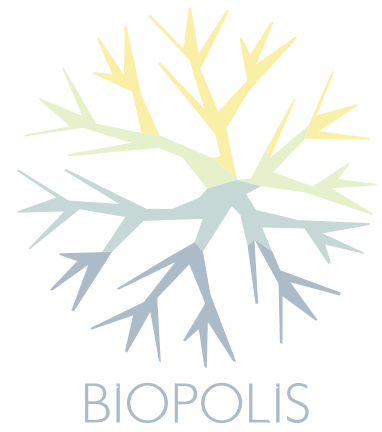


WP5

Education and Training Strategy

Deliverable 5.1



Education and Training Strategy

Deliverable 5.1

Lead beneficiary

UM

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SUMMARY

This document (D5.1) presents the Education and Training Strategy for the BIOPOLIS Association. “Education and training” is a work package of its own (WP5) in the BIOPOLIS Teaming project, it is the core of one of its strategic objectives, and participates in several of its specific objectives. The strategy aims at developing Doctoral and Post-doctoral programs, providing access to diversified and high-quality training to all personnel of BIOPOLIS, in order to serve the objectives of the Centre and of personal development, and contributing to train non-academic practitioners in the fields of expertise of the Centre. The strategy will benefit from extensive mutualisation and transfer of competence and best practices from the large academic community in Université de Montpellier and its Doctoral School, as well as input from the Porto Business School. Here we describe the measures taken to implement this strategy, focusing primarily on four pillars, with strong interconnections: (i) Management of the Doctoral program; (ii) Management of the Post-doctoral program; (iii) Organisation of scholarly events; (iii) Continuous training and development program; and (iv) Training for society. We also describe the governance and management processes involved in the implementation of the Strategy, and describe how its impacts will be evaluated and revised. The strategy is expected to increase the quality of the outputs of BIOPOLIS, its attractiveness and impact on society.

1. INTRODUCTION

The EC funded **BIOPOLIS Teaming project** supports the upgrade of the research unit of ICETA, CIBIO, to a Centre of Excellence in the areas of Environmental Biology, Ecosystem Research and Agrobiodiversity, through extensive Teaming activities with the partner University of Montpellier (UM), France, in collaboration with the Porto Business School (PBS), a business partner. One of the initial activities of the BIOPOLIS project has involved the creation of a new Non-Profit Scientific institution, the **Association BIOPOLIS**, and the transfer of all assets and liabilities of CIBIO, including human resources, equipment and scientific and technical capabilities, from ICETA to the new Association. After these initial steps, the conditions have been created to prepare the key strategic plans of the Association, and to start a number of urgent activities, which are critical to meet its Vision and Mission within the timeframe of the Teaming project.

As stated in the **Grant Agreement (GA)** of the Teaming project, the **Vision** of the Association BIOPOLIS is to become “*one of the best international Centres of Excellence in Environmental Biology, Ecosystem Research and AgroBiodiversity, with the capacity for spreading excellence towards innovation in the areas of Environment, Biodiversity and Agriculture, and thereby contributing to socioeconomic development at the regional and national levels*”. Building on by this overarching vision, the **Mission** of the association is “*to advance biological understanding from genes to ecosystems, and to use this knowledge to address pressing societal challenges in the areas of environment, biodiversity and agriculture through the development of world-leading research, the establishment of long-term strategic partnerships, the engagement of stakeholders, and the transfer and exploitation of research outputs*”. In the context of this vision and mission, the Association will pursue a number of **strategic objectives**, which are organized in three main axes: I) Excellence towards innovation; II) Empower economy and sustainability for a better society; and III) Internationalisation in research and training.

