

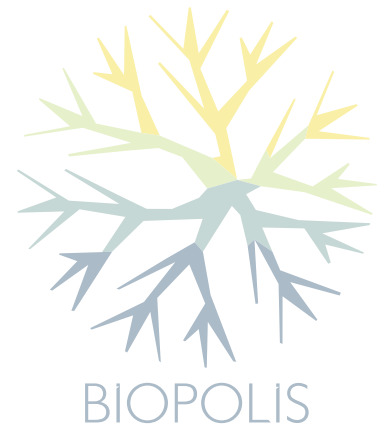


BIOPOLIS

WP6

• Communication, Dissemination and Exploitation Plan

Deliverable 6.2



- **Communication, Dissemination
and Exploitation Plan**

Deliverable 6.2

Lead beneficiary	CIBIO/InBIO
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SUMMARY

This document (Deliverable 6.2) provides the first version of the *Communication, Dissemination and Exploitation Plan* (CD&E Plan) of the BIOPOLIS Association, in accordance with the Grant Agreement (GA) of the Teaming Project No 857251. The Plan was designed to assure consistent and effective application of CD&E procedures across all participants and activities related to BIOPOLIS. The aim is to have an integrated approach that strategically targets these activities and that is fully embedded in the work plan, thereby reaching out to society and showing the benefits of BIOPOLIS R&I, and contributing to maximise their societal and economic impact. In this document, we first introduce the requirements set out for the production of the Plan (Section 1). Second, we provide the context of the Plan considering the vast range of CD&E activities previously carried out by CIBIO, and describe its general and specific objectives (Section 2). Third, we describe the main strategic axes of the Plan (Section 3), and identify its main audiences (Section 4). Fourth, we provide detailed accounts of the communication (Section 5), dissemination (Section 6) and dissemination (Section 7) actions and activities that will be carried out in the scope of the Plan. Finally, we describe the governance and management structure that will be involved in Plan's implementation (Section 8), and define the processes and indicators that will be used in monitoring and evaluation (Section 9). The CD&E Plan will be implemented through the entire lifetime of the Teaming project and beyond, and will be regularly updated and improved to enhance its efficiency and cost-effectiveness. Eventual significant changes will be summarized in Implementation Reports.

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 transference 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, that 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, communication, dissemination and exploitation are key component of the BIOPOLIS Association activity, which will be supported by the Teaming project. Specifically, these activities will contribute directly to at least four main strategic objectives detailed in the Grant Agreement:

- i. Tap into Portugal’s potential in research and innovation, creating an independent, strong and sustainable CoE that **delivers excellent scientific research and innovation with high societal impact over the long term**.

- ii. 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.
- v. Enhance the appreciation of science, biodiversity and ecosystems by society as a whole, raising awareness regarding the links between the knowledge-based management of social-ecological systems, sustainable socioeconomic development and human health and well-being.
- vi. 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.

Given the importance of these activities to deliver key strategic objectives of BIOPOLIS, the proposal of the Teaming project included a preliminary strategy for dissemination and exploitation of results (GA Section 2.2.1), as well as outlining the communication strategy (GA Section 2.2.2). Based on these strategies, the proposal also included a summary of communication, dissemination, and exploitation activities to be developed during the project, together with their corresponding performance indicators and target groups (GA Table 2.2a). To further develop and then implement these strategies, the **work plan** of the Teaming project involves a specific work package (WP6) dedicated to “Communication, Dissemination and Exploitation”, which aims “*To (i) ensure smooth internal communication within the CoE; and (ii) increase the visibility and impact of BIOPOLIS research and innovation among the scientific community, stakeholders the general public*”.

To pursue its objectives, WP6 involves a specific Task (6.2) focusing on the preparation of a *Communication, Dissemination and Exploitation (CD&E) Plan*. According to the GA, this task is developed by the BIOPOLIS Association (which will formally take over all the roles and duties of ICETA-CIBIO after the amendment to the GA), with a strong involvement of the University of Montpellier and PBS. The Task is carried out in months 3-12, 45-48 and 81-84, corresponding to the production of the CD&E Plan, and their subsequent first and second revisions, respectively.

The current deliverable (6.2) provides the *Communication, Dissemination and Exploitation Plan*. envisaged in Task 6.2 of the Teaming project, following the specifications set out in the

work plan. This Deliverable was due after the first year of project implementation (Month 12; September 2020), but its production was delayed due to several constraints and impediments, namely due to the serious impacts of the COVID since March 2020. The COVID restrictions affected all aspects of BIOPOLIS activity, with a particular damaging effect on outreach activities, most of which had to be delayed or cancelled altogether in the first lockdown period, and then were progressively transferred to online platforms and events. There was thus a need to concentrate the efforts of the team to deal with all these problems, thereby delaying considerably the preparation of the CD&E Plan. Nonetheless, and despite the delays in the production of the Deliverable, several activities related to communication, dissemination and exploitation have been implemented since the beginning of the BIOPOLIS Teaming 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 its experience and achievements in the development of a range of communication, dissemination and exploitation activities. Highlights of these activities include: (i) strong online presence, including an institutional website, project websites, and personal pages of researchers in a wide range of platforms; (ii) increasing presence in social media, such as Facebook, Twitter and LinkedIn, among others; (iii) strong use of online platforms for the open dissemination of scientific and technical contents, including research datasets, lab protocols, software, and publications; (iv) production of institutional brochures, leaflets and other promotional materials; (v) production of films for major media channels describing CIBIO's research and researchers¹; (vi) regular organisation at Campus de Vairão of conferences, seminars and workshops, at national and international level, including the annual conference TiBE – Trends in Biodiversity and Evolution²; (vii) strong experience in the publication of research results in a range of disciplinary and multi-disciplinary journals, including top-level journals such as Science, Nature and PNAS; (viii) strong interaction with the media, resulting in the regular featuring of research in national and international newspapers and online news platforms; (ix) strong channels with the public administration, municipalities, private corporations and other stakeholders, facilitating knowledge transfer; (x) partnerships with initiatives of public engagement in science, including *Ciência Viva*³ and the Gallery of Biodiversity of the Museum of Natural History and Science of the University of Porto⁴.

The CD&E Plan of BIOPOLIS will build upon, and aim at further enhancing and expanding, the past experience and achievements of CIBIO in communication, dissemination and exploitation, benefiting from the new organisational structure and the resources made available through the Teaming project. Moreover, the Plan benefits from the University of Montpellier in the strategic planning, organisation and implementation of CD&E activities, as well as from the capacity of PBS to reach out to private corporations and other stakeholders. In this context, according to the specifications of the GA, the CD&E Plan was designed to assure consistent and effective application of Communication, Dissemination & Exploitation procedures across all participants and activities related to BIOPOLIS. The aim is “*to have an integrated approach*”

¹ [As Novas Viagens Filosóficas](#)

² [Trends in Biodiversity and Evolution](#)

³ [Ciência Viva](#)

⁴ [Gallery of Biodiversity](#)

that strategically targets these activities and that is fully embedded in the work plan, thereby reaching out to society and showing the benefits of BIOPOLIS R&I, and contributing to maximise their societal and economic impact". The Plan should be designed with a range of targets in mind, including the scientific community in Europe, as well as companies, government agencies, end-users and the general public. In this way it will maximize the impact and visibility of the BIOPOLIS project, and more generally, of the CIBIO research and researchers, at regional, national and international levels.

Given these general goals, the specific objectives of the CD&E Plan stated in the GA area:

- i. to raise regional, national and international awareness, recognition and attractiveness of BIOPOLIS R&I, promoting its areas of expertise and excellence;
- ii. to disseminate BIOPOLIS's research and innovations, enabling others to effectively use/ exploit results;
- iii. to identify relevant audiences, markets and business segments to facilitate and encourage the concrete exploitation of research results and products;
- iv. to contribute to fund raising and medium/long-term financial sustainability of the CoE.

3. STRATEGY AND GOALS

A well-defined CD&E strategy is essential to achieve the main goals of BIOPOLIS and to maximize the visibility of the TEAMING project among the national and international community. We will adopt an integrated approach to planning Communication, Dissemination and Exploitation activities, given that these activities are largely complementary, interdependent, and need to be understood as “horizontal issues” that run alongside and complement research and innovation activities throughout the project’s lifetime. However, for simplicity and clarity of presentation, we will present separately the proposed strategies and goals for Communication, Dissemination and Exploitation. These strategies will be reviewed on a regular basis to verify whether they are fulfilling their objectives and to improve on any aspects that are underperforming.

