

Stage 1 - Preliminary hearing submission

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2013 Evaluation of FCT Research and Development Units

Preliminary hearing submission

According to article 100.º and following the "Código do Procedimento Administrativo (CPA)", in the context of preliminary hearing and before results are considered final, you may submit any comment you consider pertinent regarding the evaluation. This must be done within 10 working days after the communication of the results.

The comments presented in the preliminary hearing should be substantiated and will be assessed as follows:

- By FCT, with regards to procedural and administrative issues or
- By evaluation panels, with regards to scientific issues.

Do you wish to record any comments during the preliminary hearing?

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

Yes

Comments

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

<p>CEFITEC cannot accept this grade because there are severe misinterpretations and lack of proper evaluation criteria. CEFITEC's achievements have been underestimated and a correct evaluation will certainly lead to reach stage 2. Yet, CEFITEC's human and technical patrimonies are far from being non-relevant and the present recommendation made final will eradicate a unit that has been a ref. on experimental physics contributing for advanced training at the national and international levels with continuous effort seeking contracts with industry (although modest) and other external funding schemes both for research and students supervision. The unit has been graded "Very Good" by international panels during the last assessments. Due to the latest re-organization CEFITEC is now much more active having a concise and well-focused set of activities. The present proposal reflects an expected major step towards excellence in science and technology. The unit has achieved high international standards besides the continuous budget shortage over the years performing a considerable effort to deliver top research publications, fruitful international links with reference universities/research units and some industry partnerships. CEFITEC does not understand how the previous assessment by 3 ESF experts (4/4/4-5/4/4-4/4/4-5/4/4) has provided such a final report (4-3-4-3). Regarding productivity CEFITEC reaches the top of the 16 units in Physics as clearly shown by the available ratings. We ask the panel to correct the errors and consider our comments in order to deliver a new grading. Errors and misinterpretations: 1-The panel insists twice in the description of main areas as in 1994 (sec. 3.1): "Photoionization and Mass Spectroscopy" no longer is in CEFITEC since 2008. We underwent a deep re-organization resulting in 2 groups with 6 proposed thematic lines. In Criteria C: "The... team is multidisciplinary and encompasses... medical diagnostics, detector technology..." These are not currently within the scope of CEFITEC, and no reference is made in the application. We ask the panel to base its comments in the actual structure and proposed thematic lines; 2-The panel refers: "...only about 50% of the researchers are integrated members" (criteria B). This is not correct. All members in sec. 3.2.1 are IM and fulfil FCT requirements for that. If the comment refers to the period before re-organization, CEFITEC had about 30 but now only 16. The productivity of the past period is, obviously, from 30 researchers. However, the scientific output indicators per researcher (e.g. publications/FTE) from those in the 'new' unit are definitely much higher than from the previous team. No impairment should result from that re-organization. Either the panel's comment is wrong or not supported by the facts, is therefore misleading; 3- "...only 8 PhD's were awarded... which corresponds to only 1 PhD for every 10 researchers or 5 integrated members". 8 PhDs for 30 researchers do not lead to "1 PhD for every 10 researchers", as stated. This error led to the Panel's Overall Comment "The numbers of young people being trained... appears very low". The panel did not consider CEFITEC close involvement in 2 doctoral programmes recently awarded. Please take into account the true ratio and the PhD programmes relevance; 4-In overall comment: "A large percentage of the researchers do not qualify for IM status." We do not understand this comment (see above). This is a critical error, leading to a very negative comment and evaluation. Revise it and refer to the application and not to misinterpretations. Questionable Panel's Criteria: "The level of external funding attracted... is not very encouraging" (Criteria B.iii). Indeed, the rate of</p>
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succeeded applications in the latest years is low, mainly due to lack of available funding, the discouraging complexity of EU calls and the heavier teaching duties of most researchers. However, as mentioned by the panel: "The unit has experienced a burst of productivity in the last two years... resulting in a good... record" (Criteria A.i). This means, we increased by much the scientific productivity without abundant funds. The ratio of deliverable/amount of funding is very high, what is a very positive indicator. Is the panel aware of what CEFITEC can deliver if more funding were available? CEFITEC goal is not to gather funds but to generate knowledge by publishing its achievements in well-known scientific journals. This goal was accomplished as recognized by the panel. Penalizing CEFITEC for the lack of funding in recent years