As is clear from the strategic axes described above, promoting high quality education and training is a key component of the BIOPOLIS Association activity, which will be supported by the Teaming project. Specifically, this activity contributes to five main strategic objectives detailed in the Grant Agreement:

- i. Build up human and logistic capacities for developing excellent research and innovation, train researchers and practitioners, and promote knowledge transfer and the exploitation of results, establishing a state-of-the-art collaborative research platform where the best facilities and equipment are available to researchers, spin-off and start-ups, and industrial partners.
- ii. Promote specialised jobs, economic growth and investment at the national and regional levels, engaging with business corporations and other stakeholders, increasing capacities to develop problem-solving research, transferring knowledge to end users, and creating start-up companies.
- iii. Raise the critical mass of highly skilled researchers and international visibility of the country and region in the fields of environment, biodiversity and agriculture at the national and regional levels, attracting the best talent worldwide, and contributing to reversing the problems associated with “brain drain”.
- iv. Improve international experience, networking capacities and participation in cross-border science networks, connecting researchers and research institutions through strategic partnerships with internationally leading institutions worldwide, and with research institutions from least developed countries.
- v. Train a new generation of highly-skilled researchers and practitioners, offering internationally recognised doctoral and post-doctoral programmes, as well as advanced training and continuous development programmes for professionals at different stages of their career.

Given the importance of these strategic objectives, the **work plan** of the Teaming project involves a specific work package (WP5) dedicated to “Education and Training”, the aims of which is “*to set up, implement and monitor the Education and Training Programmes of BIOPOLIS CoE, thereby contributing to train a new generation of highly-skilled researchers and providing continuous development opportunities for established researchers and practitioners*”. This WP focuses primarily on doctoral (Task 5.2) and post-doctoral (Task 5.3) training, and on advanced training and continuous development (Task 5.4). There are, however, strong connections with tasks in other WPs, namely WP2 (recruitment and management of human resources: Task 2.4 - Recruitment of research staff and Task 2.5 - Human resource management), as well as WP4 (Operationalisation of the Research Programme: Task 4.1 - Strategic research program).

To pursue its objectives, WP5 includes a specific Task (5.1) designed to “*Set-up the education and training programme of BIOPOLIS*”. This task is developed from months 6 to 48, under the leadership of the University of Montpellier, in articulation with ICETA-CIBIO and PBS. According to the work plan, the BIOPOLIS Association will formally take over all the roles and duties of ICETA-CIBIO after the amendment to the GA. One of the initial activities of this task is the development of an *Education and Training Strategy*, which will set the strategic guidelines for the doctoral and post-doctoral programmes, as well as for the advanced courses.

The current deliverable (5.1) provides the *Education and Training Strategy* envisaged in Task 5.1 of the Teaming project, following the specifications set out in the work plan. This Deliverable was due in the early stages of project’s implementation (Month 9; June 2020), but its production was delayed due to several constraints and impediments, namely due to the serious impacts of the COVID pandemic since March 2020. Besides affecting all aspects of BIOPOLIS activity, the pandemic restrictions had a particularly serious impact on education and training activities, which in the first months of the lockdown had to be cancelled or delayed, and thereafter they were progressively adapted to online teaching models. Nonetheless, and despite the delays in the production of the Deliverable, several activities related to education and training have been implemented since the beginning of the project, building on plans and activities outlined in the Teaming proposal, and benefiting from the past experience of the partners involved in the consortium.

2. CONTEXT AND OBJECTIVES

The BIOPOLIS Association represents the upgrade of CIBIO, benefiting from a range of previous efforts and activities carried out in the field of education and training. CIBIO is the major scientific partner of the Doctoral Programme in Biodiversity, Genetics and Evolution (BIODIV), which is organized by the Universities of Porto (UP) and Lisbon (UL)¹. The Programme has been very successful, with a total of 147 students enrolled at UP from the academic years of 2013/14 until 2019/20, of which 24% are international; a total of 55 students have already obtained their PhD degree. CIBIO is also the only scientific partner of the Master programme in Biodiversity, Genetics and Evolution, hosted by the Faculty of Sciences of the University of Porto, with an average of 40 students per year. In addition, CIBIO offers annually over 10 advanced courses in topics related to Biodiversity and Evolution, involving internal and external instructors, in which hundreds of students are enrolled. Finally, CIBIO has a long tradition of organising a wide range of scholarly events, including weekly seminars, journal clubs, summer schools, and the annual conference TiBE², which greatly contribute for the training of students at different levels, as well as contributing to the continuous formation of technical and research staff. Some of these events are formally included in the training programs, with students having to assist to a given number of seminars and other events to obtain the necessary credits to complete their courses.

