



ANNEX C1bis: Twinning Light Fiche

Project title:

Strengthening Capacities and introducing EU practices for sustainable operation and management of the BIO4 Campus

Beneficiary administration:

Ministry of Science, Technological Development and Innovation

Twining Reference:

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EU funded project

TWINNING TOOL

Acronyms and Abbreviations

AP	Action Plan
CEB	Council of Europe Development Bank
CFCU	Department for Contracting and Financing of EU Funded Programs
CIR	Common Implementing Regulation
EEA	European Economic Area
EC	European Commission
EDP	Entrepreneurial Discovery Process
EUD	European Delegation
EU	European Union
GoS	Government of the Republic of Serbia
ICT	Information and Communication Technology
IPA	Instrument for Pre-Accession Assistance
JRC	Joint Research Centre
KPI	Key Performance Indicator
LTD	Limited Liability Company
MS	Member State
MSTDI	Ministry of Science, Technological Development and Innovation
OT	Others
OPS	Operational Side Letters
PL	Project Leader
PM	Prime Minister
PSC	Project Steering Committee
R&D	Research and Development
RS	Republic of Serbia
SDG	Sustainable Development Goal
SEE	Southeaste Europe
STEM	Science, Technology, Engineering, and Mathematics
STI	Science, Technology, and Innovation
STP	Science and Technology Park
UN	United Nations
UNIDO	The United Nations Industrial Development Organization
UN-IATT	UN Interagency Task Team on STI for the SDGs
WBIF	Western Balkan Investment Fund
4S	Smart Specialization Strategy of the Republic of Serbia

1. Basic Information

1.1 Programme: Annual Action Plan for the Republic of Serbia 2022 – Direct management with ex-ante control.

1.2 Twinning Sector: SO

1.3 EU funded budget: 250.000 EUR

1.4 Sustainable Development Goals: SDG 9 - Industry, Innovation and Infrastructure

Being strongly committed to the SDGs achievements, Serbia has become the first country developing Science, Technology and Innovation (STI) for SDGs Roadmap (Smart Specialisation Strategy (4S) Action Plan 2021-2022) based on the smart specialisation approach while participating in the United Nation's Global Pilot Programme on STI for SDGs Roadmap. The methodological and policy-making efforts on Smart Specialisation for sustainable development, supported by the Joint Research Centre (JRC) and United Nations Industrial Development Organization (UNIDO), resulted in the inclusion of the SDGs component in the 4S and in the development of the STI for SDGs Roadmap. Being successfully designed and implemented, the Serbian Roadmap and Serbia's experience are effectively used as an example of best practice in the development of Roadmaps for sustainable development and were included in the "Guidebook for the Preparation of Science, Technology and Innovation for SDGs Roadmap" (the Guidebook) (UN-IATT and EC/JRC, 2021).

- SDG 9 Industry, Innovation and Infrastructure – envisions building resilient infrastructure and promoting inclusive and sustainable industrialization driven by innovation. The goal includes eight sub-goals that are monitored over twelve indicators. In Serbia, based on the data of the National Statistical Office, it is possible to monitor five sub-objectives and seven indicators.

Innovative solutions empower us to tackle agricultural challenges, optimize resource usage, and promote sustainable practices, aligning directly with SDGs on zero hunger and sustainable cities. Bearing in mind the impact that science, technology and innovation have on society as a whole, the science area indirectly contributes to the following Sustainable Development Goals:

- SDG 3 Good Health and Well-Being – Through investments in biotechnology, biomedicine, and life-science innovation, Serbia contributes directly to improving population health and healthcare outcomes. The BIO4 Campus, as a regional hub for life sciences, supports research on advanced diagnostics, personalised medicine, and sustainable healthcare solutions, fostering cross-sector collaboration that aligns with SDG 3 targets on universal health coverage and access to quality healthcare services.
- SDG 4 Quality Education – By strengthening the connection between education, research, and innovation, the Government of Serbia promotes quality education at all levels and supports lifelong learning. The BIO4 Campus will enhance higher-education programmes and create new opportunities for training, mobility, and skills development in cutting-edge scientific fields, directly contributing to SDG 4 objectives on inclusive and equitable education and the development of relevant skills for sustainable employment.

- **SDG 5 Gender Equality** – Of the total number of researchers who are part of the scientific community of the Republic of Serbia, 52.3% are women. This is the result of support programs implemented by the Ministry for many years.
- By implementing scientific research support programs in the field of green transition, there is an indirect contribution to the following sustainable development goals:
SDG 7 – Available renewable energy;
SDG 11 – Sustainable cities and communities;
SDG 13 – Climate Action and
SDG 15 – Life on Earth.

Innovation, technology, and science play a pivotal role in accelerating the implementation of the SDGs. Embracing cutting-edge solutions, promoting research and development, and leveraging digital advancements can revolutionize approaches and unlock new pathways towards sustainable development.

2. Objectives

2.1 Overall Objective:

To support establishment of the BIO4 Campus, as a renowned hub for cutting-edge research, innovation and collaboration in the life sciences within the Southeast Europe (SEE) region.

2.2 Specific objective:

To strengthen capacities to operate and manage the BIO4 Campus and increase international visibility.

2.3 The elements targeted in strategic documents i.e., National Development Plan/Cooperation agreement/Association Agreement/Sector reform strategy and related Action Plans

PM's Manifesto – This program states that Serbia has united its best capacities and has gathered more than 1,000 PhDs and nearly 5.000 students from seven faculties and nine scientific institutes in the BIO4 Campus, along with students and business community, who will create a unique place of creation by bringing together talent, knowledge and infrastructure in one place. The BIO4 Campus is new European centre for the development of new technologies that shape both the present and the future. BIO4 Campus will additionally positively change the living conditions, improve science and education, but also strengthen the economy, competitiveness, and be the centre of Serbia's economic development in the years and decades to come.

