**Evaluation Panel: SOCIAL SCIENCES - Management**

**Panel Members**

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<td>Philip Dover (Chair)</td>
<td>Babson College, United States of America</td>
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<td>Helena Karjalainen</td>
<td>École de Management de Normandie, France</td>
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<td>Inma Rodríguez-Ardura</td>
<td>Universitat Oberta de Catalunya, Spain</td>
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<td>Jan Vissers</td>
<td>Erasmus School of Health Policy and Management,</td>
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<td>Erasmus University Rotterdam, The Netherlands</td>
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<td>José María Pons</td>
<td>San Telmo Business School, Spain</td>
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<td>Keiichi Nakata</td>
<td>Henley Business School, University of Reading,</td>
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<td>Peter Wilson</td>
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**R&D Units**

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<td>Investigação e o Desenvolvimento (IST-ID)</td>
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<td>Centro de Estudos de Gestão e Economia (CEGE)</td>
<td>Universidade Católica Portuguesa (UCP)</td>
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<td>Centro de Estudos em Economia Aplicada do Atlântico (CEEAplA)</td>
<td>Fundação Gaspar Frutuoso, FP (FGF)</td>
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<td>Centro de Inovação e Investigação em Ciências Empresariais e</td>
<td>Instituto Politécnico do Porto (IPP)</td>
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<td>Sistemas de Informação (CIICESI)</td>
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<td>Centro de Investigação Aplicada em Gestão e Economia (CARME)</td>
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Evaluation Panel: SOCIAL SCIENCES - Management

R&D Unit: Católica Lisbon Unidade de Investigação em Gestão e Economia (CUBE)
Coordinator: David Leonard Patient
Integrated PhD Researchers: 53

Overall Quality Grade: EXCELLENT
Evaluation Criteria Ratings
(A) Quality, merit, relevance and internationalization of the
R&D activities of the Integrated Researchers in the R&D Unit Application: 5
(B) Merit of the team of Integrated Researchers: 5
(C) Appropriateness of objectives, strategy, plan of activities and organization: 4

Base Funding for (2020-2023): 901 K€
Recommended Programmatic Support
PhD Fellowships: 3
Programmatic Funding: 270 K€

Justification, Comments and Recommendations
Católica Lisbon continues its excellence as a Business and Economics R&D Unit. The increasing stream of high quality research papers is impressive. More impressive, however, is the largely interdisciplinary nature of these papers, the steady increase in international collaboration, an ability to fund research projects from a variety of academic and commercial sources, and the dynamic and evolutionary nature of the research output (e.g., growth of Knowledge Centers, market access and impact through laboratories/observatories). The quantity and quality of research publication is laudable although the Evaluation Panel were uncomfortable with the “penalty” for multiple author articles. This is clearly in conflict with the important institutional goal of stimulating collaborative, cross-functional activity. CUBE appears to have bridged the tricky gap between academic excellence and commercial and societal relevance with important initiatives like the Smart City Innovation Lab and the Patient Innovation project. Although active in a broad range of management research, it has had the wisdom to focus attention in areas of significant disruption that transcend national boundaries (Technological Entrepreneurship and Entrepreneurship, Social Entrepreneurship, etc.). Its links with global players like MIT and Carnegie Mellon ensure that it is an international research center located in Lisbon rather than a domestic Unit with some overseas outreach. This is a vital distinction as CUBE strives to recruit the best and brightest researchers from the global marketplace. A particular observation is the strong community spirit engendered within the Unit. This is especially evident in the support given to PhD fellows and junior researchers -- such as mentorship, conference and seminar funding, and rewards for top quality publications. This leads to an infectious enthusiasm and participatory pride throughout the Center. It is felt, however, that strategic clarity needs to be sought for the Unit aspirations for the PhD programs. There is a very small number of students currently studying. What exactly does CUBE want to achieve with the degree? Much prestige is engendered by collaboration with CMU and MIT but how does this translate to on-the-ground research activities at CUBE?

It is clear that CUBE is aided by its location and its excellent facilities. Future expansion plans should ensure that CUBE retains its state-of-the-art presence as the academy is impacted more and more by digital transformation. It was noted, however, that 50% of the CUBE budget results from executive education. This work is concentrated in the hands of only a few faculty members. It is advised that such endeavors be opened up to a wider spectrum of faculty. Taking all of this into account CUBE appears well set for the foreseeable future. It has sound leadership, dedicated and talented researchers, improving international brand recognition, and the ability to quickly react to the seismic shifts in management trends (social innovation, data analytics, digital economics, etc.). There is one area, however, that could have been better explained. The goals for the Unit are largely organizational -- improve the quality of the PhD programs, integrate more post-docs into the research process, fund raise from more diverse sources, etc. This is fine but not sufficient. Stronger guidelines would have been welcomed that included more performance based criteria. Examples might be that 40% of articles in 4 or 4* journals is set as a "stretch" goal, fund raising from non-FCT sources be increased to 35%, a Net Promoter Score of 80 is sought in relationships with corporate clients and so on. Although these particular scores are purely illustrative, in using metrics where possible, performance can be more accurately assessed and incentives devised. Similarly, it would be instructive to see clear, measurable objectives for each of the research groups and knowledge centers. These may well exist but were not evident in the application or presentation. Overall, a terrific
job is being done at CUBE with much confidence evident in progressive scientific and societal development in the upcoming years.
Evaluation Panel: SOCIAL SCIENCES - Management

R&D Unit: Centro de Estudos de Gestão do Instituto Superior Técnico (CEG-IST)
Coordinator: Maria do Rosário Sintra de Almeida Partidário
Integrated PhD Researchers: 35

Overall Quality Grade: VERY GOOD
Evaluation Criteria Ratings
(A) Quality, merit, relevance and internationalization of the
  R&D activities of the Integrated Researchers in the R&D Unit Application: 4
(B) Merit of the team of Integrated Researchers: 4
(C) Appropriateness of objectives, strategy, plan of activities and organization: 4

Base Funding for (2020-2023): 453 K€
Recommended Programmatic Support
PhD Fellowships: 3
Programmatic Funding: 202 K€

Justification, Comments and Recommendations
CEG-IST as a centre for management studies has a well-developed international profile for research at the interface between management science and engineering. Its stated vision is “to be a leading international research centre in the frontier between Management Science and Engineering and a first choice for partners looking for cutting-edge approaches in the interface between engineering, technology, and management science.” The stated objectives are: 1) to promote research opportunities associated with the development of knowledge, processes, tools and methods required to make decisions and to shape public policies; 2) to configure organizational structures and systems, and to design sustainable engineering systems; 3) to solve problems associated with the information-intensive technology-based economy, and 4) to contribute to the design of resilient and sustainable systems. It is organised into three research groups: Systems Engineering and Management (SEM), Engineering and Management of Organizations (EMO), and Strategic Environmental and Sustainability assessment and management (SENSU).