All CD&E activities will strictly follow rules for Acknowledgement of EU funding. All activities will acknowledge EU funding following the wording and criteria specified in the grant agreement (Annex I). The contribution of EU funding to address societal challenges will be highlighted.

3.1. Communication strategy and goals

The **main strategic goal of the communication strategy** is to promote BIOPOLIS, its results and achievements, through the implementation of a variety of activities targeted at multiple audiences. Achieving these goals will require the implementation of a number of activities, including:

- i. Defining a corporate identity (logo/brand) to improve recognition among stakeholders and to foster a sense of identity among members of the CoE (**Action 1: Identity creation**);
- ii. Create and maintain a BIOPOLIS website to showcase strategies and achievements, act as a point of entry for research and corporate partners, among other functions (**Action 2: BIOPOLIS website**);
- iii. Use online media, including YouTube, Twitter, Instagram and other social media platforms, to communicate BIOPOLIS to the wider community through vlogs, educational videos, etc. (**Action 3: Social media**);
- iv. Issue a regular electronic newsletter with updates on BIOPOLIS activities (**Action 4: BIOPOLIS Bulletin**);

- v. Create brochures and flyers about BIOPOLIS (**Action 5: BIOPOLIS Promotional Materials**);
- vi. Support the participation of BIOPOLIS researchers in workshops and seminars targeted at non-specialised publics (**Action 6: Meetings**);
- vii. Develop exhibitions and activities for the general public, through the partnership already established with the Biodiversity Gallery of the Natural and Science Museum of the University of Porto, and the Serralves Foundation, among others (**Action 7: Exhibitions and related activities**);
- viii. Organise events specifically for stakeholders, whereby BIOPOLIS and its achievements can be communicated in a more targeted and effective way (**Action 8: BIOPOLIS Events**);
- ix. Encourage publication of non-technical papers to document research results with relevance to the wider society (**Action 9: Publication of non-technical papers**);
- x. Communicate BIOPOLIS to schools through printed materials and seminars, targeted at both teachers and school children (**Action 10: Media and public engagement**);
- xi. Promote citizen science and other forms of citizen engagement, through for instance online platforms such as eBird and iNaturalist, and linking to research projects (**Action 10: Media and public engagement**) and;
- xii. Establish long term relationships with the media and facilitate press releases about BIOPOLIS activities that can raise journalists' interest on its research and innovation outcomes (**Action 10: Media and public engagement**).

3.2. Dissemination strategy and goals

The **main strategic goal of the dissemination strategy** is to document and showcase the results of BIOPOLIS R&I, thereby ensuring that they are available and in a form that others can use, both during and after the implementation of the Teaming project. The aim is to enable and facilitate stakeholders to use the results/products thereby maximising the project's impact. Specifically, effective dissemination ensures that the knowledge and results generated are easily available for others to use, either for developing new research, for improving policies and management of natural resources and agrobiodiversity, or for commercial exploitation. Thus, dissemination activities make the results/products generated by BIOPOLIS widely available to stakeholders, leading to their exploitation. The main targets include not only the scientific community, but also stakeholders that can benefit from BIOPOLIS R&I results, such as the

corporate partners, policymakers, the organisms of the public administration at national, regional and local levels, and NGOs. Achieving these strategic goals require the development of a wide range of activities, including:

- i. Publication of open access, high impact scientific papers in international journals, thus making the results widely available to the scientific community (**Dissemination Action 1: Publication of open access scientific papers**);
- ii. Presentation of results in scientific and technical seminars, conferences and workshops, with financial support awarded for young and outstanding researchers (**Dissemination Action 2: Presentation of results in scientific meetings**);
- iii. Creation of a Knowledge Management System for efficient sharing and dissemination of knowledge, materials, methods and results among partners (see Deliverable 6.3) (**Dissemination Action 3: Develop and implement a Knowledge Management System**);
- iv. Creation of a Data Management System to deal with the enormous volumes of data generated by BIOPOLIS' researchers (see Deliverable 4.7) (**Dissemination Action 4: Develop and implement a Data Management System**);
- v. Creation and maintenance of a database of CoE stakeholders and other potential collaborators/partners compliant with the provisions of General Data Protection Regulations (GDPR) (**Dissemination Action 5: Identify and create a database of stakeholders and other potential users**);
- vi. Development of a stakeholder engagement programme, which will include the organization of public meetings, round-tables, seminars and other relevant activities (**Dissemination Action 6: Develop a stakeholder engagement programme**);
- vii. Organization of information-sharing sessions for decision makers and funders (public and private) to outline the significance and impact of R&I results (**Dissemination Action 7: Organise sessions for decision makers and funders**); and
- viii. Organization of demonstration events where the practical outcomes of the CoE's research and innovation can be showcased and tested by stakeholders (**Dissemination Action 8: Organise demonstration events**).

3.3. Exploitation strategy and goals

The **exploitation strategy** was designed considering that BIOPOLIS will produce a range of exploitable results, which besides contributing to generate new research, are expected to be

useful to address societal challenges and to develop new products, processes and services. Briefly, exploitable results are expected to emerge in each of the three main pillars devised in the research programme: (P1) development of new engineering and technological solutions, including e.g. genomic approaches, remote sensing and bio-logging, to reduce the cost and increase the effectiveness of strategies, tools and methodologies for the study of biodiversity on all levels, from genes to ecosystems, the assessment and monitoring of species and ecosystems, minimising environmental impacts, and managing biological populations for conservation and sustainable use; (P2) development of novel solutions based on comprehensive and systemic approaches to increase the delivery of ecosystem services in natural and human-dominated landscapes, including urban and rural landscapes, through the design and implementation in articulation with key stakeholders of nature-based solutions, thereby addressing societal challenges such as climate change and the reduction of wildfire risks, while contributing to align the goals of biodiversity and ecosystem service conservation with the goals of innovation for growth and job creation: and (P3) harness the potential of local agrobiodiversity to foster sustainable and resilient agriculture and forestry production systems in changing environments, developing and implementing a combination of new methodologies and technological advances in fields such as omics (e.g., genomics, metagenomics, transcriptomics, metabolomics), big data, and computer modelling and simulation, among others.

The **main strategic goal of the exploitation strategy** is to promote the utilisation of BIOPOLIS results, through its target application in further research activities not covered by the project, in developing, creating and marketing of products and processes, in creating and providing services, and in standardisation activities. Exploitation will involve targeted measures and activities, whereby obtained results will be effectively used across scientific, economic, political and societal exploitation routes, aiming to enhance its value and impact for society. Exploitation is also critical for the long-term sustainability of BIOPOLIS as it will underpin future revenue generation related for instance to Intellectual Property Rights and Licensing of BIOPOLIS Innovation, and the creation of new businesses and spin-offs. Achieving these strategic goals require the development beyond the end of the project of the dissemination activities listed in Section 3.2 (above). It will also require the development of a number of additional activities, including:

- i. Identification and characterisation of the different types of valuable and exploitable results and products, and the organizations/individuals ('users') who could benefit/use

- these results/products (**Exploitation Action 1: Identifying and characterising exploitable results, and their potential user groups**);
- ii. Identification and characterisation of the most appropriate and commercially viable exploitation routes/strategies for the expected key exploitable results/products (**Exploitation Action 2: Identifying and characterising optimal exploitation routes**);
 - iii. Definition of an internal policy (within the CoE) of intellectual property rights and protection of exploitable results through patenting (See Deliverable 6.3) (**Exploitation Action 3: Defining institutional policy for intellectual property rights and protection of exploitable results through patenting**); and
 - iv. Clear guidelines on how results will be exploited, including the potential for creating spin-off companies or partnering with extant corporations (T8.5) (**Exploitation Action 4: Exploitation through the creation of spin-offs or partnering with extant corporations**); among others.

4. AUDIENCES

4.1. Communication target audiences

Communication of BIOPOLIS will during project's implementation will target at a wide range of audiences, each of which will be engaged through tailored messages and communication tools:

- i. **Project partners and their linked third parties** (corresponding to internal communication; see deliverable D6.1 for details);
- ii. **Public and private institutions affiliated with BIOPOLIS**, including other universities and research centres, public agencies, business corporations, and non-governmental organizations;
- iii. **The global research community**, particularly in the key areas of BIOPOLIS research, such as environment, biodiversity, forestry and agrifood, among others;
- iv. **SMEs and other private corporations**, including those currently or potentially involved in Invited Chairs;
- v. **Environmental policy and decision makers** at EU, national and regional levels;
- vi. **Environmental NGOs**;
- vii. **The media**;
- viii. **End-users** of BIOPOLIS data and products;
- ix. **The general public**.