Smart Specialization Strategy of the Republic of Serbia for the period 2020 – 2027 and belonging Action Plan - The Smart Specialization Strategy is one of the key documents adopted by the Government of the Republic of Serbia in order to develop a knowledge-based society. The Strategy is an important instrument for improving the innovation and research ecosystem and directing future investment in industrial areas identified as priority areas in this process. The Strategy includes the plan on guiding the industries that were recognized as priorities during the Strategy development process: Food for Future, Future Machines and Manufacturing Systems, ICT and Creative Industries.

Bearing in mind that the improvement of research and innovation capacities is one of the most important priorities of the Smart Specialization Strategy of the Republic of Serbia, the Action Plan of the Strategy for the period 2023-2025 supports the continuity of scientific research and further development in the field of biomedicine and bioinformatics, which was already started in the previous period. In this sense, the central and one of the most important investments of the Action Plan for the period 2023-2025 is the investment in the further development of the bioeconomy through the construction of the BIO4 Campus for bioinformatics, biotechnology, biodiversity and biomedicine (BIO4 Campus). Throughout the Entrepreneurial Discovery Process (EDP), conducted during developing process of new Action Plan of the Strategy for the period 2023-2025, the huge growing importance in the fields of biomedicine, bioinformatics, biotechnology and biodiversity is recognized for the scientific ecosystem in Serbia. There is a huge potential, several scientific research institutes expressed interest to be tenant in BIO4 Campus including faculties and private sector.

Strategy for the Development of Start-up Ecosystems of the Republic of Serbia for the period 2021-2025 - In order to economically strengthen the Republic of Serbia, encouraging the start-up ecosystem has been recognized as one of the Government's priorities. By creating innovations that contribute to the transformation of the economy and the creation of new jobs, start-ups increase the export of products with high-added value and contribute to economic growth.

Strategy on Scientific and Technological Development for the period 2021 - 2025 "The Power of knowledge" S&T Strategy (2021-2025) - The Strategy on Scientific and Technological Development for the period from 2021 to 2025 "The Power of knowledge" was adopted by the Government of the Republic of Serbia at the session held on February 10, 2021, based on The Law on Science and research and on The Law on Innovative activity. This Strategy represents a strategic instrument that aims to improve the welfare of the citizens of the Republic of Serbia, leveraging scientific and technological development. The general objective of aforementioned Strategy is to accelerate the development of the Republic of Serbia through improvement of quality and efficiency of science, technological development and innovation, and also through further integration into the European research area. Therefore, this Strategy adopts measures which will provide the necessary conditions for the dynamic development of the scientific research and innovation system that helps to reach the standards of developed economies through regulation of targeted levels of financing, and development of human resources and infrastructure.

Furthermore, this Strategy envisages additional strengthening of scientific and research institutions as well as investment in infrastructure in order to be recognizable at the regional and European level and capable of solving complex problems independently. In that respect, this Strategy foresees investments in new science and technology parks, centres of excellence and institutes. For this reason, The Strategy is of vital importance in the context of the construction of the BIO4 Campus, which will combine IT and biological sciences, and represents four pillars of the core R&D activities: biodiversity, bioinformatics, biotechnology and biomedicine. In that manner, it will be possible to significantly boost activities of the scientific research and to promote and enable cross-disciplinary approach focused on new and cutting-edge technologies and integrated services as result of collaboration across disciplines and organizational units.

The strategic framework has a particular focus on the most relevant societal challenges, including health, food and water, defence and security, energy, environmental protection, and climate change, fostering national identity and improving state decision-making, as well as priority technologies in the areas of ICT and artificial intelligence, innovative industries and Industry 4.0, and also emerging technologies of strategic interest.

Economic Reform Program of the RS for the period from 2023 to 2025 – Structural reform identified for the period 2023-2023 includes - Creating conditions for the development of biosciences and bioeconomy through the construction of the BIO4 Campus which aims to support intensified development in the fields of biotechnology, biomedicine, bioinformatics and biodiversity. The planned activities within the framework of the structural reform include the construction of the BIO4 Campus, connecting the BIO4 Campus tenants and service users with international scientific and corporate partners, the implementation of the transformation plans of the scientific research institutes and the raising of human capacities and competencies.

3. Description

3.1 Background and justification:

In August 2021 the Serbian Government adopted an initiative on the formation of a BIO4 Campus in Belgrade which is foreseen as a platform for multidisciplinary R&D for life sciences. It will be a vibrant concentration of researchers, innovators, entrepreneurs, students and industry gathered around knowledge and infrastructure. Four pillars present the core R&D activities of the BIO4 Campus: biodiversity, bioinformatics, biotechnology and biomedicine. BIO4 campus will be home to different stakeholders including faculties, research institutes, the start-up community and the biopharma industry with all supporting facilities.

The rapid advancement of technology, coupled with its intersection with biology, is ushering in the next wave of technological revolution. In this transformative era, Serbia stands as a strong contender, equipped with several inherent strengths positioning Serbia favourably to actively participate in the bioeconomic revolution. With a focus on quality STEM (science, technology, engineering, and mathematics) and life science education, advanced scientific institutes, and thriving centres of excellence in bioinformatics and biotechnology, Serbia boasts a solid foundation for scientific progress. Additionally, its rich biodiversity and supportive government policies and incentives for innovation and industry cooperation further enhance its potential. Leveraging these strengths, Serbia is embarking on the establishment of the BIO4 Campus—an ambitious and multidisciplinary project that will unite academic institutions, scientific research centres, business-oriented organizations, and R&D facilities. By bringing together key stakeholders and fostering collaboration, the BIO4 Campus aims to attract industry partners, fuel innovation, and drive sustainable economic growth. Moreover, it will play a pivotal role in transforming the healthcare system by facilitating the adoption of modern diagnostics and data-driven treatments. With state-of-the-art facilities and a commitment to scientific excellence, the BIO4 Campus is poised to shape the future of bioeconomic development, not just in Serbia but also within the broader SEE region. Regional dimension of the BIO4 Campus will provide for better collaboration between pre-accession countries in the fields of biomedicine, transfer of technology and exchange of students and researchers in the bio-science field.

