

Annex 5**to the Development and sustainability programme with a business plan
Policy and rules for exploitation and commercialization of research results,
including a knowledge and technology transfer structure****PREAMBULE**

The Competence Centre on Technology Transfer (CC TT) was launched in 2018 by the Joint Research Centre (JRC) of the European Commission and is the recognized reference point for expertise on technology transfer for the European Commission and the institutions of the European Union. The CC TT provides technology transfer policy-related expertise and services to the European Commission and other institutions of the Union and operational support services to a broader range of stakeholders, including member states and individual research institutions facing technology transfer-related challenges and issues. The CC TT takes a holistic approach to the technology transfer process and provides services in three interconnected domains, capturing a complex value chain.

These are:

- Activities in the area of capacity building
- Provide expertise and policy support in technology commercialization, including IP management
- Support programs and projects for capacity building, including upskilling TT professionals

It is well known that the EU is a leader in the production of science. Unfortunately, most research results are not transferred to the market and broader society. This is because of several factors, including the lack of professionalized technology transfer project managers at universities, research centers, and related organisations. The CCTT provides training and knowledge to create a support system for commercializing research results. We support the development of the necessary technical competencies, human capital, and skills to successfully commercialize research and early-stage technologies. Our support entails providing knowledge, methods, and tools for identifying, evaluating, and protecting technologies, managing intellectual property rights, developing business, and negotiating commercial deals. Upskilling prepares practitioners to actively engage with different players in the innovation ecosystem and support successful technology transfer.

The transfer, exploitation, and commercialization of public research results is a crucial science, technology, and innovation policy area. In the current context of fiscal austerity and competition from new players in many countries, universities and public research institutions (PRIs) are under pressure to increase the economic outputs and impact of their investments in public research.

Although knowledge and research produced by the public research system are diffused through various channels like the mobility of academic staff, scientific publications, conferences, contract research with industry, and licensing of university inventions, much of the policy focus

has centered on promoting knowledge transfer through a dual model of commercialization. This model is characterized by supply-push forces, where universities and PRIs transfer academic inventions via the sale, transfer, or licensing of intellectual property, often on an exclusive basis, to existing firms or new ventures (e.g., academic spin-offs). The converse of the supply-push model is a demand-pull model based on contract research or collaborative research and development (R&D) where industrial actors solicit universities and PRIs to find solutions to production and innovation problems.

Major aspects

Building the required institutional capabilities at universities and PRIs is central to public efforts to commercialize public research. In many countries, universities and PRIs continue to base the productivity of TTOs on traditional measures of technology transfer such as patents and licenses. They represent a very small share of the knowledge that is transferred from universities and PRIs. In response the CoC has to combine the institutional and legal support for technology transfer and commercialization with support to entrepreneurial channels for commercializing knowledge: as existing incubators, and accelerators, as well as to plan and implement mentoring, and training for academic entrepreneurs, and policies to promote venture through the data center platform which can link angel investors and small and medium-sized enterprises (SMEs). These previously distinct models or paths for commercialization are becoming more integrated, with research and innovation relying on greater “openness” and collaboration both upstream, on the research side, and downstream, on the commercialization path. Openness in science (open science) increases the channels for transferring and diffusing research results. Conversely, open innovation in business firms creates a division of labor in sourcing ideas and their exploitation. This has led to intermediaries that broker commercialization activities, notably intellectual property (IP) services.

Industrial and other commercial partnerships

In order to reach the project research objectives, and to support the ISSS through high quality of research, it is essential to achieve a greater integration of the research and innovation systems in Bulgaria. The BLUE CRISTAL CoC will aim primarily for strategic partnerships with the industries, which suggests launching joint projects for new scientific knowledge generation and its implementation for design of new products and offering them in the market. These projects will create preconditions for closer integration between universities and industry related to staff exchange, joint supervision of PhD students and mentoring of young researchers working on the joint projects, optimal use of the CoC research infrastructure and the created scientific databases. Within the project, the main directions of cooperation with the industry are outlined by the scientific work packages.