4.2. Dissemination and exploitation target audiences

To maximize potential impact, the dissemination and exploitation strategy is carefully focused on the needs of end-users, each of which will be the target of specific dissemination and exploitation goals:

- i. **The global research community**, particularly in key research areas such as environment, biodiversity, forestry and agrifood, among others, which will benefit from BIOPOLIS results for developing new knowledge/research and to produce innovation;
- ii. **Policy and decision makers** at EU, national and regional levels, which will benefit from BIOPOLIS' results for designing new policies and management regulations to improve the sustainable use of natural resources and agrobiodiversity;
- iii. **Non-governmental organizations** related to biodiversity conservation, sustainability, and socio-economic development, which will benefit from BIOPOLIS' results for designing evidence-based interventions and for developing new research/monitoring

- projects;
- iv. **Land managers**, from local to national levels, which will benefit from BIOPOLIS' results for improving sustainable land use and for ecological intensification of agricultural and forest production systems;
 - v. **Business corporations**, particularly those engaged through the Affiliates Programme and the Invited Chairs initiative, which will benefit from BIOPOLIS' results for improving their processes related to environmental sustainability and for developing new commercial products and services.

5. COMMUNICATION ACTIONS

In this Section, we described the major communication actions that have been planned, part of which had already been outlined in the Grant Agreement (GA) of BIOPOLIS. These actions instruments have been carefully chosen to increase BIOPOLIS visibility and communicate and promote its research and innovation achievements among a range of targeted stakeholders. Furthermore, these instruments will help building the reputation of BIOPOLIS as a Centre of Excellence recognised at national and international levels. Some Actions have already been implemented (e.g., project logo, the project website, press releases and publications), while others will be implemented in due course. Communication mainly targeted at the partners and linked third parties of the BIOPOLIS Teaming project have already been dealt with in separate deliverables (D6.1, D10.6), so they will not be considered here, except when needed to better explain the importance and reach of specific activities.

5.1. Communication Action 1: Visual identity and public image

Creation of a recognisable image of BIOPOLIS is important to ensure its position as a distinct player in the Portuguese and European RD&I ecosystems. The identity includes development of a strong logo to be used in all activities, together with standardized layouts for letters, publications, public presentations, and other forms of communication.

5.1.1. *Development of BIOPOLIS Logo.*

Concept: An eye-catching logo (Figure 1) for BIOPOLIS has been developed with the objective of boosting internal and external recognition. The logo simply captures the idea of the complex ecological networks that form the basis of the BIOPOLIS' research and is available in various formats (e.g., black and white, colour, negative versions). All partners will use the logo for newsletters, websites, banners, posts on social networks and so on, in order to create a common style of communication and to facilitate quick recognition of BIOPOLIS to all audiences.

Target audience: all BIOPOLIS target audience (see Section 4).



Figure 1: BIOPOLIS logos.

5.1.2. Creation of templates

Concept: Using the designed logo (Figure 1), a number of templates will be prepared for different types of documents (slides presentation, letterheads, signature layouts, footnotes, etc) and formats (docx, pdf, ppt, etc.), allowing easy recognition of BIOPOLIS. All templates will be available for use by BIOPOLIS team members through the internal communication channels (D6.1, D6.3, D10.6).

Main target audience: BIOPOLIS members and partners.

5.2. Communication Action 2: BIOPOLIS website

5.2.1. Creation and maintenance of project website

Concept: A dedicated website for BIOPOLIS has been designed and implemented (Figure 2) and is online at <https://biopolis.pt/en/>. The website plays a fundamental role in increasing visibility and as a platform for communication relating to the BIOPOLIS project. It is written in English with the aim of be a dynamic space with information on project's structure and contents, activities and achievements, research and corporate partners, regular news and articles. It is an essential tool for communicating the information generated by the project, not only to European Commission and BIOPOLIS team, but also to BIOPOLIS' diverse stakeholders, the general public and the media. Website content includes:

- A section with general information about the project, its overall objectives, general scope and vision;
- Dedicated pages describing the Research Lines and summarizing each BIOPOLIS Work Package (goals and main activities);
- A partner section detailing the three main Teaming partners, CIBIO, University of Montpellier and Porto Business School – this will be updated with relevant information during the course of the project;
- A “News & Events” section, including news about BIOPOLIS, announcements of workshops, meetings, and symposia, seminars given by team members in Portugal and abroad, invited speakers within the scope of the project, research publications, news from the team's networking activities or major achievements, open positions, among other news;
- A contacts page to allow the website visitors to directly contact members of the BIOPOLIS team;
- A Publication list, with links to publishers and/or repositories where publications are available.

Main target audience: all BIOPOLIS target audience (Section 4).

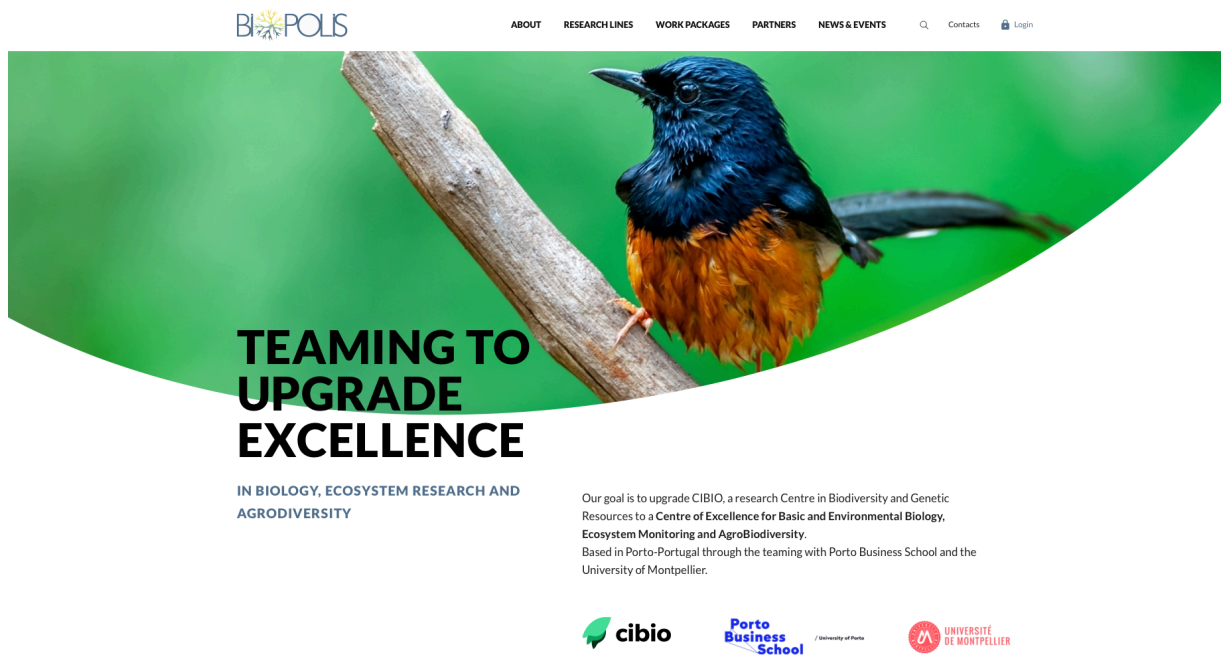


Figure 2: Screenshot of BIOPOLIS website.

5.2.2. Creation and maintenance of institutional website

Concept: A institutional website of the BIOPOLIS Association will be created, representing the upgrade of the website of CIBIO (<https://cibio.up.pt/>). Like the project website, the institutional website is critical to increase visibility of the institution and to communicate information about its researchers, projects, outputs and achievements, communication events, training, among others. The website will become fully operational in October 2021, and will contents such as:

- Governance and management structure;
- Vision, Mission and Strategic Objectives;
- International collaborations, including links to the TwinLabs;
- Research, including research groups, invited chairs, publications, projects, knowledge and technology transfer, and research facilities;
- People, with dedicated pages showing the profiles of researchers, students, technical staff and administrative staff;
- Training, with information on post-graduate training and advanced training, including links to dedicated pages where details of courses and training events are described;
- Services, including dedicated pages for Molecular Analysis Services (CTM), Applied Ecology Services (GEPE), Genomics Platform, Business & Biodiversity, Research Facilities and Venue Facilities;

- Careers, with information on open calls and employment opportunities;
- News and Events, including conferences and seminars, among others;
- Science in society, with pages dedicated to media, outreach and citizen science.

