

Action plan of CiiEM for 2022

Introduction

Institutional context

The Egas Moniz Interdisciplinary Research Centre (CiiEM) is the research centre of Egas Moniz - Higher Education Cooperative, located south of the Tagus river in the Almada Municipality. Egas Moniz is the founding body of a University, a Polytechnical school, and several clinics providing high-quality, affordable health care at a regional and National level and social services to the populations. CiiEM functional setup and functioning are organized around the Egas Moniz strategic plan that can be found at <https://www.egasmoniz.com.pt/pt-pt/institucional/egas-moniz/plano-estrat%c3%a9gico.aspx>.

CiiEM provides research support to all the Egas Moniz organizations in a transversal manner.

This document sets up the work plan of CiiEM and explains its alignment with Egas Moniz's strategic plan, together with specific requirements brought about by the need to operate in the wider scientific environment of the National and International Scientific System of which CiiEM is an active member.

CiiEM is evaluated periodically by the Portuguese Foundation for Science and Technology through an international high-level scientific panel that considers the centre's performance and adequacy of the structure and development plan for the next funding period.

This evaluation sets up the support provided to CiiEM by the scientific National public system that partially covers its needs. Egas Moniz provides additional support enabling fast development of CiiEM's strategic activities and ensuring the high excellence performance of Egas Moniz's research activity.

General objectives and strategic lines

CiiEM objectives are bound by the needs and strategic options of Egas Moniz that aim to “Stimulate and consolidate a research culture”.

It contemplates several priorities, such as:

- Infrastructure consolidation, through internal and external funding
- Research excellence and productivity continuous improvement
- Horizon scanning through CiiEM's observatory for increasing participation of CiiEM and its researchers in profile-raising National and International research activities
- Participation in the multiple European funding activities including ERC programmes, Marie Skłodowska Curie, European framework programmes and others

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- Participation in the multiple national funding activities including PRR programmes, Compete 2020 and preparation for participation in Portugal 20-30
- Development of a Research Support Office aiming to support competitive participation in external research calls
- Improved external funding
- Attract external funding through participation and promotion of research projects in partnership with high quality research partners
- Creation of interface projects
- Projects with companies and public organizations
- Partnerships
- Increase interaction with PERIN (Portugal in Europe Research and Innovation Network) and other networks
- Incentivising translational science with the creation of startups hosted by the Egas Moniz incubator at Madan Parque
- Production of intellectual property and patents reinforcing the Egas Moniz image as an innovation hub
- Internationalization of the Egas Moniz brand

These priorities unfold through the operation of four main strategic lines:

1. Increase of the scientific production
2. Increasingly gathering external financing for research projects
3. Promote inter and transdisciplinary research linking Egas Moniz's research with the world
4. Improve CiiEM's classification by the Portuguese Science Foundation

Note:

The indicators were placed in related groups so that they can be easily understood, under the sections where they have the greatest significance, however their relevance spans through several strategic lines

Global activity

These represent top level activities, performed by the CiiEM Board of Directors in order to evaluate the work carried out and set the stage for the unfolding of the core CiiEM activity for the following year

Activity	Time frame	Notes
Elaboration of the annual activity plan of the following year	October-December	Main activities to be performed
Annual report	January-February	Main report of the past year

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Report of the External Advisory Committee on the activities of CiiEM and its annual report	During the CiiEM Congress (June)	Evaluation and proposals for improvement from senior top level advisors
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Strategic lines

SL 1 - Increase the scientific production

The anticipated activities consist of several types of meetings aiming to foster research activity within Egas Moniz, promote teams and Interdisciplinary science creating networks with the critical mass and competencies needed to carry out up-to-date high-level research activity and boosting the scientific production.

It is considered that EM's Investigation shall have its specialized and interdisciplinary agendas, aligned with the European Agenda for Knowledge and Innovation, as well as the 2030 Agenda for Sustainable Development from the United Nations.

Scientific research promotion, including its organization, shall maintain an open science policy in its core, with manuscript publication support for indexed 1st quartile (Q1) scientific journals.

Meetings

Several and diverse meetings are held regularly or with specific scientific objectives at Egas Moniz and support the strategic lines to a variable degree. They provide a seminal follow-up and interchange of experiences among the multiple disciplines and scientific areas covered by Egas Moniz. Others address particular subjects or advances or aim to disseminate and discuss Egas Moniz's research among a wider audience.

These events have a substantial impact on the introduction of novel concepts and provide awareness of the newest advances in science, thus maintaining Egas Moniz research aligned with top research groups, networks and partners at a National or International level.