Partnership with innovation intermediaries

The knowledge transfer from the CoC to the industry will be carried out mainly in collaboration with intermediaries in the innovation system (clusters, innovation centers, technology transfer centers, branch organizations, etc.), with which will be undertaken joint activities according to the specific regional industrial needs. A special attention will be paid to organizations supporting start-ups and building innovation and entrepreneurship competencies of young people and employees.

Partnership with state bodies and local authorities

The CoC will seek collaboration with them targeted at support of the development of ecosystem-based local and regional sustainable development of the adjacent costal territories of the Danube River and the Black Sea, and offering advanced electronic services to citizens and businesses, as well as for development of smart urban environment. Within the project as a main collaboration form is considered launching joint pilot projects to test the research results in a real environment. A special role will have Varna Municipality, Ruse Municipality, Burgas Municipality, where the key project partners have headquarters.

Partnership with NGOs

In order to foster the digital transformation, expand the participation and create prerequisites for environmentally friendly, energy efficient and resource responsible policies, collaboration with NGOs in the field of the specified WPs will be sought. With these organizations will be organized joint activities for raising the awareness on the contribution of science to the development of the economy and society, and to form a more attractive image of researchers and attract young people to research careers.

Partnerships with other research organizations, universities and think-tank groups

Of particular importance will be to expand the collaboration with other research organizations and universities in the country, so as to provide them opportunities to benefit from the research results of the project and the established research infrastructure and scientific databases of the BLUE CRISTAL CoC. The knowledge transfer to the scientific community in the country will facilitate launching partnerships for new research projects of common interest for the development of science in support of the regional and national priorities of ISSS. The partners universities/institutes have collaborated for years with research organizations and universities in the areas of BLUE CRISTAL WPs. Within the project will be discussed with them joint initiatives for knowledge transfer and further development of new project ideas. In addition to the mechanisms for sustainable partnerships, opportunities will be sought to ensure continuity of joint project funding. The BLUE CRISTAL CoC will actively seek opportunities to expand its regional, national, and European funding sources. Various grant opportunities and financial instruments will be used, such as:

- European funding programs for research and innovation;
- National funding programs for research and innovation;
- Programs for financing public-private partnerships;
- Grants for cooperation between science and business;
- Financial instruments, including venture capital funds.

The envisaged policy in the Preamble will be based on the following framework for commercialization, knowledge and technological transfer of the BLUE CRISTAL CoC described below.

CHAPTER ONE

General

Article 1. These Regulations regulate the relations between the Competence Center—BLUE CRISTAL and the academic and student staff of its partners and define the rules for the exploitation and commercialization of scientific research and innovative discoveries, as well as the transfer of technologies from the Steering Committee into commercial practice.

Article 2. The relations under these Regulations are regulated by a structure (office) for transferring knowledge and technologies to the BLUE CRISTAL CoC - IP& knowledge transfer unit and with the support of the Centers for Technological Transfer and Entrepreneurship of Ruse University and the similar centers within the structure of Burgas Universities and the BAS

Article 3. Objects of commercialization are intellectual property, inventions, utility models, trademarks, as well as original software, methods, apparatuses, samples, and works of science regulated in the Law on copyright and its related rights.

Article 4. In the relevant contracts (employment, civil, doctoral, as well as for the training of bachelors, masters, interns, etc.), the rights and obligations of the parties to them regarding the creation and use of objects subject to commercialization must be regulated in detail by each CoC partners in alignment to the policy, the rules and procedures of the CoC

Article 5. (1) The present policy and the related CoC regulations and internal rules do not apply to scientific products developed for the scientific development of their creators, such as articles in scientific journals, conference reports, and teaching aids, the writing of which was not assigned, financial resources, and the intellectual and material property under the BLUE CRISTAL project or property of the BLUE CRISTAL Association.

(2) This regulation does not apply to commercializing objects of intellectual property that have the nature of classified information and are subject to other rules.