Main target audience: all BIOPOLIS target audience (Section 4).

5.3. Communication Action 3: Social Media

Social media represents a modern and powerful tool used to interact with the scientific community and other interested parties. BIOPOLIS will have a strong online presence, with pages and regular feeds on all the major social media platforms; Twitter, YouTube, Facebook, Instagram for communicating informally with stakeholders and the general public, and LinkedIn and ResearchGate for the more Academic/Business audience. These platforms are industry standards that many of our partners and collaborators are already using, and by interacting with them through these platforms we can significantly increase the visibility of the project/association. We may expand our social media presence onto other platforms in the future depending on innovations in this rapidly moving area.

5.3.1. Creation and maintenance of Twitter feed

Concept: Twitter is a micro-blogging tool and is one of the world's most popular social media platforms with over 1 billion users (both private and businesses). Twitter communication will focus on posts relating to team social events, participation in conferences and networking events, retweets of mentions to BIOPOLIS team members from other users, open positions, showcasing scientific papers, and media appearances. CIBIO has already a Twitter profile (https://twitter.com/cibio_inbio) with a reasonable number of followers (>1,000), which will be used to help raising attention to the BIOPOLIS profile.

Main target audience: project partners, research community, public and private institutions affiliated with BIOPOLIS, Environmental NGOs, the media.

5.3.2. Creation and maintenance of Facebook & Instagram pages

Concept: Given Facebook's and Instagram general nature as social networks, they will be used to communicate the existence of BIOPOLIS, highlighting activities carried out by each Research Group, and showcasing main results and, especially, societal impacts of the results.

Main target audience: project team and partners, end-users and the general public.

5.3.3. Creation and maintenance of YouTube channel

Concept: YouTube is the World's premier video sharing platform. BIOPOLIS will have a dedicated YouTube channel that will be especially used to communicate its activities to younger people and to make available recorded events related to research. Specifically, BIOPOLIS will make available edited versions of recorded workshops and talks, subject to informed consent of participants featuring in the video. It will also create a wide-range of videos that showcase BIOPOLIS research activities, research groups and members. The YouTube channel may also be used for posting educational/training videos created by BIOPOLIS members.

Main Target audience: project team and partners, global research community, end-users and the general public.

5.3.4. Creation and maintenance of LinkedIn page

Concept: LinkedIn is the world's largest professional networking site, with more than 546 million users in over 200 countries and territories worldwide. Its mission is to connect professionals to make them more productive and successful. A profile of BIOPOLIS has been already created (<https://www.linkedin.com/company/biopolispt/>) and will be regularly updated, which will further help the BIOPOLIS project to achieve higher visibility in the corporate world.

Main Target audience: project partners, global research community, and professionals and stakeholders from public and private institutions affiliated with BIOPOLIS, including other universities and research centres, agencies of the public administration, business corporations, and non-governmental organizations.

5.3.5. Promoting ResearchGate use among BIOPOLIS researchers

Concept: ResearchGate is a social network aimed specifically at science professionals and researchers, providing a simple system to post research products, keep fellow users updated on research projects, and monitor the impact of research publications. Many of CIBIO's researchers are already on ResearchGate, but through better coordination there is still considerable scope for increasing the presence of BIOPOLIS' researchers, products and

research projects on the network.

Main target audience: project team and partners, the Global research community in the key areas of research.

5.4. Communication Action 4: BIOPOLIS Newsletter

Concept: The BIOPOLIS Newsletter is mainly an instrument of internal communication, and so it is detailed in the Internal Communication Plan (Deliverable 6.1). However, it is also treated here because it may also be useful to reach out to external parties. Briefly, the main purpose of the Bulletin is to increase internal visibility of the work of the BIOPOLIS team, share project news and results, and to showcase some of the day-to-day work of members. The Bulletin will cover topics such as BIOPOLIS news (related to the team, new arrivals, new papers, results, etc); Overview of recent events (e.g., field-trips, conferences, workshops, round-tables, training courses), and advertisement of forthcoming events and advanced training courses. The newsletter will be available on the BIOPOLIS website, on social media and will be sent by e-mail to all interested parties. A “Subscribe” option is available on the public section of the website in order to progressively extend the distribution list.

Main target audience: all BIOPOLIS members and stakeholders.

5.5. Communication Action 5: BIOPOLIS Promotional Materials

5.5.1. Production of brochures and flyers

Concept: Brochures and flyers will be produced in hard copy and digital formats that summarize the profile of the BIOPOLIS Association, thereby enhancing its visibility for a wide range of audiences. Hard-copies of flyers/brochures will be distributed in places of interest (e.g., conference venues) and electronic copies will be distributed by mailing list, and will be available for download on the BIOPOLIS website and social media platforms. They will also serve as accompanying or supporting material for public presentations and events. The BIOPOLIS brochure will introduce the main objectives of project, main activities, and services/products produced; for aimed at the academic audience and for potential end-users.

Target audience: all BIOPOLIS target audiences (Section 4).

5.5.2. Production of Leaflets

Concept: Leaflets will be used for both internal and external communication, and are detailed in the Internal Communication Plan (D6.1). Briefly, leaflets will contain essential information about BIOPOLIS (e.g., vision, mission and objectives of the CoE), in Portuguese, English and French, to ensure maximum reach and readability. To promote engagement, they will include reusable content (e.g., an institutional Calendar).

Target audience: all BIOPOLIS target audiences, but especially institutional stakeholders.

5.5.3. Production of Posters

Concept: Posters will be produced with the aim of informing stakeholders about the scope and aims of BIOPOLIS, explaining the importance and expected impact of the project and showcasing activities and services. A non-academic poster will also be produced, aiming at eliciting interest and excitement in the project, aimed at the general public.

Main target audience: all BIOPOLIS target audiences, including the general public and academic community.

5.5.4. Creation of short format videos

Concept: Video is a very powerful tool for raising awareness, engaging users, promoting discussion, etc. A video has the advantage that can be used on a wide variety of digital platforms (website, social media, YouTube), and can be shown live at public events (e.g., workshops, press conferences, etc.). Three main types of videos are planned: 1) short, lively clips showcasing the main objectives and expected impacts of the BIOPOLIS project; 2) reporting the achievements and main results from the Research Units; and 3) basic science communication and education, aimed at students and the general public.

Main target audience: all BIOPOLIS target audiences, including the general public and academic community.

5.6. Communication Action 6: Meetings

Concept: The CA&EU officers will identify BIOPOLIS representatives to attend existing events or dedicated fairs in order to: a) Establish useful connections nationally and

internationally; b) exchange contacts with representatives and stakeholders, c) Communicate the existence of BIOPOLIS association through video presentation, talks, distribution of leaflet, etc.

Main target audience: public and private institutions affiliated with BIOPOLIS, SMEs and major national corporations, Policy and decision-makers levels, and environmental NGOs.

5.7. Communication Action 7: Exhibitions and related activities

Concept: Exhibitions and related activities will be developed with the main objective of bringing science into the day-to-day life of the audience. These exhibitions will initially benefit from the partnership already established with the Gallery of Biodiversity of the Museum of Natural History and Science of the University of Porto, and the Serralves Foundation, and new partnership will be sought to increase the uptake of the initiative.

Main target audience: End-user and general public (focus on families).

5.8. Communication Action 8: BIOPOLIS Events

Concept: BIOPOLIS events will be specifically organized for engaging and motivating stakeholders, showcasing the achievements of the CoE and communicating objectives, results and services in a more targeted and effective way. For example, organizing workshops aimed at sharing knowledge with stakeholders in locations adequate to the target audience (e.g., in Lisbon for Portuguese government officials).

Main Target audience: BIOPOLIS team and project partners, public and private institutions affiliated with BIOPOLIS, Scientists and academics.

5.9. Communication Action 9: Publication of non-technical papers

Concept: Non-technical papers and reports (e.g., white papers, policy briefs, reports) will be produced to document research results with relevance to the wider society and will be made available over multiple communication channels (e.g., Website, Social Networks). These publications will also make maximum use of the EC supported dissemination mechanisms, such as publication of project information on the official sites of EC (e.g., Research and Innovation Participant Portal, CORdIs News, Cordis Wire, Headlines on the Commission's Research &

Innovation website, Research*eu results magazine).

Main target audience: Environmental policy-makers, land-managers, environmental entrepreneurs, environmental NGOs.