BIO4 LTD Belgrade was established by the Government of the Republic of Serbia in 2023 as the 100% Government owned legal entity, designated for operational and strategic management of the BIO4 Campus and building the ecosystem. BIO4 team currently counts around 15 professionals, whose activities cover developing biotech ecosystem in Serbia, establishing and nurturing industry relations, fostering collaboration between science and industry, fostering international collaboration and putting Serbia on a global biotech map and increasing the visibility of the ecosystem. Along with that, members of the BIO4 LTD team are actively involved in activities related to the development of the concept and technical documentation for the infrastructure of the Campus. The team will be further expended according to the upcoming needs of the BIO4 Campus and ecosystem. In addition to BIO4

LTD staff, the existing personnel of BIO4 Campus tenant institutions—including research institutes and university faculties already engaged in the life sciences—will actively participate in and benefit from the Twinning Light project activities. These researchers, laboratory managers, and administrative staff represent the core group to be trained in areas such as Core Facility management, business models, and collaborative practices, ensuring that the project delivers tangible and lasting capacity-building outcomes from the very start of implementation.

Project technical documentation has been finalised, and the “no-objection” on the tender documentation was issued by the Council of Europe Development Bank (CEB) in July 2025. BIO4 Campus will occupy close to 20 hectares of land in a part of Belgrade which already has a substantial infrastructure in traditional life sciences with two major institutions in this field (Institute for Virology, Vaccines and Sera “Torlak” and Medicines and Medical Devices Agency of Serbia) and the current Faculty for Pharmacy and Institute of Molecular Genetics and Genetic Engineering. When finalized, it is expected that the Campus will be hosting nine scientific institutes, seven faculties from the University of Belgrade, R&D centres of pharmaceutical, biotech and life science companies, an extension of Science-Technology Park Belgrade in the area of bio-start-ups as well as convention and exhibition centres and sport facilities. There will be over 300 labs, including eight Core facilities and over 30 Core Centres scattered around the Campus.

Core facilities:

- Biosafety Level 3 Laboratory (BSL3)
- Centre for Proteins
- Centre for Microscopy and Imaging
- Analytical Instrumentation - Lipidomics and Metabolomics Centre
- Flow Cytometry Centre
- SportsLab facility
- Wastewater Treatment Facility
- Vivarium (animal facility).

Aside from science, research and education function, BIO4 Campus will also represent a hub for incentivizing private companies, which are active in the bio-economy area. Providing the research and testing equipment equal usage for all tenants, ready-to-go research solutions and advisory support, it is expected that start-ups and companies within the Campus will be able to attract more private capital and VC funds.

LEGAL FRAMEWORK

According to national legislation, primary objective of the Ministry of Science, Technological Development and Innovation is to promote and support scientific research, technological development, and innovation to enhance Serbia's overall competitiveness and economic growth. In that respect, the Ministry focuses its efforts on R&D activities and their funding, innovation creation and technology transfer as well as scientific, technological development and improvement, legislation and policies, with the aim of fostering economic development. Two laws of the Republic of Serbia: The Law on Science and Research and the Law on Innovative Activity, regulate this area.

The Law on Science and research stipulates in Article 8 that “The aims of the realization of scientific research activity, among others, are: creation of new knowledge in order to encourage social, technological, cultural, artistic and economic development, increase the social product

and raise citizens' standards and quality of life, improvement of overall scientific research capacities (human resources and institutions), strengthening of international scientific cooperation and contribution in the regional, European and global research area, support for the creation of innovations for the economy, and the transfer of technologies and the strengthening of engineering capacities with the aim of creating comparative advantages on the global market and promoting entrepreneurship.”

The Law on Innovative activity, in article 7, paragraph 1, regulates the duties of The Ministry in this field. On that note, it is stipulated that the Ministry should: establish cooperation with other state administration bodies with the aim of encouraging the development of overall innovation capacities in the Republic of Serbia, propose public policy documents in the field of innovative activity and support programs for innovative subjects and subjects of innovation infrastructure to the Government, achieves international cooperation and takes care of the inclusion of subjects of the national innovation system in the European and international innovation space, in accordance with the national law and approves the annual work program of the Fund for Innovation Activities and Science and Technology Parks as beneficiaries of subsidies and coordinates the compliance of the work program with the foreseen public policy documents under the Ministry's jurisdiction.

3.2 On-going reforms

The Twinning project will be implemented within the framework of Serbia's ongoing reforms in science, technology, and innovation (STI), with a strong emphasis on enhancing the R&D ecosystem and transforming Serbia into a knowledge-based economy. These reforms are driven by national strategic documents, most notably the **Smart Specialization Strategy of the Republic of Serbia (4S) for 2020–2027**, the **Strategy for Scientific and Technological Development of the Republic of Serbia 2021–2025**, titled "The Power of Knowledge", and the **Strategy for the Development of Start-up Ecosystems of the Republic of Serbia for the period 2021-2025**.

These strategies outline the country's commitment to strengthening its STI capabilities, improving research infrastructure, and fostering innovation across key sectors, including biotechnology and life sciences. The **IPA II** also supports these reforms and provides funding for projects that facilitate Serbia's integration into the European Union by aligning its systems and practices with EU standards.

3.3 Linked activities

The Twinning project is closely aligned with several ongoing and previous initiatives, both from the European Union and other international donors, aimed at strengthening Serbia's research and innovation capacity.

EU and International Assistance

EU IPA Projects: Previous IPA projects have focused on enhancing research infrastructure, improving governance in research institutions, and fostering innovation. Notably, the IPA 2014 Project on Innovation and Research in Serbia provided essential support for developing research infrastructure, laying the groundwork for initiatives such as the BIO4 Campus.

