

Stage 1 - Proposal for a decision

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2013 Evaluation of FCT Research and Development Units**Review process - Stage 1: Final Panel consensus statement****Outcome of Stage 1**

Proceeding to Stage 2?

Yes

Grade

Selected to Stage 2

Proposal for funding

Annual Core Funding (€)

Individual criteria

Grading Scale for individual criteria:

- 5 - Excellent (All relevant aspects of the assessment criteria successfully addressed. Any shortcomings are minor)
- 4 - Very Good (Assessment criteria very well addressed/met, although certain improvements are still possible)
- 3 - Good (Assessment criteria well addressed/met, although improvements would be necessary)
- 2 - Fair (Assessment criteria broadly addressed, however there are significant weaknesses)
- 1 - Poor (Assessment criteria addressed in an inadequate manner, or there are serious inherent weaknesses)

A. Productivity and contribution to the National Scientific and Technological System (NSTS)

- i.) Research outputs; knowledge and technology transfer activities, when applicable, giving particular importance to the registration and value of patents, models or other relevant innovation indicators;
- ii.) Contribution to the accumulation of knowledge and skills of the National Science and Technology System (expected effects and results); contribution to the advanced training of researchers; contribution to the promotion and dissemination of scientific and technological research; dissemination of results and actions to promote scientific culture, as well as participation in activities designed to promote public understanding of science, technology, art and culture; relationship between available past funding and output;
- iii.) Degree of multidisciplinary and of internationalization, when relevant

Score

Substantiating Comment

LAETA is organized as an Associate Laboratory of 4 research institutions, IDMEC/UL, INEGI/UP, ADAI/UC and AEROG/UBI, which are recognized by the FCT in the fields of energy, transport technologies, aeronautics and key-enable mechanical engineering technologies (coordinator: José Carlos Fernandes Pereira). The groups are located in 3 Portuguese Regions. LAETA is an Associate Laboratory with 253 PhD holders - accounting for more than 1 300 research papers in international journals over the last five years.

The Research Lines are Energy, Transport Technologies, Aeronautics and Space, Key Enable Technologies (Advanced Manufacturing, Advanced Materials, Biomechanics, Fires, Engineering Design and Engineering Systems) and Future Emerging Technologies

During the previous period, the global funding was 52.9 M€ including: Pluriannual programme / strategic project: 10.5 M€, FCT funded projects: 10.4 M€, EU funded projects: 6.95 M€, National industry projects: 12.2 M€, International industry projects: 1.67 M€. The general indicators are as follows: 143 PhD theses have been produced, 1391 peer reviewed articles in international journals plus 136 book chapters, 54 patents.

B. Scientific and technological merit of the research team

- i.) Scientific productivity and merit of the results of the Unit's research, taking into account the relevance of both current and planned research, as well as the level of internationalization of scientific activities, including publications and citations of published works or other relevant aspects;
- ii.) Skills and composition of the research team to adequately execute the proposed program;
- iii.) Ability to successfully compete for national and international research grants and contracts, including contracts with companies.

Score

Substantiating Comment

The funding is impressive and from many different sources, including international. 46 k€ per IR per year during the previous period. In the last five years, LAETA was ranked 1st place among all associate laboratories in Portugal in terms of the level of competitive funding raised from European projects, national projects, consultancy and services compared with strategic funding obtained from the FCT. 17 Company Spin Offs have been created by LAETA researchers.
Five LAETA Researchers are Editors-in Chief of international Journals.
In a report by FCT, for the period 2007-2011, LAETA is the 7th (2nd in Engineering) national research institution with more research papers (1146) published in ISI Journals.
The publication output is good, without being exceptional: Ratio of peer reviewed paper per IR: 1.2 per year, PhD theses per IR (over 5 years): 0.62, Less than 6 % of the IR have a H index larger than 10. The publication level considered IR by IR is not exceptional and should be homogenized for next years.

C. Scientific merit and innovative nature of the strategic programme

- i.) Relevance, originality and impact of the proposed strategic programme;
- ii.) Contribution of the scientific, technological, artistic or cultural activities of the proposed programme for a smart specialization strategy of the region in which the R&D Unit is incorporated;
- iii.) Degree of multidisciplinary and of internationalization, when relevant.