5.10. Communication Action 10: Media and public engagement

Media and public engagement go beyond that documented in the BIOPOLIS project, as it will bring visibility to BIOPOLIS association and will reinforce the concept of the Centre of Excellence, being the source of science communication and dissemination to society. Media and public engagement actions will be focused not only in the countries of BIOPOLIS project partners (Portugal and France), but will also aim to be a reference for Science in the Portuguese speaking countries in Africa and in Brazil, where public understanding of science and the environment is often low.

5.10.1. Engage with media stakeholders

Concept: A strategy to attract the interest of the media towards BIOPOLIS will be developed and implemented. This will build on the list of media contacts already produced by CIBIO, with a focus on engaging these journalists/contacts to reinforce communication channels. Press releases will be produced when there are major outputs, such as prizes, publications in top journals, major scientific and technical breakthroughs, among others. Press conferences might be used in case of a major achievements.

Main target audiences: journalists, members of the traditional and digital media.

5.10.2. Staging of events and activities for the general public.

Concept: Events and activities for the general public will be organised, including exhibitions, field courses, BioBlitz, citizen science initiatives, events for schoolchildren and teachers, among others. Establishing strong communication channels between BIOPOLIS and schools will be a priority, with the aim of familiarizing school children with environmental science issues through development of materials and delivery of seminars, targeting both teachers and school children. To achieve this, we will produce “edutainment” material, combining traditional material with innovative and/or fun tools to make it easier for young people to learn and engage. Examples include collection of short science stories, science activity books, comics, etc.

Material and guides (and other material to be used or be hung on the wall in classrooms) will also be developed and tailored to school teachers based on BIOPOLIS research, innovation, and achievements, aiming to provide the tools for bringing BIOPOLIS Science to the classroom.

Main target audiences: the general public, especially children.

5.10.3. Development and staging of Scientific Games

Concept: In order to combine the educational aspect with the fun aspect of learning, BIOPOLIS will consider developing interactive games. The design of this instrument will need initially an analyses and expertise advice from educational experts and development of partnership with local schools for piloting the games. Examples of some of these ideas are: a memory card based on ecosystem services concept; or a board game focusing in nature-based solutions which combine nature conservation with economic growth of the agroforestry sector.

Main target audiences: the general public, especially children.

5.11. Future communication actions

With the progressive growth of BIOPOLIS, the communication activities will be expanded and strengthened. In this context, a number of additional communication activities will be considered and eventually implemented if sufficient human logistic and financial resources are available, and if they are considered important to meet BIOPOLIS' Vision and Mission. Possible areas of future interest include:

- Digital infographics: Infographics are very popular and are being used in various areas as a simple form of content, tailored to different audiences, aiming to summarize complex content and make it understandable quickly. BIOPOLIS infographics might focus on translating of its achievement in a concise and intuitive format, of easy understanding and up taking.
- Communication Series: this would focus on a campaign consisting of a series of publications aimed at reinforcing the awareness of a Scientific achievement/results.
- Radio Series: a traditional medium still very used in less developed countries, can be a tool for science interview, thematic talks, communication science to other audiences. This could begin as a regular podcast (see below) that can be adapted for Radio.

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- Podcasts (and streaming): podcasts are increasingly used to provide science communication to the general public, using formats of interviews and thematic series/talks, interview clips, talks by experts, etc.
 - Webinars. Webinars are interactive seminars to be viewed online, BIOPOLIS already organizes webinars for a more internal research communication, and the idea is to extend the webinars to target post-graduate students and early careers researchers all across the world. The use of webinars, viewable online due to streaming to on-demand, and “live” moments with the lecturer/researcher/invited speaker, will ensure a unique opportunity to communicate with earlier researchers from various places in the world. These can be posted on the forthcoming BIOPOLIS YouTube Channel.
 - Partnership with a national newspaper: Establishing a partnership with a national newspaper would provide a privileged instrument to communicate BIOPOLIS research, innovation and achievements to a wide audience. Consultations towards the implementation of this action are currently on-going.

6. DISSEMINATION ACTIONS

Dissemination and exploitation (D&E) of BIOPOLIS results and outputs during and after project implementation is extremely important for project sustainability and impact. Here we describe each of the D&E Activities proposed in the current Plan.

6.1. Dissemination Action 1: Publication of open access scientific papers

Concept: Publication of results in scientific journals is one of the main channels for disseminating research project results and achievements. Therefore, publishing the outcomes of research and innovation in international, peer-reviewed scientific journals will be the standard tool for disseminating results to the global researcher community. All studies funded through BIOPOLIS will be published open access using the “gold” or “green” standards. Publications will acknowledge funding and will be disseminated as widely as possible, following in particular the requirements for publication set out in the Grant Agreement (Annex 2– Requirements for BIOPOLIS Publications). Links to publications will be made available in BIOPOLIS websites, as well as in personal pages of researchers.

Main target audiences: global research community, particularly in the key areas of BIOPOLIS research.

6.2. Dissemination Action 2: Presentation of results in scientific meetings

Concept: The presentation of results at scientific and technical events, congresses and workshops is still a channel to disseminate new knowledge. BIOPOLIS team members will be strongly encouraged and supported to participate in scientific events, increasing its visibility to the national and international scientific communities. A dedicated budget will be provided to support the participation of BIOPOLIS staff, PhD. students and early-stage researchers at scientific events.

Main target audiences: global research community in the areas of environment, biodiversity and ecosystems, forestry, and agrifood.

6.3. Dissemination Action 3: Develop and implement a Knowledge Management System

Concept: The development and implementation of a Knowledge Management System (KMS)

is key for the general performance of BIOPOLIS, including quality management, research, innovation, training, and communication, dissemination and exploitation, and so it is detailed in a separate document (D3.3). Briefly, the KMS defines procedures and tools for sharing and disseminating knowledge, materials, methods and results among partner. See D3.3 for further details.

Main target audiences: All staff from BIOPOLIS and its partners in the Teaming project, including linked third parties.

6.4. Dissemination Action 4: Develop and implement a Data Management System

Concept: As for the KMS, the development and implementation of a Data Management System (DMS) is key for the general performance of BIOPOLIS, including quality management, research, innovation, training, and communication, dissemination and exploitation, and so it is detailed in a separate document (D4.7). Briefly, the DMS include the provisions for making data findable, accessible, interoperable, and reusable (FAIR), and it describe the open access policies, following the guidelines set in the H2020 Online Manual. Upon publication of the corresponding studies, all data produced by BIOPOLIS will be stored curated and made available online through open access platforms, including the national platform PORBIOTA, as well as international platforms such as GBIF (<https://www.gbif.org/>), NCBI (<https://www.ncbi.nlm.nih.gov/>), boldsystems (<https://www.boldsystems.org/>), deims.org (<https://deims.org/>), among many others. Finding of these data is also made easier though Google Dataset Search tool. Details of data management and sharing are provided in Deliverable 4.7, with additional relevant information provided in D6.3.

Main target audiences: BIOPOLIS researchers, the global research community and other users of scientific data.

6.5. Dissemination Action 5: Identify and create a database of stakeholders and other potential users

Concept: A database of stakeholders and other potential end users will be created and regularly updated, to facilitate the communication channels with potential end-users of BIOPOLIS outputs. This database will include information on a wide range of stakeholder categories, including: i) policy and decision makers at EU, national and regional levels; ii) non-

governmental organizations related to biodiversity conservation, sustainability, and socio-economic development; iii) land managers, from local to national levels, and; iv) business corporations, particularly those engaged in BIOPOLIS through the Affiliates Programme and the Invited Chairs initiative. These contacts will provide an increased audience that would potentially benefit the dissemination of project outcomes. The database will be produced and use in full compliance with the General Data Protection Regulation (Regulation (EU) 2016/679).

Main target audiences: BIOPOLIS researchers, managers and technical staff.

6.6. Dissemination Action 6: Develop a stakeholder engagement programme

Concept: The proactive engagement with stakeholders will provide one of the main routes for the dissemination and exploitation of BIOPOLIS outcomes. This importance of this action is clearly underlined in the work plan described in the Grant Agreement, which devotes an entire package for the creation and implementation of an affiliates programme. This programme was specifically designed to engage stakeholders and nurture their relationship with BIOPOLIS over time, contributing to align research with societal needs, implement the CD&E Plan, and assuring long term sustainability through continued support of stakeholders. The Affiliates Programme and its implications for communication, dissemination and exploitation are thoroughly described in Deliverable 7.1 (*Report of the Planning of the Affiliates Programme*). The programme will involve a wide range of stakeholders, including other research and academic institutions, business corporations, organisms of the public administration at the national, regional and local levels, non-governmental organizations, and other stakeholders. After creating the Affiliates Programme, BIOPOLIS will establish the channels of communication between institutions, which will include the website, a regular newsletter (see WP6), personal contacts for screening new research needs and opportunities, and development of new research projects, among others.