Construction of BIO4 Campus will constitute a major infrastructure investment by the Government of Serbia. Total cost of the project (including construction works and supply of equipment) is estimated at EUR 676 million. Financing will be secured through Government

funds complemented with loans from **the Council of Europe Development Bank (CEB), European Bank for Reconstruction and Development (EBRD)** and other sources. The infrastructure part of the project has been nominated for co-financing from **WBIF funds** (through the Reform and Growth Facility) and the final decision is expected in fall 2025.

Private Sector Engagement: The private sector, particularly within the biotech and pharmaceutical industries, has shown strong interest in the BIO4 Campus. Numerous companies are already collaborating with Serbian research institutions, and the Twinning project will enhance these partnerships by connecting the BIO4 Campus to relevant experts and institutions from EU.

Additionally, **Serbia SDG Investor Map** serves as a guide for investors (both domestic and foreign) offering a comprehensive and strategic framework for aligning their investments with United Nations' SDGs which are a set of 17 global goals aimed at addressing various social, economic, and environmental challenges by 2030. This map is designed to assist investors in identifying investment areas that are profitable but at the same time contribute to sustainable development of the country and world. According to the analysis which combined secondary data research on the existing development needs, country policy priorities, and market opportunities five sectors were identified, among which Healthcare was defined as a potent investment sector. Serbia's proposed SDG investment portfolio consists of thirteen Investment Opportunity Areas (IOA) including Biotechnology & Pharmaceuticals that is in alignment with four pillars of BIO4 activities. This analysis also showed the best position of the Belgrade region in this field. Most of the entities from pharmaceutical branches and the field of R & D in biotechnology are concentrated in the Belgrade region and Vojvodina, where stakeholders from both regions are planned to be included in BIO4 campus.

3.4 List of applicable *Union acquis*/standards:

The European Council granted Serbia the status of a candidate country in 2012. The Stabilization and Association Agreement (SAA) between Serbia and the EU entered into force in September 2013. Since the opening of Serbia's accession negotiations in January 2014, 22 out of 35 chapters have been opened, two of which provisionally closed. (Chapter 25 Science and Research and Chapter 26 Education and Culture).

The new methodology for accession negotiations based on clusters was formally adopted on March 25, 2020. The first Intergovernmental Conference with Serbia was held on June 22, 2021, during which Cluster (Fundamentals) was opened. Subsequently, the Intergovernmental Conference that opened Cluster 4 (Green Agenda and Sustainable Connectivity) took place on December 14, 2021. The negotiation process for Chapter 25 Science and Research is part of Cluster 3 (Competitiveness and Inclusive Growth). The explanatory screening for this chapter was held on October 6, 2014, and the bilateral screening on December 1, 2015. The chapter has been provisionally closed, indicating progress in aligning with the EU *acquis*.

The aim is for Serbia to get best practices from different EU Member States in order to promote faster accession route, but also to promote BIO4 Campus as playground for researchers' goal to reach scientific, technological solutions that are applicable to EU standards in relevant fields.

3.5 Components and results per component

In order to improve existing capacities of the teams managing BIO4 Campus and Core Facilities/Centres and further enhance operations of the BIO4 Campus in Belgrade, this proposed Twinning Light project aims to achieve the following results:

The results:

1. Core Facility Management strengthened: This includes improving operational efficiency, managerial skills training for Core Facility (CF) managers, training of CF managers for using the specific equipment, optimizing resource allocation, and fostering a collaborative and innovative environment among researchers, innovators, and entrepreneurs.

2. Core Facility employees trained: This result highlights the focus on enhancing the skills and competencies of the personnel working in the Core facilities. It includes designing and implementing training programs tailored to the needs of Core facility employees to ensure they have the skills required to operate advanced equipment and perform their roles effectively. This also includes assessing and certifying the proficiency of employees in using specialized equipment, ensuring they meet the required standards and can contribute to the facility's success.

3. Core Business Model enhanced: The project aims to strengthen the core business model of the BIO4 Campus, ensuring its sustainability and long-term success. This will involve conducting a comparative analysis of business models of similar Campuses/Parks in EU, identifying areas for improvement, and implementing strategies to maximize its effectiveness. By doing so, we aim to attract industry partners, promote entrepreneurship, and foster economic growth within the biotech sector.

4. Collaborative partnerships with relevant institutions expanded: To leverage the full potential of the BIO4 Campus, it is crucial to establish strong partnerships and collaborations with other relevant internationally oriented institutions. Through this project, we will actively seek opportunities to connect and collaborate with local, regional and broader international research organizations, academic institutions, industry associations/companies, and government agencies. This will facilitate knowledge exchange, interdisciplinary research, and the development of joint initiatives, ultimately strengthening the overall impact and reach of the BIO4 Campus.

3.6 Expected activities:

Result 1: Core Facility Management strengthened

Activity 1: Implementation of custom-made training programs and workshops covering relevant topics for Core Facilities and Core Centres.

- **Sub activity 1.1** Identification and conduction of proper training programs for Core facility managers;
- **Sub activity 1.2** Identification and organization of proper training programs for core facility employees based on specific equipment and infrastructure in Core facilities within BIO4 campus;
- **Sub activity 1.3** Collaboration with experts and trainers to deliver high-quality training sessions for other core centres that are required for BIO4 Campus.

Activity 2: Communication and dissemination of guidelines and manuals to relevant stakeholders, ensuring their accessibility and understanding.

Result 2: Core Facility employees trained

Activity 1: Implementation of custom-made training programs and workshops covering relevant topics for Core Facilities and Core Centres.

Activity 2: Communication and dissemination of guidelines and manuals to relevant stakeholders, ensuring their accessibility and understanding.

Result 3: Core business model enhanced

Activity 1: Conduct a comprehensive analysis of the operational processes and needs of the BIO4 Campus.

- **Sub activity 1.1** Mapping of campuses and platforms within EU that can serve as examples for the analyses of management model for BIO4 campus;
- **Sub activity 1.2** Analysis of models and best practices for management of Campus;
- **Sub activity 1.3** Develop clear and concise guidelines and manuals covering various aspects of Campus management and public procurement, such as resource allocation, financial management, facility management, project coordination, and administrative procedures.

