

Annex 6

Plan for the development and commercialisation of the BLUE CRISTAL portfolio of intellectual property rights

The following document outlines BLUE CRISTAL's strategic and operational plan for developing and commercializing its intellectual property portfolio. It has been prepared following the Intellectual Property Policy and Rules (Annex 4) and the Policy and Rules for the exploitation and commercialization of research results (Annex 5).

The main focus of this plan is to serve as a guideline for BLUE CRISTAL researchers and management staff when setting goals for knowledge valorization and technology transfer indicators for each research activity outcome. By leveraging the research capacity of the leading scientific groups engaged in the ambitious BLUE CRISTAL Work Research Program, the document aims to enhance commercialization capability, leading to sustainable revenue growth by increasing the value of the IP assets.

The IPR portfolio plan is based on three main strategic objectives. The first is to ensure the **high quality of the research program**, which will lead to the development and expansion of the IPR portfolio within the selected main research areas.

Market alignment: ensuring a good fit between IP development with market needs and trends by conducting regular market analyses and collaborating with industry stakeholders

Commercialization effect: Developing efficient commercialization pathways for IP assets by supporting flexible licensing models and forming strategic partnerships to exploit the results in the market.

On an operational level, each WP leader and the BLUE CRISTAL Management and Administrative team should envision appropriate activities for addressing these three primary goals for continuous development and expansion of the IP portfolio.

1. Intellectual Property Development

The BLUE CRISTAL Work program consists of 7 interrelated work packages, which will be implemented by interdisciplinary research teams from all partner universities to ensure holistic problem-solving. Each domain defined in the WP involves top-tier researchers (R4), several experienced researchers (R3-R2), young researchers (R1), and Ph.D. students. All partners' staff members will be encouraged to publish in recognized research journals and participate in prestigious conferences.

In parallel, a culture of innovation will be nurtured through training programs and cross-functional collaboration between researchers, industry partners, SME companies, and startups. Partnerships with research institutions and startups will be established to accelerate IP development.

2. IP Portfolio Management

To facilitate strategic and operational IP management, the BLUE CRISTAL CoC will set up a platform repository enhanced with data and business analysis tools and dashboards for regular monitoring of outcomes and operational processes for managing the IPR portfolio commercialization activities.

2.1. IPR Platform functionality on the BLUE CRISTAL collaborative platform as component of the data center

The implementation of the IPR platform is defined within the WP 7, where the CoC data center will be established. The collaborative platform will have reserved space and specific functionalities for enhancing centralized IP management, IPR tracking, and collaboration. Some additional functionalities for this space include:

- Information section about IPR policies, Q&A, and best practices,
- Contacts and access to TTO and IPR experts for all researchers affiliated with the BLUE CRISTAL;
- Webinars and collection of guidelines and best practices aligned to BLUE CRISTAL Intellectual Property Policy and Rules.
- IPR process management includes tracking patent applications, licensing agreements, and commercialization efforts.
- IPR repository with the collection of IPR assets brief description, providing up-to-date, relevant data.
- Specific services on the collaborative platform supporting additional activities and processes for BLUE CRISTAL IPR portfolio development and management.
- The platform can support seamless technology transfer between the CoC and industry partners

2.2. Operational process management and accountability

To manage the intellectual property rights (IPR) of BLUE CRISTAL, a simple process is established. An accountable IPR/TTO (Technology Transfer Office) officer from the CoC (Center of Competence) is assigned to oversee each IPR asset and evaluate its potential for commercialization on a regular basis. This process begins with the registration of an IPR asset in the platform, which can be initiated by anyone associated with BLUE CRISTAL's research, with or without the involvement of the WP (Work Package) team leaders.

Additionally, all BLUE CRISTAL WP leaders are responsible for helping their staff members collect IPR outcomes and store them in a centralized repository. The business and commercial experts, along with the IP authors, will create strategies for commercializing the RTD (Research and Technological Development) outcomes.

The BLUE CRISTAL Management Board will oversee the IPR repository and determine ways to use it for new commercial products and services. They will also manage the intellectual property portfolio.

3. Market alignment

To ensure a good fit between BLUE CRISTAL's leading research program and market alignment on national and international levels, the BLUE CRISTAL partners will take advantage of the experience and practice of the existing organization's structures for the exploitation and commercialization of research results. Considering that Technology Transfer Offices (TTO) play a pivotal role in bridging the gap between academic research and real-world applications, BLUE CRISTAL CoC will build on the experience of the established TTO structures to facilitate IPR portfolio development and management and facilitate the effective transfer of technologies and intellectual property from the research environment to the commercial sector, driving innovation and economic impact. As identified in Annex 5, BLUE CRISTAL partner organizations have already set up TTO structures, and thus BLUE CRISTAL will closely collaborate with them:

- Centre for Technology Transfer at Ruse University established in 2008;
- Centre for Technology Transfer at Burgas University, ICT Cluster Burgas and others;

When necessary, additional expertise will be sought from the Foundation "Junior Achievement" Bulgaria, Joint innovation centre at BAS (EEN member), South-East DIH, and EURAXESS staff. The capacity of the partner specialists to consult researchers on all IP, TT, and commercialization processes will be strengthened during the project, and experienced professionals with expertise in intellectual property (IP), business development, and legal affairs will be attracted for any specific case.

Commercialization Effect

4. Establishing IPR models and priorities

The partners of the BLUE CRISTAL CoC will set relevant priorities to support the commercialization of intellectual property rights (IPR). Firstly, all related staff will receive specialized training to better understand and consider the best commercialization paths for the licensed technologies. Making connections and facilitating informal networking with experienced IPR experts and researchers will further ensure a smooth transition from the laboratory to the market. On a more structural level, the CoC will follow a clear patenting strategy that formulates a path for patenting aligning with the center's research goals and commercialization objectives. The BLUE CRISTAL will prioritize inventions with high market potential and strategic relevance. More flexible licensing models will be assigned to cater to diverse industry needs. The licensing agreements will be tailored to suit the characteristics of each technology, considering factors like exclusivity, territory, and royalty structures. The CoC will collaborate with legal experts to negotiate favorable licensing agreements that balance the interests of all parties involved..

5. Strategic collaboration frameworks and contractual research with companies:

BLUE CRISTAL partners need to consider how to facilitate knowledge transfer from established strategic contacts with companies. When appropriate, a detailed framework for RTD and IPR asset management collaboration can outline the scope, goals, and

responsibilities of both parties. For each Industry partnerships, BLUE CRISTAL partners can explore various collaboration models, such as joint ventures, research consortia, and strategic alliances. Implement clear procedures for the licensing and transfer of intellectual property resulting from collaborative projects with businesses. Explore joint funding mechanisms for collaborative research projects with companies, especially in the schemes of SMEs, vouchers schemes and others;

6. Building capacity of the research staff

Additional plan will ensure capacity building and training program for incentivizing researchers on technology disclosure and commercialization processes. It will be developed as a task within CMs and will focus on:

Researcher Exchange Programs and Mentoring Programs:

- Develop researcher exchange programs that allow academics to spend time working in industry and vice versa.
- Establish partnerships with companies willing to host researchers and share expertise.

Skills Transfer Initiatives:

- Implement initiatives for skills transfer, allowing researchers to gain insights into industry practices.
- Encourage industry professionals to contribute their expertise to academic research projects.

Joint Training Programs:

- Collaborate with industry partners to design joint training programs that address the skills needed in both academia and industry.
- Ensure that researchers are equipped with practical insights into real-world challenges.