Regular Meetings

These meetings are dedicated to the regular activity of CiiEM and allow widespread dissemination of relevant activities being carried out as well as opening possibilities for new cooperations and improvements

Meeting type	Anticipated number of	Time frame*	Aim
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	meetings		
Follow up of thematic area's activity	5	The whole year	To disseminate and discuss the activity and development plan of CiiEM thematic areas
Follow up of CiiEM Investiga projects	1	December	To disseminate and follow up the advances of the Egas Investiga funded projects
CiiEM Summer Research Summit Including the First Egas Moniz Research Fair	1	September	This replaces this year the CiiEM Congress due to difficulties associated with the Pandemic including mobility, and focus mainly in seminars devoted to European research strategic areas.

Note: Due to the pandemic-related travelling constraints until the middle of the year, and the special characteristics of the Research Summit that focused mainly on European Research Policy, the visit of the External Advisory Committee was not performed, and its evaluation will be based on the CiiEM activities report and plan to be elaborated in January.

Specific meetings

Specific Meetings are events that are organized, aiming to provide information needed for interaction with partners and stakeholders maintaining up to date information and contacts for the unfolding of Egas Moniz research activity.

Type	Anticipated number of meetings	engagement type/organiser	Subject	Title	Time frame
Seminar	More than 5	organiser/Egas Moniz - CiiEM	Scientific seminars	Several titles depending on	The whole year

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			dealing with topics of importance to Egas Moniz research activity	the seminars	
Special meetings	1	Participation / EU and international partners	European research policy	EuroHealthNet's Policy and Strategy Meeting	February 2022

General Incentives

Public funding for research is of paramount importance but insufficient to maintain a regular activity of the institution, especially for developing areas that need a first boost to achieve the level of excellence needed to be successful in the National and International highly competitive environment.

Egas Moniz supports researchers and their innovative concepts in the context of the organization's policy and needs with the following programmes:

Incentive type	Time frame	Designation	Objective	Targets	Number of incentives	Main supporter
Ph. D support	Call during September-October 2022	EM PhD scholarship program	Support to carry out the PhD according to identified needs	Egas Moniz Ph. D students	3 Ph.D. scholarships	FCT
Research support	1/9/22 to 31/10/22	"Egas Moniz/CiiEM Investiga"	Small projects to get data and concepts for the development of larger external funded projects	CiiEM researchers	5-10 / year	Egas Moniz
Ph. D Junior Investigator	September-October 2022	EM PhD Junior researcher	Hiring a first stage researcher	General Scientific community	1	FCT
Research	1/9/22-	Egas	Research	Egas Moniz	Undefined	Egas Moniz

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support for early students	31/10/22	Moniz/CiiEM Star Student	initiation programme for undergraduates	students	limits	
Support for education-directed Research and Development projects	1/9/22 to 31/10/22	“Egas Moniz/CiiEM Educom”	Small projects for education improvement aiming to develop concepts to apply for external funding	Egas Moniz teachers and researchers	5-10 / year	Egas Moniz
Support for the development of Startups	December 5 to December 31, 2022	StartUP Egas Moniz	Funding for setting up Startups using research results of Egas Moniz /CiiEM members	Egas Moniz/CiiEM members	Undefined	Egas Moniz
Support to open access publication	The whole year		Support for Open Access publication of Egas Moniz papers	Egas Moniz/CiiEM members	All Open access papers in Q1 and others of special interest	Egas Moniz
Promotion of open access publication by PhD candidates	The whole year		Support for Open access publication of manuscripts in 1 st quartile scientific journals, by attributing a 30% discount on the annual fee	PhD Students	All that apply	Egas Moniz

CiiEM members can be PhD holding Egas Moniz faculty or from other partner institutions that want to associate to the CiiEM research centre.