In line with these objectives and research themes, there are publications in high quality outlets in specialised areas such as operations research, entrepreneurship, and environmental impact assessment reflecting its engineering orientation. In terms of volume, given the number of integrated researchers, the volume of high quality publications is relatively small. There is evidence of strong international collaboration and partnerships, notably its involvement in EU projects, the MIT-Portugal PhD programme as well as the CMU-Portugal PhD programmes in Technological Change and Entrepreneurship and Engineering and Public Policy. As a Unit, it has strong collaboration with industry and has successfully acquired external funding that is expected of a Unit of its size and disciplinary orientation. During the evaluation period the Unit has acquired as much as 7 times external funding as the base FCT funding. The Unit has improved its performance in terms of both number of publications in high quality outlets and funding acquisition beyond the evaluation period (2013-2017). It has a range of PhD offerings which include innovative programmes such as Leaders for Industry and Environmental Health. These programmes have attracted students from multidisciplinary and international backgrounds – management as well as engineering – attracted by the reputation of the institution and the potential for the opportunity to work on industry-oriented research projects. Such initiatives demonstrate a well-performing Unit. There is demonstrable impact through scientific publications which could be further strengthened by measuring industry or societal impact generated by research findings.

The team of integrated researchers are collectively producing outputs in high quality outlets and are strongly involved in international collaborative research in highly topical and emerging areas. Their scientific contributions are internationally recognised by awards as well as membership of editorial boards of good quality journals and contributions to scientific societies. The track record in acquiring research funding highlights the strong interactive nature of their work. There is a subset of researchers who are very active in publishing in high quality journals which generates a strong overall publication profile for the Unit. The amount of funding acquired does not significantly correspond to the number of high quality publications which indicates that funding acquired are often of a more practical nature with more focus on delivering useful societal outcomes. This can be oriented strategically as generating a clearer impact on public and private practice. The research areas are topical and there is recognition by the Unit to better identify emerging areas at the technology-management interface (e.g., IOT and supply chain design) as it
refocuses and re-orient its research groups. It employs a typical science and engineering model of project-based research contracts for junior researchers which also drives the search for project funding.

The R&D Unit has a strong sense of identity as a management unit within an engineering faculty, which is one of its assets. There are a clear, coherent set of objectives which recognise the importance of training young researchers. The Unit sets out the following strategies: 1) promote cross-fertilization of the three fields; 2) foster cross-disciplinary research themes that can engage researchers with distinct backgrounds and interests; 3) further stimulate publications in top journals; and 4) push further with internationalisation. The Unit recognises the need to keep the research relevant and current, and plans to re-define the research groups into five groups: Technology Strategy, Entrepreneurship and Innovation; Decision Analysis, Risk Analysis, and Information Management; Systems Modelling and OR and Analytics/Optimization for Decision Support; Supply Chain and Operations Management; and Environment and Sustainability for Management Support. These reflect the Unit strategic evolution and its match with the needs of industry and society. There is also recognition of the requirement to create mechanisms for increasing funding acquisition that will benefit from a solid implementation plan as this is crucial in retaining junior as well as senior researchers. This operational plan is also important for the Unit in fostering multidisciplinary and interdisciplinary research. Further emphasis on the recognition of ethical issues will be beneficial especially in the domains where societal implications of technology management are becoming increasingly relevant.

The key strengths of the Unit include: internationally recognised expertise in decision support methods, sustainable supply chains, entrepreneurship and technological change, and sustainability assessment; visibility of international collaboration through projects involving international partners and shared PhD programmes; track record of diverse funding acquisition; and advancing opportunities for collaboration with industry. The areas for improvement include: volume of high quality publications, in particular in top-quality outlets; visibility and leverage of multidisciplinary and interdisciplinary research; evidence of impact beyond academic publications such as demonstrable contribution of research to business and society in such areas as policy development; ownership and emphasis on importance of ethical issues in research in both current and emerging areas; and development of a clear implementation plan for strategic objectives beyond quantitative targets.

The proposed budget for 2018-22 focuses on FCT funding for external missions and on PhD fellowships and postdocs for project management. Relying on other funding sources for postdoc researchers and equipment is also reasonable given the project-oriented approach of the Unit. This is consistent with the strategy for further funding that emphasises internationalisation and training of young researchers.

In summary, this R&D Unit shows evidence of becoming a national reference in multiple areas of Management Science/Engineering expertise with the potential to become an international reference through further improvements in the volume of publications in top-quality outlets as well as greater attention to business and societal impact through the development of a clear and actionable implementation plan.
Evaluation Panel: SOCIAL SCIENCES - Management

R&D Unit: Centro de Estudos de Gestão e Economia (CEGE)
Coordinator: Nuno Miguel Ornelas Martins
Integrated PhD Researchers: 28

Overall Quality Grade: VERY GOOD

Evaluation Criteria Ratings
(A) Quality, merit, relevance and internationalization of the R&D activities of the Integrated Researchers in the R&D Unit Application: 4
(B) Merit of the team of Integrated Researchers: 5
(C) Appropriateness of objectives, strategy, plan of activities and organization: 4

Base Funding for (2020-2023): 420 K€
Recommended Programmatic Support
Programmatic Funding: 270 K€

Justification, Comments and Recommendations

The Centro de Estudos de Gestão e Economia (CEGE) is part of Católica Porto Business School (CPBS). CEGE has earned its high ratings in all three criteria for evaluation because of its strong performance, highly qualified and productive personnel, and well thought out plans for the future. During the site visit, the researchers were able to elaborate on, and add to, the written submission which made it clear to the evaluation team that CEGE has planned well to build on its track record.

The researchers at CEGE have published in well regarded, rigorously refereed, and high-quality academic journals, including internationally recognized ones. Organized into three interdisciplinary research areas focused on markets and policy, service industries, and sustainability, the research output spans a wide range from the heavily theoretical to the more applied. A consultancy practice allows dissemination of research-based ideas to practitioners as well as serves as a conduit for new research ideas of relevance which leads to the next round of research. This leads to a virtuous cycle of research-publications-dissemination-new questions-research.

The integrated researchers at CEGE are highly qualified with PhDs from well-regarded universities, mostly from Europe. They publish regularly and are often working on several papers at the same time even as most of them shoulder considerable teaching responsibilities.

CEGE has developed and articulated a clear vision, a focused strategy, and a well-thought out plan of activities, and has put in place an organization with accompanying systems and processes to implement the vision, strategy, and plan. CEGE’s vision is clearly set on maintaining and building on the strong research culture that has helped CEGE to accomplish much in the last few years. Its strategy builds on the three thematic research areas that it currently uses to organize and deliver on its research plans. Its plan of activities continues with its present approach of letting the three research coordinators work closely within each research cluster to pursue research topics and projects as they see fit. This bottom up approach has much to commend it as it allows autonomy within the well-defined boundaries preset for the three research clusters while permitting cross-cluster coordination for consultancy purposes. The organization structure involves a Centre director, who is also the research head in the business school, helped by faculty coordinators of research clusters. This is adequate and appropriate for the vision, strategy, and the plans of CEGE. A commendable part of the future plans is CEGE’s decision not to pursue a doctoral program right away. The CEGE director and others maintain that CEGE would move forward only if the researchers were confident that they could attract high quality students to the PhD program.

