FCT Investigator Grants

Guide for Peer Reviewers 2012

1. INTRODUCTION

This document outlines the reviewing process and its inputs and outputs, and it defines the responsibilities of the participants in the process. It details a number of important issues, such as: FCT's mission; objectives of the present Call and application components; evaluation criteria; scoring system; evaluation committee/team and levels; feedback; confidentiality and conflict of interest.

FCT's mission

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

FCT's mission consists of 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, following an international peer review evaluation of proposals presented by institutions, research teams or individuals in 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's viewpoint on science and technology is wide, including exact, natural and health sciences, engineering, social sciences, and the humanities.

2. CALL FOR THE FCT INVESTIGATOR GRANTS

As part of its strategy to promote scientific excellence, FCT has recently launched an international call for the recruitment of eighty FCT Investigators to be hired in 2012.

The typical profile of the FCT Investigator corresponds to highly motivated applicants seeking to independently develop, conduct and coordinate scientific research activities in Portugal.

The call is aimed at researchers holding a PhD degree at three levels, stipulated according to the number of years after the award of the degree and the number of years working as an independent researcher.

a) "**starting grants**" aimed at PhD holders with less than 6 years after the award of the degree, with no need for previous scientific independence;

b) "**development grants**" aimed at PhD holders with more than 6 years and less than 12 years after the award of the degree, being independent researchers for less than 6 years;

c) "**advanced grants**" aimed at PhD holders who are independent researchers for more than 6 years.

Independent researchers are scientists who have already established themselves as research leaders in their own right, often as Principal Investigators or Group Leaders, supervising a research team and by attracting funding in competitive grant applications by FCT or other national and international funding agencies.

In adding up the time periods outlined above, a maximum tolerance of 11 months is acceptable for this call, provided it is properly justified.

Each applicant cannot apply to more than one level per call and it is the applicant's responsibility to decide to which level she/he wants to apply.

Application Components

Applications are submitted online via a dedicated FCT Web application. A single submission of the full proposal is followed by a two-step evaluation process.

The three main items to be provided in the application are **curriculum vitae**, a **research project** and a **career development plan**; all elements will be subject to evaluation. Each item must be produced in both extended and abbreviated format (synopsis).

The application form is organized in sections, some of which are obligatory and some optional. The sections to be filled out are the following:

Application description

A. Executive summary

1. Synopsis of CV/ major accomplishments
2. Synopsis of the research project & career development plan
3. Number of years after completion of the PhD
4. Number of years working as an independent scientist
5. Justification for deviations (optional)

B. Full description of the application

1. Research project

Background

Research plan and methods

Expected outcomes/ Impact

Major references

2. Career development plan

Career objectives

Development / Consolidation of an independent career

Internationalization / networking plan

C. Statement on ethical and legal Issues

D. The host institution

1. Select institution

2. Description of the host conditions

E. Support materials (optional)

The extended CV, as featured on the FCT-CV Portal is an integral component of the application.

Applicants identify, from a given list, OCDE´s adopted Field of Science and Technology (FOS) classification, the primary scientific area and sub-area of the project, and indicate up to 5 keywords which characterize the proposed scientific activity.

It is the applicant's responsibility to identify the **host institution** and to obtain the agreement required to carry out the scientific project and the career development plan. The host institutions must provide all means, including materials, support services, critical mass and institutional policies to ensure the implementation of the research project and career development plan.

There is **no pre-established structure to describe the research projects and career development plans**, which can be different for different career paths and research profiles. To facilitate the submission process, the online form features text boxes that describe the key points of the application. However, applicants are free to ignore the titles indicated in the text boxes and provide a title that more appropriately describes the contents of their proposal.

3. EVALUATION CRITERIA

The evaluation and selection process will use diverse criteria for the 3 components of the application under evaluation. The table below presents the relevant criteria for the different components of the application: CV, research project, and career development plan.

Table 1. Application components and evaluation criteria.