Activity 2: Communication and dissemination of guidelines and manuals to relevant stakeholders, ensuring their accessibility and understanding.

Result 4: Collaborative partnerships with relevant institutions expanded

Activity 1: Conduct a comprehensive analysis of the operational processes and needs of the BIO4 Campus.

Activity 2: Establish partnerships and collaborations with national and international institutions to create exchange programs.

- **Sub activity 1.1** Develop guidelines and criteria for selecting individuals eligible for exchange opportunities;
- **Sub activity 1.2** Arrange study visit;
- **Sub activity 1.3** Facilitate the logistics and administrative processes for participants, including visa arrangements, accommodation, and travel arrangements.

Activity 3: Conduct a systematic mapping of potential international partner institutions that align with the objectives of the BIO4 Campus.

- **Sub activity 1.1** Initiate negotiation processes and discussions to explore collaboration opportunities;
- **Sub activity 1.2** Facilitate meetings, workshops, and joint research initiatives to foster collaboration and knowledge exchange between the BIO4 Campus and partner institutions.

3.7 Means/input from the EU Member State Partner Administration:

The project will be implemented in the form of a Twinning Light contract envisaged to provide exchange of experience and know-how with a Member State with good practice in the project activities.

The Twinning Partner shall provide an adequate team of experts: Project Leader (PL), responsible for overall coordination of project activities, Component Leaders (CL) responsible for a specific results/activity in the project and short-term experts with suitable knowledge to carry out the described activities.

Profile and tasks of the PL:

The Project Leader from the Member State must be a high-ranking public servant of a Member State with proven experience in management of research infrastructures, innovation campuses and/or intergovernmental organizations. Relevant experience should include oversight of complex facilities, innovation ecosystems, and integration of Core/Shared Facilities into broader institutional and national frameworks. Preferably, the Project Leader should bring expertise in business development and strategic management, as opposed to a solely scientific background, to effectively drive the project's strategic objectives.

As a minimum, the project Leader should be able to dedicate to the project at least 3 days per month, with at least 3 on-site visits. He/she will be supported by his/her Member State administration or intergovernmental organization for logistics, accounting and administrative affairs.

3.7.1 Profile of Expert 1 (Project Leader) - Requirements:

The BIO4 Campus will encompass eight Core Facility Centers, as mentioned above.

In light of this, the Project Leader should possess substantial long-term experience in the management of research and/or innovation infrastructures, life science campuses, or comparable academic or institutional facilities within the EU/EEA. The candidate's background should emphasize strategic and operational management competencies over purely scientific qualifications. Furthermore, the candidate must demonstrate a proven track record in knowledge valorization, particularly in translating research outcomes originating from academic institutions into practical, societal, or commercial impact.

- University degree or equivalent professional experience of 8 years in management, business administration, innovation management, or another relevant field (a scientific or technical background may be considered an asset but is not a requirement);
- Minimum of 3 years of specific experience at leadership and/or strategic management roles within organizations overseeing research infrastructures or innovation campuses comparable in scope and function to those established at the BIO4 Campus.

The PL should possess demonstrable expertise in facilitating cross-sector collaboration, advancing innovative methodologies and services, and ensuring their cohesive integration into the broader context of innovation ecosystems.

PL should be skilled in aligning operational goals with EU research policy priorities, particularly in the context of Twinning actions, as described in Twinning Manual.

Tasks of the Project Leader

- Assuring compatibility with relevant EU requirements for project implementation and dissemination of information and results, especially within context of regulatory, funding, and operational frameworks;
- Ensure that capacity-building and knowledge transfer are embedded in all project activities, with a particular focus on strengthening management skills and business capacities for BIO4 Campus and Core Facility staff;
- Define strategic pillars to guide long-term management and sustainability planning, with a focus on establishing sustainable and resilient funding mechanisms and ensuring the Campus's integration into the broader European innovation ecosystem.

3.7.2 Profile and tasks of Component Leaders:

For each component, one component leader should be designated. He/she will be one of the short-term experts, the most experienced in the related field of the component.

Profile Component Leader 1

- University degree in management, business administration, innovation management or another relevant field (scientific/technical background may be considered an asset) or equivalent professional experience of 8 years;
- Minimum of 3 years of professional experience in Core Facilities, research infrastructures or comparable organizations, with cross-disciplinary exposure and understanding of innovation processes, preferable at managerial position;
- Demonstrated leadership in coordinating collaborative, capacity-building initiatives and facilitating knowledge exchange across institutions;
- Desirable experience in facilitating management training.

Tasks of Component Leader 1

Develop a comprehensive assessment and strategic development plan for Core Facility management at BIO4 Campus, including gap analysis, human resources development, targeted training programs, and a sustainable organizational and operational strategy, in line with the coordinating role of CL described in Twinning Manual.

- Communicate with the beneficiary counter parts regarding the reaching of the expected Result 1;
- Conduct a gap analyses of Core Facility management in BIO4 Campus, covering planned equipment, implementation plans, number and type of facilities, and existing managerial capacities within the ecosystem.
- Prepare a human resources development plan, with clear pathways for strengthening managerial and technical skills;
- Define a training plan for Core Facility managers, including targeted modules (e.g. drafting mission, vision and strategy of Core Facility Centre);
- Develop a comprehensive strategy for Core Facility management in BIO4 Campus, covering organizational structures, staffing needs, sustainability and resource management (infrastructure and funding);
- Map potential EU match-making Core Facilities for knowledge exchange and managerial training opportunities;
- Integrate recommendations for collaboration models into the Core Facility manager development plan, ensuring career advancement and exposure to international best practises;

- Drafts concise guidelines and manuals for Core Facility operations, including budget planning, equipment procurements, fee structure, training frameworks, and collaboration mechanisms with industry, academia, other national institutions, tenants;
- Organize and facilitate workshop for relevant stakeholders of beneficiary country for dissemination and proper understanding of guidelines, procedures and manuals;
- Organize and facilitate training programs for Core Facility managers.