CEGE has a number of strengths. In the first place, the organization of its research efforts under three well-defined research areas allows the faculty in almost all of the traditional discipline areas in a business school to have the opportunity to participate in multiple research projects in one or more of the research areas. Since most researchers have more than one research stream under way at any point in their careers, this expands the opportunities for them. Secondly, while the average age of the research faculty is 45, CEGE has a mix of older and younger researchers which allows well considered research projects that have both theoretical and practical or applied aspects. In other words, the working together of younger and older researchers allows better research projects to be chosen. Third, CEGE has
provided for regular research events such as monthly research seminars, workshops, and internal conferences. These events allow regular exchange of ideas, proper and timely feedback on ongoing research projects, identification of new research projects, encouragement and involvement of new researchers, and socialization between local and visiting researchers. They also allow younger research faculty to explore practitioner applications of their research with more experienced researchers as well as faculty involved in consultancy efforts at CEGE. Fourth, the faculty involved in leading the various labs at CEGE and CPBS attend the internal seminars and conferences to help researchers find opportunities for consultancy assignments and to reach out to potential sites for new research and data collection. Fifth, CEGE has consciously chosen to identify and recruit high quality post-doctoral researchers to join as members of the integrated researchers’ group and work on the various research projects led by the faculty. These young, well-trained researchers are likely to bring both fresh perspectives and enthusiasm to the research projects leading to faster completion of projects. The onboarding of these young researchers may also lead to more publications since they have an incentive to be more productive researchers as a large number of publications on their resumes will help them find tenure track faculty positions in leading universities. Sixth, in contrast to many research universities, CEGE and CPBS have consciously chosen not to penalize co-authorship of research publications such as papers and books. In other words, the incentives and rewards system at these institutions give equal credit to co-authored and single-authored research publications. This has the positive effect of promoting a more cooperative rather than a competitive research environment that permits higher research productivity. Moreover, this approach promotes more inter-disciplinary research projects as researchers from multiple research fields come together easily to explore relatively risky and complex research projects. Seventh, CEGE defines consultancy broadly including both business applications of research results and public policy impact from research output. This allows CEGE to develop a reputation for policy work thus attracting researcher interested in such research to the institution.

There are a few areas of potential improvements as well. One, the lack of a PhD program deprives CEGE (and CPBS) from having a larger impact on society in terms of contributing to augmenting human capital in Oporto as well as in Portugal. The Evaluation Panel suggests that CEGE consider creation of a small but high-quality PhD program to support their research efforts and increase societal impact. Two, the service sector focused research effort seems to be more technology than human resources driven. Since the service sector plays an increasingly important role in many economies and human resources play a critical role within that sector, it may be worthwhile for CEGE to increase the participation of human resources researchers in service sector oriented research efforts. Such a move may also open up more opportunities for CEGE researchers to get involved in training and employment deliberations of public policy makers.

CEGE has been provided programmatic funding of 270,000 Euros for hiring PhD researchers based on CEGE’s request for funds to hire 3 such researchers.
Evaluation Panel: SOCIAL SCIENCES - Management

R&D Unit: Centro de Estudos em Economia Aplicada do Atlântico (CEEAplA)
Coordinator: Mário José Amaral Fortuna
Integrated PhD Researchers: 23

Overall Quality Grade: GOOD
Evaluation Criteria Ratings
(A) Quality, merit, relevance and internationalization of the
R&D activities of the Integrated Researchers in the R&D Unit Application: 3
(B) Merit of the team of Integrated Researchers: 3
(C) Appropriateness of objectives, strategy, plan of activities and organization: 3

Base Funding for (2020-2023): 260 K€
Recommended Programmatic Support
Programmatic Funding: 202 K€

Justification, Comments and Recommendations
Given the financial challenges experienced in recent years, the output from the research funding acquired demonstrates a good performance level. The R&D Unit is capitalising on the uniqueness of its geographical setting and the research opportunity it offers, in a very intensive interaction with the educational programmes. In particular, its strength in tourism management and regional studies is noteworthy.

Based on the ratings quality of publications produced, given the size of the Unit, the performance of the team of integrated researchers at CEEApIA can be considered impressive. However, their impact on international and national research communities is less clear. This might be due, in part, to its geographical location but given the quality of research carried out at the Unit it is required that the researchers become more strongly networked in the international research community to maximise their research impact.

The objectives, strategy, action plan and measures are clearly laid out – however, these will benefit further from having a sharper sense of focus in the mission and vision. That would bring more coherence to the objectives and measures, and make better use of the Unit strengths. This absence of crisp vision is also reflected in the budget model in which relatively little emphasis is given to external missions and equipment, which are instrumental in strategic planning for initiatives needed to build an international research profile.

The Center of Applied Economic Studies of the Atlantic (CEEAplA) is, with help from FCT, recovering from a financial crisis at the university of the Azores. The staff of the R&D Unit have learned to cope with conditions of limited resources, with a very high teaching workload and by using the Masters courses and the parttime PhD programme as levers for research output. Given these restrictions, the Unit has produced an impressive amount of output that is gradually increasing.

The Unit has recently started the development of a new strategic plan aimed at redefining mission, objectives, strategy and actions. This process will make clear the current profile of activities in education and research, what the trending research topics are and how resulting objectives can be realised.

Any evaluation of the R&D activities of the Unit starts from acknowledging these conditions and the emerging strategic positioning of the Unit. Though this is a positive observation, there is also a danger of trying to optimize actions within the current frame, while a wider reframing might lead to new and more exciting opportunities.

The threats of the current situation are that the quality of research and the volume of research output is less than possible, unless:
− there is a PhD program in tourism management, which represents the most outstanding and authentic area of research excellence;
− there is better methodological guidance and support for PhD students;
− there is a better profiling of the centre’s outstanding areas of expertise, as well as the way of organising research teams and knowledge transfer;
- an ambition for internalisation of R&D activities, by seeking collaboration with universities with similar research excellence and philosophy.

The Evaluation Panel recommends to start the strategic reorientation anew and include the following suggestions:

- **Mission and vision**: what does CEEApIA want to be? -- a research center that inspires by undertaking interesting research on one or more topics, in close collaboration with its educational activities, or a simply a by-product of an educational centre?

- **Issues**: be a top research center in one or two outstanding areas with international ties of collaboration to leading research centres, or a research center in tourist management plus a lot of other research interests? It is better to focus on one outstanding area and elaborate that very well than pursue activity in multiple areas?

- **Process**: involve in the chosen strategic direction all stakeholders (tourism and related companies, university, government) and as well as all expertise (staff, including PhD students, but also experts from overseas university partners).

- **Internal structure**: the new strategy should be finalised with a structural presentation of the new profile of the research centre that involves chosing the best “brand” name, and by labeling the groups by names that appeal to stakeholders, for instance, tourism and marketing, tourism and economics, tourism and management, etc.