minimizing the "burst of productivity" in the same period is unfair. High-productivity with low funding rate should be awarded not penalized. Analyzing the public ratings released by FCT, among the 16 units in Physics, CEFITEC is 1st in: Ranking Field-Weighted Citation Impact, Ranking Top Cited Publications 1,5 and 25%; 2nd: Rating Outputs per FTE, Ranking Citations per FTE and Top Cited Publications 10%; 3rd: Share of International Collaboration. The h-index ranks CEFITEC in 8th better than 4 other units better scored. Criteria A—One of the main facilities is the "Atomic & Molecular Collisions Lab. (LCAM)" founded in 2004 and it is not mentioned anywhere its R&D achievements and international role within electron transfer studies in a unique EU setup. LCAM manages to deliver a reasonable number of high-impact peer review journals with an average of half of it from the experimental setups installed at CEFITEC and with two PhDs awarded in 2008-2012. Of relevance a PRL and other publications fully emerged from the research work at CEFITEC only, and this is not considered; the new international PhD programme funded in 2013 through FCT competitive call is unique within FCT/UNL having CEFITEC as the coordinating unit. This will deliver 24 new PhD degrees fully supported through scholarships from 2014-2020. This was not properly recognized by the panel. Dissemination is far from being limited to a hospital in Portugal. In sec. 9.3.2 there is reference to a Spanish grant, which also involves a hospital in Spain. CEFITEC regrets the lack of space in the application and lack of opportunity to discuss these issues with the panel. The level of internationalization is beyond the EU and is not expected to be as frequent as the EU due to CEFITEC's budget restriction over the last years. The number and level of EU networks (mainly COST Actions) is a mirror of CEFITEC's capability to get involved in "external funding" with the main purpose of human mobility. CEFITEC believes that this item, although reasonably scored, could easily reach 5 within the unit's dimension and achievements; Criteria B—CEFITEC is well aware of the different stages and achievements of its members and all of them (16) do comply with FCT minimum requirements to be IM. The panel did not consider the extreme effort on "hidden" funding supplied through the unit's full active participation in several EU COST Actions as Portugal national representative. In sec. 3.2, "1.6 M€, of which 33% was supplied through FCT-MEC, 60% through national and EU levels, 4% from international agencies, mainly at EU level and 3% through other agencies". Other relevant issues that are not perceived in the report and pertain to the relevance of links with industrial partners in the regional/local community are with Cork Supply (2nd world cork producer), IPQ (National Metrology Institute), ISQ (Instituto Soldadura e Qualidade) and Lusospace, including advanced training at the PhD level. With no partners for vacuum technology expertise, Metrovac initiated working as a small company with unique services. CEFITEC has already endorsed a plan to launch new links with industries/enterprises, including ESA, on ionic propulsion, NPL in the frame of the Euramet project "Newkilo", PROMES of CNRS, Laser Inst. of Stuttgart Univ., Glexyz to develop products and advanced training in vacuum technology. Worth mentioning, that partnership with private industries in some of these projects is officially constrained due to intellectual property protection policies. The solar-pumped laser lab has recently established a cooperation with a Singapore-based company Mineriver Pte. Ltd., for reducing renewably magnesium from serpentines ores by both solar-pumped lasers and highly concentrated solar power. In sum, score (3) is far from being reasonable within the context of these issues; Criteria D—The panel again did not consider CEFITEC close involvement in 2 doctoral programmes and the urgent need to top up its researchers team with post-doctoral fellows to continue and reinforce strategic areas, as per in sec. 12.2. The major scientific and technological areas on surface science and vacuum technology, atomic & molecular physics, solar laser technology and thin films production, have the installed human critical mass, technical and experimental capabilities to perform successfully the proposed objectives; several milestones have been added in sec. 10.4.2 of the proposal although not explicitly stated. As far as budget is concerned, CEFITEC mainly requires proper investment for human resources only. The equipment patrimony at the unit's laboratories is sufficient to perform the activities proposed. We stress the former 3 ESF external peer review reports on the requested budget considered as "modest". We regret that the panel did not fully observe these achievements and so a total score of (3) is not adequate. Overall Comment—CEFITEC is organized in 6 thematic lines: 1) Atomic & molecular interac.; 2) Solar pumped laser; 3) Applied cold plasmas; 4) Functional molec. systems; 5) Applied surface science; 6) Vacuum tech. & metrology, where all have shown installed capabilities to develop with success the proposed 2015-2020 plan. We note that most of CEFITEC's achievements have been fully ignored and the proposed decision does not even give a proper chance to the unit to gather together in a joint effort to focus research activities and deliver scientific and technical relevant outputs. ESF reports must be carefully considered and the final score re-evaluated allowing direct access to stage 2.