objectives.

Specific details are required. General statements of objectives that are not properly substantiated or ideas not shown to be *new* ideas of the PI and his/her team are neither useful nor sufficient. The PI's goal is to convince the evaluation panel that he/she has the potential to contribute to progress and not just to the status quo.

This subsection is not only technical - it should also address organizational considerations. It should show that the PI has a well conceived plan to achieve the objectives (including, if needed, alternative methodologies if the proposed methods prove to be unfruitful), that he/she knows how to predict results that the temporal planning and management are adequate and that resources are well distributed.

It should contain a brief description of how the PI proposes to organize the work into various tasks, the interaction between the various tasks, the role of each participant and what each of the research groups involved will do, the schedule, and a set of milestones with which to judge how the work is progressing.

This subsection is organized in four parts:

- [Critical Review of the Literature](#) - here you make the team's previous work known, you show your knowledge of the state of the art and you explain the innovative nature of your proposal;
 - [Research Plan and Methods](#) - here you describe, in detail, the research plan you intend to carry out, the methodologies to be adopted, the expected results and how the activities will be divided into tasks;
 - [Tasks](#) - here you describe, in detail, the methods to be used and expected results for each of the tasks in the plan of work, along with the resources needed, the duration of each task and the roles of the various participants;
 - [Project Scheduling and Management](#) - here you describe the management of the project, how team members will be coordinated and the planned reports.
- **Literature review:** The goal of this section is to describe the group's previous work and the methodologies that compete with those proposed in this project, and to justify the need for the proposed innovation. The literature review should be critical. Simply referring to previous work without commenting the contribution the work makes to the approach proposed in your project or without mentioning its limitations is neither significant nor useful. Previous results of the PI and the research team are viewed favorably. The evaluators look at this section to evaluate the vision and the knowledge that the PI has regarding the state of the art and the reasons why the PI believes that the methodologies proposed will perform the best. The PI must convince the

evaluators that he/she and the research team have the background needed and understand the open problems in the field of research in which the proposal falls.

The references cited in this section, as well as those in other sections of the proposal, must be fully identified in the [References](#) section, using a method of cross-referencing chosen by the PI.

- **Research plan and methods:** Based on the critical review of the literature presented above, describe the proposed research plan and methods to be used, focusing on the following questions:
 - What is the problem to be investigated; what are its challenges and what is the “great idea” that the PI and his/her team have to deal with them?
 - Why is the problem important and interesting?
 - What points of view and methods are to be adopted?
 - How will the project advance the state of the art, and what are the new basic ideas that will enable the team to reach their goal?
 - What important ideas do the PI and his/her team have for achieving these goals?
 - What results can be expected from the project?
 - What is the nature of the collaboration between the various partners and what role is played by each one?

In this component, the PI should present an overview of the methodologies to be adopted, which will be detailed for each task in the following subsection.

- **Tasks:** For each task into which the project’s activities are organized, the following information should be provided:
 - Task denomination
 - Start date for the activity and duration (in months)
 - Person*month
 - Description of task and expected resultsIn connection with the content of subsection 3.2.2, [Research Plan and Methods](#), we asked the PIs to describe, in detail, for each task:
 - the objectives, in the context of the project;
 - the methods and approaches proposed to achieve them;
 - the expected results of the task, and how these results are prerequisites for the tasks to follow;
 - how they articulate with the other tasks;
 - the role each partner and institution will play in the task.
 - Justification of the resources, both human and material, needed to achieve the expected results of the task should be included. An overall justification of the resources required for the project is required in Section 8 - [Justification of the budget](#).
 - Members of the research team who will participate in the task.
- **Project timeline and Management:** in this item the PI should include the proposed project management structure, in particular the coordination among participants, the predicted meetings and the reporting structure. A project timeline with the task time schedule is requested. It will appear in Section 9 of the Application Form in pdf format under the name timeline.pdf

A list of callendarized milestones should be included, with the milestone date, name and description. Milestones should be made explicit in the project timeline.

Bibliographic references

This lists all the references cited in the technical description of the proposal, with a cross-reference methodology chosen by the PI. The requested information includes title, authors' names in the order they appear in the publication, name of the book or the journal, editorial data whenever applicable, volume number, number of pages and year of publication. If the papers are available electronically, PI should include the corresponding URL.

The maximum number of references is 30.

Note: if there is any restriction in the access to some of these publications, PIs were advised to include them in a protected (username and password) web site and to include the username and password in a file named authentication.pdf uploaded in Section 9 of the application form.

Previous publications

Reference to a maximum of 5 (five) papers, books or monographs published, presented or accepted for publication, authored or co-authored by research team members and that are considered by the PI of relevant importance to evaluate the scientific quality of the research team. The requested information includes title, authors' names in the order they appear in the publication, name of the book or the journal, editorial data whenever applicable, volume number, number of pages and year of publication.

These articles may be **uploaded to a website**. The URL addresses provided must be complete, and it is the PI's responsibility to make sure that the links remain active.

It was requested that these papers were made available at an internet web site and accessible to the reviewers through an URL link, whose maintenance is the PI's responsibility.

Note: if there is any restriction in the access to some of these publications, but nevertheless allowing for review processes, PIs were advised to include them in a protected (username and password) web site and to include the username and password in a file named authentication.pdf uploaded in Section 9 of the application form.