Main target audiences: BIOPOLIS stakeholders, including the public and private sectors.

6.7. Dissemination Action 7: Organise sessions for decision makers and funders

Concept: BIOPOLIS will regularly organise sessions and meetings tailored to decision makers and funders (public and private). The main objectives will be to: i) outline the significance and impact of BIOPOLIS R&I results, and; ii) mainstreaming knowledge generated by the

BIOPOLIS project into decision making actions. The presentations for decision makers will focus on evidence-based results and proposed adaptation measures and actions. Specifically, they will show how research and innovation can be turned into practical applications that address a number of societal challenges. Presentations for funders will focus on the benefits of future of research areas and its potential impact in the real world. These meetings will take advantage of the *Policy-related documents described in the Communication Plan (CD&E)*: e.g., policy briefs (Section 5.9 above), opinion documents and reports describing relevant outcomes of BIOPOLIS.

Main target audiences: decision makers and funders.

6.8. Dissemination Action 8: Organise demonstration events

Concept: BIOPOLIS will regularly organise demonstration events, which will showcase the practical outcomes of research and innovation to stakeholders. This action will use on-site and off-site (e.g., road-shows) events to highlight the potential for exploiting key results and products for the benefit of the economy/society. Specific activities will depend on research outcomes, but may involve field and lab demonstrations of new technical and technological solutions, ecological intensification processes, or new models of ecosystem management.

Main target audiences: stakeholders, especially private corporations (including SMEs) and entrepreneurs.

7. EXPLOITATION ACTIONS

The exploitation actions of BIOPOLIS will be targeted at making the exploitable results available to all potential end-users and to promote its effective use by stakeholders, while protecting and creating added value from Intellectual Property Rights. The main actions considered to pursue these goals are indicated below.

7.1. Exploitation Action 1: Identifying and characterising exploitable results, and their potential user groups

Concept: For this action, the focus will be on promoting the concrete use of R&I, both in commercial applications and to support decisions and management strategies by, e.g., policymakers, wildlife managers, landscape managers, and other stakeholders. Therefore, the target will be on stakeholders that can make concrete use of the obtained R&I results, including the corporate partners, organisms of the public administration, the spin-offs emerging from the CoE activity, and NGOs, among others.

Main target audiences: BIOPOLIS researchers and potential users of knowledge/services/products generated by BIOPOLIS research.

7.2. Exploitation Action 2: Identifying and characterising optimal exploitation routes

Concept: Results will be exploited in different ways, depending on the type of result and the specific needs of potential user groups. Under normal circumstances, the optimal exploitation route for any given research result will be identified through engaging with affiliate partners and key stakeholders, often through face-to-face meetings. Such engagements provide opportunities to present achievements and progress towards future milestones, to discuss the exploitation of results, and to receive feedback on promising research avenues. This action will also build heavily on the stakeholders and routes of communication developed in the Affiliates Programme (Section 6.6 above).

Main target audiences: BIOPOLIS researchers, affiliate partners and potential users of knowledge/services/products generated by BIOPOLIS research.

7.3. Exploitation Action 3: Defining institutional policy for intellectual property rights and protection of exploitable results through patenting

Concept. Management of IP Rights is an important step towards supporting commercial exploitation, defining the rights and obligations of project partners and stakeholders. The

BIOPOLIS policy on Intellectual Property Rights and Licensing Innovation is part of the Knowledge Management System and is described in Deliverable 6.3. A financial return on research investment will be sought through licensing of rights to use specific research outputs (IP such as patentable ideas or products). To support these activities, UM will provide training for the Knowledge Transfer Officer and at least one researcher of each Research Unit, benefiting from its long experience on IP and licensing of innovation. For projects developed jointly between BIOPOLIS and UM in the frame of shared intellectual property, BIOPOLIS will benefit from the experience and input of SATT (the Société d'Accélération de Transfert de Technologie) AxLR.

Main target of action: BIOPOLIS researchers and associated personnel.

7.4. Exploitation Action 4: Exploitation through the creation of spin-offs or partnering with extant corporations

Concept: This action aims to promote the exploitation of BIOPOLIS results through the creation of spin-offs and through partnering with private corporations. In fact, it is envisaged that some of the results generated by BIOPOLIS researchers will lead directly to the creation of new businesses and spin-offs, which will mainly be promoted to commercialise research results for which there is not an obvious partner, or in cases where direct commercialisation by a spin-off linked to BIOPOLIS might create a competitive advantage. The resulting constellation of start-ups and of small and medium size enterprises (SMEs) has the potential to provide high-quality job opportunities, and contribute to regional and national development. These activities will be carried out in close liaison with experienced teams from UM and PBS, and will involve training on research entrepreneurship, training on how to apply for EU specific funding for innovative start up and spin off, legal and financial support to the creation of spin-offs, mentoring from practitioners, favourable conditions for access to office space and labs, and contributions to initial investment of particularly promising initiatives.

Main target of action: BIOPOLIS researchers and associated personnel, private corporations, entrepreneurs and other interested parties.

8. GOVERNANCE AND MANAGEMENT

As defined in the Grant Agreement, the overall responsibility for the preparation and initial implementation of the CD&E Plan is under the responsibility of ICETA-CIBIO, with substantial contributions by the University of Montpellier (MU) and Porto Business School (PBS). All the roles and responsibilities of ICETA-CIBIO in this task will soon be formally transferred to the BIOPOLIS Association, upon amendment of the GA.

The full implementation of the *CD&E Plan* will be under the responsibility of the Communication, Advancement and Engagement Unit (CA&EU) of the BIOPOLIS Association, in collaboration with the IT Officers, the Administrative and Finance Unit (A&FU), the Montpellier Communication and Accounts Office (MC&AO), and the Research Units (RUs), under the general supervision of the Board of Directors (BoD). The team of the CA&EU is composed by six officers (Head of unit, Education and Training Officer, International Relations Officer, Business Relations Officer, Knowledge Transfer Officer, and Communication and Dissemination Officer), and is coordinated by a Head of Unit, who will supervise all the activities of the Unit, including overseeing the execution of the Internal Communication Plan, and she/he will be reporting to the Associated Director (AD) supervising this area. The main function of the **Communication and Dissemination Officer (CDO)** will be to coordinate communication and dissemination activities, working to promote the visibility and profile of BIOPOLIS at the national and international level, and to raise public awareness regarding science and biodiversity. The Officer will be responsible for managing the *CD&E Plan* implementation and development of each activity. A dedicated budget will be allocated annually to internal communication activities. The CDO will work closely with the communication and dissemination officer who will work at Montpellier's BIOPOLIS Office.

An important component of the CD&E plan involves knowledge transfer to public and private institutions, and so there will also be a deep involvement of the Business Relations Officer and Knowledge Transfer Officer, who will also work under the supervision of the Head of the CA&EU. These two Officers will form an office within the CA&EU called **Innovation Management Office (IMO)**, with the main task of mainstreaming innovation and implementing the innovation management strategy and activities of BIOPOLIS. The tasks of this Office (IMO), include: i) helping researchers to identify and facilitate new products and processes that can be transferred to stakeholders; ii) the management of IP Rights; iii) the development of contacts with R&D decision makers; iv) the management of technical and contractual relationships, and; v) the support to promotional events and interdisciplinary

workshops. The IMO Office will also be responsible for establishing relations with business corporations and the management of the Affiliates Programme. This will include setting up meetings with the business community and other stakeholders, finding new business partners, and identifying research areas with added value to the Business Corporation. This Office will work closely with staff of the Administration & Finances Unit (A&FU), namely with the Legal Affairs Officer, and with the RUs to explore research and innovation opportunities. The BoD will be responsible for final approval of IP transfer.