Profile Component Leader 2

- University degree in a relevant scientific or technical field or equivalent professional experience of 8 years;
- Minimum of 3 years working experience in Core Facilities and Core/Shared Centres, research infrastructures or comparable organizations, with cross-disciplinary exposure and understanding of innovation processes, preferable at managerial position;
- Proficiency in coordinating techniques and technologies, and service integration across facilities;
- Knowledge of safety protocols in research;
- Experience in designing and delivering trainings for researchers and staff, including experimental design and data analysis.

Tasks of Component Leader 2

The Component Leader shall conduct a gap analysis of existing and planned equipment, services, and staff competences at the BIO4 Campus Core Facilities and Core/Shared Centres; identify training needs and capacity gaps; design the training scope, program, and trainer selection accordingly; and define the number and profiles of employees to be trained – all tasks performed in line with the coordinating role of CL described in Twinning Manual

- Conduct a gap analysis of provided and/or planned equipment, services and existing staff competences at the BIO4 Campus, covering both Core Facilities and Core/Share Centres, and identify training needs and capacity gaps;
- Design training scope, program and selection of trainers based on the gap analysis;
- Define the number and profiles of employees across Core Facilities and Core/Shared Centres to be trained;
- Provide recommendations and templates for workflows and service integration, aligned with international best practices;
- Provide guidance on safety protocols and standards related to instrumentation and analyses;
- Introduce methodologies for applying standard operating procedures (SOPs) and electronic laboratory documentation (lab notebooks);
- Organizes and facilitate sessions to staff and users on analytical techniques and instrument operation;
- Organizes and facilitate workshops for employees for dissemination and proper understanding of procedures, manuals, workflows.

Profile of Component Leader 3

University degree in management, innovation, business administration or another relevant field (scientific/technical background may be considered an asset) or equivalent professional experience of 8 years;

- Minimum of 3 years professional experience in business development, international collaboration or management of Core/Shared Facilities, research infrastructures or comparable organizations, , preferably with direct involvement in inter-institutional and international partnerships that resulted in knowledge valorization;

- Strong knowledge of the research and education ecosystem in EEA.

Tasks of Component Leader 3

Map and analyse relevant EU/EEA campuses and platforms with comparable core/shared facilities to BIO4 Campus, and, in cooperation with beneficiary counterparts, define criteria for selecting the most relevant partners for knowledge exchange and collaboration in knowledge valorization business models. Based on this analysis, provide recommendations on organizational setup, financing, legal frameworks, development plans, and sustainable partnership mechanisms that could inspire and be adapted to the BIO4 Campus context. All tasks are to be planned and performed in line with the coordinating role of CL described in Twinning Manual.

- Communicate with the beneficiary counterparts regarding the reaching of the expected Result 3;
- Map and shortlist relevant campuses/platforms within the EU/EAA with comparable Core/Shared Facilities to BIO4 Campus;
- In cooperation with beneficiary counterparts, define criteria for selecting the most relevant partners for exchange of knowledge and collaboration in area of various business models relevant to knowledge valorization;
- Provide recommendation on the features of selected campuses in terms of organizational setup, finances, legal services, development plans, sustainability and other characteristics that may serve as inspiration to BIO4 Campus;
- Identify models of cooperation and partnership mechanisms that have proven successful in the EU/EEA and are applicable to BIO4 Campus context;
- Organize and facilitate meetings and establish communication with selected partner infrastructure;
- Prepare a practical list of potential “match-making” partners and propose a framework for initiating collaboration;
- Draft recommendations for BIO4’s international collaboration and corporative relations strategy in the pre-opening phase (focus on first 3-5 years).

Profile of Component Leader 4

- University degree in management, business administration, international relations or another relevant field (scientific/technical background may be considered an asset) or equivalent professional experience of 8 years;
- Minimum of 3 years of professional experience in business development or management of innovation campuses, research infrastructures or comparable organizations;
- Proven experience in establishing collaborative arrangements with other similar organizations, academia, industry;
- Legal knowledge of similar research infrastructures in EEA;

Tasks of Component Leader 4

Tasks described in Twinning Manual for CL should be performed so to lead the assessment of BIO4 Campus’s current processes and development potential, identifying strategic opportunities for international collaboration. Also, CL4 should propose and support the establishment of partnerships with EU/EEA institutions, including recommendations on legal frameworks and contributions to drafting formal collaboration agreements

- Communicate with the beneficiary counterparts regarding the reaching of the expected Result 4;

- Assess the current processes and development perspectives of the BIO4 Campus, identifying opportunities for international collaboration;
- Propose potential partnerships with international institutions and campuses that can serve as role model for BIO4 Campus;
- Recommend appropriate legal and organizational forms for establishing collaborations, partnerships and other linkages;
- Contribute to the drafting of collaboration agreements with identified international partners in EU/EEA;
- Organize and facilitate logistics and administrative processes for participants for meetings and exchanges with relevant institutions;
- Draft proposals for key performance indicators (KPIs) to monitor the success of international partnerships;
- Develop a list of potential international partners with suggested partnership formats and scope of collaboration.

3.7.3 Profile and tasks of other short-term experts:

A pool of short/medium term experts will be available, to support the implementation of activities. The proposed pool of short-term experts is expected to cover all relevant areas targeted under this project and should be identified by the Project Leader in the course of defining the operational side letters (OPS). The short-term experts will work in close cooperation with the PL and the Beneficiary in order to meet the specific objectives as set out above. Terms of reference for short-term expert(s) will be elaborated by Project Leader and the beneficiary counterpart at the work plan preparation stage.