While building upon these past achievements, BIOPOLIS will greatly enhance education and training potential, benefiting from the new organisational structure and the resources made available through the Teaming project. Moreover, the education and training strategy will benefit from the extended and diversified research and academic community associated with the University of Montpellier, one of the largest communities in the world in the scientific areas concerned by BIOPOLIS. It will also benefit from the contribution of the Porto Business School in specific areas. The spirit and objectives of the Education and Training Strategy of BIOPOLIS can be summarised as follows:

- Ensuring that the education and training of personnel is adapted to the objectives of BIOPOLIS, and implementing efficient and adaptable measures to constantly target this objective;

¹ [BIODIV - Doctoral Programme in Biodiversity, Genetics & Evolution](#)

² [TiBE - Trends in Biodiversity and Evolution](#)

- Ensuring that all personnel have access to high standard education and training, not only for the sake of the objectives of BIOPOLIS, but also to promote their personal development and future employability;
- Providing fair access to training for all personnel;
- Putting the training abilities of BIOPOLIS at the service of society and the non-academic world, as well as that of the development of Southern countries.
- Making these objectives in line with the available or foreseen budget of BIOPOLIS, taking into account other funding sources.

Considering these overarching objectives, the education and training strategy has been organised in four pillars, with strong interconnections: (i) Management of the Doctoral program; (ii) Management of the Post-doctoral program; (iii) Organisation of scholarly events; (iii) Continuous training and development program; and (iv) Training for society.

3. MANAGEMENT OF THE DOCTORAL PROGRAMME

The newly created BIOPOLIS association has taken over CIBIO in its partnerships with the successful Doctoral Programme BIODIV, involving the Universities of Porto (UP) and Lisbon (UL). A key element of the strategy to strengthen BIOPOLIS Doctoral Programmes and to promote the attraction of international students, is to foster their internationalisation through partnerships with top-level universities from the European Union and elsewhere. Such a program is ongoing with University of Montpellier (UM), which has already signed several cotutelle agreements with UP recently, leading to joint PhD degrees for students co-supervised by UM and CIBIO researchers. Furthermore, in the framework of the Teaming project, UM and UP have signed a general partnership protocol, making UP one of the strategic partners of the MUSE (Montpellier University of Excellence) project. This should facilitate BIOPOLIS' request for a generic cotutelle agreement, in order to simplify the establishment of each new agreement in the framework of the Teaming project. Therefore, although partnership with other universities and other countries are expected to be established by BIOPOLIS in the future, the partnership with UM can be immediately and significantly implemented in the framework of the Teaming project. Several of the measures described below result from incorporating best practices at play in UM.

Each year an international call will award grants to PhD students in the three thematic lines of BIOPOLIS. The research subjects selected in each call will be defined by the BIOPOLIS Direction which, together with UM, will identify and favour the possibilities of co-supervision and cotutelle. Most grants will be funded in Portugal, by FCT through its support to research units, but also from the internal budget of the BIOPOLIS Association and related funding programmes. In addition, BIOPOLIS is involved through BIODIV in a programme of grants to PhD students from Portuguese-speaking African countries (Ciência LP/CEBiCNa - Consortium of Natural Sciences and Biodiversity Schools), whereby up to 20 grants will be awarded annually³). A small proportion of grants will be funded by UM, on its own budget.

PhD scholarships will be selected following open, international calls, as is already in practice in the UP and UM doctoral schools (resp. BIOVIV and GAIA). The selection process involves a thorough evaluation of the CV, followed by an interview with all top-ranking candidates. Students will receive advanced training to complement their scientific skills and expertise, but

³ <https://biodiv.pt/en/news/consortium-of-natural-sciences-and-biodiversity-schools-cebicna/>

also other aspects contributing to personal development and better insertion in professional life, in compliance with the rules of the two doctoral schools. Students in co-tutelle will benefit from the training possibilities offered by both institutions. We will see below how BIOPOLIS and UM will contribute to enrich this offer, in the framework of the continuous training and scholarly programs of BIOPOLIS, as well as in the Post-doctoral program, by making some of its provided generic training available to interested PhDs.