Score

Substantiating Comment

LAETA is organized around 5 Thematic Research Lines - in line with its main objectives - and 10 Research Groups. The Laboratory is organized into a matrix form.
"LAETA based research contributes to finding solutions to the major challenges faced by contemporary society and which represent priorities of the first order at European, National and Regional scale. These include clean accessible and affordable energy and clean and safe transport,(including aeronautics)".
"LAETA strategy towards innovation involves 1) ensuring the adequacy and renewal of human resources, 2) promoting the creation of high-quality knowledge and competence in Portugal and the efficient transfer of knowledge created elsewhere for our own use and 3) accelerating the exploitation of knowledge and expertise."
"Three-pillar bridge model along the innovation chain, from basic research, through technological research up to product development and prototyping."
The strategic program is very wide and fits well with the spirit of our time (greener, more sustainable...) but it is difficult to identify something really innovative.

D. Feasibility of the work plan and reasonability of the requested budget

- i.) Organisation of the programme in terms of the proposed objectives and resources (budget, duration, infrastructures); organisation and work environment, with special focus on the adequacy of the research team's critical mass to perform the proposed objectives and on the management of resources directed to research activities, which includes supervision of postgraduate students and post-doctoral involvement in R&D activities;
- ii.) Adequacy of proposed budget to accomplish the proposed strategic programme;
- iii.) Institutional resources (technical, scientific, organisational and managerial) of the participating entities. The commitment of the host institution in providing the manpower and material resources to implement the proposed programme is especially valued.

Score

Substantiating Comment

The expected indicators over the next 6 years are as follows:

Publications in peer-review international journals: 2365 (up from 1391). This would correspond to a production rate per IR of 2 per year (ambitious).

PhD theses: 259 (up from 143), 52 Patents.

Global budget of 16.5 M€ distributed amongst the 4 institutions according to: IDMEC: 6.975 M€, ADAI: 1.436 M€, UBI: 521k€; INEGI: 7.568 M€

The global budget includes 8.3 M€ for human resources, 1.623 M€ for missions, 1.56 M€ for services, 1.94 M€ for equipments. The budget represents approximately 20% of the total amount of funding that is currently needed to carry out the ongoing R&D activities of LAETA (annually, it represents 25 % of the funding during the previous period).

Additional questions

1. Laboratory intensity level

Do you agree with the laboratory intensity level suggested in the application?

Yes

If you recommend a different level, please substantiate

2. Suggested basic and applied research/experimental development share

Do you agree with the suggested basic and applied research/experimental development share suggested in the application?

Yes

If you recommend a different basic/applied research share, please substantiate

Comments

Overall Comment

LAETA is organized as an Associate Laboratory of 4 research institutions, IDMEC/UL, INEGI/UP, ADAI/UC and AEROG/UBI, The group consists of 250 IR organized around 5 Thematic Research Lines: Energy, Transport Technologies, Aeronautics and Space, Key Enable Technologies and Future Emerging Technologies.

This is obviously one of the largest and one of the best research units in Portugal.

The funding (52.9 M€ during the previous period) is impressive and from many different sources, including

international. The publication output is OK: Ratio of peer reviewed paper per IR: 1.2 per year, PhD theses per IR (over a period 5 years): 0.62. The expected indicators for the next period include an increase of the peer reviewed publications from 1391 to 2365; This would correspond to a production rate per IR of 2 per year and appears ambitious.

The strategic program is very wide and fits well with the spirit of our time (greener, more sustainable) but it is difficult to identify something really innovative. The funding requested represents annually 25 % of the total funding during the previous period.

Questions and comments

To be raised by the Panel to the Research Unit if the latter proceeds to the second stage of the evaluation (on site visits by Panel)

In the strategic program, can you present a few ideas that you intend to develop and which are really innovative?

Stage 1 - Comments submission

Submission deadline: 11-07-2014 17:00:00

2013 Evaluation of FCT Research and Development Units

Comments submission

After notification of the results of the first stage of evaluation, the units that are recommended to proceed to the second stage are given an additional opportunity of responding to the comments of the evaluation panels. These comments are optional and should be limited to clarification of misunderstandings or to correcting factual errors in the reports.

This must be done within 10 working days after the communication of the results.

Do you wish to record any comments?

(If you don't want to submit comments, you may leave this form empty or unlocked)

No Yes

Comments

The comment will only be considered valid if locked within the 10 working day period.

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