The *Communication, Dissemination and Exploitation Plan* (CD&E) is a multi-activity proposal involving various strategies and activities within BIOPOLIS. The effective implementation of the CD&E Plan will therefore require multi-level governance as follows:

8.1. Governance and management of communication

As outlined above, the CDO will coordinate the communication and dissemination activities, working to promote the visibility and profile of BIOPOLIS at the national and international level, and to raise public awareness regarding science and biodiversity. The Officer will be responsible for managing the CD&E implementation and development of each activity. The CDO will regularly engage with the BIOPOLIS team in the routine of the Communication Activities in the following ways:

- CDO will work closely with the BoD, the RU research leaders and other BIOPOLIS Officers to strategically plan content and to identify those responsible in each Unit for providing information about the news/results to be communicated.
- All members of the BIOPOLIS team will be encouraged to engage in Communication Actions, and the CDO will systematically remind BIOPOLIS team members of the need to share content/news to support the communication strategic plan.
- All BIOPOLIS team and partners will be regularly requested to submit material to the Bulletins/social network/website/videos via divulgacao@cibio.up.pt. This will be compiled by the CDO. Layout will be prepared by IT officer. Documents created will be revised, if necessary, by Head of Unit and one of the members of the Board of Directors prior to publication.
- The CDO will identify persons to be BIOPOLIS spokespersons to attend interviews, contribute video content, etc.
- The CDO, Head of Unit and AD of the BoD will decide together on the type of content to be posted (BIOPOLIS website, BIOPOLIS online medias, BIOPOLIS Publicity and

awareness-raising material).

- The CDO will serve as a manager and a moderator of the internal social networks, inviting new members and taking responsibility for administration/moderation/monitoring.
- The CDO will prepare a detailed plan of information disclosure for each communication channel, with topics, type, and time.
- The IT officer will develop/implement Google Analytics and other online tools to monitor traffic and other indicators of use/interest in online tools (e.g., social media sites).
- Information will be compiled by the CDO, IT officers, and A&FU for the BIOPOLIS website/brochures/leaflets. Layout will be prepared by IT committee. Products will be revised by Head of Unit and one AD from the Board of Directors.
- The A&FU will keep lists of Participation of BIOPOLIS researchers in scientific and technical events.
- RUs members and BoD will organize the content and agenda for the **BIOPOLIS Events**; The A&FU and Technical Support Unit (TSU) will work together to organize the meeting and logistics; CDO will assist with dissemination.
- The CA&EU Officers will assist researchers with the publication of non-technical papers and writing of storylines.
- The CDO and the Education and Training Officer will coordinate public engagement actions, including, e.g., interaction with schools, expositions and events.
- The RU teams will be responsible for providing opportunities for Citizen science actions.
- The Head of Unit, CDO and BoD will be the main responsible for establishing long term relationships with the media.
- The governance of internal communication is fully described in the *Deliverable 6.1, Internal Communication Plan*.

8.2. Governance and management of dissemination and exploitation

As outlined above, the Business Relations Officer and Knowledge Transfer Officer (IMO officers) will be the main coordinators for dissemination and exploitation activities. These Officers will regularly engage with the BIOPOLIS team in the routine of the Dissemination & Exploitation Activities in the following ways:

- Preparation of publications will be responsibility of BIOPOLIS research team, IMO and

AFU can assist/advise with open access and data repositories.

- Presentation of results in scientific meetings will be the responsibility of BIOPOLIS research team; A&FU will keep a list of participation; CDO will share the information.
- Development and implementation specifics of the Knowledge Management System is described in deliverable D6.3. This will primarily involve the BoD, IMO, and IT officers.
- Development and Implementation specifics of the Data Management is described in Deliverable D4.7; Data Management will evolve over time according to best practices, regulations, and societal demands; a Data Management and Open Access Committee will be designated by the Science Council (SC) in Consultation with the Coordinator Researcher of each RU, and approved by the BoD. The committee will have five members, and it will include senior researchers and IT experts with experience in Data Management and Open Access. This Committee will be responsible for monitoring the implementation of the Data Management and Open Access Procedures, and reporting the results in the regular Implementation Reports.
- IMO officers will curate the database of stakeholders and develop the engagement programme with assistance from A&FU, other CA&EU officers, participation of BIOPOLIS researchers (e.g., when it is a demonstration or open site visit) under supervision of the Head of Unit and BoD. More information on governance of the stakeholder engagement is described in deliverable D7.1. *Report of the Planning of the Affiliates Programme.*
- IMO officers will develop the strategies for the organisation of sessions for decision makers and funding sources with assistance from the A&FU, RU researchers, and supervision of the BoD.

9. MONITORING AND INDICATORS

The implementation of the *Communication, Dissemination and Exploitation Plan* (CD&E) will be regularly monitored by the Communication and Dissemination Officer (CDO), as well as the Business Relations and Knowledge Transfer Officers, and reported to the Head of the CA&EU and to the Associate Director responsible for this component of the work. To ensure and measure the ongoing effectiveness of the CD&E activities, feedback will be regularly sought from target audiences. Specifically, feedback will be directed to understanding if CD&E actions are being effective, and to evaluate whether different audiences are getting the information they want or need. The mechanics used for feedback will be:

- i. **Direct feedback.** For example, face to face communications/messaging/emails after seminars or presentation of products;
- ii. **Formal feedback.** Based on questionnaire sent to target audiences after actions.

The CA&EU Officers will compile feedback and incorporate changes into CD&E Plan. Any changes, additions and/or updates/changes and improvements will be carefully explained and described in future BIOPOLIS Implementation Reports/CD&E Plan revisions.

Besides the feedback obtained from target audiences, the Plan will be monitored considering a number of operational indicators, which will be used to measure progress in its implementation. In addition, the impact of CD&E activities will be monitored considering the more high-level impact indicators listed in the Table 2.1b (GA), and further refined and detailed in Deliverable 9.2. Here we consider only the operational indicators, which are the most relevant to the daily monitoring of Plan's implementation. These operational indicators were developed considering the indicators listed in Table 2.2a of the Grant Agreement.

9.1. Monitoring and indicators for communication

Monitoring and evaluation of *Communication* activities (Section 5) will be based on the operational indicators described in Table 1.

Table 1. Suggested indicators and targets for the Communication Activities considered in the Communication Dissemination & Exploitation Plan of BIOPOLIS.

ID	Communication Actions	Indicators and Targets
1	Visual identity and public image	<ul style="list-style-type: none"> • No. of public acknowledgements referring to the BIOPOLIS CoE • Proportion of activities acknowledging EU funding

ID	Communication Actions	Indicators and Targets
1.1	Development of BIOPOLIS Logo	<ul style="list-style-type: none"> Logo developed and made available to BIOPOLIS community
1.2	Creation of Templates	<ul style="list-style-type: none"> Templates developed and made available to BIOPOLIS community
2	BIOPOLIS website	<ul style="list-style-type: none"> No. and growth (%) of interactions via the project website (including average visitors per month, average pages viewed) Number of unique visitors Number of downloaded files
2.1	Creation/maintenance of Project Website	<ul style="list-style-type: none"> Fully functioning website posted
2.2	Creation/maintenance of Institutional Website	<ul style="list-style-type: none"> Fully functioning website posted
3	Social media	<ul style="list-style-type: none"> No. and growth (%) users for social media platforms
3.1	Creation and maintenance of Twitter feed	<ul style="list-style-type: none"> Number of tweets, mentions, followers on Twitter A minimum of 2 to 4 tweets (re-tweets) a month related to the project/ association
3.2	Creation and maintenance of Facebook & Instagram pages	<ul style="list-style-type: none"> Official BIOPOLIS Facebook and Instagram accounts activated Number of posts, mentions, followers on Facebook and Instagram Target of doubling number of followers every 6 months for the first 2 years of the project
3.3	Creation and maintenance of YouTube channel	<ul style="list-style-type: none"> Number of videos, visualizations, followers for YouTube YouTube channel established 1 official video posted every 3 months Target of doubling number of followers every 6 months for the first 2 years of the project
3.4	Creation and maintenance of LinkedIn page	<ul style="list-style-type: none"> Number of connections/followers, profile/page views for LinkedIn Institutional LinkedIn account established Target of doubling number of followers/connections every 6 months for the first 2 years of the project
3.5	Promoting ResearchGate use among BIOPOLIS researchers	<ul style="list-style-type: none"> Number of researchers registered, publications, projects on ResearchGate By end of 2022 - 80% of BIOPOLIS researchers registered on ResearchGate By end of 2022 - 70% of CIBIO publications available on ResearchGate (private or public copies) By end of 2022 - 80% of externally funded CIBIO research projects described on ResearchGate Target of 10% increase in CIBIO publication reads per year
4	BIOPOLIS Newsletter	<ul style="list-style-type: none"> Number of Bulletins produced Target two Bulletin per year, starting in 2022
5	BIOPOLIS Promotional	