During the 1st year, students will be accompanied by a team of mentors from BIOPOLIS and UM. Mentors will advise students on the development of research opportunities and the availability of supervisors. PhD students are expected to spend a minimum of 3-6 months per year in the UM partner laboratory, and they will have the opportunity to attend international conferences and workshops. Following best practice in the UM doctoral school, every student (be it or not in cotutelle with UM) will be followed during the PhD by a committee made up of at least one external scientist specialist in the field, a representative of each doctoral school concerned, and a representative of each laboratory concerned (BIOPOLIS and the UM lab). The committee will meet once a year before each new registration with the student and the supervisor(s), both jointly and separately, to evaluate the progression, the quality of the work and of the supervision, and detect potential problems. The committee will report to the laboratories and doctoral schools. These rules will apply to all PhDs in BIOPOLIS.

BIOPOLIS will use its own resources to make sure that all PhD students have access to adequate funding for the training and mobility requested to fulfil the objectives described above, depending on each one's access to institutional external sources (e.g. through FCT fellowships benefits, the doctoral schools or the grants funding their research).

4. MANAGEMENT OF THE POST-DOCTORAL PROGRAMME

Within the training component, particular attention will be given to young researchers with a PhD. This will involve the creation of a Postdoctoral Training Programme, aiming to train young researchers towards independence in the first years after their PhD, and to provide additional professional development opportunities in the context of long-term career prospects. All post-doctoral researchers in the first years after obtaining the PhD will be offered the opportunity to join the Programme.

Each Post-doctoral researcher will be supervised by two senior researchers, one in-house and another from an international research institution. All Post-docs will be involved in research projects of their supervisor, where they will take responsibilities for developing key practical tasks. Post-doc researchers will be supported to spend extended periods in international, top-level research institutions, to receive training and to participate in collaborative research projects. Training will have strong components directly related to enhancing scientific potential, but also a strong component of transferable skills that are expected to foster career development opportunities, including interpersonal, organization, leadership, and communication skills. Particular attention will be given to training on innovation, knowledge transfer, and intellectual property rights. Training may also include temporary placement in business corporations and bodies of the public administration committed to the programme. Post-docs will be given the opportunity to attend international conferences and workshops.

Post-doctoral positions will be awarded through international competitive calls. The profiles of the positions offered will be determined by the Direction of BIOPOLIS, and in the frame of the Teaming project, research in collaboration and supervision with a researcher in UM will be sought for and favoured. The majority of positions will be offered on BIOPOLIS funds and a small proportion on UM funds.

The training program for Post-docs will include a set of core trainings that will be organized on a regular basis. The exact content and number of such events will be constantly adapted to the expressed needs and feed-back from participants. The initial proposal is the following:

- i. Transferable Skills and Career Development Courses. At least one course per year will deal with transferable skills and career development. These courses are mainly targeted at PhD students finishing their thesis and post-doctoral researchers, but they will be generally open to the staff of BIOPOLIS. The aim is to enhance the prospects of career

development for early-stage researchers, by providing training on important transferable skills such as interpersonal, organization, leadership, and communication skills.

- ii. Soft skills training for researchers. These courses will focus on matters that are essential to the career development of researchers, though they generally involve skills not directly related to a scientific area of expertise. The courses can be taken by researchers at different stages of career, but they will be primarily directed to early-career researchers. There will be up to 3 courses per year, covering themes such as paper and grant writing, poster design and presentation, oral presentation skills, knowledge transfer and IP rights, project management, creative thinking, among others.
- iii. Entrepreneurial training for researchers. These courses will be organized by the PBS partner, and will focus on providing acquaintance to the mindset and skills normally mastered in the business world. The courses can be taken by researchers at different stages of career, but they will be primarily directed to early-career researchers. There will be up to 2 courses per year, covering themes such as opportunity-driven entrepreneurship, venture capital attraction, starting a business based on an innovative service or tool, knowledge-transfer and IP rights, business management, creative thinking, among others.

More specific training needs will also be taken into consideration thanks to the more adapted processes dedicated to continuous training for all BIOPOLIS personnel (see below).

5. ORGANISATION OF SCHOLARLY EVENTS

Scholarly events such as seminars, workshops, thematic symposia, discussion groups, summer schools, are an important component of training, especially for young researchers. Building up on the experience of CIBIO and on the collaboration with UM in the frame of the Teaming project, BIOPOLIS will extensively develop this type of actions. Some events will be organized on a regular basis, with shared implication of BIOPOLIS RUs in the organization, an important aspect to establish the identity of the Centre, and the implication of its personnel. The participation of UM researchers will be strongly encouraged and facilitated.