The Evaluation Panel believes CEEApIA is at an important point of inflection where radical strategic and operational change is essential for survival. It is thought that the necessary building blocks are on hand to make these changes.
Evaluation Panel: SOCIAL SCIENCES - Management

R&D Unit: Centro de Inovação e Investigação em Ciências Empresariais e Sistemas de Informação (CIICESI)
Coordinator: Ricardo Jorge da Silva Santos
Integrated PhD Researchers: 21

Overall Quality Grade: GOOD
Evaluation Criteria Ratings
(A) Quality, merit, relevance and internationalization of the R&D activities of the Integrated Researchers in the R&D Unit Application: 3
(B) Merit of the team of Integrated Researchers: 3
(C) Appropriateness of objectives, strategy, plan of activities and organization: 5

Base Funding for (2020-2023): 229 K€
Recommended Programmatic Support
PhD Fellowships: 2
Programmatic Funding: 270 K€

Justification, Comments and Recommendations
CIICESI, as a centre for research and innovation in business sciences and information systems, has developed a profile for multidisciplinary research for regional development in the Tamega and Sousa regions. Its stated mission is the “promotion of Research, Development, Innovation and Knowledge Transfer, at the service of Public and Private Institutions incorporating decision intelligence into management.” Its expertise spans the areas of business and information systems with emphasis on Artificial Intelligence, Data Analysis and Decision Making. Although the overall quality of research output during the evaluation period of 2013-17 does not demonstrate a focus on highly rated publication outlets, the Unit is exhibiting its excellence and track record by engaging in activities that stimulate the regeneration of the region through the dissemination of knowledge and provision of guidance on advanced production processes and cognate technologies to businesses operating in the local economy. This is consistent with their stated strategic objectives:

1) boost the innovation ecosystem of the Tâmega and Sousa Region in support of the industrial revolution - Industry 4.0;
2) position CIICESI as the reference interface for technology and knowledge transfer projects in the fields of Industry 4.0 and IoT;
3) strengthen formal mechanisms of technology transfer with an emphasis on advanced production systems;
4) contribute to the competitiveness of the region’s industry and, in parallel, to its socio-economic development.

The focus on applied research that creates value for the region is a key characteristic of this Unit. Its ambition to transform the traditional regional industries of shoe, textile and wool production into high technology areas through the application of emerging management and engineering concepts is laudable and can potentially contribute significant national and international impact. Given the relative size of the Unit as measured by the number of integrated researchers, the track record in funding acquisition shows some success with local funding, consistent with its objectives. In 2013-2017 the Unit raised €873k of funding for its projects. This was about 15 times the base FCT funding of €60k. This demonstrates the Unit effectiveness in funding acquisition. The Unit will benefit from revealing its research impact in other than academic outputs. They should build on concrete examples of contributions and knowledge transfer to local business. This is undoubtedly a strength of this Unit.

The research team is strongly engaged in topical issues for businesses in the digital economy which is reflected in the projects and initiatives. It has a relatively small number of highly motivated and effective integrated researchers. To facilitate its outreach activities to businesses in the region, it takes a strong cross-functional approach to research activity and dissemination. The team of researchers contains pockets of excellent publication performance, but there is little evidence of international recognition for scientific contributions such as awards and significant roles in the scientific communities through membership of editorial boards of high-quality journals. However, the Unit has other excellent qualities that include a strong shared vision and commitment to becoming the catalyst for businesses in the region while developing a strong international scientific profile in relevant technology areas such as artificial intelligence and data analytics. There is a strong cohesion and competence in the team that bodes well for the future. This is aided by an inclusive and participatory approach to setting strategic objectives and focus research areas for the Unit, involving both senior and junior researchers.

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The R&D Unit is broadly achieving its designated objective of primarily serving the region and its businesses. This could be more clearly articulated in its mission statement. With its additional strategic aims of integrating itself into a larger international network, the dissemination of high-quality research and presentations at international conferences become essential. Given these expanded goals, it is not clear that senior management is providing sufficiently strong leadership. While the current participatory approach may work in creating a motivated and coherent Unit, it is important to consider if a clearer strategic focus should be articulated to improve the overall research performance. Given the practical orientation of the research activities, it is also recommended that a clear ethical approval procedure be put in place to ensure appropriate ethical considerations in future research.

The strengths of the Unit include: a clear focus on contribution to regional development; a phased plan for raising awareness and building technical capacity in local businesses to create the framework for technology-oriented business transformation through conducting high-quality, high impact research; close contract with local business and regional authorities; and a highly motivated and collaborative team with a wide range of expertise. The areas of improvement include: improving the overall quality of research outputs; and increasing the visibility of the impact and contributions of the R&D Unit. It is recommended that:

a) the roadmap for research of the Unit be more clearly articulated, taking into consideration the focus and necessary outcomes at each stage in the journey;

b) a clear definition of impacts other than research publication be developed against which research activities can be measured and aligned – this should include quantifiable metrics such as the number of businesses engaged in business forums and gains for firms in terms of both financial and intangible (e.g., customer satisfaction) benefits;

c) a stronger international profile as a leader in regional business transformation be developed through strengthening international and national partnerships with regions with both similar and complementary expertise;

d) a detailed publications plan with specific targets defined to maximise the quality and quantity of outputs required to fulfil opportunities at various stages of the roadmap.

This will enable a more focused resourcing plan to achieve an efficient use of resources.

The proposed budget for 2018-22 focuses on funding for human resources and on equipment. This is consistent with the strategy of strengthening its stakeholder engagement by building up its capacity. In this respect, more emphasis on contracts for technical or secretarial staff would be appropriate. Moreover, to increase its international collaboration and visibility, allocation of more resources to supporting external missions would better support its objectives.

Overall, CIICESI has very strong potential to become a leading specialist research centre with its focus on regional technological transformation through close collaboration with local business. It already possesses a sound research foundation and track record. Developing measures for high impact research and further building an international profile can be facilitated through effective planning and allocation of resources.
Evaluation Panel: SOCIAL SCIENCES - Management

R&D Unit: Centro de Investigação Aplicada em Gestão e Economia (CARME)
Coordinator: Ana Lúcia Marto Sarge
Integrated PhD Researchers: 16

Overall Quality Grade: GOOD
Evaluation Criteria Ratings
(A) Quality, merit, relevance and internationalization of the R&D activities of the Integrated Researchers in the R&D Unit Application: 3
(B) Merit of the team of Integrated Researchers: 4
(C) Appropriateness of objectives, strategy, plan of activities and organization: 4

Base Funding for (2020-2023): 198 K€
Recommended Programmatic Support
PhD Fellowships: 1
Programmatic Funding: 202 K€

Justification, Comments and Recommendations
This is a new institution (first time evaluation), with a great deal of potential for development, focused as it is on applied, market-based research. The Centre was set up in early 2018 and the team of researchers provided very clear and positive answers on how the creation of the Centre had been beneficial. The advent of the Centre had facilitated joint work as there was increased awareness of each integrated researchers study interests. Consequently, research productivity had experienced faster growth. The Centre was able to identify a number of research areas for collaborative focus leading to improved overall research quality (see Strengths and Weaknesses below). However, the quality of research will now need to be evaluated with higher research publication standards.