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CiiEM Membership

Actions	Action detail	Time frame
Attract new membership	Invitation of members of the Egas Moniz teaching community to integrate CiiEM, in particular new hired members and Integration of PhD-holding members from the larger scientific community that meet the required criteria.	Whole year

Indicators

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These are used to monitor the performance of CiiEM and its evolution. The existing and new indicators were associated with the strategic lines where they have a significant impact, but many are relevant to more than one strategic line. Indicators	target value (to be achieved in 2022)	significance	Notes
Indexed publication number	Over 150	Reflects the overall publication activity of CiiEM, related to the research effort	The number of indexed publications has increased significantly over the years.
Nº of citations of indexed publications in the last 6 years	Over 7000	Reflects the impact of the research publications in the scientific community	The enlarged period considered for the value is needed due to the low number of citations after publication. To be revised.
% of indexed publications in each quartile	Publications in Q1 > 40%	The value reflects the quality of the publications as measured by the ranking of the journals	Reflects the quality of the journals where CiiEM articles are published, thus their visibility to the scientific community

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Integrated members (No.)	Over 70	Reflects the overall excellence of CiiEM members	The number of integrated members has been increasing. In the last 3 years, integrated members have productivity equal to or greater than 3 publications in indexed journals with publications in quartile 1, books of international circulation or patents.
Conferences/seminars/congresses/workshops of a scientific nature (No.)	Over 10	This indicator relates to the core development of the scientific activity within CiiEM by addressing privileged areas to be publicly disclosed and discussed	Conditioned by the pandemic constraints

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No. of funded research projects in progress	Over 40	This is an indicator of the research effort that is being developed, with repercussions on funding and number of publications.	
Value of financing obtained in research projects (k€)	400 K€	The value is associated with the number of research projects as well as the funding allocated to them by funding bodies	The value can be greatly affected by single large projects.
Number of international projects applied for	Over 6	Provides an indication of the efforts made by CiiEM to compete at European and other International levels.	This is considered an indispensable factor for the development of research at CiiEM.
Number of projects in which international teams collaborate	Over 20	Evaluation of the effort to seek international partnerships.	This impacts on the quality and up to date work performed at CiiEM and increases its capabilities

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% of submitted projects that got funding% of submitted projects that got funded	Over 25%	Success rate of the submitted projects. Conditioned by the approval rate of the funding institutions more than by the quality of the projects	Considering the low approval rate of projects in National and International calls the value is considered desirable but difficult to achieve
Number of awards and distinctions	Observational indicator.	Indication of the existence of actions worthy of distinction.	It has increased in the past two years

SL 2 -Increasingly gathering of external financing for research projects

The core of the development strategy of Egas Moniz and CiiEM is to increase the funding available for research and development, not only applying to funding agencies but also to interface research with commercial and industrial activities through translational science.

Improvements in the quality and societal implementation of the projects submitted to external National and International agencies for competitive programmes will address the increase in funding for excellent projects. Startup development using the infrastructures and knowledge gathered at Egas Moniz with support of the associated incubator MADAN Parque will further address the translational objective.

The intellectual property produced in EM, as a result of its investigation, allows technology transfer, which grants its recipients the right to act as a marketer in the market, and its valorization, with a financial return for EM. These actions must be designed aiming the sale or licensing of patents, brands and companies.

EM must continue to support the creation of technology-based companies that apply the results of R&D and allow the continuation of research in a business context, reinforcing EM's image as a hub of innovation.

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Research support office

A research support office will help researchers and guide early-stage researchers to increase the impact and excellence of submitted projects improving the success rate of Egas Moniz project submissions. These will take advantage when needed of the services of dedicated companies and in-house knowledge from advanced researchers.

Action	Time frame	Description	Supporting partners
Courses for project and paper writing	The whole year	Invited teachers and in-house expertise	
Support from project associated companies	Determined by the calls' schedule	Whenever needed National and International projects can be elaborated entirely or partially by dedicated companies	Adapted to each call
Help from PERIN and National contact points of European programmes	Determined by the calls' schedule	FCT, National Contact Points and PERIN provide critical information for the setup of projects.	PERIN FCT NCPs

Horizon scanning

Horizon scanning is an essential activity for detecting financing opportunities and be able to take advantage from them. Several agencies operating at the National or European level offer comprehensive programmes that cover most of the areas. The most critical information can be found on the sites of FCT and the EU (Funding & Tenders). Public or private companies (e.g. LaCaixa), medical associations and many other organisations also contribute with funding programmes that can be important. Initiatives from the list below and others will be disseminated through CiiEM. The list is far from exhaustive.