The organisation of scholarly events will expand and strengthen previous initiatives developed by CIBIO in recent years, as well as considering new models that can be useful to pursue the objectives of BIOPOLIS. Together, the following scholarly initiatives will be organised on a regular basis:

- Scientific seminars. A weekly scientific seminar will be organised on subjects of general interest within the general axes of research of BIOPOLIS. An Organization Committee will receive suggestions of speakers from BIOPOLIS personnel (through the Research Units leaders), with a short description of the motivation and potential interest for BIOPOLIS. Participation of researchers from UM will be strongly encouraged. The seminars will be given in person at BIOPOLIS facilities, while respecting sanitary rules, and simultaneously broadcasted by video-conference, so that researchers from UM and other partner institutions can attend.
- PhD Days. Once a year during this two-days event, PhD students (second and third year) will present their research through short talks and posters. A social event will follow. The talks will be broadcasted by video-conference and the posters displayed on an internet platform, so that UM researchers can participate.
- Periodic workshops. Workshops on specific themes will be organised, which will be proposed in turn by each Research Unit of BIOPOLIS (four events per year). They will concern the research interests of the organising RU, and will include participation of its members and of external invited researchers, especially from UM. Attendance will be open to all BIOPOLIS personnel and to external participants in the limit of the capacities. They will also be broadcasted in video-conference, which will allow in particular researchers in UM to attend and improve their awareness of the research conducted in BIOPOLIS. They

will include time for discussions and social events promoting exchanges between the organising RU members and other attendants.

- Summer schools. BIOPOLIS will organise annually a summer school focusing on an emerging theme of research or innovation, and with a strong potential for enhancing the capacity of the CoE. The summer schools will be organised in close collaboration with UM and its researchers. Each Summer School will last for about one week, involving theoretical and practical teaching.

BIOPOLIS will encourage and sustain the organisation of other events on an opportunistic basis, and in close liaison with UM. This flexible organisation, together with the material support of the Teaming project in the framework of the collaboration with UM, is expected to greatly enhance the capacity of such incentives to emerge. There will be no constraint on the nature of the events proposed, provided they can promote scientific exchange between BIOPOLIS and UM and the building of a common scientific culture, and that they are compatible with the budget of the Teaming project. These could be for instance thematic workshops, roundtables, symposia, brainstorming, summer schools. The general principle is that any idea of such an event can be emitted by any member or group of the BIOPOLIS or UM communities. The interest of the other community is evaluated, and if substantial, the project is presented to the Teaming project, with a description and estimated impact, budget and participation. The processes by which such possibilities can be identified will be described below. The events will take place either in France or Portugal, depending on convenience, the Teaming project covering mobility of the participants and the human resources involved.

There are numerous periodical seminars organized at different scales (team, Research Unit, LabEx) in the vast UM community, as well as some by BIOPOLIS. Since for the moment most of them are virtual, they will be accessible to everyone. The offer will be gathered on each site and advertised through the communication channels of the other site. In UM, the weekly SEEM (Seminars in Ecology and Evolution) are organized at the scale of the whole local community, thanks to funding by LabEx Cemeb⁴. Participants are chosen through two calls a year where Montpellier researchers propose potential speakers. The Teaming project will encourage them to propose speakers from BIOPOLIS.

⁴ <https://www.labex-cemeb.org/>

6. CONTINUOUS TRAINING AND DEVELOPMENT PROGRAMS

BIOPOLIS is committed to providing its personnel access to continuous training and development, contributing to the development of the Centre as well as personal development of its staff. This concerns all personnel in BIOPOLIS, whatever their status and role (PhDs, Post-docs, researchers, technical and administrative personnel). The process proposed below is inspired by the best practices in UM Research Units.