ID	Communication Actions	Indicators and Targets
	Materials	
5.1	Development of brochures and flyers	<ul style="list-style-type: none"> • Number of distributed leaflets and other materials • Annually updated brochure in Portuguese and English produced. Flyers in Portuguese, French and English produced
5.2	Production of Leaflets	<ul style="list-style-type: none"> • Annually updated leaflet in Portuguese, English and French produced
5.3	Production of Posters	<ul style="list-style-type: none"> • Two posters (academic and non-academic) produced
5.4	Creation of short format videos	<ul style="list-style-type: none"> • YouTube channel created • Up to three official videos produced annually
6	Meetings	<ul style="list-style-type: none"> • No. and growth (%) of presentations and in events • No. of keynote presentations • Dedicated budget allocated to support participation of staff, PhD. students and early-stage researchers
7	Exhibitions and related activities	<ul style="list-style-type: none"> • Number of Exhibitions developed • 1 major exhibition every 2 years
8	BIOPOLIS Events	<ul style="list-style-type: none"> • No. of events organized • Number of people attending events • Organization of at least one annual event (TiBE) to present the achievements of BIOPOLIS to the scientific and technical community
9	Publication of non-technical papers	<ul style="list-style-type: none"> • No. of non-technical publications produced • A minimum of 1 non-technical paper per research unit per year published (with a DOI) on the BIOPOLIS website and ResearchGate and/or EC platforms
10	Media and public engagement	
10.1	Engage with media stakeholders.	<ul style="list-style-type: none"> • No. of articles published in the media • No. of events covered • No of press releases • Database of journalists created • 1 media day per year • 5 Press releases per year
10.2	Staging of events and activities for the general public	<ul style="list-style-type: none"> • No. of events and activities for the general public, number of participants and satisfaction of participants in public engagement • 1 citizen science event (e.g., field day) per year • 2 school visits of BIOPOLIS staff per year • information pack developed for teachers
10.3	Development and staging of Scientific Games.	<ul style="list-style-type: none"> • 1 game developed every two years

9.2. Monitoring and indicators for dissemination

Monitoring and evaluation of *Dissemination* (Section 6) activities will be based on the operational indicators described in Table 2.

Table 2. Suggested indicators and targets for the Communication Activities considered in the Communication Dissemination & Exploitation Plan of BIOPOLIS.

ID	Dissemination Actions	Suggested indicators and targets
1	Publication of open access scientific papers	<ul style="list-style-type: none"> No. and growth (%) of papers published and proportion of papers in Q1; 4 publications per research unit per year in high impact, open access journals, 100% publications acknowledge EU funding Scientific papers altmetric (e.g., shares on social media, RG score, etc.)
2	Presentation of results in scientific meetings	<ul style="list-style-type: none"> 30% of research staff presenting results at least 1 scientific event every year.
3	Develop and Implement a Knowledge Management System	<ul style="list-style-type: none"> See indicators in Deliverable 6.3
4	Development and Implementation of a Data Management System	<ul style="list-style-type: none"> DMS defined and fully implemented in first year of project No. of data sets made public and No. of dataset downloads
5	Identify and create a database of stakeholders and other potential users	<ul style="list-style-type: none"> Searchable database constructed and made available to BIOPOLIS staff by end of 1st year of project
6	Develop a stakeholder engagement programme	<ul style="list-style-type: none"> No. of meeting organized with affiliate partners and stakeholders No. of engaged stakeholders and other participants 2 official stakeholder engagement events per year
7	Organise sessions for decision makers and funders	<ul style="list-style-type: none"> No. of policy-related documents produced 2 events per year (1 for decision-makers, 1 for funders)
8	Organise demonstration events	<ul style="list-style-type: none"> No. of organized demonstration activities No. of involved stakeholders and other participants 2 events per year (1 on-site, 1 off-site)

9.3. Monitoring and indicators for exploitation

Monitoring and evaluation of *exploitation* (Section 7) activities will be based on the Key Performance Indicators described in Table 3.

Table 3. Suggested indicators and targets for the Communication Activities considered in the Communication Dissemination & Exploitation Plan of BIOPOLIS.

ID	Exploitation Actions	Suggested KPIs/ targets
1	Identifying and characterising exploitable results, and their potential user groups.	<ul style="list-style-type: none"> • No. of exploitable products and processes produced by BIOPOLIS • No. of potential users of BIOPOLIS results
2	Identifying and characterising optimal exploitation routes.	<ul style="list-style-type: none"> • No. of events organised to showcase BIOPOLIS results to potential end users
3	Defining institutional policy for intellectual property rights and protection of exploitable results through patenting	<ul style="list-style-type: none"> • Policy for IPR established • No. of patents developed, commercialized and revenue
4	Exploitation through the creation of spin-offs or partnering with extant corporations	<ul style="list-style-type: none"> • No. of new businesses, start-ups and spinoffs initiated • No. of new partnerships established to exploit BIOPOLIS products and processes

10. CONCLUDING REMARKS

This is the first version of the *CD&E Plan*, which together with the *Internal Communication Plan* (D6.1) and the *Knowledge Management System* (D6.3), sets the foundations for communicating, disseminating and exploiting the results and achievements of the BIOPOLIS project. The Plan builds on the history of successful CD&E activities previously developed by CIBIO, as well as the long experience of the University of Montpellier and PBS. Therefore, it is expected that the Plan will be efficient and cost-effective at achieving its general and specific objectives, greatly contributing to reaching out to society and showing the benefits of BIOPOLIS R&I, and contributing to maximise their societal and economic impact. Notwithstanding, the CD&E Plan and its activities will be regularly reviewed based on the feedback received and, on the indicators described above, aiming at permanently enhancing its performance. Specifically, the Plan will be regularly updated and expanded in relation to institutional needs, feedback, impact analysis, and changes in technology, as well as evolving concepts and changes in work practices after implementation of actions. In particular, a major review of the plan is expected midway to project conclusion, while at the end of the project, a Plan for the Dissemination and Exploitation of Results will be produced, which will be implemented beyond project's lifetime. Overall, it is expected that the CD&E Plan will become a living document that can be quickly adapted to provide the best possible basis for effective Communication, Dissemination & Exploitation Activities. Significant changes to the Plan will be carefully summarised in upcoming Implementation Reports.

ANNEX 1 – Acknowledgement of EU funding

Funding by the EU will be acknowledged in all infrastructures, publications, activities and actions developed in relation to the BIOPOLIS Teaming project. In particular, we will use the specifications set out in number 38.1.2, as described in page 57 of the Grant Agreement.

38.1.2 Information on EU funding — Obligation and right to use the EU emblem Unless the Agency requests or agrees otherwise or unless it is impossible, any communication activity related to the action (including in electronic form, via social media, etc.) and any infrastructure, equipment and major results funded by the grant must: (a) display the EU emblem and (b) include the following text: For communication activities: “This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 857251”.

For infrastructure, equipment and major results: “This [infrastructure][equipment][insert type of result] is part of a project that has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 857251”.

When displayed together with another logo, the EU emblem must have appropriate prominence. For the purposes of their obligations under this Article, the beneficiaries may use the EU emblem without first obtaining approval from the Agency.

ANNEX 2 – Specifications for BIOPOLIS Publications

In accordance with EC regulations, all publications directly benefiting from the BIOPOLIS Teaming project will include the following text: *“This project has received funding from the European Union’s Horizon 2020 research and innovation programme under grant agreement No 857251”*.

The following rules will also be followed, as described in pages 48 e 49 of the Grant Agreement:

(a) as soon as possible and at the latest on publication, deposit a machine-readable electronic copy of the published version or final peer-reviewed manuscript accepted for publication in a repository for scientific publications; Moreover, the beneficiary must aim to deposit at the same time the research data needed to validate the results presented in the deposited scientific publications.

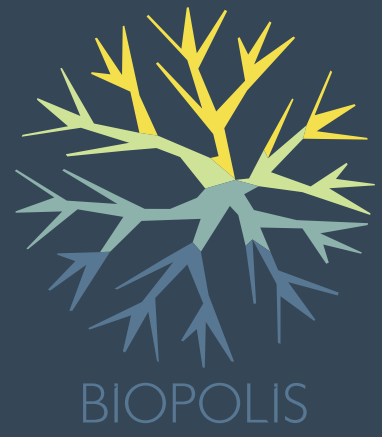
(b) ensure open access to the deposited publication — via the repository — at the latest: (i) on publication, if an electronic version is available for free via the publisher, or

(ii) within six months of publication (twelve months for publications in the social sciences and humanities) in any other case.

(c) ensure open access — via the repository — to the bibliographic metadata that identify the deposited publication.

The bibliographic metadata must be in a standard format and must include all of the following:

- the terms “European Union (EU)” and “Horizon 2020”;*
- the name of the action, acronym and grant number;*
- the publication date, and length of embargo period if applicable, and*
- a persistent identifier.*



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