Application components	Evaluation criteria
CV **(60%)**	***1. Scientific merit of the applicant*** Scientific productivity of the applicant evaluated according to criteria accepted internationally by the different scientific communities; Abilities and skills to adequately execute the proposed project; Degree of internationalization; Overall suitability of the research profile for the intended grant level; Degree of success in previous calls for grant applications/ projects; Doctoral and post-doctoral training.
Career Development Plan **(20%)**	***2. Strategic planning*** Organization and structure of the career development plan.
	3. Conditions for Independent Research Adequacy of the career development plan and prior achievements towards research independence.
Research Project **(20%)**	***4. Scientific merit & innovative nature*** Relevance and originality of the project proposed (based on the state-of-the art in a given scientific area and previous work done by the applicant); Innovative nature of the idea underlying the research project; Adequacy of the methodology adopted; Production of innovative knowledge that can contribute to benefits to society or to the business sector.
	5. Viability of the work plan Feasibility and conditions granted by the host institution to support the research project and the career development plan.

Indicators for **scientific merit of the applicant** include the main academic and professional degrees, publications in top specialty peer-reviewed journals and/or in major multidisciplinary international peer-reviewed journals. Equivalent contributions/indicators from areas where international peer-reviewed publications are not available or are not common practice should be provided and explained (for example peer-reviewed conference proceedings and/or monographs on specific research fields). Other relevant indicators include

competitive funding from national and international funding agencies, granted patents, supervision of doctoral and post-doctoral post-graduate students and prizes, honours and awards.

Examples of conditions offered by host institutions valued in this grant scheme include: technical and administrative support staff, adequate laboratory and office space, and access to infrastructures.

Each of the three components of the application the five criteria is rated using a 9-point scale with integer numbers only (no decimal ratings). Additionally, an overall rating of the application is required. The overall rating reflects the reviewer's judgment of the application and should not be a simple average of the three individual components.

4. SCORING SYSTEM

The current FCT scoring system uses a 9-point scale:

Impact	Score	Descriptor	Additional Guidance on Strengths/Weaknesses
High	9	Exceptional	Exceptionally strong with essentially no weaknesses
	8	Outstanding	Extremely strong with negligible weaknesses
	7	Excellent	Very strong with only some minor weaknesses
Medium	6	Very Good	Strong but with numerous minor weaknesses
	5	Good	Strong but with at least one moderate weakness
	4	Satisfactory	Some strengths but also some moderate weaknesses
Low	3	Fair	Some strengths but with at least one major weakness
	2	Marginal	A few strengths and a few major weaknesses
	1	Poor	Very few strengths and numerous major weaknesses
Minor weakness: An easily addressable weakness that does not substantially lessen impact. **Moderate weakness:** A weakness that lessens impact. **Major weakness:** A weakness that severely limits impact.			

A score of 9 indicates an exceptionally strong application with essentially no weaknesses. A score of 1 indicates an application with serious and substantive weaknesses with very few strengths; 5 is considered an average score.

Impact, regards the research project and career development plan likelihood to have a sustained, powerful influence or strong impact on the research field(s) involved:

- High impact = 7 to 9;
- Medium impact = 4 to 6;
- Low impact = 1 to 3.

5. EVALUATION COMMITTEE AND LEVELS

The evaluation process of eligible applications comprises two levels. At each level different subcommittees carry out differentiated readings towards a final evaluation and selection.

1st Evaluation level

The two items under review at the first evaluation level (CV synopsis and the synopsis which combines the research project and career development plan) will be subjected to scientific evaluation by four panels responsible for the preliminary reviewing of all applications. This distribution is in accordance with the four major scientific domains under the aegis of the Scientific Councils of FCT.

Each application is reviewed by a first reader and a second reader. This step entails analysing, commenting, and evaluating the **CV synopses and the Research Project and Career Development synopses** by the **reviewers**. Only up to 30% of the applications are selected on to the following level, ensuring that the total number of pre-selected candidates does not exceed 2-3 times the number of available positions.

A first-level Review Report is produced for each application, consisting of an overall rating of the synopses and a substantiated recommendation for the proposal to either pass or fail this level.