The team of integrated researchers at the Unit strongly support the strategic plan which they see as a key step in their long term goal of transitioning into a full university. They are developing a point of differentiation around their expertise in applied research and real world problem solving capabilities.

This team were found to be very knowledgeable about the economic and business realities of the region ... informed about key industry problems, maintaining close contacts with local and regional business and civic leaders, and establishing a good reputation as “business and research partners” to these constituents.

They would welcome the seal of quality and prestige that would come with FCT accreditation and funding. This will also enable them to attract researchers who could quickly transition to Integrated status, something that is hard to do within their present “early stage” position.

Both the leadership and the senior researchers at the Unit expressed a strong desire to develop their own PhD Program. This will be a significant way to strengthen their research output. In fact, some of the faculty already supervise PhD candidates from other universities, largely at the initiative of the students. Resultant benefits from improved publications are increasingly evident.

The quality of research carried out is sound given the organisational constraints faced. Additionally, they have undertaken a number of initiatives to make some progress along the international dimension (International Business Degree taught fully in English to an international student body, temporary visiting overseas professorships, an impressive, multinational External Advisory Board, etc.)

The team of researchers have the potential to generate revenue from their well-developed contacts through knowledge dissemination in the form of consulting and executive education. This should be particularly true on issues such as management of family owned companies and regional planning and development where the team have become recognised experts.
Strengths of the Unit:
- Highly motivated team of researchers;
- Quality of contacts with local / regional administrators and with business leaders;
- Focus on applied research, which reinforces links with key stakeholders;
- Some researchers are using inductive research methodologies and developing case studies, techniques well-suited to the mission and strategy of the Unit;
- Given the size of the Unit, its geographic location and its non-university status, it has been imaginative in internationalising the activities of the centre and improving the CVs of the researchers.

Weaknesses of the Unit:
- Being a Polytechnic the members of the R&D Unit have higher teaching loads (a minimum of 12 hours per week). Currently, it is only possible to lessen that load by trading in funds from research projects they are bringing to the institution;
- The number of integrated researchers remains small, limiting opportunities for joint, multidisciplinary collaboration;
- Members of the R&D Unit must expand their creativity and ingenuity in order to further develop avenues for monetising their research output among stakeholders;
- The scope of International Management research topics should be more in tune with the nature of the problems faced by companies in their immediate environment.

The Evaluation Panel advises that, in the short run, the commencement of a PhD program should not figure so prominently in the priorities of the Unit. Instead, further improvements in research output should be achieved by increasing the number and focus of researchers.

The PhD fellowship should go to a candidate attending the University of Coimbra (CeBER) Doctoral Program.
Evaluation Panel: SOCIAL SCIENCES - Management

R&D Unit: Centro de Investigação em Contabilidade e Fiscalidade (CICF)
Coordinator: Sónia Maria da Silva Monteiro
Integrated PhD Researchers: 15

Overall Quality Grade: VERY GOOD
Evaluation Criteria Ratings
(A) Quality, merit, relevance and internationalization of the R&D activities of the Integrated Researchers in the R&D Unit Application: 4
(B) Merit of the team of Integrated Researchers: 4
(C) Appropriateness of objectives, strategy, plan of activities and organization: 3

Base Funding for (2020-2023): 225 K€
Recommended Programmatic Support
PhD Fellowships: 2
Programmatic Funding: 135 K€

Justification, Comments and Recommendations
The majority of integrated researchers in the CICF research center have published innovative research in the form of papers, books, chapters and conference proceedings that have received national and international recognition. The Center significant research contributions include:

- Financial Yearbook of the Portuguese Municipalities. This yearbook is in its 13th edition and was prepared by CICF researchers in partnership with the Order of Certified Accountants and the Court of Auditors of Portugal. The unique database of economic and financial analysis provided by this yearbook is highly useful to local governments and municipalities throughout Portugal and has been disseminated internationally.

- Tax Education and Citizenship project has received widespread attention throughout Portugal in raising citizen awareness of the role of taxes in Portugal.

- The process of public sector accounting change as the result of IPSAS adoption in the Iberian Peninsula. This project is a partnership involving three CICF members and five international researchers and has generated eight papers in international journals, four papers in national journals, eight books or book chapters, and two PhD theses and two masters’ theses.

While the Center is organized into four research areas (public accounting, accounting and social responsibility, financial and management accounting, taxation), its most significant contributions are in the areas of public accounting, corporate social responsibility, and in conducting projects that impact society in Portugal. Obtaining funding in these areas can be challenging although the Center track record of attracting funding is good. There is a sound level of international exposure including research collaboration with Brazil. Further impact can be seen in its involvement with projects that involve local/regional communities and industry. The POMPEIA Observatory facilitates open data initiatives and is strategically significant through the provision of public accounting knowledge. Overall, it presents itself as a highly active and productive R&D Unit.

The focus on applied research makes it more difficult to publish in top-quality accounting outlets although publications appearing in European Accounting Review are commendable. It should be a stretch goal to place more frequent publications in such highly ranked outlets. On the other hand, there is considerable evidence of researchers making significant impact on accounting practice.

The Center has advised 15 PhD students during the evaluation period through its partnership with the Aveiro University. Many of the PhD theses topics have been developed from research projects originating within CICF. CICF has organized international conferences that have drawn hundreds of participants from over 20 countries while generating published proceedings from each conference. CICF is very active in public accountancy and is part of IPCA. It has active partnerships with five polytechnic institutes in Portugal and Aveiro University. In particular, it has strong commitments to the region and supports local businesses through knowledge transfer via research projects and executive education programs.
The research center plan for 2018-2022 represents an aggressive continuation of the strategic directions pursued between 2013-2017. Special emphasis is placed on the acceleration of the internationalisation of activities and the further promotion of interdisciplinary applied research. The Evaluation Panel applauds the concentrated intended focus of CICF – applied, practice-based research that services communities/businesses through the resolution of real world problems. Going forward, the Center should make greater efforts to improve the quality of the journals in which it publishes. This is a R&D Unit focused on emerging topics in accounting and taxation which, so far, has produced a very limited number of papers for indexed journals. Researchers in the Center should look assiduously to find publishable research opportunities in the applied projects they conduct at the local and regional level. While there is a natural tendency to view these projects as a form of consulting with limited opportunity for scientific research, there is evidence from other R&D Units that this is not always the case. By carefully and strategically considering the data available from companies engaged in applied projects, high quality publications can result from these efforts.