4 - Research team

This is the list of research members, including the indication of expected grant holders or contracts to be established in the framework of the project. Except for this last group, the information for each member includes:

- Name. The Curriculum vitae for each research team member is available by clicking on the corresponding name.
- Role in the project.
- Academic degree.
- % of time allocated to the project.
- Indication if this is a key element of the research team.

Each PI should have a minimum of 25% of his/her time allocated to the project.

The Guide for Project Application refers that all the research team members should complete their CVs according to a set of rules. Moreover, it is referred that the CVs of the research team **key elements** will be specially evaluated by the reviewers.

The main instructions for CV completion include:

- Should be brief, emphasizing relevant information, and should be written in English;

- **Should not include references to articles submitted** for publication or presentation, nor to R&D projects currently in the proposal phase; only articles published or accepted for publication and projects approved for funding should be mentioned;
- Should follow reverse chronological order when presenting lists;
- When mentioning projects, indicate the project title, the entity funding the project, the period in which the project was executed and your role in the project (e.g., Principal Investigator, team member);
- In the field “Other skills/activities”, under “Current research interests”, mention activities such as serving as associate editor for journals, member of technical or scientific committees for international conferences, person in charge or jointly in charge of organizing scientific events;
- In the field “Experience as advisor” mention only doctoral or master’s theses **that have already been completed**. For each student, enter their name, title of the dissertation, year completed and the student’s current job position. List doctoral dissertations first, followed by master’s dissertations. Do not include dissertations currently underway;
- The field “Field of Specialization” under “Current research interests” must be filled out.

5 - Previous funded projects of the same PI

This part assesses the success of previous funded projects and it is an indicator of quality of past research and the ability to organize, plan research activities, and deliver results by the PI of the current proposal. The section shortly presents funded projects with the same PI of the current proposal that started not longer than **5 years ago**. Approved projects not yet started should be included.

For each project, funded by FCT or other funding agency or research program, a set of information was requested in particular project summary, a complete list of outcomes attributable to the project(s) like papers or books (where published), systems built, patents from the work, degrees obtained by students working in the project, duration, budget and research team, including those elements belonging to the present proposal.

Important: Young researchers should not be penalized in what concerns their scarce experience as PIs, but rather their youth and potential should be taken into account.

6 - Expected output indicators

This section has two fields:

- Expected indicators
- Dissemination of scientific activities

7 - Budget

The per project funding limit is set forth in the respective [Announcement of Call](#). A budget table must be filled out for the Principal Contractor and for each Participating Organization. The total of all the tables represents the sum of funding requested, which is calculated automatically and shown in the table “Overall Budget”.

The budget should be distributed over the different years taking into account the number of months in each calendar year of the project. If the project is approved, there is a possibility that changes will be made to the budget distribution schedule based on observations of the evaluation panel or when the project is approved. See the [timeline](#) for the evaluation and decision process.

The expense categories that appear in this menu are those set forth in the [Regulations](#) and in the [Announcement of Call for Proposals](#).

In the "Funding Plan" table, indicate whether there is any self funding, other public funding or other private funding coming from any of the proposing and participating organizations. The total cost of the project is the sum of all the components indicated in the Funding Plan table.

Human resources

Human resources dedicated to the project's R&D activities, including costs of individual grant recipients. The funding of these grants shall comply with the ([Norms for the award of grants in R&D projects](#)).

Travel

Expenses resulting from project related participation in conferences, travel for fieldwork, meetings and visits in Portugal or abroad. Example: travel expenses, registration fees, daily allowances, and accommodation.

Consultants

Consulting expenses for project support. Foreign scientists living outside Portugal may collaborate on the project and receive financial support for travel to Portugal and accommodation and may be paid for consulting work done on behalf of the project.

Acquisition of goods and services

Expenses related to acquisition of goods or services for the project which can be documented by: "Green" receipts, receipt for an "Isolated Act", or an Invoice/Receipt.

Also included in this category are other current expenses directly related to execution of the project (e.g., consumables, reagents, etc., and acquisition of books and subscriptions to scientific journals when these fall within the scope of the project) and expenses paid to licensed auditors or accountants.

Patent registration

Registration **abroad** of patents, copyrights, utility models and designs, national models or brands when associated with other forms of intellectual property, namely fees, prior art searches, consultant's fees.

Adaptation of buildings and facilities

Adaptation of buildings and facilities when essential to carrying out the project, in particular for environmental and safety reasons, provided that these costs do not exceed 10% of the total eligible cost of the project.

Equipment

Expenses related to obtaining instruments and equipment, provided they are directly and unequivocally used by the project and remain tied to the project during the period of its execution. Indicate the phase of the project in which they are to be acquired.

Overheads

Overheads based on the real costs incurred due to execution of the project and which are imputable to it on a pro-rated basis according to a fair and equitable method of calculation duly explained and periodically reviewed, up to a limit of 20% of the eligible direct costs of the project.

8 - Budget rationale

In this section the PI has to justify the need of the proposed budget for each of the expenses type.

9 - Attachments

When necessary, PIs can attach documents corresponding to formulas, figures, diagrams, graphics or images. The allowable formats of these documents are: GIF, JPEG and PDF. The file timeline.pdf with the task schedule is mandatory.

If there is any restriction in the access to some of publications with an associated URL, **but nevertheless allowing for review processes**, PIs were advised to include them in a protected (username and password) web site and to include the username and password in a file named authentication.pdf uploaded in this section.