The needs for training will be constantly updated through their inventories, which will be collected yearly at different levels:

- At the level of the head of each Unit of BIOPOLIS (administrative and scientific). This allows evaluating the needs in relation to the general objectives of the CoE, and to ensure the efficiency of each Unit. At the level of each Unit, this is determined through a dialog between the direction of the Unit and the personnel concerned.
- At the level of every BIOPOLIS personnel (administrative and scientific). This allows every personnel to express directly and independently their personal needs or wishes in terms of personal development and career plan, be it in the frame of BIOPOLIS or beyond.
- Statutory training. Another category of needs for training includes those that are legally requested or recommended, for instance, what concerns hygiene, security, animal welfare. Periodical update of such needs will be operated and the personnel needing such training identified.

All expressed needs are collected yearly and priorities are established according to a series of criteria:

- Importance for the objectives and development of the CoE.
- Quantitative importance, i.e. how many personnel are concerned by a specific need.
- Importance for the wellbeing and personal development of the applicants.
- Possibility to provide the requested training (including in collaboration with UM, see below) and adequacy to the budget.

On this basis, the training plan for the next year is set up and submitted to the Direction of BIOPOLIS. The capacity to fill the needs will be enhanced by the collaboration of UM in the frame of the Teaming project. The collected needs will be compared to those expressed in each of the UM Joint Research Units (by processes already in place, similar to those described in the

previous paragraph) in order to identify common needs. To fulfil the needs, several options are possible and will be used:

- A periodical call is launched for the organization of training sessions by the BIOPOLIS personnel, or UM personnel, or both together. The call is open, but mentions the priorities defined after the inventory described above. These priorities generally concern the needs expressed by a sufficient number of personnel. Note this may account for the needs expressed by BIOPOLIS and UM personnel together when this can allow mutualization of the organization of the training. These trainings will be organized either in UM or BIOPOLIS facilities, depending on opportunities and convenience. The Teaming project will take in charge the expenses, including mobility and human resources.
- If the need cannot be fulfilled within the frame of BIOPOLIS or the Teaming project, external providers are sought for. They can be suggested by the applicants.
- For more specific trainings, that concern only one or a small number of applicants, it will be examined whether training can be provided on an individual basis, either by BIOPOLIS personnel, or by UM personnel (through dedicated internships in a UM service, laboratory or platform, or through visit of UM personnel to BIOPOLIS facilities). BIOPOLIS technical personnel may be especially concerned by this type of action. Such visits to UM will be greatly facilitated by the possibility for the Teaming project to sustain mobility and to compensate for the human resources dedicated.

Another process, partly independent but less formal than the previous one in terms of calendar, will also be implemented. Communication networks will be used to ensure mutual awareness between BIOPOLIS and UM of projects of the other party to organize specific trainings. Opportunities of co-construction of such events, potentially with instructors from both sides, will thus be identified. The Teaming project will be a strong incentive to make such events happen thanks to its capacity to fund the related expenses, including human resources ensuring organization and instruction. Possibilities to sustain mobility will also encourage cross-participation. The process described here is similar to that described above for “opportunistic” scholarly events.

7. TRAINING FOR SOCIETY

BIOPOLIS will set up a program of thematic workshops and continuing advanced training targeting practitioners from stakeholders and the general public. This action relies on the close relationship of BIOPOLIS with several public and private institutions and companies, including those that support the BIOPOLIS project application. This action also links with the Affiliates Programme, which will establish a partnership with other academic and research institutions, business corporations, organisms of the public administration at the national, regional and local levels, non-governmental organizations, and other stakeholders. The Affiliates Program is detailed in Deliverable 7.1, and includes the access of stakeholders to training initiatives organised by BIOPOLIS.

The program will include training courses in cutting edge themes where BIOPOLIS members have a specialized and transferable knowledge. Stakeholders will be previously contacted in order to identify topics of particular interest. Whenever possible, courses will be organized in association with the stakeholders. Activities for the general public will also be proposed, especially in close cooperation with the Natural History and Science Museum of the University of Porto, and the Biological Station on Mértola⁵, two institutions which are closely associated with BIOPOLIS. These activities will include the organization of BIOBLITZ, seminars, workshops, school activities, among others.