While the "esprit de corps" within the Unit was excellent, there were undoubtedly operational challenges at CICF: heavy teaching loads, limited numbers of PhDs and post docs, scarcity of travel/conference funding, etc. It is hoped that future FCT and other funding will help lessen some of these problems for an ambitious research centre.
Evaluation Panel: SOCIAL SCIENCES - Management

R&D Unit: Centro de Investigação em Economia e Gestão da Universidade de Coimbra (CeBER)
Coordinator: Luis Miguel Candido Dias
Integrated PhD Researchers: 33

Overall Quality Grade: VERY GOOD
Evaluation Criteria Ratings
(A) Quality, merit, relevance and internationalization of the
   R&D activities of the Integrated Researchers in the R&D Unit Application: 4
(B) Merit of the team of Integrated Researchers: 4
(C) Appropriateness of objectives, strategy, plan of activities and organization: 4

Base Funding for (2020-2023): 495 K€
Recommended Programmatic Support
PhD Fellowships: 4
Programmatic Funding: 202 K€

Justification, Comments and Recommendations
CeBER is a new centre for business and economic research that has already built a reasonably well-developed international profile for research. Most of its members come from the Faculty of Economics where they compiled a publication track record and a network for their research. The three thematic clusters contribute to this profile through a number of scientific papers. The number of high quality scientific papers per integrated researcher is excellent, with this performance making the FCT budget request reasonable. The centre is involved in 4 PhD programmes and the Evaluation Panel questioned whether this was too many. However, there is considerable collaboration with universities abroad.

The team of researchers shows an excellent publication performance in terms of both quality and quantity of papers, with its scientific contributions internationally recognized by a number of awards. Its participatory role in the scientific community is illustrated by the many editorial positions.

The quality of the application is very sound. Objectives, strategy and plan are well developed and coherent. The research themes selected coincide closely with the goals of the three research groups, and the research output is often based on real world problems and applications.

The Center of Business and Economic Research (CeBER) at the University of Coimbra is a fairly new R&D Unit started in 2016, with its strengths lying in management, economics and operational research. The 33 integrated members originate from the Faculty of Economics and from other universities. This is the first evaluation by a FCT.

Thematic clusters of research have been defined for 2018-2022, based on a careful analysis of research performed in the past. The three clusters are: organisational innovation and development, institutions and policies for sustainable development, and health decisions and policy. These thematic clusters are meant as a focal point for the encouragement and development of interdisciplinary research.

The staff of the centre is involved in 4 PhD programs: business management, management – decision aiding science, economics, and sustainable energy systems. In the application, 36 PhD fellowships are requested for these four programs.

The strengths of the centre currently are:
- The members are experienced researchers who have built a sound research track record.
- Education and research are strongly related as scholarly papers result from Masters’ theses work and PhD dissertation work.
- The use of rigorous quantitative research methods helps differentiate the approach of the centre from other universities studying business and economics.
Some weaknesses in the current situation of the centre are:

– There is not much ‘new blood’ coming in. Most researchers have been in the faculty for a long time. At this stage of the centre’s development ‘out of the box’ thinking is required with new, younger colleagues required to give a fresh perspective on developments.

– CeBER should be viewed as a start-up, a challenge which should not be underestimated. Commencing this process with such a large group can be daunting as it is necessary to go through a strategic re-orientation on mission, vision, objectives and actions.

– The requested solution of many PhD fellowships leading to increased research productivity might be misleading. A PhD student needs first to be educated and trained, while a post-doc colleague would be productive from the outset.

Therefore, the Evaluation Panel recommends CeBER to invest more time in the strategic reorientation required for such a new centre. The following steps are suggested:

– Mission and vision: What does CeBER want to be? – a research centre that inspires by undertaking interesting research on one or more topics, in close collaboration with educational activities, or a more simple offshoot of an educational centre?

– Topics: a top research centre in one or a few focused topics with international ties of collaboration to research centres around the world, or a research centre with many different research interests? It can be argued that it is better to focus on one outstanding area and elaborate that extensively than be active in numerous areas. If more areas are chosen, the logic for selecting the combination of topics should be clear and persuasive.

– Resources: what is required for performing this research; what are the amount of PhD and post-doc fellowships required? Are there other methods of gaining research productivity (e.g., Visiting Professors/Fellows)?

– Process: involve stakeholders (companies, university, government) in the development dialogue as well as all operational expertise (staff, including PhD students, plus possibly outside experts such as collaborating faculty from other universities).

– Internal structure: the new strategy should be finalised with a detailed presentation by the research centre to its various publics. This should include quantitative key performance indicators so that future activity can be accurately assessed and rewarded.
Evaluation Panel: SOCIAL SCIENCES - Management

R&D Unit: Centro de Investigação em Organizações, Mercados e Gestão Industrial (COMEgi)
Coordinator: Luis António de Castro Valadares Tavares
Integrated PhD Researchers: 49

Overall Quality Grade: GOOD
Evaluation Criteria Ratings
(A) Quality, merit, relevance and internationalization of the
   R&D activities of the Integrated Researchers in the R&D Unit Application: 3
(B) Merit of the team of Integrated Researchers: 3
(C) Appropriateness of objectives, strategy, plan of activities and organization: 2

Base Funding for (2020-2023): 428 K€
Recommended Programmatic Support
PhD Fellowships: 2
Programmatic Funding: 68 K€

Justification, Comments and Recommendations
COMEgi is essentially a new R&D Unit being evaluated for the first time. The evaluation in 2013 related to CLEGI, a Unit
only about a third of the size of COMEgi and devoted specifically to research on Industrial Management. The Evaluation
Panel takes into account this fact and understands that the Unit is in the early stages of development (e.g., the
organisational structure is not fully developed, the Unit is still transitioning from the previous structure, it faces
uncertainties that may contribute to unclear directional priorities). However, the Evaluation Panel sees a lack of clear
research strategy at this point and considers the current research environment far from ideal for researchers. The
Evaluation Panel feels that more strategic and operational guidance is needed to allow researchers to efficiently develop
the Unit. For example, future research strategy should carefully consider the number of research areas pursued, thought
being given not to overextend the areas explored. The Unit might concentrate on specific, targeted areas where
researchers have both deep and unique expertise. This may allow COMEgi to assume a differentiated position in a
crowded R&D market.

The Evaluation Panel considers that the quality of the published research is sound, with much of the output appearing in
international academic journals. The dominant research thrust is toward applied problem solving, which is consistent
with the mission of conducting “research on management and markets.” This approach is aided by improvement in
interdisciplinary collaboration that could be further fostered by closer interaction between the four research Areas.
Research topics perceived as particularly promising include work on public policy (e.g., e-public procurement, public
sector management) as well as technology management projects in partnership with companies. These endeavours are
given a multi-regional flavour by COMEgi’s presence in three different geographical locations.

The Evaluation Panel found researchers at the Unit to be very engaged in their research productivity despite heavy
teaching and managerial responsibilities. 12 hours per week teaching was felt to be challenging for junior researchers
while the complexity of managing the new multi-site institution led to a perception of excessive bureaucracy and
uncertain leadership on such important issues as strategic direction and operational efficiency. For example, no clear
career/promotion plan was discerned for researchers with some evidence of active dis-incentives in place on such items
as conference attendance due to the heavy teaching loads of certain researchers. The Evaluation Panel recommends
that programmatic funding be specifically targeted for such situations as this will improve the international and
multidisciplinary dimensions of both research and researchers.