Agencies and programmes	Short description	Notes
FCT grants in all scientific domains. Open usually annually, they represent a preferred source of financing in Portugal	Promoting and reinforcing the skills of scientific and technological institutions through the participation of their teams in Projects that are	

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	funded in all scientific fields.	
PERIN evolves from the “GPPQ-Office for the Promotion of the EU RTD Framework Programme” and expands its activities to the Research & Innovation, Erasmus+, Space ad Digital EU funding Programmes.	Follows up on the European opportunities.	
EU Grants Several typologies bound to high excellence criteria	European Research funding from the European Comission	
Egas Moniz/CiiEM internal funding programmes	Egas investiga Egas Educom Start'UP Egas Egas Star student	Cover needs for funding of several Egas Moniz groups and activities complementing other external programmes to boost Egas Moniz Scientific productivity
EEA grants are a multi-annual Financial Mechanism, through which Iceland, Liechtenstein and Norway provide financial support to member states of the European Union with the greatest deviations from the European average of GDP per capita, which includes Portugal.	Funds research projects with several typologies	

Action	Time frame	Description
Call Scoping	Weekly	Search and collection of existing research calls on the available platforms

Interaction with the Egas Moniz teaching institutions

CiiEM interacts at several levels with the teaching institutions IUEM and ESSEM. The majority of CiiEM researchers are teachers of Egas Moniz institutions, providing a link between teaching and scientific experience of its members.

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CiiEM members participate, taking advantage of their research experience and deep knowledge of specific areas in the orientation of Ph. D, thesis from Egas Moniz programmes and also Master and graduation thesis that are part of the curriculum of several study cycles.

CiiEM members also participate in the evaluation panels (Juri) of the thesis.

Translational Science

Translational science is the natural environment for science-companies interaction and is actively supported by Egas Moniz through specific funding programmes and the support of Egas Moniz incubator sediated at Madan Park.

Action	Time frame	Aim	Notes
Patents	According to the research opportunities	To secure Intellectual property over valuable Egas Moniz-based research	
Startup formation	According to agreement formalized in the Egas Moniz StartUP programme	To develop startups with the support of Egas Moniz and partners expertise and resources	
Operational startup support	According to the agreement formalized in the Egas Moniz StartUP programme	Based on courses like "StartUp research Nova", and programmes being set up with in-house knowledge and Madan Parque	
Contacts for innovation and translational Science	Undefined	Contacts of scientists with companies fostering translational science initiatives	CiiEM will disseminate information on meetings aiming to bring in contact researchers and companies that are regularly promoted by organisations like ANI

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Indicator table

Indicators	target value	significance	Notes
Master theses with the involvement of the integrated members of CiiEM (No.)	Over 50	Reflects the contribution of CiiEM members to the activity of the Egas Moniz teaching institutions	New
PhD theses completed and oriented by integrated members of CiiEM (No.)	Over 5	Reflects the successful contribution of CiiEM members to the activity of the Egas Moniz teaching institutions concerning their highest degree	New
PhD students oriented by integrated members of CiiEM (No.)	Over 35	Measures the effort of CiiEM to the highest degree of Egas Moniz teaching activity	New
Patents (No.)	Over 1	Success of the research activity with potential translational value	New goals under development
Number of approved coordination and support projects	Observational indicator	Projects that aim to improve conditions for the development of research at the institution's global level, including the FCT project associated with the unit's funding	Presently corresponds to the FCT support for the functioning of CiiEM
Value of coordination and support projects	Equal or greater to the base funding from FCT	Global amount of funding obtained for the functioning and improvement of conditions of CiiEM	Now amounts to 100K€
Overall amount of international funding captured (€)	Observational indicator	The value is highly influenced by single large projects	

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SL 3 - Promote inter and transdisciplinary research linking Egas Moniz's research with the world

Modern science uses innovative approaches covering the combination of concepts from diverse disciplines to boost innovation and tackle stalled scientific and societal issues.

Egas Moniz's competencies cover a wide range of disciplines which facilitates and creates attraction for this transdisciplinary approach. Also, as a prominent member of the community and providing healthcare and social services, this is an area that can be developed, resulting in an increased societal impact.

This approach is supported by several associations and partnerships and paves the way for translational science which is one of the main goals of Egas Moniz/CiiEM. Included in this objective is research training of pre-graduate students that will carry the Egas Moniz experience to other institutions and to society, opening avenues for future expansion of Egas Moniz influence and activity.

As an active societal stakeholder, EM can also contribute to the Sustainable Development Goals (SDGs) through know-how and best practices in order to support the implementation and integration of sustainability in its research, teaching and learning activities, Campus operations and interaction with society.