⁵ <https://www.mertolafuturelab.com/blog/portfolio/estacao-biologica-de-mertola/>

8. GOVERNANCE AND MANAGEMENT

In the scope of the Teaming project, the overall responsibility for the work package focusing on education and training is attributed to the University of Montpellier, which is also responsible for setting up the programme (Task 5.1), for creating and managing the post-doctoral training programme (Task 5.3), and for monitoring and evaluating the overall programme (Task 5.5). In turn, ICETA-CIBIO is responsible for the management of the doctoral programme (Task 5.2) and for the creation and management of the advanced Training and continuous development programme (Task 5.4). According to the work plan, the BIOPOLIS Association will formally take over all the roles and duties of ICETA-CIBIO after the amendment to the GA. PBS will also participate in planning and implementing the programme, contributing in particular to aspects related to the development of soft skills, relation with corporations, entrepreneurship, among others.

The operational responsibility for implementing the Education and Training Programme will be attributed to a large extent to the staff of the BIOPOLIS Association. The Education and Training Strategy will be under the strategic responsibility of one of the Associate Directors of the Board of Directors, who will ensure that the strategy integrates aspects pertaining to the scientific and innovation strategies of BIOPOLIS, and that the necessary human, logistic and financial resources are available. The implementation will be led by the Communication, Advancement and Engagement Unit (CA&EU), in articulation with other bodies of BIOPOLIS, including the Scientific Council and the Principal Investigators (PI) of the Research Groups. The CA&EU is coordinated by a Head of Unit, who will supervise all the activities of the Unit, including education and training. The CA&EU will have a fully dedicated Education and Training Officer (ETO), who will be the main responsible to coordinate and implement the Internalisation Strategy. The ETO will link with the Universities of Porto and Montpellier, as well as other international universities, regarding the academic component of the doctoral training programme. The Education and Training Officer of BIOPOLIS will regularly report to the head of the CA&EU and the ADs. Actions will be planned on a yearly basis, ensuring the balance between core training actions and more specific actions resulting from the collection of the needs and of the offer, as described above.

The scientific subjects for PhDs and Post-Docs to be hired will be proposed by the Principal Investigators, in coordination with their Research Unit Leaders. The AD for Research, in accord with the Science Council, and taking into account recommendations of the International Advisory Committee, will, if necessary, select the proposals according to their adequation with the strategic objectives of BIOPOLIS and its budget constraints (including the sources of funding for the various positions). The recruitment process itself will be organized by the Human Resources Officer (HRO), who is part of the Administration and Finances Unit (A&FU).

The Montpellier Communication and Account Office (MC&AO) will inventory on a yearly basis the training needs expressed in UM research units and compare them with those expressed in BIOPOLIS, collected by its ETO. They will jointly launch the informal call aiming at filling some of these needs internally. The MC&AO will implement, in cooperation with the communication services of BIOPOLIS, the communication strategy to ensure mutual awareness of the needs of the project and of the available offer in the area of training, as well as PhD and Post-Doc supervision, as described in the previous sections.

9. MONITORING, INDICATORS AND REVIEW

The implementation of the Education and Training Strategy will be regularly monitored by the Education and Training Officer, and reported to the Head of the CA&EU and to the Associate Director responsible for this component of the work. Monitoring will be based on the Key Performance Indicators and targets described in the BIOPOLIS proposal Table 2.1b, and refined in Deliverable 9.2 – Definition of CoE KPIs. From all KPIs presented in D9.2, we will use those most related to the strategic objectives listed in Section 1, and that are directly related to the components of education and training. Based on this exercise, the KPIs selected to monitor the performance of the Internationalisation Strategy and their respective targets at short, medium and long term are listed below.

Table 1: Key Performance Indicators used to monitor the Education and Training Strategy in relation to strategic and specific objectives. The targets presented are non-cumulative, and relative to the baseline achievements. The medium-long term impact of BIOPOLIS to the Innovation Index of Portugal (IIP) relative to the European Innovation Scoreboard are ranked between Fair (F), Large (L) and High (H).