Applicants are subsequently informed whether or not they have passed to the second level and will have access to the above mentioned Review Report.

2nd Evaluation level

First Stage: International Peer Review

The **full applications** (i.e. the extended versions of the CV, research project and career development plan) selected to the second level of review will be evaluated by two external mail referees. **External mail referees** will produce an evaluation report for each application, to be forwarded to the final Evaluation Panel.

Individual external mail reviewing includes:

- Applying the evaluation criteria and rating each component;
- Providing a succinct but substantial explanatory comment for each component. 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 referee's own judgment of the merit of the overall application without resorting to any sort of quantitative algorithms;

- Providing a global 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;

Both marks and comments are critically important:

- The individual review marks and comments are the starting point for the panel discussions and for the panel final rating.

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.

Two reports per application are produced and forwarded to the **Evaluation Panel members**.

Second Stage: Evaluation Panel - Preliminary Assessment

The final Evaluation Panel will be composed by 10 members: a Chair and 3 members for each scientific domain, namely, Life Sciences, Physical Sciences and Engineering, and Social Sciences and the Humanities. All members will have access to all projects which have passed to the second level of evaluation as well as to the respective external mail reviewer reports. Each reader will analyse both full applications and reports from external mail referees.

The Chair of the Evaluation Panel will lay down the procedures to be followed and the tasks of the respective members. Unless otherwise indicated by the Chair:

- the Evaluation Panel divides half of the total positions among the three domains such that the sub-committee for each domain will (1) select the top candidates for the number of positions ascribed and (2) prepare a reserve list for the final round of discussions. The Panel will then meet in a plenary session to select the best candidates from the reserve list pool, irrespective of the applicants' domain.

- each Evaluation Panel member will be assigned an approximately equal number of applications both as first reader and as second reader.

The Evaluation Panel must ensure that each application receives a fair judgment and is discussed appropriately. Each application will receive a mark and the panel will produce a consolidated ranking list of the applications above the quality threshold.

The objective of the meeting is to determine the final selection. A short evaluation report of each application is required, to be made available to the applicants.

Meeting activities

The undertakings of the Evaluation Panel are:

- To generate a consolidated ranking list of applications and to recommend those to be funded;
- To approve an Evaluation Panel report for each application, based on the respective comment by the first reader;
- Prepare a second-level global evaluation report;

The Evaluation Panel has the possibility of interviewing all or some of the candidates and this will rest on its own decision. It is necessary to give the candidates to be interviewed a minimum 48-hour notice.

Applicants are subsequently informed whether or not they are selected for funding and will have access to the above mentioned global evaluation report.