The research centre is making progress on internationalising its activities and it should be encouraged to intensify these
efforts. The Evaluation Panel noted international collaborations with other research institutes and universities in Europe
and further abroad; researchers are publishing in international journals (although the quality of these should be
carefully assessed and, where necessary, upgraded); the Unit is sending researchers, whenever possible, to international
conferences. This is laudable and elementary in today’s globalised world where research results need an international
audience to gain both legitimacy and credence and need to be discussed through exchanges among researchers
representing different institutions at international research meetings, workshops, and conferences.
The Evaluation Panel recommends that visiting professors / researchers be invited more frequently to COMEGI and institutional alliances sought with similar research centres in other European countries. The Unit is encouraged to develop its own seminars or workshops involving leading international scholars. A further way to develop internationally is to increasingly participate in European research contracts such as H2020 and Marie Curie. This would also bring much needed diversity in research funding.

A high level of motivation and satisfaction was found among PhD candidates. Most of them were from the new PhD in Management and Decision Sciences with all of them having a full time job besides being PhD candidates, mostly from teaching appointments in higher education institutions. The Evaluation Panel considers this PhD Program worth funding as it helps move the Unit beyond the study of Industrial Management into the wider field of Management Science. This would be particularly appropriate if the research impact could be felt in the sphere of public policy as well as commercial practice. The level of senior faculty support for the programs is high. Selective hiring of PhD program graduates represents a way to provide continued intellectual stimulus to the future activities of the Unit.

A brief summary of the strengths and weaknesses of the R&D Unit shows:

Strengths:
- Potential for high quality, internationally impactful research given the production capacities of COMEGI’s current members.
- Increasingly multidisciplinary culture in which researchers are encouraged in cross-functional collaboration.
- Improving levels of academic publications achieved in international journals.
- Highly motivated PhD candidates who find the research environment stimulating to work in.
- Multi-regional structure that can provide research synergy if properly managed.

Weaknesses:
- Overly broad definition of research fields in which the Unit wants to leverage its efforts. Serious thought should be given to identifying areas of focus where outstanding expertise can be concentrated. This could result in a significant reduction in research lines.
- Some elements in the incentive system are not helping researchers to focus their efforts on the research task. For example, clear career planning guidance with promotion paths for researchers are not evident.
- Key people, especially among the junior researchers, are overburdened by the need to perform multiple tasks (management, teaching and research), which prevents them from optimising their scholarly contribution to the R&D Unit.
- Lack of research assistants. If more research assistants/post docs were present in the Unit, this may help reduce the work overload on integrated researchers.
Evaluation Panel: SOCIAL SCIENCES - Management

R&D Unit: Investigação em Economia, Gestão e Tecnologias da Informação (REMIT)
Coordinator: Cristina Maria Paixão de Sousa
Integrated PhD Researchers: 27

Overall Quality Grade: GOOD

Evaluation Criteria Ratings
(A) Quality, merit, relevance and internationalization of the
  R&D activities of the Integrated Researchers in the R&D Unit Application: 3
(B) Merit of the team of Integrated Researchers: 4
(C) Appropriateness of objectives, strategy, plan of activities and organization: 4

Base Funding for (2020-2023): 310 K€

Recommended Programmatic Support
PhD Fellowships: 2
Programmatic Funding: 202 K€

Justification, Comments and Recommendations
It may look initially as if the ratings for REMIT are somewhat harsh. This is because the Unit is extremely young and has
yet to produce much of a research productivity and application track record. The research quality is currently modest
with 12% of articles in Q1 of the SCOPUS index. The Unit comprises 27 researchers with the majority coming from the
senior ranks of the UPT business school faculty. To date there is a limited number of Post-docs and Junior Researchers,
traditionally the area of most productive and imaginative vibrancy within a research center. Similarly, the PhD program
was only recently launched so little or no output is evident here. Moreover, the degree is classified as an "Industrial
PhD" (perhaps equivalent to an Executive DBA) focused on critical business problems and with the intent of most
graduates returning to responsible positions in commerce. REMIT will have to look to the competitive marketplace for
PhD’s to provide future intellectual capital. Despite these shortcomings REMIT appears to have made a sound start as a
fledgling R&D Unit. Research productivity -- at least in terms of volume -- has quickly ramped up, an encouraging
interdisciplinary approach is being taken to study topics, funding has been secured from quite a wide range of national
and international sources, and collaborations/partnerships have been forged with an impressive array of academic and
commercial institutions. Indeed, progress has been sufficiently rapid to warrant a strong case being made for the
appointment of a process manager to aid grant applications and project management.

REMIT have been wise in constraining their selection of research topics largely to a limited number of challenges found
in the surrounding regions that nevertheless have considerable global resonance. These include building the
entrepreneurial mindset, managing SMEs and family businesses, and appreciating how heritage, tourism and culture can
contribute to sustainable territorial development. This sharp focus should allow REMIT to become a center of excellence
on these and associated research themes and permit strong and positive differentiation from competitive R&D centers
throughout Portugal. It should be noted that working in such applied, pragmatic areas of study make it more challenging
to produce conceptually rigorous papers but this should not dilute the desire to operate effectively at this university-
industry-society interface. On the other hand, association with commercial partners offers healthy opportunities for
consulting and executive education, both avenues to positive cash flow.

In short, the future looks bright for REMIT. It is advised, however, that future plans be a little more crisply defined. At
the moment they are broad and somewhat vacuous -- strengthen the team, greater interaction and cross-fertilization,
etc. It would be most helpful if goals -- where possible -- be precise and quantitative. How can publications in Q1
journals be attained and to what extent? How can our thrust in entrepreneurship be linked with leading global
exponents of entrepreneurial theory and practice? Who would these exponents be (Babson College, MIT, the Kauffman
Foundation, etc.)? Such discipline is important. By providing goals that can be measured, performance can be more
accurately assessed and accountability allocated.
R&D Unit: Núcleo de Estudos em Ciências Empresariais (NECE)
Coordinator: João José Matos Ferreira
Integrated PhD Researchers: 32

Overall Quality Grade: VERY GOOD
Evaluation Criteria Ratings
(A) Quality, merit, relevance and internationalization of the
R&D activities of the Integrated Researchers in the R&D Unit Application: 4
(B) Merit of the team of Integrated Researchers: 4
(C) Appropriateness of objectives, strategy, plan of activities and organization: 3

Base Funding for (2020-2023): 443 K€
Recommended Programmatic Support
PhD Fellowships: 3
Programmatic Funding: 202 K€

Justification, Comments and Recommendations
NECE is a R&D Unit housed within UBI in Covilhã. It is organized into three research groups: entrepreneurship, competitiveness, and innovation; organizational management; and economics and finance. The Unit consists of 34 integrated researchers, 12 collaborators and 40 doctoral students under supervision. They have a sound organizational structure with the three research divisions receiving oversight from a scientific board and an executive board.