(3) This policy and the related CoC regulations and internal rules do not apply to the commercialization of objects of intellectual property, which are subject to agreement with ministries and state bodies and their regional and local sub-structures according to their specific rules.

Article 6. (1) The principles of commercialization emphasize the interdependence and cooperation between scientific circles and industry based on innovation.

(2) The success of this collaboration depends on the methods and incentives provided to researchers to carry out technology transfer, i.e. the fair distribution of patent licensing revenues between the CoC and scientists, which in turn represents the incentive that helps develop formal technology transfer;

(3) An indicator of the success rate of the proposed methods is the scale of commercial exploitation of patents filed by researchers, followed by increased innovativeness of enterprises.

Article 7. (1) The CoC, through its IP&Knowledge Transfer Unit, is the applicant for the objects for registration and protection before the Patent Office of the Republic of Bulgaria.

(2) The inventor/author has the right to be included in the application for registration of the object of intellectual property under conditions regulated by contract.

Article 8. (1) The structure for the transfer of knowledge and technology after registration of the intellectual product offers the interested persons (researcher, unit, CoC) a method for the commercialization of the product.

(2) A researcher (or a group of researchers) through an Agreement will accept the form of commercialization of the results of scientific research, innovative discoveries and know-how proposed by the IP&Knowledge Transfer Unit.

Article 9. (1) If the parties do not agree otherwise, the mandatory trading rules will apply. Under these default rules, when a member of scientific staff informs the CoC through the IP&Knowledge Transfer Unit of research results and innovative discoveries and related know-how, the CoC will have three months to reach a decision on their commercialization.

(2) If the CoC through the IP&Knowledge Transfer Unit does not decide or decides not to commercialize the results, it will be obliged to enter into an agreement with the researcher to transfer the rights to the results for a nominal fee. In this case, the CoC will be entitled to 25% of the revenue received by the researcher.

(3) If the researcher accepts the proposed agreement, he or she will be entitled to 50% of the commercialization proceeds.

CHAPTER TWO

Methods for commercializing research and innovation discoveries

Article 10. The transfer of technologies created within the framework of the CoC will be carried out through contracts with external contractors and/or through start-up companies established within the CoC.

Article 11. (1) Commercialization on the basis of contracts with external contractors includes the sale to the industry of the results of scientific research and innovation discoveries and the related know-how or licensing through the IP & Knowledge Transfer Unit to the CoC.

(2) The rights of each of the parties (researcher, unit, CoC) reflected in the Agreement, as well as the ratios in which the revenues from commercialization will be divided, are in accordance with the CoC Intellectual Property Policy and Regulations.

(3) Revenues from the commercial realization of the objects of intellectual property obtained as a result of contracts with external contractors are distributed as follows:

50% for the authors of an invention, useful model, industrial design, software, or database, as remuneration for using the intellectual property of the Partner:

20% in CoC's structural unit where the object of intellectual property was created;

30% for the development of CoC's innovation activity and operational maintenance and/or upgrade and/or development of the distributed infrastructures of the CoC under Article 12 of Annex 4 para (1) Indirect commercialization includes the creation of wholly-owned companies for the implementation of the results of scientific research and innovation discoveries and related know-how.

(4) Revenues from using intellectual property (IP) include one-off and periodic payments under license agreements and payments related to the transfer of IP rights owned by the CoC or its members.

(2) The creation of start-up ("spin-off") companies to the units of the Structure for the transfer of knowledge and technologies is foreseen through a contribution of the results of the research and development work and the know-how related to them.

(3) Application for state financial support of start-up companies based on high-tech scientific developments through various risk financing instruments.

Article 13. (1) The net profit from the commercial realization of the objects of intellectual property is formed on the basis of invested funds for registration and maintenance of the protection of the given object and received income from the CoC.

TRANSITIONAL AND FINAL PROVISIONS

§ 1. The models of the forms under these policies and regulations are approved by the SC of the CoC.

§ 2. In the Regulations, the rights and obligations of the partners for the commercialization of the objects of intellectual property owned by the CoC are regulated, if it does not contradict the current regulations.