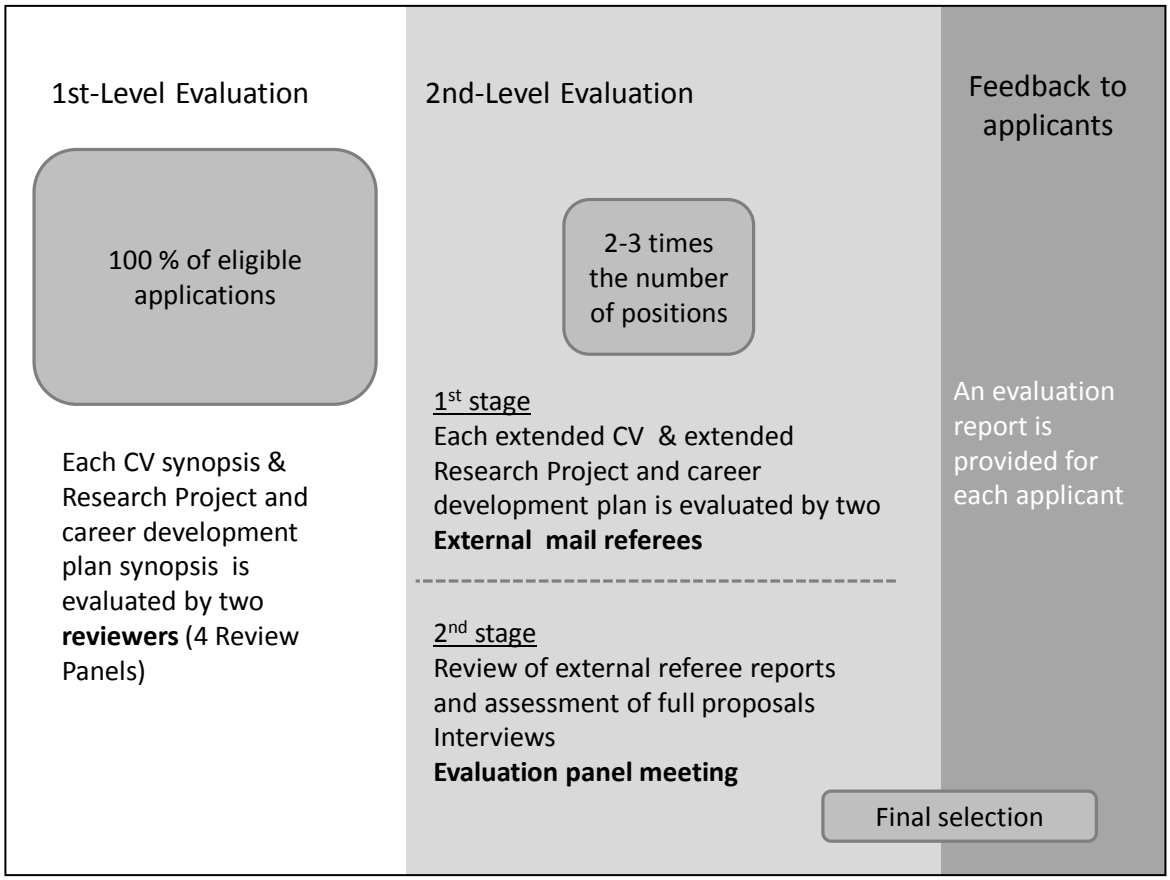

Figure 1. Evaluation committee and levels.

6. FEEDBACK

At both levels of this process, members of the evaluation committee 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 applicant, the proposed science, or the scientific field concerned.
- Avoid asking questions, as the applicant will not be able to answer them.
- Evaluate the proposed work and not the work you consider should have been proposed.

In the case of a very large number of proposals, some standardisation of the comments may be implemented.

7. CONFIDENTIALITY AND CONFLICT OF INTEREST

Confidentiality

The confidentiality of written proposals must be protected. All 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, which appears the first time each member of the evaluation committee uses his/her 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 FCT Investigator Grants 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 apllications, nor to make available, other than to FCT or to the Evaluation Panel, the results of the evaluation.

Conflict of interest (CoI)

Any CoI must be declared prior to the evaluation process. No reviewer shall make an individual review of a proposal if in CoI with it.

Circumstances that could be interpreted as a **disqualifying conflict of interest** are laid down in the following criteria:

1. First-degree relationship, marriage, life partnership, domestic partnership;
2. Personal interest in the application's success or financial interest by persons listed under no.1;
3. Current or planned close scientific cooperation;
4. Dependent employment relationship or supervisory relationship (*e.g.* teacher-student relationship up to and including the postdoctoral phase) extending five years beyond the conclusion of the relationship;
5. The affiliation or pending transfer to this or to a participating institution;
6. Researchers who are active in a council or similar supervisory board of the applying institution are excluded from participating in the review and decision-making process for applications originating from this institution;

A potential conflict of interest may exist, even in cases not covered by the clear disqualifying conflicts indicated above, in the following circumstances:

7. Relationships that do not fall under no. 1, other personal ties or conflicts;
8. Financial interests of persons listed under no. 7;
9. Participation in university bodies other than those listed under no. 6, e.g. in scientific advisory committees in the greater research environment;
10. Research cooperation within the last three years, e.g. joint publications;
11. Preparation of an application or implementation of a project with a closely related research topic (competition);
12. Participating in an on-going scientific or inter-personal conflict with the applicant(s).

In the latter case, FCT will make a decision whether the situation in question constitutes an actual CoI – or whether no CoI exists.