Profile and Tasks of Short-Term Experts:

- University degree in a relevant organizational, scientific or technical field or equivalent professional experience of 8 years;
- Strong communication and teamwork skills to facilitate collaboration across diverse teams.
- Experience in managing or working within a Core facility, research centre or similar institution is highly desirable.
- Familiarity with a range of instruments and associated technologies relevant to their area of engagement is an advantage.
- Ability to oversee equipment maintenance, calibration, and troubleshooting, as applicable to their specific role in the project.
- Strong computer skills and the ability to use relevant software and tools for project implementation.

4. Budget

Maximum budget available for the project is EUR 250.000.

Name of contract	IPA Community Contribution	National Co- financing	Total
Strengthening Capacities and introducing EU practices for sustainable operation and management of the BIO4 Campus	250.000 EUR	/	250.000 EUR

5. Implementation Arrangements

5.1 Implementing Agency responsible for tendering, contracting and accounting (AO/CFCE/PAO/European Union Delegation/Office):

European Union Delegation to the Republic of Serbia

Avenija 19a, Vladimira Popovića 40/V

11070 Belgrade, Republic of Serbia

Phone: +381 11 3083200

5.2 Institutional framework

Beneficiary: Ministry of Science, Technological Development and Innovation, Sector for International cooperation and EU integration; BIO4 LTD

Within the Ministry, the Sector that will be the direct beneficiary of the project is the IPA Unit within Sector for International cooperation and EU Integration. The mission of the IPA Unit as a smaller internal unit within the Ministry is to efficiently plan, implement and monitor IPA projects aligned with research reform initiatives and fostering of innovations.

The priority of the IPA Unit continues to assist further progress and reforms that are needed to pave the way for successful integration into the European Union Research area and economy by assuring the quality of human resources, private sector development and competitiveness. This includes the commitment to the application of high professional standards in IPA programming and project implementation processes in line with the Common Implementing Regulation (CIR) as well as the IPA II Implementing Regulation (Commission Implementing Regulation (EU) No 447/2014 of 2 May 2014).

The BIO4 LTD has been established in 2023 as managing entity for BIO4 Campus by the Government of Republic of Serbia and it will be employing different experts in the future.

Partners: BIO4 LTD, BIO4 Campus tenants

5.3 Counterparts in the Beneficiary administration

5.3.1 Contact person:

Ms Milica VUČEVIĆ

Sector for International Cooperation and European Integration

Position for project programming within the EU Instrument for Pre-Accession Assistance (IPA) in the field of science, technological development, and innovation.

Ministry of Science, Technological Development and Innovation (MSTDI)
22-26 Nemanjina str, 11 000 Belgrade, Serbia
Tel: +381 64 8134 159
E-mail: milica.vucevic@nitra.gov.rs

5.3.2 PL counterpart:

Ms Teodora ILIĆ, Project Manager, BIO4 LTD Belgrade
11 000 Belgrade, Serbia
Tel: +381 64 413 4103
E-mail: teodora.ilic@bio4.rs

6. Duration of the project

The overall execution period of the Twinning contract is 11 months.

The **implementation period of the Action will last 8 months**. The execution period of the contract shall enter into force upon the date of notification by the Contracting Authority of the contract signed by all parties, whereas it shall end 3 months after the implementation period of the Action.

7. Sustainability

Targeted areas of the project support are recognized in **PM's Manifesto, Smart Specialization Strategy of the Republic of Serbia for the period 2020 – 2027 and belonging Action Plan, Strategy for the Development of Start-up Ecosystems of the Republic of Serbia for the period 2021-2025, Strategy on Scientific and Technological Development for the period 2021 - 2025 "The Power of knowledge" S&T Strategy (2021-2025)**.

Establishing BIO4 LTD Serbian government enabled that process of building capacity and competencies for management of BIO4 Campus facilities and centres is done in parallel with infrastructure building (construction). Therefore, project activities will give significant contribution that infrastructure is equipped properly and that management and staff are trained and prepared for all future tenants' needs. Also, collaborative relationships are crucial for successful accomplishing of the BIO4 Campus mission, both international and relationships between national institutions and companies.

8. Crosscutting issues (*equal opportunity, environment, climate etc...*)

This Twinning project related to BIO4 Campus, shall have an equal opportunities policy and do not discriminate against employees in any form like age, gender, or race/ethnicity. Male and female participation in the project will be based on the relevant standards of EU.

- Environmental considerations

Any ecological friendly initiative which can be taken will have to be implemented.

- Communication and publicity

All requirements to ensure the visibility of EU financing will be fulfilled in accordance with R. (EC). N. 718/2007.

9. Conditionality and sequencing

There are no external conditionalities affecting the start and implementation of the Twinning Light Project. However, the project's effectiveness relies on having the designated staff in place from the outset to fully benefit from the planned capacity-building and training activities.

10. Indicators for performance measurement

- Indicator 1: Number of Trained Core Facility managers.
- Indicator 2: Number of trained Core Facility employees.
- Indicator 3: Number of Exchange Opportunities.
- Indicator 4: Number of partnerships established between the BIO4 Campus and international institutions.

11. Facilities available

For the Member State and/or intergovernmental organization experts, the BIO4 Campus will provide a variety of meeting rooms and workshop spaces. These will include rooms of different sizes to accommodate various types of meetings and theoretical workshops. Additionally, lab spaces and equipment from existing labs within the BIO4 Campus' tenant facilities will be available to support their work.