Action	Aim	Context	Notes
Partnership scanning	Health partnerships: CiiEM's observatory will notify CiiEM members of initiatives of partnerships that may be of interest to CiiEM members and of new partnerships and partnership possibilities that may be relevant to CiiEM member's activities, covering also social issues	Partnerships are a way of getting in touch and participating in important scientific and other cooperation with a regional, National and International scope.	Some active Egas Moniz partnerships: EuroHealthNet Health Cluster Portugal Cáritas Diocesana de Coimbra (SHAFE) Associação Parque de Ciência e Tecnologia Almada/ Setúbal - MADAN PARQUE STARTUP RESEARCH NOVA European Parkinson's Disease Association (EPDA)
New partnerships with foreign Universities	CiiEM will deliver information on Universities seeking partners for specific	Many CiiEM research groups have active, often long term partnerships with	

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	projects to expedite international collaboration of CiiEM groups	National and/or international Universities, that are of great value to the institution.	
Elaboration of specific cooperation protocols	Scientific development often requires the participation of complementary competencies and methods that cannot be found in a single institution. Egas Moniz/CiiEM aims to increase these cooperation initiatives for development purposes and in the context of specific projects and initiatives	These are formed in many of the projects to be submitted along the year, and in specific inter-institutional initiatives from the Egas Moniz and CiiEM's Board, spanning the whole year	

Indicator table

Indicator	target value	significance	
The indicators for this section are to be implemented in 2022			

SL 4 - Improve CiiEM's classification by the Portuguese Science Foundation

CiiEM is periodically classified by an International high-level panel assembled by FCT. The panel evaluates the performance of the centre as well as a project that represents the basis for a new 4-year cycle of funding and emits recommendations for development. These are incorporated in this plan and aim overall to improve the excellence of research carried out and the overall scientific output of the Research Unit. Indicators and evidence that demonstrate a positive evolution are therefore critical and are closely monitored by CiiEM

Action	Aim	Depends on	Notes
Improve Excellence	To improve the quality and impact of the research being carried	The quality of the proposals and journals and importance for	

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	out, reflected in the impact factor of the journals where it is published and on the citation number, and derivate indicators.	the scientific area	
Improve Productivity	Increase the scientific output of Egas Moniz, reflected in the number of high-quality papers	The number of projects, the critical mass of CiiEM researchers, and the excellence of the publications	Continuous monitorization
Improve the critical mass of high-performance CiiEM researchers	These are reflected by the number of integrated CiiEM researchers and the improvement of the criteria for achieving integration	The number and quality of integrated researchers is to be improved through integration of further Egas Moniz researchers and hiring of new ones	Continuous monitorization

Indicator table

Indicators were placed where they were thought to have a more significant impact, but their importance spans through several strategic lines

Indicator	target value	significance	
CiiEM's FCT Classification	Very good		Presently Good
Average h-index value of integrated members	12	Measures the international scientific impact of the integrated body of researchers	New Presently 10.9

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Orçamento CiiEM 2022

Correspondente ao financiamento atribuído pela FCT com base na avaliação da Unidade (Classificação de Bom)

Financiamento FCT

Rubricas	Investimento Aprovado	Tranferência Verbas	Despesa 01/01/2020	Despesa 2021	Despesa 2022 até 13/4/22	Despesa a realizar
Aq. Bens Serviços	148 770,00	-111 000,00	11 016,76	5 372,50	254,61	21 126,13
Consultores	80 000,00		17 330,98	7 287,75	0,00	55 381,27
Encargos Gerais	93 992,00		17 583,44	0,00	0,00	76 408,56
Missões	19 000,00		700,00	0,00	0,00	18 300,00
Registo Patentes	7 303,24	11 000,00	5 170,50	2 128,50	0,00	11 004,24
Recursos Humanos	93 394,76		23 312,43	23 312,43	3 862,38	42 907,52
D.Promoção Divulgação	27 500,00	100 000,00	12 803,10	60 131,39	23 861,69	30 703,82
SOMA	469 960,00	0,00	87 917,21	98 232,57	27 978,68	255 831,54

Nota:

As verbas indicadas e sua execução correspondem ao financiamento atribuído pela FCT e são cedidas e controladas por essa entidade.

O restante financiamento, necessário para cobrir as iniciativas mais dispendiosas do CiiEM, nomeadamente os programas de investigação Egas/CiiEM investiga e Egas Educom, apoio à publicação Open Access, apoio à investigação de alunos (Egas Star Student) e formação de startups (Start'UP Egas), são supridos na maior parte pela Direção da Egas Moniz, de acordo com a orçamentação das ações que vão sendo aprovadas em concursos competitivos. Numa fase de rápido crescimento do CiiEM que superou todas as expectativas essas verbas foram aprovadas caso a caso, mediante concursos apropriados e aprovação da Direcção da Egas Moniz / CiiEM.