The R&D Unit presents a very international face to its research activities and aims to extend its research quality in the future. The R&D Unit has achieved good visibility both home and abroad. During the evaluation period, researchers published a high number of papers (200+), edited books (25), book chapters (140+), and proceedings (600+). Notable contributions include:
• Energy Economics. An ongoing project focused on the link between energy consumption and economic growth. Published research has focused on Spain and other regions.
• Interdependence between trade credit and bank lending. This line of research has had a multinational impact on how companies can receive and employ trade credit in economic downturns.
• An integrative model of consumers’ intentions to purchase travel online. This research topic has generated a number of studies and helped companies predict online travel purchasing patterns.

NECE’s mission is to instigate and drive pioneering research. This has led, for example, to publications in top ranked journals in both tourism and energy economics. In addition, NECE is engaged in a number of entrepreneurial projects that have multidisciplinary and “global” impact. These include:
• ICT Entrepreneur – implemented in 5 countries, it promotes cooperation and the exchange of best entrepreneurial practices.
• SCIENT – a European University-business alliance to educate and support young, science entrepreneurs.
• ARTISAN – working with aspiring entrepreneurs to encourage business continuity across generations.
• Entrepreneurship development for the youth in Mozambique. This is a project that evaluates the impact of an entrepreneurship curriculum program in secondary schools on the acquisition and application of entrepreneurial skills as well as its impact on student and community lives.

Note that support for this eclectic array of projects comes from an impressive range of funding sources.

NECE researchers serve as editors and reviewers on a wide number of scholarly journals. Furthermore, in spite of its somewhat remote location, NECE has been able to organize research conferences that have attracted an international audience. The Unit supports a very active PhD program through is partnership network that includes UBI, University of Madeira, polytechnic institutes and higher education groups. This has resulted in over 200 PhD students being advised, in part, by NECE integrated researchers during the evaluation period.

One of the Center strengths lies in the organized and strategic way it conducts its research. Regular meetings within each research group focus on how to successfully publish in the top scientific journals and researchers are provided incentives when published in such journals. The Center has also worked to leverage the relationships it has with the
regional and local businesses by engaging in cooperative projects and by disseminating knowledge by offering executive education programs. The Center researchers make a concerted effort when engaged in these local projects to provide not only a pragmatic problem solution but to find ways to obtain data that can be translated into conceptual frameworks that can be submitted to leading journals.

Going forward, the Center should give thought to creating knowledge centers or centers of excellence that would give NECE greater visibility in the scientific community. While they have started to build a reputation locally, nationally and, in some cases, internationally for their applied work in energy, tourism, and entrepreneurship, creating knowledge centers in these areas would give the Unit a point of identity for future academic research. While plans to improve the performance of the Unit are identified in their strategic plan, NECE would further benefit from developing a clear set of key performance indicators to accompany these activities. For example, NECE states it intention to work closely with local authorities (e.g., encouraging entrepreneurial teaching in secondary schools) while, at the same time, forging international partnerships with overseas universities and public policy institutes (e.g., on EU initiatives). Does the Center really have the resources to do both? If not, what resources would be required? It would be useful to revisit the mission and objectives to establish research and operational priorities so that scarce resources can be used more effectively and competitive positioning sharpened in the highly competitive Portuguese R&D Unit market.
Evaluation Panel: SOCIAL SCIENCES - Management

**R&D Unit:** Unidade de Investigação em Desenvolvimento Empresarial (UNIDE)  
**Coordinator:** Maria de Fátima Ramalho Fernandes Salgueiro  
**Integrated PhD Researchers:** 58

**Overall Quality Grade:** EXCELLENT  
**Evaluation Criteria Ratings**
- (A) Quality, merit, relevance and internationalization of the  
  R&D activities of the Integrated Researchers in the R&D Unit Application: 5  
- (B) Merit of the team of Integrated Researchers: 4  
- (C) Appropriateness of objectives, strategy, plan of activities and organization: 4

**Base Funding for (2020-2023):** 965 K€  
**Recommended Programmatic Support**
- PhD Fellowships: 7  
- Programmatic Funding: 270 K€

**Justification, Comments and Recommendations**
Over the assessment period, BRU-IUL’s research outputs were original, innovative and of high quality (e.g. the integrated researchers published a total of 257 articles in Q1/Q2/Q3 JCR indexed journals); and the papers produced had considerable scientific-scholarly impact (as measured, for example, by number of citations). Furthermore, the Unit research productivity evolved positively over time with multiple and diverse initiatives (competitively funded projects, world-class doctoral programmes, visiting fellowships, editorial appointments…) becoming increasingly internationalised. The five research groups belonging to the R&D Unit all contributed strongly to these achievements.

BRU-IUL defines itself as a multidisciplinary Unit with research interests in a variety of business fields. To date, knowledge clusters have been largely based on disciplines within management science (Economics, Finance, etc.) although very relevant and commendable cross-functional initiatives around such topics as sustainability and data analytics are quickly evolving. Consequently, competitive research is increasingly encouraged and conducted in international, collaborative, and interdisciplinary teams, making such a diverse approach a key driver of BRU-IUL’s future research positioning. It is intended that an intensification of interdisciplinary methods will maximise synergies, contribute to the R&D Unit market differentiation and reinforce integration and internal collaboration between knowledge clusters within the Unit.

BRU-IUL’s objectives are ambitious yet attainable. They would be even more useful if they are stated as specifically as possible. This would require, where possible, for them to be quantified, so that in the future research productivity patterns can be monitored and assessed while allowing international benchmarking to become established. However, because there is no single indicator capable of capturing the complexity and the full richness of research, a broad range of robust metrics measuring research performance should be embraced, along with supporting qualitative methodologies. The spectrum of quantitative metrics could include but not be limited to: number/percentage of papers published in JCR indexed journals (JCR impact factor and quartile ranking); number/percentage of papers published by journals positioned in JCR Q1 and in the JCR 1st decile; number/percentage of papers published in Q1/1st decile Scopus indexed journals (SJR impact factor and quartile ranking); number/percentage of papers in journals ranked 4*, 4, 3 or 2 in the ABS Academic Journal Guide; number of citations in Web of Science, Scopus and Google Scholar; faculty member’s h-index; number of editorial appointments for JCR indexed journals; number of keynote addresses at international conferences; number of international scientific awards and prizes; number of international visiting fellowships; amount of funding awarded in international competitive calls. Nevertheless, because the systematic adoption of some of these indicators might lead to an excessive reliance on objectives specified in terms of quantity of publications, to the reputation of the journals in which the papers are published, and to quality metrics of the journal articles themselves, it should always be remembered that papers should also be assessed in terms of the novelty and innovation of the research in and of itself.

BRU-IUL is involved in some best practices of knowledge transfer and collaboration with public and private business partners. An excellent example of this is the Marketing Future Cast Lab. In the future, this initiative could be replicated in other research groups with the establishment of further knowledge centres or Centres of Excellence. This will allow
the creative acceleration of the publication of applied, market-based research and the increased monetising of research outputs through such pursuits as executive education and licensed research.

For the next assessment period, the R&D Unit is very well positioned to show significant improvement in all relevant performance indicators, a higher level of international and multidisciplinary activity and even more diversity in its income sources. The Evaluation Panel congratulates BRU-IUL on a job well done and looks forward to observing its future positive progress.