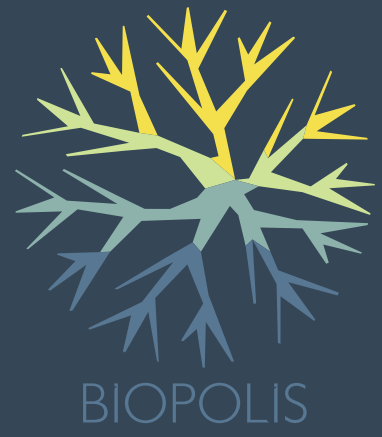
Current achievement*	Y1-2	Y3-5	Y6-10	Impact to the IIP	Specific objectives [SO]
I. EXCELLENCE TOWARDS INNOVATION					
(ii) Build up Human and logistic capacities					
<i>II.1. Annual No. of private or public academic and business using the platform facilities</i>					
5	8	12	20	H	SO:3, 5-7, 9, 11
<i>II.2. Annual No. of courses for technology and knowledge updating</i>					
1	4	4	4	H	SO:3, 5-7, 9, 11
II. EMPOWER ECONOMY AND SUSTAINABILITY FOR A BETTER SOCIETY					
(iv) Develop Solutions to Societal Challenges					
<i>II.4.2. No. of students from low- and middle-income countries enrolled in post-graduation</i>					
4	5	16	20	L	SO:3, 5, 7, 11
(v) Enhance appreciation of science, biodiversity and ecosystems by the society					
<i>II.5.3. No. of non-academic people involved in scientific outreach activities or enrolled in exchange training programmes with business and industry</i>					
8	15	20	30	H	SO:9-11
<i>II.5.4. No. of joint activities with regional and local authorities on societal issues</i>					
2	4	10	10	H	SO:9-11
<i>II.5.5. No. of outreaching events organised for the general public and number of participants</i>					
2/2000	4/6000	5/8000	6/10000	H	SO:9-11
(vi) Promote specialised jobs, economic growth and investment					
<i>II.6.2. No. of stakeholders enrolled in the CoE's Affiliates Programme</i>					
3	10	18	25	H	SO:10-12
III. INTERNATIONALIZATION IN RESEARCH AND TRAINING					
(vii) Raise Critical Mass and international visibility					
<i>III.7.3. Percentage of the staff enrolled in mobility programs</i>					
1%	2%	5%	10%	L	SO:2, 4, 5
(viii) Improve international experience and networking capacities					
<i>III.8.3. % of post-graduation students from other nationalities</i>					
10%	15%	25%	25%	H	SO:3-5, 9

Current achievement*	Y1-2	Y3-5	Y6-10	Impact to the IIP	Specific objectives [SO]
(ix) Train a new generation of Highly-Skilled Researchers					
III9.1. <i>No. of students annually enrolled in the CoE's post-graduation programmes</i>					SO:2, 4, 5
24	35	60	70	L	
III9.2. <i>No. of doctoral thesis submitted per year</i>					SO:3, 4, 5, 10,11
12	14	20	14	H	
III9.3. <i>No. of employees from national or international organizations trained at BIOPOLIS</i>					SO:3, 4, 5, 10,11
6	12	20	30	H	

The implementation strategy will be monitored by the Education and Training Officer of BIOPOLIS, in articulation with the Montpellier Communication and Account Office (MC&AO), mainly in the case of initiatives involving UM. Besides recording the KPIs, these officers will gain feedback on the initiatives from enquiries made to those involved, including students and professors. The enquiries will evaluate the levels of satisfaction and request suggestions for improvement. Progress in the implementation of the strategy will be reported through the lifetime of the project (Deliverables 5.2 to 5.5). A major review of the strategy will be made midway to project's completion (M48; Deliverable D5.6).

10.CONCLUDING REMARKS

The Education and training strategy is an essential component of the development of BIOPOLIS into a Centre of Excellence in research, development and innovation in the fields of biodiversity and Environment. Teaming with the University of Montpellier, a world leader in research, education and training in this area, federating the implantation of all major national French Research Agencies on a single site, will offer a unique opportunity to diversify the offer and transfer good practises. The strategy described here will contribute to the impact of BIOPOLIS on society, by improving the quality of its scientific output, diffusing of knowledge to society, contributing to career development of its members in and outside the academic world, and the development of activities linked to the economy, with important inputs from the Porto Business School. We have defined a strategy ensuring that the highest level of training be available, for the sake of the objectives of BIOPOLIS, and the wellbeing and development of its personnel. Notwithstanding, the Strategy and its activities will be regularly reviewed based on the feedback received and on the indicators described above, aiming at permanently enhancing its performance. Overall, it is expected that the Strategy will become a living document that can be quickly adapted to provide the best possible basis for effective Education and Training at BIOPOLIS.



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