ANNEXES TO PROJECT FICHE

1. Simplified logical framework matrix

LOGFRAME PLANNING MATRIX FOR PROJECT FICHE

LOGFRAME MATRIX (English)				
Overall objective	Objectively verifiable indicators	Sources of verification	Risks	Assumptions
To support establishment of the BIO4 Campus as a renowned hub for cutting-edge research, innovation, and collaboration in the life sciences within the Southeast European (SEE) region	<ul style="list-style-type: none"> - Number of international experts involved in BIO4 Campus activities, - Participation in international projects and research networks and institution - Increased visibility in scientific publications and media coverage 	Reports of the conferences held, news articles, publications		
Specific (Project) Objective(s)	Objectively verifiable indicators	Sources of verification	Risks	Assumptions
To strengthen capacities to operate and manage the BIO4 Campus and increase	Number of collaborations and partnerships established between the BIO4 Campus and external stakeholders	Project final report		Government incentives for RDI remain at

international visibility	Number of training programs and workshops conducted for Campus staff and researchers	MSTDI and BIO4 Campus annual report		their current level or increase BIO4 Campus operational
Results	Objectively verifiable indicators	Sources of verification		Assumptions
1. Core Facility management strengthened 2. Core Facility employees trained 3. Core business model enhanced 4. Collaborative partnerships with relevant institutions expanded	1. Number of Trained core facility managers: - Increased number of staff and researchers trained through programs and workshops provided through this Project 2. Number of trained core facility employees increased number of employees trained for manipulation of the specific infrastructure and equipment 3. Number of Exchange Opportunities Number of meetings related to enhancement of core business model, number of analyses i.e. number of campuses used for comparison 4. Number of partnerships established between the BIO4 Campus and international institutions	Project final report		Staff interested to take active role and participate in workshops
Activities	Means	Costs		Assumptions
1. Implementation of custom-made training programs and workshops covering relevant topics for Core Facilities and Core Centres		EUR 250,000		

<ul style="list-style-type: none"> - Identification and conduction of proper training programs for core facility managers - Identification and organization of proper training programs for core facility employees based on specific equipment and infrastructure in Core facilities within BIO4 Campus - Collaboration with experts and trainers to deliver high-quality training sessions for other core centres that are required for BIO4 Campus. <p>2. Conduct a comprehensive analysis of the operational processes and needs of the BIO4 Campus.</p> <ul style="list-style-type: none"> - Mapping of campuses and platforms within EU that can serve as examples for the analyses of management model for BIO4 campus - Analysis of models and best practices for management of Campus - Develop clear and concise guidelines and manuals covering various aspects of Campus management and 				
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<p>public procurement, such as resource allocation, facility management, project coordination, and administrative procedures.</p> <p>3. Establish partnerships and collaborations with national and international institutions to create exchange programs.</p> <ul style="list-style-type: none"> - Develop guidelines and criteria for selecting individuals eligible for exchange opportunities. - Facilitate the logistics and administrative processes for participants, including visa arrangements, accommodation, and travel arrangements. <p>4. Conduct a systematic mapping of potential international partner institutions that align with the objectives of the BIO4 Campus.</p> <ul style="list-style-type: none"> - Initiate negotiation processes and discussions to explore collaboration opportunities. - Facilitate meetings, workshops, and 				
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joint research initiatives to foster collaboration and knowledge exchange between the BIO4 Campus and partner institutions. 5. Communication and dissemination of guidelines and manuals to relevant stakeholders, ensuring their accessibility and understanding.				
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Annex 3. List of relevant Laws and Regulations

- The Framework Agreement between the European Commission and the Republic of Serbia on the rules on cooperation regarding the financial aid of the European Commission to the Republic of Serbia, in accordance with the rules of the instruments of pre-accession assistance (Official Gazette of the Republic of Serbia, no. 124/07),
- The Framework Agreement between the Republic of Serbia and the European Commission on the arrangements for implementation of Union financial assistance to the Republic of Serbia under the instrument for pre-accession assistance (IPA II) (Official Gazette of the Republic of Serbia, no. 19/2014),
- Financial Framework Partnership Agreement between the European Commission And the Republic of Serbia (Official Gazette of the Republic of Serbia international agreements, no. 6/2022),
- The Sectoral Agreement between the Government of the Republic of Serbia and the European Commission setting out provisions for the management and implementation of Union financial assistance to the Republic of Serbia under the instrument for pre-accession assistance in the policy area "Agriculture and Rural Development" (IPARD), adopted in November and signed in December 2015.
- The Financing Agreements concluded between the European Commission and the Republic of Serbia for IPA I, IPA II and IPA III programmes.
- Decree on establishing the Audit Authority Office of EU Funds (Official Gazette No. 41/2011 and 83/11).
- Decree on Appointing the Audit Authority in Serbia no. 110-10696/2013.
- The Decree on Appointing the Audit Authority for Auditing the Management system for Pre-accession Assistance programmes of the European Union under Instrument of Pre-accession Assistance, adopted in October 2015.
- Decree on the Management of EU Pre-Accession Assistance Programmes under Component I of the Instrument for Pre-Accession (IPA) – Transition Assistance and Institution Building for the Period 2007-2013, enacted by the Government Decision No 110-1568/2019 dated 14 February 2019.

- Decree on the Management of Programmes of Pre-Accession Assistance under the Instrument for Pre-Accession (IPA II) for the period 2014-2020 (Official Gazette of the RS No 10/2019).
- Decision on the Appointment of the Responsible Persons and Bodies in the Management of EU Pre-Accession Assistance Programmes for the Period 2014-2020, Government Decision No 110-1569/2019 dated 14 February 2019. Decree on the implementation of the Cross – Border cooperation and transnational programmes in cooperation with Member States countries within IPA II 2014-2020 framework (Official Gazette of the RS No 37/2018)
- The Decree on the management of the European Union's pre-accession assistance programmes under the Instrument for Pre-Accession Assistance (IPA III) for the 2021-2027 period (referred to as IPA III Decree), adopted on 12 April 2023 by the Government of the Republic of Serbia and published in the Official Gazette of the Republic of Serbia No 29/2023 dated 13 April 2023
- The Decision on the Appointment of the Responsible Authorities, Bodies and Persons in the Management of EU Pre-Accession Assistance Programmes for the Period 2021-2027, adopted by the Government of the Republic of Serbia and published in the Official Gazette of the Republic of Serbia no. 34/23 from 28 April 2023;
- Bilateral Agreements with IPA countries Montenegro, Bosnia and Herzegovina and the Republic of North Macedonia (CBC)
- Financing Agreements
- Public Financial Management Reform Program for the period 2021-2025 was adopted by the Government of the Republic of Serbia on June 24, 2021.